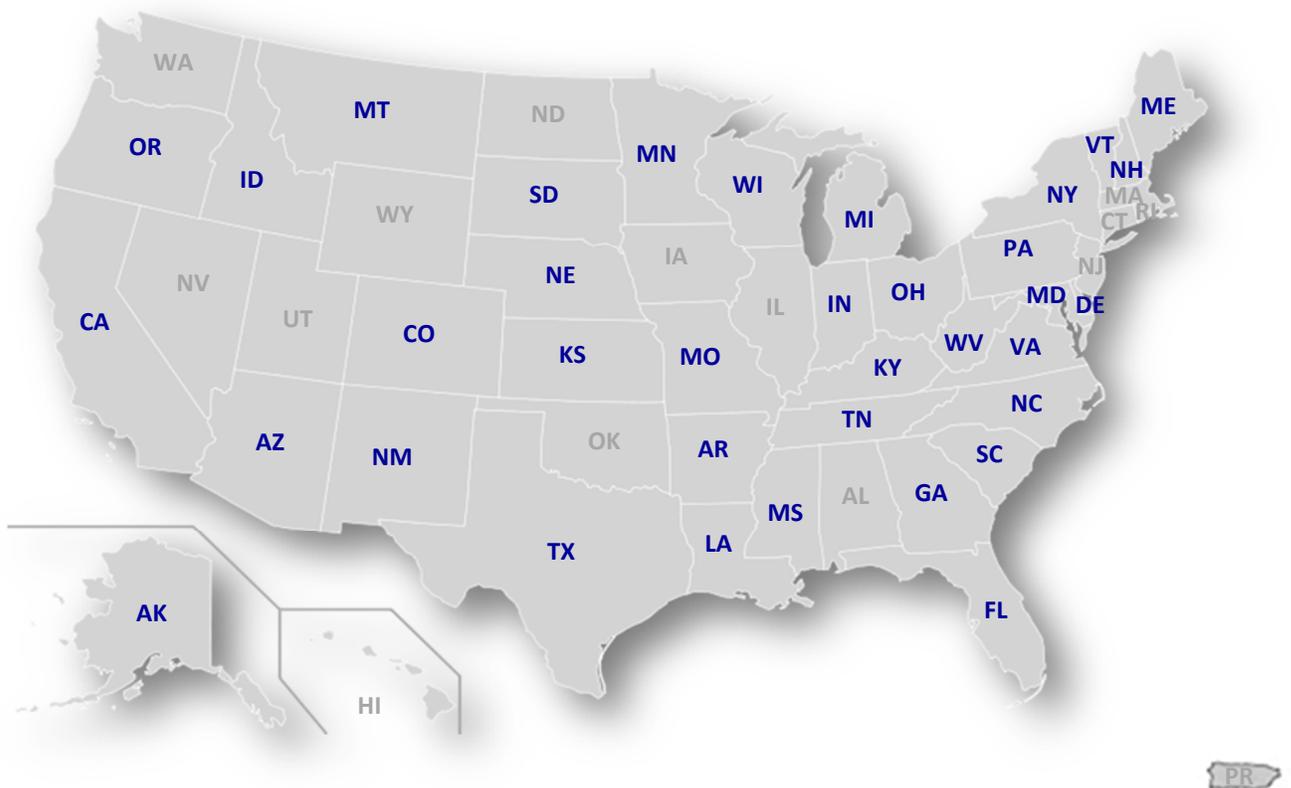




# Source Book

## Rural Health Care Services Outreach Grant Program

2012 - 2015





U.S. Department of Health and Human Services  
Health Resources and Services Administration



---

# Source Book

## 2012-2015 Rural Health Care Services Outreach Grant Recipients

The Rural Health Care Services Outreach Program is authorized by Section 330A of the Public Health Service Act (42 U.S.C. 254c), as amended. The program supports projects that demonstrate creative or effective models of outreach and service delivery in rural communities. Funding can be used to meet a broad range of health care needs from health promotion and disease prevention to expanding oral and mental health services to case management for rural HIV patients. These projects address the needs of a wide range of population groups including, but not limited to, low-income populations, the elderly, pregnant women, infants, adolescents, rural minority populations and rural populations with special health care needs. The community being served must be involved in the development and ongoing operations of the program, to appropriately address the needs of the population. All projects are responsive to any unique cultural, social, religious and linguistic needs of the target population.

The emphasis of this grant program is on service delivery through collaboration, adoption of an evidence-based or promising practice model, demonstration of health outcomes, replicability and sustainability. Proposed projects have an outcomes-oriented approach that will enhance and sustain the delivery of effective health care in rural communities by tracking specific health indicators that will demonstrate the impact of their project at the end of their grant period. Projects are based on evidence-based or promising practice models and demonstrate health status improvement in rural communities. Outreach projects can take the framework of an evidence-based or promising practice model and tailor it to their community's need and organization.

This Source Book provides a description of the 70 initiatives funded under the Rural Health Care Services Grant Program in the 2012 – 2015 funding cycle. The following information for each grantee is included: Organizational Information, Consortium Partners, Community Characteristics, Program Services, Outcomes, Challenges & Innovative Solutions, Sustainability, and Implications for other Communities.

**2012 - 2015 Rural Health Outreach Grantees Grant Recipients**  
(Listed by State)

<b>State</b>	<b>Grant Organization Name</b>	<b>Page</b>
<b>Alaska</b>	<a href="#">PeaceHealth DBA Ketchikan General Hospital</a>	<a href="#">1</a>
<b>Arizona</b>	<a href="#">Mariposa Community Health Center, Inc.</a>	<a href="#">7</a>
<b>Arkansas</b>	<a href="#">Siloam Springs Regional Health Cooperative, Inc.</a>	<a href="#">15</a>
<b>California</b>	<a href="#">County of Nevada Health and Human Services Agency (HHSA)</a>	<a href="#">22</a>
	<a href="#">Lake County Tribal Health, Inc.</a>	<a href="#">29</a>
	<a href="#">Woodlake Union Elementary</a>	<a href="#">38</a>
<b>Colorado</b>	<a href="#">Telluride Medical Center Foundation</a>	<a href="#">43</a>
<b>Delaware</b>	<a href="#">La Red Health Center, Inc.</a>	<a href="#">50</a>
<b>Florida</b>	<a href="#">Heartland Rural Health Network, Inc.</a>	<a href="#">57</a>
	<a href="#">Rural Health Network of Monroe County Florida, Inc.</a>	<a href="#">63</a>
<b>Georgia</b>	<a href="#">Georgia Southern University</a>	<a href="#">70</a>
	<a href="#">Irwin County Board of Health</a>	<a href="#">74</a>
	<a href="#">Meadows Regional Medical Center, Inc.</a>	<a href="#">81</a>
<b>Idaho</b>	<a href="#">St. Mary's Hospital, Inc.</a>	<a href="#">90</a>
<b>Indiana</b>	<a href="#">Indiana Rural Health Association, Inc.</a>	<a href="#">95</a>
<b>Kansas</b>	<a href="#">Unified School District #498 Marshall County Kansas</a>	<a href="#">102</a>
<b>Kentucky</b>	<a href="#">Ephraim McDowell Health Care Foundation, Inc.</a>	<a href="#">110</a>
	<a href="#">Kentucky Office of Vocational Rehabilitation</a>	<a href="#">117</a>
	<a href="#">Lake Cumberland District Health Department</a>	<a href="#">127</a>
	<a href="#">Lotts Creek Community School, Inc.</a>	<a href="#">134</a>
	<a href="#">Marcum and Wallace Memorial Hospital</a>	<a href="#">141</a>
	<a href="#">Montgomery County Health Department</a>	<a href="#">148</a>
	<a href="#">Unlawful Narcotics Investigations, Treatment, &amp; Education</a>	<a href="#">156</a>
<b>Louisiana</b>	<a href="#">Hospital Service District No. 1-A of the Parish of Richland</a>	<a href="#">162</a>
	<a href="#">Innis Community Health Center, Inc.</a>	<a href="#">169</a>
	<a href="#">Louisiana Tech University</a>	<a href="#">174</a>
<b>Maine</b>	<a href="#">Mount Desert Island Hospital</a>	<a href="#">181</a>
<b>Maryland</b>	<a href="#">Allegany Health Right, Inc.</a>	<a href="#">189</a>
<b>Michigan</b>	<a href="#">Spectrum Health United Hospital</a>	<a href="#">194</a>
	<a href="#">Sterling Area Health Center</a>	<a href="#">202</a>
	<a href="#">Upper Great Lakes Family Health Center</a>	<a href="#">208</a>
	<a href="#">Western Upper Peninsula Health Department</a>	<a href="#">215</a>
<b>Minnesota</b>	<a href="#">County of Koochiching</a>	<a href="#">222</a>
	<a href="#">Mississippi Headwaters Area Dental Health Center</a>	<a href="#">227</a>
<b>Mississippi</b>	<a href="#">Central Mississippi Residential Center</a>	<a href="#">233</a>
<b>Missouri</b>	<a href="#">Citizens Memorial Hospital District</a>	<a href="#">237</a>
	<a href="#">Freeman Neosho Hospital</a>	<a href="#">243</a>
	<a href="#">Health Care Coalition of Lafayette County</a>	<a href="#">250</a>
	<a href="#">Northeast Missouri Health Council</a>	<a href="#">256</a>

**2012 - 2015 Rural Health Outreach Grantees Grant Recipients**  
(Listed by State)

<b>State</b>	<b>Grant Organization Name</b>	<b>Page</b>
<b>Montana</b>		
	<a href="#">Butte Silver Bow Primary Health Care Clinic, Inc.</a>	<a href="#">263</a>
	<a href="#">Granite County Hospital District</a>	<a href="#">268</a>
	<a href="#">Madison Valley Medical Center</a>	<a href="#">272</a>
	<a href="#">Missoula City/County Health Dept/Partnership HC</a>	<a href="#">280</a>
<b>Nebraska</b>		
	<a href="#">Nebraska Association of Local Health Directors</a>	<a href="#">284</a>
	<a href="#">Public Health Solutions District Health Department</a>	<a href="#">293</a>
<b>New Hampshire</b>		
	<a href="#">Mary Hitchcock Memorial Hospital</a>	<a href="#">301</a>
	<a href="#">Mid-State Health Center</a>	<a href="#">310</a>
	<a href="#">North Country Health Consortium</a>	<a href="#">316</a>
<b>New Mexico</b>		
	<a href="#">Ben Archer Health Center</a>	<a href="#">324</a>
	<a href="#">Hidalgo Medical Services</a>	<a href="#">330</a>
<b>New York</b>		
	<a href="#">Chautauqua County Health Network</a>	<a href="#">337</a>
	<a href="#">Chautauqua Opportunities, Inc.</a>	<a href="#">344</a>
<b>North Carolina</b>		
	<a href="#">Partnership for Children of the Foothills</a>	<a href="#">352</a>
<b>Ohio</b>		
	<a href="#">ProMedica Fostoria Community Hospital</a>	<a href="#">356</a>
	<a href="#">Trinity Hospital Twin City</a>	<a href="#">362</a>
<b>Oregon</b>		
	<a href="#">La Clinica del Cariño Family Health Center, DBA One Community Health</a>	<a href="#">368</a>
	<a href="#">Samaritan North Lincoln Hospital</a>	<a href="#">376</a>
<b>Pennsylvania</b>		
	<a href="#">Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc.</a>	<a href="#">384</a>
	<a href="#">Community Guidance Center/formerly Clearfield-Jefferson Community Mental Health Clinic</a>	<a href="#">392</a>
<b>South Carolina</b>		
	<a href="#">Newberry County Hospital Foundation</a>	<a href="#">399</a>
<b>South Dakota</b>		
	<a href="#">Delta Dental Plan of South Dakota</a>	<a href="#">404</a>
	<a href="#">Avera Sacred Heart Hospital</a>	<a href="#">407</a>
	<a href="#">University of South Dakota</a>	<a href="#">413</a>
<b>Tennessee</b>		
	<a href="#">Buffalo Valley, Inc.</a>	<a href="#">419</a>
<b>Texas</b>		
	<a href="#">Madison County</a>	<a href="#">424</a>
<b>Vermont</b>		
	<a href="#">Behavioral Health Network of Vermont, DBA Vermont Care Network</a>	<a href="#">433</a>
	<a href="#">Bi-State Primary Care Association</a>	<a href="#">444</a>
<b>Virginia</b>		
	<a href="#">Giles Free Clinic</a>	<a href="#">450</a>
<b>West Virginia</b>		
	<a href="#">Future Generations</a>	<a href="#">455</a>
<b>Wisconsin</b>		
	<a href="#">ABC for Rural Health, Inc.</a>	<a href="#">460</a>

# Alaska

## PeaceHealth Ketchikan Medical Center

Part I: Organizational Information	
Grant Number	D04RH23609
Grantee Organization	PeaceHealth Ketchikan Medical Center
Organization	Hospital
Address	3100 Tongass Avenue, Ketchikan, AK 99901
Grantee organization website	<a href="http://www.peacehealth.org">www.peacehealth.org</a>
Outreach grant project title	Alaska Subspecialty Nursing Consortium; formerly Alaska Perioperative Nursing Consortium
Project Director	Name: Shannon Updike
	Title: VP Patient Care Services
	Phone number: 907-228-8300 ext. 7734
	Fax number:
	Email address: <a href="mailto:supdike@peacehealth.org">supdike@peacehealth.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,822
	May 2013 to April 2014: \$149,799
	May 2014 to April 2015: \$144,792

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement)		
Partner Organization	Location (town/county/state)	Organizational Type
*PeaceHealth Ketchikan Medical Center	Ketchikan, Alaska	Hospital
Yukon Kuskokwim Health Corp	Bethel, Alaska	Hospital
Sitka Community Hospital	Sitka, Alaska	Hospital
Bartlett Regional Hospital	Juneau, Alaska	Hospital
SouthEast Area Regional Health	Sitka, Alaska	Hospital
Central Peninsula Hospital	Soldotna, Alaska	Hospital
South Peninsula General Hospital	Homer, Alaska	Hospital
*Providence Alaska Medical Center	Anchorage, Alaska	Hospital
Providence Kodiak Island Hospital	Kodiak, Alaska	Hospital
*Norton Sound Health Corp	Nome, Alaska	Hospital
Maniilaq Medical Center	Kotzebue, Alaska	Hospital
*Alaska Regional Hospital	Anchorage, Alaska	Hospital
*Fairbanks Memorial Hospital	Fairbanks, Alaska	Hospital
*Alaska Native Medical Center	Anchorage, Alaska	Hospital
*MatSu Regional Medical Center	Palmer, Alaska	Hospital

### Part III: Community Characteristics

#### A. Area

The service area for the grant has been the entire state of Alaska. Health provider organizations from the following communities participated in the program: Ketchikan, Sitka, Juneau, Homer, Soldotna, Anchorage, Palmer, Bethel, Kotzebue, Nome, Fairbanks and Kodiak.

## B. Community description

This project has involved all regions in the state of Alaska. Alaska is a huge rural state with several challenges and opportunities. About 50% of its residents reside in Anchorage, its largest community. The lack of a connected road system poses many barriers for the delivery of healthcare services throughout the State. Alaska had a total of 710,231 people in the 2010 census. Alaska's elderly population is one of the fastest growing subsets with 54,938 persons 65 years and over. Alaska also has 104,871 American Indian and Alaska Natives spread over more than 210 remote communities. Many of those remote communities lack adequate healthcare and basic sanitation services. There are high rates of disease and behavioral health issues that adversely impact those remote villages. The tribal health system has made great efforts to reduce the health and social service challenges with innovative grass roots programs.

## C. Need

The need for this project was first identified by the Chief Nursing Officers (CNO) / Directors of Nursing (DON) Sub-Committee of the Alaska State Hospital and Nursing Home Association (ASHNHA). Continuously challenged by the limitations and lack of a sufficient workforce of specialty trained nurses in Alaska, the DON Sub-Committee identified the need to create an Alaska-based training program of subspecialty nurses to work in communities serving Alaskans. Subsequently, a newly created Consortium identified perioperative (surgical) nurses as their area of greatest need for training. Alaskan hospitals were relying on traveler nurses with 13 week contracts. This was very expensive, did not lead to the development of permanent staff or state-based pool of workers, and challenged organizations in establishing and maintaining consistency in practices and delivery of care. The Consortium determined that growing its own subspecialty workforce would be much more sustainable, result in a higher level of care, and deliver better outcomes for the communities involved.

Following the successful implementation of the Perioperative training program, the Consortium broadened training to address the next highest need – Perinatal (labor and delivery). Other areas of identified need and focus include Behavioral Health and Emergency Medicine.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

PeaceHealth and ASHNHA adapted the consortium model from the NorthWest Perioperative Nursing Consortium (NWPC) from Seattle, Washington. NWPC has been in existence for 13+ years and is a consortium of hospitals in the metropolitan area of Seattle. The leadership of NWPC was instrumental to our ability to implement the Alaska-based program efficiently and cohesively. The NWPC had a proven model and allowed the Alaska Consortium to utilize their materials including the design of their membership and curriculum; they also provided mentorship and guidance.

The biggest adaptation Alaska made from the NWPC model was to concentrate the specialty surgery areas into a concentrated week of didactic training. The NWPC model provided for nurse interns to receive that training once a week for several weeks. In Alaska, the extensive travel distances would have been cost prohibitive especially for the rural remote hospitals involved. The adapted model has proven very beneficial and has been further adapted to the perinatal subspecialty nurse training. Alaska also developed a webinar-based program to keep the nurses in contact while they are at their facilities between the didactic sessions. This too has been effective in keeping the lines of communication open and has contributed to an on-going network of resources after completion of the program.

We continue to look to ways to improve the program and reduce cost and impact associated with rural partners traveling into Anchorage for training. Use of distance-learning tools and techniques along with the didactic sessions continue to be explored.

### B. Description

PeaceHealth Ketchikan Medical Center through its contractor, the Alaska State Hospital and Nursing Home Association (ASHNHA) has trained 5 cohorts, each of 17-week duration, for perioperative nurses. There have been 61 perioperative nurses trained from 9 consortium partners. In addition, 4 nurses completed on-line programs for perioperative training through the Association of Operating Room Nurses (AORN).

Two cohorts for perinatal, each of 13-week duration, have been completed with 32 nurses trained. Additionally, the perioperative training program has allowed 10 surgery tech students to participate in the initial didactic session with the perioperative nurses from 4 of the consortium partners. The consortium has also investigated the establishment of a formal surgery tech program for Alaska. No decisions have been made concerning that program.

Finally, the consortium has begun discussions on a third subspecialty area of training. It is a combination of emergency medicine and behavioral health.

### C. Role of Consortium Partners

The consortium has two levels of facility membership.

- Full Member—provides a nurse educator for the subspecialty training, and/or participates in planning, space, grant administration, etc.
  - PeaceHealth Ketchikan Medical Center, Yukon Kuskokwim Health Corporation, Providence Kodiak Island Hospital, Fairbanks Memorial Hospital, Alaska Regional Hospital, Alaska Native Medical Center, Providence Alaska Medical Center
- Associate Member—is unable to provide an educator, but provides financial support.
  - South Peninsula Hospital, Sitka Community Hospital, Bartlett Regional Hospital, Central Peninsula General Hospital, Norton Sound Health Corporation, Maniilaq Medical Center

Full members sign a Memorandum of Understanding agreeing to provide staff resources for the training, and participate in consortium meetings, planning, other Consortium related activities. Associate Members participate in the meetings and provide input on the program focus/activities. The consortium members meet twice a year to provide management oversight for the program, determine the priorities and develop new strategies for providing the training. The consortium acts as a sub-committee of the ASHNHA Chief Nursing Officers/Directors of Nursing (CNO/DON) Committee. The Consortium reports on its activities to the full CNO/DON committee.

The nurse educators for either the perioperative or perinatal services are the backbone of the consortium. They have the following roles and responsibilities:

- Select a chair for the groups and rotate that chair position to allow shared responsibility among the members.
- Develop and adjust the curriculum to address the needs of the nurse interns
- Hold planning meetings throughout the year to discuss the curriculum, schedule of the training, locations for the training and # of trainings to be offered.
- Develop resources including guest presenters and assign specific parts of the curriculum to each other.
- Assign an educator to handle evaluations for the cohorts of nurse interns
- For the perinatal classes, assign a team member to coordinate the Friday Check-ins.

During the HRSA grant, PeaceHealth and ASHNHA staff have served a coordinating/administrative role for the program. This has included grant administration, finances, coordination of travel for interns/instructors, preparing and scheduling meetings of the consortium/ educators, etc.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The Consortium has achieved its goal of training perioperative nurses in Alaska and reducing reliance on traveling nurses to staff our surgical departments and operating rooms. To date, the Consortium has trained 61 perioperative nurses. Another 9 nurse interns are currently being trained in the sixth cohort of this program. These nurses will graduate in June bringing the total trained to 70 nurses over the grant's three-year period. This is consistent with the target in PeaceHealth's application for HRSA outreach funding.

The Consortium has pushed beyond perioperative nurse training to a second focus area of perinatal nursing. Following the same model and approach as with the Peri-Operative training, the nurse educators first looked to identify an existing program that could be adapted to meet our Alaska needs and requirements. The Association of Women's Obstetrical and Neonatal Nursing's (AWHONN) Perinatal Orientation and Educational Program (POEP) modules were selected. The Consortium, through its perinatal nurse educators, has completed two 13-week training cohorts for 30 nurses. Expanding our program focus to include perinatal nursing has attracted two new associate members to the Consortium, as perinatal nursing is more broadly needed among ASHNHA's membership. The two new members are both rural tribal facilities: Maniilaq Medical Center in Kotzebue and Norton Sound Health Corporation in Nome. There are 15 nurse interns currently in the training which will be completed in May, 2015.

In April 2014, the Consortium members identified a third critical area of concern / need in subspecialty nursing. Though first identified as two separate needs, through further discussion and assessment it was determined that addressing Emergency and Behavioral Health together would be extremely beneficial, especially for the rural remote hospitals throughout Alaska. The CNO/DON committee met at the State of Alaska's psychiatric institute to focus attention on the need to better train and manage relationships for those facilities who do not have dedicated behavioral health services but encounter patients with behavioral health issues in their emergency rooms/medical-surgical floors. A planning meeting to explore options occurred in January, 2015. Additional work is needed to assess possible training options and determine if there are sufficient resources to accomplish the training. Alaska has very limited capacity for institutional behavioral health services and to date, no existing model such as the NWPC for peri-op training, has been identified.

After the first year of the grant, PeaceHealth and ASHNHA reached out to the leadership of the NWPC, and asked if their key staff would be willing to conduct an evaluation of Alaska's program. Diana Frawley and Tracey Jones conducted the review and provided a detailed report of their findings. Based on these findings, we made the following adjustments:

- Because of the limited number of nurse educators, there was concern that our key instructors would burn out over time. The consortium addressed this by utilizing a nurse educator as a consultant to relieve the demands on the core instructors and assist new consortium members with the training for the interns at their facility. This approach has worked well. In addition, the educators took the spring of 2014 off to recharge. This has also proven to be effective, both for the instructors as well as the participating organizations.
- It was recommended that the nurse educators meet more regularly to evaluate the quality of the program and improve their teaching skills/tools. Utilizing webinar services, the educators started meeting on a more frequent and regular basis. A major effort was made to enhance the skills of the educators in teaching adult learners and being sensitive to different learning styles. PeaceHealth and ASHNHA contracted with a college professor to provide guidance and conduct activities and two seminars to improve the skill sets of the instructors. In order to standardize the teaching of particular skills and avoid variation in their guidance for measurable skills, the educators conducted joint reviews of their instructional days utilizing the Association of Operating Room Nurses (AORN) manual for the standards and protocols. The team continues to utilize the most recent edition of the AORN manuals for perioperative nursing.
- In order to do a better job of explaining the segments of the training (including the justification/efficacy of spending several weeks having the interns learn the scrubbing role in the OR) and also addressing with their facilities the appropriate use of the interns in their clinical settings, we adjusted the didactic sessions to reinforce the reasons for the various elements of the learning. Each of the facilities worked to reinforce this with the leaders and preceptors in their respective operating rooms.
- In order to improve the process for on-boarding nurse interns and providing recruits with the expectations/realities in the perioperative setting, the participating organizations revised their screening procedures. The facilities adjusted their recruitment efforts to require that the interested nurse spend a day shadowing circulating nurses in the operating room to better understand the requirements/demands of the job. This has been very beneficial for the selection of interns and improved cohort completion rates.

The Consortium contracted with the same NWPC evaluators for a review of years 2 and 3. That review is in process. The evaluators were on-site in Anchorage March 16-18, 2015. A report is expected on or before April 30, 2015.

## **B. Recognition**

In the spring of 2014, three of the perioperative educators traveled to the Association of Operating Room Nurses (AORN) Congress in Chicago, Illinois, to present their materials/program at a poster session during the conference. A poster was created that showed the model of the project and key outcomes.

ASHNHA is part of a state-wide coalition that develops strategies, policies and programs to address healthcare workforce needs for Alaska. PeaceHealth/ASHNHA have highlighted the Consortium work to those stakeholders. ASHNHA advocated for additional funding for the program through the Alaska State Legislature. The legislature has provided a grant to supplement the funding received from HRSA. Those funds are expected to help sustain/expand the program past the HRSA outreach grant period.

At the ASHNHA annual meetings the member CEOs are briefed on the work of the committee and consortium. Several CEO's have expressed their support for the success of "growing our own" subspecialty nurses and the positive impacts of the overall program.

## Part VI: Challenges & Innovative Solutions

There were several challenges in the development of the Consortium and the training programs. They included:

- **Finding a training / education model to use as a base for the Alaska program:** There are not many models across the country for subspecialty nursing education which utilizes a consortium approach. Alaska was very fortunate to connect with the NorthWest Perioperative Nursing Consortium (NWPC). Most importantly, their leadership proved to be very receptive and supportive of Alaska's efforts to develop their emerging practice model. They gave of their time and resources to conduct a feasibility study and help Alaska adapt and use their curriculum. The finding of an existing and proven training model for a specific specialty focus continues to be our greatest challenge as we look to expand into new program areas.
- **Getting commitment from the larger urban hospitals in Alaska to support the training of their staff and the staff from the rural hospitals:** Although this was a HRSA outreach grant, the only facilities in Alaska with the capacity/resources to provide the instructors/space were the urban facilities in Anchorage and Fairbanks. Therefore, the project needed to address their needs so that they would be willing to provide those resources. That did and continues to occur.
- **Partnering with an organization that met the requirements for HRSA outreach funding:** PeaceHealth Ketchikan Medical Center was willing to serve as the applicant agency for the funding on behalf of the Consortium. Fortunately, the leadership of PeaceHealth and ASHNHA were aligned since Pat Branco was chair of ASHNHA and CEO at PeaceHealth Ketchikan Medical Center. PeaceHealth has a rich history in partnering with the federal and state government to successfully develop, implement and manage grants.
- **Identifying the Nurse Educators and bringing them together to develop the team:** The Consortium needed the support of the chief nursing officers to allocate the educator resources in order for the project to be successful. This was accomplished by use of Memorandums of Understanding and Associate Member Agreements with the various entities/facilities. The engagement of these leaders continues to be very important to the sustainability of the programs.
- **Development of the second area of focus - Perinatal Nursing:** This required a commitment from an entirely new group of nurse educators. Fortunately, the core curriculum for this had been developed by the Association of Women's Health Obstetrics and Neonatal Nursing (AWHONN). The consortium is using the Perinatal Orientation and Educational Program (POEP). As many more ASHNHA members provide obstetric services, new associate members have joined. The same model has been used for the perinatal cohort although the length of the training is 13 weeks instead of 17 weeks for the perioperative training.

## Part VII: Sustainability

### A. Structure

The Consortium plans to continue the work which was originally begun with the HRSA Rural Outreach grant funding. There continues to be a need to train subspecialty nurses in Alaska. Growing our own nurses will be crucial for ASHNHA members' ability to provide community healthcare services. It is expected that the full members will continue. It is also expected that associate members will join when their facilities have the demand for training. The Consortium will continue to explore other areas of need. As noted above, there has been an interest in training for emergency room nurses and behavioral health nurses.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Consortium will continue to provide both perioperative and perinatal training in 2015 and 2016. There will be some adjustments due to the loss of the grant funding. It will be necessary to further develop the core educators so that they can work independently of the funding available with the grant support. Given the cost of travel, there will be challenges for the small facilities that struggle with having sufficient resources to sustain such programs.

One of the strategies is to increase the reliance on the nurse educators to assume some of the coordinating functions that were accomplished by ASHNHA staff during the grant period. As well, there will be a greater reliance on the facilities outside of Anchorage to manage the logistics of getting the nurse interns/instructors to Anchorage.

Finally, it's hoped that additional grant funding will be available to allow the Consortium to add additional areas of subspecialty nurse training.

### **C. Sustained Impact**

The Outreach program has allowed the Consortium to "grow their own" subspecialty nurses. This will have a lasting impact on the delivery and cost of healthcare in Alaska. Given its remoteness, Alaska will always struggle in attracting and retaining nursing talent and expertise, especially in the rural remote communities. By helping nurses that already live and work in Alaska to gain these specialized skills, we are enabling those nurses to serve their communities more effectively for years to come. Overcoming the reliance on temporary nurses will pay long-term dividends. Not every nurse or family is successful in Alaska. Those who have grown up in the state have a much greater desire to work and live in such a fascinating place.

It is certainly the case that this project has built relationships among the Consortium members. Having educators work together has already paid huge dividends in sharing best practices in the facilities and a willingness to help each other in their everyday activities. At one perioperative class, a new surgery manager was able to obtain a specific package of instruments for a case in her community from another facility. That would not have been possible without the collaboration and shared belief that facilities are better and stronger working together. This project has brought together large urban hospitals and small-rural Critical Access hospitals. This interchange of ideas and challenges is very healthy as Alaska addresses its healthcare needs and determines how best to support those needs today and into the future.

## **Part VIII: Implications for Other Communities**

In developing this Consortium, it is evident that not many similarly focused sub-specialty nurse training programs exist across the country. That certainly suggests there is an opportunity to take the good work accomplished with this HRSA assistance to other states and jurisdictions. The consortium model relies on the belief in shared values by sometimes-competing entities. There has to be a vision that the training will be better if it is aggregated and the expertise of educators is shared across organizational lines.

A key element in the framework of our Consortium was the belief that all participants, whether full or associate members, demonstrate a financial commitment to the program from the onset. In our grant application it was stated that the largest single expense for the training would be the cost of wages for the nurse interns. Facilities had to commit significant resources to help the nurses gain the training and experience. Additionally, the Consortium asked full members to contribute \$1,000 and associate members to contribute funding in lieu of providing an instructor to the program. Having these financial metrics has helped to solidify the commitment of the members and participants as well as sustain the program past federal assistance. Other states should consider such commitments to ensure program success.

Alaska faces unique challenges given its geography and lack of connectivity to a central road system. Other states will most likely find it easier and less expensive to implement a similar type program and curriculum. Conversely, because of its isolation and remoteness, Alaska facilities have always had to help each other to provide the best care for the Alaskan citizens. Those walls may be much higher in large cities with many more entities involved.

# Arizona

## Mariposa Community Health Center

Part I: Organizational Information	
Grant Number	DO4RH23596
Grantee Organization	Mariposa Community Health Center
Organization Type	Federally Qualified Health Center (FQHC)
Address	1852 N. Mastick Way, Nogales, Arizona 85621
Grantee organization website	<a href="http://www.mariposachc.net">http://www.mariposachc.net</a>
Outreach grant project title	<i>Vivir Mejor! (Live Better!) System of Diabetes Prevention and Care</i>
Project Director	Name: Susan Kunz
	Title: Chief of Health and Wellness
	Phone number: 520-375-6050
	Fax number: 520-761-2153
	Email address: <a href="mailto:skunz@mariposachc.net">skunz@mariposachc.net</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Mariposa Community Health Center	Nogales, Santa Cruz, Arizona	Federally Qualified Health Center
*Southeastern Arizona Area Health Education Center (SEAHEC)	Nogales, Santa Cruz, County, Arizona	AHEC
*Carondelet Holy Cross Hospital CHCH)	Nogales, Santa Cruz County, Arizona	Critical Access Hospital
*Nogales Community Development (NCD)	Nogales, Santa Cruz County, Arizona	Community Development Corporation
*University of Arizona Prevention Research Center (AzPRC)	Tucson, Pima County, Arizona	University
*Nogales Community Food Bank (NCFB)	Nogales, Santa Cruz County, Arizona	Food Bank
Santa Cruz County Superintendent of Schools (SCCCSS)	Nogales, Santa Cruz County, Arizona	Schools/County Government
University of Arizona Cooperative Extension Office (UACEO)	Nogales, Santa Cruz County, Arizona	University
Women, Infants, Children (WIC)	Nogales, Santa Cruz County, Arizona	Federally Qualified Health Center
Adolescent Wellness Network (AWN)	Nogales, Santa Cruz County, Arizona	Network
Cosechando Bienestar (Harvesting Wellbeing) (CB)	Nogales, Santa Cruz County, Arizona	Coalition

## Part III: Community Characteristics

### A. Area

*Vivir Mejor!* serves all the communities within Santa Cruz County. The communities are: Rio Rico, Nogales, Tumacacori, Patagonia, Sonoita, and Elgin.

### B. Community description

Santa Cruz County is a border community with two very active ports of entry that welcome a steady flow of people and commerce. Santa Cruz County is a poor, rural Hispanic/Latino community that faces many challenges. Ninety-three percent (93%) of Nogales residents are Hispanic Latino, a high percentage is foreign born and the majority speaks Spanish in the home. More than 20% of county residents live in poverty. Only six out of ten adults graduate from high school (71.2%), compared to eight out of ten adults (85.2%) in Arizona. It also remains the most uninsured county in Arizona. In 2012, 21.5% of the Santa Cruz County population was uninsured. That rate was cut in half, approximately, by the five thousand new enrollments in health insurance during the 2013-2014 Affordable Care Act enrollment period.

Additionally, Santa Cruz County faces an overweight and obesity problem, as well as a high prevalence of diabetes. More than one in four (26%) of Santa Cruz County adults has a BMI over 30, compared to 25% of Arizona adults. The rate of obesity among Santa Cruz County adults has increased by two percent according to the average annual prevalence of 24% from 2001-2007.

### C. Need

The US-México border region has been impacted by diabetes to an alarming degree. The rate of mortality in the border region is nearly 50% higher than in the rest of the country and Hispanics/Latinos are 2-3 more times likely to suffer from serious complications. This elevated prevalence is directly associated with the obesity epidemic in the United States. Not surprisingly, Nogales residents have high rates of obesity and diabetes. According to the 2007 Behavioral Risk Factor Survey, 37% of Santa Cruz County adults were overweight, exceeding the Arizona prevalence of 35%. Of greater concern is the increase in obesity among adults from 26% in 2005 to 37% in 2007 (compared to 21% of adults in Arizona). Consumption of refined food low in fiber and high in sugar, fat and salt is the norm. Approximately 4,200 residents of Santa Cruz County self-identify as having diabetes (Behavior Risk Factor Surveillance Survey, 2007) and 11% of the adult patients served by Mariposa Community Health Center have diabetes. The age-adjusted death rate for diabetes was 48.7 /100,000 populations in 2005, compared to 20.1/100,000 for all Arizona (Arizona Health Status and Vital Statistics). Only 17.4% of high school students reported eating the daily recommended five or more servings of fruits and vegetables (Youth Risk Behavior Survey, 2007).

In regards to physical activity, the following are some facts to note:

- An Arizona Department of Transportation Walking and Biking Study underway for the North County documented significant barriers to bicycle and pedestrian mobility in the Rio Rico area.
- According to the RWJF County Health Rankings, Santa Cruz County ranks 13<sup>th</sup> out of 15 Arizona counties in access to recreational facilities.
- There is not public transportation in the City of Nogales, Rio Rico or the rest of the county.
- Very few sidewalks exist and no biking paths along the major thoroughfares in the City of Nogales.
- A Design Charrette completed in 2009 included community recommendations for more green space and pedestrian by-ways.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

*Vivir Mejor!* adopted four evidence-based program and/or promising practices during the grant cycle. They were:

#### Evidence-based

1. The **Pasos Adelante (Steps Forward) Curriculum** was used in our weekly one and a half hour classes. The curriculum focus is to reduce the risk for cardiovascular disease and diabetes. We adapted it to include more diabetes specific sessions, including diabetes complications and foot care. In Year 3 of the grant cycle, the eight-week intervention was modified to five weeks to improve participant retention.

2. **Promotoras de Salud (Community Health Workers)** deliver the diabetes education, train and support the Lay Leaders. Mariposa Community Health Center's (MCHC) Health and Wellness department, Platicamos Salud (We Talk Health) has used this model since 1991, when it received its first Rural Health Outreach grant to provide promotora- delivered community health education.
3. The **Patient Centered Medical Home Model (PCMH)** was used to integrate the Promotora de Salud into the coordinated care teams. The Promotora's title was changed to Patient Navigator to distinguish the special role in disease management and coordinated care. High-risk patients were identified by the clinical care teams and the Promotora de Salud provided education and support via a home visit.

### **Promising practice**

4. Three **Lay Leaders** were trained by the Promotora de Salud to recruit and informally teach community members diabetes prevention and self-management. All three Lay Leaders were participants of the *Vivir Mejor!* program before becoming volunteers. They were identified by the Promotora de Salud as good candidates for Lay Leader training because of their commitment and dedication to learning and sharing what they learned with others.

## **B. Description**

### **Vivir Mejor! Diabetes Education**

Promotora-delivered, culturally competent diabetes education classes, *Pasos Adelante*, were held once a week for 1½-2 hours throughout the three years. The classes were supplemented by physical activity sessions that included Yoga, Aerobics and Body Strengthening taught by trained /certified instructors. By the end of Year 2, the physical education sessions increased to four days a week. The following is a list of topics covered by the *Pasos Adelante* diabetes education classes held at the Mexican Consulate.

- What is Diabetes
- Nutrition & Diabetes
- The Heart & Diabetes
- What am I eating?
- Complications of Diabetes
- Foot Care
- The Effects of Stress
- Counting Carbs

Program participants and their family members were recruited within the community or referred by MCHC providers. Incentives for participation included receiving a voucher for a diabetes-appropriate food box for attending five classes and completing the post test. In addition, other incentives such as small weights, Yoga mats or other exercise items were also provided.

### **Physical Activity Classes**

Physical activity is an important part of the participant *Vivir Mejor!* experience. As mentioned in the section above, Yoga, Aerobics and Body Strengthening made up the exercise component of the program. By Year 3, the physical activity sessions increased from twice a week to four times a week and also included a Rhumba class. As with the diabetes classes, the physical activity sessions were hosted by the Mexican Consulate.

### **Nutrition Counseling**

Carondelet Health Network offered nutrition counseling to MCHC patients in the high-risk diabetes category ( $A1C \geq 8.0\%$ ). In the first year of the grant, the nutrition counseling was provided via teleconferencing by a Registered Dietician, based out of Tucson. In years 2 and 3, Carondelet announced that the teleconferencing was no longer available due to some funding cuts. Instead, they provided a bilingual, nurse practitioner/certified diabetes educator (NP/CDE) with over 15 years of experience working in the community to conduct the nutrition counseling sessions. The sessions consisted of an initial one-on-one 30 minute session, with the option of also having two 15 minute follow-up sessions if needed.

### **Food Box Distribution**

The Nogales Community Food Bank (NCFB) prepared and distributed diabetic food boxes to *Vivir Mejor!* participants who attended at least five diabetes education classes and completed a post-test. Food boxes include items tailored to support the diets of people with diabetes and their families. The NCFB values each food box at \$125.00. Contents remained unchanged throughout the three years. *Vivir Mejor!* participants redeemed all 40 coupons each of the three years of the grant.

### **Patient Navigator Services**

As a result of the *Vivir Mejor!* objective to incorporate Patient Navigators into MCHC's Patient Centered Medical Home Model (PCMH), the Patient Navigator (PN) at MCHC has become an integral member of the coordinated patient care teams. The PN made home visits to patients that were identified by the care coordinated teams as needing education in self-management strategies and support. The PN also referred patients to the group diabetes education classes that were held at the Mexican Consulate and tracked patients who received nutritional counseling from the CDE, for follow-up.

### **Lay Leaders**

In Year 2, three participants from the *Vivir Mejor!* diabetes classes who showed particular interest in learning healthy habits were approached by the Promotora with an invitation to become Lay Leaders for *Vivir Mejor!* They agreed to be trained as peer educators and to teach a pilot program under the supervision and guidance of the Promotora. Once this was accomplished, they went on to recruit their neighbors, family and friends to come to their homes for informal diabetes education sessions. Unfortunately, one of the Lay Leaders had to drop out soon after being trained because of health issues. In Year 3, two Lay Leaders were trained by the Promotora to lead neighborhood walking groups. By March 2015 they had three different walking groups actively participating.

### **Community Activities**

In addition to the core activities listed above, the *Vivir Mejor* consortium conducted numerous community outreach activities during the grant period. The Consortium sponsored a screening of the Weight of the Nation, a 4-part HBO documentary film that was developed with the Institute of Medicine and in association with the Centers for Disease Control and Prevention and the National Institutes of Health. Since it is one of the largest national public health campaigns on obesity, the *Vivir Mejor!* Consortium agreed that our community would benefit from having it shown at the local theater. Segments of the film were shown at 3 one-hour screenings open to the public for a nominal ticket price. Other Consortium sponsored community activities were a Diabetes Awareness Day, a screening event held in the local Wal-Mart parking lot where staff administered 65 glucose tests to community members; a Diabetes Health Fair conducted by Mt. Sinai Medical Center medical students; a *Vivir Mejor!* presentation provided to FRONTERA students on program highlights. Other activities included a World Diabetes Day Walk attended by 36 participants and a Bike Path Initiative that supports the construction of bike paths in and around Nogales in the Arizona Department of Transportation 2016 budget plan.

## **C. Role of Consortium Partners**

The Consortium partners participated in *Vivir Mejor!* per the following roles and corresponding activities:

### **SEAHEC**

SEAHEC has organized, conducted, and evaluated health care provider trainings in Nogales, AZ to improve health care provider services for patients with diabetes. In Year 1, SEAHEC conducted an informal needs assessment with nine MCHC providers to discuss training topics. By Year 2, SEAHEC had organized training for *Motivational Interviewing*, *Cost Effective Medications for Diabetes* and a *Diabetes 101* class. In Year 3, SEAHEC organized *Oral Manifestations of Diabetes and the Link to Overall Health Training*, and a repeat of *Diabetes 101* for clinic support staff.

In Year 2, SEAHEC produced a digital story, *Vivir Mejor! Making the Healthy Choice, the Easy Choice* which describes the *Vivir Mejor!* systems approach to diabetes prevention and care and highlights the program's impact through its first year. SEAHEC showed the video to twelve Mariposa health providers in January 2014. As mentioned earlier in this report, the digital story offers an innovative way to show health providers the comprehensive approach that *Vivir Mejor!* uses to support community members in a culturally appropriate manner. It is important to note the *Vivir Mejor!* members were able to attend a digital story workshop courtesy of additional funds that *Vivir Mejor!* was awarded by a CDC REACH grant (Reach Su Comunidad).

### **Nogales Community Food Bank**

The Nogales Community Food Bank was contracted to prepare and distribute diabetes-appropriate food boxes throughout the grant cycle. Recommendations by a Registered Dietitian were taken into account when choosing the food items for the box. Forty food boxes were distributed to *Vivir Mejor!* participants as a special incentive who attended five or more diabetes education classes during each grant year. The NCFB valued each food box at \$125.00 and all 120 vouchers were redeemed.

### **Nogales Community Development**

The Nogales Community Development provided a one-hour financial literacy class to participants during Week 8 of the diabetes education classes at the end of each class cycle. The class was an introductory session to a multi-session course on budgeting expenses, banking services, investing and how to save for the future.

### Carondelet Holy Cross Hospital

Carondelet Holy Cross Hospital offered nutrition counseling to high-risk MCHC diabetes patients ( $A1c \geq 8.0\%$ ). A Nurse Practitioner/Certified Diabetes Educator (NP/CDE) with over 15 years of experience working in the community conducted individual nutrition counseling sessions. The sessions included the development of an individual meal plan as well as the recording of the participant's clinical measurements. If needed, an MCHC patient navigator scheduled a 15-minute follow-up appointment for three months later. If the participant's HbA1c remained at 8% or above at the time of the follow-up appointment, the patient navigator scheduled a third appointment for three months later. Follow-up calls were made to participants who were "no-shows" to reschedule the appointment.

### University of Arizona Prevention Research Center

AzPRC was the evaluation partner for *Vivir Mejor!* and was responsible for instrument development, data management, and data analysis and reporting. The evaluator worked very closely with *Vivir Mejor!* staff and lay leaders and attended diabetes education classes, participated regularly at Consortium meetings and stayed in close contact with the Project Coordinator. An MPH graduate student who worked under the lead evaluator took the initiative to create a Lay Leader Development Guide to "support community health workers (CHWs), CHW supervisors, and CHW organizations seeking to extend evidence-based disease prevention programming using community-based volunteers (referred to as lay leaders)."

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In the area of diabetes management knowledge, all respondents through Year 3 ( $n=76$ ), there was a statistically significant improvement ( $p<0.001$ ) in the number of clients who answered "yes" to the question: "Do you know what an A1c is?" The percentage of participants who responded affirmatively increased from 38% at pre-test to 95% at post-test.

Pre- and post-tests measured food consumption as self-reported servings per week of various healthy and unhealthy food groups. Unhealthy food groups included red meat, pan dulce, flour tortillas, and sugary drinks; healthy food groups included fruits and vegetables. Among all respondents through Year 3, there were statistically significant decreases ( $p<0.05$ ) in the average number of self-reported weekly servings of each unhealthy food group and a statistically significant increase in the number of weekly servings of vegetables ( $p<0.001$ ).

Number of walks reported per week measured the amount of physical activity that diabetes education participants engaged in. At the end of Year 3, the percentage of participants who reported taking 0 walks per week decreased from 47% at pre-test to 10% at post-test, while the percentage of those who reported taking 1 to 2 walks per week increased from 14% to 44%. Overall, the average number of walks per week among all respondents through Year 3 increased significantly ( $p<0.001$ ), from 2.19 to 2.95, and 47% of respondents (34/73) increased their number of walks per week.

Diabetes management behaviors are categorized as: 1) maintaining a healthy diet, 2) exercising, 3) taking diabetes medication, 4) checking feet, and 5) monitoring blood glucose level. Presented as a select-any, multiple-choice question, this item was not included in the first version of the pre- and post-test, and therefore has only 53 responses. The purpose of the question is to demonstrate participants' awareness of the importance of these maintenance behaviors. McNemar's test showed that all maintenance behaviors had statistically significant increases ( $p<0.01$ ).

### **Nutrition Counseling**

Average HbA1c Measurement of Nutrition Counseling Clients:

The initial number of participants was 137, at first follow-up it was 68 and at second follow-up it was 2. The average HbA1c measurement initially was 10.9%, at first follow-up 8.67% and at second follow-up 8.68%.

Average HbA1c Changes for Nutrition Counseling Clients with Follow-up Appointments:

Sixty-seven participants attended two appointments; average HbA1c at first appointment: 10.10%, average HbA1c at last appointment: 8.67%. The change was 1.40%, with a statistical significance of  $p.>0.001$ . Twenty-two participants attended three appointments; average HbA1c at first appointment: 10.50%, average HbA1c at last appointment: 8.75%. The change was 1.80% with a statistical significance of  $p.>0.001$ .

## B. Recognition

MCHC was invited by the Milbank Fund to share its CHW Model as a best practice model with its State Reform Group that is composed of state governors, legislators, health department directors and Medicaid directors. The presentation given in November of 2014 featured the use of Patient Navigators and Lay Leaders as best practices for chronic disease management and coordinated care.

In Year 2, the local newspaper featured an article on a *Vivir Mejor!* participant success story. Our Patient Navigator was instrumental in helping the patient learn healthy lifestyle strategies. The patient reported that the help she received from the PN was invaluable and inspired her to “stick with it”. Also in year 2, a local magazine, *BorderEco*, featured an article on *Vivir Mejor!* after having interviewed the Project Coordinator about the program and its impact on the community.

## Part VI: Challenges & Innovative Solutions

A common challenge that many programs face is patient retention and *Vivir Mejor!* was no different in that regard. Scheduling for the nutrition counseling sessions was particularly challenging, in that participants often would not call to cancel an appointment. We addressed this issue by double booking for each time slot, but even this strategy has not always been satisfactory. Reminder calls have been a must both for the nutrition counseling sessions as well as the diabetes classes. Offering incentives to program participants for completing at least five diabetes education classes has helped to minimize attrition. The food box vouchers for completing five classes have also helped to keep participants motivated to attend classes. In year 3, we decreased the number of diabetes education classes from eight to five. We felt this would make it easier for participants to complete the full intervention.

Other challenges relate to the difficulty in contracting potential consortium partners. For example, our original proposal identified the Housing Authority as a partner who would provide a facility in which to have exercise classes. The partnership, however, never materialized due to insurmountable problems it faced in hiring staff to do the work. We addressed this issue by utilizing the Mexican Consulate facility instead.

## Part VII: Sustainability

### A. Structure

The *Vivir Mejor!* Consortium will continue to function as it has for the past three years. The frequency of meetings will be determined by partner preference. The following existing partners will continue to be part of the Consortium: Santa Cruz County, Superintendent of Schools, University of Arizona Cooperative Extension, WIC, Carondelet Holy Cross Hospital, SEAHEC, Adolescent Wellness Network, Cosechando Bienestar (Harvesting Well-Being) Coalition, Nogales Community Development, Nogales Community Food Bank, and the Arizona Prevention Research Center. New partners will be encouraged to join. Naturally, partner roles might change according to the dictates of future funding streams.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Major activities that will continue include:

**Diabetes Education** - Diabetes education will continue with some modifications. We will periodically change the location to maximize community reach, restrict class participation to diabetics and their family members only, and require participants to attend class 1 as part of a peer cohort.

**Lay Leaders** - The three Lay Leaders have already been trained and are now experienced in facilitating classes. The major costs were incurred in the initial phase of their training. The Lay Leaders can now serve as mentors for others. MCHC will continue to explore models to support lay health, keeping in mind that there is greater interest from funders in using this sustainable approach.

### **Other activities:**

The University of Arizona Cooperative Extension (UACE) will continue to support the *Vivir Mejor!* initiative in the areas of healthy eating and physical activity. Women, Infants and Children (WIC) will serve as a link to gestational diabetics, and will refer and promote program activities to its participants. Carondelet Holy Cross Hospital (CHCH) will continue to offer nutrition services and support enhancement of nutrition services in the community as well as outreach to bring new Registered Dietitian to the community. South Eastern Arizona Health Education Center (SEAHEC) will continue to offer trainings to healthcare providers. The Adolescent Wellness Network (AWN) will connect with youth in the community and be a link to the Youth Advisory Council. Cosechando Bienestar (CB) Coalition will continue to foster a greater understanding of food systems and access issues in the community as well as connect to WIC via food vouchers that can be used at the local Farmers Market. Nogales Community Development (NCD) will continue to make financial literacy classes available to the community in the hopes that providing important information on sound financial planning will lead to greater financial stability among area residents.

The funding strategies that have been identified to continue current activities are:

- **Earned Income** - This strategy will be used to provide training to other organizations or consortia on Lay Leader Development and how to implement a Promotora-delivered Diabetes Education program.
- **Indirect funding** – The MCHC Health and Wellness Department is funded almost entirely by grants. Because of this, it is possible to make in-kind contributions to support staff members who deliver the diabetes education classes. The indirect funding strategy also ensures that the Patient Navigator will be covered by MCHC clinic operations, as opposed to grant funding. Another strategy we will use to cover the cost of materials for the program is to approach area businesses for donated items. We will also seek donations that can be used as incentives for participants.
- **Grants** – As noted above, multiple grants support the MCHC Health and Wellness Department programs, therefore, using this strategy to continue Consortium activities is an obvious choice. Department staff is often covered by many funding streams, so leveraging those resources allows for extended activities. Additionally, the *Vivir Mejor!* program lends itself to competitive grant funding.

### **C. Sustained Impact**

**Lay Leaders** –The Lay Leaders have increased community capacity and developed a mentor/mentee relationship with the promotora that will not disappear. Lay Leaders provide an innovative way to extend community reach.

**Diabetes Risk Awareness** – There is an increased awareness and understanding about prevention and care. There has also been a significant drop in A1Cs for some patients. At least 85 participants will probably live longer due to the diabetes health education they receive. Participants often take home and share information with family, which can lead to potential changes in a family's lifestyle.

**Relationships** – The cross-sector work through the consortium has strengthened relationships across organizations. For example, a link with the university has served to provide for a mutually-beneficial internship; MCHC clinic providers have a better understanding of the work *Vivir Mejor!* does in the community because of increased communication between the PNs and the providers. Additionally, the digital story about *Vivir Mejor!* that was presented to MCHC doctors at their weekly meeting served to highlight program successes. The relationship with the food bank is innovative because it helps to decrease program attrition by offering a food box to program participants as an incentive for greater class attendance. The relationship with NCD is innovative because it provides people with useful financial information that can lead to greater financial stability. Food boxes and financial literacy both address social determinants of health. The relationship with SEAHEC has strengthened the provider /community connection through increased training. The Lay Leader Guide that was developed by the UA also has the potential to be a promising practice. Also of note is REACH Su Comunidad (RSC) as an example of collective strength to leverage more resources. Through the RSC we were able to connect to the food system (healthy menu options) and physical activity (walking trails).

**Health Care Providers** – Will continue to refer patients to navigators and now have a better understanding of how valuable patient navigators are on a systems level. Providers have an increased awareness of the effectiveness of the Patient Navigator to connect patients to community resources and help patients manage their disease for better health and quality of life. Enhanced communication with MCHC medical providers has increased their knowledge of clinic population progress on diabetes indicators based on evaluation results share with them.

## Part VIII: Implications for Other Communities

The *Vivir Mejor!* model has demonstrated that using a systems approach to help improve the health and lives of underserved people with a chronic disease is the logical choice. Offering services in a culturally appropriate manner via Promotoras or Community Health Workers (CHWs) is essential to achieve community buy-in and trust. Given that the use of CHWs is also growing nationally both in rural and urban settings and across ethnic and racial groups, it is an especially replicable and cost-effective model to use. The integration of CHWs into PCMH is clearly replicable as an evidence-based practice that is adaptable to be culturally appropriate for any setting. The *Pasos Adelante* curriculum has already been used in other sites in Arizona, with outcome research and results documented in peer review journals. Lastly, the success of the *Vivir Mejor!* Consortium points to the obvious fact that working together, no matter in which community is more beneficial to that community than working alone.

# Arkansas

## Siloam Springs Regional Health Cooperative, Inc.

Part I: Organizational Information	
Grant Number	D04RH23614
Grantee Organization	Siloam Springs Regional Health Cooperative, Inc.
Organization Type	504(c)(3) non-profit Health Network
Address	116 S. Broadway, Siloam Springs, AR 72761
Grantee organization website	<a href="http://www.bridgestowellness.org">www.bridgestowellness.org</a>
Outreach grant project title	Eat Better Move More
Project Director	Name: Barbara Price Davis
	Title: Executive Director
	Phone number: 479-549-3143
	Fax number: 479-549-3243
	Email address: <a href="mailto:office@bridgestowellness.org">office@bridgestowellness.org</a>
Project Period	2012– 2015
Funding level for each budget period	May 2012 to April 2013: \$149,997
	May 2013 to April 2014: \$174,974
	May 2014 to April 2015: \$174,970

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Siloam Springs Memorial Hospital	Siloam Springs, Benton County, AR	Hospital
*Community Physicians Group	Siloam Springs, Benton County, AR	Medical Health Provider
*Community Clinic	Siloam Springs, Benton County, AR	Medical Health Provider
*Siloam Springs Chamber of Commerce	Siloam Springs, Benton County, AR	Community Chamber
*Benton County Health Department	Siloam Springs, Benton County, AR	County Health Department
*Siloam Springs School Department	Siloam Springs, Benton County, AR	School District Administration
*Ozark Guidance	Siloam Springs, Benton County, AR	Mental Health Provider
*Quickcare Medical Clinic	Siloam Springs, Benton County, AR	Medical Health Provider
*John Brown University	Siloam Springs, Benton County, AR	University

### Part III: Community Characteristics

#### A. Area

Project Service Area: Siloam Springs, Benton County, AR

Total Bridges to Wellness Service Area: Rural Benton and Washington counties in Arkansas, and rural parts of four counties in northeastern Oklahoma.

#### B. Community description

The city shares a border on the Arkansas-Oklahoma state line with the city of West Siloam Springs, Oklahoma, which is within the Cherokee Nation territory. The community is located on the western edge of the growing Northwest Arkansas metropolitan area and has had a population increase of 47% to 15,039 between the 2000 and 2010 censuses. The racial and ethnic composition of the population in 2010 was 76% non-Hispanic white, 0.8% black, 4.6% Native American, 1.6% Asian, 0.2% non-Hispanic reporting some other race, 5.0% from two or more races. Further, 20.8% of residents were Hispanic or Latino, compared

to 16% for the rest of Benton. The per capita income for the city was \$16,047. About 9.5% of families and 12.5% of the population were below the poverty line, including 17.6% of those under age 18 and 8.6% of those age 65 or over.

In 2012, the city was named one of the 20 best small towns in America by *Smithsonian* magazine

The combined population of the entire service area of Bridges to Wellness approaches 200,000. Focusing this project on the City of Siloam Springs kept the project to a reasonable size.

### C. Need

Here in Siloam Springs, poverty is high, incomes are low, and diabetes and obesity are rampant. At 20.9%, the diabetes rate in our region is nearly three times the national average of 7.7%, while obesity rates reach as high as 39% compared to the national average of 34.9%. The service area of Bridges to Wellness also has a shortage of clinical staff and is federally designated as a Health Professional Shortage Area (HPSAs) and is deemed a Medically Underserved Area (MUA).

#### High Incidences of Diabetes and Obesity, Low Activity and Poor Eating Habits

The data confirm that residents of our entire Bridges to Wellness service area experience extremely high levels of diabetes and obesity. The Centers for Disease Control indicates that from 1999 to 2009, the incidence of diabetes in Arkansas increased 150%, while in Oklahoma it increased 200% (CDC Trends in Diabetes, 2010). At 20.9%, the diabetes rate in the Siloam Springs region is nearly three times the national average of 7.7% (Univ. of Ark., 2008). All of the Oklahoma service area counties also exceed the national rate by several percentage points, with Adair County at 16.8%, Cherokee County at 13.5%, and Delaware County at 15.6% (Okla. State of the State Health Report, 2011).

Such high rates of diabetes are caused by poor eating habits and disproportionately lower levels of physical activity in our service area. The 2008 Behavioral Risk Factor Surveillance System (BRFSS) surveys reveals that 80% of Benton County residents report consuming fewer than five fruits and vegetables per day. This is higher than the national rate of 76%. It is not surprising that Arkansas was named the ninth most obese state in the nation in 2011. Arkansas's adult obesity rate is 30.6%, an increase of more than 80% during the last 15 years. While Benton and Washington counties report rates of 25% to 27% at the county level, this level is 29.4% among Siloam Springs area residents. Similarly, Oklahoma is ranked the seventh most obese state in the country, with a statewide obesity rate that has doubled in the last 15 years to 31.4%. All of our Oklahoma service area counties experience even higher levels, with obesity rates there ranging from a low of 32% to a high of 39% (Okla. State of Health, 2011).

Research and resident input indicate that the members of this community need: 1) access to affordable ways to improve their own health, 2) information about education and activity options and 3) social and community support to encourage and reward healthy lifestyle choices.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

While our plans were inspired by several successful models and tools, such as SparkPeople.com and Shape Up Somerville, the two most influential promising practices that we adapted for this grant are summarized here with their health outcomes data.

**Blue Zones:** AARP and the United Health Foundation sponsored a prototype "community transformation program," or "Blue Zone," in Albert Lea, Minnesota in 2009. Blue Zones are characterized by community-wide, multi-faceted efforts that attempt to effect long-term change in behaviors, lifestyle and culture. In a small town (pop. 18,000) not much larger than our community (15,000), more than 25% of the population participated in the one-time, five month intervention. Measurable Outcomes included: 1) average weight loss of 3 lbs. per participant, 2) 49% decrease in health care costs for City employees, 3) employee absenteeism decreased 21%, 4) 550 adults joined walking clubs (racking up 75 million steps walked).

**Virgin Health Miles (VHM):** VHM is a commercially-based work-place wellness program that allows employees to earn points (and cash rewards) for their physical activity. It also includes an online/smart-phone activity tracker like our project proposes to use. Initial outcomes are very promising. Companies using VHM have provided data that employee participation rates vastly exceed the national average for participation in workplace wellness programs and are reporting measurable 1) increases in physical activity, 2) decreases in blood pressure, 3) improved or maintained BMIs, and 4) reduced costs of employee medical claims. While we realize that these were not scientific studies and that VHM had an interest in presenting only success stories, the diversity of employers that are self-reporting strong results and the large population sizes convinced us that the successes were likely valid and replicable.

## B. Description

The Siloam Springs Regional Health Consortium operates under the name of "Bridges to Wellness." The grant program focuses on interventions around healthy nutrition (Eat Better) and healthy physical activity (Move More) and is framed by the overall program design referred to as "Eat Better/Move More (EBMM)." Program services included those that address specific interventions for either nutrition or physical activities and some that span the entire healthy lifestyle approach in the community.

In support of the promotion of healthy nutrition (Eat Better), the following activities have been developed.

Recruited and trained "Cooking Matters" Instructors. Throughout the grant period our organization hosted many six-week interactive courses helping families to shop for and cook healthy meals on a budget. At each class, we provided incentives for attendance, educational materials to continue cooking activities at home and groceries for further application of the lessons. We held the classes at a variety of sites to increase community residents' ability to walk to the locations.

We hosted various educational Lunch and Learn sessions in area businesses and community locations. Health educational professionals were recruited to speak at each session. We also coordinated with area businesses and City representatives to promote interest in employees and community members. Promotional materials were created specific to each event:

1. Exercise in the workplace
2. Nutrition on the go
3. Mental Health
4. Benefits of Farmer's Markets and organic foods
5. Living with arthritis

In addition, BTW created the "Sliced and Diced" event, a fast-paced, highly interactive cooking competition. This was a free event for the families in the Siloam Springs area community. Members of the audience were invited to compete on cooking teams with a goal of creating the healthiest and tastiest dish with preselected ingredients. This event furthered the mission of Bridges to Wellness to mobilize community wellness through a variety of community programs and events. Additionally, we fostered an environment of healthy living through a lifestyle of healthy cooking and nutrition in the community.

In support of the promotion of physical activity (Move More), the program had strategies aimed at the general community and those focused on employees of area business and agencies.

The basic Move More strategy for employees was to encourage co-workers at engaged worksites in the community to form teams. Bridges to Wellness (BTW) recruited and trained coaches to oversee, educate and provide feedback to team members and work closely with an oversight Wellness Committee at each enrolled business. BTW also provided a certified personal trainer for community members for outdoor workout sessions. Kick-off events were held at all of the enrolled businesses and tracked each team's activities. "Weekly pledges" were created and sent to our online Eat Better/Move More dashboard. Each pledge had a fitness, nutrition, and wellness component. Each pledge is a brief goal or idea to be healthy, fit, and well. It gives people something small to strive towards. BTW researched available fitness resources and communicated wellness opportunities to team members. Teams were also provided a weekly newsletter created by BTW which contained information on team point updates for the dashboard, prize announcements, schedules of events and the weekly pledge. In addition, the EBMM program provided monthly newsletters about area community wellness and health activities.

Another Move More intervention was the establishment of an Outdoor Gym on the grounds of the local university. This was a partnership among BTW, John Brown University and the City of Siloam Springs. The Outdoor Gym equipment was purchased by BTW and installed as a series of exercise stations in a readily accessible green space of the university that are weather resistant and available to the public whereby people of all ages can engage in physical exercise at a level that meets their ability.

Move More activities aimed at the general community included the creation of a highly visible community call to activity - WELLFEST!. WELLFEST! is a one day in motion for all ages and abilities. Various physical activity events and healthy cooking activities were provided to the community at little to no cost. This event averaged 400-600 participants each year, some coming from hundreds of miles away to participate. Participants have provided testimonials that WELLFEST! provided a positive lasting effect and they strive to continue to come back each year. Additional community Move More services include low cost Yoga and Zumba classes.

One global strategy in support of EBMM was engagement in a mix of activities around changes in the community environment to create more health-supporting circumstances for residents. This included a community survey on interest in establishing a community wellness center and working with Downtown Main Street in Siloam Springs on master planning for a more livable, sustainable and healthy community. These community change activities are still under consideration but they provided additional opportunities for BTW to promote a healthy community and to raise its visibility with local organizations and leaders.

Another cross-cutting strategy was the creation of a web-based personal health dashboard that was customized expressly for EB/MM. The dashboard provided for setting personal nutrition, physical activity and other health goals and the ability to track progress towards the goals. In addition, there were tools such as a virtual coach and calorie calculator to support participant success. By the end of the grant, the EBMM dashboard was discontinued as experience demonstrated that many new personal devices and web-based alternatives were advancing beyond the EBMM capabilities.

In recognition of the significant immigrant community, BTW also conducted several forums with the Hispanic community in our service area to identify barriers to access to health care and the prevailing issues they identify as primary needs. These forums were held in community churches in collaboration with highly trusted Hispanic school employees. The forums were well attended and have led towards the establishment of an Immigrant Health Task Force, a new area of focus for Bridges to Wellness. This task force has already influenced some new community partnerships.

### C. Role of Consortium Partners

Community Physicians Group: Serves on Bridges to Wellness Board of Directors and employees actively participated in the Eat Better Move More initiative. Additionally, Community Physicians Group provided key feedback for the pilot program, the online activity tracker dashboard and key member oversight of the program.

Siloam Springs Memorial Hospital: Serves on Bridges to Wellness Board of Directors and partner in planning and oversight of the grant activities. Provides advertisement for Bridges to Wellness' activities.

John Brown University: Serves on Bridges to Wellness Board of Directors and partner in planning and oversight of the grant activities. Provides advertisement to student, staff and faculty for partnership opportunities. Houses the Outdoor Gym.

ARcare: Serves on Bridges to Wellness Board of Directors and partner organization which provided an opportunity for expansion of the EBMM initiative into their service area.

Community Clinic: Serves on Bridges to Wellness Board of Directors and provided volunteers for events and data for reports

Siloam Springs Chamber of Commerce: Serves on Bridges to Wellness Advisory Board of Directors and provided free publication and marketing of events, partnered on Zumba and Cooking Matters and Lunch and Learns

Benton County Health Department: Serves on Bridges to Wellness Board of Directors and provided data for planning

Siloam Springs School Department: Served on Bridges to Wellness Board of Directors and partnered in publicizing EBMM teams and events and in publicity to families and translation services

Ozark Guidance: Serves on Bridges to Wellness Board of Directors and provided volunteers for events

Quickcare Medical Clinic: Provided volunteers and referrals for educational programs

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Our full external evaluation is still underway. Our evaluation will focus on quantitative measurement of attitude and behavior change over the past three years. Results are expected to show that residents value health more, pursue health more purposefully, and that they are eating better and moving more now than they were three years ago.

Our community engagement achievements during the grant period include:

- a grand total of 2018 EBMM community event participants, with a 314% increase from year 1 to year 3
- a total of 33 participating Peer Educators

- 1034 attendees in Culinary Delights and Cooking Matters
- 9 participating employers in EBMM for their employees
- 320 participants in healthy living Lunch and Learn events
- 206 Move More teams

As the data shows, we had excellent community buy-in via our community events, Cooking Delights/Cooking Matters programs, and peer educator educational opportunities. The EBMM events included such things as WELLFEST!, our “day of movement” event, and our 5K run and bike races. One of our WELLFEST! activities that was very successful was the “Family Fitness Challenge” activities that included hula hooping, golfing, soccer, and jump roping. The strongly participating business partners booked Bridges to Wellness not only to do the Lunch and Learn programs but to also bring the Family Challenge activities to their company picnics.

Other areas declined as we worked out the online dashboard and movement team concept. As stated previously, the online dashboard was a great concept where teams could sign up, log in with their activity counts, and receive motivational coaching. In 2013, a short evaluation was sent to the movement team participants to receive input about the dashboard. Of those that returned their surveys (approximately 10%), most reported that they quit using it because it was hard to use. They also reported very little impact of the coaches since coaching was by email and text with no actual personal relationship with the coach. Receipt of this feedback prompted a revamping of the dashboard and coaching approach but, by that time, other free (we charged a nominal fee) online apps had been developed that were much more user friendly and provided the user with much more information than did our dashboard. Eventually, few people continued using ours.

The number of business partners went down for two reasons. First, the number of Lunch and Learn sessions decreased when the Program Coordinator left. Second, those businesses that continued as partners, saw the value in the Lunch and Learns and scheduled more than once for different groups of employees.

The number of 5K walks has increased. There is now, after three years, at least one per month supporting numerous causes. Family Fun Fitness activities are now a part of Farmer’s Market. The number of walking and biking trails has been increased. In fact, two new clubs have developed which focus on movement: Siloam Springs Peddlers, a biking club; and P.A.S.S. (Physically Active Siloam Springs), which is devoted to helping advocate for more community fitness opportunities.

Overall, through qualitative conversations with many stakeholders in the community, there is a belief that Siloam Springs is the “healthy community” of Northwest Arkansas. There is a sense of belief that this community values and supports health living and healthy choices. Continued efforts to propagate this belief can only have a positive impact in the community long-term.

## B. Recognition

Our organization has been recognized in the newspapers throughout the years for many of our community outreach activities and services we have provided. The radio stations made public announcements for our WELLFEST! events. We have advertised on billboards on main thoroughfares in the surrounding area and numerous listings on Chamber event sites throughout the area. Our organization is very active on numerous forms of social media (Facebook, twitter, etc.). These have provided a unique avenue for us to host contests which have engaged and challenged the community as well as increased our visibility without cost.

Some specific recognitions include:

- Newspaper Article and Radio announcement featuring the Outdoor Gym facility brought to the community by BTW.
- Cooking Matters Class editorial spread in the area newspaper, flyers in the area and Chamber email blasts.
- Received media recognition for the numerous Health fairs with area partners and employers.
- Lunch and Learn sessions public announcements in City news bulletins and company e-mail blasts.

## Part VI: Challenges & Innovative Solutions

Contact and communications with employees of partner organizations were slow and ineffective at times. Finalization of plans took several weeks. Channels of communications had to be expanded to remedy the situation.

The small community had limited resources for Lunch and Learn sessions. There were not that many businesses to accommodate the number set in our goals. Therefore, the number of Lunch and Learn sessions were reduced accordingly but the content was no less effective.

Community recognition of BTW and its Mission expanded as services and programs expanded. Work plans were modified as activities progressed. Roles of partner organizations shifted and changed organically as feedback from members was received and considered.

Participants did not find the dashboard activity tracking site to be user friendly or engaging. Clients lost interest in tracking and even began to use other online dashboard and mobile applications. The one developed by Bridges to Wellness went through many changes and updates throughout the years based on client feedback, but was still not as successful as free applications such as "My Fitness Pal," due to limited finances and technology capabilities.

Although the WELLFEST! event was well received and fulfilled many of our goals and objectives, it has never quite had the community reach that we envisioned. Our solution to the community outreach challenge was to change WELLFEST! from a one day event to a summer in motion coinciding activities with Farmer's Market, which has a community reach of about 1,000 people weekly.

## Part VII: Sustainability

### A. Structure

The consortium is led by a formal rural health network established as a 501(c)3 non-profit. As such, the consortium will continue in the form of the formal network. Depending on the activities and programs, the roles and level of engagement will change accordingly as the needs and resources shift and change. Many of the consortium members are represented on the Board of Directors of Bridges to Wellness, actively supervising the governance of the organization.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Sustained activities and programs:

1. Cooking Matters
2. Lunch and Learn Sessions
3. WELLFEST! Activities
4. Yoga
5. Zumba
6. Eat Better, Move More educational activities and community advocacy activities

Cooking Matters will be sustained through a partnership with the University of Arkansas Extension Service, which will provide the manpower and resources to continue the healthy cooking program.

The Lunch and Learn sessions will be sustained through a partnership with the American Heart Association and with Hope Cancer Resources. They will now focus on chronic disease prevention with blood pressure, sodium intake, and smoking cessation now being the educational foci.

WELLFEST! has now changed from a Day of Motion to a Summer of Motion with activities taking place in conjunction with the Siloam Springs Farmer's Market. This will expand the reach of the activities to include more community members while making the event much more cost efficient. This event for 2015 is being sustained through a community foundation sponsorship.

Yoga and Zumba have been so well received that the Zumba program has now become part of the City of Siloam Springs offerings. This has allowed the yoga class continue as it is self sustaining.

Eat Better, Move More began with an intention and a desire—increasing community activity and encouraging better eating habits. Although the online dashboard tracking mechanism has been dropped from our initiatives, many other aspects continue including the walking clubs and the focus on expanding the walking and biking trails in Siloam Springs. Both of these areas will be sustained through new partnerships with the Siloam Springs Peddlers and the community group P.A.S.S. (Physically Active Siloam Springs). These new partnerships will provide the necessary support to the walking clubs and will continue the advocacy efforts for expanded walkways and bikeways. New grants and foundational requests are being sought to cover any expenses of these advocacy efforts.

### C. Sustained Impact

The belief that Siloam Springs is a healthy community is an attitude shift that will have positive long-term effects. This belief extends through the schools, Chamber of Commerce and John Brown University, to name a few. There is a new interest in creating a Bike Friendly Community, having businesses recognized as healthy workplaces and schools are striving for the national title of Fit Friendly School. All of these are changes in attitudes that impact behavior and should, over time, impact the rates of chronic diseases in our community. With more people insured, the active recruitment of more service providers is a priority among the healthcare part of our community.

Another long term effect is the collaboration that has stemmed through the various projects. These collaborations are tackling health issues in a different and more productive way than ever before. When the concept of public transportation is discussed, we can now point out that it would solve the problem of transportation as a barrier to accessing food which contributes to food insecurity. The awareness that seemingly unconnected processes truly do impact the overall health of a community is a change in mindset that has happened in large part due to the efforts of Bridges to Wellness and the community partners in making that connection. The number of 5K walks has increased. The interest in walking and bike paths has increased. The push for safe routes to schools for our children has grown stronger. A qualitative study has shown that, over the three years of the grant, there has been an increase in knowledge and favorable change in attitudes relating to such representative dynamics as the notion that a healthier workforce leads to decreases in insurance costs for the business and increased productivity and that exercise doesn't have to be something to dread. Our full, quantitative analysis is still underway, and will hopefully support these perceptions.

## Part VIII: Implications for Other Communities

The lessons learned over the last three years tell us that community health and wellness must be a multi-pronged approach, that initiatives must be multi-disciplinary and must address different angles of the community. Many of BTW's initiatives depended on business community buy-in. A better approach might have been to seek out the civic organizations and the community groups. Our current approach includes coming at the issue from three focused directions: Eat Better/Move More, which focused on the healthy eating and the walkability of our community; Immigrant Health, which focuses on the specific needs of a subpopulation which include health literacy problems and food insecurity issues and Chronic Disease Prevention activities. This three pronged approach is the condensed, more focused approach that has evolved through the efforts over the last three years.

Another lesson is that programs must be organic in nature and flexible enough to evolve. If one planned activity doesn't have the desired impact, the consortium must be responsive enough to let it go. It is often very easy to get so invested in a particular project that much time and effort is put forth even when the community is suggesting the efforts

# California

## County of Nevada Health and Human Services Agency

Part I: Organizational Information	
Grant Number	D04RH23569
Grantee Organization	County of Nevada Health and Human Services Agency (HHSA)
Organization Type	County Behavioral Health Outpatient Services
Address	950 Maidu Avenue, Nevada City, CA 95959-8600
Grantee organization website	<a href="http://www.mynevadacounty.com">http://www.mynevadacounty.com</a>
Outreach grant project title	Healthy Outcomes Integration Team (HOIT)
Project Director	Name: Michael Heggarty, MFT
	Title: Interim Director HHSA
	Phone number: 530-470-2562
	Fax number: 530-265-9860
	Email address: <a href="mailto:Michael.Heggarty@co.nevada.ca.us">Michael.Heggarty@co.nevada.ca.us</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
County of Nevada Health and Human Services Agency: Fiscal Department	Nevada City/Nevada County/California	County Government
*Western Sierra Medical Clinic	Grass Valley/Nevada County/California	FQHC
*Sierra Family Medical Clinic	Nevada City/Nevada County/California	FQHC – Look Alike
*Community Recovery Resources	Grass Valley/Nevada County/California	Substance Use Treatment Program
*Common Goals, Inc.	Grass Valley/Nevada County/California	Substance Use Treatment Program
*Sierra Nevada Memorial Hospital	Grass Valley/Nevada County/California	Hospital
Turning Point Community Programs	Grass Valley/Nevada County/California	Mental Health Outpatient Program

### Part III: Community Characteristics

#### A. Area

The County of Nevada Health and Human Services Agency's program, Healthy Outcomes Integration Team (HOIT) provides services to a rural county in Northern California: Nevada County.

#### B. Community description

The needs of the community include limited access to health care services; coordinated services across health and behavioral health care (which includes mental health and substance use services); and lack of integrated treatment planning to improve health outcomes. One of the most significant health factors in Nevada County is the high rate of suicide. Nevada County has a rate of 23.1 suicides per 100,000 population compared to 9.9 per 100,000 Californians statewide. There is also a large number of older adults over one-third of the population 55 years of age and older. This aging population presented opportunities for HOIT to promote health and well-being and ensure easy access to health and behavioral health services. Many of these older adults do not have a history of utilizing behavioral health services, but life experiences place them at a higher risk for depression, anxiety,

and other mental health disorders, including substance use as a result of depression or prescription drug use for pain management.

### C. Need

Persons with a Serious Mental Illness (SMI) often have multiple health conditions. These physical health conditions may impact their mental illness and prevent them from achieving wellness and recovery. These individuals also need and/or benefit from a person-centered health care system that addresses their health care, mental health, and substance use issues. HOIT was designed to develop the capacity to deliver bi-directional, integrated health care services by co-locating primary care services at the Nevada County Behavioral Health (NCBH) clinic, as well as co-locating behavioral health services, including psychiatric services, at the FQHCs to meet the needs of clients. In addition, HOIT was designed to link individuals and their families to needed services, including substance use services in the community.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

HOIT implemented a modified version of the IMPACT model, an evidence based-practice, to assist in the coordination of a person-centered health care home. HOIT also coordinated health and mental health services for persons with a SMI and had chronic health conditions. HOIT utilized a full-time Registered Nurse (RN) to coordinate services between the FQHC primary care providers and the mental health psychiatry and outpatient mental health services for persons enrolled in the program. The HOIT RN and NCBH Clinical Team Leader met weekly with the FQHC RN and FQHC Primary Care doctor to create a Health Care Home and coordinate services for clients receiving services. This team coordinated and reconciled medications for the clients, and coordinated care to ensure physical health and behavioral health conditions were addressed and monitored.

Consistent with the IMPACT model, the project also hired three (3) part-time service coordinators to help coordinate care, provide case management, and link clients to needed services including accessing substance use services and other resources in the community. Specifically, the RN and Service Coordinators coordinated services, offered health and wellness activities, and assisted clients understand how to manage their chronic health conditions; how to reduce use of tobacco; and develop skills in nutrition, shopping, and healthy meal preparation. The HOIT staff ensured that the client (and their family members, as feasible) was an active participant in all aspects of their health care plan. These activities promoted integrated, person-centered care, supported individuals in achieving healthy outcomes, and helped ensure that each client and their family members were actively involved in the treatment.

### B. Description

The focus of this Outreach program was to identify adults ages 18 and older with an SMI who also have chronic health conditions, or are at risk of being diagnosed with chronic health conditions. Once identified, the individual was linked to primary health care services, and specialty health services, as needed. A thorough assessment for both health and mental health (including lab work) provided a comprehensive baseline for identifying the needs of the individual. Based on this assessment, HOIT staff worked with each client to 1) identify a person-centered health care home; 2) develop a written Wellness and Recovery Action Plan (WRAP) to support clients in achieving positive health outcomes; 3) ensure they were enrolled in the needed services including health, mental health, and substance use services.

An Individual Wellness Report (IWR) was also developed for each individual, which provided an easy-to-understand display of core health indicators that included carbon monoxide level (indicates impact of smoking); Body Mass Index; blood pressure; blood sugar (diabetes); and heart health (cholesterol). The IWR compares the individual's score on these health indicators with standard measures and color codes their values (green – good; yellow – caution; red – at risk). Clients then identified which health indicators they wanted to address and staff linked them to workshops, classes, and activities to support them in meeting their goals.

The HOIT RN and HOIT clinician worked closely with the RN from each FQHC to coordinate care. The HOIT project greatly enhanced communication between organizations. Initially, staff from each organization felt that they didn't have time for a weekly meeting. After nearly two weeks of meeting, staff began to understand the value of coordinating care tighter however able to, identify all of the medications a client was taking (or not taking) and which physician was prescribing each medication. By creating a health home and sharing information across organizations, clients received coordinated services and care. Within the first month of the grant, the FQHC nurses and physician were calling to coordinate services throughout the day for clients they shared. The FQHC primary care physicians who worked with HOIT participated in the many of the calls and fully supported this health integration model.

HOIT is our initial goal was to co-locate primary care services inside the building of the Nevada County Behavioral Health program. Upon further review of the extensive change of scope and necessary California licensing changes, the FQHC found that it was too time consuming to make this strategy cost effective. However, they were creative and met the goal by driving their mobile van (which is licensed to deliver primary care services anywhere in the community) to the parking lot of the NCBH clinic. Clients were able to receive services just outside the front door of the clinic, and felt welcomed by the Primary Care Physician.

The HOIT RN provided medication support and education to the clients; conducted the health assessment at admission, every six months, and at discharge; and offered educational workshops at the clinic and local wellness centers. She filled medication caddies for several of the clients to help them manage their medications and take them as prescribed. She closely monitored all lab results and contacted those with abnormal levels. She was always available to answer questions, and celebrated success. She worked closely with the HOIT Service Coordinators, psychiatrists, and primary care staff to coordinate services and activities. She updated the psychiatrist and primary care physician on changes in medications and side effects. She also coordinated prescriptions with the pharmacy and coordinated services with local primary care physicians in the community.

The HOIT clinician provided therapeutic oversight to the team, conducted assessments, and managed client care. The service coordinators provided support to clients, facilitated wellness activities, linked clients to needed services, provided training, and served as ambassadors for the client, to help them navigate the system. They accompanied clients to appointments, helped them get signed up for services, and provided transportation, when needed, to ensure that clients were able to access health services. The service coordinators served as the client's voice at appointments, their coach and mentor, their social support system, and cheerleader to celebrate every step of their successes.

### **C. Role of Consortium Partners**

At the beginning of the project, there were five organizations in the consortium who were actively involved in planning and implementing HOIT with NCBH as the lead agency. Western Sierra Medical Clinic, a Federally Qualified Health Center (FQHC), and Sierra Family Medical Clinic, an FQHC Look-Alike, participated in all of the planning meetings, developed the concept for the HOIT project, and implemented components of the goals. The two substance use treatment agencies, Community Recovery Resources (CoRR) and Common Goals, were also actively involved in all aspects of planning and implementing the project.

NCBH developed a Request for Proposals and hired Turning Point Community Programs as the contract organizational provider. Turning Point worked closely with NCBH to develop the job descriptions. NCBH and Turning Point collaborated to interview and hire the HOIT staff and begin implementing the goals of the grant. Turning Point/HOIT staff provided the core services for clients. The partnership between NCBH and Turning Point was seamless and clients were unaware of the difference in staff employed by Turning Point and those employed by NCBH.

The FQHC RN and primary care physician helped clients navigate access to health care, linked them to the appropriate physician, helped the clients navigate the FQHC health care system, and participated in weekly (and more frequent) calls to reconcile medications and coordinate services across health, mental health, and substance use treatment.

The two substance use treatment providers, CoRR and Common Goals coordinated services across programs. This coordination helped clients receive services for their co-occurring disorders and supported them in their recovery from substances.

The local hospital, Sierra Nevada Memorial Hospital (SNMH), located in Grass Valley, is an important partner in the system of care. SNMH operates the Emergency Department which treats individuals in crisis and is the first point of contact for those who need to be hospitalized for a psychiatric emergency. SNMH and NCBH have developed a close working relationship. When clients are in crisis, the crisis is deescalated whenever possible. SNMH and NCBH have a new grant to develop a Crisis Stabilization Unit on the grounds of the hospital, which will provide an additional level of support for our clients.

SPIRIT Peer Empowerment Center also had a significant role with HOIT clients. SPIRIT is a peer-run center that had created a healthy community that is open at no charge to people facing challenges to their mental health. They have a number of trained peer counselors who offer a holistic approach, acceptance, support, education, and advocacy. They support people as they identify their path to recovery, and empower them to achieve their personal goals. Many of the wellness activities offered to HOIT clients were held at SPIRIT. This relationship created a strong system in the community to support clients, and provide additional peer support to help clients achieve their health and wellness goals.

In the first year of implementation of the grant, these organizations worked together to develop a Memorandum of Understanding (MOU). This MOU outlined the roles and responsibilities of each organization, discussed confidentiality and shared services, and

created the foundation for developing person-centered health care homes for shared clients. It also outlined plans for sharing data on primary care, mental health, and substance use treatment services. The partnership and collaboration was outlined to ensure that HOIT services met the needs of shared clients. As a component of this MOU, a Release of Information was developed to allow the organizations to share information on mutual clients.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

A number of health outcomes were measured on this project. These outcomes included the number of HOIT clients who had an identified person-centered health care home; the number who had a written Wellness and Recovery Action Plan (WRAP); the number who received health care, mental health care, and substance use treatment services; and the number who showed improvement on health indicators.

System outcomes included: co-locating of FQHC primary care services at the NCBH clinic and behavioral health services at the FQHCs; implementing an evidence-based practice (EBP) called IMPACT; developing the capacity to collect and share health information on key health indicators between members of the consortium; and developing shared data reports to track outcomes and improve services over time.

There were 84 clients enrolled in HOIT. All 84 clients now have a person-centered health care home, 100% developed a WRAP plan, and all received health and mental health services. In addition, approximately 20 % received substance treatment services. The majority participated in services at SPIRIT Wellness Center.

The HOIT project had a significant impact on crisis and inpatient services for clients enrolled in the program. **Crisis Services:** Nearly half (45%) of all HOIT clients (38 of the 84) received crisis services while enrolled in HOIT. Following discharge from the program, only 26% of the clients received crisis services (12 out of 46). **Inpatient Services:** Only 3.5% of all HOIT clients (3 out of 84 clients) were admitted to psychiatric inpatient hospitals while enrolled in HOIT. Following discharge, only 2% (1 out of 46) were hospitalized. This clearly illustrates the impact of HOIT on the lives of our clients while in the program and after discharge.

The health outcomes achieved for clients enrolled in HOIT are also outstanding. For clients who had a baseline score of “At Risk” on a health indicator when they enrolled in HOIT:

- 78% showed improvement on their Systolic Blood Pressure;
- 86% showed improvement on their Diastolic Blood Pressure;
- 33% reduced their Body Mass Index;
- 40% improved their Fasting Plasma Glucose;
- 50% improved their Hemoglobin A1C;
- 67% improved their Total Cholesterol; and
- 63% improved their Triglycerides.

Of the individuals who smoked at admission, 87% showed an improvement in their Breath Carbon Monoxide Measurement. These results truly demonstrate the impact of HOIT on improving the health outcomes of clients with a serious mental illness.

HOIT arranged for clients to have free gym memberships. The client was required to attend the gym at least 10 times a month (as evidenced by information from the gym). This requirement resulted in a huge incentive to keep their membership. Some clients use the gym every day to swim, use the workout equipment, and participate in classes. One of the important successes of these gym memberships is the reduction in stigma for our clients. HOIT clients are working out with members of the community, which helps to reduce stigma and also helps the client feel comfortable as one of the citizens of the town. We have seen an increase in self-confidence, improved health outcomes, and participation in other community events.

#### Client Success Stories

“Elise” has dementia, severe symptoms of agoraphobia, and Seasonal Affective Disorder (SAD). She has been inside a lot this winter, declining most offers of outings, groups, or support, descending into depression and confusion. Her service coordinator arranged for Elise to have an in-home support services worker start coming to her home, to help her with daily activities. Elise is also using the free LifeLine phone that HOIT obtained; this program helps Elise call family members who had been worried about her. Her service coordinator helped her to visit SPIRIT to obtain a box of groceries from their food pantry, as she frequently forgets to buy groceries or to eat regularly. While at SPIRIT, she reconnected with an old friend who remembered when Elise

volunteered at SPIRIT as a Peer Counselor, where Elise even cut hair for the participants since she had been a beautician. Her service coordinator reports, “Elise picked up a free book to read and is wearing the biggest smile that I have seen in months.”

One middle-aged male client had a problem with angry outbursts and threatening behavior. He was also having a hard time making friends. HOIT provided him with a gym membership and supportive weekly contacts with his Service Coordinator. The client has since been working out at the gym at least 3 days each week. His angry outbursts have decreased; he has lost weight; and he feels more fit. He also reports making friends at the gym and feeling an increase in positive mood.

***The motto at SPIRIT Peer Empowerment Center is “Together we change lives.” We do this at HOIT too!***

## **B. Recognition**

There have been local newspaper articles highlighting our clients’ successes. For example, there was an article about one of our client’s successful efforts to stop smoking. The HOIT project was nominated for an award by the California Behavioral Health Director’s Association. Many counties in California are implementing Health Care Integration activities and are utilizing our Individual Wellness Reports and other components of our program. Staff from other counties frequently call to learn more about the HOIT activities, and obtain examples of our MOU and Release of Information. The HOIT RN obtained support from the NCBH Workforce Education and Training (WET) funds to partially pay for her nursing degree.

## **Part VI: Challenges & Innovative Solutions**

The biggest challenges to implementing HOIT and how they were addressed are outlined below:

- Co-locating FQHC services at NCBH
- Sharing Electronic Health Record (EHR) information between consortium members
- Improving access to care for the most remote communities

Co-locating FQHC services at Nevada County Behavioral Health. FQHCs have federal regulations and certification for the type and location of services offered. FQHCs need to complete a change of scope request to deliver services outside of their initially-certified site location. In addition, California has certain requirements in their licensing for changing the location of services. These regulations results in months of effort to obtain a change of scope and licensing. After initially reviewing the application process, Western Sierra Medical Clinic (WSMC) determined that the optimal method for delivering primary care services to NCBH clinic was to utilize their mobile van. As a result, WSMC did not need to apply for the change of scope request. This decision saved time and money, and provided co-located health care services at our clinic.

The mobile van arrived at each clinic one morning per week. The HOIT RN and Service Coordinators scheduled HOIT clients in 30 minute intervals to be seen by the primary care physician and nurse. The HOIT RN was also available to coordinate care and communicate information with the van medical team from a behavioral health perspective.

Sharing EHR information between consortium members. It was our goal to develop and/or modify existing electronic health records (EHR) to achieve interoperability and be able to exchange health information to meet Stage 1 Meaningful Use specifications. It was also our goal to identify middleware to allow the integration of data from different systems. While there are several larger counties in California with health information technology grants who have been working to develop this interoperability, it was too big of a project for this project. During the three years of funding, NCBH and WSMC both purchased and implemented new EHR systems. Both systems are able to meet Stage 1 Meaningful Use Specifications, and are able to fax prescriptions across organizations. Unfortunately, these two EHR systems are not able to achieve interoperability at this time. It is still a goal across California to develop this capacity. We will work closely with the counties that are able to implement this standard, and learn from them as they achieve this goal. Fortunately, the NCBH software system, *Anasazi*, is working with one of these grant-funded counties. Their experience will benefit us in achieving this goal and resolving this barrier.

Improving access to care for the most remote communities. The geography of Nevada County creates significant barriers to services for the eastern part of the county. During the winter, snow frequently closes the highway and prevents travel. The HOIT staff have worked to assist persons in remote locations to access health and behavioral health services from the most convenient provider. We also utilize telemedicine and telepsychiatry to improve access to health care services, whenever possible. Currently, there is a small health care clinic and behavioral health services in Truckee. In instances where a HOIT client near this location needs additional primary care or behavioral health services, the HOIT team has been able to link the client to needed services to these sites.

**A. Structure**

Our consortium will continue. We continue to meet periodically to support the enhanced collaboration and coordination between the agencies. It is now routine for the FQHC(s) and NCBH to coordinate services and reconcile medications for shared clients. Shared collaboration between NCBH and the two Substance Use Treatment programs (CoRR and Common Goals) also occurs on an ongoing basis. Turning Point will continue to have a contract with NCBH to employ an RN and Service Coordinators. The SPIRIT Peer Empowerment Center will continue to support wellness and recovery activities and coordinate services with NCBH. SPIRIT also has a contract with NCBH to provide Crisis Peer Counselors to support clients when they are in crisis and need additional support.

Sierra Nevada Memorial Hospital will continue to work closely with the consortium and develop additional services with NCBH. NCBH obtained additional funding to develop a Crisis Stabilization Unit at the hospital. This fully supports the goals of this grant and the consortium, and promotes coordination and collaboration across clients and organizations. This program will help reduce crisis and inpatient service utilization for clients.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The HOIT health integration activities will continue to be sustained. The FQHC RN, HOIT RN, service coordinators, and NCBH clinical team leader and clinician will continue to work together to coordinate care and improve access to services. These positions will continue to be funded through Medicaid reimbursement of services. All agencies coordinate services for shared clients. Similarly, clients will continue to access wellness and recovery services at the SPIRIT Peer Empowerment Center.

As mentioned above, Sierra Nevada Memorial Hospital will continue to serve clients in their emergency department as well as through the development of a Crisis Stabilization Unit, which will operate to reduce the number of crisis services and inpatient services utilization for clients. NCBH obtained California funding through the California Health Facilities Financing Authority to construct this Crisis Stabilization Unit.

**C. Sustained Impact**

The vision and success of this health integration project will have lasting effects on this county and the way in which services are coordinated across agencies. As a result of this project, there has been a change in the range of services delivered by the NCBH program. The focus on the “whole person” is evident across the agency. Staff have learned how to understand and support clients to manage their chronic health conditions, link them to physical health care services, and offer wellness and recovery services to improve health outcomes. These values and skills are used across the continuum of care and evidenced by all providers, including psychiatrists, nurses, clinicians, and Service Coordinators (Case Managers). Clients have been empowered by learning about their health conditions and are actively managing their chronic health conditions. These changes are also evidenced by the exciting improvement in health outcomes from the project.

The Outreach rural health grant has been instrumental in creating a strong foundation to allow us to obtain additional funding to expand our Crisis Continuum of Care. In 2013, California legislation passed Senate Bill 82, which created two new funding opportunities to expand crisis mental health services across the state. Nevada County successfully obtained funding from both funding sources. The first funding opportunity supports Nevada County HHS to expand our mental health crisis services to locate crisis workers in the emergency department (ED) of the local hospital 24/7. Prior to this funding, crisis workers were on-call, but needed to travel to the ED to conduct the crisis assessment. This co-location at the hospital allows immediate crisis response and supports the crisis worker to help resolve the crisis in a timely manner.

In addition, crisis peer Counselors have expanded hours when they are available to come to the ED and support clients and their families during the crisis situation. This strategy creates a more welcoming environment while the client is in the ED. This funding is also being used to develop a Peer Run Respite Center. The four-bed respite center is available for individuals to have a home-like, welcoming place to stay for up to 28 days. The Respite Center staff will help create a safe place where individuals can resolve

a crisis, receive supportive services after discharge from the psychiatric inpatient hospital or ED, and/or prevent the need for crisis services.

The second funding opportunity for the HHSA has created a mental health Crisis Stabilization Unit (CSU) on the grounds of the local hospital, adjacent to the ED. The CSU also expands the Continuum of Crisis Services for our county, to help prevent an individual's admission to a psychiatric hospital. Nevada County does not have a psychiatric inpatient hospital in-county, so all clients who are hospitalized need to be transported to other counties. By having a CSU, many clients will be able to resolve their crisis locally and not need to be hospitalized. Individuals from the CSU can also be discharged to the Respite Center, to further support their recovery.

## Part VIII: Implications for Other Communities

HOIT offers an excellent model for other small, rural counties to utilize in integrating health, mental health, and substance use services to improve health outcomes for adults with an SMI. The HOIT program has outstanding strategies for other counties to use, including the HOIT Memorandum of Understanding, Multi-Agency Release of Information, and Individual Wellness Reports. These documents provide methods and policies for referring clients; sharing electronic health care information; tracking health indicators across providers; protecting confidentiality; and celebrating healthy outcomes for clients and the health care system. All data collection forms, policies, and models for outcome reporting are available to other communities to utilize and modify to meet their needs.

# California

## Lake County Tribal Health Consortium

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23589
<b>Grantee Organization</b>	Lake County Tribal Health Consortium
<b>Organization Type</b>	Federal Title I tribally-sanctioned nonprofit organization providing primary health care. Represents six federally recognized Native American tribes in Lake County, California
<b>Address</b>	P.O. Box 1950 Lakeport, CA 95453
<b>Grantee organization website</b>	<a href="http://www.lcthc.com">www.lcthc.com</a>
<b>Outreach grant project title</b>	4Ps Plus Pregnancy Support Project
<b>Project Director</b>	Name: Patricia Hubbard
	Title: Program Director
	Phone number: 707-263-8382 ext.1303
	Fax number: 707-263-7169
<b>Project Period</b>	2012– 2015
<b>Funding level for each budget period</b>	May2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Health Leadership Network (HLN)	Lakeport, CA	Community-based collaborative
*Lake County Public Health Services	Lakeport, CA	County Department
Lake County Behavioral Health, including AODS & Mental Health services	Lucerne and Clearlake, CA	County Department
Easter Seals of Northern CA	Lakeport, CA	Nonprofit community-based organization
Lake County Office of Education Healthy Start	Lakeport, CA	County Office of Education School-Based family support services
Lake Family Resource Center	Kelseyville and Lakeport, CA	Nonprofit community-based organization
Sutter Lakeside Hospital	Lakeport, CA	Hospital
St Helena Hospital	Clearlake, CA	Hospital and clinic
MCHC Lakeside Health Center	Lakeport, CA	Clinic
Partnership Health Plan of CA	Santa Rosa, CA	MediCal Managed Care
*Lake County Tribal Health Consortium*	Lakeport, CA	Tribal Clinic and Behavioral Health services

### Part III: Community Characteristics

#### A. Area

LCTHC HRSA Outreach Grant serves the Native American population living in the county of Lake in northern California; the Native population numbers around 3,900, or about 6% of the county's total population. The target population served under the project includes the six federally-recognized Pomo Tribes: Big Valley Rancheria Pomo; Elem Indian Colony of Pomo Indians of the Sulphur Band Rancheria; Habematolel Pomo Indians of Upper Lake; Middletown Rancheria of the Pomo Indians and Lake Miwok;

Scotts Valley Band of Pomo Indians of California; and Robinson Rancheria Pomo Indians. Members from at least 111 different tribes live in Lake County, equal to nearly 20% of the 565 federally-recognized tribes nationwide.

## B. Community description

The county's total population is 64,665 (2010 American FactFinder, US Census), with the population in the area's two largest towns at 15,000 living in Clearlake and 5,600 living in Lakeport, the county seat. During the past twenty-five years, there has been an increase in the ethnic and linguistic diversity of the people living in the county. This has been enriching for the county, but it has also brought challenges in education, health care, and human services. The local economy is mainly based on retail business, agriculture associated with seasonal packing sheds and wine grape growing industry, and tourism. There is additional employment in county government, nonprofit human services, health care, and public education. During the past five years, unemployment rates have fluctuated from a high of 18.2% in January 2010 to 8.3% in February 2015. Overall, 36.4% of children under 18 in the county are living in poverty (American FactFinder 2009-2013) and 41.8% of Native Americans in the county live below poverty level. Currently, about one in five households overall in the county are receiving federal or state aid. County Health Rankings (2014) (University of WI, Robert Wood Johnson funded) show Lake County with an overall county health outcomes ranking of 57<sup>th</sup> out of 58 counties, and 55<sup>th</sup> for health behaviors (including smoking, binge or heavy drinking, obesity, and physical inactivity). Results from the 2010 Lake County Health Needs Assessment show that, compared to rates for the State of California, Lake County's smoking rate is double for adults and triple for youth; rates for alcohol-involved motor vehicle fatalities are three-times higher; admission rate for alcohol and drug treatment is double; rates for lung cancer, chronic liver disease and cirrhosis, as well as heart disease, obesity and deaths due to all cancers are worse than the state's.

County Health Status Profiles (CA Department of Public Health, Three-Year Average for 2009-2011) indicated that Lake County was ranked 54<sup>th</sup> out of 58 counties in the state for the percent of women (66.5%) who began their prenatal care in the first trimester. In addition, the county was ranked 51<sup>st</sup> for the percent of pregnant women (68.3%) who received adequate/adequate plus prenatal care. The state averages were 83.3% and 79.7%, respectively. In addition, on average, 6.3% of babies were born at low birth weight during this three-year period (county ranking 32<sup>nd</sup> out of 58 counties). Countywide screening data on substance use for women in the month prior to knowing they were pregnant indicated that 63% had a positive screen (for use of tobacco, alcohol, marijuana, other drugs, and/or prescription medications). This dropped to 46.2% with a positive screen after their pregnancy was known.

## C. Need

Lake County's Native American tribes have a long history of generational and personal life trauma that continues to impact individuals' physical, emotional and mental health and well-being. Native American women who drink alcohol or take drugs during their pregnancy can deliver a child with permanent impact on their physical, emotional and mental health, including Fetal Alcohol Spectrum Disorder (FASD). Substance use by Native American pregnant women and their partners, lack of access to transportation, limited trust for non-Native prenatal providers, and little knowledge and understanding of the importance of and need for prenatal care are key drivers for this project. From 2009 through 2012, LCTHC 4Ps Plus Project provided pregnancy support services to Native American women through an initial HRSA Outreach grant. This project's services included first and third trimester screening for substance use, depression and domestic violence/intimate partner violence (DV/IPV); engaging the women immediately after they received a positive pregnancy test; providing an educational intervention early in the pregnancy; and connecting the women to prenatal care in their 1<sup>st</sup> trimester and providing incentives to ensure an adequate number of visits were completed. Exit interviews were conducted after the birth of the child to document birth outcomes. As a result of this project, fewer Native American babies were born exposed to Alcohol, Tobacco and Other Drugs (ATODS) and women were ensured healthier births through completion of at least 13 prenatal visits. Of the babies born to the Native American women during this time period, 93% were of normal birth weight and 68% were born free of exposure to any tobacco, alcohol or drugs. Overall, 75% of the women participants received at least 13 prenatal visits during their pregnancy, with 74% receiving early prenatal care beginning in the first trimester. However, these results indicated that there was more work to do, with 32% of the Native American women still using ATODS during their pregnancy and about 25-26% not receiving early and/or adequate prenatal care. Enhanced strategies were outlined at the conclusion of the initial three years of funding to include a more intensive focus on engaging the women in clinical mental health counseling during their pregnancy and increasing the level of client contact through screening in the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> trimesters of their pregnancy, individual counseling, and participation in educational support groups, social gatherings and celebrations. During the period of this current HRSA Outreach grant (2012-2015), the Human Services Department received funding to engage in an intensive home visiting program and began a pilot job skills program for some of the male partners of the women in 4Ps. The vision for the 4Ps Plus Pregnancy Support project is stated as follows: "In Lake County, every Native American baby will be born free of the effects of prenatal exposure to alcohol, tobacco, and other substances into healthy, peaceful, substance-free families living in proud, strong tribal communities." The 4Ps Plus project resides in the LCTHC Human Services Department that provides behavioral health counseling, outpatient relapse prevention, and a Parent Child

Development Center offering educational and job and life skills classes and group engagements to Native American families working toward resolving physical and mental health concerns and addressing life's complex issues in a circle of care.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

In 2006, a countywide 4P's Plus Pregnancy Support project was organized through a collaborative effort of Lake County Health Leadership Network, Lake County Public Health and other private, nonprofit agencies, including LCTHC, who serve pregnant and parenting Native American women. The collaborative countywide effort has focused on sustaining the use of screening throughout the prenatal period to provide continued, appropriate services and referrals to pregnant women for reduced substance use and increased access to early and adequate prenatal care. The evidence-based model being implemented through the LCTHC project was developed through work by Dr. Ira Chasnoff at the Children's Research Triangle, Chicago (<http://www.childstudy.org/ira-j-chasnoff-president/>). The screening tool being used by LCTHC and the countywide collaborative is the 4Ps Plus Screen for Substance Abuse, Depression, and Domestic Violence in Pregnancy along with an educational intervention titled: "I am Concerned," by: Ira J. Chasnoff, M.D., and Richard F. McGourty, Ph.D., NTI Upstream (<http://ntiupstream.com/files/4PsPlus.pdf>). The 4P's Plus screening tool has been shown to reliably and effectively screen pregnant women for risk of substance use, including those women who are typically missed by other perinatal screening methodologies. (<http://www.ncbi.nlm.nih.gov/pubmed/17805340>).

### B. Description

The target population for the current grant is Native American pregnant and parenting women and their associated family members and support network. The project is providing them with continued assistance, incentives and support to keep their prenatal OB/GYN appointments and to accept interventions by LCTHC Human Service staff and other consortium or community services providers throughout their pregnancy. The frequency of screening for substance use, depression and DV/IPV was expanded during this grant period to include intake, at 2<sup>nd</sup> and 3<sup>rd</sup> trimesters and after the birth of the child to find any concerns due to post-partum depression. Birth outcomes for the child continue to be tracked (i.e. normal birth weight, normal discharge or C-section, and exposure to substances). This project included a more intensive level of mental health counseling, increased social and educational interactions and integrated behavioral health support for the participants. Additional highlights of program activities follow:

4P's Pregnancy Screening with Professional & Mental Health Counseling Services (HRSA funded): The 4Ps Plus screening questionnaire is presented to the pregnant woman by a LCTHC Human Service counselor. Depending on the results of the screening, referrals are then made to the appropriate LCTHC Mental Health Counselor, Pediatric Clinic, Medical Department or other Human Service Department programs and also to other agencies in the county in order to provide the pregnant mother and her family a complete "circle of care."

Relapse Prevention Individual and Group Counseling (IHS/LCTHC funded): A regular schedule of counseling services, recovery support and smoking cessation groups are offered through the Human Service Department at the Parent Child Development Center (Legacy Court) with funding by LCTHC/Indian Health Service (IHS). Relapse Prevention is using the following curriculum: "Native American – Red Road to Wellbriety, In the Native American Way ([www.whitebison.org](http://www.whitebison.org))

4P's Mom's-to-Be Shower and Special Celebrations (HRSA funded): To build the woman's healthy social connections, LCTHC holds a monthly Mom's-to-Be Shower funded by LCTHC for pregnant mothers which offers important health information concerning pregnancy and also provides fun activities along with special gifts for the mother's-to-be. Throughout the year during the holidays, LCTHC provides parties and gifts to assure the pregnant mother's clearly know LCTHC is concerned for their care and positive outcomes during their pregnancy.

Women's Cultural Wellness Class (HRSA funded): Encourages Native American pregnant women and other women in their family to gather and enjoy Cultural and Traditional activities providing the connections needed for help and support during a women's pregnancy.

GED & Adult Education Classes (IHS/LCTHC funded): Native American clients who are studying to receive their GED or Adult Education Certificates are provided weekly tutoring services at the Parent/Child Development Center, Legacy Court, and are also directed to the Adult Education Office or the Lake County Office of Education for the help and support they need to achieve their high school certificate.

Parenting Classes and Groups (IHS/LCTHC funded): A Nurturing Parenting Group along with a “Motherhood is Sacred” ([motherhoodissacred.com](http://motherhoodissacred.com)) class is offered weekly at the Parent/Child Development Center in support of building knowledge and practice around parenting skills

Job Skills and Job Search Classes (IHS/LCTHC funded): Two Job Skills classes are offered at the Parent/Child Development Center; 1) Customer Service/Job Search and 2) Home Maintenance and Repair. Qualified state teachers have been hired by LCTHC to teach pregnant women and other family members to obtain the education and training they need to find work in the community, and to increase their family income moving them out of a low level income.

### C. Role of Consortium Partners

Consortium partners include Lake County’s key health care professional, providers and policy makers. The partners are all members of the Health Leadership Network (HLN) that has been addressing various community health care needs in Lake County, CA since its establishment in 2002. HLN focuses on collaborative projects that require cross-agency cooperation for successful implementation of health care policies and procedures and works to strengthen the partnership between medical and non-medical providers. HLN has recently engaged in “Way to Wellville,” a huge opportunity for the community to look at its health care profile, which includes mental and physical health and well-being. LCTHC is involved with HLN in this project. Lake County was chosen along with four other communities across the nation by HICCUP to be a part of the “Way to Wellville” initiative after a nationwide search (<http://www.hiccup.co/challenge/#>). LCTHC will be working closely with consortium members to make this project a success in helping the Native American community move towards better health and wholeness. LCTHC is also committed to keeping our whole community healthy by providing access to affordable, quality health care. Consortium partners, their roles and responsibilities are as follows:

Lake County Tribal Health Consortium (LCTHC): After LCTHC received the HRSA Outreach Grant, the facility developed a Cultural Wellness Parent Child Development Center (CWC) providing professional health and human service interventions with pregnant women, mothers, and supporting family members to reduce or eliminate alcohol and drug use during pregnancy and increase access to prenatal care. A parenting and preschool activities program was developed to help parents prepare their children for entry into kindergarten, and to have the children involved in learning activities while the parents attended adult groups and classes in support of making positive changes in their lives. In addition, LCTHC Human Services focuses on improving behavioral health and increasing integration with LCTHC Medical. The Department hired a Licensed Child and Family Therapist to assist in enhancing clinical mental health services available, including services for the Native American pregnant women and their family members who are participating in 4Ps. In addition, a Substance Abuse Counselor, a Human Service Counselor and an additional Licensed Clinician provide services and support for behavioral health issues on a daily basis at LCTHC.

Health Leadership Network (HLN): The HLN facilitates the Consortium meetings and provided strategies, ideas and direction for the group. The HLPN has sponsored county-wide seminars and presentations, such as Dr. Ira J. Chasnoff, M.D., training on Fetal Alcohol Syndrome Disease (FASD), use of the 4P’s Plus Screening Tool for Substance Abuse, Depression and Domestic violence during Pregnancy, and the prenatal intervention “I Am Concerned.” LCTHC staff members attended all seminars and presentations and the regular HLN meetings to support community activities that met the shared goals and objectives of the CWC.

Lake County Public Health Services: Public Health plays a leadership role in the health care and policy development. They provide targeted primary health care services, referral networking, systems management, outreach and distribution of health care information. In addition, they convene periodic meetings in support of the countywide implementation of 4Ps Plus screening and provided funding support to use the 4P’s screening form and receive periodic aggregate reports from NTI Upstream/Children’s Research Triangle.

Lake County Mental Health Services: This partner provides on-call assistance for any mental health concerns that might arise with the Native American clients served. LCMH has developed and sponsors a safe place for Native Americans living in Lake County to gather together and share their traditions, culture and past history called “Circle of Native American Minds.” Circle of Native American Minds hosts special monthly events for LCTHC such as “Drumming Out Drugs” and Relapse Prevention drum making activities.

Easter Seals of Northern California: Easter Seals provides technical assistance and early childhood assessments/screenings for children’s development, health and safety, collaborating with families that attend the CWC and its programs.

Lake County Healthy Start: This partner assists families with school-age children of the CWC with community resources and referral networking.

Lake County Alcohol and Other Drug Services: This partner offers services and interventions to the clients who are court-ordered to attend a Relapse Prevention Group.

Lake Family Resource Center: The Lake Family Resource Center provides domestic violence/intimate partner violence support and shelter services, and Nurturing parenting classes in the county. LCTHC and LFRC have partnered along with St Helena Adventist Health in a health care response to domestic violence grant (2014-2016) through Blue Shield of California Foundation and Futures without Violence.

Health Care Providers: Sutter Lakeside Hospital, Saint Helena Clear Lake Hospital (Adventist Health), Lakeside Health Center and LCTHC all work together to assure each client receives quality prenatal care. Recently, Partnership Health Plan of CA (the managed MediCal provider for Lake County) also joined the consortium.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

*“The 4Ps program has changed my life for the better. I am a better mother and person as well.”*

Quote from Native American pregnant and parenting woman participating in LCTHC 4Ps Plus Pregnancy Support program

The target population for the current grant is Native American pregnant and postpartum parenting women and their associated family members and support network. The 4Ps screening for substance use, depression and DV/IPV at intake indicated that 76% of the pregnant women had parents that had a problem with drugs and/or alcohol and 32% indicated their partners also had a problem with substance use. In addition, 32% indicated depression was an issue for them and 18% indicated their partner's temper was a problem for them. Adverse Childhood Experience (ACE) questionnaires were also administered with participants at intake. These results indicated that 85% of the pregnant women had at least one ACE marker, with 59% indicating three or more ACE markers. The ACE results are a measure of the

childhood trauma experienced by participants and, along with the 4Ps screening results, point to an ongoing need for behavioral health support. This project period included a more intensive level of mental health therapy/counseling, increased social and educational interactions and integrated behavioral health support for the participants, intended to drive improvement in the results related to the project's primary measures. Detailed results for the women served from May 2012-April 2015 include the following:

- There have been 136 pregnancies among participants during this grant period to date (within approximately 1 month to the end of the grant). This is more than the total served during the first round of funding (total of 94 pregnancies among NA women May 2009-April 2012).
- 110 (81%) of the 136 women started their prenatal care in the first trimester, one goal of the project. This is an improvement over the 75% achieved in first round of funding.
- A total of 104 of the 136 (76%) women who completed the initial intake process with the 4Ps Plus screening have engaged in services (13 are still pregnant as of the end of March 2015); 12 additional women had miscarriages or terminated their pregnancy and 20 more women refused additional services or moved out of the area.
- Of these 104 women, there have been 71 live births thus far where exit data has been collected, with 64 (90%) at normal birth weight. This is a decrease from the earlier project period, at 93% at normal birth weight.
- There has been a significant increase in the number of C-sections during this second round of the project, with 41% of the births thus far having been by C-section (compared with 14% in the earlier project period).
- 82% of these babies (58 out of 71 births) have been born free of exposure to tobacco, alcohol or drugs. This compares with 68% in the first round. There has been an increase in babies born free from any exposure across the board (from tobacco, alcohol, marijuana, drugs, or medicines).
- Compared to the month before they knew they were pregnant, 52% more Native American pregnant women participating in the 4Ps Plus Pregnancy Support project abstained from any alcohol use; 18% more abstained from marijuana use; and 26% more quit smoking.
- The average number of prenatal visits was approximately 13.03 visits, with 13 visits as the target for participants in the project. Approximately the same percentage of participants (72%) completed 13 or more prenatal visits compared with the first round.
- 68% (28 of 41) of the pregnant women who gave birth during their participation and indicated they were using substances at intake had abstained during their pregnancy
- 100% (30 of 30) of the women who entered the program not using substances continued to not use during their pregnancy.

In a satisfaction survey at the end of their participation in the program, participants provided feedback on the usefulness of the information they learned about keeping themselves and their baby healthy, the importance of prenatal care and the importance of abstaining from drugs and alcohol during their pregnancy. The Participant Survey results indicated that:

- 93% of participants strongly agreed that they learned useful information about the importance of prenatal care;
- 96% of participants strongly agreed that they had learned that “a small amount of alcohol or drugs during pregnancy can harm my baby”;
- 93% of participants strongly agreed that they will use the information they learned to keep their baby healthy;
- 88% of participants strongly agreed that they received the type of help they wanted.

*“This program has given me the strength to continue my sobriety and keep myself and my children healthy.”*

Quote from 4Ps and  
Tribal Home Visiting Mother

## B. Recognition

The LCTHC Human Services Job Skills Program (piloted in 2013-2014 to work with Native American partners of pregnant and parenting women) was featured in an article and video presentation (Lake County News, [Building an oasis of health: Lake County Tribal Health Consortium debuts new family garden space](#), Sunday, 08 June 2014 Elizabeth Larson.

## Part VI: Challenges & Innovative Solutions

One challenge the LCTHC 4P’s program has experienced during this HRSA Outreach grant was getting the pregnant women to make an ongoing connection with the Human Service Department in joining the 4P’s (4 stages of pregnancy) group. The program worked to engage the women early in their pregnancy to complete screening and prenatal visits, to utilize substance use counseling and support and to participate in regular monthly healthy social activities from the first trimester of their pregnancy until after the baby’s birth. Early prenatal care helps women and providers to identify and lessen the potential risks of FASD, birth defects and other developmental disabilities in young children prenatally exposed to alcohol, tobacco, and other drugs. During this past grant period, LCTHC Medical and Human Service staff committed to work together to build a strong link between the two departments to ensure all Native American women who have a positive pregnancy test are seen not only in the Medical Department but also by a Human Service Counselor. This ensures that the woman is offered the 4P’s educational intervention and screening to evaluate for any problems they might have during pregnancy. Women who do not receive information concerning the negative outcomes of substance use during pregnancy may leave the Medical OB clinic knowing they are pregnant but do not return to the clinic or come in to the Human Services Department until they are in 2<sup>nd</sup> or 3<sup>rd</sup> trimester, thinking there is no need. Since not seeing a doctor until the 6<sup>th</sup> or 8<sup>th</sup> month of pregnancy has been a generational concern, LCTHC OB Center’s nurses are now screening women during a pregnancy test and before they leave the clinic for any signs or symptoms of substance use to make sure the Human Service Department is called while the pregnant woman is still at the clinic and can be guided over to meet with the staff for the support she needs during pregnancy and postpartum.

Another challenge was to make sure the pregnant woman received and connected with all available support and referrals provided to LCTHC programs and those of other Consortium members. Referrals are made after the 4P’s, Government Performance and Results Act (GPRA) and ACE assessments were completed with a LCTHC Human Service Counselor. At times, the pregnant woman would refuse the referrals offered. The LCTHC OB clinic and the Human Services Department work closely together to keep each other informed of the referrals for services offered to the pregnant woman. Encouragement to engage in the services offered is given in different ways: 1) to help the client make the first appointment needed with the referral agency; and 2) to assist client with any support she may need to get to her first referral appointment, such as transportation. The project staff also developed a structured incentive program to encourage the pregnant women to complete their prenatal visits and then come into LCTHC during their second and third trimester to be screened using the 4Ps tool and receive their incentive/gifts. To validate the prenatal visits, the prenatal provider signs a form indicating the participant had seen the doctor at least three times during the trimester. This provided an opportunity for the 4Ps Plus Pregnancy Support staff to maintain critical contact with participants during the course of their pregnancy.

## Part VII: Sustainability

### A. Structure

LCTHC anticipates the Consortium will continue on with its current members to implement a countywide approach to meeting the needs of pregnant women and their family members and assure that children are not prenatally exposed to toxic substances. The Health Leadership Network (HLN) has been facilitating the Consortium meetings and will continue to do so, providing direction

concerning new health initiatives and ongoing support for community-wide activities. All consortium members listed have worked closely together for a long time to establish in Lake County higher standards of medical care and health and wellness services for all peoples served.

## B. On-going Projects and Activities/Services To Be Provided.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

LCTHC expects to discontinue some services and continue some of the activities developed during the HRSA Grant after April 30, 2015 as follows:

Pregnancy Screening: Screening for pregnant women will be provided through LCTHC Medical, utilizing the Comprehensive Perinatal Screening Program (CPSP) screening tool rather than 4P Plus. The LCTHC Medical Department OB/GYN Clinic will provide information concerning FASD and the negative aspects of using drugs and alcohol during pregnancy and health information concerning pregnancy, instead of in the Human Services Department by Social Service staff. This will be more of a patient-by-patient in-reach focus, with limited outreach and health-focused groups offered.

Relapse Prevention: Regular schedule of counseling services and recovery support and cessation groups will be continued through the Human Service Department by the Relapse Prevention Counselor with funding by LCTHC/Indian Health Services (IHS). Relapse Prevention is currently using the curriculum: "Native American – Red Road to Wellbriety, In the Native American Way ([www.whitebison.org](http://www.whitebison.org)),

GED & Adult Education Classes: Native American clients who are studying to receive their GED or Adult Education Certificates will be directed to the Adult Education Office or the Lake County Office of Education for the help and support they need to achieve their certificate. Life skills, job skills and job search classes currently being offered by LCTHC Human Services Department will not be continued unless additional funding can be secured.

Professional Counseling Services: LCTHC Human Services Department will continue through the Human Service Department and sustained from funding by LCTHC/IHS.

Parenting classes and groups: Fatherhood/Motherhood is Sacred (<http://aznaffa.org/>) and Nurturing Parenting Program for prenatal and afterbirth families will continue using the curriculum [fdr@nurturingparenting.com](mailto:fdr@nurturingparenting.com).

Overall, sustaining and connecting Native American pregnant women to early and adequate prenatal care and strongly encouraging them to refrain from substance use during and after pregnancy will continue to be a priority in the LCTHC Human Service and Medical Departments.

## C. Sustained Impact

The sustained impacts from the LCTHC HRSA Outreach grant can be described as:

### New Ways of Working Together and Serving Native Clients

Working relationships were strengthened through the grant. There has been an expanded focus on the prenatal period and the health of both the mother and the baby by service providers involved in the Consortium. LCTHC has shown through this grant that screening and added follow-up support for pregnant woman can result in healthier births.

### New Capacity Created

- New capacity was created, especially at LCTHC. The Medical Clinic has increased its awareness of the services provided through Human Services. In addition, the Medical Clinic added a prenatal provider during the grant period and Native women have been responding positively to this development. Previously, they would have to go to another provider in the county to receive prenatal care. Now, with the addition of these services at LCTHC, Native women are able to stay connected to this trusted medical home during their pregnancy.

- LCTHC Human Services staff are working closely with the Family and OB/GYN Medical practitioners co-located in the Clinic to encourage Native American women early in their pregnancies to participate in prenatal visits, one-on-one counseling, groups and other activities offered at LCTHC and through referrals to other community-based agencies.
- In addition, the grant emphasized the need for additional clinical counseling capacity in Human Services. In 2012, LCTHC hired an additional Mental Health professional to connect closely with the Medical Department and provide mental health counseling to all pregnant women and other family members who support her. Many Native American clients have had traumatic events happen to them during their childhood and young adult lives and require skilled counseling and support for their recovery from those events and to reduce their use of drugs and alcohol.
- The grant initiated the creation of the Cultural Wellness Center (CWC) where groups and classes are offered for the project participants. The groups and classes are provided in a safe environment away from the clinical setting of LCTHC. The program's approach is relationship-based and utilizes frequent contacts and motivational talks, counseling and educational support. Due to the success in attendance by the pregnant and parenting mothers, their partners and other family members, in 2013, LCTHC added a Job Skills program. This program helps to support participants' relapse prevention, advance their education, acquire the work skills needed to be successful on the job, and receive assistance to find work in the Lake County community in which they live. Not all of these CWC services will be able to be sustained without additional grant funding after April, 2015. However, the program helped to identify the importance of this approach to relapse prevention and recovery support.

#### Policy Changes to support sustained impact

One additional impact from the increased awareness of the importance of this prenatal period as well as other factors, LCTHC began to provide Comprehensive Perinatal Support Program (CPSP) at Medical. This program coordinates with the 4Ps Plus program to work with women receiving prenatal services at LCTHC. In March 2015, LCTHC completed and held its grand opening of a new Pediatric and OB/GYN clinic in Lakeport. The positive accomplishments and outcomes from the LCTHC HRSA grant have been recognized by the range of medical and non-medical agencies serving pregnant and parenting women and their families in the county for its support of healthy pregnancies and babies born without prenatal exposure to substances.

### **Part VIII: Implications for Other Communities**

Every community is different and needs to develop measures/indicators that are unique to their particular program strategies. However, the LCTHC Human Services program staff has identified several key factors that were beneficial to its success. Each relate to the continued development over time of its organizational and community strengths.

#### 1. Growing organizational steps toward integration of behavioral and physical health services

The 4Ps Plus Pregnancy Support Project benefited significantly from being associated with LCTHC Medical Clinic and being embedded in the Human Services Department. With OB/GYN services added in 2014, Medical has seen a growth of about 25% in the number of women of child-bearing age that have been served in the clinic during the period of the grant. There were 143 women who received a positive pregnancy test in Medical from May 2012-April 2015. Of these 143 women, 136 (95%) were provided a referral and connected with the 4Ps Plus Pregnancy Support Project in Human Services during the grant. Both Medical and Human Services, along with their patients, benefited from the alignment of interests and through integrated and complimentary services and referrals.

#### 2. Growing organizational response to providing a "circle of care" for families

LCTHC Human Services has had a major long-term focus on prevention of Fetal Alcohol Spectrum Disorders (FASD). A needs assessment completed in 2010 among the Native American community in Lake County provided further drive to prioritize services to prevent newborns from being exposed to substances prenatally. Human Services has worked to develop a "suite" of culturally-appropriate services that are aligned with these community interests, including adding mental health clinicians, enhancing outpatient relapse prevention programs and recovery support services, and offering home visitation based on an evidence-based model with a focus on clean and healthy pregnancies and parenting. In March 2015, LCTHC also opened a new pediatric clinic in Lakeport that is expected to add to the growing population of children, pregnant and parenting women, and their families being served.

#### 3. Increasing community partner engagement including a focus on the prenatal period

The success of the 4Ps Plus Pregnancy Support program has contributed to a growing interest in the broader community around integration of behavioral and physical health, and a continued interest in the prenatal period. The Consortium of medical and non-medical providers involved in this grant continues to meet and engage new partners. In addition, a broad collaborative in the county, including LCTHC as a partner, is engaged in outreach, education and policy/systems change efforts with a focus across

the lifespan around reducing chronic disease, preventing obesity, improving physical activity, improving mental health and wellbeing and reducing substance use, funded through a HRSA Network Development grant and two CDC Health Partnership grants. This is also continuing through Lake County's initiation as one of the five Way to Wellville communities nationwide.

# California

## Woodlake Unified School District

Part I: Organizational Information	
Grant Number	D04RH26933
Grantee Organization	Woodlake Unified School District
Organization Type	Family Resource Center-School
Address	168 N. Valencia, Woodlake, CA 93286
Grantee organization website	<a href="http://www.woodlakepublicschools.org">www.woodlakepublicschools.org</a>
Outreach grant project title	On Point
Project Director	Name: Irma Rangel
	Title: Director
	Phone number: 559-564-5212
	Fax number: 559-564-5301
	Email address: <a href="mailto:irangel@w-usd.org">irangel@w-usd.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,997
	May 2013 to April 2014: \$149,997
	May 2014 to April 2015: \$149,997

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Woodlake Unified School District and its Woodlake Family Resource Center	Woodlake/Tulare County/California	Public School District
*Family HealthCare Network	Woodlake/Tulare County/California	Health Clinic Network
*Woodlake Police Department	Woodlake/Tulare County/California	Law Enforcement
*Tulare County Health & Human Services Agency	Visalia/ Tulare County/California	Public County Health Agency
*Tulare Youth Service Bureau	Tulare/ Tulare County/California	Children's Mental Health Services

### Part III: Community Characteristics

#### A. Area

The Woodlake Unified School District's program, On Point, provides services in Tulare County, California which includes the town of Woodlake and the surrounding 800 square mile unincorporated rural area served by the Woodlake Unified School District. This area is officially populated by 10,000 people. However, there are uncounted thousands of migrant workers who come to this area each year drawn by ready agricultural work.

#### B. Community description

We are a young community: nearly 25% of our population is under the age of 18, with 10% under 5. The median age is 25, compared to the national average of 35 (*USCB, op.cit.*) The average birth rate in the town of Woodlake is nearly 20/1000 total population, compared to 13.5/1000 nationally (Center for Disease Control, Population Query, Washington, D.C., 2008 [*CDC*]). We are a predominately Hispanic community: almost 84% of Woodlake residents identify themselves as Hispanic or Latino. In addition, 42.6% identify themselves as foreign born, and of those, 97.2% from Latin America (*USCB, op.cit.*). Our school surveys report that 99% of students speak Spanish at home, and 47% are English learners. Linguistic and cultural isolation are both risk factors for perinatal depression, as well as barriers in their own right to accessing healthcare and treatment (*NICHM, op.cit.*). Lastly, we are a community challenged by poverty, another recognized risk factor for perinatal depression (*NICHM, op.cit.*). The median family

income is \$23,880, less than 1/2 the US average of \$50,046, and with families that are nearly 1/3 larger. The unemployment rate for Tulare County is 18.7%, compared to California at 12.3%, and the US at 9.1% (*City-Data.com, Admaveg, Inc., 2011 averages*).

### C. Need

Nearly six years ago, WFRC and its consortium partners launched the REACH project, a HRSA ORHA-funded mental health outreach, education, and service delivery project. Through the success of that project, we developed a more detailed base of knowledge than ever before regarding Woodlake's mental health needs. A picture has emerged of perinatal depression as a major untreated disease in our community. At the same time, we found through our work with perinatal women that the perinatal juncture provides a window for treatment with more potential, far-reaching, positive outcomes than almost any other period of life, for the mother, children, and whole families. Thus the target population itself was the impetus for the inception of perinatal focus.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

We set about finding the most appropriate response, in terms of clinical effectiveness, limited resources, our particular community's array of geographic, linguistic, and cultural conditions, and desired long-term outcomes. The result was *On Point*, a system of collaborative, interlocking components aimed at education, screening, and treatment of Perinatal Mood and Anxiety Disorders (PMADS). Our methodology was a promising model hybrid of: (1) the renowned "Nursing Best Practices Guideline, April 2005, "Interventions for Postpartum Depression," Registered Nurses Association of Ontario (RNAO), which set forth effective protocols for screening and effective clinical practice guidelines following assessment; (2) the regional program created and implemented by our Consortium Partner, the Tulare County Health and Human Services *Perinatal Wellness Project*, and our years of hard won experience working together in adapting the RNAO's programs to our local settings and conditions; (3) WFRC's proven, successful outreach, case management, and service model for addressing mental health issues in our community.

RNAO's seminal document on screening and treating post-partum depression surveyed all available research and project studies to that time. It then set forth the importance of treatment for the mother and child, and the logical effectiveness of nurses in that process. Their findings and recommendations have been verified and sustained in numerous studies.

The RNAO document set forth the following clinical protocol: (1) Pregnant and post-partum women are to be screened for PMADS by use of a professional screening instrument, the Edinburgh Post-Natal Depression Scale (EPDS). The EPDS is easily self-administered and scored, and has consistently tested as highly sensitive and accurate across numerous cultural and linguistic barriers (*Gaynes, et al., op.cit.*). (2) The score initiates the next step: a score of 10 or higher triggers a referral for mental health services. A score of less than 10 requires no clinical response; however, a milder form of post-natal depression commonly called "baby blues" may be indicated and empathetic response indicated. (3) If the mother answers Question 10 affirmatively (that she has thoughts of hurting herself), the score is immediately reported and crisis protocols are initiated.

These protocols were developed for a hospital setting for use by nurses; however they point in the document to community based possibilities adapting the same principles. Thus, 3 years ago, we adapted the RNAO clinical protocols to our regional and rural setting: (1) screening would be conducted at multiple sites by trained lay persons and professionals, greatly increasing point of contact screening, (2) scores would be reported to centralized nurse case manager(s), who would be qualified to make referrals to local mental health practitioners and/or initiate crisis protocols. Working together, our Project therapist and PWP staff developed Woodlake population specific practices for incorporating EPDS screening, referral and treatment into our service protocols: (1) PWP public health nurse contributing specialized nurse case management based on her extensive knowledge of our local conditions, (2) healthcare access assistance and other case management linkage provided through our home visit, or "platicas," teams, and (3) the addition of multiple community education and screening points through our local network consisting of our Consortium partners and supporting partners.

### B. Description

1. Include access assistance/case management at weekly MDT meetings
2. Ensure ongoing training for home visit teams in access assistance
3. Screen all eligible women at various points of contact using EPDS
4. Conduct 10-15 home visits a week
5. Train all relevant WFRC and Consortium partner staff to administer EPDS, and refer when indicated
6. Seek out new contact points among other agencies and organizations, and train for screening and referral
7. Provide direct mental health services to 20-25 women per week
8. Provide comprehensive case management of all cases

9. Acquire, adapt, and/or develop materials appropriate to target populations
10. Disseminate materials using contact points of all possible partners

### C. Role of Consortium Partners

Family HealthCare Network continues to be one of two major health care providers in this community. Community health programming is a primary component of the activities of Family HealthCare Network and drives their patient centered approach of linking with community members beyond the four walls of the community health center. This organization operates several programs to promote health and wellness in communities like Woodlake that lack access to other sources of community health care and services due to financial, linguistic, geographic and transportation barriers.

Family HealthCare Network supports opportunities to raise awareness on access to affordable health care. Their staff is trained and certified as Certified Educators and Certified Enrollment Counselors for California's implementation of the Affordable Care Act called Covered California.

Specific activities provided under this Outreach grant include providing medical care as needed for program participants and administering medication when needed. Psychiatrist, licensed psychologist and licensed clinical social workers provide Behavioral Health and Mental Health services at Family HealthCare Network that support program efforts.

The Woodlake Police Department (WPD) continues to be readily available when called upon by WFRC staff to address any safety matter pertaining to program participants. The WPD is short staff due to funding issues and no longer able to provide an onsite detective to attend weekly multidisciplinary team meetings. This has not affected our collaboration or ability to communicate effectively.

The Tulare County Health & Human Services Agency-Perinatal Wellness Program was impacted early on by a significant reduction in funding at which point the component of therapeutic services was illuminated. The nurse case management component was kept at a less intense capacity. A new contract was awarded to Tulare Youth Services Bureau to provide needed clinical interventions to women experiencing postpartum depression under the new program, Building Bridges.

Tulare County Health and Human Services Agency under Mental Health Services Act funding provided contract to WFRC to provide clinical services to women experiencing postpartum perinatal mood disorders. Prenatal Wellness Program continues to provide nurse case management services to eligible program participants in our Woodlake community.

The Woodlake Unified School District serves as the governing body of WFRC and is the Lead Education Agency representing hundreds of site staff that work in coordination with WFRC staff to provide support to our children and their families.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

All the combined efforts of WFRC and its Consortium partners move towards the goal of long-term positive outcomes for the children and families of our community.

Our specific goals and outcomes were defined as:

Goal 1. Perinatal women and their families will have greater access to healthcare through application assistance and other cost-reducing devices.

Outcome 1: 100% of perinatal women screened for PMADS by WFRC were also assisted with eligibility access.

Outcome 2: 10% increase over three years in the incidence of use of available preventative health care services

Outcome 3: 10% decrease over three years Incidence of hospital ADCs for Woodlake residents

Goal 2. Every perinatal woman in Woodlake will be screened for PMADS using the EPDS, and referred for professional treatment where ever needed under professional nurse case management protocols.

Outcome 1: 25% increase in screening over five years (reflecting potentially pregnant women as percent of population) in the number of adult patients in the target population that have been screened for depression.

Outcome 2: 25% annual growth intervals to achieve 100% at the end of five years in the number of all potential perinatal women in Woodlake service area who are screened for PMADS

Goal 3. We will provide all Woodlake perinatal women who are diagnosed with PMADS with timely, professional mental health therapy that will relieve their suffering and lead to healthy choices in their lives.

Outcome 1: Every woman treated for PMADS shows recovery within clinically indicated time per increased score on GAF, BDI-II, or other relevant, professional mental health assessment instruments

Outcome 2: 25% annual growth intervals to achieve 100% at the end of five years in the number of women treated for PMADS to approximate number of anticipated need per population

Outcome 3: 10% positive change in indirect social data, such as reduced child abuse rates, over five years reflecting increase in positive long-term healthy behavior choices in mothers

Outcome 4: 10% positive change in indirect social data, such as increased childhood immunizations, over five years indicating positive later in life outcomes of infants and children

Goal 4. Woodlake families will no longer stigmatize women who suffer from PMADs and will provide understanding and support treatment for the health of the entire community.

Outcome 1: 10% increase over three years in WFRC walk-ins for PMADS

Outcome 2: 10% increase over three years in school-based referrals

Outcome 3: 10% increase over five years in FHN referrals

## B. Recognition

This grant received local acknowledgement through announcement at our School Board. Community recognition is ongoing through local service providers and program participants.

## Part VI: Challenges & Innovative Solutions

On Point did not face any major challenges during this grant cycle. Through a collective impact approach we are able to resolve shortfalls. One example is early on when we lost our fulltime Public Health Nurse and were not able to hire and or retain one on a part-time bases and our Consortium Partner, HHS-Perinatal Wellness Program lost significant funding for to contract out for clinical services. On Point Program was able to secure funds to provide clinical services to eligible women and Perinatal Wellness Program was able to maintain nurse case management component that extended to On Point eligible program participants. On program participants received both critical case management form Public Health Nurse and mental health services from bilingual bicultural therapist.

## Part VII: Sustainability

### A. Structure

Our established consortium will continue. All current partners will be part of it: Family HealthCare Network, Tulare County Health & Human Services Agency, Tulare Youth Service Bureau, Woodlake Police Department, and Woodlake Unified school District.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

For over 10 years, our Consortium partners, Family HealthCare Network, Tulare County Health and Human Services, the Police Department, and the School District, who represent nearly all Woodlake service providers, have met regularly at WFRC in multidisciplinary team meetings and other programmatic meetings. Out of this meeting process described above we formed the goals and objectives of the *On Point* Project. Similarly, based on our many years of experience in setting our course through quantitative evaluation, we adopted one PIMS measure, the incidence of depression screening in our total population.

On Point Consortium will continue with the screening of Perinatal Mood and Anxiety Disorders. This is a mental health condition that may not be avoided and or prevented so ongoing screening is essential. All of the Woodlake Family Resource Center (WFRC) staff have been trained in administering the Edinburg assessment tool and have adopted screening all eligible women as an agency policy. The Women, Infant & Children Program (WIC) have also adopted as a set practice to administer the Edinburg to all eligible women that come through their door. WIC is a countywide program.

Eligible women will continue to receive therapeutic services by licensed clinicians. Tulare County Health and Human Services Agency (TC HHSA) has awarded a new contract to Tulare Youth Services Bureau to provide therapeutic services to women experiencing PMADS, specifically in rural communities. TC HHSA has awarded a separate contract to the WFRC to support position of clinician to provide therapeutic services to women experiencing PMDS. We are not anticipating a change in contracts.

Family HealthCare Network will continue to be one of the two major healthcare facilities in our community. We will continue to use Family HealthCare Network as a primary resource for medical treatment, psychiatric consultation and medication needs.

The Woodlake Police Department will continue to meet the safety needs of our program participants and community.

The Woodlake Unified School District will continue to invest staff to work collaboratively with the WFRC and coordinate services for children and their families.

The Perinatal Wellness Program will continue to provide limited time nurse case management services to eligible women. The Tulare County Public Health Department continued to sustain this program component.

### C. Sustained Impact

The *On Point* Project Vision Statement:

*Every perinatal woman in Woodlake will make healthy and positive choices for herself, her children, her family, and her community.*

The *On Point* Project Mission Statement:

*The mission of On Point is to raise our community to health through addressing the mental health needs of women during the perinatal juncture, defined as the period during pregnancy, six months before, and one year after, as a key impact point generating multiple positive effects for our children, our families, and our community.*

The sustained impacts of our program have been developed and achieved through loyalty to our vision and mission stated above. We have raised awareness not only in our rural community regarding the issue of Perinatal Mood and Anxiety Disorders (PMADS) but have mobilized key partners to bring countywide attention and resources to this issue. We identified key partners that interface with pregnant women at critical times and who are committed and trained in screening these vulnerable women. Unanimously we agreed upon a uniform and evidence-base screening tool, the Edinburg Postnatal Depression Scale (EPDS). Women experiencing PMADS are treated by a licensed clinician within their own community. The local Family HealthCare Network provides the medical care and administration of appropriate medication if needed.

In summary, the sustainable impact of On Point lies on the success of healthcare and social service providers working together on the project's treatment of PMADS which exemplifies a strategic leveraging of resources to target a specific moment of an individual's life where change in the primary recipient can have the greatest secondary and tertiary positive outcomes for whole communities.

## Part VIII: Implications for Other Communities

This was a very valuable experience with significant outcomes that can be replicated elsewhere rendering many benefits to at risk women. Other communities who embrace this program will: 1) offer perinatal women and their families greater access to healthcare through application assistance, 2) screen at risk women for PMADS using an evidence base tool, and 3) provide perinatal women who are diagnosed with PMADS with timely, professional mental health therapy that will relieve their suffering and lead to healthy choices in their lives.

# Colorado

## Telluride Medical Center Foundation

Part I: Organizational Information	
Grant Number	D04RH23616
Grantee Organization	Telluride Medical Center Foundation
Organization Type	Network
Address	POB 4222, Telluride, CO 81435
Grantee organization website	<a href="http://www.tchnetwork.org">www.tchnetwork.org</a>
Outreach grant project title	Prevention through Care Navigation Outreach Program
Project Director	Name: Lynn Borup
	Title: Executive Director
	Phone number: 970-708-7096
	Fax number: 888-595-3242
	Email address: <a href="mailto:lynn@telluridefoundation.org">lynn@telluridefoundation.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,978
	May 2013 to April 2014: \$149,961
	May 2014 to April 2015: \$149,979

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Midwestern Colorado Mental Health Center (Center for Mental Health)	Multiple counties that include: Montrose, Ouray & San Miguel/CO	Mental Health Center
*Basin Clinic	Naturita/Montrose/CO	Rural Health Clinic
*Olathe Medical Clinic (River Valley Family Health Center)	Olathe/Montrose/CO	Federally Qualified Health Center
*Telluride Medical Center	Telluride/San Miguel/CO	Community Clinic
*Uncompahgre Medical Center	Norwood/San Miguel/CO	Federally Qualified Health Center
*Telluride Foundation	Telluride/San Miguel/CO	Community Foundation
*Montrose Memorial Hospital	Montrose/Montrose/CO	Non Profit Hospital

### Part III: Community Characteristics

#### A. Area

Montrose, Ouray, and San Miguel Counties

#### B. Community description

Our rural three-county region is an isolated area of southwestern Colorado, 350 miles from Denver. Our service area is a designated Health Professional Shortage Area (HPSA) for primary, dental, and mental health care; a Medically Underserved Area, and a Medically Underserved Population. These three designations signify an at-risk community with too few primary care providers, medium-high poverty, pockets of extreme poverty, and elderly populations. The clinics serving this region are true "frontier clinics," and some of the most rural medical clinics in the state. Communities are separated by high mountain mesas, rugged 14,000-foot peaks, and red rock canyons with travel designated to rural county roads and limited state highway systems that cross mountain passes and provide challenging driving conditions, especially during the harsh winters. Under these circumstances many people lack the ability or cannot afford to drive to clinics or doctor/dentist appointments, and no regional

public transportation system exists; this has a direct impact on our growing population of elderly residents living in these remote areas who are unable to drive. Poverty is a key issue that affects the unmet health needs and access to health services; 42% of families are at or below 200% of Federal Poverty Level, and our target population ranks higher than the state average for being uninsured (19.3% vs. 15.5%). Also, our region has higher than the state average of unemployment, with one of our counties ranking fifth highest at 10.6% vs. the state average of 7.6%. Structural impediments, the social and cultural challenges of health literacy, small-town/rural social and cultural challenges, transportation barriers, and an aging population are all primary factors that influence life in our community.

### C. Need

Our rural population is faced with high rates of heart disease and diabetes, exacerbated by the health disparities discussed above. Cardiovascular disease (CVD) is the leading cause of death in our region (second to cancer) and needs to be reduced by 37% to meet the Healthy People 2020 goal, and 8.7% of individuals are diabetic compared to the Healthy People 2020 goal of 2.5%. Additionally, our Network Members are faced with limited human and financial resources and independently have limited capacity for addressing the needs and gaps in services for their diabetic and CVD patients.

Due to the high percentages of people with CVD and diabetes in our region, and the identified needs and gaps in our service area, our Program's focus is to reduce the prevalence of diabetes and CVD in our adult population through control and management of risk factors as well as creating a system of support for those clients trying to make healthy lifestyle changes.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Our Prevention through Care Navigation Outreach program adopted the following evidenced practices:

- **Colorado Heart Healthy Solutions (CHHS):** Is an evidence-based, peer-reviewed statewide cardiovascular risk reduction program in Colorado that focuses on underserved populations created by the Colorado Prevention Center (CPC). CHHS aims to reduce the burden of cardiovascular disease and diabetes. CHHS involves a network of community health workers (CHWs) who outreach to underserved community members and provide health assessments, biometric testing, health education, coaching, referrals to local medical and healthy living resources, and ongoing support to at-risk individuals at no cost. Tri-County Health Network augmented this model with the addition of a stronger diabetic care management component.
- **Community Health Workers (CHW):** CHWs are culturally competent and trusted members of the communities they serve. They work to improve healthcare outcomes by facilitating access through education, referrals and basic health screenings. CHWs coordinate with local providers to ensure services are not duplicated but are complementary of their efforts to improve the health of their patients with CVD and/or diabetes. Bidirectional referrals and communication between CHWs and clinics ensure a comprehensive team approach in caring for the most underserved community members.
- **Motivational Interviewing:** Is an evidence-based process that addresses hesitation to change. The conversation encourages clients to express their desire for change, enhance their confidence and strengthen their commitment to make lifestyle changes.
- **Chronic Disease Self-Management Program (CDSMP):** This evidenced-based Stanford School of Medicine program occurs once a week for six weeks in community settings. Classes provide individuals with peer support and assistance in navigating barriers to care. Attendees leave empowered with the necessary tools, peer support, and coping skills to continue with their own action plans to lead a healthier life.
- **Physician Profiling:** A physician engagement component ensures cohesion between the CHWs and local healthcare providers. A Colorado Prevention Center cardiologist, and co-founder of CHHS, met with CHWs and local stakeholders, including the program director, clinic manager, physicians and mid-level providers. The meetings discussed: engagement in the program, seamless integration for at-risk individuals, and how to facilitate access into care for referred participants. Monthly "fast facts" emails highlighted recent developments in diabetes and CVD preventive care.

### B. Description

Tri-County Health Network hired CHWs to lead our Program activities. CHWs live in the communities where they provide outreach services and are hired, in part, for their relationships and respect in the community. Community members see CHWs at the post office, hardware and grocery stores and recognize them as "trusting hands" within their communities.

Program activities included:

- providing biometric testing in the field to screen underserved people at risk for developing diabetes and/or CVD.
- offering individual peer support to manage lifestyle changes and improve overall health.
- conducting the 6-week Stanford CDSMP classes throughout all three counties in both English and Spanish.
- developing relationships with community businesses/practitioners in order to establish an understanding of the program and develop a referral process between CHW and lifestyle/clinical businesses. One hundred twenty-four community resources were established and 570 referrals were made over the course of the program.
- working collaboratively with partner clinics to engage noncompliant patients who have barriers to getting biometric testing within prescribed timeframes.
- implementing a program evaluation to track outcomes and Program impact.

### C. Role of Consortium Partners

Tri-County Health Network Consortium partners include Telluride Medical Center (non for profit medical facility), Basin Medical Clinic (rural health clinic), Uncompahgre Medical Center (federally qualified health center), Center for Mental Health, Montrose Memorial Hospital (non for profit regional hospital), River Valley Family Health Center (federally qualified health center), and the Telluride Foundation (non for profit community foundation). During the planning and implementation of our Program, Consortium partners were thoroughly engaged. Partners participated in quarterly meetings where Program outcomes were discussed, barriers addressed, and best practices implemented. Partners referred their patients to CHWs and CHWs shared results, including patient action plans, with the referring clinic which were then incorporated into the patient's electronic medical records. CHWs were included in partner "huddles" to discuss shared patients/clients and courses of action. Additionally, partners provided space for screenings; promoted and championed the Program among their patients, to their respective board of directors, and within their communities. Throughout the program, partners played an integral role in Program evaluation, quality improvement, and sustainability planning.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

As a result of our efforts, two broad outcomes were evident: 1) an underserved community became aware of the prevalence of a chronic disease and positive steps they could take to address it, and 2) local clinics were better able to serve their patients through a strong referral system and enhanced community resources. Specifically 1,192 individuals were screened for risk of diabetes and/or CVD. Of the total screened, 633 individuals were identified as at-risk. Astonishingly, of those identified as at-risk, 425 individuals had no knowledge of their risk prior to screening. Through continued efforts and physician education, local clinics began accepting the biometric field results as "valid" tests to be included into the patient's medical record and so a strong referral system was developed between local clinics and CHWs. CHWs effectively referred 385 at-risk individuals back into primary care for further evaluation by a physician and physicians referred uninsured patients or patients with other barriers to care, such as transportation, to CHWs for screening and blood pressure maintenance. Seven hundred twenty-one clients who did not have a primary care provider were referred to local clinics. Additionally, we established an electronic interface with our local Health Information Exchange (HIE) to transfer the biometric test results captured in the field to the HIE making these results available to all providers participating with the HIE.

To the credit of our staff, 505 clients chose to remain engaged with a CHW after their first screening and created action plans towards meeting lifestyle goals with CHW peer-support. The CHW's role here was invaluable. Underserved community members shared that their own lack of self-management was a major barrier to continuing necessary care for their chronic conditions – they simply did not want to go to their doctor and confess their horrible diets or lack of exercise. Understandably having their local CHW contact them for peer support prompted them to be accountable for their daily health care decisions. CHWs established 124 community referral resources within three rural counties and referred 570 clients to these community resources. We also offered a new community resource and trained six team members to lead CDSMP classes. Eight six-week classes were offered in three counties. Finally, within our Consortium clinics we developed chronic disease registries so our clinics could accurately track clinical outcomes for over 800 diabetic patients and 1,800 CVD patients. Outcomes achieved include a 12.3% increase in the number of diabetes/CVD patients with a LDL less than 100 and a 6.1% increase in the number of diabetes/CVD patients whose blood pressure was less than 140/90.

### B. Recognition

Hiring culturally appropriate CHWs was a major accomplishment for our program. Five articles were written about our CHWs in their respective local newspapers - articles not only promoting the program but also highlighting the value of having accessible

health workers within their communities.

During the course of our Program, our CHWs were invited to present our Program at community health events such as rural Diabetic Support groups, Hospital sponsored Diabetes Day lectures, local health fairs, and clinic staff meetings. One CHW was invited to sit on the board of a local non-profit organization that promotes community living resources. Over the duration of our grant period, we've received thanks from many of our clients served by our CHW's. There are numerous patient testimonials expressing appreciation for the assistance and support provided by CHW's in the community.

## Part VI: Challenges & Innovative Solutions

*The hiring process for CHWs was challenging in a rural service area, with a limited applicant pool.* Typically, rural communities have a heightened sense of "stranger awareness" and only people that are well-established in these rural settings would be as well-received as our CHWs. While our CHWs required more training time than we anticipated, the time spent has proven to be worthwhile as evidenced by the outpouring of people seeking participation in the program.

*Achieving clinician and staff buy-in with community clinics is a timely process.* Doctors and clinical staff were reluctant to refer to non-clinical people and had questions about the validity of the testing tool as used by non-clinical CHWs. To address this, we brought Dr. Mori Krantz, the co-investigator for Colorado Heart Healthy Solutions (CHHS) and a practicing cardiologist, into our rural clinics to discuss the program, provide literature and answer questions regarding the validity of Cholestec machine results and its use in the field by CHWs, and to review the evidenced-based CHHS program and its success in identifying individuals at-risk for diabetes and heart disease. It is important to note that clinical buy-in resulting in CHW referrals was achieved after continued education and one and a half years of successful program activity.

*Identifying medical and healthy living resources was a challenge in rural areas.* Not only was the number of resources limited but also, the time spent introducing each potential referral to our program was more time consuming than we anticipated. However, developing these relationships proved worthwhile and once trust was established, CHWs not only referred to these resources but were also referrals of these resources.

*The holiday season between the end of November through the entire month of December was a significantly slow period for health screenings.* We quickly realized that community members did not want to think about healthy eating and lifestyle habits during "dessert and casserole" season. CHWs had many cancellations on scheduled appointments with rescheduling occurring in January. During this time CHWs focused their efforts on community outreach and identifying resources.

## Part VII: Sustainability

### A. Structure

The consortium will continue as it consists of our Network Members, which are the major health care stakeholders in our service area. Network Member include: **Basin Clinic**, a Rural Health Clinic and a 24/7 Emergency Center; **River Valley Family Health Center**, a Federally Qualified Health Center, **Telluride Medical Center**, a multispecialty/primary care Rural Health Clinic and a 24/7 Emergency Center; **Uncompahgre Medical Center**, a Federally Qualified Health Center and dental clinic; **The Telluride Foundation**, a 501(c)(3) nonprofit community foundation; **Montrose Memorial Hospital**, a not-for-profit, regional medical center and community-based hospital; and **The Center for Mental Health**, a regional community mental health center.

The Tri-County Health Network was formed in 2010 and is formally organized as a 501c3. All members of the consortium are also members of the Network; many of whom were founding members and helped to create the Network.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

We anticipate that the following activities will be sustained beyond our Outreach grant period:

**Biometric Screenings/Assessment in the field** – A proven tool effective in identifying residents at-risk for diabetes and CVD. Although more and more people have insurance, they are not taking advantage of the preventive services benefit covered under most plans. Additionally, in our rural community there are many who do not seek care for a number of reasons from the current healthcare delivery system. This service focuses on serving those who are not in the mainstream and the most underserved populations in our most rural regions. We plan to have CHWs continue offering these screening throughout the community, mainly in our local libraries, in order to meet our goal of having everyone in our rural aware of their diabetes and CVD risk.

**Peer support for lifestyle changes** – Once a client is identified at-risk, CHWs review changes in their lifestyle that can help improve this status. CHWs provide educational materials, share community resources, and refer clients to local clinics, as necessary. Many clients are interested in setting goals to improve their health and rely on the CHW to motivate and support them in these efforts. Through this Program we are reaching many individuals who are not taking advantage of the resources available and who like the “non-institutional” peer-support provided by CHWs. Through the support and education provided, we are creating an overall healthier region and believe these efforts should continue.

**CDSMP classes** will continue. These classes have been largely successful in our rural service area. The classes are facilitated by CHWs and attendees are referred to the class through in-reach by other Tri-County Health Network programs, provider referrals, and community partners. The classes occur in both English and Spanish. The Consortium clinics are highly invested in this evidence-based curriculum and provide classroom space after clinic hours.

Additionally, the following activities are currently under consideration by our Consortium members:

1. *CHWs attend medical appointments with clients to assist with health literacy and language barriers.* This activity was brought to our attention through client requests and viewed by our Consortium clinics as a natural component ascribed to the purpose of CHWs.
2. *Diabetic retinopathy telescreening (DRS)* - Given the lack of specialist in our rural communities including ophthalmologists, our approximately 800 diabetic patients must travel up to 4 hours round trip in order to receive their annual DRS. Given this challenge, diabetes patients often do not receive their annual screening. A great concern as diabetic retinopathy affects nearly half the diabetic population and is a leading cause of vision loss. Early detection is crucial to preventing blindness and timely intervention can reduce severe vision loss by 90%. Using telemedicine to bring DRS into our communities and onsite at partner clinics was supported by Consortium members as it eliminates identified barriers to care. CHWs will become certified photographers by Eye Picture Archive Communication System (EyePACS), a telemedicine DRS provider, to take retinal images and transmit them to certified reviewers for detection of eye disease and results will be transferred to the local clinics.
3. *Cooking Matters classes* - CHWs will be trained to conduct this hands-on, six-week cooking course that that serves low-income families. Each course covers meal preparation, grocery shopping, food budgeting and nutrition. Cooking Matters empowers individuals and families with the skills to stretch their food budgets and cook healthy meals, promoting nutrition and healthy eating.
4. *Rural Restaurant Health Options Program* - CHWs will pilot this cost-effective and low maintenance program for owner-operated restaurants to increase awareness of already-existing healthy menu options and substitutions. The program does not require restaurants to change their menu but it is a way for them to better advertise the healthy options that they already offer. The program is very low cost, simple to implement and encourages communities to choose healthier menu options.

The network is considering a range of strategies to sustain our Consortium’s activities and/or support potential new Outreach activities. Given that the program is well established, it is possible for the program to *reduce the management hours* for the Executive Director, Programs Manager, Clinical Associate and Data analyst. This would allow for money spent on management time to be delegated to paying CHWs and buying screening supplies. To the extent of reduction, currently the Program employs three CHWs who serve three rural counties. Reducing the area to two counties would terminate one CHW position. This strategy would be employed only as a final attempt to sustain program activities.

*Earned Income Strategies* include charging a fee for screening services and educational courses as well as insurance reimbursement. While our underserved population cannot make significant contributions, often a small contribution or fee does

increase the participants feeling of successful self-management. Additionally, large employer groups may receive premium reductions if all employees receive yearly screenings that our program provides. The fee for a large employer screening event could cover the cost of the screening, time of the CHW and produce income to contribute to potential new activities. An earned income strategy could also be implemented for Chronic Disease Self-Management Program (CDSMP) classes that we currently provide to the community. This could be approached on a sliding fee scale, local government or public health sponsored, or through insurance reimbursement. Because insurance carriers are now more focused on prevention and reimbursement rules are changing, this is becoming a plausible approach to pay for preventive services that our Program provides.

*External Funding Opportunities* include grant opportunities through federal and state agencies, local governments, private foundations, and community opportunities. This will help to diversify our grants portfolio and help to not only continue our current Program, but begin new activities. There is continued discussion with the Colorado Prevention Center to help fund our Program since we are utilizing their model and it supports their mission to reduce the risk of cardiovascular disease through early detection. We will continue to collaborate with community partners including schools, public health, and local Area Health Education Centers and other non-profits as grant sub-recipient and/or public/private partnerships that require community-wide engagement. Additionally, Consortium members have discussed seeking some of the local government marijuana tax dollars to be invested back into the community for health programs.

*Consortium member dues*, while not tremendous, do have the potential to off-set program costs and we will continue to seek *in-kind contributions* such as free screening space offered by our local libraries to be able to continue the program in its current capacity.

*Fundraising efforts* through events are often successful for non-profits however, the return on investment for the costs that are associated with organizing the event tend to outweigh the benefits. However, a *donation button on our website via AmazonSmile* will direct potential donors to the Program to our website to donate on-line and participate in receiving 0.5% of the price of eligible purchases through AmazonSmiles.

## C. Sustained Impact

Community health workers (CHWs) have been integrated into the way care is delivered in our communities which will have many long lasting impacts. Our efforts have improved the health of our most underserved community members by providing screenings, in easy to access locations, to identify risk for diabetes and/or heart disease and providing education on the effects lifestyle choices can have on overall health.

Our CHWs have established an extensive list of community resources that will continue to be maintained and made available to community members who are seeking a path to better health. These resources are shared verbally by the CHWs with clients because in rural areas businesses open and close regularly quickly outdated a printed version.

We have developed collaborations with local community service groups, community libraries and town governments that we will sustain. We will continue to utilize these relationships and community champions to help support our mission by improving access to healthcare services regardless of socioeconomic status.

CHWs have increased community health literacy in the rural areas served by the grant. CHWs engage clients regarding their health status and promote behavior change through education and peer-to-peer support. Education with respect to health literacy will impact not only the client, but also the friends and family of the client.

Consortium members implemented quality improvement programs that increased the number of patients who receive evidence-based care for diabetes and cardiovascular disease. To accomplish this, our team helped mine data and build the diabetes and CVD chronic disease registries for our clinics. Clinics use the registries to identify gaps in services and identify high-risk patients with biometric outcomes outside a controlled level. These registries are now a tool that the clinicians rely on for patient panelment and identifying high risk patients.

The Clinical Subcommittee, comprised of the medical directors from our four Consortium member clinics, will continue to meet. The Committee discusses evidence-based clinical guidelines, creates quality improvement programs, and shares best-practices in the treatment of patients with chronic disease.

Providers now recognize the value and impact of engaging a trusted community member to perform outreach services within the community and to act as a health care extender for the provider in the field. Providers see that the mobility of the CHW allows for

increased access to individualized diabetic and cardiovascular screenings, health education, and coaching. This helps reduce barriers in accessing medical services, promote behavior changes, and improve biometric indicators among our vulnerable population. Using non-clinical people to outreach to non-compliant clinic patients is now a successful part of the clinic workflow that will be sustained.

## Part VIII: Implications for Other Communities

While the Tri-County Health Network does not provide direct medical services itself, it has extensive meaningful involvement with the target population and has been instrumental in operating Community Outreach Programs that address the needs of our rural target population by assisting in assuring health care is accessible, affordable and available in our region. Additionally, CHHS has a track record of use and success in rural communities. The program targets hard to reach underserved individuals with an emphasis on rural residents. Of the 16,000 individuals served by CHHS, 85% are designated as underserved and 70% are residents of rural or frontier counties. CHHS been operational for the past four years (in its current form) and has been replicated in 26, mostly rural, counties throughout Colorado. Colorado communities that utilize CHHS have documented evidence of success. One study of over 1,600 at-risk clients, who returned for retesting within the prescribed 9 month timeframe, demonstrated improvements from their initial baseline measures between .05 to 19.6 in all the major risk factors.

The Tri-County Health Network's success, as reported in the **Outcomes and Evaluation Findings** section, illustrates the program's effectiveness and value. The Program's 1) use of lay CHWs; 2) cost effectiveness; 3) portability of the OSCAR software tracking system, which enables CHWs to meet patients where they are; 4) flexible implementation to accommodate different community needs; and 5) evidenced based strategy to improve health outcomes for diabetic and CVD patients, result in a program that is replicable under similar circumstances.

Experiences and outcomes that will benefit other communities that are interested in implementing a similar program include:

- It is essential to hire Navigators that are culturally appropriate, seen as a trusted member of their community, and show passion for community outreach in addition being capable of traveling great distances, even in inclement weather, and using technology for reporting purposes.
- Achieving clinician and staff buy-in is a timely process. Studies substantiate the successful use of CHWs in promoting life-style changes outside of a clinical setting; however Doctors and clinical staff are typically reluctant to refer their patients to non-clinical people (CHWs). It is important to have a clinical champion who can discuss the program and review evidence-based guidelines with Doctors and clinical staff. Additionally, be prepared to review how CHWs will be trained, what type of education will be offered to clients, and establish a referral protocol that enacts how information will be shared between the physician and the CHW regarding not only the referral but also the outcome of the patient engagement.
- Holiday months are customarily slow for CHWs that are offering health support. During this time focus on community engagement, training, and developing relationships with community resources for referrals.

# Delaware

## La Red Health Center

Part I: Organizational Information	
Grant Number	D04RH23588
Grantee Organization	La Red Health Center
Organization Type	Federally Qualified Health Center
Address	21444 Carmean Way Georgetown, DE 19947
Grantee organization website	<a href="http://www.laredhealthcenter.org">www.laredhealthcenter.org</a>
Outreach grant project title	Rural Delaware Mental Health Services Expansion
Project Director	Name: Brian Olson
	Title: Chief Executive Officer
	Phone number: 302-855-2020, ext. 1116
	Fax number: 302-855-2025
	Email address: <a href="mailto:bolson@laredhealthcenter.org">bolson@laredhealthcenter.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*La Red Health Center	Georgetown, Sussex County, Delaware	FQHC
*Delaware Division of Substance Abuse and Mental Health Services	Wilmington, New Castle County, Delaware Dover, Kent County, Delaware Georgetown, Sussex County, Delaware	Government agency
*Brandywine Community Services	Wilmington, New Castle County, Delaware Dover, Kent County, Delaware Georgetown, Sussex County, Delaware	Community-Based Provider
*Mental Health Association in Delaware	Wilmington, New Castle County, Delaware	Advocacy organization
*Delaware Division of Public Health, Office of Rural Health	Wilmington, New Castle County, Delaware Dover, Kent County, Delaware Georgetown, Sussex County, Delaware	Government agency
*Delaware Rural Health Initiative	Dover, Kent County, Delaware	State Rural Health Association
*Mark Borer, M.D., Psychiatric Access, Inc.	Dover, Kent County, Delaware	Private Practice Provider

### Part III: Community Characteristics

#### A. Area

La Red Health Center's mental health services expansion is targeted to Sussex County, Delaware; the southernmost of Delaware's three counties and the only one which is federally designated as "rural".

#### B. Community description

Rural Sussex County, Delaware is a Medically Underserved Area (MUA), a low-income Health Professional Shortage Area (HPSA), a dental HPSA, and a mental health HPSA. Sussex County is large in land mass and access to care is most challenging for individuals in the more remote and less commercially developed areas of the county. The county is home to a large number of poultry, dairy and crop-growing farms and facilities; small business is the predominant form of business. According to the United

States Census Bureau 2013 estimate, Sussex had 206,649 residents. The median income is below the state average. Approximately ¼ of the County (24.4%) lives under 200% FPL, half which is below 100% FPL. According to the Census, 65.8% of the total target population is Caucasian /white, 27.7% Black/African-American and 5.8% Hispanic. Public transportation is scarce. Language is often a barrier; 11% of county residents speak a language other than English. Sussex County has worse health outcomes for major chronic diseases such as heart disease, asthma, diabetes, HIV, and infant mortality than the rest of the state and, in many cases, the nation. The all site cancer incidence and mortality rate for African Americans in Sussex is the worst rate in the state. The County also experiences the worst rates in the state for pre-term birth rate, teen pregnancy, and first trimester access to prenatal care. Finally, the County has significantly higher mortality rates from suicide and accidents than the other two Delaware counties.

### C. Need

Specific to Sussex County mental/behavioral health service availability, there is excessive demand placed on the limited resources of existing community based mental/behavioral health providers (public or non-profit), private mental health practitioners, and a mal-distribution of inpatient mental health treatment services. As previously noted, the county is a federal Mental Health HPSA. The Sussex County ratio of FTE mental health specialists to population is 1:2,802.) The proportion of psychiatrists to all mental health professionals (10%) is the lowest in the state. Sussex County has the lowest ratio statewide of psychiatrist to population at 1:22,983 persons served by each FTE psychiatrist (the state ratio is 1:7,075 persons, 1:5,146 for Kent County and 1:6,253 for New Castle County). Across the state, 64% of psychiatrists and 44% of mental health specialists have someone in their office who can speak a language other than English. According to the University of Delaware's "Mental Health Professionals in Delaware 2009" (2010), Sussex County's psychiatrists and mental health specialists are least likely to have the ability to communicate in a language other than English. Not only does Sussex County have any number of problematic socioeconomic indicators discussed above, it also has the highest proportion (30%) of mental health specialists age 60 and over. Many are unsure whether they will remain active in five years, increasing the concerns about the future adequacy of mental health services in the service area. Area providers are effective in the provision of their respective services however; significant gaps and overall capacity persist for the target community to access needed services.

La Red Health Center owns the only two federally qualified health centers in the county; one in Georgetown and one in Seaford. As the only sliding fee scale safety net provider in the county, La Red utilized this grant program to lead the development of a comprehensive expansion of direct mental health service delivery offerings.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

#### Psychiatric Consultation:

Our methodology was to implement a locally designed, copyrighted program Creatrics®. This "homegrown" program was developed and field tested in the local Delaware health care system by a private practitioner who is a part of the Consortium (Mark Borer, M.D), and ultimately, a contracted consulting psychiatrist to La Red. Dr. Borer's proprietary process has many elements similar to the Seattle Children's Hospital Child Psychiatric Consultation (Seattle, WA) recognized in the June 2011 ORHP "Rural Behavioral Health Programs and Promising Practices" Manual. In the Seattle model a psychiatric consultation hotline provides consultations on child psychiatric issues to rural primary care providers. Providers call a hotline, and reach an administrative assistant who collects data on the child (demographics, medical history, etc.). The psychiatrist provides a consultation for the rural doctor, and, if therapy is recommended, contacts a social worker to identify a therapist in the area who could provide treatment for the child. This flexibility and advance work facilitates the use of tele-psychiatry. The program collects a range of data as to its effectiveness, and has indicated reducing or stopping psychotropic medications in over 50 percent of consultations. Similar to the Seattle model, our methodology was implementation of a process of information gathering conducted in the primary care setting, expedited by fax or email to the psychiatric consultant, who in turn, provided a customized case study approach to the primary care provider team, and once per week provided onsite interface. Similar to the Seattle model, early outcomes research on Creatrics® showed more effective psychotropic medication management and numerous other positive outcomes related to patient, family, and provider satisfaction and quality of life. (Medication management outcomes were **not** an evaluative measure in the FORHP grant.)

#### Tele-mental health/Telemedicine:

A variety of national sources cite the merits of telemedicine as a means to expand access to care. It is known to help providers maximize resources to serve more patients, and to be particularly effective in providing services in rural and/or remote locations where people would not otherwise have access to care. Its ability to expand critical access in environments where workforce is in short supply is one benefit, while its ability to reduce government expenditure of public program dollars on transportation is

another. The industry is fast emerging and several models are recognized for their outcomes. The one evidence based model that we most closely reviewed was that of the Telemedicine-Based Collaborative Care contained within SAMSHA's National Registry of Evidence Based-Programs and Practices. It is an adaptation of the collaborative care model used for rural Department of Veterans Affairs primary care practices and is designed to improve patient depression outcomes in rural primary care settings through collaboration of primary care physicians, non-physician members of the health care team, and mental health specialists such as psychiatrists.

## B. Description

The original grant work plan put forward a three point, three-year, plan to:

- 1) Integrate mental/behavioral health and primary care to improve patient health outcomes,
- 2) Introduce psychiatric consultation services, and
- 3) Implement the use of telemedicine for tele-mental health services to facilitate direct access to psychiatric services that are not otherwise available in the County.

Within the first year of the project plan it was determined that a major shift in work plan prioritization was needed. The activities of implementing psychiatric consultation and the use of telemedicine were determined as necessary prerequisites to readiness for integration. As such, staff expansion including psychiatrists, changes in workflows to accommodate consultation with onsite specialist resources (psychiatrists), implementation of case review process, and modification of the electronic medical records system to accommodate primary care/specialty collaboration without violation of HIPAA confidentiality were all completed.

**Psychiatric Consultation-** The psychiatric consultation process has been implemented as a means to develop primary care provider's confidence in detecting and managing mental/behavioral health concerns and medication. It has been incumbent to begin the cultural shift on the integration continuum and the work needs to continue. The psychiatric consultation process has been a foray to full integration because it has facilitated communication between the medical and mental health staff and has created a setting wherein cases, particularly those that are complex, can be co-managed. Work continues on defining triaging processes for all patients, not just complex cases or those with medication needs. Two psychiatrists have been added to the La Red provider team (one as an employee and one as a contractor); they both provide consultation services to primary care providers and the mental health staff for skill building, medication management, and case review (one specializes in children, and the other in adults). A psychiatric nurse practitioner has been employed at each La Red site and both psychiatrists may provide direct clinical services before close of calendar year 2015.

**Telemedicine-** Equipment was budgeted as an FORHP expense but ultimately was provided by the State of Delaware. Mental/behavioral health staff, and support personnel have been trained in its use. Physical space has been established specifically for telemedicine consults. Relationships with targeted medical specialists in other areas of the state, and out-of-state, have been established through contractual agreements with the State of Delaware, and academic medicine institutions. Liability, credentialing, licensure, and HRSA/BPHC Section 330 requirements have been completed for consulting specialists. Medicaid provides reimbursement for telemedicine services on the basis of the service provided (and not the modality of service). There is positive momentum in the commercial payer community to do the same. There is legislative action in the Delaware General Assembly this session to further promote the use of telemedicine as a modality, and the State's recent receipt of \$48M of Center for Medicare & Medicaid Services State Innovation Model funds includes the use of telemedicine as a means of expanding access to care within a reformed health care environment.

**Readiness for Integration-** The accomplishments realized during the FORHP grant period established readiness that was recognized by HRSA as sufficient progress to warrant funding support for behavioral health integration activities during the 2015-2016 program years.

## C. Role of Consortium Partners

In 2011, the **Rural Delaware Mental Health Services Expansion Consortium** was established to serve in an advisory council role to La Red as the organization continued its expansion of onsite mental health services. This particular consortium; however, was an adaptation of a consortium originally formed in 2008 to advise the organization on how to best address the mental health needs of the rapidly increasing numbers of senior citizens in the service area, the *Southern Delaware Healthy Seniors Consortium*. In 2011 the consortium's composition was augmented, and its purpose modified, to address the broader accessibility of mental health services in rural Delaware.

The Office of Rural Health Policy Rural "Health Care Services and Outreach" Grant (2012-2015) enabled start-up of psychiatric consultation and telemedicine (for access to out of area specialty services) and laid the framework for integration of behavioral health services into La Red's primary care units.

This model of utilizing external expert advice and assistance has been used numerous times since La Red's inception. Key stakeholders were identified as a core set of partners to assist the organization in planning its service delivery model. The overarching objective(s) for the consortium are to:

- Provide expert guidance that applicably enables La Red to refine and adapt its strategies ensuring long term support and sustainability;
- Encourage collaborative relationships among providers in the public and private sectors; and
- Educate stakeholders and policymakers about La Red resources and any key challenges related to sustaining the service(s).

Consortium membership is comprised of representatives from targeted public and private sector organizations who provide critical depth based on their expertise in needed areas. Per organizational partner the following expertise and assistance were provided via the Consortium membership;

<b>Delaware Division of Substance Abuse and Mental Health Services:</b>	-Liaison to State Medical Director -Collaboration with Community Mental Health Centers -Policy assistance related to Medicaid reimbursement
<b>Brandywine Community Services:</b>	-Clinical service delivery expertise
<b>Mental Health Association in Delaware:</b>	-Advocacy
<b>Delaware Rural Health Initiative:</b>	-Public Relations support; policymakers, stakeholders
<b>Mark Borer, M.D., Psychiatric Access, Inc.</b>	-Technical assistance in psychiatric consultation -Technical assistance to start up case review -Liaison to private practitioners & commercial payers
<b>Delaware Division of Public Health, Office of Rural Health</b>	-Liaison to State, Federal, and National resources

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The May 2012-April 2015 grant period has included the following key outcomes:

The La Red organization experienced an aggressive growth period during this grant period. In April 2012 just at the onset of this project, the organization relocated its main site to its own newly constructed, state of the art (25,000 square foot) medical facility. Immediately thereafter planning began for the renovation and purchase of a 10,000 square foot facility to which to move the second service site. Ultimately, La Red opened its new Seaford location in September but delayed the ribbon-cutting ceremony to November 2013 to coincide with National Rural Health Day (and a press event).

The organization achieved Level 2 Patient Centered Medical Home recognition for both of its service sites from the National Committee on Quality Assurance (NCQA) in March 2013. Level 3 recognition was achieved for the Georgetown site in February 2015 through the Add-On process and was submitted for the Seaford site on March 30, 2015. We are currently working on PCMH specialty recognition for the prenatal and behavioral health programs and expect to submit that application by the end of the 2015 calendar year. Multi-disciplinary teams, technology systems, and proactive use of data are creating effective day to day workflows that achieve value for patients and payers and that continue to prepare the organization to meet the needs of the additional health center users that full health reform continues to generate.

The La Red Board committed to the organization's comprehensive mental health service "center of excellence" expansion in August 2012. La Red hired mental health clinical leadership. A bilingual psychiatrist for clinical leadership (Dr Jose Capiro) came on board in January 2013. And in February 2013, La Red contracted with a consulting psychiatrist (Dr. Mark Borer) to assist with introduction of the psychiatric consultation process, changes to the electronic medical record system for HIPAA compliant documentation, and introduction of medical team case review processes. Credentialing, liability, scope expansion, and specialty service approval activities were completed with HRSA as a requirement of the 330 Federally Qualified Health Center program. A

combination of FORHP funds, patient income, other federal grants, and philanthropic funds have fluidly enabled the significant expansion of mental health workforce at both the Georgetown and Seaford sites.

At 2014 calendar end, “mental health” was the leading diagnosis for all patient visits; 1248 unduplicated patients generated 5420 individual mental health visits. These patients represented 17.8% of patients and 21% of all visits. This compares to 154 patients (3% of total patients) generating 1167 mental health visits (5.7% of total visits) in 2011, the year prior to the onset of this grant-funded expansion of services. Related to quality of care metrics for mental health services, the organization amended its clinical plan in late 2013 to include a 2016 performance goal of 30% of all patients 12 years of age and older screened for depression, and introduce a goal for screening adults for unhealthy alcohol use. By year end 2014, La Red had exceeded its 2016 clinical goal for depression screening.

Contracts with the State of Delaware, Johns Hopkins University, and the University of Rochester have been secured for telemedicine services. Delaware licensing and HRSA requirements related to liability have been completed in all instances. Whereas the purchase of Polycom/telemedicine equipment had originally been budgeted to the FORHP grant, an additional contract with the Division of Services for Children, Youth, and Families (DSCYF) has provided equipment to La Red. (Savings on the ORHP budget supported various iterations of staff expansion as referenced above.) The DSCYF provides two contracts to La Red; one contract is to support a collaboration between La Red and InSight Telepsychiatry, LLC wherein Insight provides telepsychiatry to La Red patients under 18 years of age. The State is paying Insights for the psychiatrists’ time in full. The DSCYF goal is to fund these activities for the short term, but ultimately for La Red to contract directly with Insights to pay the psychiatrist and begin billing and collecting. The second contract supports our in-house child and adolescent focused psychiatric consultation process. Dr. Borer provides consultation to primary care providers seeing children under 18 years of age in an effort to build PCP comfort with managing psychiatric medications. This contract reimburses a flat rate for La Red primary care provider time in consultation and enables Dr Borer to bill DSCYF directly for his professional time to provide the consultation.

Environmentally during this period, telemedicine and mental health access became state priorities. In July 2012, the state Medicaid program began reimbursing for telemedicine services. This decision was made administratively, with no change in state law. With State support, the Sussex County Mental Health Professional Shortage Area designation was renewed and geographically expanded in November 2012 (from a portion of the County to the whole County). In March 2015, House Bill 69 was introduced to amend Titles 18 (insurance) and 24 (professions) of the Delaware Code to encourage health insurers and health care providers to support the use of telemedicine and encourage all state agencies to evaluate and amend their policies and rules to foster and promote telemedicine services. These items are offered just as examples of key happenings that support this work.

## B. Recognition

The Rural Assistance Center in its November 2013 Rural Health Monitor publication interviewed La Red on the success of our integrated service model for both mental/behavioral health and oral health services. At a local level, program staff have been invited annually 2012-2014 to provide panel presentations of our program development at the annual rural health conference.

## Part VI: Challenges & Innovative Solutions

This grant period has started the cultural shift towards fully integrated (primary care and mental/behavioral health) care but more work has to be done insofar as establishing full medical team “buy-in. To foster this shift to interdisciplinary, team based care, combined provider team meetings were initiated during the grant period, clinical leadership was recruited for the mental health department (a psychiatrist with previous La Red experience), and a site visit was completed by officials from Cherokee Health System in April 2014. Also there is a carved out day of the month for combined provider staff case review with the consultant psychiatrist.

Physical layout of the facility, though brand new, created some challenges for immediate provider collaboration at the point of care. We are continuing to assess how physical space and workflows are most conducive to fostering this level of dialogue immediately within the primary care unit. Rough floor plans for changed space configuration have been developed jointly between primary care and behavioral health staff and a first request to HRSA for capital improvement dollars was unsuccessful. We are gearing for a second opportunity. Also, we are gearing up for hiring an additional behavioral staff team member who will be based directly in the primary care unit at each the Georgetown and Seaford sites.

Finally, ongoing provider education has been identified as a need and towards that end, providers are allotted continuing education dollars as a part of their employment package, they are encouraged to participate in online training opportunities, and they are encouraged to network with peers through meeting and conference participation.

**A. Structure**

It is our plan to continue the consortium. Each of the senior level leaders who represent the consortium organizations offer in-depth professional expertise to the La Red service expansion effort. Additionally, and equally important, these individuals provide the benefit of their associations and participation in numerous other initiatives and forums. In this small state, health professionals “wear many hats” and participate in multiple efforts of cross-cutting nature thereby spreading awareness and understanding of La Red activities to multiple parties. Additional organizations are called into the consortium on a more informal, ad hoc, basis. No specific additional parties have at this time been identified to be recruited as new consortium members; however, the consortium has had active dialogue and occasional meeting participation with representatives from other groups including but not limited to; A.C.E. Peer Resource Center, Delaware Telehealth Coalition, Henrietta Johnson Medical Center, and the Mid-Atlantic Association of Community Health Centers. Since its onset, the role of the consortium has evolved from one of providing critical planning input to that of more of an advisory/sounding board. The consortium will continue in this advisory role and thus requires less staffing support than it did at beginning. Moving forward, it will be convened on a quarterly basis by the La Red Chief Executive Officer. Teleconference meetings of the consortium are now scheduled throughout calendar year 2015, with additional face-to-face meetings schedules as indicated.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The consortium will continue to support La Red as the organization continues to provide onsite psychiatric consultation and telemedicine services, and moves forward with full integration of behavioral health services into the primary care units at both of its service sites. This continued movement towards full integration will involve delving into new topics and program activities identified as natural byproduct of consortium discussion and also after a two day site visit from Cherokee Health Services in April 2014, as mentioned above. Planning for the implementation of the following activities is underway:

- Full implementation of SBIRT, initiated in winter 2015 as a screening mechanism. SBIRT is an evidence-based screening process with a recognized reimbursement code within the State system. Direct conversation has been conducted with the State Medicaid Director to apprise of this pending approach.
- Use of embedded behavioral health consultants. As discussed above, the organization seeks to fully integrate behavioral health into the daily patient flow within primary care. Job descriptions have been crafted and recruitment is imminent.
- Peers/Recovery coaches to support individuals with alcohol and substance abuse recovery, and recovery from trauma including domestic violence and sexual assault. We will be exploring the most effective way to incorporate these non-traditional workers into our service system either through direct hire or possible contracting with a local organization that is developing peer recovery coaches.
- Billing & reimbursement system updates for new and nontraditional staff and services.

**C. Sustained Impact**

FORHP funds have enabled the formation of a solid infrastructure of mental/behavioral health personnel and service delivery mechanisms that will have lasting impact for the community. New ways of serving the community (in an ambulatory care “one-stop” setting, and via telemedicine), new provider capacity, and supportive health policy have been created during the grant period and as direct result of the FORHP grant.

Mental health staffing has been expanded in two service sites. Psychiatrist physician leadership has been secured and will remain in place offering program development support and direct services. Psychiatric case consultation, case review, and cross-disciplinary provider team meetings have been instituted fostering increased dialogue between primary care physicians and specialists and dialogue between FQHC staff and the private sector. Primary care/psychiatric consultation process has been implemented resulting in increased primary care provider confidence and skills and effective co-management of patient cases.

State contracts have been secured to provide reimbursement for this consultation process thus facilitating its increased use because it is otherwise a non-billable service. Telemedicine equipment was provided by the State and telemedicine services will continue. Contracts for services with two universities and the State have enabled access to medical sub-specialties not available in the county. Formative integrative activities with primary care have been completed including but not limited to behavioral health staff consultation with primary care teams, case review meetings, and combined/all provider team meetings. Medicaid instituted reimbursement for telemedicine in summer 2012. As recent as January 2015, Highmark DE is approving virtually delivered psychiatric mental health services. There are requirements to constitute "virtually delivered" care however the fee schedule for these services is no different than for face to face services. House Bill 69 to amend Delaware insurance code to support the continued adoption of the use of telemedicine cleared the House and moved to the Delaware Senate on 4/1/2015.

Taken together, the FORHP grant has enabled the creation of a solid infrastructure that will remain a springboard for continued program development to serve the community.

## Part VIII: Implications for Other Communities

The key learning outcome that we could share with other communities that are interested in implementing similar programs is the importance of gaining multi-stakeholder buy-in. In order for a new service line to be successful there must be multiple sources of commitment; legislative, public and private payers, physicians and other community based providers, advocacy groups, etc. Distinct from outreach to consumers or other referral agencies about the service availability, a separate public relations approach to program development is critical to generate interest, identify potential challenges/resolutions, and advise of rationale, goals, and vision. A strategic reach to targeted leaders helps build consistency of message, dispel any faulty information/perceptions, and builds shared expectations.

## Heartland Rural Health Network, Inc.

Part I: Organizational Information	
Grant Number	D04RH23580
Grantee Organization	Heartland Rural Health Network, Inc.
Organization Type	Non-Profit Rural Health Network
Address	1200 West Avon Blvd. Suite 109 Avon Park, FL 33825
Grantee organization website	<a href="http://www.hrh.org">www.hrh.org</a>
Outreach grant project title	Diabetes Master Clinician Program & Subservices
Project Director	Name: Kelly J. Johnson
	Title: Executive Director
	Phone number: 863-452-6530 ext. 305
	Fax number: 863-452-6882
	Email address: <a href="mailto:kelly.johnson@hrh.org">kelly.johnson@hrh.org</a>
Project Period	2012– 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Pioneer Medical Center	Wauchula/Hardee/FL	Rural Health Clinic
*Sun N Lake Medical Group	Sebring/Highlands/FL	Rural Health Clinic
*Samaritan's Touch Care Center	Sebring/Highlands/FL	Volunteer Clinic
*Florida Department of Health-Highlands County	Sebring/Highlands/FL	Health Department
*Heartland Rural Health Network, Inc.	Sebring/Highlands/FL	Non Profit Rural Health Network
*Dr. Edward Shahady, Diabetes Master Clinician Program, Inc.	Jacksonville/Duval/FL	Non Profit

### Part III: Community Characteristics

#### A. Area

Highlands, Hardee, DeSoto and rural portions of Polk Counties, FL

#### B. Community description

The service area is located in the southern part of Florida—about two hours southwest of Orlando and southeast of Tampa. Demographic, social, and economic conditions all influence chronic disease management in the communities as they have a direct relation to chronic disease outcomes. The service area includes Highlands, Hardee, DeSoto, and rural portions of Polk County for a total service area population of 170,095. The racial makeup includes an average of 81.5% White, 9.75% Black, and 8.5% other. The service area has a higher average Hispanic/Latino population (28.3%) as compared to the state and national rates at 21% and 15%, respectively. Twenty-five (25%) of the service area is without health insurance as compared to the state rate of 18% and national rate of 15%. Persons living below 100% poverty level within this service area are also higher (22%) than state and national rates at 13% and 15%, respectively.

## C. Need

The project rationale was based upon consideration of the following community health attributes:

- disparities in the age-adjusted death rate (AADR) and hospitalization rates of diabetes;
- seniors and minority populations experiencing higher rates of diabetes & cardio-vascular disease (CVD);
- higher rates compared to state and national rates of conditions impacting diabetes and CVD outcomes such as stroke, blood pressure, obesity, etc;
- impact of socio-economic factors on chronic diseases; and
- difficulty navigating available services for the target population.

Our Rural Health Outreach Grant program was focused on addressing diabetes and CVD through nutritional awareness, remote monitoring of biometric data, tracking chronic disease management goals through a registry, and community-based case management services in cooperation with health care providers. Twelve percent (12%) of our service area's adults have been diagnosed with diabetes as compared to the state and national rate of 8.7% and 8.3%, respectively. The population within our service area also has higher rates of adults diagnosed with hypertension (29%) and high blood cholesterol (45%). Forty-one percent (41%) of adults have a BMI of 25.0 to 29.9, and are classified as overweight while 28% are classified as being obese with BMI rates equal to or above 30.0. Both of these percentages exceed state and national rates.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

There are four main components of our outreach program which were developed to adequately address chronic disease management within our service area and target population. Two models are based on promising practice models and two have been determined to be evidence based. They are each discussed in greater detail below.

#### Model 1: Diabetes Master Clinician Program (DMCP)

The Florida Academy of Family Physician Foundation's (FAFPF) evidence-based DMCP model represents a necessary shift in medical practice. An article published in *Clinical Diabetes* (2008) reported that the 58 Florida practices participating in the DMCP at the time of publication were able to help patients attain better control of their diabetes as compared to the national averages. The journal article states that "the 8,657 patients (27,920 visits) in the 58 practices averaged 54% goal achievement for A1C, 53% goal achievement for LDL, and 54% goal achievement for blood pressure and 19% are achieving all three goals at the same time. Several practices across the state have achieved goals as high as 75% for the individual measures and 44% for all three measures together." Although the registry was established to improve the quality of diabetes care with information on HgbA1C and body mass index (BMI), it also provides much needed data on CVD as the registry tracks cholesterol (LDL, HDL, non-HDL, and Triglycerides), blood pressure, weight control, and smoking status, including smoking cessation trainings a patient may have been given. This evidence-based model was selected due to the successful outcomes reported in the *Clinical Diabetes* journal article as well as numerous discussions with Dr. Edward Shahady, the DMCP's Medical Director, on the core content and quality indicators offered by the DMCP's registry that would help improve the quality and systems of care at a more local level, impacting both provider and patients.

#### Model 2: Community Health Workers (CHWs)

We utilized the promising practice model of CHWs to aid in chronic disease education in the home/community based setting for our target population. An evaluative research report conducted by RTI International/University of North Carolina Evidence-based Practice Center and published by the Agency for HealthCare Research & Quality (AHRQ) concluded that CHWs can serve as a means of improving outcomes for underserved populations for some health conditions.

CHWs serve as a connection between health care consumers and providers to promote health among populations or groups that have traditionally lacked access to adequate health services. One of the most unique features of utilizing CHWs is they live in the communities in which they work, understand what is meaningful within these communities, communicate in the language of the population served and recognize the importance of cultural buffers to promote positive health outcomes. The National Community Health Advisor Study conducted by the University of Arizona and the Annie E. Casey Foundation (1998) surveyed 500 CHWs nationwide and identified the seven core services of CHWs which include bridging cultural mediation between communities and the health care system; providing culturally appropriate and accessible health education and information, assuring that people get the services they need; providing informal counseling and social support; advocating; health screenings; and building individual and community capacity. The Centers for Disease Control (CDC) has provided leadership in documenting and acknowledging the roles of CHWs with the first national database established in 1993. In 2002, HRSA's Bureau of Primary Health Care CHW

information was also added to this database. The evidence on the effectiveness of CHWs in Diabetes Education and Self-Care is published in numerous professional peer-reviewed journals nationwide.

### Model 3: Healthy Eating for Successful Living in Older Adults

This program is one of the four original Model Programs Projects, evidence-based health promotion programs in nutrition, physical activity, depression and chronic disease self management, that were developed, tested, and disseminated by the National Council on Aging (NCOA). The focus of this program is to maintain or improve participants' wellness, with particular emphasis on chronic diseases development/progression. The program uses behavior change strategies that help participants build a sense of empowerment as they accomplish incremental changes through various activities and lessons. The Healthy Eating program was developed by the Lahey Clinic in collaboration with several other Boston area organizations and the NCOA. Pilot testing was conducted at three agencies in Boston which differed in size, location, and diversity of the population served.

The program is structured to be delivered through weekly workshops targeting adults 60 and older. The sessions are highly participatory and include an education component, hands on activities, support group, and resource connection. Participants do not have to be committed to making behavioral changes when they join the program but should be willing to take part in the process. The program runs for six weeks with participants meeting 2.5 hour weekly. The recommended class size is between 8 to 12 participants.

The core components of the program include self-assessment and management of dietary patterns of each participant; goal setting, problem solving, group support; education; and behavioral change strategies. The only modification we made to this program is the suggested target population. The program was designed and tested on adults age 60 and older and we modified the program to include adults 18 and over, based on our target populations' age range.

### Model 4: Remote Monitoring through Health Buddy System

Remote monitoring, one of three types of telemedicine applications, enables medical professionals to monitor a patient remotely using various technological devices. This method is primarily used for managing chronic diseases or specific conditions, such as heart disease, diabetes mellitus or asthma. These services can provide comparable health outcomes to traditional in-person patient encounters, supply greater satisfaction to patients and may be cost-effective. Remote monitoring is considered a promising practice but not evidence-based due to several factors, including lack of randomized controlled trials and lack of cost effectiveness analysis. According to an article published in the Journal of American Medicine Information Association, "Home tele-monitoring of chronic diseases seems to be a promising patient management approach that produces accurate and reliable data, empowers patients, influences their attitudes and behaviors, and potentially improves their medical conditions. Future studies need to build evidence related to its clinical effects, cost effectiveness, impacts on services utilization, and acceptance by health care providers." A 2008 report published by Health Management Associates detailed some promising findings in their evaluation of remote monitoring in chronic disease management. Researchers found that interventions to manage congestive heart failure, conditions among the elderly and high risk pregnancy provide the most benefit for improved outcomes and cost savings. Research consistently reflects a strong return on investment for care management, ranging from \$2.72 to \$42.7 dollars saved per dollar invested. This can be attributed to higher costs and severity of illness lending itself to savings potential by reducing hospital readmissions.

## **B. Description**

The premise of the program is for providers to have access to the Diabetes Master Clinician Program's (DMCP) online data registry which offers an opportunity for providers to input diabetes clinical measures into the registry. The registry provides a "report card" for patients as well as producing data specific to individual practices which helps the provider with population management. Another component of this program is offering Community Health Workers (CHWs) for patients who may be experiencing more difficulty or external barriers to managing their diabetes. The providers use referral forms which are faxed to our offices whereby the Coordinator assigns a CHW to referred patients. The CHW serves as an "extension" of the provider's office and works with the referred patients to develop goals and work on addressing barriers to managing diabetes. Regular case conferences are held by the Coordinator, CHWs and participating DMCP providers to provide data updates on their clinic status as it relates to clinical measures as well as to discuss CHW cases. After the CHW meets with the patient, case notes are faxed back to the provider, which helps keep the communication lines open between the CHW and provider's office on the status of their patient. In the latter part of Year 3 of the grant, one provider transitioned from the DMCP registry to just using CHW services (due to internal restructuring) whereby rather than loose them altogether as a participating provider, we decided to pilot a diabetes educational program with a total of five CHW home visits (2 assessment/post assessment and three educational sessions) with summaries faxed back to the provider office after completion of their visits. We also facilitated CHOICE (Choosing Health Over

Illness with Creative Eating) nutrition classes in a variety of settings throughout the service area. Lastly, we attempted to roll out a remote monitoring pilot program but faced several challenges that are discussed in the challenges section below.

### C. Role of Consortium Partners

The role and responsibility of each consortium partner involved included committing to using the DMCP registry and updating it regularly so that data was made available within our service area. Each consortium partner also provided a dedicated staff member(s) to meet with the Coordinator to review registry data and discuss any areas of concern as it relates to the DMCP. Consortium partners agreed to refer patients to the CHW program if they were determined eligible by the consortium partner in accordance with the program policies. Dr. Shahady's role as a consortium partner was to offer educational opportunities for consortium partners through emails, offering the DMCP registry, as well as performing an annual site visit.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Two local provider offices were recognized by Heartland Rural Health Network and the Florida Academy of Family Physicians Foundation as Centers of Diabetes Excellence. This means that a practice has met certain quality indicators as it relates to diabetes care. Locally, we now have a total of four participating DMCP offices that are recognized as Centers of Diabetes Excellence, the two newest recognized in December 2013 as Sun N Lake Medical Group and Hardee Family Medical Group. In addition to the entire practice being recognized, each of the staff, including the physicians, were recognized for their efforts to achieving quality diabetes care in their respective offices by receiving certificates noting them as either a Diabetes Master Clinician (provider) or Diabetes Master Clinician Associate (Medical Assistant, Nurses, other office staff). A graduation ceremony was held to recognize them. Six practices were initially trained in the DMCP and four continue to be actively involved in the program. The reasons for the reduction in practices include closing of one office and one had difficulties integrating the DMCP into their electronic health record (EHR) system.

The total annual savings for patients meeting at least one of three ADA quality indicators (A1c, LDL, Syst BP) in the Network's service area in 2013-2014 was \$891,312. Twenty one percent (21%) of HRHN specific DMCP participants met all three quality indicators. Over ten CHOICE programs were facilitated serving 100 participants.

### B. Recognition

Our Community Health Worker program was featured in the Rural Monitor Summer 2014 online edition:

<http://www.raconline.org/rural-monitor/rural-diabetes-management/>

## Part VI: Challenges & Innovative Solutions

The largest challenge we experienced involved the Remote Monitoring Program. When originally drafting the Year 1 budget, we worked closely with a manufacturer of remote monitoring equipment. We were surprised to see some unexpected costs that were not originally disclosed to us when drafting the budget. Also, the Network administration was not satisfied with the contract terms and conditions. The Network administration wanted language to be included to state "based on availability of grant funds" for subsequent contract years, but this was not included in the amended contract language. The additional costs were also not to the Network's benefit or budget, so we started seeking additional vendor quotes for similar remote monitoring systems. After considering three additional vendors, the Network opted to go with another vendor. This company was the most agreeable and easy to work with to modify the terms and conditions to include exactly what we wanted in the contract to protect our interests as it relates to the grant agreement we have with HRSA. Furthermore, their costs were half of what we originally budgeted for the 15 units and they were willing to visit the Network office to complete "hands on" training with the staff to roll out the systems. The units were ordered and training on the system occurred in December, 2012. Staff met with the Diabetes Master Clinician providers to ask them to select a sample of patients who were seeing a CHW and may also have been willing to participate in the remote monitoring project. One caveat was that, due to reimbursement of the diabetes test strips and a certain strip being required for the remote monitoring product, we had to select patients based on having Medicare. This ultimately quashed hopes of getting this program off the ground. In Year 3, we had a client who was referred to us, but after meeting with him he wasn't interested in participating. The provider even tried to speak with him to encourage participation, but this did not come to fruition.

We had originally had a particular external evaluator in mind but came to understand that we may want to consider options more broadly. We ultimately went with Epiphany Community Services "REACH" evaluation, already a provider of evaluation services for another of our grants, which provides us with database access to enter our evaluation data on the various activities.

A challenge has been that the DMCP registry does not have the capability at this time to integrate with other EHRs which means some providers may have “double data entry” to enter data into both systems. One provider finds the DMCP so useful they are doing the double data entry, although we have been met with resistance to try and recruit new providers to implement the DMCP based on the inability to interface with other EHR systems at this time.

We had some staffing turnover for the Project Coordinator’s position, but over the last year, our current Project Coordinator has served in this capacity and has really streamlined the data collection and policies/procedures for the program.

## Part VII: Sustainability

### A. Structure

Yes, at this point in time we expect that the consortium will continue. The partners that will continue to be a part of the consortium include: Pioneer Medical Center, Florida Department of Health Highlands County, Sun N Lake Medical Group, and Samaritan’s Touch Care Center, Diabetes Master Clinician Program, Inc.

### B. On-going Projects and Activities/Services To Be Provided.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The DMCP program will continue to maintain the data registry free of charge to participants through the relationship we have with the organization, Diabetes Master Clinician, Inc. The Community Health Worker program will continue on a smaller scale through a grant we have secured in partnership with the local health department. The structure will be a little different as we will be providing educational sessions and case management follow-up after sessions as compared to in-home, one-on-one services, as it is structured now. The CHOICE nutrition program components have been built into this new grant, although it won’t be the six week course that it is now. We will continue to sustain our activities, although on a much smaller scale, through the securing of additional grant funds.

### C. Sustained Impact

The most profound sustained impacts as a result of the grant activities are new ways of serving residents with diabetes in this region. Providers have changed their practice standards by focusing on systematic quality of care as it relates to diabetes by providing their patients with high quality, evidenced-based care; using patient registries and other systems support for care; linking patients to intense CHW navigation and support; and by engaging the patient in self management of their diabetes with such tools as a personal diabetes management report card to track status towards achieving goals related to their diabetes diagnosis (e.g. LDL, BP, annual checks, A1C, etc).

Additional sustained impact is in that much of the education and training activities of this grant will continue to be available to the community beyond the grant period through our ongoing relationship with the DMCP, Inc. Providers will be able to continue to receive education on diabetes care for their patients through Diabetes University. This is free education that is provided to any medical professional through the DMCP, Inc. website. Participating practitioners have been provided a variety of opportunities, too, for additional training sessions that add value to them individually, their practice, as well as the patients they serve. The education and data registry will be available to the practitioners after the grant ends. Also, evidence-based nutrition curriculum, including food demonstration portion size materials, will continue to be available for any organizations who want to utilize it for their own use. Although we faced many barriers in getting our remote monitoring portion of this project up and running as we had so strongly anticipated, the remote monitoring equipment, including blood pressure units and scales, will be available to organizations that want to take advantage of these items.

## Part VIII: Implications for Other Communities

In this Outreach experience, we were able to demonstrate the value of not only adopting evidence-based models individually but, more importantly, integrating them into original, synergistic approaches that made the impact greater than the parts. This is especially true in what we feel the evidence shows to be the value of linking the CHW model with the DMCP approach to systematic diabetes patient clinical care. The combination of maintaining a diabetes patient registry at the practice level with empanelling practice patients with a CHW proved supportive of the clinicians' quality of care, the patients' ability to self-manage and the ability to optimize the use of data to support all through the registry and patient report cards.

As it relates to the remote monitoring strategy, we learned the hard way it's very expensive up front (even more so than some of the vendors relay to you) and, unless you can bill some sort of insurance, the testing strips are very expensive alone without any coverage. Make sure up front that the vendor is willing to work with your terms and open to modifying contracts. We experienced companies that wouldn't budget on contract wording and did not protect our organization so much as it did their businesses. This was such a challenge that we ended up going with the one vendor who would modify the contract to reflect this grant program terms. However, limitations with strips required us to accept only Medicare clients, which severely limited our population of study, and, ultimately, impacted the success of our tele-monitoring pilot program. We also did not originally anticipate consent forms, waivers, and insurance issues, so it's important to plan on these activities beforehand. We worked with a lawyer who drafted terms and conditions and a waiver for potential clients to sign, releasing the Network from liability. This did impact our organizational insurance but we were lucky to find a vendor who was reasonably priced for insurance coverage. When you are a nonprofit who doesn't provide direct medical services, it's just important to be aware of these issues before moving into tele-health.

It's important to keep communication lines open with providers when seeing referred clients of a CHW program. We faxed case notes on a weekly basis to respective providers on any clients that were seen so that the provider is always kept in the loop as to their referred patient's progress. This constant communication was valuable to the provider and we built a rapport and program value with consortium partners through these efforts.

# Florida

## Rural Health Network of Monroe County, Florida, Inc.

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23611
<b>Grantee Organization</b>	Rural Health Network of Monroe County, Florida, Inc.
<b>Organization Type</b>	FQHC
<b>Address</b>	3706 North Roosevelt Blvd., Suite D, Key West, Florida 33040-4566
<b>Grantee organization website</b>	<a href="http://www.rhnmc.org">www.rhnmc.org</a>
<b>Outreach grant project title</b>	Rural Health Care Services Outreach Grant Program- <i>The Keys to Healthy Smiles</i>
<b>Project Director</b>	Name: Daniel E. Smith
	Title: President & CEO
	Phone number: 305-517-6613, ext. 301
	Fax number: 305-517-6617
	Email address: <a href="mailto:dsmith@rhnmc.org">dsmith@rhnmc.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Rural Health Network of Monroe County, Florida, Inc.	Key West/Monroe/Florida (Lead Agency in Grant)	Not-for-Profit - 501(c)(3)
*Monroe County School District (MCSD)	Key West/Monroe/Florida	Public School System
*Southernmost Homeless Assistance League (SHAL)	Key West/Monroe/Florida	Not-for-Profit - 501(c)(3)
*Key West Housing Authority (KWHA)	Key West/Monroe/Florida	Not-for-Profit - 501(c)(3) - Authority established for low income housing
Monroe County Continuum of Care (MC-CoC)	Key West/Monroe/Florida	Not-for-Profit - 501(c)(3)

## Part III: Community Characteristics

### A. Area

All of Monroe County, Florida was served by the Outreach Grant, consisting of the communities that make up the Florida Keys (or islands). Specifically, the areas of the Keys that were served were: the City of Key West, the unincorporated area of Big Pine Key, Summerland Key, the City of Marathon, the City of Layton, the Village of Islamorada, and the unincorporated areas of Tavernier, Key Largo and Ocean Reef. U.S. 1 highway, mile markers 0-120 cuts directly through the string of islands that make up the Florida Keys. The Florida Keys run from mainland Florida (Miami-Dade County) approximately 130 miles out through the Gulf of Mexico and the Atlantic Ocean, dividing the two bodies of water with the chain of islands known as the "Florida Keys". The road serving the Keys ends in Key West, Florida at mile marker "0" on U.S. Highway 1.

### B. Community description

Today there are 73,090 people living in Monroe County, (32% without any form of insurance). The average population density for the 114.85 square miles that make up the Keys is 636 people. The communities of the Florida Keys are spread out over a 113 mile

stretch, consisting mainly of two lane roads, with over 60 bridges, having communities on more than 100 keys or islands. As the case in most rural areas, services that are available are scattered over that stretch of roadways. The average width of the Keys is no greater than two miles. The majority of the race in the county is white (89.5%), with a fairly even split amongst males and females. The largest age group for both genders is between 25 and 55, with a median age of 46.4 years. Tourism is the largest workforce in the Keys, employing upward of 55 percent of the county's workforce.

The Keys has a large number of alcoholic licenses, 660 in fact, compared to other equally sized populations that have 150-200 licenses. Adult alcohol consumption in Monroe County is 25.1% compared to the State of Florida at 15%.<sup>1</sup>

### C. Need

The target population included all Medicaid, uninsured, low-income students in grade levels two and seven within the county, all of whom were served without regard to race, color, religion, national origin, familial status, gender, sexual orientation or preference, age or income. Our grant was designed to reach three particular segments of the population that had not had access to affordable oral health care. We put together a coalition of organizations that had access to the three target populations. The history of the Rural Health Network and its direct care services since the year 2000 helped to target the health care needs of the population, specifically with oral health care. Rural Health Network of Monroe County's (RHNMC) three dental clinics served 9,967 active patients or 13.8% of the county population, with 83.04% of all patients having no insurance in the past fiscal year. There were 8,438 school children in the 2014-2015 school year, with 3,789 on the National School Lunch Program or 44.9% of the entire school population. There are 1,635 homeless, or 2.26% of the county population, with only 12 having reported seeing a dentist in the past 12 months. There are 18,976 seniors (those over age 60), or 25.9% of the county population, with 3470 housing program participants, 1752 below median income (30-80%) and 816 over age 61, receiving some type of housing assistance. The county housing authority is desperate to help bring affordable and accessible dental care to their community.

The 2011-12 numbers are 1218 students.<sup>2</sup> Over a three year period that equates to 3,600 students that were examined and treated as needed. According to the Monroe County School District's website; 3,789 students (44.9%) were eligible for the Free/Reduced Lunch 2011-12 program.<sup>3</sup> This became the focal point of our target population referencing school children. In addition to the student population, our focus was also on the homeless and the economically disadvantaged seniors of Monroe. The homeless population is 1,635 people; equating to 187 children under age 18; 1,326 adults (18-60); and 119 over age 60. Of that population 1,206 are male, 425 are female and 4 are transgender. The economically disadvantaged seniors (over 61) participating in the housing authority's programs equal 816, comprising 23.52% of that total population of 3,470 people. Statistics show that the total uninsured population was 23,101 in 2010, or 32% of the county's overall population and the population under the age of 18 is 11,015.<sup>4</sup>

The following information is taken from the Florida Department of Health and was updated on December 2009, concerning "County Specific Profile Relating to the Oral health of Disadvantaged persons". The chart shows that 5,796 children were below 200% of the Federal Poverty Level. That is greater than one third of Monroe's children. It also showed that 15,330 adults were at or below 200% of the Federal Poverty Level. The total number of children and adults (21,126) below 200% of poverty was a staggering 29.24% of the current Monroe County population.

The coalition worked on a master plan that would enable the target population groups to have access to the oral health care programs, while educating the three segments of the target population as to the importance of proper oral care and how to continue to access that care for all future needs.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

In 2006 "A Model Framework for Community Oral Health Programs, Based Upon the Ten Essential Public Health Services" was published, prepared by the American Association for Community Dental Programs. Its creation was supported by Health Resources and Services Administration. In an effort to always understand our community and our relationship with the community as an effective working partner, RHNMC has adopted this model framework.

<sup>1</sup> Statistics derived from Florida Health-Monroe County Community Health Almanac 2013

<sup>2</sup> Source: [www.keysschools.com](http://www.keysschools.com), 10/2012

<sup>3</sup> Source: [www.keysschools.com](http://www.keysschools.com), 10/2012

<sup>4</sup> Source: American FactFinder, 2010 American Community Survey 1-year Estimates

The publication is "...a policy document describing the integration of oral health into the 10 essential public health services. The 10 essential public health services provide a nationally accepted framework within which to describe the public health core functions needed to achieve the goal of healthy people living in healthy communities. The *Framework* provides a context in which to consider the relationship between oral health activities, public health responsibilities, and desired outcomes and describes how oral health can be promoted with the context of the 10 essential public health services to improve a community's overall health status." The following are the 10 essential services, taken directly from the publication:

1. Monitor health status to identify community health problems.
2. Diagnose and investigate identified health problems and health hazards in the community.
3. Inform, educate and empower people about health issues.
4. Mobilize community partnerships to identify and solve health problems.
5. Develop policies and plans that support individual community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services, and ensure the provision of health care when otherwise unavailable.
8. Ensure a competent public health personal health care work force.
9. Assess effectiveness, accessibility and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.<sup>5</sup>

Prior to the 2012 Outreach grant, RHNMC had been providing dental services for 10 years. RHNMC has found that combining our history with this public health framework approach has positioned us well to reach our goals and provide a better service to the local community as a whole. Over that period of time the network had come to learn a considerable amount about how to structure and manage oral care for its community. The first realization in our program was that technology was key to the industry (and to our survival), from digital radiography to electronic health records. Another valuable lesson learned was by partnering with local "private practice" dentists (of whom 4 local practitioners helped RHNMC in its first clinic endeavor). Using experienced dentists, who ran "private practices" for years, gave RHNMC's management staff positive insight into the best practices. Utilizing the experience over the years from dentists that volunteered to work with RHNMC combined with the best practices utilized by the current industry standards gave RHNMC a model that worked for our unique rural area.

## B. Description

Funded activities included scheduling trips to the various schools for assessment and application of dental sealants. Assessments were recorded and reported to the parent(s) or guardian of the children and appointments were scheduled for; hygiene visits, x-rays, exams and procedural work as required. For the low income housing seniors, flyers & brochures were distributed, meetings with seniors at their housing projects were done, and appointments were made for scheduled visits, including those service items listed above, along with partial and complete removable (dentures and prosthodontics). As stated earlier, the homeless were a more difficult group to coordinate, mainly due to a lack of motivation and trust. We initiated the "requirement to register as a healthcare patient" as they registered for various homeless services, thereby becoming a "requirement" for care.

All of the above was done with the concept of providing the necessary education and support that each of the three groups required. The coalition, or consortium partners, worked diligently to see that each of the groups had an understanding of what we (as a group) were attempting to accomplish and what the expectations were after the "seed" monies from the federal government were no longer available. Surveys were used to assure that each of the three groups understood the program and understood the need to continue monitoring the status of their care. Curriculum was designed for each segment of the population, all of which carried common denominators to measure the three year project. The "patients" were expected to participate in program training four times each year. They were also tested to demonstrate their retention of the information that they were provided, which focused on dental hygiene and the need for regularly scheduled visits.

Regular meeting and conferences were held, outreach programs such as health fairs and presentations were conducted to forums such as the local Rotaries, Community Leadership programs, etc., all of which were successfully designed to promote the program, and later the successes of the program(s) implemented.

During 2014, RHNMC was also working towards its Federally Qualified Health Clinics' status of "Patient Centered Medical Home", by the National Quality Assurance (NCQA). This process served as a means to educate not only the Rural Health Network staff and their existing patients, but also the Consortium Partners as to the long range goal of seeing that patients are a large part of

---

<sup>5</sup> Source: "A Model Framework for Community Oral Health Programs", May 2006 by AACDP

their own personal health care and that educational process of having a team approach to everyone participating in providing and receiving the care was essential to success.

### C. Role of Consortium Partners

The partners brought specific segments of the population to the forefront. The School System brought the children into the program, the Housing District brought the elderly seniors into the program and the two homeless coalitions worked within that population, which were found to be the most non-compliant group. The children and the elderly were the most manageable. The homeless population, for a variety of reasons was the most difficult. Many times there was a lack of trust, a need to “hide” or a deeper psychological issue that made that population more elusive. The elderly population was the second most difficult because the social medical program (Medicare) only covers one (1) lifetime denture, which many already had but were worn beyond repair. This compounded the issue of providing a meaningful dental program. Over time we were able to provide the best possible dental program and solutions that we could and solve, as a team or consortium.

The School System worked with RHNMC to schedule visits to the schools to assess the 2<sup>nd</sup> & 7<sup>th</sup> grade children. Our dental teams, which consisted at various times of a dentist, a hygienist, two dental assistants, and a care coordinator, worked with the school system nurses and principals to coordinate the visits. We set up “mash” style dental chairs and equipment, used art rooms whenever available, for access to sinks for water and teeth cleanings. Additional focus was to educate the parents and children on the need for brushing and flossing, but also to educate the families on the access to care using the RHNMC dental clinics. As stated earlier, RHNMC has three clinics strategically located in the Lower Keys/Key West, the Middle Keys and the Upper Keys.

The Housing Authority put out regular bulletins and flyers announcing the RHNMC program and worked with our clinics to help schedule the elderly patients, at times helping all concerned address any transportation issues with the county transportation authority. The Housing Authority had a fantastic control mechanism, as all the participants were readily available for meetings, trainings and discussions concerning the project. The Authority had readily available rooms for such activities.

Working with the homeless population, as indicated earlier, turned out to be the greatest challenge. Several attempts were made in a variety of ways: public & individual transportation, group bussing, all with many challenges. Ultimately RHNMC and SHAL made it a policy that the homeless registration would actually take place within our medical clinics, which we then tied to the dental program. They made it mandatory that all those seeking shelter for reasons of homelessness were required to have a baseline physical and a dental assessment.

Each consortium member worked within their segment of the target population to educate and evaluate the process from the beginning of the program, through the process of care and to measure the outcomes. As a group the members discussed their particular challenges and successes to work in unity for the overall mission and goals set forth.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

We first measured the size of the target population of each of the three major groups for accuracy, then requested self-evaluations from each of those wanting our services, to get a subjective finding of what they thought of their own personal oral health care requirements and their oral needs. Each self-evaluation was tuned to the specific population (school children, aging adults, and the homeless), but each evaluation required specific measurable answers that were tallied together. Next we measured the service provided to each group over the entire three year span. These services represented the following list of items: Dental assessments, sealants, dental hygiene, treatment plans, x-rays, fillings, extractions, removable prosthodontics (dentures & partials/bridges) and fixed prosthodontics (crowns & implants, if required). Our improvements in oral health care far exceeded our expectations and the group of consortium members that we chose proved to be invaluable to the overall success of the project.

In the three years of the dental outreach grant (from May 1, 2012 through April 30, 2015), RHNMC provided the following services: Dental Sealants- 5,469; Diagnostics- 1,524; Preventive- 573; Restorative- 599; Endodontics- 24; Periodontics- 246; Prosthodontics-removable- 145; Implant Service-0; Prosthodontics-fixed- 20; Oral Surgery- 289; and Adjunct Services- 199.

For the three (3) years RHNMC held the outreach grant, our return on investment (ROI) for the overall organization was fantastic. During the three years the grant supported the oral health project of RHNMC we matched the total revenues generated by the organization to the support given for the grant. Through complex ROI spreadsheets, we calculated a direct return on the monies

invested by the HRSA Outreach Grant for our RHNMC to be \$18.41 generated for every \$ 1.00 invested. By adding many indirect factors, including long term costs adverted, our figures reflect an astonishing \$ 37.68 for every \$1.00 invested.

## **B. Recognition**

In 2012 RHNMC was invited to and attended the White House Rural Health Counsel as the only Oral Health Care participant, to discuss the stages of our program and to state the needs of oral health in the rural committees. We were represented by the only pediatric dentist in Monroe County (who also holds a Master's Degree in Public Health). It was an honor to have been asked to be a part of the team that was chosen to represent oral health care in a rural setting.

## **Part VI: Challenges & Innovative Solutions**

The following list captures potential problems the partners encountered throughout this project and beyond, and suggested methods to achieve reconciliation and resolution. As addressed in our mitigation plan that was submitted with our grant application, we did have several very minor issues, but they were not too difficult to address.

The softer challenges were the day to day routine issues that every business and venture face; such as staff absences (whether scheduled or for illnesses and sick leave), supply shortages and equipment breakages/repairs. These issues were dealt with in our customary manner and handled by having backup staff, supplies and equipment all of which we had already developed for each of our three clinics.

The next level of challenges was handling minor incidences such as complaints, short term delays, altercations and transportation related issues. Once again, our mitigation plan for handling such issues worked well to resolve this level of challenges.

The unexpected challenge, however, was the issue with the homeless population being very non-compliant. The coalition had anticipated that the homeless would be the one population that would be the most eager to receive the "free" dental services. It was just the opposite. There appeared to be a fear on the part of the homeless to work with any group outside the two homeless coalitions. Our consortium met several times to discuss the disconnect that existed with the homeless. The two homeless partners, Southernmost Homeless Assistance League (SHAL) & the Monroe County Continuum of Care (MC-CoC) stated many times that the homeless population lacked trust in established organizations and acted in fear at complying to rules or order. In the end the result was that, as stated earlier, we moved the registration of the homeless population (including all counseling) to the RHNMC facilities. It became a requirement for the homeless, in order to receive any benefits, to submit to a baseline physical, which included dental assessments, and a treatment plan. This approach served to build the level of trust that was needed, not only for the dental program to move in a positive direction, but for the medical health center to reach this difficult population. Having a "health care plan" or initiative, that was a formal part of the homeless registration, which included a dental assessment and treatment plan, also allowed for testing of such things as tuberculosis and lice. One event, a rare but potentially fatal health condition for the patient and the community-at-large and the other a common event that was controllable and manageable when detected and dealt with.

## **Part VII: Sustainability**

### **A. Structure**

The partnerships will continue, however in a less formal manner and meeting less often. The school district, the housing authority as well as SHAL (Southernmost Homeless Assistance League) & the Monroe County Coalition for the Continuum of Care (for the homes) have been our community partners for years and will continue to be. That being said, RHNMC is always looking for newer ways to get our message(s) out to the community and plan to expand our options with fundraising events and community fairs and activities.

As stated earlier SHAL will continue to register and counsel the homeless at our healthcare facility, which will allow RHNMC access to the patient and the patient to care. Both the School District and the Housing Authority will periodically put out materials on RHNMC services and programs. RHNMC will continue to provide community education. We are currently developing a "Center of Excellence" which will provide a facility and equipment to hold professional staff to staff, staff to patient, and leadership to all for educational guidance in the healthcare marketplace.

## B. On-going Projects and Activities/Services To Be Provided.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Our mission is to continue our outreach dental program(s) and keep the local community abreast of our services and achievements and to continue the “services” we offer, but limit the services to “in-house”, or clinical activities within our clinics. Outreach will only be done through fundraisers and other public activities with no actual assessments being performed outside our clinics, with the possible exceptions of “health fairs”.

We are setting up a “Center of Excellence”, as stated above, for educational and training purposes. We are encouraging the entire Monroe County healthcare establishment to participate in the process so that we can all communicate our programs and services to each other and to the general community population. We believe that bringing more community businesses and partnerships together will solve many problems. We as a community need to get the “best bang for the dollar”, which obviously starts with coordination of services, elimination of unnecessary duplications and marketing the message to the community at large.

To continue this project, RHNMC will continue to request financial support from the following organizations; The commissions of the various Florida Keys Cities, the Monroe County Commissioners (through the Human Services Advisory Board aka the HSAB) which has supported our special programs to a tune upwards of \$300,000 each year, the Monroe County Sheriff’s Shared Asset Forfeiture Fund (which utilizes the interest off of seized properties) to help community non-profit programs, the State of Florida (through the Florida Office of Rural Health), and program income (derived from the paying patients with insurances and out-of-pocket payments). Additionally we plan to work with all three local Rotaries in the Key West and Lower Florida Keys to promote our dental program on a continual basis, working various fundraisers to promote the program supporting each of the three particular segments of the population here in the Florida Keys.

## C. Sustained Impact

The community has learned more about the services RHNMC provides, which include medical services as well as the dental services that were in the scope of this grant award. In each of the five clinics we operate we are now cross promoting our programs. The success we had with this Outreach Grant over the past three years as well as the success of obtaining the Patient Centered Medical Home certification has been not only an educational experience for our entire staff, but also has helped educate our community partners as to our mission and goals in helping provide access to affordable oral and medical health care throughout the rural Florida Keys.

## Part VIII: Implications for Other Communities

This project was a prime example of partnership cooperation and success, in the utilization of its memberships to reduce costs and work jointly for a common purpose. Though not particularly novel, it still represents a local, rural experiment in not-for-profit/school district cooperation and unification and the cooperation of a homeless coalition ( 30+ members) and of the Southernmost Homeless Assistance League (SHAL) with a public “authority”, the Key West Housing Authority (KWHA) to assist in providing oral healthcare to those seniors in need.

Still, replication is based on assumptions and givens. In this project’s case, we all started with the fact that the project’s success depended on each partner’s ability to recognize and accept each member’s strengths and weaknesses. Also, there needed to be an understanding amongst the consortium that we were going to provide top quality of service standards, efficiency, and most importantly, the ability of the partnership to adjust to and accommodate partner differences.

The project’s national replication could be applicable to most rural primary care ventures that seek to reduce cost through merger and cooperation. However, it also assumes that there are already existing programs that can be more efficiently administered, if the individual parties involved recognize that consolidation of services is a win-win for not only the partners but also for the clients served and for the overall community.

It also pre-supposes that there are existing means of providing the required services; i.e. primary care, dental care and mental health and substance abuse services, as well as secondary and tertiary care available through the potential replicating partners. Additionally each partner must be willing to share costs and eliminate competition for income. If these above conditions are present in a community, there would be a much greater chance for success in the implementation of a similar model addressing oral health care.

Finally, in our case, sustaining the program also assumes that there is a government assistance program in place that matches or exceeds income from client fees, and which is willing to accept and/or negotiate increases in costs as health care costs rise.

For Rural Health Network of Monroe County there existed a consortium of members that were strongly devoted to their individual populations, as well as to the overall success of all three groups targeted. For oral health care, RHNMC was poised to provide the services in all three areas of the county, which greatly reduced the issue of access and promoted the chances of success.

## Georgia Southern University

Part I: Organizational Information	
Grant Number	D04RH23576
Grantee Organization	Georgia Southern University
Organization Type	University
Address	GSU Box 8028, Statesboro, GA 30460
Grantee organization website	<a href="http://www.georgiasouthern.edu/rhri">http://www.georgiasouthern.edu/rhri</a>
Outreach grant project title	Applied Diabetes Education Program using Telehealth: Project ADEPT
Project Director	Name: K. Bryant Smalley, Ph.D., Psy.D.
	Title: Executive Director, Rural Health Research Institute
	Phone number: 912-478-8648
	Fax number: 912-478-0751
	Email address: <a href="mailto:bsmalley@georgiasouthern.edu">bsmalley@georgiasouthern.edu</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Georgia Southern University	Statesboro/Bulloch/Georgia	University
*Mercer University	Macon/Bibb/Georgia	University
*East Georgia Healthcare Center	Swainsboro/Emanuel/Georgia	FQHC
*Georgia Partnership for Telehealth	Waycross/Ware/Georgia	Nonprofit

## Part III: Community Characteristics

### A. Area

The service area for *Project ADEPT* included a contiguous four-county service area located in rural southeast Georgia (an area of the state starkly impacted by diabetes), including Candler, Emanuel, Tattnall, and Toombs counties.

### B. Community description

The service area is highly diverse (with at least 36% minority representation countywide) and has high rates of diabetes, with all counties having higher diabetes rates than the national average of 8% and all but one having higher rates than the state average of 11.2%. Together, the counties have approximately 7,500 diabetic patients. Each county is also both a primary care Health Professional Shortage Area (HPSA) and a Medically Underserved Area (MUA). Poverty rates and uninsurance are very high in the service area – each county has higher than 20% poverty and 20% uninsurance (as compared to the US average poverty of 15.1% and Georgia average of 18.7%; and US average uninsurance of 15.4% and Georgia average of 17.8%). Risk factors for diabetes complications are also high, with near or above 30% obesity in each county (as compared to the national average 26.1%) and physical inactivity rates at or above of 26% (as compared to the national average 25.4%).

### C. Need

Diabetes is one of the most devastating diseases in the United States with regards to both morbidity burden and mortality rates.

While the effect of diabetes is profound throughout the US, these diseases disproportionately impact rural areas. Rural populations (particularly in the South) have been identified as being dramatically more impacted by diabetes; in fact, the rural South represents the core of CDC's recently designated "diabetes belt," underscoring the disparate diabetes burden that rural residents experience. Georgia, the largest state east of the Mississippi, is particularly impacted by diabetes. While 8% of the adult US population is diabetic, 11.2% of adult Georgians have diabetes. Within Georgia, rural counties are disproportionately impacted, with an average diabetes rate of 11.5% in rural counties (as compared to 10.9% in urban counties). Unfortunately, in combination with the increased diabetes prevalence burden that rural Georgians face, there is also a profound lack of diabetes educators in rural Georgia. Despite having a rural population of more than 1.8 million residents, over 75% of rural counties have no CDE within the county. This gap in coverage leaves more than one million rural residents of Georgia forced to seek billable diabetes education services outside of their home county if such services are needed. Such travel is often not feasible because of significant transportation and economic barriers that rural residents face in seeking care.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

*Project ADEPT* is based upon the evidence-based AADE7 Self-Care Behavior model for diabetes self-management education (DSME) developed by and endorsed by the American Association of Diabetes Educators (AADE). According to the AADE, "the AADE7 Self Care Behaviors framework reflects the best practice of diabetes self-management education/training by measuring, monitoring and managing outcomes." The AADE7 framework focuses on seven key components of diabetes education: healthy eating, being active, monitoring, taking medication, problem solving, reducing risks, and healthy coping. Its modular format allows for flexibility in delivery and for easy tailoring of content to the cultural realities of rural living. The overall AADE7 framework has been demonstrated to be effective in rural settings for both individual and group delivery when culturally tailored to the rural realities of the target population. To ensure that *Project ADEPT* is culturally-relevant for our target population, all educational materials, handouts, topics of discussion, and resource lists were reviewed prior to use, and the educators were either from a rural background or had significant experience in working with rural populations to ensure that examples and suggestions were consistent with the realities of rural living.

### B. Description

*Project ADEPT* focused on providing evidence-based diabetes education services to patients within four of East Georgia Healthcare Center's rural FQHC offices. The diabetes educator was centrally housed at the Swainsboro (Emanuel County) location, and provided in-person education services at that office. In addition, telehealth was used to connect to the other locations (Candler, Tattnall, and Toombs counties) to maximize the availability of diabetes education services without the need for travel to remote sites. Translation services were used to facilitate sessions with Spanish-only speaking patients (e.g., 40% of Tattnall's patient population prefers or exclusively speaks Spanish). A total of eight mini-modules were offered based upon the AADE7 framework, typically two modules within each of four sessions.

### C. Role of Consortium Partners

The Rural Health Research Institute (Georgia Southern University) served as the lead grantee, responsible for all fiscal responsibilities, progress reporting, progress monitoring, and overall leadership of the initiative. The Center for Rural Health and Health Disparities (Mercer University) provided leadership as well, in addition to leading evaluation activities. East Georgia Healthcare Center was the FQHC clinic partner on the initiative, and to facilitate interaction with the patient population the diabetes educator was employed directly by EGHC. The Georgia Partnership for Telehealth established the telehealth system that connected the hub and spoke locations and provided support in the initial implementation of the program.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

As described in more detail below, the project experienced delays in initial implementation due to challenges in hiring qualified diabetes educator candidates and the departure of the originally-hired diabetes educator after training was completed but prior to the program beginning. As a result, diabetes education services did not begin until much later into the project than originally planned. Since beginning services, nearly 90 patients have enrolled in the program, and *Project ADEPT* is currently operating a wait-list. A total of 128 direct patient encounters have occurred, with an additional 556 indirect encounters. Participants are highly diverse, with 52% African-American and 13% Hispanic, and the vast majority (68.2%) are either uninsured or on public assistance. The majority of patients (77.3%) are female, and nearly all (87.5%) are between the ages of 18 and 64.

In terms of individual outcomes, as of May 2015, over 36% of participants have their most recent A1c at less than 8.0, and nearly 60% have their most recent blood pressure at less than 140/90. While ongoing monitoring and evaluation of program outcomes is taking place to allow for a broader picture of the longer-term impacts of program participation, we have been able to complete pre-post analyses on a subset of participants for whom follow-up data has already been collected (20 patients for A1c and 30 patients for BMI). Preliminary results show an improvement both in A1c and BMI, with 75% of participants showing a decrease in A1c from pre to post and 66.7% of participants showing a decrease in BMI from pre to post. Of the 20 participants for which A1c's were collected, individuals showed an average decrease in their A1c's of 1.225 from 9.4 to 8.175. As it relates to BMI, data collected from 30 patients showed a .243 average decrease in BMI from 35.94 to 35.69.

## B. Recognition

Project ADEPT will be the subject of an upcoming feature in *Rural Roads*, the magazine of the National Rural Health Association. In addition, upon funding Project ADEPT was featured in the Statesboro Herald.

## Part VI: Challenges & Innovative Solutions

The most significant challenge encountered during the Project was the difficulty in hiring and training an appropriate diabetes educator for the position. Reflective of nationwide challenges in recruiting and retaining qualified diabetes educators within rural settings, it initially took over a year to hire in the program's first educator. The educator was initially employed by the grantee (Georgia Southern University), but unfortunately upon completion of training the educator left the position prior to enrolling any patients into the program. At this point, upon examination of some of the barriers to implementing the program (such as accessing patient records, scheduling of patients, perceived connection of program to providers within the FQHC, concerns over liability), prior approval was sought to relocate the employee to East Georgia Healthcare Center to allow the educator to be a direct employee of the clinic where patients were being seen (and connecting out to sister locations using telehealth). During this time the government shut-down occurred, which delayed approval of our restructuring. Upon approval, it took several months to re-hire a qualified educator and train her appropriately in the protocol. However, it has become clear that waiting for the right educator was key to the program's eventual success. Once the new diabetes educator began, the program quickly filled and currently operates a wait-list. Good relations with referring providers throughout the FQHC network have been established and sustained, helping to support the program's ongoing sustainability. By being flexible in implementation (i.e., being willing to restructure the initial plan of having a centralized educator providing telehealth to all locations to a revised model of an on-site educator providing in-person education at one site and using the telehealth to connect to other locations), we were able to implement a program with the potential for long-term impact and sustainability.

## Part VII: Sustainability

### A. Structure

The consortium is planning to continue, with Georgia Southern University, East Georgia Healthcare Center, and Mercer University maintaining the program's operations. The Georgia Partnership for Telehealth, whose main focus was on supporting the initial establishment of the telehealth system, will continue to be a supportive presence but will not be an active member of the ongoing operations.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

All program activities will be sustained, initially through a planned no-cost extension and longer-term through outcomes-based reimbursement and billing for services. The key to this success will be the process of accrediting the program through the Diabetes Education Accreditation Program (DEAP) through the American Association of Diabetes Educators. In addition, we will continue to support the educator in the attainment of the Certified Diabetes Educator (CDE) credential. A strategic plan is in place to apply within the next 6 months for accreditation through DEAP. These key components will allow the program to become revenue-generating which will be its main source of long-term sustainability.

### C. Sustained Impact

As a result of Outreach funding, a new and sustainable diabetes education program has been implemented that not only has the ability to reach the 7,500 diabetic patients in the original service region, but also the broader patient population in EGHC's 5 other clinic locations as the program expands and begins to include additional telehealth service locations after the grant has been completed. This support has been essential, as there is a nearly complete void of diabetes educators across the entire EGHC service area – without the funding for this program, over 10,000 diabetics would remain unable to receive evidence-based diabetes education services to empower them to self-manage their condition and improve their outcomes. The program has developed a new capacity to meet the needs of newly diagnosed and existing diabetic patients, creating demonstrated improvement in A1c and BMI for the vast majority of those who have participated. This has helped to increase the focus on diabetes education within the clinics, and encourages providers within EGHC to “prescribe” diabetes education services. In addition, the equipment and networking process has substantially increased the ability of EGHC to engage in provision of services using telehealth, and in future years this foundation may help to expand into additional telehealth services within the clinic locations.

## Part VIII: Implications for Other Communities

One key aspect to the program's success was its continued flexibility. The needs of rural areas are each unique and subject to rapid change, and remaining responsive and flexible to those differences and changes is important. For instance, our original model was to have a university-based diabetes educator connecting to all remote clinic locations. However, it became evident that a more feasible and sustainable model was for the educator to be a clinic employee who provided both in-person (at their home location) and telehealth services (to remote locations). Having a physical presence in the network greatly facilitated connections with providers and visibility of the program, and having the educator herself be an ambassador of the program directly within the clinics was very beneficial.

In addition, we conducted “kick-off” events at each of the locations (both in-person and telehealth locations) where the educator physically traveled to the remote locations to meet staff and potential participants. This allowed staff to meet and know the educator, connecting them more directly with the program's efforts and making the project more prominent in their minds. This also had the benefit of raising awareness of the program directly with patients, and led to many of the initial participants in the program.

Given the demographic profile of the service region, maintaining access to translation services was essential. For telehealth-based sessions, translation was provided at the spoke rather than hub site, which helped to minimize concerns over potential interactions of challenges possible with remotely translated services.

Some of the greatest success stories, we became aware of, were through informal communication with the educator regarding progress made or breakthroughs achieved. These would frequently come up in conversation with patients, and implementing a way to track such qualitative comments would allow for a greater ability to demonstrate the personal nature of the impact of the programs.

## Irwin County Board of Health

Part I: Organizational Information	
Grant Number	D04RH23585
Grantee Organization	Irwin County Board of Health
Organization Type	Public Health
Address	407 West 4 <sup>th</sup> Street, Ocilla, GA 31774
Grantee organization website	
Outreach grant project title	Sweet Dreams
Project Director	Name: Samantha Napier, LMSW
	Title: Project Director
	Phone number: 229-468-5003
	Fax number: 229-468-5028
	Email address: <a href="mailto:Samantha.Napier@dph.ga.gov">Samantha.Napier@dph.ga.gov</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Irwin County Health Department	Ocilla/Irwin/Georgia	Public health, government agency
South Health District	Valdosta/Lowndes/Georgia	Public health, government agency
Ben Hill County Board of Health	Fitzgerald/Ben Hill/Georgia	Public health, government agency
Cook County Board of Health	Adel/Cook/Georgia	Public health, government agency
Berrien County Board of Health	Nashville/Berrien/Georgia	Public health, government agency

## Part III: Community Characteristics

### A. Area

The Irwin County Board of Health's program, Sweet Dreams, provides services to four rural counties in South Georgia: Ben Hill, Irwin, Berrien, and Cook Counties.

### B. Community Description

Sweet Dreams is located in a medically underserved rural community. The rural community consists of Ben Hill, Irwin, Berrien, and Cook Counties which are bordering counties located in south central Georgia. They are four of the ten counties comprising the South Health District (SHD). The predominant employment sectors are government services, production of goods and service, and agriculture. More than 26% of the community is made up of minority groups, primarily African American and Hispanic. There are high rates of obesity, little physical activity, and high poverty levels within the community. The rate of diabetes in this community exceeds both the state and national averages.

In Ben Hill County, the estimate total population was 17,515 in 2013, with about 62.2% of the population being white, 35.1% being black, and 6.4% being Hispanic. Manufacturing is considered the largest employment sector within Ben Hill County. The other predominant employment sectors are government services and retail trade. The total population in Irwin County for the same year was an estimate of 9,427 people, with 71.1% white, 27.1 % black, and 68.4% Hispanic. The largest employment sector

in Irwin County is government followed by manufacturing and farming. Berrien County's 2013 total population was 19,048. Almost eight-seven percent (86.6) of the population is white, 11.1% is black, and 5% is Hispanic. In Berrien County, the majority of the population is employed in the manufacturing sector, followed by government and retail trade. Cook County's 2013 total population was 17,066. Within the total population in Cook County, 70% are white, about twenty eight percent (27.7) are black, and about six percent (5.9) are Hispanic. Cook County's largest employment sector consists of manufacturing followed by government and retail trade. All four counties continue to have an agriculture component to their economies although this has been in decline. The main crops grown are peanuts, cotton, tobacco, and bell pepper.

### C. Need

Diabetes is a chronic disease that affects 9.3% of the United States population or almost 29 million people. Unfortunately, the 2012 rate of diabetics in the state of Georgia at 9.6% exceeded the national average. The counties of Ben Hill, Irwin, Berrien, and Cook are included in the newly identified "diabetes belt" which consists of 644 counties in the southeast that have an 11.0% or higher prevalence of diabetes. Diabetes is the seventh leading cause of death in the nation and is a major contributor to heart disease, stroke, kidney failure, amputations, and adult onset blindness. The risk for death in diabetics is about twice that of people who do not have diabetes of a similar age.

In addition to this prevalence data, other risks such as high rates of obesity, little physical activity, high poverty levels, and the racial composition make it clear that diabetes is a serious health issue for Ben Hill, Irwin, Berrien, and Cook Counties. There is an increased demand for health care services and the implementation of a health care system built on preventive services. In addition, the local hospitals in these rural counties continue to struggle to provide care for large proportions of the population with no health insurance. Community health promotion programs were non-existent in Ben Hill, Irwin, Berrien, and Cook Counties until Sweet Dreams was initiated. Currently there remain no community health promotion programs in any of these four counties with the exception of Sweet Dreams. The combined issues of physician shortages, nursing shortages, lack of health insurance, high poverty levels, low educational levels, language translation issues, lack of transportation and few health promotion programs, present formidable barriers to the residents of Ben Hill, Irwin, Berrien, and Cook counties in accessing primary care and needed diabetes prevention and intervention/education programs.

## Part IV: Program Services

### A. Evidence-based and/or Promising Practice Model(s)

The "Power to Prevent: A Family Lifestyle Approach to Diabetes Prevention" is a community based best practice model that was designed by the National Diabetes Education Program (NDEP) to "encourage African Americans at increased risk for type 2 diabetes to become more physically active and to eat more healthful foods as a way to prevent or delay the disease." The "Power to Prevent" curriculum is made up of 12 sessions and includes a program leader's guide with material to help plan and promote the program, conduct the classes, and evaluate its effectiveness.

The 12 learning sessions include:

- Introduction to Power to Prevent
- Small Steps Lead to Big Rewards
- Strategies for healthy Eating
- Physical Activity: Get Moving Today
- Make Healthy Food Choices One Day at a Time
- Diabetes Overview
- Physical Activity for Families
- Portion Size
- Navigating Around Eating Out
- Partner With Your Health Care Provider
- Get Your Family and Friends Involved
- Celebrate Big Rewards

Each session contains educational information for the above stated topics along with suggested activities and handouts. There are also pre and post questionnaires for sessions 3, 4, 6, and 11 to evaluate the effectiveness of the education. These questionnaires were revised after they were pilot tested. In addition, participants are encouraged to complete the NDEP Game Plan which is a Fat and Calorie Counter and Food and Activity Tracker. Keeping a food and activity diary is one of the "most

successful techniques for losing weight” according to the curriculum guidelines. These trackers are available from the NDEP website and were distributed to each participant each week. Ideas for incentives are also included with the curriculum guidelines in an effort to encourage participants to make healthy lifestyle changes.

When the need for diabetes prevention education was realized, the consortium requested the assistance of their technical assistance provider from the Georgia Health Policy Center, Beverly Tyler, to help them find an effective program to base the enhanced Sweet Dreams project on. Without hesitation, Ms. Tyler suggested the “Power to Prevent” curriculum due to its family and community approach. This curriculum still is a perfect match and has enabled Sweet Dreams to continue providing diabetes education to current type 2 diabetics while expanding prevention education into the general community. The key goal of the “Power to Prevent” is to identify individuals at high risk and to educate them on the “behaviors that will help them lose weight and prevent or delay type 2 diabetes”. Although the curriculum was designed with African Americans in mind, the guidelines suggest that this program is appropriate for any audience. Sweet Dreams targets all adults from various ethnicities who are at high risk for type 2 diabetes with a special emphasis on uninsured low income individuals.

## B. Description

During the first year, (2012-2013) Sweet Dreams provided education classes in Ben Hill, Irwin, Berrien, and Cook Counties in Georgia to help prevent and control type 2 diabetes. Two series of diabetes self management classes were provided to help type 2 diabetics learn how to control their disease and prevent complications such as heart disease, kidney failure, neuropathy, and blindness. In addition to these classes, a new diabetes prevention class using the CDC’s “Power to Prevent” curriculum was initiated. This class specifically targeted families at high risk for type 2 diabetes within the African American and Hispanic communities. The “Power to Prevent” classes teach families how to make positive lifestyle changes focused around healthy eating and exercise that will prevent chronic diseases such as diabetes. In order to reach a greater number of people, Sweet Dreams used a peer educator along with the “Power to Prevent” curriculum. Sweet Dreams was successful in recruiting a facilitator who led classes in the Hispanic community. The facilitator was chosen from Sweet Dreams existing patient population and trained using the above stated curriculum.

In addition to Sweet Dreams accomplishments in 2012-2013, over 1,870 people received our services from community outreach, individual management, and education. More than 138 diabetics in the four counties were provided monthly diabetic testing supplies from program funds and a local trust fund called the Palemon Gaskins Trust Fund. Forty-six individuals received prescription assistance through Sweet Dreams RX Assist program. Overall Sweet Dreams provided more than \$95,734 in prescription assistance in the first year of the third cycle. Sweet Dreams also participated in local health fairs and provided diabetes prevention education information through presentations at local churches and civic organizations.

The “Power to Prevent” curriculum was designed to be taught over a 12 week period; however, Sweet Dreams had a difficult time retaining participants for the complete 12 week series of classes. To resolve this issue, Sweet Dreams combined 4 of the 12 classes reducing the number of classes to 8 weeks for each series. This in addition with incentives for participation helped to ensure participants received all of the information from the “Power 2 Prevent” curriculum including pre and post education assessment. During this grant cycle (2013-2014) three series of classes were completed. A total of forty-one participants attended and completed the three educational series (8 weeks per series). Weight, body mass index, blood pressure, and hemoglobin A1Cs were used to evaluate the effectiveness of the “Power to Prevent” classes. This data was collected at the first educational class and again at the end of the 8 week session of classes. The program received great improvements over the 8 weeks; average body mass index improved from 34.05 to 33.302, and the average hemoglobin A1C improved from 6.95% to 6.74%, the average weight loss for the class was 10 pounds, and blood pressure reductions averaged about 4 millimeters of mercury systolic and diastolic pressures. Ninety-five percent of the participants who completed the educational classes reported an increase in physical activity. The average increase was from reporting no activity at the beginning of the class series to reporting they exercised at least 2-3 times per week by the end of the 8 weeks. In addition to the success of the second year, Sweet Dreams assisted diabetics without insurance in receiving more than \$94,000 in medications and testing supplies. More than 193 diabetics benefited from the prescription assistance service. Overall during the second year, Sweet Dreams provided over 1,215 people diabetes education prevention services through community outreach, educational classes, and individual management.

During the third year (2014-2015), Sweet Dreams continued to promote diabetes education through “Power to Prevent” classes. Sweet Dreams held two series of “Power to Prevent” classes with a total of thirty-two participants combined. In an effort to enhance the nutritional component and meet the demand by its participants for healthier cooking ideas, the program contracted

with a nutritionist/chef to provide onsite cooking demonstrations for healthy food preparations and healthy eating for diabetics and their family. In addition the nutritionist took the responsibility for teaching two of the “Power to Prevent” classes entitled “*Make Healthy Food Choices One Day at a Time*” and “*Portion Size, Eating Out*”. This initiative allowed participants the “one on one” cooking experience they requested and enabled them to put what they had learned about healthy eating into a practical experience.

As a result of the great response received from the cooking classes conducted during the “Power to Prevent” classes, Sweet Dreams offered free holiday cooking classes for diabetics. Sweet Dreams continued to contract with the nutritionist/chef, and she held two classes which were filled to capacity at both sessions, with a total of 19 attending both sessions. In observance of National Diabetes Month, Sweet Dreams hosted its first Diabetes Walk for Power to Prevent participants and their family members. This initiative was developed to acknowledge the participants commitment of completing the eight weeks of classes as well as promote diabetes awareness within Berrien and Cook Counties. During this event, the Chronic Disease Coordinator from the South Health District spoke to participants and their families on healthy living lifestyles. Participants and family members received packets on diabetes education from Sweet Dreams and NDEP. Also, Sweet Dreams partnered with the NDEP to improve the health of citizens in Ben Hill and Irwin Counties by hosting its first Diabetes Awareness Forum. The event utilized professional speakers with expertise in diabetes management to educate clients, their families, and the community about diabetes prevention, management, healthy eating, physical activity, and medicine management. The forum also included exhibits from local doctor offices, a licensed chef who specializes in preparing healthy diabetic meals, representatives from local health departments, and Sweet Dreams staff. In addition a new strategy was implemented in an effort to increase community awareness; students who had completed the 8 week “Power to Prevent” series were encouraged to take back what they had learned to their local churches and implement an activity program and healthy eating initiative, utilizing Sweet Dreams staff to help with literature and educational needs. Four community churches from within the four county service area participated in this outreach effort. The churches reported great participation from their congregations.

Sweet Dreams has continued to utilize the prescription assistance and temporary assistance programs for low income diabetics who need assistance with diabetic testing supplies. A RX Assist data program service has been purchased annually and consistently utilized throughout the grant cycle to generate applications to assist clients with long term prescription needs. Sweet Dreams assists patients in the application process as well as provides follow up and refill assistance when needed. Through a local trust fund called the Palemon Gaskins Trust Fund and grant funds, Sweet Dreams continues to provide temporary assistance with medications and diabetes testing supplies. These medications and testing supplies are vital pieces of the puzzle for managing diabetes. Without these assistance programs, many individuals cannot afford the cost. More than 210 diabetics have received prescription assistance during this current grant period. Sweet Dreams has served more than 2,464 people through community outreach and prevention education in the form of health fairs, community presentations, and newspaper articles is also provided by Sweet Dreams to educate the community on early detection and prevention of type 2 diabetes.

### C. Role of Consortium Partners

Sweet Dreams has been a collaborative effort by the Irwin, Ben Hill, Berrien, and Cook County Boards of Health, Dorminy Medical Center, Irwin County Hospital, Cook Medical Center, South Georgia Medical Center (SGMC) Berrien Campus, Irwin Family Medicine, Nashville Eye Center, Berrien County Collaborative, Adel Family Medicine, Adel Recreation Department, and the South Health District (SHD) to address the epidemic of diabetes. The members of the consortium have been supporting the current diabetes education program and have met quarterly since its inception. This consortium has been involved with the planning and development of the current Sweet Dreams program. The consortium feels strongly about the need to provide the services of Sweet Dreams to Type 2 diabetics in addition to prevention education to target the growing number of pre-diabetics in the four counties.

The consortium responsibilities are as follows:

The **Irwin County Board of Health** is the lead agency and fiscal agent for the grant. Responsibilities include general supervision of project staff, provision of office space for project staff, referrals, providing nursing staff to assist with community outreach, and participating in quarterly oversight and planning meetings for the project. The **Ben Hill County Board of Health**, **Berrien County Board of Health** and the **Cook County Board of Health** provide the same services with the exception of providing space and supervising the staff. Each of these boards of health is in the **South Health District**. The district office and its staff provide general oversight and management to the project including epidemiological support for data collection and evaluation. In addition, the South Health District’s public relations specialist provides assistance with media reports and the development of materials.

**Irwin County Hospital, Dorminy Medical Center, SGMC Berrien Campus, and the Cook Medical Center** have been a great source of referrals for Sweet Dreams. Other responsibilities of the hospitals include assisting in educating physicians about the project, providing space for the classes, and participating in quarterly oversight and planning meetings for the project.

General medical oversight for the project has been provided by **Irwin Family Medicine**. With assistance from **Adel Family Medicine** and **Nashville Eye Center**, Irwin Family Medicine has led the efforts to educate local physicians about the project, made referrals, and participated in quarterly oversight and planning meetings for the project.

The **Berrien County Collaborative** is a source of referrals and assists in disseminating diabetes information to the community and schools. The **Adel Cook Recreation Department** also is a source of referrals and supports the efforts of increasing physical activity by offering community exercise classes. Both of these agencies have participated in quarterly oversight and planning meetings for the project.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The first measure of success of Sweet Dreams is the establishment of the diabetes coalition made up of the local hospitals, health departments, physicians, recreation departments, and other community agencies. This collaborative effort of the consortium expands the number of diabetics that can be targeted in the community and increases access to diabetes education.

During the grant period, Sweet Dreams has increased availability of medications and testing supplies to diabetics in rural communities through prescription assistance programs including a local trust fund, the Palemon Gaskins Trust Fund, and RX Assist. As a result more than 541 diabetics within the four county service areas have received monthly diabetic testing supplies and prescription assistance. Over \$268,305.32 in medications and supplies have been provided to diabetics in this community.

During the course of the Outreach grant, through individualized self-management sessions and “Power to Prevent” classes; nutritional education and diabetes prevention have been provided to more than 469 diabetics. From these contacts, participants have learned how to eat healthier, increase their activity and control their disease, preventing long term complications such as heart disease, kidney failure, neuropathy, and blindness. The success of the classes is evident by the average improvement in body mass index, blood pressure, hemoglobin A1C’s, and cholesterol in class participants. From the grant period May 2012-April 2013 participants had the following results: average body mass index improved from 28.92 to 28.55, average blood pressure improved from 127/77 to 125/73, average hemoglobin A1C levels remained the same, and average cholesterol improved from 210 to 180. During the grant period May 2013-April 2014 participants had the following results: average body mass index improved by 34.5 to 33.3, average blood pressure improved from 138/79 to 129/75, A1C levels remained the same and cholesterol improved from 195 to 181. In May 2014-April 2015 participants had the following results: average body mass index improved from 38.05 to 37.5, the average blood pressure decreased by at least 10 points, average hemoglobin A1C remained the same, and the average cholesterol improved from 231 to 175. Everyone who completed the education classes reported an increase in physical activity level.

In addition over the grant period, Sweet Dreams has reached more than 6,000 people through community outreach activities that include health fairs, community presentations, billboards and signs on walking tracks promoting healthy lifestyles, healthy cooking demonstrations, and programs in local churches.

### B. Recognition

Sweet Dreams services and successes have been featured in local newspapers. In addition Sweet Dreams has received special recognition and acknowledgement from participants of classes and prescription assistance through submission of newspaper entries and letters of gratitude.

## Part VI: Challenges & Innovative Solutions

Sweet Dreams had a difficult time retaining participants for the complete series of classes. To resolve this issue, Sweet Dreams combined some of the classes which reduced the number of classes from 12 to 8. This helped to ensure that the participants received

all of the information and were present for the post education assessment. Receiving physician referrals was one of the struggles that we encountered in the beginning of Sweet Dreams, but once we established a trusting relationship with a few of the local physicians, we were able to recruit most of their diabetic patients. Patients respect their physicians' opinion and are more likely to attend diabetes education classes and receive self-management and nutrition education if instructed to by their doctor. Although education and prescription services have been expanded with Sweet Dreams, there are still high risk groups that are not being reached such as the Hispanic population who do not qualify for prescription assistance through the pharmaceutical companies if they are not legal residents. Sweet Dreams has been able to provide assistance to some of these patients through a local trust fund.

During the second of the Sweet Dreams grant, staffing changes were needed to meet the demand of the clients being seen. The clerical position had been vacant for several months and it was decided by the Project Director at that time, that this position would be more beneficial to the program and to the clients if it was changed to a Social Service Provider 1 position. Sweet Dreams had experienced many opportunities with clients within the program where a social worker's services would have been valuable. For example, the establishing and organizing of resources to meet the demand for transportation to and from educational sessions, assisting clients with social needs (other than diabetes medications) that had been identified on admission through the psychosocial assessment; such as lack of adequate housing, lack of adequate food, financial resources and other family social needs. In addition this vacant position being upgraded to a Social Service Provider 1 position provided needed assistance to the Program Director. The licensed Social Worker was able to assist with the increasing numbers of comprehensive assessments on face to face admissions and was able to help with presentations and outreach within the four county service areas.

## Part VII: Sustainability

### A. Structure

The consortium feels strongly about the need to provide the services of Sweet Dreams to type 2 diabetics in addition to prevention education to target the growing number of pre-diabetics in the four counties. At this time there are no plans to continue the consortium developed through the Outreach grant. However, Irwin, Ben Hill, Berrien, and Cook County Boards of Health often collaborate on projects and will play a role in sustaining the program at the individual health clinics in their counties. All four health departments have a strong relationship with their local hospitals which will continue. Additionally the county health departments have relationships with the Chronic Disease Prevention and Health Promotions Coordinator at the South Health District.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Sweet Dreams program components will be continued following the grant cycle, but on a more limited basis. The local health department nurses in the four counties have received training on educating individuals on diabetes self-management. Patients that present to the health departments with uncontrolled or poorly controlled diabetes will receive self-management education from these nurses. This service is necessary due to the rate of diabetes and the risk of complications, such as heart disease, strokes, blindness, kidney failure, and amputations, which will continue to rise and place a financial burden on the health system without the understanding of diabetes self-management.

Irwin and Ben Hill County Health Departments will continue to provide prescription assistance and temporary assistance with diabetic testing supplies to low income diabetics through Palemon Gaskins Trust Fund. These medications and testing supplies are a vital piece of the puzzle of managing diabetes. Without these assistance programs, many individuals cannot afford the cost. Both of these services help to improve diabetes management and have a lasting impact on the diabetics and community by decreasing the risk for long term complications.

It is anticipated that "Power to Prevent" classes will continue for another six months using carryover funds from the Outreach grant. These classes have made a positive impact within the communities Sweet Dreams serve as well as provided community awareness. Health promotion and education around diabetes will continue in all four counties through the support of local health departments and Sweet Dreams new partnership with South Health Districts, Chronic Disease Prevention and Health Promotions

Coordinator. This activity is necessary because of the prevalence of diabetes and the increased need for prevention and detection.

### C. Sustained Impact

There are many aspects of the Sweet Dreams program that will continue to benefit the community. This program has created a collaboration of hospitals, doctors, school systems, public health workers, and other community leaders that will continue to work together to improve healthcare in four rural South Georgia counties. The collaboration has opened the communication lines not only between community agencies but across the county lines.

Sweet Dreams has purchased diabetic meters for patients that would otherwise not be able to afford them. Monitoring blood glucose levels is a necessity for diabetes management. These meters will continue to serve the diabetics for many years. In addition, the education that has been given to these diabetics will have a lifelong impact for helping them to manage their disease. Many of the participants have made lifestyle changes that will not only improve their diabetes control, but will help to protect them from other chronic diseases.

The curriculum that was developed for the self-management education will be available for public health nurses to continue to work with patients diagnosed with diabetes. Staffs of the four health departments have been trained on the "Power to Prevent" curriculum and materials are available for their use. In addition, the education that has been given to these diabetics will have a lifelong impact for helping them to manage their disease. Many of the participants have made lifestyle changes that will not only improve their diabetes control, but will help to protect them from other chronic diseases. Through community education programs, Sweet Dreams has increased public awareness and knowledge of diabetes prevention and management.

New partnerships between the county health departments and the South Health District Family Nurse Practitioner, Nutritional Service Director, Chronic Disease and Health Promotions Coordinator, Public Information Officer/Risk Communicator have been established and will continue in effort to meet the needs of patients within the four counties.

## Part VIII: Implications for Other Communities

Since the inception of the grant, Sweet Dreams has been a collaborative effort by local hospitals, local health departments, local physician offices, and other various community partners who have helped address the epidemic of diabetes. Community collaboration has always been, and still is, an essential tool to the development of the program. It has helped increase community awareness of the importance of preventing and early detection of type 2 diabetes in the counties we serve. Community collaboration has also assisted with reducing the economic burden for type 2 diabetics; providing medications and diabetic supplies for low income participants.

The establishment of "Power to Prevent" classes is another essential tool that can benefit other communities. These classes offer education about healthy eating and increasing physical activity in an effort to prevent type 2 diabetes in these high risk communities. These classes also help participants improve their weight, body mass index, blood pressure, and hemoglobin A1C which is accessed during the 8 week class series. In addition the materials for the "Power to Prevent" curriculum are easily accessible through the National Diabetes Education Program and are easy to follow for facilitators in all communities throughout the United States.

# Georgia

## Meadows Regional Medical Center

Part I: Organizational Information	
Grant Number	D04RH23599
Grantee Organization	Meadows Regional Medical Center
Organization Type	Hospital
Address	Community Wellness Department; 714-1 NW Broad St., Lyons, GA 30436
Grantee organization website	<a href="http://www.Meadowsregional.org">www.Meadowsregional.org</a>
Outreach grant project title	Regional Diabetes Outreach Program
Project Director	Name: Nancy Stanley
	Title: Community Wellness Department Director
	Phone number: 912-524-4000 ext. 306
	Fax number: 912-524-4004
	Email address: <a href="mailto:nstanley@meadowsregional.org">nstanley@meadowsregional.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Southeast Regional Primary Care Corporation	Vidalia, Toombs Co., Georgia	Primary and Specialty Care: RT Stanley Rural Health Clinic
*Meadows Regional Medical Center Community Wellness Dept.	Lyons, Toombs Co., Georgia	Non-profit 501c (3) Hospital
Toombs County Health Department	Lyons, Toombs Co., Georgia	Health Department
*Vidalia City Schools	Vidalia, Toombs Co., Georgia	Public City School System
Southeast Georgia Communities Project	Lyons, Toombs Co., Georgia	Non-profit 501c (3) focusing on underserved Latino Population
*Mercy Medical Clinic	Lyons, Toombs Co., Georgia	Non-profit 501c (3) providing primary care to the uninsured
Allergy and Asthma Clinic of Southeast GA	Vidalia, Toombs Co., Georgia	Primary Care Practice
Optometry Associates	Vidalia, Toombs Co., Georgia	Optometry Practice
Vidalia Recreation Department	Vidalia, Toombs Co., Georgia	City Recreation Department
Lyons Recreation Department	Lyons, Toombs Co., Georgia	City Recreation Department
Southeast Technical College	Vidalia, Toombs Co., Georgia	Area Technical College
Trane	Vidalia, Toombs Co, Georgia	Local manufacturing plant
Tattnall County Family Connections	Reidsville, Tattnall Co., Georgia	Multi-organization collaborative network serving families
*Toombs County Family Connections	Vidalia, Toombs Co., Georgia	Multi-organization collaborative network serving families
*Tri-County Family Connections	Mount Vernon, Montgomery, Georgia	Multi-organization Collaborative Network
Ideal Pharmacy	Lyons, Toombs Co, Georgia	Private Owned Pharmacy
*South Central Public Health Group	Dublin, Montgomery Co/Laurens Co,	District Health Department (South Central

	Georgia	GA)
Registered Dietician	Vidalia, Toombs Co., Georgia	Meadows Regional Medical Center RD
*East Georgia Health Care	Toombs, Tattnall, and Montgomery Counties. Swainsboro, Georgia	Local Federally Qualified Health Care Provider(FQHC)
Amy Roberson	Vidalia, Montgomery Co., Georgia	Consumer: Mother of Type 1 diabetic child

### Part III: Community Characteristics

#### A. Area

Diabetes outreach screening, education and clinical care services were provided for participants in Toombs, Tattnall, and Montgomery Counties of Southeast Georgia. Fortunately with program growth, services were extended to serving people from a 12- county region.

#### B. Community description\

Our regional demographic characteristics are typical of similar rural areas. Poverty, illiteracy, low educational attainment, and unemployment all contribute to the existing local economic distress. When a family in poverty is attempting to avoid homelessness and bankruptcy, proper nutrition, decreasing stress levels, getting adequate exercise and even getting adequate health care, is "low on the priority list". Approximately one in every four (24%-27%) of our region's residents are currently uninsured.

Lack of education is a major reason why local families do not have adequate health insurance coverage. The majority of employment options available to someone who is not a high school graduate are entry level positions that either do not offer health insurance or offer it at a price the worker cannot afford. Many local high school graduates who have not entered college are in the same type of jobs.

Poverty seems to impact the most vulnerable residents in a community the hardest. Between 26%- 28% of our residents are currently living below the poverty level. Moreover, 43%-46% of children, under 18 years of age, are currently living below the poverty level in the service area. Much of this poverty is a result of single parent households and limited educational attainment (Georgia KIDS COUNT, 2014). Compared to urban areas, rural areas experience a 17% higher diabetes prevalence rate. A 2010 CDC study projected that as many as one of three U.S. adults could have diabetes by 2050 if current trends continue. The Georgia Department of Public Health 2012 Diabetes Burden Report indicated that between 2000 and 2010, diabetes prevalence among Georgia adults increased significantly by 43 percent from 6.8% (395,808 adults) in 2000 to 9.7% (712,203 adults) in 2010. Nearly two-thirds of Georgia counties are estimated to have diabetes prevalence among adults greater than 11.1% of which our target counties are indicated also higher than the state rate of 15.3%. They include: Toombs County 24.9%, Tattnall County 25.6% and Montgomery County (no rate available).

Diabetes is among the leading causes of preventable death. Poverty impacts the progression of this disease. It is not uncommon for our rural diabetes patients to have difficulty affording glucose meter strips for routine glucose self- monitoring or to have forgone screenings such as eye exams that are crucial to the detection of diabetes associated co-morbidities. These system level barriers may exert a more profound effect on rural racial and ethnic minorities whose household incomes are 40-50% less than that of rural white households and 50-60% less than suburban white households thereby contributing to existing racial and ethnic disparities in diabetes prevalence and mortality.

#### C. Need

In 2003, due to an increase in incidence of diabetes within Toombs County, a graduate nursing student worked with Meadows Regional Medical Center (MRMC) to perform a community wide diabetes education needs assessment. She surveyed 100 participants in the county. The survey indicated a strong need for a formal diabetes education program, assistance with medicines and more information on nutrition and cooking. Given the increased rates of diabetes and the need for education, Meadows Regional Medical Center successfully applied for a state grant to begin a comprehensive diabetes education program in the community. However, as more education was provided, more needs were identified for improved access to medical care, medications and diabetes supplies.

In 2011, regional secondary data continued to show high rates of poverty, limited education and disparity regarding health care access. Our MRMC diabetes consortium decided to perform another community needs assessment with Mercy Medical Clinic

patients in Vidalia, Georgia (This clinic serves low income, uninsured patients in a 16 county area): out of the patient population of 251 patients: 24.7% of the patients were treated for diabetes; of this total, 64.5 % participated in a diabetes self-management program (DSME); 15.3% of the patients improved their A1C. Lifestyle changes that patients wanted to make and needed help with were making healthier food choices, exercise, taking medications, and decreasing weight.

To promote health care equity and provide quality prevention initiatives, the consortium sought funding through the HRSA Rural Health Outreach grant to develop a Clinical Care/ Diabetes Education program and has proved to successfully help patients learn self management skills to lower their blood sugar, cholesterol, and blood pressure. However, patients continue to need assistance learning how to make healthy food choices for weight loss. Our community classes were increased to help patients set goals for life style change.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Meadows Regional Medical Center Diabetes Program utilizes evidence based research to support our Model of Care. Our Diabetes Self management Education Program (DSME) is credentialed through the American Association of Diabetes Educators (AADE) and utilizes the Healthy Interaction Conversation Maps for curriculum. These maps help our educator facilitate group discussion and participants openly share issues regarding diabetes self management and develop solutions for their needs. A series of four, 1 hour classes are provided in a clinical setting and then patients are encouraged to meet with their Advanced Practice Nurse to discuss treatment options and needed changes. This type of care model is known as a Group Visit option and helps patients receive integrated care, as well as, reduce costs for medical visits, time away from work and personal responsibilities, and transportation barriers.

Patients that are at risk for diabetes or need ongoing support for weight loss and exercise are offered enrollment in the CDC-Diabetes Prevention Program (DPP) that runs a course of 12 months. This curriculum provides peer support and encouragement for participants to lose 7% of their body weight and increase activities for exercise at least 3 days a week for 30 minute intervals. The DPP program is offered free in our target counties and is proving to be effective since peers of the same ethnicity motivate each other to make healthy lifestyle changes and accomplish weight loss goals.

### B. Description

The Meadows Diabetes Education Program uses a mix of DSME education in a clinical setting through group visits (clinical care with same day class education); Group Education Classes and Individual Session classes at our Wellness Center and Community Diabetes Prevention classes in community locations. The two clinical site locations are located at a rural health center and local "free clinic."

Mercy Medical Clinic (MMC) serves as the free clinic site; DSME is provided in group classes monthly using the Healthy Interactions Conversation Map. Four classes are offered at 3 month intervals-preferably in the same timeline as patient blood work was needed. After the educational session, the clients are scheduled for provider visits the same day, Individual sessions are provided if clients cannot attend the class schedule, or if they have special circumstances which require one-on-one training.

RT Stanley Rural Health Center (RTSHC) serves as the second clinical site location; DSME is delivered in group classes. The program is delivered in 2-2 hour training sessions at 3 month intervals. When possible, the clients are scheduled with an APRN and the education is billed as a part of the provider visit. The majority of this clientele are insured with Medicaid, Medicare or Private Insurance.

A third clinical site location was started at the Allergy and Asthma Center of Southeast Georgia. During year 1 we attempted monthly group DSME with individual follow-up in three months. We provided education to patients of this clinic and their adjacent Acute Care Clinic. The population was primarily Medicare and 3<sup>rd</sup> party payers. The charge was \$35 out of pocket for each session. This location had limited attendance and we found that patients did not return for follow up sessions.

In year 2, due to poor participation, we decided to stop services at the Allergy and Asthma Center and move to the Meadows Wellness Center to provide education services for patients seeing other regional health care providers in our area. Classes were provided in group sessions, as well as, individually and continued to be a \$35 out-of-pocket charge.

In year 3, we transitioned to charging third party payers and moved to group DSME monthly with follow-up in group format to meet Medicare guidelines. Individual education is provided under certain circumstances as outlined by Medicare.

In an effort to increase access to screening, education and diabetes care in Toombs, Tattnall, and Montgomery Counties, there has been an ongoing media campaign to raise education level about Type 2 diabetes and the availability in the area for educational services. We have used PSAs at a local radio station, the radio stations website, articles and ads in the local newspaper, the local hospital's intranet and e-mail, and informational flyers in pharmacies and primary care giver's offices. Multiple health fairs and educational programs have been accomplished in business and community settings to provide education on Type 2 diabetes and provide further support educationally if needed.

In regards to promoting and strengthening healthy lifestyles through education, partnerships and access to medical care, we have provided health fairs in all three counties. A1C/blood sugar screenings have been performed, as well as, the diabetes risk assessment tool. Positive screens were referred to primary care and education was provided. Educational materials and display boards were presented at the health fairs.

### **Regional Support Group**

A regional support group has been ongoing throughout the three years. Weekly meetings are held at the Meadows Wellness Center and are lead by a certified diabetic educator. Guest speakers are invited to share relevant topics with diabetic attendees. Individuals participating in the DSME are encouraged to attend support group meetings. During year 3, additional monthly support group meetings for diabetics or individuals at risk for diabetes have come together at the Mercy Medical Clinic. This group also has guest speakers/ specialists with the focus on weight loss and healthy living. Individuals in the DSME at all sites are given the opportunity to join the Mercy Medical Clinic group if desired.

### **Power to Prevent and National Diabetes Prevention Program- Healthy Lifestyles Community Program**

During years 1 and 2, the "Power to Prevent" program was provided in a train-the-trainer format for church and community groups in the three counties. The curriculum was difficult for group leaders to understand and had limited measures to evaluate participant success. A transition to the national Diabetes Prevention Program (NDPP) was made in year 2 and 3. NDPP proved to be easier to follow and used improved measures to evaluate participant exercise and weight loss achievement. The new community program was offered at MMC with participants from all three service areas. One exception was a church group who had previously offered a "Power to Prevent" class and was interested in the NDPP. This group was located in Montgomery County.

### **Regional Consortium**

A regional diabetes consortium has been ongoing for the last seven years. Since our grant funding, it has gained partnerships with local community leaders and businesses, as well as, providers of health care. It has expanded to serve as an advisory board for the newly established Southeast Georgia Rural Community Network. This is a non-profit 501c (3) founded to advocate and provide access to healthcare and education in the service area. The established network is actively pursuing 2 federally-funded grants to increase access to integrated coordinated care for diabetics of our region.

## **C. Role of Consortium Partners**

Our original consortium partners included:

- **Southeast Regional Primary Care Corporation:** Employs and manages primary care and specialty care practice physicians and mid-level providers that offer medical care for the Meadows Regional Medical Center service area. This corporation partners in the project to establish and maintain diabetes group education/medical visits for diabetic patients that will obtain services at RT Stanley Health Center. A physician in the RT Stanley Health Center acts as a supervisor for the APRN providing primary care to diabetics in the outreach grant. The providers act as referral sources for our Lifestyle Change and DSME classes, and RT Stanley Health Center hosts DSME classes on a monthly basis with follow-up with an APRN as a part of the group model referenced above.
- **Meadows Regional Medical Center Community Wellness Department:** The Community Wellness Department serves as the lead partner in the Consortium. The Community Wellness Department has participated in providing financial and administrative oversight of all program activities. This partner also facilitates Regional Consortium meetings.
- **Toombs County Health Department:** Serves as a public health advisor in guiding the consortium on strategic planning for outreach programs to decrease gaps in education/service.

- **Vidalia City Schools:** Partners with the program to identify families that will benefit from screening, education and medical care; makes appropriate referrals to the program; serves the consortium in an advisory role to identify needs of children and their families, as well as staff, within the Vidalia School System.
- **Southeast Georgia Communities Project (SEGCP):** SEGCP serves to advise the Consortium on the needs of the Latino Community that live and work in the service area; assists with interpreter needs and community education outreach programs when available.
- **Mercy Medical Clinic:** Partners to offer Group Visit Diabetes Education for their diabetes patients and provides primary care for regional patients that are low income and uninsured. A subsidiary of the MMC, the Compassionate Care Dental Clinic, provides low cost hygienist and dental care to diabetics that qualify financially.
- **Allergy and Asthma Clinic of Southeast Georgia:** A Local Private Practice, partnered to offer a Group Visit Diabetes Education Site for the targeted region; their physician serves as Medical Advisor for the Regional Consortium.
- **Optometry Associates:** Private local optometry practice in Vidalia, Georgia. Serves as an advisor and accepts diabetic referrals for eye care in the organized medical network.

New partners were added with growth of the Diabetes Program and the development of the Southeast Georgia Rural Community Network. New partners include the following:

- **Vidalia Recreation Department:** Partners to host monthly lifestyle change classes and cooking and exercise classes as needed.
- **Lyons Recreation Department:** Partners to host cooking classes as a part of the Lifestyle Change programs. In 2013, they hosted a “Power to Prevent” diabetes walk that was a fundraiser sponsored by the consortium.
- **Southeastern Technical College:** Dental Hygiene School partners to provide low-cost dental hygiene and x-rays for diabetic patients.
- **Trane:** local business interested in healthy lifestyle training for their employees. Hosted educational sessions about diabetes at their facility.
- **Tattnall County Family Connections:** Partners to give advice on the needs of families in the Tattnall County area. Acts as a liaison between Consortium and the Tattnall County School System. Assisted in the formation of focus groups for a community assessment.
- **Toombs County Family Connections:** Partners to give advice on the needs of families in Toombs County. Acts as a liaison between the consortium and Toombs County Schools. Assisted in the formation of focus groups for a community assessment.
- **Tri-County Family Connections:** Partners to give advice on the needs of families in Montgomery, Wheeler and Treutlen Counties. Hosts health fairs that have been attended by the MRMC Community Wellness Department. Assisted in the formation of focus groups for a community assessment. Acts as a liaison between the consortium and the Montgomery County School System.
- **Ideal Pharmacy:** Partners to give advice on the needs for diabetes education and pharmaceutical changes in this time of healthcare reform.
- **South Central Health District:** Partners to provide two health educators. One of these health educators has begun training to provide DSME at a primary care practice in Dublin Georgia (Laurens County); provided assistance in the distribution and analyzing of the community assessment.
- **East Georgia Health Care:** Partners with MMC to provide the Compassionate Care Dental Clinic for diabetics. Assisted with and provided fundraising efforts for the “Power to Prevent” Walk; serves as a referral source for DSME.
- **Local Consumer:** Partnered with Consortium to assist with “Power to Prevent” Walk in publicity, fundraising, and recruitment. As an officer in the Parent/ Teacher Organization, the representative acts as a liaison with the Vidalia City Schools. As an active member of the American Diabetes Association, acts as a liaison with that group. As the mother of a type 1 diabetic child, acts as a consumer advisor for needs of diabetics and their families in the community.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

During the grant period, 177 patients participated at MMC and RT Stanley Health Center clinical site locations; 51 patients participated at the Asthmas and Allergy Clinic site for a total of 228 patients during the 3 year grant period.

An estimated 700,000 connections were made through local radio spots and another 126,000 hits through the radio station's website. Program publicity was also accomplished through flyers at multiple providers' offices and pharmacies and flyers given out at health fairs and community events. Events were publicized through MRMC's website and e-mail. The local newspaper also ran several advertisements and did articles on the community outreach programs.

At least 8 health fairs and 10 community programs were completed reaching at least 2,000 individuals in the tri-county area. Blood sugar and Diabetes Risk screens were performed and 100% of those who had abnormal screens were linked to care.

The regional support group at Meadows Wellness Center met a total of 105 times and served 215 individuals. The post-core lifestyle group at MMC met 9 times in 2014/2015 and served 30 individuals; 245 diabetics participated in support group meetings.

Our community education classes served over 60 participants and had slow participation due to limited ability to find volunteer "train the trainer" leaders in the first year. However, in year 2 and 3, participation increased with the transition to the NDPP program which seemed to be more user- friendly and peer oriented.

Five community classes completed Power to Prevent (Toombs-3, Montgomery-1, Tattnall-1), and 4 classes completed NDPP. For the NDPP, one class was held in Montgomery County in a church and 4 classes were held at MMC. The classes at MMC were in Toombs County but included individuals from all 3 counties. A group home from Tattnall County transported 5 individuals for classes to MMC and has remained involved in the support group; 80.0% demonstrated pre/post program knowledge gained.

Participants that completed the DSME programs showed significant reduction in their A1C measure; 66.6% improved their A1C; 45.6% decreased their A1C to 7.0 or below. Patients enrolled in the clinical site programs also showed reduction in blood pressure and cholesterol measures; 52.2% of patients with elevated BP lowered their levels, 17.4% lowered levels <120/80; 82.8% of participants with elevated cholesterol lowered their levels, 58.6% brought their cholesterols into a healthy range.

In 2013 and 2014, the Regional Consortium had three quarterly meetings yearly and representatives from a six- county region were documented. The Regional Consortium has expanded from the original 8 members to 20 members strong. Although still weak in the area of local government leaders, representatives from public health, business, educators, philanthropy, non-profits, community development and health care participate in advising and planning for the Southeast Georgia Rural Community Network activities. Family Connections representatives from all 3 counties add a unique perspective regarding the needs of diabetic families in our area.

A regional community assessment was performed in 2014; 150 surveys available in both English and Spanish were distributed in each target county with a 30% return rate. This was followed-up with both focus groups and town hall meetings. The data was processed and several areas of concern were evident throughout the service area. Access to affordable medical and dental care, Spanish- speaking interpreter services in healthcare, Alzheimer support groups, teen pregnancy counseling and support, obesity programs and exercise support, transportation to all of the above, and support for single parent families were common themes.

Contacts with the Magnolia Coastlands Area Health Education Center have been made to start the process of planning a conference or a series of webinars that will award continuing education credit for health professionals in 2016/2017. This opportunity will help regional providers stay apprised of the changes in diabetes standards of care and new pharmaceutical recommendations.

Diabetes educators have offered teacher trainings in a local primary school and a regional school serving children with autism or behavior order disabilities to help serve the needs of individual diabetic students requiring extra care.

## **B. Recognition**

The Meadows Wellness Center Diabetes Education Program (our DSME program) successfully completed an audit by the American Association of Diabetes Educators (AADE) in 2014 and maintains their accreditation. Project funding has allowed for our Diabetes Educator to obtain credentialing for the CDC Diabetes Prevention Program. Our educator will continue to provide DPP training as well as "Train the Trainer" programs in the future.

The project has also developed a strong medical network infrastructure through the partnerships of the Georgia Light House Foundation (eye care), Compassionate Care Dental Clinic and Mercy Medical Clinic. Outreach activities are promoting awareness

regarding the need for prevention screening and early care. A specialty care network has been organized to improve access to care for the insured and uninsured of the target region. The program is serving a large region of Southeast Georgia with documented participation of people from 12 counties. Telemedicine and an expanded integrated care coordination program for complex diabetics are being pursued in the near future.

## Part VI: Challenges & Innovative Solutions

We have seen an evolution in our DSME program; although the initial program at Mercy Medical Clinic has been successful and has remained essentially unchanged. Our sites that produce revenue have been in flux. As the needs for DSME for multiple providers became evident, a change was made to the Meadows Wellness Center hosting the education. A charge of \$35 could not maintain a sustainable program. Patients also verbalized the desire to have their insurance leveraged. MRMC agreed to assist with billing insurance and this is essential in maintaining sustainability. As Medicare guidelines were explored, a move from some individual education to almost exclusive group education has occurred.

The site at RT Stanley Health Center was blessed with many physician referrals, but consistent patient “no shows” for education. Multiple strategies were attempted including immediate scheduling by the staff at the clinic, reminder phone calls, and letters to the patient’s residence, with very little success. Those who did come often had been recently seen by their provider, so no primary care visits were required. During the course of the grant, Medicare changed their guidelines and rural health centers became unable to charge for education services. Without a provider visit by our advanced practice nurse (APRN), we were unable to reimburse any of our costs. In addition to the patient barriers, this practice underwent a change in electronic medical record keeping which required the staff to be unable to assist with any of the needs of the DSME program. Because of these roadblocks, we scaled back our efforts at the RT Stanley Health Center and put our resources in other parts of our program, while still maintaining a weekly presence at the health center. Our present efforts focus on identifying the patients wanting to be educated by their response to flyers in the practice. They are either scheduled at the clinic site as a group visit (education and provider visitor) or at the MWC for a 4 hour class and insurance coverage is billed for services. We have also lowered our expectations and require only one follow-up appointment for education, rather than following for three more classes.

Our community lifestyle change classes have also undergone some change. Initially, we adopted the CDC’s “Power to Prevent” program. This program was easy to implement and several area churches were able to send leaders to be trained and complete the program. A common theme expressed was the excess of paperwork for the participants to complete on an almost weekly basis, with very little return on the investment. No clinical measures were assessed in the program. The difficulty of making changes in eating and exercise habits for a lifetime became glaringly obvious, and we felt we needed a stronger program with more commitment. Our diabetes educator attended the NDPP training in Atlanta offered before the Peer Learning Seminar in Atlanta, 2013. We felt this program would meet the needs of our community and began transitioning to that program in January, 2014. Although still run by volunteer leaders, a need for a stronger interest and commitment from the leaders, as well as, training, has caused most of the classes to be performed at MMC to give the volunteers more access to health care providers. As more classes are graduating, the leadership team is slowly expanding. We are committed to slower growth into the community than originally expected, but long term results that will impact the health of our community as a whole.

The Regional Support Group was very successful initially with new participants and multiple outside speakers. This group has not continued to attract new members and new speakers have not been recruited to expand the knowledge of the group. The post-core monthly meetings of the NDPP have been opened to participants of the DSME program to add another option for support of healthy lifestyle. This program is bringing in specialists in healthy lifestyle as guest speakers and meets during the day which gives participants more options for support.

## Part VII: Sustainability

### A. Structure

The Consortium has successfully completed a five- year strategic plan for growth and is also serving as an Advisory group for the Southeast Georgia Rural Community Network that has been organized to perform regional community assessments and design/plan community programs of need.

## B. On-going Projects and Activities/Services To Be Provided.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

All elements of the program will be sustained. We will continue to provide group education visits and DSME at two clinical sites. The Advanced Practice Nurse will work in partnership with the diabetes educator to bill for clinical services at the same time that diabetes education is provided when possible. This revenue will help to sustain staff. An agreement with the RT Stanley Rural Health Center will allow for the diabetes program to obtain a percentage of the revenue generated from the clinical bill. DSME at the Meadows Wellness Center will bill third party insurance for group education classes and continue to offer classes monthly. With increased patient participation in the Meadows Wellness Center DSME program, weekly classes may be offered in the future.

The Community DPP program will continue to offer four sessions yearly at the Mercy Medical Clinic. The program will receive support for continuation through the MRMC Community Wellness Department and will also utilize volunteer instructors in the community. However, due to limited staff availability, outreach screening programs will continue on limited requests. We will seek funding to provide these services through the Southeast Georgia Rural Community Network and Meadows Regional Medical Center.

The Regional Consortium will continue to meet “face to face” quarterly and discuss program outcomes and quality measures for continued success. A sustainability plan with a detailed budget has been developed to support all activities and financial management of the MRMC Diabetes Education Program.

## C. Sustained Impact

The DSME/clinical programs have proven effective in lowering participant A1C post program. DSME followed by participation in the Community Diabetes Prevention program will serve as a new model of care for diabetes education and ongoing community support in our region.

The expansion and strength of the Regional Consortium has allowed for interdisciplinary partnerships in the community. These partnerships are increasing our capacity to develop specialty care networks, integrated care coordination programs and secure infrastructure to apply for future state, federal and foundation grants to expand wellness initiatives. The Regional Consortium will also function to perform ongoing comprehensive community assessments to identify resources and needs in the community. This information will be utilized to strategically plan, design, implement and evaluate future wellness programs and initiatives. Well planned programs will impact quality health care by decreasing health disparity, integrating care to reduce costs and ultimately improve patient quality of life.

## Part VIII: Implications for Other Communities

This grant opportunity allowed us to expand a local diabetes collaborative into a Regional Wellness Consortium and increase diabetes care and education for a 12- county region. We gained knowledge in assessing regional community needs and strategically planning community programs that could be sustained for the future. We realize that education alone sometimes is not enough to make a difference in improving outcomes; diabetic patients also have to have clinical care support and resources for treatment and medication to truly impact health outcomes. Network Partnerships are vital to address community needs and barriers and we learned how to form strong partnerships with business, education, health care, government, public health, consumers, community development and non-profit organizations in our target communities.

We strongly suggest “Rural Communities” develop formal networks to strategically plan for outreach programs. Also, incorporation of a comprehensive community needs assessment will help to prioritize needs/issues in the planning process.

A strong work plan needs to incorporate flexibility since many times pilot programs need to be evaluated early and continually changed when activities prove to be ineffective in moving the project forward to meet goals and objectives. Evaluation measures

are also important in helping to assess program viability and expansion. New programs should have a strong idea of what outcomes they want to achieve and a consistent way to measure their success in achieving outcomes.

We were fortunate to have outreach programs that provided clinical care, community education and outreach support. A mix of all three components is ideal when addressing community needs. Moving forward, we see a need to improve endocrinology specialty care and mental health counseling. Our community assessment and pilot program activities helped to move our consortium in the direction of seeking telemedicine resources.

# Idaho

## St. Mary's Hospital

Part I: Organizational Information	
Grant Number	D04RH23615
Grantee Organization	St. Mary's Hospital
Organization Type	Critical access hospital
Address	701 Lewiston St., P.O. Box 137, Cottonwood, ID 83522-0137
Grantee organization website	<a href="http://www.smh-cvhc.org">www.smh-cvhc.org</a>
Outreach grant project title	Medical Home Plus project
Project Director	Name: Pam McBride
	Title: Chief Grants and Strategy Officer
	Phone number: 208-816-0794
	Fax number: 208-476-5385
	Email address: <a href="mailto:pam.mcbride@smh-cvhc.org">pam.mcbride@smh-cvhc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*St. Mary's Hospital	Cottonwood, Idaho, Idaho	Critical access hospital
* Clearwater Valley Hospital	Orofino, Clearwater, Idaho	Critical access hospital
*Public Health – Idaho North Central District	Lewiston, Nez Perce, Idaho	Public health district
*NiMiiPuu Health	Lapwai, Nez Perce, Idaho	Tribal health
*Saint Alphonsus Regional Medical Center	Boise, Ada, Idaho	Tertiary care center
St. Joseph Regional Medical Center	Lewiston, Nez Perce, Idaho	Tertiary care center
*Human Needs Council	Grangeville, Idaho, Idaho	Social service and health agencies
*Clearwater County Human Needs Council	Orofino, Clearwater, Idaho	Social service and health agencies
Snake River Community Clinic	Lewiston, Nez Perce, Idaho	Urban free clinic
Kootenai Medical Center	Coeur d'Alene, Kootenai, Idaho	Tertiary care center
Syringa General Hospital	Grangeville, Idaho, Idaho	Critical access hospital

## Part III: Community Characteristics

### A. Area

The Medical Home Plus project served three counties in frontier north-central Idaho: Clearwater, Idaho, and Lewis Counties.

### B. Community description

St. Mary's Hospital and its partner, Clearwater Valley Hospital and Clinics, serve about 28,000 people in three counties of frontier north-central Idaho, including parts of the Nez Perce Indian Reservation. Clearwater, Lewis, and Idaho Counties are larger than Maryland and Delaware combined, but have only one stoplight, poor local economies, and limited medical resources. Residents of these counties are older and poorer than average, have high rates of suicide and stroke death, and are at increased risk for

diabetes and other chronic conditions. The area has a high suicide rate in the state with one of the highest suicide rates in the nation. Compared with many other states, residents face significant barriers to receiving preventive care services due to challenges of poverty and being in the state with the lowest rate of physicians per capita in the nation.

### C. Need

The communities served by this project are extremely rural. The Idaho clinics in this proposal serve three frontier counties with an average population density of 2.4 people per square mile. Current “rural” designation is population density of less than 100 people/square mile. Residents of these communities face geographical challenges which relate to health care challenges. They are located an hour or more away from the closest large hospital that offers trained specialists and full service emergency care. Many social services are also located an hour or more away, and there is only one public transportation route that covers part of the service area. Cottonwood and Grangeville have no public transportation connecting residents to the service, retail and medical hub of the region. Goals, objectives, and activities for the Medical Home Plus project were chosen to impact areas of highest medical need in the community: diabetes, depression, and stroke risk due to hypertension. The more intensive management resources offered by the collaborative care model addressed service area needs related to poverty, age, and isolation.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Medical Home Plus project aimed to connect frontier residents with concerned primary care providers, active nurse case managers, and integrated community resource workers. The project used the evidence-based practice of the collaborative care model embedded within the promising practice of the medical home model. The collaborative care model of adding a nurse case manager to the primary care team was modified so that nurses managed patients with multiple chronic diseases, rather than focusing on a single disease state. In addition, referral coordinators were added to coordinate community and specialist resources. The expected outcome was improved community health, measured by increases in diabetics with controlled blood sugar, patients with controlled hypertension, and increased depression screening rates.

### B. Description

Grant activities took place at three primary care clinics that are managed by two different critical access hospitals. The main grant activities were to establish positions of nurse case managers and community referral coordinators.

Nurse case managers served high-risk patients with multiple concurrent chronic conditions. They began by serving patients who had simultaneous diagnoses of diabetes, cardiovascular disease, depression, and chronic pain. These conditions were chosen to meet the community’s highest needs, as determined by a community health needs assessment and validated with input from primary care providers.

The nurse case managers worked as team members in the patient-centered medical home. They created a patient registry, reviewed care goals with providers, and contacted patients. They then determined patients’ health goals, discussed barriers, identified solutions, and monitored progress. Nurse case managers helped encourage patients to get needed diagnostic testing, uncovered issues with medication management, helped arrange transportation to appointments, and dealt with issues stemming from social isolation and poverty.

The case managers were assisted by community referral coordinators. A community referral coordinator was hired at each of two critical access hospitals. They maintained an online database of community resources covering areas as varied as transportation, mental health resources, substance abuse counselors, housing, energy assistance, and weight loss. Case managers sent service requests to the community referral coordinators. They identified appropriate resources, made appointments, and tracked completion of appointments. The community referral coordinators also received requests from the rest of the primary care team. They helped track specialist referrals, appointments, and results. Their efforts greatly enhanced access to care and were a vital part of coordinating care.

These positions were new within the organization, so policies, referral protocols, and evaluation processes were created for both nurse case managers and community referral coordinators.

### C. Role of Consortium Partners

Consortium partners included public health, Tribal health, social service agencies, critical access hospitals, and primary care providers from three counties. Project activities were developed from multiple discussions with key informants from all project

partners. Partners provided services to patients in the target population and regularly discussed how to improve communication between systems. Partners also met regularly during implementation to review project progress and identify opportunities for coordinated action.

One example of coordinated action is the online community resource database. Two different Human Needs Councils had created paper versions of community resources. The Human Needs Councils are networking groups for social service, faith-based, and health organizations within each county. They operate on tiny budgets, and printing the directories was a big part of their budgets. The hospitals had also compiled different resource lists in the course of activities like discharge planning and the community health needs assessment process. Discussions during grant activities led all partners to pool their resources and create a shared on-line directory. It is regularly reviewed at the Human Needs Councils, then updated online by hospital community referral coordinators. It is hosted on the hospitals' websites and freely available to all.

Initially, each hospital conducted an individual community health needs assessment. As the grant progressed, a joint community health needs assessment was conducted with two Public Health agencies, 10 counties, and multiple health providers. Out of this needs assessment process, a community-wide action plan was developed and implemented which included key elements (e.g., obesity, diabetes, and mental health) that aligned with the Outreach grant project.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

One key objective of the Medical Home Plus project was to provide intensive, proactive medical management for 380 high-risk patients during the 3-year project period. To date, 3 nurse case managers have provided services to 255 patients. For patients who have received case management services, 65% have controlled blood sugar, 79% have controlled blood pressure, and 78% have been screened for depression. This compares favorably to the general population. For general patients of Clearwater Valley and St. Mary's Hospitals and Clinics, 64% have controlled blood sugar, 73% have controlled blood pressure, and 22% have been screened for depression.

Depression screening used a simple tool with profound results. All nurse case managers have uncovered patients who were actively contemplating suicide, unbeknownst to their families or care teams. All received referrals to mental health resources and are currently leading more satisfying lives.

Over the course of the project period, hospital readmission rates at St. Mary's Hospital have been lowered by about 4% since July 2012. Hospital readmission rates at Clearwater Valley Hospital have decreased by about 1% during that same time period.

A second project objective was to create a system to engage community resources for population health that is sustainable by year three of the project period. Almost 6,000 patients have received more than 11,000 referrals during the project period. Of that number, 351 have been community referrals. Community referrals are those provided by consortium partners. They include transportation, infant toddler program, housing, legal aid, clothing, food, utilities, parenting classes, alcohol treatment, domestic/child abuse resources, employment training, diabetes prevention program, support groups for medical illness or parenting support, life line health alert, home care, and Weight Watchers programs. Very few of the community referrals would have been made before this project was funded. None of the 11,000 referrals would have been managed consistently.

Community referral coordinators or case managers also regularly attend county-wide human needs councils. These councils exist to spread awareness of community resources and connect consumers in need to health and social services. Regular attendance by these hospital/clinic staff sustains the engagement with community resources that this project began.

Systemic changes have also been made to sustain better communication. Five processes have been adopted for shared communication of patient information with St. Joseph Regional Medical Center, NiMiiPuu Health, insurance companies, mental health providers, and human needs councils.

### B. Recognition

Clinics of Clearwater Valley and St. Mary's Hospitals and Clinics were able to participate in a state pilot on payment reform for patient-centered medical home. The state pilot emphasized the nurse case management services made possible through this grant. Those clinics recently received certification by NCQA as Level 3 patient-centered medical homes, the highest level awarded.

Thanks to a referral from federal ORHP leadership, the hospital was recently contacted by CMS to share ideas for their new program, the Transforming Clinical Practice Initiative. As a result of this grant's emphasis on depression screening, more patients are referred to the telepsychiatry program at Clearwater Valley and St. Mary's Hospitals and Clinics. This program was recently honored as the national winner of the Premier Cares award for innovative programming for the medically underserved.

The initial success of the grant's nurse case management program led project hospitals to pilot a program to spread case management services to the Emergency Department. That pilot was just awarded a statewide Award of Excellence in Health Care Quality by Qualis Health, the CMS regional quality improvement organization.

## Part VI: Challenges & Innovative Solutions

Case management and referral coordination services were adopted readily by our hospitals and clinics. The integration went much more smoothly than we expected. We've been analyzing that success, and we think we have an idea of the factors that promoted successful implementation. One was to listen to doctors' needs and frustrations, and emphasize how those positions would meet their needs. In other words, we "marketed" or communicated our services differently to different target audiences. A service that makes wonderful sense from a public health or long-term care perspective, for example, needs to be tied to clinical care quality indicators to get physician and staff buy-in.

One of the challenges we experienced was in reaching the target number of patients for case management services. By participating in a learning collaborative with other case managers, we learned that our target was too high for the high-risk population we were trying to serve. We also acquired some tools for managing this population, such as triaging participants based on the frequency with which they needed to be contacted, then color-coding files based on that level.

Another solution to the perceived challenge of underperformance lies in data analysis. Early in the project, we looked at all our indicators in aggregate. Once we broke them down by site, we could identify differences in implementation patterns that helped us see best practices. The site-specific indicators were a useful tool for encouraging under-performers to ramp up their efforts. For example, they pointed out differences between case loads and documentation of nurse case managers at each site.

## Part VII: Sustainability

### A. Structure

Most existing partners are continuing in the coalition. The one exception is the Idaho Primary Care Association. They are concentrating on activities in more southern regions of the state. In addition to existing partners, two larger referral hospitals, another critical access hospital, and a free clinic have joined our network discussions. New partners are all part of the care continuum for health care in the tri-county service region.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

All program activities established under the Medical Home Plus Project will continue beyond grant funding. St. Mary's Hospital and Clearwater Valley Hospital have agreed to support the case manager and community referral coordinators positions using hospital operating expenses. In fact, a third case manager has already been added to meet the needs of the outlying clinic populations at St. Mary's Hospital. St. Mary's Hospital operates 6 primary care clinics covering a service area about the size of Delaware. The additional case manager position demonstrates physician and administrative acceptance of the program's value.

The Human Needs Councils will continue to operate on-going communication channels. Suggestions for improved workflows or additional services will flow through existing agency channels. For the hospitals, for example, the community referral coordinators attend the Human Needs Council meetings. They answer questions from other agencies, or follow through to obtain needed help. When other agencies have service improvement suggestions, the referral coordinators bring the suggestions back to their supervisors. Supervisors (managers) pursue appropriate actions.

One issue that arose from the Human Needs Council will help sustain access to care beyond the project period. In just the first few months of the project, barriers to care were reduced when welfare staff realized that clinics provided sliding-fee services for patients without insurance. Although that has always been the policy of hospital clinics, misinformation had become established in various agencies. Agencies now realize uninsured patients can establish care at our clinics. Hospital staff have been reminded of appropriate ways to admit and schedule new patients. These processes will continue to enhance access beyond the grant funding period.

In similar fashion, we have worked on communication between mental health providers and hospital/clinic facilities. There was a large reluctance from mental health providers to share any type of information with our facilities. Through education and continued communication, we are now receiving notification that our patients have kept or missed mental health appointments. Those processes will be sustained after the funding period ends.

The strategic plan which was a deliverable for Outreach grant activities is continuing via shared action planning in the region. Public Health – Idaho North Central District is spearheading a 10-county action plan to sustain communication between all hospitals and two public health agencies. Focus areas include diabetes prevention, obesity, and mental health.

### C. Sustained Impact

The Medical Home Plus project has achieved multiple examples of sustained impacts. They can be broadly categorized into new ways of serving and new capacity created.

#### *New ways of serving*

- Discharge instructions are now shared between facilities. This results in enhanced care coordination and should lead to improved clinical quality indicators.
- Assigning dedicated staff to attend regular meetings of area human needs councils results in fewer silos and better communication between agencies. A good example of how this results in sustained impact is making social service agencies aware of hospital and clinic financial assistance policies, who can then share that information with their clients. Removing perceived barriers to care results in increased access to primary care services for low income residents.
- A field has been created for community resources in the clinic electronic medical record. This will allow future tracking and management of community resource referrals.
- Protocols have been established for referring patients to nurse case managers and for mental health services. This results in enhanced care coordination and should lead to improved clinical quality indicators.
- Technical assistance has facilitated leadership development and better alignment between physicians and senior leaders to sustain changes beyond the funding period.

#### *New capacity created*

Two types of positions– nurse case managers and community referral coordinators – did not exist before this grant funding. Both will be continued after the grant funding ends. These positions are crucial parts of the patient-centered medical home team.

An electronic community resource directory has been created. St. Mary's Hospital and Clearwater Valley Hospital host the directory on their joint web site and provide it as a freely available resource for the community. A process has been established for monitoring and updating the resource directory through the Human Needs Councils. The Councils request regular updates from their members, aggregate the changes, and then send the information to the hospital for electronic updates.

## Part VIII: Implications for Other Communities

We developed a dashboard for project progress that included multiple indicators in one view. This was useful for managing multiple efforts and demonstrated the breadth of impact of project activities. One tool we discovered was pairing stories with data analysis. When we used a story to illustrate an outcome – whether at the patient or the agency level – it generated more discussion, evaluation, and follow-up activities than just using data on a run chart.

Another lesson we've learned that has implications for other communities is that competition is healthy. Early in the project, we looked at all our indicators in aggregate. Once we broke them down by site, we could identify differences in implementation patterns that helped us see best practices and motivate sites to increase their efforts. Nurse case managers at different sites identified differences in the ways they were introducing patients to the program, in the level of help they were providing, and in the time they were devoting to different patients.

# Indiana

## Indiana Rural Health Association

Part I: Organizational Information	
Grant Number	D04RH23583
Grantee Organization	Indiana Rural Health Association
Organization Type	Non-profit, state rural health association
Address	7214 W 940 S, Rosedale, IN 47874-7134
Grantee organization website	<a href="http://www.indianaruralhealth.org">www.indianaruralhealth.org</a>
Outreach grant project title	Noble County Outreach Project
Project Director	Name: Dana Stidham
	Title: NCOP Project Director-RHC Program Coordinator
	Phone number: 812-342-6482
	Fax number: 812-232-8602
Project Period	2012– 2015
Funding level for each budget period	May 2012 to April 2013: \$149,319
	May 2013 to April 2014: \$143,348
	May 2014 to April 2015: \$123,381

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Central Noble Community School Corporation	Albion, IN	School
*Parkview Noble Hospital	Kendallville, IN	Hospital
*Neighborhood Health Clinic	Fort Wayne, IN	FQHC
*East Noble School Corporation	Kendallville, IN	School
*Covering Kids and Families (CKF)	South Bend, IN	Non-profit statewide organization
*Indiana Rural Health Assoc. (IRHA)	Terre Haute and Rosedale, IN	Non-profit statewide rural health organization
*Community Action of NE IN (CANI)	Fort Wayne, IN	Non-profit organization
*About Special Kids (ASK)	Indianapolis, IN	Non-profit organization
*West Noble School Corporation	Ligonier, IN	School
*Smith Green Community Schools	Churubusco, IN	School

### Part III: Community Characteristics

#### A. Area

Service area is Noble County and upper corner of Whitley County in northeast Indiana. One of the four school corporations serves Whitley and Noble Counties.

#### B. Community description

Noble County is rural with a total population of 47,570 (2013). The majority is white: 88% are white, 10% Hispanic, 1% more than one race, and 0.7% Black. A primary community factor is poverty: 14.2% of residents were living below the poverty level. The percent of children receiving free lunch is 41.4% and 11.2% are in the reduced lunch program. These are higher than the state's rates. At the beginning of the program, the per capita income for the county was \$21,889 and median family income was \$47,117, which are lower than those for the state.<sup>1</sup>([Quickfacts.census.gov](http://Quickfacts.census.gov))

### C. Need

Many parents do not have health insurance. Lack of insurance is stressful for families because they know that a large medical bill could lead to unaffordable debt and even bankruptcy. Families struggling financially cannot afford health insurance, which is a major barrier for them to access health care. Their inability to pay for their care risks the stability of health care providers and ultimately, increases costs of services for all. Uninsured families usually do not have a medical home; therefore they miss out on preventive health care screenings, continuity of care, and childhood developmental assessments. Noble County ranked 5<sup>th</sup> out of 92 counties in Indiana for highest percentage of uninsured children. Poor health affects children's ability to work and perform well in school. Finally, health literacy, food insecurity and risky health behaviors, such as smoking and obesity, can be addressed by the medical home.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

#### 1. 100% Campaign, established by the Children's Defense Fund of Texas

Our project replicated many practices from the 100% Campaign model. Community Action of NE IN (CANI) – Covering Kids and Families (CKF) staff met with each school superintendent to describe the Noble County Outreach Project (NCOP) and discuss all aspects of the 100% Campaign. To confirm their support, each superintendent signed an MOU. The Outreach Enrollment Specialist carried out most of the 100% Campaign Activities which included:

- a) Determine insurance status of all children in school by adding two questions to students' annual registration forms: insurance status and permission to release contact information. Questions were also on the athletic departments' emergency contact cards. Nurses and coaches collected the contact information for the uninsured and passed it along to the outreach enrollment specialist.
- b) Present brief outreach presentations about the value of health insurance to parents at all sports concession meetings; and fall, winter and spring sports. Similar presentations were given to the athletic department and school staff.
- c) Display public health insurance materials in gyms and concession stands, e.g. flyers and posters with an athletic theme.
- d) Include public health insurance outreach flyers with free and reduced lunch applications sent home to parents.
- e) Provide monthly articles for school newsletters. School nurses submitted them to the school newspaper.
- f) Place the 100% Campaign link and logo on the school's website for parents to access more information.
- g) Meet with the school nurses, periodically, to assess and improve outreach and referral strategies.
- h) Exhibit at Back-To-School Registration activities, Kindergarten Round-Up and other school events.

#### 2. Badger Care School Outreach Toolbox, initially developed by Wisconsin Covering Kids and Families, was the model used to design the Indiana Healthcare Toolbox ([www.indianahealthcaretoolbox.org](http://www.indianahealthcaretoolbox.org)). It is a resource with drawers labeled:

For Families and Professionals:

- Descriptions of Indiana's Public Health Insurance Plans
  - Covered Services and Eligibility Overview
  - Informational videos for visitors with reading disabilities and low literacy
  - How to Apply
  - FAQs
- Overview of Marketplace Insurance and website links

For Professionals and Outreach Strategies

- Identifying uninsured kids through schools
- Planning outreach strategies through: school registration forms, free and reduced lunch program, mobile dental clinic, school outreach activities, materials to customize and download
- Tips on Retaining Health Insurance
- Statistics and Data

### B. Description

Strategies and activities of this Outreach grant included:

- Development of a Consortium, Strategic and Sustainability Plans.

- Hired full time Outreach Enrollment Specialist (OES) certified as a Federal and State Navigator. This person worked closely with the schools, WIC clinic, Parkview Noble Hospital, other community agencies and businesses. Additionally, the OES offered free education, outreach and enrollment throughout the community.
- Customized and developed new outreach materials and activities for the 100% Campaign.
- Designed the publicly available Indiana Healthcare Toolbox website, which is a repository of resources for other communities to use to replicate the project. Content was designed to help consumers determine what enrollment and healthcare options may be available to them. All materials are available in English and Spanish. Short videos provide information to consumers with visual or literacy challenges. ([www.indianahealthcaretoolbox.org](http://www.indianahealthcaretoolbox.org))
- Trained consortium members and others on how to use the toolbox.
- Designed and distributed outreach materials: posters, flyers, video, newspaper ads, etc. These were added to the Toolbox for future use.
- Promoted the value of medical homes in presentations, handouts and during consumers' application session. Each applicant received a health care Enrollment Folder with coverage information and a magnet to remind them when to recertify their plan.
- Developed a one page flyer highlighting each of the three Managed Care Medicaid Plans to help applicants select a plan during the application process. This expedited the application process and improved their chances for assignment to their preferred provider.
- Reached out to the primary care providers to increase Medicaid panels and recruit more providers.
- Created a GIS map to reflect provider coverage, poverty levels and ethnicity for the county.
- Developed a tracking system for recertifications. This was reinvented each time the state changed their process. As of 2015, the state initiated a system to determine eligibility and automatically recertify Medicaid recipients.
- Mitigated coverage gaps. The project:
  - Utilized hard copy mail, email, texting, and social media to remind Medicaid recipients to recertify before their coverage lapsed.
  - Designed a magnet with information families would need to update their case with the state. Magnets were customized with their recertification date.
  - Developed other outreach and communication materials including ads to educate families about the importance of timely recertification and steps to recertify.
  - Distributed outreach materials to families through the schools, Neighborhood Health Clinics' WIC Clinic and provider practices.
- When private Marketplace Plans became available, the project added them as options for coverage along with the public Medicaid and Healthy Indiana Plan (HIP).

### C. Role of Consortium Partners

Consortium members attended the initial planning meeting for the grant proposal. Each participated in at least one workgroup:

- Medicaid Expansion – Parkview Hospital and primary care
- Toolbox Development – CKF, ASK, IRHA, CANI
- Outreach and Education – Schools, WIC clinic, CANI, IRHA
- Evaluation – ASPIN\*, CANI and IRHA

Consortium members also participated in a SWOT analysis. Using those observations and ideas, representatives from CANI-CKF and the project director from IRHA identified revisions for the Strategic Plan. Ultimately, all consortium members participated in the development of the Sustainability Plan.

CANI-CKF hired the outreach enrollment specialist who performed direct outreach, education and enrollment activities throughout the county. CANI provided direct supervision of local activities.

IRHA participated in all aspects of the grant and ensured completion of activities and submissions of all HRSA reports.

\*ASPIN, external evaluator for IRHA.

### A. Outcomes and Evaluation Findings

#### Overarching Goals:

1. Increase the number of insured children and adults in Noble County.
  - Over 600 individuals enrolled in health insurance in rural Noble County during the three years of the project. The goal was 450.
  - Outreach flyers, yard signs, posters, business cards and newspaper ads:
    - Year one 11,841
    - Year two 38,591
    - Year three 44,795
  - Outreach through movie videos at the local theater. Videos played along with other community ads and movie trailers at the local theater. They ran for 26 weeks during the 2014-15 enrollment period.
2. Increase the number of children and adults in Noble County connected with a medical home.

New members have a short period of time to select a preferred provider. A GIS map was used to help them locate a provider close to their home or work. If they didn't select a provider, Medicaid assigned them to one of three Managed Care Entities and a provider within 50 miles. Consequently, each was assigned to a medical home. To further underline the importance of a medical home, each applicant received education during the application appointment with the outreach enrollment specialist. They were educated about the basics of health insurance, reporting changes, how to use their new insurance, and the importance of a medical home. All their materials were placed in a special Enrollment Folder to help them keep their materials organized when they return home. Prior to the state's new automated recertification program, magnets reminders for recertification were in their folders. This past year we added the C2C booklets.

During the project we distributed 562 Enrollment Folders.

3. Prevent gaps in coverage from year to year for those enrolled in a public health insurance plan.

We had limited success with recertification strategies due to difficulties with contacting members. Direct strategies included letters, email and texting. Indirect strategies included ads in the local Mall News, a promotional paper that is free to subscribers with a circulation of 12,000. Fortunately, in 2015, the state instituted an automatic system for tracking enrollees ongoing eligibility through various databases, similar to the Marketplace, and automatically recertifies them, thus eliminating this challenge.

Prior to the state's automated recertification system in early 2015, we included a refrigerator magnet reminder and gave one-on-one education about recertification at the time of application. Additionally, we searched the state's database for renewal notices and sent them a reminder letter and text message.

### B. Recognition

Covering Kids and Families exhibited the Noble County Outreach Project at their 2013 Indiana School Health Network. IRHA contacted CANI to present the project at their Spring Into Quality Symposium. IRHA and CKF exhibited the Toolbox at several conferences: Covering Kids and Families, Indiana Primary Health Care Association and IRHA. The NCOP was highlighted in CKF's Annual Report (2013) and on their CKF Fact page that is distributed to Board members and community partners.

The project has already been duplicated in several counties, particularly because it was the model used by CKF's CHIRPA grant.

1. Our initial plan was to track enrollment with Ind-e-App, the state's electronic application system. Several staff were trained on the process, and we initially used it but found that it didn't fit our data collection needs. We discontinued using Ind-e App and developed an excel spread sheet for our data collection instrument to capture all the PIMS data and organize enrollment status. It

also allowed us to make comments to revisit previously denied Medicaid applicants once Marketplace Plans and HIP 2.0 became available. This customized spreadsheet also provided some formative evaluation of our processes, e.g. identify which sites were referring patients, identify what types of consumers were falling into the coverage gap, etc.

2. Initially, some primary care offices would not refer their self-pay patients for enrollment assistance. Their practice management said that providers did not want to refer patients because Medicaid would assign them to a different provider, sometimes splitting up families between providers. We talked to the Medicaid Managed Care entities (MCE) and the practice managers about possible ways to mitigate this problem. Discussions led to the development of a written policy/procedure that asked the consumer to identify their preferred provider. This information along with the one page comparison of plans helped consumers make an educated decision. Indiana expanded Medicaid through the HIP 2.0 program and increased reimbursement rates in February, 2015. This eliminated Indiana's coverage gap and prompted primary care providers to refer their self-pay patients for Medicaid enrollment assistance. The updated Medicaid online application now asks applicants to enter the name of their doctor. The State posted a one page resource for comparing the three plans on the Indiana Medicaid website, similar to the one we developed earlier. Persistence and communication with all stakeholders seemed to be the keys to resolving this problem.
3. We were not aware that the local hospital in our consortium had an enrollment vendor until we started the project. This vendor was contracted by the larger hospital system rather than by the local county hospital, so we had limited communication or collaboration with them. We sensed that the enrollment vendor perceived that our activities impacted their enrollment numbers. The sustainability plan identified the differences and the value of each approach, i.e. reactive and proactive approaches. The hospital vendor's approach was to contact hospital patients to offer enrollment assistance after the patient presented to the ER or was admitted to the hospital. The outreach project's approach was to identify uninsured in the community at-large and through the schools. The outreach project directed consumers to the enrollment specialist's office for one-on-one assistance. This proactive approach mitigated inappropriate use of emergency room, uncompensated care and missed opportunities for preventive care. Approaches are different, and both appear valuable.
4. Staff turnovers at the hospital, school and enrollment staff proved to be a challenge. We replaced and trained enrollment staff as quickly as possible. We met with the new hospital president and school nurse to meet, greet and educate them about the project. The MOUs provided continuity and encouraged continued participation from each partner.
5. Tracking recertification and identifying reliable communication strategies with the Medicaid members for recertification reminders was challenging. We did our due diligence with this aspect of the project. We tried a combination of telephone calls, text reminders and letters. At the same time, Medicaid was sending letters too. We discovered that they moved, changed phones, or simply failed to respond, etc. This year, Indiana Medicaid began effective auto-recertification by utilizing various databases to determine eligibility for recertification.

## Part VII: Sustainability

### A. Structure

The consortium members decided that they needed to remain engaged in the project to maintain the momentum and successfully address the needs of the county's uninsured. The consortium will continue with the current partnerships at the local level.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Outreach, education and enrollment will continue. Due to state's new recertification system, there is no longer a need to continue the recertification activity.\*

Consortium members plan to meet twice a year after the project to review the status of the activities identified in the sustainability plan, share enrollment data from CANI and the hospital's enrollment vendor and identify whether any modifications to the program are needed. Outreach, education and enrollment in the Medicaid programs and Marketplace Plans will continue through CANI

with a local outreach enrollment specialist either on a full or part time basis and the hospital vendor will also continue to enroll their uninsured patients, e.g. inpatient, ER, and the Parkview Provider Group.

CANI will continue to provide outreach, education and enrollment for Medicaid and the Marketplace.

The school nurses will continue to submit the monthly ads from the toolbox to their schools' newsletters.

CKF will continue to update the Indiana Healthcare Toolbox which is available to anyone via the [www.indianahealthcaretoolbox.org](http://www.indianahealthcaretoolbox.org)

\* ACA required all states to establish an automated system for recertification which eliminated the need to locate members to assist them with recertification. The automated system mitigates gap in coverage.

### C. Sustained Impact

Increased health insurance coverage increases access to health care. By establishing a local office, the outreach enrollment specialist developed relationships with other agencies and community leaders and educated consumers through local media and at community events. As a result of this work, there is a significant drop in the number of uninsured in Noble County. The community is more familiar with CANI, the local service agency that provides assistance with health insurance enrollment, as well as with many other critical services. Residents benefit from their easy system for scheduling an appointment. They know they can call on a local, friendly agency to answer their questions or troubleshoot problems that arise. The Kaiser Family Foundation reported Noble County's uninsured rate was 20.3% in 2011. Enroll America's interactive map shows Noble County's uninsured rate to be 19% in 2013. It dropped to 14% in 2014. At least a 6% drop during the project period is significant enough to assume the presence of a trusted resource locally was an effective strategy for reducing the rate of uninsured. Prior to the project, the primary enrollment service was the hospital vendor that assisted the hospital's uninsured patients by phone.

This project was instrumental in improving collaboration among local agencies, e.g. CANI, WIC office, schools, local health department, Project Babe, Chamber of Commerce, interagency coalition, county hospital birth planner, etc. The collaboration among consortium members helped them recognize each other's expertise for this project and future ones. Members from each organization have a stronger working relationship.

The Indiana Healthcare Toolbox remains a valuable resource for any agency seeking to improve their rates for health insurance coverage. It offers information about Medicaid, HIP and Marketplace and serves as a repository for templates and other educational materials.

There is greater awareness and knowledge about the Marketplace plans. Residents' perception about what many called "Obamacare" improved from the first year to the next. This was noted in the increased numbers that sought assistance and anecdotal comments we heard from them referencing that they were referred by friends and family.

As a result of more residents receiving appropriate health care supported by their newly acquired health care coverage, we expect to see:

- Students will have better attendance and perform better in class.
- More residents will get preventive health care services to mitigate cost of more serious health care needs.
- Less family financial crises as a result of costly health care
- Employees will have better attendance, leading to cost effectiveness for employers through higher productivity
- Increase access to quality health care
- Increased revenue for healthcare providers, which leads to more jobs.

## Part VIII: Implications for Other Communities

This project was designed to test a new approach to improving access to health care for children, families and individuals by removing the barrier of being uninsured. Many rural communities struggle with finding affordable health insurance because companies tend to be small and many residents are self-employed. In order for Noble County families to be part of a healthy and vibrant community, they need to establish themselves with a medical home and receive preventive care and continuity of care.

Initially, community stakeholders were identified and came together to share their unique perspectives as providers of healthcare, education and public assistance. These organizational representatives evolved to become consortium members. They committed to

work together by signing mutual aid agreements, contributing to the strategic planning of the program and sharing their perspective of the community's needs. They met regularly to share successes and resolve challenges. Insights and support from such a broad group were invaluable.

Relationship-building, trust and respect were key elements. This was noted within the consortium and with the outreach enrollment specialist and community businesses and agencies. We found that community partners shared ideas and found opportunities to assist residents through their shared vision. For example, our project helped distribute vouchers for diapers to pregnant women when they came for assistance with presumptive eligibility. Also, the local health department was a great partner for referrals. They distributed hundreds of our flyers during flu shot clinics and childhood immunizations.

The 100% Campaign was a best practice model for the Children's Defense Fund in Texas that we also found very effective for identifying uninsured children and their parents. This model was a comprehensive program with the school that provided a wealth of opportunities to connect with parents and school staff. The 100% Campaign provided opportunities to make presentations to teachers, coaches, and parents. School newsletters and websites also helped us get our information out. The nurses kept us connected and invited us to school events. Consequently, our data collection reflected significant referrals from the schools. School nurses usually know which kids are uninsured which makes them great partners in the effort.

We found a local free newspaper, heavily sponsored by businesses' coupons, to be an effective outreach tool. We placed front page ads and articles inside. Enrollment applicants reported seeing our ads. We also created short informational videos that played prior to movies at the local theater.

Other successful outreach and educational strategies included enrollment events and posters in strategically placed locations throughout the county, e.g. laundry mats, gas stations, temporary employment agencies, local restaurants, health professional offices, etc.

We asked applicants where they learned about our service so we could identify which outreach sites were most effective. We also tracked enrollment and denial rates to fine tune the process and noted why some were denied. Tracking enrollments also provided us insight into how much we were saving healthcare providers in lost revenue and helped us provide compelling rationale to leverage funding.

The project created a toolbox website as a repository for resources that we developed and available to be customized by others: newsletter articles for school newsletters, outreach handouts, posters, ads, medical home flyers, MCE plan handouts, our video, etc. The toolbox included videos for low literacy or visually impaired, which could also be used as links for social media. There are overviews of each type of coverage, e.g. Indiana Medicaid programs, HIP 2.0 and Marketplace, for consumers as well as providers and program planners. The website also provides FAQs for consumers to help them understand how to use their insurance and make changes once they are covered. All web pages and resources are in Spanish. This tool was modeled after the successful Badger School Outreach Toolbox of Covering Kids and Families of Wisconsin.

We found that the From Coverage to Care (C2C) booklets were good resources to give new applicants to help them understand how to use their insurance, understand their insurance card and EOB, how to appropriately use the ED, etc. They are free and can be ordered at [Marketplace.cms.gov](http://Marketplace.cms.gov).

CANI has a user friendly, automated appointment scheduler for consumers to schedule an appointment. The system sends appointment reminder text message.

We did not find Facebook to be particularly effective. Many rural residents do not have internet access and finding a link to personal Facebook accounts to reach the targeted audience was a challenge.

We found that some providers were slow to open Medicaid panels and refer self-pay patients for enrollment assistance. Due to Medicaid expansion through the new HIP 2.0 plans and Medicaid's increased reimbursement rates, panels are increasing, new providers are being recruited and there is a new process to refer them to the hospital's vendor. Consequently, we expect uninsured rates to continue to decline and greater, appropriate utilization of health care to develop.

Overall, this project reduced the uninsured rate by at least 6% in the first two and a half years of the project. It successfully replicated two model projects and created additional strategies for helping other communities address their needs for healthcare insurance coverage.

# Kansas

## Unified School District #498 Marshall County Kansas

Part I: Organizational Information	
Grant Number	D04RH23618
Grantee Organization	Unified School District #498 Marshall County Kansas
Organization Type	School District
Address	121 E Commercial St – Waterville, KS 66548-8917
Grantee organization website	<a href="http://www.valleyheights.org">www.valleyheights.org</a>
Outreach grant project title	Healthy Early Learning Project
Project Director	Name: Philisha Stallbaumer
	Title: Project Director
	Phone number: 785-292-4453
	Fax number: 785-292-4455
	Email address: <a href="mailto:philishas@bluevalley.net">philishas@bluevalley.net</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,225
	May 2013 to April 2014: \$149,618
	May 2014 to April 2015: \$149,976

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Unified School District #498 Valley Heights	Waterville/Marshall/Kansas	School District
*Unified School District #113 Prairie Hills	Sabetha/Nemaha/Kansas	School District
*Unified School District #115 Nemaha Central	Seneca/Nemaha/Kansas	School District
*Unified School District #380 Vermillion	Vermillion/Marshall/Kansas	School District
*Nemaha and Marshall County Head Start	Three Sites: 1) Marysville/Marshall/Kansas 2) Sabetha/Nemaha/Kansas 3) Seneca/Nemaha/Kansas	Head Start
*Community HealthCare System, Incorporated	Onaga/Pottawatomie/Kansas (Clinics in Centralia/Nemaha /Kansas & Frankfort/Marshall/ Kansas)	Hospital
*Community Memorial Healthcare, Inc.	Marysville/Marshall/Kansas	Hospital
*Nemaha Valley Community Hospital	Seneca/Nemaha/Kansas	Hospital
*Marshall County Health Department	Marysville/Marshall/Kansas	County Health Department
*Nemaha County Community Health Services	Sabetha/Nemaha/Kansas	County Health Department
*Blue Valley Telecommunications	Home/Marshall/Kansas	Telecommunications Business
*School-Business Educational Consortium	Frankfort/Marshall/Kansas	Non-Profit Organization

### Part III: Community Characteristics

#### A. Area

Our Rural Health Care Services Outreach Grant served the following communities and counties in Northeast Kansas: **Marshall County** – covering the cities of Axtell, Blue Rapids, Frankfort, Marysville, Vermillion and Waterville and **Nemaha County** – covering the cities of Centralia, Sabetha and Seneca.

## B. Community description

According to most recent data from the US Census Bureau, Marshall and Nemaha Counties in Kansas are comprised of 20,163 residents. Based on this total number of residents, 6.4% of the total population in these two counties is under the age of 5; 24.2% under the age of 18; and 20.7% age 65 years or over.

In 2014, the Kansas Health Institute reported that 33% of adults in Marshall County and 29% of adults in Nemaha County are considered obese. Unfortunately, no local obesity data for children in our target population of 0-5 years is collected except for what is being conducted through the grant project. Gaps in health services are present and do exist in the local service area. The Health Resources Services Administration has identified both Marshall and Nemaha Counties as a county-wide Health Professional Shortage Area (HPSA). Furthermore, both Marshall and Nemaha Counties are also designated as Medically Underserved Populations (MUP). Additionally, there are also economic and social conditions that impact the health status of our local communities. In 2013, the median household income for Marshall County was \$44,032 and \$47,122 for Nemaha County. These figures are below the average of Kansas at \$51,332 and the United States at \$53,046. There is also a big discrepancy in the percentage of Marshall and Nemaha County residents ages 25 and older that have a bachelor's degree or higher when compared to state and national data. Only 15% of Marshall County residents and 19.5% of Nemaha County residents hold a bachelor's degree or higher versus 30.3% of Kansas residents and 28.8% of United States residents.

## C. Need

The *Healthy Early Learning Project (HELP)* was developed to address the unmet need for and support of health promotion and education as integral instruments in alleviating the ongoing health needs of early childhood obesity in Marshall and Nemaha Counties located in Kansas. The program was built on a model that had been previously developed for Kindergarten-12<sup>th</sup> grade students in the same counties by using research/evidence based physical activity and nutrition curriculum to increase the physical activity levels of students along with their consumption of fruit and vegetables. The only deviation in the *HELP* from the original model was the age of the target population (0-5 year olds). Throughout Marshall and Nemaha Counties this project was to be implemented in six public school preschool sites; 3 Head Start sites; and through four district Parents as Teachers programs.

At the inception of the program, several factors indicated a need to address the challenges of early childhood obesity. Highlighted factors include the following:

- Based on BMI assessments, almost 28% of 3-5 year old preschool students were classified in the overweight/obese category.
- No preschool sites had Health Advisory Teams in place and a limited number of preschool sites had written policies in place to address nutrition and physical activity within the preschool setting.
- The average daily minutes of physical activity for students while in preschool was only 43 minutes compared to the recommended 60 minutes by the CDC.
- 67% of preschool sites offered fruit as a snack only one time per week and 11% never offered vegetables as a snack.
- 42% of preschool parents reported their child consumed less than two servings of fruit per day and 85% reported their child consumed less than three servings of vegetables per day.
- 67% of preschool instructors rarely or never received any type of physical activity professional development and 78% rarely or never received any type of nutrition professional development.
- 80% of preschool parents received nutrition and physical activity information from their child's preschool less than three times per year.

In addition, and as mentioned previously, the Health Resources Services Administration has identified both Marshall and Nemaha Counties as a county-wide Health Professional Shortage Area (HPSA). Furthermore, both Marshall and Nemaha Counties are also designated as Medically Underserved Populations (MUP).

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The evidence-based model or promising practice model(s) that the *Healthy Early Learning Project* adopted include the following:

**Sports, Play & Active Recreation for Kids (SPARK) Early Childhood Physical Activity Program** - The SPARK Early Childhood Physical Activity Program is designed to provide children ages 3-5 with high activity, academically integrated, enjoyable

movement opportunities that foster social and motor development and enhance school readiness skills. This curriculum was purchased in Year 1 of the grant period for all preschool sites and training was offered during this same time frame. During Year 2 & Year 3 of the grant cycle, each preschool site then implemented and integrated the curriculum into their preschool setting. The frequency of the implementation depends upon the site, but all sites utilize the curriculum and resources from at least once per week to daily in order to increase the physical activity levels of students.

**Action Based Learning (ABL)** – Action-based learning uses physical movement, balancing, cross-body motion, eye tracking and spatial awareness to help children learn while moving. Training and instruction pertaining to action-based learning was provided to all preschool sites during Year 1 of the grant. Additionally, preschool instructors were able to purchase resources to help with the continued implementation and integration of action-based learning in the classroom during Years 2 & 3. This evidence-based model is used in the classroom on a daily basis because it is integrated into academics.

**Book in a Bag** – Book in a Bag was created to encourage young children's interest in foods, nutrition and reading in a small group setting. Children learn about nutrition by having age-appropriate storybooks with food-related themes read to them, then participating in hands-on food and nutrition activities. Each lesson is centered around the food groups of MyPlate, family times or mealtimes and includes an activity, recipes and a Dear Parent letter. Curriculum and resources for Book in a Bag were purchased during Year 2 of the grant cycle and implemented and integrated into all preschool settings during Years 2 & 3. Since the curriculum materials are self-explanatory and provide a step-by-step guide for implementation, no training was necessary. However, nutrition training provided through the Healthy Kids Challenge during Year 2 of the grant cycle included the use of the Book in a Bag model to teach and reinforce healthy eating concepts. The frequency of this model's implementation depends upon the preschool site, but all sites utilize the curriculum and resources at a minimum twice per month to encourage the increased consumption of fruits and vegetables and other healthy eating behaviors.

**Power Panther Preschool** - Power Panther Preschool is designed to encourage consumption of fruits and vegetables and promote physical movement of preschool children. Power Panther Preschool was developed to increase children's exposure to a variety of fruits and vegetables; encourage children to learn to enjoy fruits and vegetables; provide fun, seasonal experiences with food; make trying new foods a positive experience; encourage children to become more physically active; and help children learn more about how their bodies function through movement. Curriculum and resources for Power Panther Preschool were purchased during Year 2 of the grant cycle and implemented and integrated into six preschool settings during Years 2 & 3. Since the curriculum materials are self-explanatory and provide a step-by-step guide for implementation, no training was necessary. The frequency of implementation for the Power Panther Preschool depends upon the preschool site, but participating sites utilize the curriculum and resources at a minimum twice per month.

**Learning about Nutrition through Activities (LANA) Preschool Program** – LANA is a fun, effective, and hands-on approach to nutrition education. Kids play and learn at the same time, building the critical skills for making healthy eating choices. Curriculum and resources for LANA were purchased during Year 2 of the grant cycle for only one school-based preschool site. However, it was implemented and integrated into the one school-based preschool site and the three Head Start sites during Years 2 & 3 of the grant period. Additionally, nutrition training provided through the Healthy Kids Challenge during Year 2 of the grant cycle included the use of LANA as a model to teach and reinforce healthy eating concepts. The frequency of this model's implementation depends upon the preschool site, but a total of four preschool sites utilize the curriculum and resources at a minimum twice per month to encourage the increased consumption of fruits and vegetables and other healthy eating behaviors.

No adaptations were made to the evidence-based models during the project period.

## B. Description

During the first year of the grant cycle (2012-2013), the *Healthy Early Learning Project* accomplished numerous activities. Data collection protocols were established and equipment and resources were purchased for nine preschool sites in order to collect physical activity and nutrition data for four various weeks throughout the school year. Additionally, student BMI was collected in the fall and spring semester as well as parent awareness being measured during this same time frame. Multi-disciplinary Health Advisory Teams were created at each preschool site to provide project expertise and guidance. Written policies for nutrition and physical activity were developed and/or enhanced within each preschool setting. The Sports, Play & Active Recreation for Kids (SPARK) Early Childhood Physical Activity Program was purchased along with resources. Training was provided to preschool instructors and aides from all nine participating sites. A "Nutrition Nugget" Newsletter was purchased and distributed to parents as a source of providing physical activity and nutrition information. Lastly, both a Communications Plan and a Strategic Plan were developed and approved by network partners.

In the second year of the grant (2013-2014), many activities from Year 1 continued. Regular data collection including BMI measurements; pedometer readings; preschool site snack/food logs; fruit & vegetable surveys; and parent awareness surveys. The multi-disciplinary Health Advisory Teams continued to meet once a semester at each preschool site to provide project expertise and guidance. Written policies for nutrition and physical activity were updated within each preschool setting. The "Nutrition Nugget" Newsletter was renewed and again distributed to parents as a source of providing physical activity and nutrition information. Also, both the Communications Plan and Strategic Plan were updated and approved by network partners.

Furthermore, Year 2 included the addition of several new activities. Physical activity curriculum (SPARK) purchased during Year 1 of the grant was implemented at all nine preschool sites on a consistent and regular basis. Additional physical activity resources were also purchased to address action-based learning concepts and increase the physical activity levels of students. Nutrition curriculum including Book in a Bag; Power Panther Preschool; and the Learning about Nutrition through Activities (LANA) Preschool Program were purchased and implemented into the preschool environment. Cooking carts along with essential resources were also purchased to enhance the nutrition curriculum and provide future utilization in conjunction with special events to be implemented during Year 3 of the grant cycle. Professional development/training on the implementation and use of the various nutrition curriculums and resources was offered through the Healthy Kids Challenge and was well attended. Work began on the preliminary stages of a Sustainability Plan for the continuation of program activities after the grant cycle would end. The creation and development of a media campaign to educate parents and community members about childhood obesity took form. Finally, the recruitment of community partners to help engage parents and other community members in increasing healthy lifestyles through classroom activities; home activities; and special events also took place.

Similar to Year 2, Year 3 (2014-2015) included the continuation of many activities from the previous year. Regular data collection including BMI measurements; pedometer readings; preschool site snack/food logs; fruit & vegetable surveys; and parent awareness surveys. The multi-disciplinary Health Advisory Teams continued to meet once a semester at each preschool site to provide project expertise and guidance. Written policies for nutrition and physical activity were updated within each preschool setting. The "Nutrition Nugget" Newsletter was renewed and again distributed to parents as a source of providing physical activity and nutrition information. Physical activity and nutrition curriculum was implemented and integrated into the preschool environment. Gaps in physical activity and nutrition resources were identified and additional resources were purchased to address these needs. Also, both the Communications Plan and Strategic Plan were updated and approved by network partners.

As the final year of the grant period proceeded, the Sustainability Plan was developed, completed, and approved by network grant partners. The media campaign was completed and implemented by broadcasting it on local television channels. Professional development/training on implementing well planned and successful special events was provided through the Healthy Kids Challenge and instructors from all nine preschool sites were in attendance. Moreover, the continual recruitment of community partners to help engage parents and other community members in increasing healthy lifestyles through classroom activities; home activities; and special events was witnessed through special events and other similar formats at all preschool sites both during the fall and spring semester.

### C. Role of Consortium Partners

In the planning phase of the grant-funded program, the following roles and responsibilities were outlined to ensure that all consortium partners had appropriate involvement in the needs identification process; ensure commitment of partners; and define roles for the target population:

- A variety of partners from different disciplines were utilized and involved to establish initial priorities in the project.
- Grant partners generated ideas and suggestions for the collaboration of specific activities to address the goals and strategies of the project.
- Partners also gathered ideas and suggestions for the collaboration of specific activities to address the goals and strategies of the project from the target population – preschool families.
- Opportunities for continual input by partners were made available throughout the entire project planning process.
- Dissemination of information from the planning process was provided to partners and community participants with the chance for them to offer feedback.

However, when it came to the implementation of grant activities, consortium partners had more specific roles/responsibilities according to their function and area of specialty. For instance, the **fiscal agent**, Valley Heights – USD #498, provided financial accounting; filed financial reports with HRSA; and worked with HEAP to verify that all funds were being spent as appropriated.

**Preschools and Head Starts:** USD #113 – Axtell Preschool, Sabetha Elementary Preschool & Sabetha State Pre-K; USD #115 – Nemaha Central Elementary Preschool; USD #380 – Vermillion Preschool; USD #498 – Valley Heights Preschool; NEK-CAP

Marshall County Head Start; NEK-CAP Nemaha County Sabetha Head Start; and NEK-CAP Nemaha County Seneca Head Start offered assistance in strategic planning; helped develop a Media and Communications Plan; disseminated grant produced educational materials; recruited and expanded community partnerships; developed healthy learning environments; collected and provided nutrition and physical activity data; created and implemented written nutrition and physical activity policies; increased the awareness and benefits of physical activity and good nutritional habits; engaged and empowered parents and community members; implemented evidence based nutrition and physical activity curriculum; participated in professional development opportunities; and will promote and implement sustainability activities in Years 4 & 5.

**Community Partners:** Community HealthCare Systems, Inc.; Community Memorial Hospital; Nemaha Valley Community Hospital; Marshall County Health Department; Nemaha County Community Services; and Blue Valley Telecommunications offered assistance in strategic planning; helped develop a Media and Communications Plan; developed resources for healthy snack items; provided fitness and nutrition information and tips; provided speakers for schools and communities to address nutrition and fitness; and will promote and assist with sustainability activities in Years 4 & 5.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

To date, the *Healthy Early Learning Project (HELP)* has provided an impetus to make great strides in combatting the prevention of early childhood obesity and the onset of chronic disease in Marshall and Nemaha Counties in Kansas. The program has been able to accomplish what we had originally planned to do and we have been able to implement the work plan as envisioned with minimal modifications to the timeline for just a few specific activities. Our success for implementation can be contributed to countless factors including, but not limited to, ongoing collaboration; skilled program leadership; project activities being tailored to specific environments; effective communication; and the past experience and success of similar initiatives and projects with similar programmatic focus or scope.

Data results from the first two years of the grant program show that our preschool sites and communities have experienced many positive outcomes. Noteworthy results collected by the end of Year 2 include:

- Based on BMI assessments, 23% of 3-5 year old preschool students were classified in the overweight/obese category. This is a decrease of 5% from original baseline data.
- All preschool sites have Health Advisory Teams and written policies in place to address nutrition and physical activity within the preschool setting.
- 84% of preschool students attained at least 60 minutes of physical activity per day as recommended by the CDC.
- 98% of preschool sites offered fruit and/or vegetables as a snack on a daily basis.
- 69% of preschool parents reported their child consumed two or more servings of fruit per day and three or more servings of vegetables per day.
- 100% of preschool instructors have received both physical activity professional development and nutrition professional development.
- 100% of preschool parents received nutrition and physical activity information from their child's preschool at least once on a month.

The success of data collection and positive outcomes can be contributed to instructors trained in proper data collection procedures; measurements being specific, measurable, attainable, realistic and timely; and the past experience and success of similar initiatives and projects with similar programmatic focus or scope.

Besides positive data results, constructive outcomes have occurred in both school and community settings. For example, preschool instructors have now been trained to conduct health assessments; implement both nutrition and physical activity while integrating it with curriculum; and to offer special events to engage parents and community members. Furthermore, some community grocery stores have supplied their stock with new and unique healthy food options so kids can take lessons and recipes provided through the nutrition curriculum at preschool sites and bring them into the home environment.

Through the *Healthy Early Learning Project (HELP)* our consortium partners have learned that the earlier you address the need to prevent the onset of childhood obesity and chronic disease the better. Preschool students have seemed to be more willing than older children to try new healthy food options and get "excited" about wearing pedometers to collect physical

activity data. Parent participation in preschool related health activities also is higher versus that for elementary and secondary students.

## B. Recognition

After receiving initial notification of the grant funding, newspaper articles and radio announcements prevailed throughout our local communities. Information on the grant award was also televised on WIBW out of Topeka, KS. As grant activities continued to be implemented and events took place during the grant cycle, various newspaper articles were written and submitted along with pictures containing information on things such as special events. Many times this same information was sent home in school newsletters and placed on school websites for parents and other community members to peruse and view. In addition, as part of the Media Campaign, a video recognizing grant partners and highlighting grant activities was created and broadcast to community residents through local television channels within the two county area.

## Part VI: Challenges & Innovative Solutions

Although minimal in nature, following are some unanticipated challenges experienced during our Outreach program:

- The learning curve of preschool instructors working with grant data collection, especially when it included the use of technology. This challenge was resolved by revising our timeline within the first year of the grant cycle and by incorporating the utilization of a WIKI for more effective communication between grant partners.
- The extended illness of the Associate Director who was out of the office for approximately a month during the first year of the grant cycle. This challenge was resolved by making minor adjustments and modifications to the timeline within the first year.
- During Year 1 of the grant, the Project Director had to cut hours for working on this program due to another grant being received. This challenge was resolved by adjusting the staffing plan and budget to include 9 contracts for 9 campus facilitators at each of the preschool sites.
- Also, during the first year of the grant, the response time of the outside evaluator replying to our emails when we had questions or returning his data collection analysis to our office in a timely manner. As mentioned before with the other challenges, we adjusted our timeline accordingly throughout this time frame to accommodate for this situation.
- Finding time to meet that worked for all participants in each of the preschool's Health Advisory Teams (HAT). This challenge was resolved by allowing HAT to hold meetings through emails; conference calls; Skype; etc. if they cannot find a time to meet in person. However, they were still required to provide documentation showing HAT committee input during their meeting for our grant records.
- Securing nutrition training for our preschool instructors since the curriculum they chose to implement did not offer professional development specifically on the curriculum itself. This challenge was resolved by researching additional nutrition training that provided enhancement to the curriculum and resources the preschools already had in place as a result of the grant project. Project staff was able to find themed Nutrition Workshops offered through the Healthy Kids Challenge that were able to fulfill our proposed grant activities.
- Inconsistency in parents returning the Fruit and Vegetable Surveys. This challenge was resolved by Project Staff visiting with preschool instructors before Week #3 of data collection in years two and three of the grant to re-emphasize the importance of the surveys and passing this information on to the parents. Also, preschool instructors sent out a letter to parents before Week #3 of data collection highlighting grant goals, objectives, activities, etc. as well as explaining the purpose and benefits of the grant project.

## Part VII: Sustainability

### A. Structure

The consortium will continue since it is comprised of suitable partners to successfully manage and sustain the prioritized program activities beyond the grant period. However, some partners will fulfill newly defined roles with the level of involvement varying depending upon the partners; and a few, Community Memorial Hospital and Nemaha County Community Health, will no longer remain in the program consortium due to other commitments. Continuing partners have personnel within their organization whom embody the necessary skills and knowledge to adequately staff the continuation of program activities and this role would be absorbed by such partners. The designated roles for consortium partners pertaining to sustainability follow:

**USD #113 Prairie Hills, USD #115 Nemaha Central, USD #380 Vermillion and USD #498 Valley Heights:** School district partners will play a very large role in the continuation of program activities. School district staff will be responsible for providing oversight in the management/coordination of continued program activities at each of their preschool sites. School districts will also

be in charge of staffing personnel (i.e. preschool instructors and aides) at each of their sites to ensure implementation of prioritized program activities.

**Marshall County Head Start; Nemaha County Head Start - Sabetha; and Nemaha County Head Start - Seneca:** Head Start partners will also play a very large role in the continuation of program activities. Similar to school district administration, Head Start staff will be responsible for providing oversight in the management/coordination of continued program activities at each of their preschool sites. Head Start will also be in charge of staffing personnel (i.e. preschool instructors and aides) at each of their preschool sites to ensure implementation of continued program activities.

**School-Business Educational Consortium (SBEC):** The School-Business Educational Consortium will assume a smaller role than previously in the continuation of program activities. They will no longer provide paid staff to provide management/coordination of program services to preschools nor help with activity implementation unless on a volunteer basis. However, the SBEC will continue to offer expertise and skills to preschools that are built on a strong foundation of experience.

**Community Healthcare System Inc. and Nemaha Valley Community Hospital:** Local hospital partners will continue to undertake the same role as previously by providing expertise, skills, and assistance with special events, classroom presentations, and other special projects.

**Marshall County Health Department:** Local health department partners will continue to undertake the same role as previously by providing expertise, skills, and assistance with special events, classroom presentations, and other special projects.

**Blue Valley Telecommunications:** Blue Valley Telecommunications will continue to undertake the same role as previously by providing expertise, skills and assistance with communication and technology endeavors.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Activities to be sustained beyond the Outreach grant period include the following:

- **Physical Activity Curriculum & Resources Integrated in the Preschool Day:** Physical activity curriculum, including SPARK and/or Action Based Learning, will continue to be implemented and integrated into the preschool day. This activity will be absorbed by local school districts and Head Start sites.
- **Nutrition Curriculum & Resources Integrated in the Classroom:** Nutrition curriculum/education, including Book in a Bag and/or Power Panther and/or LANA, will continue to be implemented and integrated into the preschool day. This activity will be absorbed by local school districts and Head Start sites.
- **Updating Physical Activity and Nutrition Policies:** Written nutrition and physical activity policies for each preschool site will continue to be reviewed and updated on an annual basis. This activity will be absorbed by local school districts and Head Start sites.
- **Nutrition and Physical Activity Professional Development:** Since preschool instructors are already trained in curriculum that is to be continued, there is no need for additional training at this time. However, if updated training is needed, it will be provided through the school districts and Head Start administration. This activity will be absorbed by local school districts and Head Start sites.
- **Community Involvement:** Partnerships between preschool sites and community businesses will continue to be maintained and developed for assistance with special events, classroom presentations, and other special projects. This activity will be absorbed by local school districts and Head Start sites.
- **Communication for Education of Parents and Community Members:** Preschool sites will continue to post nutrition and physical activity related information on school websites; disseminate Nutrition Nuggets Newsletters or similar newsletter materials; and have the opportunity to present health related materials on the Blue Valley Telecommunications local television channel. This activity will be absorbed by local school districts and Head Start sites.

### C. Sustained Impact

The long-term effect on our community resulting from activities implemented during the *Healthy Early Learning Project* initiative are diverse and numerous. These sustained impacts include: on-going collaboration; improved service models; increased capacity in local systems; new policies; and changes in knowledge, attitudes and behaviors.

On-going impacts of collaboration will include changes in the way agencies continue to work together to serve community members. New lines of communication have been established between public school preschool instructors and Head Start preschool instructors and this relationship will endure. In addition, the culture of collaboration in communities has changed by preschool sites incorporating and engaging community and health care partners to be involved in nutrition and physical activity special events. This collaboration with community and health partners will also resume after the end of the grant cycle.

Improved service models will be sustained as a result of the development and implementation of new practice standards that will continue to be institutionalized following the end of the grant period. New nutrition and physical activity curriculum models will remain incorporated into the preschool environment. Furthermore, since preschool instructors are now trained in nutrition and physical activity curriculum, they can model and provide training to others in the future to keep curriculum integration consistent and ongoing.

Grant funds were used to build and increase the capacity of local school health systems. Assessment tools and equipment were purchased to allow for measuring the health of preschool students. Nutrition and physical activity curriculum and resources were also purchased for implementation and integration into the preschool classrooms. These resources, once purchased, will remain in the local schools and have lasting impact.

As a result of the grant program, new and/or enhanced policies were developed and implemented to sustain impact. Written nutrition and physical activity policies at preschool sites will be consistently enforced and updated regularly. These policy changes will have an enduring impact on the way nutrition and physical activity services are delivered and financed in preschool settings.

Finally, communities and local schools in the *Healthy Early Learning Project* have experienced impacts that are beyond services and infrastructure. This includes changes in the knowledge, attitudes and behaviors of providers and community members. Parental awareness of the importance of nutrition and physical activity has increased due to outreach conducted by preschool sites. Furthermore, preschool instructors have approached their teaching instruction in a new way and recognize the benefits and significance of nutrition and physical activity events within the preschool setting.

## Part VIII: Implications for Other Communities

The experiences and outcomes of our Healthy Early Learning Project have led us to believe that they definitely could be of benefit to other small rural communities; and furthermore, easily replicated. Because most of the activities in the program are incorporated into the school setting, the model for this project can be applied to other similar and not so similar school districts with very little adaptability. For instance, all of the physical activity and nutrition curriculum purchased and implemented during the program period can be utilized in any type of preschool environment as demonstrated by both the participation of Head Start preschools and school based preschools in the grant project. Therefore, the preschools that have been involved in this grant program can now share their experiences and expertise with other preschools on how to select appropriate evidence based curriculum and resources and provide demonstrations on how to implement it both within and outside of the classroom setting. Additionally, they can also share recommendations on the implementation of other grant activities such as policy and environmental changes and community engagement and empowerment.

Qualitative measures/indicators that may be beneficial for others to consider when creating their programs include, but are not limited to the following: an increased awareness within the community as a whole; increased knowledge of project participants; and increased engagement in healthy behaviors.

## Ephraim McDowell Health Care Foundation, Inc.

Part I: Organizational Information	
Grant Number	D04RH23572
Grantee Organization	Ephraim McDowell Health Care Foundation, Inc.
Organization Type	Non-profit Hospital
Address	217 S Third St. Danville, KY 40422
Grantee organization website	
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Audrey Powell
	Title: Principal Investigator
	Phone number: 859-239-2429
	Fax number: 858-239-6760
	Email address: <a href="mailto:apowell@emrhc.org">apowell@emrhc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$140,000
	May 2014 to April 2015: \$130,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Ephraim McDowell Health Care	217 South Third St. Danville, KY	Hospital
*Boyle County Health Department	448 South Third St. Danville, KY	Health Department
*Garrard County Health Department	89 Farra Drive, Lancaster, KY	Health Department
*Lincoln County Health Department	44 Health Way, Stanford, KY	Health Department
*Mercer County Health Department	900 North College St. Harrodsburg, KY	Health Department
*Boyle County Cooperative Extension	99 Corporate Dr. Danville, KY	State Cooperative Education Extension

### Part III: Community Characteristics

#### A. Area

The Ephraim McDowell Health Care Foundation provided services to the following counties: Boyle County, Garrard County, Lincoln County, and Mercer County. However, additional clients were served from Pulaski County, Casey County, Anderson County, Fayette County, Jessamine County, and one client from Georgia.

#### B. Community description

The four-county service area is located in south-central Kentucky. Central Kentucky is known as the Bluegrass Region, but two of the four counties targeted by this project are classified as Appalachian. Hills are generally rolling and the pasture land fertile in Bluegrass counties, while the Appalachian counties feature a more challenging, mountainous terrain.

In rural Appalachian, the population has a low socioeconomic status and limited access to health care services due to a lack of public transportation and long distance to health care facilities. The small, closely knit communities are populated with multi-generational families who are mutually supportive and possess cultural values of self-reliance, pride and independence. Culture

heavily influences low health literacy, tobacco use, dietary norms of high fat, high salt foods and soda drinks. Fresh fruit desserts exist and are influenced by rural isolation, lack of transportation and poverty.

There are two hospitals besides the Ephraim McDowell Regional Medical Center in the target area: Haggin Memorial Hospital in Mercer County and Ephraim McDowell Fort Logan Medical Center in Lincoln County. Two of the four counties within the program's target area are classified as Medically Underserved Areas (MUAs) and Health Professional Shortage Areas (HPSA). One county has no hospital, and two have only Critical Access Hospitals. The only integrated health services available are within Boyle County through Ephraim McDowell Health's Regional Medical Center (EMRMC), which is owned by the parent corporation that also operates the Foundation. EMRMC is a 220-bed facility that offers an array of services on an in-patient and out-patient basis. More than 30,000 ER visits, 10,000 in-hospital patient stays, 900 births and 250 deaths occur annually at the only non-Critical Access Hospital within the four county target area.

### C. Need

A needs assessment was conducted using demographic and health status indicators for the targeted areas. Data were used from *America's Health Rankings*, *Kentucky's Department for Public Health (KDPH), 2010 DCD Kentucky Behavioral Risk Factor Surveillance System Report*, *A Nation's Health at Risk III: Growing Uninsured (2005)*, and the *2011 Professional Research Consultants Community Health Assessment (CHNA)*. At the onset of the Outreach grant the target population lacked health insurance, suffered from chronic conditions like high blood pressure, diabetes, obesity, heart disease and stroke. Compared to the 14.9% of adults under 65 years in the United States who did not have health insurance, Kentucky's number of uninsured was 20.3% with Garrard, Lincoln, and Mercer Counties reporting 23.0%, 22.7%, and 26.2% respectively. Local rates of elevated blood pressure were an average rate of 39.8% versus 36.4% for the state and 34.3% nationally. The average prevalence of heart disease rate was 10.7% in the target area compared to 6.1% nationally. Diabetes incidence was 13.3% in the target area compared to 10% in the state and 10.1% nationally. The average obesity rate was 29.98% for Kentucky versus 28.5% nationally; and the age-adjusted death rate for disease related to the heart was 247.3 in the target area compared to 228.2 nationally. According to the *America's Health Rankings*, Kentucky is ranked 44 out of 50 states for being the least healthy and according to the *Kentucky Department for Public Health*, 37% of Kentucky adults were seriously overweight. Thirty eight percent reported they were physically inactive, 30 % smoke, and 30% have high cholesterol.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The University of Kentucky Heart Health Program was used to help clients identify and set personal goals, provide simple concise teaching sheets and health education. The motivational interviewing model was used to help clients identify lifestyle goals to work on. Teaching sheets which included the goals they set for themselves were given to clients. It also included a care plan that reinforced verbal counseling offered immediately after personal laboratory values were issued. Additional evidence-based models were used to set referral practices included the following: American Heart Association standards for blood pressure levels, obesity, and cholesterol; the American Diabetic Association standards for glucose levels; the National Stroke Risk Association score card; and, the Centers for Disease Control and Prevention Tobacco Use Standards and Activity Level Recommendations.

The evidenced-based program models were adapted slightly to better fit the service area's context and circumstances. The Heart Health evaluation tools were shortened to eliminate most paper and pencil tests due to literacy concerns and time constraints of the screenings. Home visits and classroom education were eliminated but replaced with monthly telephone calls made to clients participating in the study. Follow up was extended from six months up to three years. These changes were made due to transportation considerations. Education focused on individualized goals set by the clients versus the set curriculum of Heart Health.

### B. Description

The Healthy People: Healthy Communities Program works out of Ephraim McDowell Regional Medical Center (EMRMC) with four county health departments and one extension office to coordinate screenings for stroke risk. Follow up case management care of clients who agreed to participate in a research study is offered to participants. A free screening for stroke risk is offered to the populace (adults; 18 years and older) of Mercer, Lincoln, Garrard, and Boyle counties semi-annually, using the facilities of each county's health department and the Boyle County Extension Office. Participants are screened for cholesterol and glucose levels, body mass index (BMI), height, weight, and blood pressure (B/P) as well as information needed to complete a stroke risk card

developed by the National Stroke Association. After obtaining this information, each client reviews their laboratory data and stroke risk card with a registered nurse, develops a personal goal and a plan to reach that goal. Clients receive printed and verbal educational materials and appropriate tools to assist them in achieving their goals. Referrals to primary care providers (PCP), dietitians, pharmacists, hospice for grief counseling, free clinics, affordable care access, reduced fee clinics, Salvation Army for social services, mental health clinics, various support groups, diabetic and smoking cessation classes are made when appropriate using evidence based practice guidelines. EMRMC's Project Coordinator facilitates monthly follow up care of research participants utilizing nurses from each of the Health Departments to assist clients in making lifestyle changes based upon personal lifestyle goals set during the stroke risk screening. These nurses ascertain progress towards client's personal goals, provide continuing education and support, which is then documented.

### C. Role of Consortium Partners

The Ephraim McDowell Health Care Foundation is the lead applicant for this Consortium. EMRMC provided the principal investigator, the project coordinator as well as the initial vision for the grant and sought other organizations to partner with them. EMRMC staff was responsible for all planning and evaluation events, training and education of personnel, completing grant reports and attending grant required functions. EMRMC provided personnel for each screening and educational event and supervised the case management portion of the research study including client case management for the Boyle County Extension Office.

Each health department provided space for screenings and counseling, and refreshments for the fasting clients. They also provided at least one nurse for case management of those clients seeking monthly follow-up which was paid through the grant. Directors participated in consortium meetings, evaluation sessions, and sustainability planning. Clients were referred to the Health Departments for smoking cessation programs and diabetic classes. The Health Departments were very active in promoting statewide smoke free legislation. The Boyle County Extension Office also provided space and refreshments, assisted with advertisement, and participated in consortium work sessions and decision making.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Respondents to the EMRMC 2014 Community Health Needs Assessment (CHNA) met the federal guidelines for poverty at a rate of 43.5% which amounts to \$3.68 per meal for a family of four. Out of this group, the program has resulted in a decrease in stroke risk calculated from the stroke risk scorecard (movement from the red category or high risk to the yellow category (caution), and movement from the yellow category to the green category (low risk) among participants as determined by our independent research consultant). In the program's service area, which includes partner counties, the prevalence of heart disease has dropped from 10.7% in 2011 to 8.2% in 2014. Those counties in the service area that are not participating in the grant have seen an increase of heart disease with a prevalence rate of almost double the total service area (15.7%). The report indicates the number of people checking their cholesterol levels has increased from 88% to 90.3% which may not be statistically significant but does reflect a trend line in a positive direction. Three of the four counties involved in the Rural Health Outreach grant have a lower prevalence of elevated cholesterol than the state of Kentucky but remain higher than the nation (33%, 35.5%, and 36.8%, and 45.6% compared to 41.3 % for the state). Ninety four percent of clients served by the project had their blood pressure checked in the last five years with 80.9% being told they have high blood pressure and 41% diagnosed more than once with a high blood pressure. Those now taking action to reduce their B/P are 90.6% as compared to 89.2% nationally.

Upon completing a developmental return on investment, it was determined that the 1441 duplicated clients served resulted in a 5 year decrease in medical spending of \$9,612,170.06. This amounts to \$18.68 in medical return on investment per dollar spent, which is a major benefit to the health system that is already stressed. As it relates to productivity, the return on investment is \$15.52 and a total five year return on investment of \$34.19. If we do the same calculations on unduplicated clients we have a 5 year decrease in medical spending of \$6,869,264.15 for a medical return on investment of \$13.35 per dollar spent. Based on the 5 year increase on economic productivity, the economic productivity return is \$11.09 per dollar spent and a total return on investment of \$24.43 per dollar spent.

Five hundred and ten individuals participated in a study where they were contacted on a monthly basis by a Registered Nurse (RN) for lifestyle coaching. During the screening, a goal was set and a plan of action developed by the individual and a RN reviewing their biometrics and stroke risk score. A termination survey was completed after three years of follow up by RN case management. One hundred and thirty (25.5%) surveys out of 510 were returned. One hundred and four (85%) of 122 clients reported that they found themselves making healthier lifestyle choices as a result of the case management with 12 (10%) being

unsure. One hundred and sixteen (93%) of 125 responded affirmatively to the question, “Do you feel you know more about how to reduce your risk for having a stroke?” When asked if the client felt they knew the signs and symptoms of a stroke, 120 (96%) out of 125 clients responded “yes” and 5 (4%) responded “no”. Sixty-eight (55%) of 123 felt their blood pressure had improved and 79 (64%) of 123 felt their cholesterol had improved. When asked if their glucose level had improved, 62 (53%) of 118 said yes while 42 (36%) were unsure.

Anecdotal reports include one client reducing her dress size from a 20 to an 8. She instituted an exercise program, was diagnosed with diabetes and began treatment. Another client reported dropping her dress size by two sizes. A third client weighed 156.2 lbs. with a BMI of 29.5 on initial screening and after 6 months weighs 137 lbs. with a BMI of 25.5. This client now works out daily with a trainer. Another client dropped her weight from 184 to 174 lbs. in 12 months. Consequently, her B/P dropped. Program staff assisted her in obtaining B/P medication through a free clinic (this client was without insurance and medical care prior to the Affordable Care Act). We have sent several clients straight to the Emergency Room or Intermediate Care Facility due to stroke level blood pressure readings obtained in our screenings. One client decreased her B/P from 166/79 to 113/71 over the course of a year and is maintaining at that level. These are just a couple examples of what the program has been able to accomplish with those participating in the study. The 2014 CHNA documents an increase in healthy cardiovascular knowledge and lifestyle changes except for obesity and BMI values. Success is attributed to repeat screening, education and case management.

## B. Recognition

Success stories, as told by the participants, have been submitted to the local news media for publication. Stories have also been posted on the EMRMC health system website under community service and on the EMRMC Facebook page. Annually, there has been a report to the EMRMC Institutional Review Board related to the study. A final report will be presented in June 2015. A final report will also be presented to the EMRMC Research Committee. Outcomes from the project have been shared with the EMRMC and Ephraim McDowell Fort Logan (EMFL) governing boards as part of the community benefit presentation. Grant related outcomes have also been included in the EMRMC, EMFLH and Ephraim McDowell Health (EMH) 990 narrative each of the three years of the project, and interim findings have been shared with consortium partners. Other venues to share the findings are being explored, including but not limited to the EMH Research Day.

## Part VI: Challenges & Innovative Solutions

One of the first challenges that needed to be addressed was that of maintaining client confidentiality, especially when trying to communicate client data between EMRMC and the health departments. The Health Departments did not have an electronic recording and reporting system and did not have software compatible with the Kentucky Health Information Exchange. Consequently, a secure VPN network was developed by EMRMC which worked for information exchange, although it was cumbersome and inefficient causing frequent problems with access. Eventually, arrangements were made to have staff from the health departments come to the hospital to do their client case management and recording. Although only two health departments took advantage of this arrangement, it served to validate this practice for any future care because it relieved the health department nurse of health department responsibilities so they could concentrate on case management without interruptions.

It was quickly discovered that the health department RN’s had varying degrees of computer skills and comfort. Therefore, initially the project coordinator spent a significant amount of time coaching and teaching basic computer navigation skills. Some issues were never completely resolved but “workarounds” were used.

Having RN case managers at different sites fostered a lack of continuity among the group and increased inter-rater variability. This issue was addressed through monthly and then bi-monthly “Go To Meetings” that were only partially effective due to sporadic attendance caused by health department competing demands. Mass e-mail communication among the participating nurses was essential for communication of the same message to all participants. Nurse engagement for the future can be improved by better initial orientation, staff training, shared methods of reporting data results, and face-to-face peer to peer learning.

## Part VII: Sustainability

### A. Structure

The consortium will continue on a more informal basis if we do not receive grant funding for a Phase 2 project. EMRMC will continue to offer free stroke and heart attack screenings at least once a year at each of the sites as part of its community benefit

services. However, case management with monthly follow-up will not continue. Health departments will continue to provide the sites for screenings and diabetic education, smoking cessation programs, and lobby for local and state smoke free environments in our communities. The extension office will provide nutrition classes and a site for screening. The partners are as follows:

Ephraim McDowell Regional Medical Center	Boyle County Health Department
Boyle County Extension Office	Garrard County Health Department
Lincoln County Health Department	Mercer County Health Department

## B. On-going Projects and Activities/Services To Be Provided

Will all, some or none of the elements of the program be sustainable once Outreach grant funding has ended? Please check the appropriate selection.

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

As previously mentioned, at least one screening per site, per year will be sustained by EMRMC. EMRMC will supply the staff and laboratory supplies for the screenings and counseling. Space for the screenings and counseling, and refreshments for fasting clients will be funded in-kind from the health departments and extension office. In addition, efforts are underway to start a coordination of nutrition classes among the Boyle County Health Department, Boyle County Extension Office, McDowell Wellness Center, and EMRMC. Classes will at least include diabetic, low fat, low sodium diets, reading food labels, and food preparation and purchasing. This reduces duplication of services and increases access to care. Referrals to these classes will be made at the screenings. We know that continued dialogue and planning will take place between the existing partners.

If funding for Phase 2 Healthy People: Healthy Communities is obtained, expansion of the consortium to include several area churches and the Garrard County Extension Office is anticipated. EMRMC would continue to provide coordination and supervision of care along with some case management for the extension offices. Case management would continue but under different arrangements than the current plan. RN's would be required to come to the EMRMC facilities on a rotating basis to do their follow up care. Faith community nurses would follow clients from their own perspective churches. Case management would be funded through the grant.

Memorandums of Agreement are already obtained from the following partners:

Boyle County Health Department	Boyle County Extension Office
Garrard County Health Department	Garrard County Extension Office
Lincoln County Health Department	Mercer County Health Department
Danville Centenary United Methodist Church	Salvation Army
Sts. Peter and Paul Catholic Church	Lexington Avenue Baptist Church
Journey Baptist Church	

## C. Sustained Impact

EMRMC completed a Community Health Needs Assessment survey in 2014 with the assistance of Professional Research Consultants, Inc. Evidence from this survey reflect increased education and awareness of stroke risk by the population served, decreased smoking within the counties, a decrease in age-adjusted mortality trends for heart diseases and stroke, and an increase in cholesterol monitoring.

Consortium members report changes in school menus in Lincoln, Boyle, and Mercer Counties. Mercer County even hired a full time chef in their high school. Counties piloted Farm-to-School programs and several are continuing these on an ongoing basis. Burgin School has a walking trail and rewards students with activity rewards instead of sugar treats and beverages. Boyle County has increased tracking of Childhood/Teen BMI levels. With the aid of a Physical Education Program Grant, Danville Schools are making menu changes and increasing student activities also.

All counties but Mercer implemented or expanded their walking trails.

Several counties give vouchers for WIC participants to use at Farmers' Markets. At one of the churches in Mercer County, the First Lady has instituted healthy choices at every church dinner.

The Boyle County Extension Office, EMRMC, McDowell Wellness Center and Boyle County Health Department are working to join forces in providing nutrition classes to better utilize their staff, expertise, and increase access.

Consortium partners report increased collaboration and improved partnerships. EMRMC joined the University of Kentucky Stroke Network and embarked upon a massive education program regarding stroke risk and care within the network. They aggressively changed hospital practices to improve care of patients with stroke symptoms to meet evidence based practice standards. The goal is to become an accredited Stroke Center.

Health Department staff was challenged to improve their computer skills, counseling procedures, and engaging clients in self-care management. They were encouraged to explore new ways of relating to clients through integrated care of disease processes. At least one nurse from each health department verbalized the value of follow-up care and was contemplating how they could implement this in their own facilities with clients they were following.

Because Centre College and Health Occupation Student Association (HOSA) students were involved in various aspects of the screening process, potential future health leaders are being developed. One student from Centre College has gone on to graduate with a major in public health administration. This also provided a way for students to engage in the community in a way they may not have done otherwise.

There has been an increase in referrals from our partners for additional screenings and educational events. The local hospice referred nurses for training in our Faith Community Nursing program. Likewise, there has been an increase by clients requesting additional information for family members both in and outside of their immediate households. One client sought assistance for an Alzheimer's assessment and joined the University of Kentucky Research Study in Alzheimer's disease. As a result, it is evident that dialogue is taking place within family groups.

There is evidence of changed behavior among clients. Other clients while not changing their behavior at this point will say, "I know this is what I need to do" and then will proceed to inform the case manager what they need to change and sometimes add why. This demonstrates an increase in health literacy among clients in the program.

During this year's legislative session, a statewide smoke free bill passed the House and was sent to the Senate. This is certainly progress towards a statewide smoke free environment that will impact all cardiovascular health.

## Part VIII: Implications for Other Communities

While screening may not be as cost effective in terms of supplies and personnel, it does provide an entry point into communities to begin the process of education and relationship establishment. We found case management to be effective and embraced by our clientele overall if one was mindful of time constraints and activities of the client. Frequently, relationships became strong with clients trusting the case manager and seeking the case manager's advice about additional health concerns they were facing. Proper referrals could then be made, if necessary and if self-management was not appropriate. They also sought self-care management information for other family members not in the project. Because case management was done by telephone, case managers were required to make frequent and persistent attempts to contact clients in order to maintain relationships due to client's busy schedules. Consistency among case managers from various agencies is sometimes difficult to achieve.

Bringing personnel in from other agencies to one central location for in-depth training regarding teaching, coaching strategies, documentation and data collection is essential for consistency of care and protocols. Periodic joint meetings would encourage further cooperation among the various agencies beyond the director level. Engaging consortium partners' case managers in periodic meetings assures an on-going psychological paycheck in the process. This also provides an opportunity for the project coordinator to report on the outcomes of care and case managers to develop a sense of ownership and engagement in the case management process which is essential to its effectiveness. Collaborative problem solving and networking are also beneficial to program success.

Client information security is always an issue when clients are moving from county to county and information is transported between agencies. Finding a simple VPN process or electronic filing sharing system is critical and becomes even more important if coalition partners are separated by long distances. "Go To Meeting" was used with some success. Hence, some form of virtual group meetings may be necessary for long distance communication.

Obviously, case management on the local level has the potential to be effective for chronic disease process management and prevention. It has the potential to reduce healthcare costs by decreasing emergency room visits and improve quality of life. It may be a key to reducing readmissions to acute care settings. It can even be adapted using Skype among our rural and frontier areas as a mechanism for telehealth.

# Kentucky

## Kentucky Office of Vocational Rehabilitation

Part I: Organizational Information	
Grant Number	D04RH23586
Grantee Organization	Kentucky Office of Vocational Rehabilitation
Organization Type	State agency
Address	275 E. Main St., Frankfort, KY 40621
Grantee organization website	<a href="http://www.Ovr.ky.gov">www.Ovr.ky.gov</a>
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Carol Weber
	Title: Rehabilitation Technology Branch Manager
	Phone number: 859-372-8428
	Fax number: 859-371-0012
	Email address: <a href="mailto:carols.weber@ky.gov">carols.weber@ky.gov</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$147,269
	May 2013 to April 2014: \$146,559
	May 2014 to April 2015: \$147,063

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Kentucky Office of Vocational Rehabilitation	Frankfort/Franklin/KY	State Agency
Kentucky Appalachian Rural Rehabilitation Network	Lexington/Fayette/KY	Community Consortium
Kentucky Assistive Technology Services Network	Frankfort/Franklin/KY	Kentucky Tech Act Program
University of Kentucky, Division of Physical Therapy	Lexington/Fayette/KY	University
Appalachian Regional Healthcare System	Lexington/Fayette/KY	Non-profit system of hospitals
Kentucky Homeplace	Hazard/Perry/KY	Appalachian Community Health Worker Initiative
Carl D. Perkins Vocational Training Center	Thelma/Johnson/KY	Rehabilitation Center
Cardinal Hill Rehabilitation Hospital	Lexington/Fayette/KY	Rehabilitation Hospital

### Part III: Community Characteristics

#### A. Area

Project CARAT serves the Appalachian counties in Eastern Kentucky: Adair, Bath, Bell, Boyd, Breathitt, Carter, Casey, Clark, Clay, Clinton, Cumberland, Edmondson, Elliott, Estill, Fleming, Floyd, Garrard, Green, Greenup, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, McCreary, Madison, Magoffin, Martin, Menifee, Metcalfe, Monroe, Montgomery, Morgan, Nicholas, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Wayne, Whitley, Wolfe

#### B. Community description

The Appalachian region of Eastern Kentucky is a very rural area of persistent economic distress, high incidence of disability, an overburdened healthcare system, and isolated populations. Contributing to the economic distress, high unemployment rates

abound in the area, with many counties experiencing prolonged, double-digit unemployment. A major contributing factor is lay-offs in the coal industry in the region. Another factor is lack of career readiness; in more than half of the counties in the region, 40% of adults over the age of 25 do not have high school diploma. The same holds true for completion of college, with only 11.5% of adults over 25 having completed a four-year degree. Eighty percent (80%) of the counties in the target area also experience disability rates of 25% of the population. Spinal cord injury, stroke, and traumatic brain injury have high incidence rates. The region is sparsely populated with little or no public transportation, causing isolation and difficulty in providing adequate healthcare services. The area is mountainous with limited roads and few areas of concentrated population. People in the region have low health literacy and lack access to basic information, with limited access to daily newspapers, local television, or high speed internet. Most healthcare occurs in larger cities, such as Lexington, on the edges of the Appalachian region. Eighty percent (80%) of the counties in the area are designated as MUA/Ps (medically underserved areas/populations) and HPSAs (health professional shortage area).

### C. Need

With poverty, isolation, and an inadequate healthcare system, individuals with disabilities lack access to the Assistive Technology (AT) and Durable Medical Equipment (DME) they need to improve their quality of life, live independently, and participate in their community. In an attempt to involve the target community in further identifying needs related to increased vocational and independent living functionality, the Kentucky Office of Vocational Rehabilitation (OVR) conducted a comprehensive needs assessment in 2011 to determine the current and future need for vocational rehabilitation-related services in the Commonwealth. More than 400 respondents provided input to the online survey. Rehabilitation counselors who provide services to the target population indicated an increased need for AT services on a regional and statewide basis. Of the target population respondents, only 22.9% felt their AT needs had been adequately met. Even individuals with access to healthcare often didn't have the money to pay the copays associated with Medicaid and were not receiving the equipment they needed. Others were unaware of the available equipment that could aid them in being more independent. This project sought to address the need on several levels: training healthcare professionals who would stay in the area about AT/DME, informing the healthcare community members about AT/DME and its availability through Project CARAT, and providing to individuals with disability free AT/DME.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Project CARAT uses a Service-learning (SL) model and approach to engage students in the sanitizing and refurbishing of the durable medical equipment and assistive technology. SL allows students to gain valuable understanding about DME/AT, develop leadership skills in the community, and provide an important service to the community. The University of Kentucky Division of Physical Therapy (UK PT) operates a successful service learning project which provides physical therapy services to those who would otherwise not be able to receive needed therapy. The Service-learning model was applied directly to developing an SL program within the UK PT department. This same evidence-based model was adapted to fit the Work Adjustment Training Program at the Carl D. Perkins Vocational Training Center (CDPVTC). CDPVTC students all have disabilities and often have never been employed. Students in this program are learning the soft skills they need to be successful on the job. Students at CDPVTC learn not only about taking supervision, getting along with coworkers, and showing up on time; they also learn how it feels to help other people who may be in a situation similar to their own. Sanitizing and refurbishing protocol/policies and procedures are based on the Oklahoma ABLE Tech Durable Medical Equipment Reuse Program. This program is being adapted to incorporate the SL model and to serve a larger geographic area.

### B. Description

Project CARAT (Coordinating and Assisting the Reuse of Assistive Technology) has helped improve the health and quality of life of individuals with disabilities in the Appalachian region of Kentucky through the provision and redistribution of assistive technology (AT) and durable medical equipment (DME). To accomplish this goal, a three-pronged approach was developed and implemented: Network Development, Refurbishing AT/DME, and Service Learning. Each prong is explained below:

#### **1. Network Development**

Because the Appalachian region is geographically isolated and the people who live there make up an insular and independent rural culture, providing services effectively requires strong emphasis on building relationships. By developing partnerships with people and organizations that have had a long-term presence in the region, CARAT is better able to identify people who want equipment and service providers who can ensure that the equipment properly meets their needs. CARAT established contact with forty-three of the fifty-four Appalachian counties in Kentucky (80.0%) through marketing and network development efforts.

The Project Outreach Coordinator first identified major individuals and organizations that were likely to have an impact on the success and sustainability of CARAT. These organizations included DME dealers, disability-related agencies and organizations, free clinics, hospices, and hospitals. The Outreach Coordinator scheduled meetings and made face-to-face contact with individuals to obtain support for the project. During the meetings, the Outreach Coordinator described the project, asked for support, provided information on how to make donations and referrals, and asked for names of additional individuals and organizations who could be contacted. In addition to scheduled meetings, the Outreach Coordinator also drove through the area and made cold calls to organizations that might have some interest in the program. Through these marketing and network development activities, CARAT has been able to increase awareness of the program in each targeted county, to elicit donations and referrals, and to connect with influential county organizers. CARAT has cultivated many partnerships within Appalachian Kentucky, and CARAT's advisory council, the Kentucky Appalachian Rural Rehabilitation Network, KARRN, has also developed many contacts.

Some of the important contacts were with home healthcare workers (Kentucky Homeplace) and health navigators. They have been some of our most successful partners in the identification and distribution of AT/DME. These workers go into people's homes and develop a relationship of trust with the individuals who may need AT/DME. Another important connection is with the local hospitals (Appalachian Regional Healthcare System) that discharge people into the community. In particular, a rehabilitation hospital (Cardinal Hill), which works with people with acquired disabilities, has been a source of many referrals for individuals needing equipment.

Because of the varied geographical location of the CARAT partners, it was important to use a communication system that was easily accessible by all partners. To address this, Project CARAT has used two strategies. Monthly meetings are held via an ITV system, where members can participate via television across many parts of the state. Having the availability of a monthly meeting that can be attended without travel has helped keep many of the partners involved. The second strategy is the hiring of a Project Outreach Coordinator who is able to make one-on-one visits to partners.

## **2. Refurbishing Assistive Technology and Durable Medical Equipment**

Refurbishing Assistive Technology and Durable Medical Equipment (AT/DME) consists of five parts: receiving information about equipment to be donated and about people who need equipment, obtaining used equipment to sanitize and refurbish, sanitizing and refurbishing AT/DME, making it available to individuals in the community, and distributing the AT/DME as requests are made.

### **Receiving Donation and Referral Information**

The Project Outreach Coordinator often received information from contacts about equipment that was available or individuals who would benefit from AT/DME. He would pass this information to the refurbishing centers, who would contact the individual with AT/DME or who needed AT/DME. After an initial contact was made, the donating/referring individual or organization would often call the refurbishing center directly to make donations or referrals.

Additionally, the KATS Network operates a toll-free line that individuals and organizations can call to make referrals or donations. The operator on this line forwards the required information to the appropriate refurbishing center. This is an important aspect of the communication between the community and the project. It allows for a much wider range of individuals to contact CARAT and does not rely on the availability of the Outreach Coordinator. As the program is able to expand across the state, an individual can call one number and be referred to the appropriate refurbishing site.

### **Obtaining Equipment**

Most equipment has been obtained from large organizations, such as hospitals and DME dealers who have stored equipment for a number of years. In these cases, CDPVTC has sent a box truck to the location to pick up several pieces of equipment. Individuals who wish to make a donation can drop them off at a refurbishing center or at any of the partners' facilities. For example, people often drop equipment off at a Vocational Rehabilitation office. Items that are not dropped off at a refurbishing site are transferred to the site by box truck, or by individual partners who transport equipment when they are already traveling in the area. Items are also picked up by partners when a box truck is not needed for the donation. The availability of partners who often travel throughout the region has minimized the transportation expenses incurred by CARAT.

### Sanitizing and Refurbishing Equipment

Two refurbishing centers were developed during the project. Development of the centers included: identifying appropriate space for working on AT/DME, obtaining and installing a Hubscrub (a DME washing/sanitizing machine), and a storage area. Sanitizing and refurbishing protocols were established. The centers have unique staffing, based on the programs where they are located. The primary refurbishing center is located at the Carl D. Perkins Vocational Training Center (CDPVTC) in Thelma, Kentucky. CDPVTC is a rehabilitation center associated with the Kentucky Office of Vocational Rehabilitation and is funded with KATS Network funds through the KATS Network Regional Assistive Technology Resource Center that is located at CDPVTC. Students in the Work Adjustment Program perform the primary tasks of sanitizing and refurbishing AT/DME. A work adjustment instructor teaches the sanitizing and refurbishing of AT/DME as he is teaching other work-related skills. The director of the KATS Network Regional Assistive Technology Resource Center coordinates the CARAT activities, donations, and deliveries.

The second refurbishing center is housed in the Center for Excellence in Rural Health at the Appalachian Regional Healthcare System hospital in Hazard, KY. The primary work is performed by students in the Doctor of Physical Therapy Program (DPT) that is housed at that location. This refurbishing center has developed some of its own funding through donations and also receives some funding through the KATS Network for sanitizing and refurbishing supplies. The director of the DPT program oversees the students, but the students are responsible for all aspects of the program. There is an administrative person associated with the DPT program who is able to provide continuity between cohorts of students and receive phone calls regarding AT/DME and referrals.

### Equipment Database

Both partners and community members can access a database of available AT/DME that is maintained by the KATS Network. This database houses information about AT/DME available for loan, demonstration, sale, or redistribution throughout the state through KATS Network partners. The KATS Network has allowed CARAT to utilize this database to increase the availability of the refurbished equipment. Much of the information required to ensure process effectiveness and efficiency has come from the ability to track equipment using the reutilization database. The database can be queried to obtain information on every piece of equipment that is obtained, refurbished/sanitized, and distributed back out to the community. Information about each piece of equipment was entered by the service-learning students and updated at every stage of the process. Information on the database about the equipment includes where the equipment came from, if it can be reused or will be used for parts or scrapped, who was responsible for refurbishing/sanitizing it, how much money was spent to refurbish it, an estimate of the value of the equipment in new condition, which partner matched and delivered the equipment, and information on the consumer who received it.

### AT/DME Distribution

AT/DME can be picked up by the individuals receiving it at the refurbishing center. This allows the refurbishing center staff (students or administrators as applicable) to ensure that the equipment meets the needs of the individual who will receive it. In some cases, equipment is delivered directly to a healthcare professional that has made a referral so that they can make sure the equipment meets the needs of the individual and is properly fitted to them. Equipment that does not require fitting can be mailed or delivered by partners to the individual. Transportation costs are minimized by having individuals pick up the equipment or by having partners deliver it as they travel throughout the area.

### **3. Service Learning**

Service-learning is a pedagogical strategy that involves a combination of classroom instruction, community service, and critical reflection to strengthen community networks. The Service-learning component serves three primary purposes for CARAT: to provide relevant skills to participants in the project, to develop a source of volunteer workers who can perform the sanitizing and refurbishing activities, and to ensure that the project activities are sustainable beyond the life of the grant.

The CARAT refurbishing center in Hazard is based on a for-credit elective through the University of Kentucky that can be taken by DPT students in Hazard. The curriculum includes classroom training on AT/DME and sanitizing and refurbishing the AT/DME, hands-on community service work to develop and operate the refurbishing center, and identifying and addressing community needs. This collaborative strategy is used not only to help train students on refurbishment of AT/DME but also to understand the unique individual and community needs with regard to assistive technology. A student run service-learning physical therapy clinic was established in Hazard, supporting our training of PT students about how to sanitize and refurbish AT/DME.

The CARAT refurbishing center at CDPVTC also operates a student learning project for individuals with disabilities who are participating in the work adjustment program at CDPVTC. The refurbishing center provides a consistent supply of work activities to

the work adjustment program. The work adjustment instructor uses this work activity to teach students not only skills in working on AT/DME, but also soft employment skills, such as appropriate hygiene, coworker and supervisor relationships, and punctuality in work and break times. A unique benefit for this program is that individuals with disabilities who have not typically had the opportunity to be the provider of community service are able to help others who are in need. These individuals are able to take information about CARAT back to their home areas when they leave CDPVTC, which aids in obtaining AT/DME to redistribute and identifying individuals who are in need of AT/DME.

### C. Role of Consortium Partners

The major consortium partners of CARAT are the KATS Network, the Kentucky Office of Vocational Rehabilitation, the University of Kentucky Physical Therapy Program, Appalachian Regional Healthcare, Kentucky Homeplace, Cardinal Hill Rehabilitation Hospital, and the Kentucky Appalachian Rural Rehabilitation Network.

#### **Infrastructure**

The KATS Network functions as the 'backbone' of CARAT. Its mission is to make assistive technology information, devices, and services easily obtainable for people of any age and/or disability, their families, employers and employment service providers, educators, healthcare and social service providers. The Network is responsible for the programmatic management of the project including coordination among all CARAT consortium members. The existing KATS Network toll-free line is used by CARAT to accept donations and take referrals for equipment. The KATS Network AT Locator database is the online database that contains all available equipment. This database is accessible by the public and allows individuals to find and request the equipment they need. The KATS Network also employs a Project Outreach Coordinator who is responsible for the maintenance of the network of relationships required for success, including the listed partners and other community agencies/companies/individuals required to regulate the flow of AT/DME to meet the community needs. This individual is also responsible for working on the sustainability of the project and developing funding strategies that can be used to continue the work of Project CARAT. The KATS Network is also responsible for budget management. It coordinates the activities of all the partners in the Network.

KYOVR houses and staffs the main refurbishing and student training site at the Carl D. Perkins Vocational Training Center (CDPVTC) in Thelma, Kentucky. This site is funded with KATS Network funds through the KATS Network Assistive Technology Resource Center (ATRC) located at CDPVTC. In addition to refurbishing equipment and training students, staff members at the site are responsible for coordination of all transportation to pick up donations of equipment and deliver equipment to individuals and organizations who need it. CDPVTC also purchases supplies and equipment for both centers as needed. The KATS Network ATRC at the Carl Perkins Center also provides training to area healthcare workers and students on AT/DME and on sanitizing and refurbishing techniques.

The University of Kentucky Physical Therapy Program operates a refurbishing and student training site at a facility of Appalachian Regional Healthcare in Hazard. The students at this center have sponsored community events to educate the community about CARAT and obtain AT/DME and referrals. They have also obtained financial support to purchase materials and supplies. A student-run physical therapy free clinic also provides referrals to the refurbishing center.

#### **Referral partners**

The Appalachian Regional Healthcare (ARH) System acts as a referral source for individuals needing used equipment. It operates facilities and offices throughout the region. It also assists in arranging transportation of equipment between its facilities. ARH has also been instrumental in helping to educate the community and healthcare providers about Project CARAT.

Kentucky Homeplace also refers individuals needing equipment to CARAT. Kentucky Homeplace has Community Health Workers located throughout much of Appalachian Kentucky. These healthcare workers often work in the homes of individuals with disabilities who would otherwise not receive access to healthcare. They are able to identify people who are in need of AT/DME and would have no other way to obtain it.

Cardinal Hill Rehabilitation Hospital in Lexington continues to be a major referral source for CARAT. It transitions many people from the hospital after a period of rehabilitation back to their home communities in Appalachian Kentucky.

The Kentucky Appalachian Rural Rehabilitation Network continues to provide referrals to Project CARAT as they identify community members who are able to donate equipment, need equipment, or who can otherwise assist with the project.

## A. Outcomes and Evaluation Findings

### Infrastructure Development:

In a span of less than 3 years, Project CARAT has been able to establish an infrastructure to meet the AT/DME needs of individuals with disabilities residing in the most underserved part of the state. The most significant sustained impact of the project has been the building of relationships amongst people and organizations that have a long-term presence in the Appalachian areas of Kentucky, allowing them to better identify both people who require equipment and service providers who can ensure that the equipment properly meets their needs. Due to the isolated geography and the insular and rural culture of the area, it is important to work with people and organizations that have already developed a presence in the region. It is also important for the project to have face-to-face contact with individuals in the area to develop relationships. Project CARAT staff were able to meet with people in 44 of the 54 Kentucky Appalachian counties to elicit donations and referrals and to connect with influential county organizers. This relationship-building approach has brought success to the project, as Project CARAT has become the “go-to” organization for local hospitals, health insurance companies, and community health workers/navigators.

### Services Provided:

Project CARAT served a total of 269 people during almost three years of operation. 136 of these people reside in target counties. Many people outside of the target area were able to receive equipment if there was not an immediate need for it in the Appalachian counties. The project was able to serve these individuals because it was important to keep equipment moving through the process to make sure there was room for new equipment as it was donated. Equipment was distributed to Appalachian counties first before it was made available to people in other counties. In the target area of Appalachia, 64% of equipment recipients reported that they were on public assistance insurance programs (Medicare/Medicaid). Many of these individuals reported that they could not receive the equipment through Medicare/Medicaid due to their inability to pay the required copays.

A total of 621 pieces of equipment were provided to individuals, ranging in value from \$5 to \$10,000. Because the items did not have to be purchased new, the project provided a savings of over \$237,000. Individuals in the target area who received equipment rated the process of obtaining it as very easy (4.76 on a 5 point scale, where 1 = very difficult and 5 = very easy). They also indicated that the equipment received was in excellent condition (4.70 on a 5 point scale, where 1 = very poor condition and 5 = excellent condition).

### Impact on Recipients and Families:

Individuals receiving equipment indicated that the equipment had significant impact on their lives. In the target area, the most significant impacts were in the areas of having friendships and maintaining a social life and being able to live independently in the home. Recipients indicated that they were able to communicate more effectively and do more activities, like fishing, grocery shopping, attending church, and visiting neighbors. Hearing aids and batteries for hearing aids played an important role in helping individuals with hearing impairments to rejoin their families and communities. They were more independent in their homes and felt safer without fear of falling due to the provision of mobility devices like canes, walkers, and wheelchairs and personal hygiene equipment such as portable commodes and shower chairs. Recipients were able to do things for themselves such as get out of bed, get a snack, or move to another room without having to wait for someone to assist them. There was also a safety impact on caregivers; through the use of lifts, caregivers were better able to assist individuals with disabilities in getting out of bed. In some cases, individuals were able to return home, or to remain in their homes rather than moving to nursing homes, because they were able to receive appropriate AT/DME.

In addition to these outcomes, participants reported that the AT/DME they received allowed them to pursue education and employment. The two biggest factors in this were mobility devices, such as wheelchairs and scooters, and adapted computer access devices. There was also a financial impact since they were able to receive the equipment without insurance restrictions or delays and in spite of systemic poverty. Recipients appreciated that they were able to try out the AT/DME first and did not have to purchase something that did not work for them (as sometimes happened in the past).

Finally, recipients reported a significant impact on their psychological wellness. Having proper equipment to allow participation and independence in home, school, work, and community environments helped individuals deal with depression, enjoy the company of friends and family members, and enjoy life versus leading a life focused on anger and frustration.

### **Impact on Students:**

Project CARAT not only impacted those receiving the equipment; it impacted those who were able to learn about the AT/DME in their education and training programs as well. Students from the UK Physical Therapy department were trained in the refurbishing of AT/DME, which helped them to understand the technology and equipment needs in Appalachia and the process required to obtain the equipment for their (future) patients. The students also reported that they felt they would be able to perform quick, minor maintenance on equipment that would help their patients keep their AT/DME in working order for a longer period of time. This is very important in a region of systemic poverty due to the unavailability of funds to replace the equipment. Students in the UK PT program showed their overall support of the project by making a significant financial donation to help ensure that the project would be maintained.

Students participating in the work adjustment program at CDPVTC have acquired skills in working on AT/DME as well as other workplace skills. They enjoy a feeling of achievement in being able to assist others who, like themselves, have disabilities.

### **B. Recognition**

The University of Kentucky developed a video for a program called UKNow. It played once across the UK campus and continues to be replayed on the UK Public access network. Many people still comment on seeing the video on TV. The Hazard newspaper ran a piece on CARAT two years ago, focusing on a consumer whom Project CARAT was able to help. The Hazard TV station also ran a story during a DME drive the PT students held last fall. CARAT updates have been in the last 3 KARRN newsletters that are sent out to multiple organizations throughout central and eastern KY. CARAT has also been featured in "Excellence in Action," a newsletter of the University of Kentucky Center for Excellence in Rural Health.

CARAT has also been presented to several professional organizations: Appalachian Translational Research Network (ATRN) Summit (2014), the National AgrAbility Workshop (2014), KY-AHEAD (2014), West Virginia University (2013), Kentucky Rural Health Association Meeting (2012), American Physical Therapy Association Combined Sections Meeting (2013), and the Kentucky Appalachian Rural Rehabilitation Network (2014).

## **Part VI: Challenges & Innovative Solutions**

### **Changes in Partnership:**

Project CARAT faced a significant challenge in year 2 of the grant with the loss of the Bluegrass Technology Center (BTC) as a partner. The original plan was to use the large resource of available equipment and expertise at BTC to be able to quickly begin distributing items and to be able to market our program to individuals and community leaders, developing relationships that would allow us to have an effective flow of equipment out into the community to individuals who were in need. BTC also had a significant role in the development of community partners to both obtain and redistribute equipment. By the end of the first year of the grant, BTC determined that they were unable to reach out to communities located several counties away from their primary base of operations and unable to provide equipment to the Appalachian area. These problems were supported by low numbers of equipment redistributed to individuals with disabilities in Appalachia. Most of the equipment was redistributed in year 1 into the greater Lexington area. Since the goal of the grant was to target counties in eastern KY, there was a need to have a project coordinator who could establish relationships with organizations in the eastern KY region. For these reasons, during the strategic planning process in year 1, it was decided to hire a full time staff person who would coordinate Project CARAT, who would be responsible for the networking and relationship development. Additionally, the Appalachian Regional Healthcare System replaced BTC as a non-profit partner for Project CARAT. While this consortium of hospitals does not have a preexisting refurbishing program as BTC had, they do have an excellent presence and network in the target area. They have identified patients who are in need of AT/DME, identified AT/DME that could be refurbished and redistributed, and have volunteered to transport AT/DME between their hospitals. They have provided professional assistance in the appropriate matching/fitting of AT/DME to individuals as needed. ARH also provided community and healthcare worker education about CARAT.

With the loss of BTC as a partner, Project CARAT sought to replace the capacity of a recycling center, with one that could more effectively serve Appalachian Kentucky. Patrick Kitzman of the UK PT program was able to identify space within the Center for Excellence in Rural Health in Hazard, KY that allowed him to expand the services the UK PT students were able to offer. This additional space allowed the students to obtain, sanitize, refurbish, and redistribute a larger amount of equipment. The students have also started a free PT clinic that is a service learning project similar to the one developed by the UK PT program in Lexington. The refurbishing center provides AT/DME to the patients in the free clinic who need the equipment but do not have insurance or cannot pay the copay required. This increased capacity in space and available equipment has served the project well.

### **Storage Space:**

Another challenge that Project CARAT faced is a lack of storage space for donated and refurbished equipment. When writing the grant, we realized that we would need to distribute a large amount of equipment to maintain an appropriate flow of AT/DME and not run out of storage. For many factors already discussed, Project CARAT has only recently started distributing equipment from the new recycling center at CDPVTC. With the loss of BTC as a partner, storage became a larger problem. Twice during the last year, Project CARAT could not accept donations due to a lack of space. When this happened, the items were donated to BTC, even though they had stopped distributing items to Appalachian Kentucky. We have worked to address this issue in five ways: 1 – We evaluated the large amount of equipment that had been donated and scrapped the equipment that was too broken to be effectively and cost-efficiently refurbished; 2 – We completed the development of the recycling space at CDPVTC, including the purchase of a second hubscrub (AT/DME sanitizer), to increase our capacity; 3 – We developed the service-learning program at CDPVTC so that we have students available to sanitize and refurbish AT/DME as it is donated; 4 – Once we had the capacity developed, we started networking with community agencies and organizations who would be able to help identify people who need the equipment; and 5 – we worked with our community partners to identify storage space in the community where some equipment could be stored around the Appalachian area, making it easier to access for those partners and the individuals they are serving. Additionally, Project CARAT was able to donate some refurbished equipment to other agencies in the area that had need of the equipment for their patients. For example, several pediatric wheelchairs were donated to Shriner’s Hospital so they could have them available to distribute when families needed them.

### **Transportation of Equipment:**

Transportation of equipment continues to be a concern for Project CARAT. While we have been able to pay CDPVTC staff and trucks to pick up donated equipment during the grant period, we are concerned about how to effectively get equipment to consumers in a way that is sustainable after the grant period ends. Many times the consumer needs to come to a place where the equipment can be fitted by a qualified rehabilitation professional. However, we are investigating methods to minimize the travel required by individuals with disabilities and also the cost to the project for transportation. Some methods we have tried include: a local courier service which could provide the service at a reduced cost; the use of a hospital courier service, especially when we are distributing equipment to one of their patients; and the use of home health personnel to distribute equipment to their patients in their homes. To date, we have a large number of consumers who have been able to pick up the equipment themselves, but staff members have also distributed some equipment in person.

### **Staff Turn-Over:**

Staff turn-over in the project coordinator position has also created a significant barrier in addressing the sustainability of the project. This is a professional position that requires someone with a highly skilled background, and we have only been able to offer temporary employment with no benefits due to state hiring practices. We recently were able to work with the KATS Network to put this position on their contract, allowing us to offer benefits. This has allowed Project CARAT to hire an individual with the skills and experience to do the job.

## **Part VII: Sustainability**

### **A. Structure**

All of the consortium members are also members of the Kentucky Appalachian Rural Rehabilitation Network and through this organization, the consortium will continue to exist. The partners in the consortium are: Kentucky Office of Vocational Rehabilitation, Kentucky Appalachian Rural Rehabilitation Network, Kentucky Assistive Technology Services Network, University of Kentucky, Division of Physical Therapy, Appalachian Regional Healthcare System, Kentucky Homeplace, Carl D. Perkins Vocational Training Center, and Cardinal Hill Rehabilitation Hospital. All partners have agreed to continue serving in the roles identified in section IV.c. In addition, the KATS Network has agreed to take over the coordination of Project CARAT and will be responsible for maintaining the consortium.

### **B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

\_\_\_\_\_ None of the elements of the program will be sustained

The current program activities – the collection of used AT/DME, the sanitization and refurbishing of the AT/DME by the two service learning programs, matching the AT/DME to individuals with disabilities, and providing the AT/DME to those individuals - will continue. The refurbishing sites at CDPVTC and the UK PT Program at Hazard will be continued after the grant has expired.

At the UK Physical Therapy Program, students will continue to learn skills that they will need to effectively serve people in rural communities with few resources. The PT students in this program have a more thorough knowledge of AT/DME and will be able to help their patients maintain their AT/DME, refurbish AT/DME for those who cannot obtain new devices, and direct them to alternative resources to help

The KATS Network will continue to be actively involved with Project CARAT and will assist in both maintaining these current projects and expanding the AT/DME reutilization project across the state of Kentucky.

### **C. Sustained Impact**

Project CARAT has had sustained impact in the following areas:

#### **KATS Network Increased Emphasis on AT/DME Reuse**

Project CARAT has brought the refurbishing of AT/DME to the forefront of the KATS Network. Through the work of the KATS Network Center at CDPVTC, refurbishing will remain an integral part of KATS and CARAT will continue to help other KATS Network regional assistive technology resource centers focus on refurbishing. KATS Network has provided additional funding to other organizations to provide AT/DME reuse services.

#### **Expansion of Project CARAT across the Commonwealth of Kentucky**

Due to the success of CARAT, the KATS Network has decided to expand services across the Commonwealth of Kentucky and is working to implement the CARAT structure throughout the state. The KATS Network has identified other student learning opportunities and other organizations that are eager to become involved in Project CARAT. They are laying the groundwork to include other counties in central and western KY that were not included in the original grant. In addition, the Center for Accessible Living in Murray, KY has been added to the KATS Network refurbishing program to allow them to participate.

#### **Expansion of KATS Network Services**

The KATS Network has also expanded on the successes of Project CARAT's provision of refurbished hearing aids. KATS has started a new program, "SHARP," to provide low cost hearing aids to Kentuckians through the use of the "Hear Now" program and through the statewide collection of unused hearing aids for refurbishing.

#### **Increasing Skills of Healthcare Workers**

Project CARAT has also trained student healthcare providers and provided these individuals with improved skill sets. Many of these students came from rural communities and will choose to serve in rural communities upon graduation. In addition to having better skills, these healthcare providers will be better equipped to help patients obtain the equipment they need. They have also left the program with the desire to continue to be involved after graduation. These former students will be able to serve as mentors to current students as well.

#### **Increasing Community Partner Involvement**

Due to the success of Project CARAT in eastern Kentucky, other refurbishing programs are able to get more community programs involved. A good example of this is a recycling program in the Paducah area that has been providing refurbished AT/DME to patients at Lourdes hospital for years. This program was completely staffed by volunteers and had no financial support. Lourdes Hospital is now interested in participating in the program. The arrangements for structures are being formalized with an expected completion date in summer 2015.

#### **Improving Services To Rural Communities:**

The KATS Network has been able to make inroads into some very rural communities and provide, through Project CARAT, some access to AT/DME in areas in which they were unable to be completely effective in the past. As people in rural areas become more aware of AT/DME and its potential to provide improved quality of life, they will begin to seek it out through Project CARAT and its partners.

**Raising Expectations:**

In addition to the expansion of programs and the training of healthcare workers in AT/DME, Project CARAT has served to raise the expectations of people working in the Appalachian area about the provision of AT/DME to allow people to be more independent and participate more fully in their communities. It is significant that Kentucky Homeplace has integrated Project CARAT and the refurbished AT/DME into its community health navigator resource guide. People in Appalachia now have the hope and expectation that they will be able to receive the equipment they need.

**Part VIII: Implications for Other Communities**

The primary issues that must be addressed in the development of an AT/DME reutilization program similar to Project CARAT include: the development of appropriate student learning projects to provide the refurbishing, the development and maintenance of a network of individuals and agencies that are able to provide both AT/DME to be refurbished and referrals for individuals who need AT/DME, and the logistical issues of storage and transportation of equipment.

**Development of Student Projects**

Project CARAT currently operates two very different projects that involve students. At CDPVTC, students are learning general work skills in the Work Adjustment Program. There are many students in the program, and the students move in and out of the program on a regular basis. At the UK PT program, the students are studying to be physical therapists and run the program more independently. Training is provided once a year by the KATS Network. There are fewer students, and it is more difficult to keep the program staffed as the students are in and out of rotations regularly. The identification of a central person to address the administrative aspects of Project CARAT at each location has been essential for providing continuity even though the people working on the project are constantly changing.

**Development and Maintenance of a Network**

The development of a network of people and organizations involved with Project CARAT is essential to its success. Home healthcare workers and local hospitals allow CARAT to reach people in the most rural communities. Project CARAT has also found particular success in obtaining donations of used AT/DME from the following groups: DME dealers who cannot reuse equipment and often take equipment back from consumers when they deliver new equipment, hospices, hospitals, and other non-profit organizations that work with people with disabilities.

**Communication**

One aspect of network development that should be specifically addressed is the maintenance of the communication among network partners. Project CARAT has found that regular face-to-face meetings with network members help to keep the communication strong. Additionally, monthly meetings held via an ITV system allow members to participate without having to travel several hours.

**Sustainability**

CARAT was developed with sustainability in mind. Each partner is performing a task that would likely be performed by that partner, even without a grant in place. For example, ARH will still see patients who need equipment and need to assist them in locating equipment - CARAT provides them another option. The KATS Network is required to provide assistive technology reuse programs – CARAT provides them a vehicle in which to provide these services

**Project Coordinator to Facilitate Partnership and Collaboration among Grant Partners**

The presence of Program Coordinator provides the coordination of tasks in a seamless and timely manner. This is a professional position that requires someone with the special skills and experience to do the job.

**Logistical Issues of Storage and Transportation of Equipment**

The flow of AT/DME through the program is an important aspect to consider. It is necessary to keep equipment moving in and out at a rate that does not overfill the available storage area and at the same time to maintain a good selection of AT/DME that can meet the needs of the community. Developing relationships with other organizations throughout the region helps to expand storage opportunities as well as making equipment more readily available to those who need it.

# Kentucky

## Lake Cumberland District Health Department

Part I: Organizational Information	
<b>Grant Number</b>	D04RH2390
<b>Grantee Organization</b>	Lake Cumberland District Health Department
<b>Organization Type</b>	Health Department
<b>Address</b>	500 Bourne Avenue, Somerset, KY 42501
<b>Grantee organization website</b>	<a href="http://www.lcdhd.org">www.lcdhd.org</a>
<b>Outreach grant project title</b>	A STITCH in Time
<b>Project Director</b>	Name: Jamie Lee, RN, CDE, MLDE Title: Diabetes Education Coordinator Phone number: 606-678-4761 Fax number: 606-678-2708 Email address: <a href="mailto:jamiel.lee@lcdhd.org">jamiel.lee@lcdhd.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$149,197.40 May 2013 to April 2014: \$149,823.00 May 2014 to April 2015: \$150,000.00

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Lake Cumberland District Health Department	Somerset/Pulaski/Kentucky	Health Department
*Wayne County Extension Office	Monticello/Wayne/Kentucky	Cooperative Extension Agency
*Clinton County Extension Office	Albany/Clinton/Kentucky	Cooperative Extension Agency
Somerset Community College	Albany/Clinton/Kentucky	Community College
Institute for Rural Health- Western Kentucky University	Bowling Green/Warren/Kentucky	University
Institute for Rural Health- Western Kentucky University	Bowling Green/Warren/Kentucky	University
Institute for Rural Health- Western Kentucky University	Bowling Green/Warren/Kentucky	University
*Kentucky Diabetes Prevention & Control Program	Frankfort/Franklin/Kentucky	Department of Public Health
*Department of Public Health – Western Kentucky University	Bowling Green/Warren/Kentucky	University
*Department of Public Health – Western Kentucky University	Bowling Green/Warren/Kentucky	University
Business Coordinator for Worksite Development, Cabinet for Health & Family Services, Kentucky dept. for Public Health	Frankfort/Franklin/Kentucky	Department of Public Health
*DDS	Somerset/Pulaski/Kentucky	Dentist

## Part III: Community Characteristics

### A. Area

The STITCH project served employees working in two sewing factories in Clinton and Wayne Counties –two Appalachian counties in southern Kentucky.

### B. Community description

Clinton and Wayne Counties are poor, rural counties in southern Kentucky and part of the Appalachian region with a combined population of 31,085 residents. Ninety-six percent are white; 50% of the population is female. The stress and struggles of poverty and low wages lay heavily on families living in these counties. Their household has to make ends meet with 40% less income than other Kentuckians and 62% less household income than the nation's median. Twenty-seven percent of the population lives below the poverty level. Clinton and Wayne Counties are two of the unhealthiest counties in the state –Clinton ranks 64<sup>th</sup> and Wayne 75<sup>th</sup> out of 120 for health factors. When evaluating health outcomes, Wayne ranks 62<sup>nd</sup> and Clinton ranks 93<sup>rd</sup>. The population has a high incidence of smoking, lack of meaningful and consistent physical activity, poor eating habits, low health literacy skill, and limited access to health care.

### C. Need

At the start of this project 54% of the target population had no health insurance and 80% had no dental insurance. Furthermore, 29% had no medical home, 7% had not seen a doctor in the past two years or longer, 25% have never had lab work (cholesterol level, blood glucose) and 11% have not had lab work in 5 years or longer. Over one half of the target group admitted that they didn't seek medical care due to cost as well as having to miss work. The STITCH project addressed the barriers faced by so many in this target population. Health education and screening would be brought to the employee at the workplace –lab screenings and referrals, lessons at lunch, newsletters, physical activity challenges, even dental screening. By teaching this population to recognize risk factors as well as prevention and management behaviors for chronic disease, the first steps would be taken to empower the individual to become pro-active in their care.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The STITCH project used a variety of existing programs and curricula to create an effective worksite wellness program that addressed the needs of the target population. Each program was selected because of its adaptability into the worksite schedule, plus low literacy level handouts and curriculum. The following programs were used for our project: The National Diabetes Education Program, *Diabetes At Work*; *Eating Better Moving More*, *Learning about Diabetes*, *Small Steps to Health and Wealth*, and *Weight –the Reality Series*. These materials were adapted to create our worksite wellness program.

The National Diabetes Education Program, *Diabetes At Work* (which uses evidence-based curricula) lesson plans were used as the foundation and guide for integrating other educational programs into the STITCH education program. These lessons were designed as 30-60 minute lessons and were easily adaptable for “lunch and learn” formats. They were easily broken down further to meet our needs of 15 minute “lunch lessons”, and were modified to not be so diabetes specific. The “*Eating Well*” lesson plan was expanded into a twelve week Eating Better unit promoting healthy eating. The lessons were supplemented with handouts from [www.choosemyplate.gov](http://www.choosemyplate.gov) to reach larger audiences. The “*Get Moving*” lesson plan was expanded into a six week “Get Moving” unit promoting physical activity. The “*Understanding Diabetes*” lesson plan was divided into a nine week unit. The “*Taking Good Health to Heart*” lesson plan was divided into an eight week unit combining Heart Health, blood pressure control, and cholesterol. Again, lessons were supplemented with handouts from the American Heart Association to reach larger audiences. The “*Emotional Well-being*” lesson plan was divided into a three week “Managing Stress” unit with no modifications.

*Eating Better Moving More*, is an evidence- based model developed by the National Policy and Resources Center on Nutrition and Aging at Florida International University, focusing on improving eating habits and increasing physical activity among older adults. We used the activity lessons that supported the use of step counters to supplement our pedometer challenge.

*Learning about Diabetes* ([www.learningaboutdiabetes.org](http://www.learningaboutdiabetes.org)) is a non-profit charity that specializes in low literacy educational materials in English and Spanish. Various handouts were used to supplement the diabetes portions of the program. Originally, when the project began these materials were free. (There is now a charge to use these materials.)

*Small Steps to Health and Wealth* (Rutgers Cooperative Extension) curriculum encourages participants to make positive behavior changes to simultaneously improve their health and personal finances. This was used by the Wayne and Clinton Cooperative Extension Agents for lunch lessons, but was modified and only an overview was covered in a single lunch lesson.

*Weight –the Reality Series* is a 10 week program designed for use by County Extension Agents for Family and Consumer Sciences. This curriculum teaches participants to change their relationship with food, activity, and weight. Each session takes the “LAFF” approach: **L**earning –a topic presentation and/or handout, an occasional form to complete; **A**ctivity –an opportunity to move; **F**ood –a recipe demonstration or group food event to illustrate best practices; **F**un –taking time to laugh and smile, creating an environment where people can take refuge from the outside world. The curriculum was modified from 10 to 8 weeks and sessions were shortened to fit into the 15-20 minute “lunch and learn” format.

## B. Description

We felt that the old saying, “A stitch in time saves nine” is so often appropriate with our health—that by preventing health problems or addressing them early on we can prevent complications and problems down the road. **STITCH** program goals are: **S**ee the risks. **T**ake the first step. **I**mplement what you have learned. **T**ake it home. **C**ontinue daily. **H**ealthy for life.

In the planning stages of the grant, we asked participants to complete an interest and needs survey. We found that many had not had blood work in several years. To obtain baseline data we started with biometric screenings that were conducted onsite at each facility. These screenings included: Blood pressure, weight, waist, BMI, Cholesterol (LDL and HDL), Triglycerides, Glucose, and A1C. Each participant was counseled individually on their results and referred to a health care provider for all abnormal findings. These screenings were then conducted onsite annually to track results. We asked participants to complete a Wellsource Health Risk assessment initially to obtain further baseline data. This survey was repeated Year Three of the grant for follow-up. Because high blood pressure was such a concern for our population, we provided monthly blood pressure screenings with follow-up education and referrals as needed throughout the project. As a health preventative measure, flu vaccines were provided to employees annually at each facility at no charge as well.

Each employee was given the opportunity to participate in a walking challenge by using free Omron pedometers to track their steps. Large wall maps were designed and used to track participants as they “walked” from the factory to Virginia Beach, then across the United States to the Golden Gate Bridge. This was an ongoing, monthly challenge with monthly winners at each facility. Walking paths were identified at each facility to also encourage physical activity.

Lunch and learn sessions were held weekly at both lunch breaks at each facility using our educational materials and plan. Our original plan for 30 minute lunch lessons would not work with the factory schedule so we quickly modified our lessons to 15 minute “bites” of education during the employee thirty minute lunch break. An added treat quarterly was recipe testing at the facilities which was provided by the Cooperative Extension agents. Another population series at lunch was *Weight –the Reality Series* weight loss challenge. This challenge was held annually at each facility and led by the Cooperative Extension Agents. To keep the employees engaged in the ongoing lessons we incorporated incentives for participation –every 5<sup>th</sup> lesson the employees attended, they received a “healthy habit tool”. Such things as water bottles, divided plates, lunch bags, exercise bands, salad shakers, etc. kept the employees motivated and engaged.

Special gender specific events were held for employees as well. “Ladies’ Lunch” events were held year one and two. The first “Ladies’ Lunch” was held at the local health department with educational booths as well as opportunity for annual cervical cancer screening, vision and hearing screening, plus a healthy lunch was provided. The second “Ladies’ Lunch” was coordinated by the two County Extension Agents and held at the local extension office. Cooking demonstrations, pottery making, recipe tasting, health education booths, and lunch were provided for participants. One event was held for the male employees at a local activity center, with a well-known Kentucky outdoorsman as guest speaker. Fish and Wildlife personnel taught casting techniques while health information booths, physical activity stations, and lunch were provided for participants.

Wellness Teams were established at each facility and met quarterly. These 13-15 member teams were made up primarily of general workers from all areas of the factories with only 2-3 middle management staff included. Team responsibilities were to be liaisons for the factory, “cheerleaders” for activities and to review and evaluate wellness activities at the facilities.

Due to the tremendous need for dental care based on initial surveys, we partnered with the Rural Institute of Health from Western Kentucky University to provide onsite dental screening and care. In year two, 100 participants were screening with during year two by the Rural Institute of Health from Western Kentucky University finding overwhelming dental care needs. Referrals were made to the nearest Remote Area Medical clinics with gas cards provided, but only 3 employees utilized this resource. We later became

partners with a local dentist who was establishing a charity for dental care in our area. Dental services are currently being provided by this charity and will be ongoing after the grant concludes.

Finally, to keep the employees informed of ongoing activities and resources, monthly newsletters were prepared and disseminated to employees with payroll.

### C. Role of Consortium Partners

The Consortium was originally made up of ten community and state partners, each with specific roles. The Lake Cumberland District Health Department (LCDHD) acted as the fiscal agent of the grant and was responsible for the majority of the activities which include educational sessions, HRA distribution, flu vaccines, health screenings, data collection, newsletter development, and coordination of gender specific event. The Project Director, Worksite Educators, and translators were employees of LCDHD.

Patriot Industries, Inc. was chosen as the site of the project as they had contacted LCDHD expressing interest in establishing a worksite wellness program at their facilities. Patriot administration assisted with coordination of screenings and activities; distribution and collection of health assessment surveys for employees; and participation in evaluation activities. They were the liaison for the consortium and employees at the worksite.

The Clinton and Wayne County Extension Services provided educational health programs quarterly, assisted with gender specific activities, as well as participated in evaluation activities. LCDHD and the Extension Services have had a rich history of community partnership and have worked together in many activities over the years.

The Institute for Rural Health, Western Kentucky University (WKU) Dental Program provided dental screenings and education in year two as well as participated in evaluation activities. They were a liaison for community dental needs and providers. Several state universities were contacted to provide the dental care, but WKU was the only one willing to travel to provide the care onsite.

The business coordinator for Worksite Wellness Development, Cabinet for Health & Family Services, Kentucky Department for Public Health, Health Promotion Branch has assisted in ongoing project evaluation and planning. Two Western Kentucky University (WKU) professors participated in project evaluation as well as coordinating student data analysis of screenings, surveys, and project indicators. A Somerset Community College nursing professor participated in evaluation activities as well as coordination of student assistance with screenings at factories.

During the course of the project there have been additional changes with consortium members as well. The Project Director and Worksite Educator who originally began the project both resigned in the summer of 2014 –one to finish her APRN degree and the other to begin another job. The Educators were replaced by two RN's and the Project Director role was adopted by another Consortium member. Due to the magnitude of identified dental needs, the Consortium has pursued partnerships with local dental providers to help establish dental homes and meet the dental care needs. A partnership has been established with a local dentist who has joined the consortium to provide mobile dental care year 3, replacing the Institute of Rural Health as the dental provider. The evaluator stepped down from her role with the Consortium early in year one as her job duties changed at the Department for Public Health, so two professors from WKU came on board to assist with project evaluation. The Vocational School instructor and students were never able to participate in the project and therefore stepped down from the consortium late Year one.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The STITCH consortium hit the ground running once the grant funds were received. Baseline health data from the health risk assessment was obtained and will be compared to data from the end of year three once obtained. We immediately began the biometric screenings and of the 147 screened, we found that 36% had high cholesterol levels, 48% had high triglyceride levels, 62% had elevated glucose levels, 53% had elevated A1C levels, and 57% had high blood pressure. Referrals were made to the local FQHC and Rural Health Clinic for evaluation. We were excited to find that of the 213 screened the following year, 17% had high cholesterol levels, 31% had high triglyceride levels, 28% had high glucose levels, 33% had elevated A1C levels, and 45% had high blood pressure. Year three final screening had 140 participants (49 of these were new employees). 30% had high cholesterol, 40% had high triglyceride levels, 40% had high glucose levels, 40% had elevated A1C levels and 35% had high blood pressure. Over course of the grant 283 different individuals participated in the biometric screening, yet only 43 participated all 3 years which made evaluation challenging.

Pedometer kits were offered to all employees with an ongoing pedometer challenge for most steps walked each month. Regretfully, few employees were truly engaged in this component despite numerous tweaks, revisions, and promotions. However, one employee did embrace this –he walked over 3,878 miles and lost 180 pounds!

Dental education was provided for employees and one hundred uninsured employees were screened for dental needs. Many employees were referred to Remote Area Medical clinics due to the overwhelming dental care needs identified. A partnership with a local dentist was formed in year three to meet these and ongoing needs of uninsured individuals with no dental home. Dental care has been provided to clients and will be ongoing after grant period concludes.

Health education was provided for employees, but our ideal of 20-30 minute “sit down” health lessons quickly faded due to thirty minute lunch/break periods, so we modified our lessons to weekly 15 minute “lunch and learn” lessons. Each employee received a monthly newsletter with resources and health topics. Annual weight loss challenges were conducted with wonderful results and became a favorite activity with employees.

Team Wellness committees were established at each of the two plants. These teams reviewed wellness activities, discussed needed changes and new activities. The teams would have been more effective if they had met more often than quarterly, however, these teams will continue after the grant concludes.

Linkage to resources and increasing access to care was one of main success of this project, whether to HCPs for health needs, assistance for eyeglasses through the local Lion’s Club, or health care at Remote Area Medical clinic. Many employees were unaware of the FQHC in the area and additionally, employees were assisted to enroll in “kynect” –Kentucky’s healthcare connection for the Affordable Care Act when “kynectors” came to the facilities to enroll employees.

While preventive health measures were offered (flu vaccines were administered to 115 employees during year one, 148 year two, and 170 year three) absenteeism did not show a significant change over the 3 years. However, monthly individual medical costs for the factory did see a significant drop --\$248 year one, \$150 year two, and \$125 year three.

Gender specific health promotion/education events were held and despite detailed planning had very limited participation due to work schedules at the factory. A final health info event was held at the conclusion of the project with over 200 individuals participating. Health information booths were available at each facility covering tobacco cessation, diabetes, physical activity, WIC benefits, dental care, healthy eating, and eye care. Participants received educational materials on mammograms, women’s health, men’s health, physical activity, and healthy eating. Results of the final survey with 188 responding: 52% reported that they had learned ways to improve their health during lessons, 43% reported their health has improved as a result of lessons, and 63% reported that they would share this knowledge with family and friends. Over the course of 3 years, we had a total of 496 different employees participating in some aspect of the STITCH project!

## B. Recognition

We had hoped to share about our project at the Kentucky State Chamber meeting and a proposal was submitted, however our proposal was not chosen. While marketing about the STITCH project was not as extensive as we had hoped, a section of the Lake Cumberland District Health Department website is devoted to STITCH and used as a resource regarding worksite wellness.

## Part VI: Challenges & Innovative Solutions

Time was an on-going challenge for this project. The employees worked on “production”, so time to participate in lunch lessons and events was often effected by factory demands. Our original 20-30 minute “sit-down lunch lessons” were quickly shortened to 15 minute “bite-size” lunch and learns. The project has had to be extremely flexible. Events had to be modified to fit into the factory schedule. During the course of the 3 years, we faced several periods of employee lay-offs --one facility actually shut down completely for 3 months. During the lay-off periods, many employees found other jobs, so employee turn-over was an unexpected challenge as well. We were constantly orienting new employees to the program, and some of our “regulars” and team leaders were often gone.

Another unexpected challenge we faced during the beginning of year three was that both of our educators working with the project resigned –one to finish school and one to take another job. So, new staff had to be hired and relationships established with the employees.

## Part VII: Sustainability

### A. Structure

At the conclusion of the grant funding, the consortium will be made up of the Lake Cumberland District Health Department, the Clinton and Wayne County Extension agents, Dr. Steve Hieronymus, and Somerset Community College. The consortium will function in a very scaled-back fashion as compared to the original grant partnership.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

As no specific funding is designated for the overall project, no fiscal agent will be necessary in the future. The consortium will convene bi-annually via conference call to review and evaluate the project.

The LCDHD will provide the staffing and supplies for the monthly blood pressure screenings and education, staffing for coordination and participation in consortium calls and Wellness Team meetings. LCDHD will provide free access to the online health risk assessment for Patriot employees and aggregate this data free of charge. The Project Director position will be eliminated and the project activities will be coordinated by a STITCH Educator. The blood pressure screening results will be evaluated by the Department of Public Health Heart Disease and Stroke Program. The Cooperative Extension Services will provide the staffing and materials for annual educational sessions and complete the evaluation. The dental care provided and supplies will be donated by a 501C charity that is being established. Somerset Community College will assist with blood pressure screenings as a part of the students' rotation in community health as scheduling allows. Communication within the consortium will be primarily by email and biannual conference calls.

### C. Sustained Impact

The STITCH Project has provided an opportunity for consortium members to form new working relationships that may have never occurred otherwise. Also, these relationships will be ongoing as the group will work together in activities outside of the STITCH project such as community health promotion and other grant ventures. Consortium members have received additional beneficial trainings such as training for onsite biometric lab screening, the Cooper Clayton Smoking Cessation method, and Lifestyle Coach training for the Diabetes Prevention Program. Patriot Industries employees have had sustainable impacts as well. Each facility has been provided with and employees taught regarding blood pressure monitors and scales for self-monitoring. Wellness Teams have been established at each facility and TV/DVD players with health promotion DVD's are now available at break rooms in each facility. Educational "powerpoint" topical messages were developed and converted to thumb drives to be used with the TV/DVD players for constant, looped health messages. Worksite Wellness Toolkits from *Eat Smart Move More North Carolina* has been purchased for the Wellness Team and administration use to keep the momentum going. Walking maps were developed for each facility and vicinity. Path signage will be painted at both facilities by the conclusion of the project. Employees have an increased knowledge in topics such as healthy eating, physical activity, chronic disease prevention and management.

## Part VIII: Implications for Other Communities

Reflecting back for lessons learned, we now realize that more discussions with factory administration for full exploration of their vision and needs should have taken place as employer buy-in is critical to the ongoing success of worksite programs. Have a clear understanding of their commitment to the project and what they are willing to "bring to the table" before planning your program. Discuss with the employer any fluctuations in work load, history of lay-offs, and rates of employee turn-over. Building leadership support from within, engaging supervisors and "champions" would have increased the success of our project. A more effective communication plan between consortium partners, administration, and employees would have benefited the project. Additionally, more extensive assessments, planning, and promotion should have taken place at the factory prior to the initiation of activities.

Looking back, we would have been much more effective if we had implemented one aspect of STITCH at a time instead of beginning all activities immediately. We should have done extensive promotion with each activity, evaluated outcomes, made necessary revisions before beginning the next activity. Targeted project evaluation activities at regular intervals would have made

reporting more efficient and less time-consuming as well. And, finally, include orientation about the worksite wellness program into the new employee orientation process.

Another important item to note: we used evidence based curriculum and strategies for our educational programs that we were already familiar with. During the course of the grant, we actually found a worksite wellness toolkit from Eat Smart Move More North Carolina that would have met our needs with less modifications for our lunch and learn lessons.

# Kentucky

## Lotts Creek Community School

Part I: Organizational Information	
Grant Number	D04RH23591
Grantee Organization	Lotts Creek Community School
Organization Type	School
Address	5837 Lotts Creek Rd Hazard, KY 41701
Grantee organization website	
Outreach grant project title	Lotts Creek Wellness Program
Project Director	Name: Alice Whitaker
	Title: Director
	Phone number: 606-233-0626
	Fax number: 606-785-4850
	Email address: <a href="mailto:lottscreekwellness@yahoo.com">lottscreekwellness@yahoo.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
University of Kentucky (UK) Cooperative Extension	Hindman / Knott County / Kentucky	University
The Alliance for a Healthier Generation	Portland / Multnomah / Oregon	Non-profit
Knott County Board of Education	Hindman / Knott County / Kentucky	School District
UK Center for Rural Health	Hazard / Perry County / Kentucky	University
Web MD Health Foundation	San Diego / San Diego County / California	Non-profit

### Part III: Community Characteristics

#### A. Area

The Lotts Creek Community School Wellness Grant served the Perry and Knott Counties in Eastern Kentucky.

#### B. Community description

The target service area of Knott and Perry Counties in eastern Kentucky is characterized by high levels of poverty and obesity, low educational attainment levels, and many health disparities. The target population also faces many personal and geographical barriers to overall health and wellness, including limited physical activity, lack of transportation and access to medical care and services, no sidewalks, low primary care physician-to-population ratio, and limited financial resources that adversely impact community members' ability to pay for medical care and purchase healthy and fresh food options.

Lotts Creek Community School, Inc. (also known as The Cordia School), a 501c3 non-profit organization located in Cordia, Kentucky, works in conjunction with the local Knott County Board of Education to provide public education for the children of the isolated, poor and underserved region of Kentucky. Not only does Lotts Creek provide education for an enrollment of 350 students in grades Preschool through 12, but it is also a critical community partner providing a variety of outreach programs (prescription assistance, home repair, etc.) to the larger community of over 18,177 *households* across Knott and Perry Counties. These projects

demonstrate a strong commitment to the volunteer and support programs that make Lotts Creek Community School a successful community venture.

In 2012, Kentucky's overall health ranking was 44<sup>th</sup>, including being 41<sup>st</sup> in diabetes and 40<sup>th</sup> in obesity. In 2014, Robert Wood Johnson County Health Rankings and Roadmap ranked both counties in our service area 110 (Knott) and 120 (Perry) out of the 120 counties in the state in health outcomes. In looking at other health outcomes, Kentucky is above the national average for diabetes of which both Knott and Perry Counties top out at 12% versus 9% for the state and 7% in the nation. Cardiovascular disease is the leading cause of death in Kentucky. There are 113 counties with rates above the national average with Knott County at 455 deaths per 100,000 and Perry at 511 per 100,000 compared to 409 for the state and 326 for the nation.

In examining measures of health access, one of the greatest challenges in Kentucky is the primary care physician-to-population ratio. Having a regular primary care physician is strongly associated with a positive health status. Rural areas have major difficulty in attracting and retaining primary care physicians. Almost half of Kentucky's population lives in the state's 85 rural counties. Only seven Kentucky counties have primary care physician-to-population ratios above the national average of which Knott County is sorely lacking with a rate of 0.8 compared to 2.5 for the state and 3.7 for the nation (ratio of 1:3,500). Also affecting health care access is insurance. From 2006 to 2007, the uninsured population increased from 12.3 percent to 15.6 percent – a rise of 22%. Based on figures from July 2007, 30% of Knott County residents and 31% of Perry County residents were enrolled in Medicaid – higher than the state and national average at approximately 20% (Kaiser Family Foundation).

### C. Need

Our grant was funded based on the overwhelming cases of obesity and lack of physical activity in Eastern Kentucky. These risk factors are related to the increased incidence of cardiovascular disease, diabetes, stroke, and other health disorders. Kentucky ranks 42<sup>nd</sup> in the nation (United Health Foundation, 2007) for obesity and within the state, 78 counties are above the national average for obesity while only ten are above the national average for physical activity. Knott County is only slightly below the state average with 28% of the adult population experiencing obesity versus 29% for the state and 24% for the nation. Perry County, however, has a higher rate than the state or nation at 31%. Also of note, 40% of adults lack physical activity in Knott County compared to 32% for the state and 24% for the nation. Perry County is similar with a rate of 38% of adults not participating in physical activity.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Lotts Creek Community School utilized the Web MD/ University San Diego Model best practices model for the community health care worker and medical prescription assistance. This model revolves around finding prescription assistance programs online, and matching these free or low cost drugs to clients. Lotts Creek has had a relationship with the WebMD Health Foundation since the early 1990's, always revolving around prescription drug assistance. This relationship has evolved from a mail-in medicine program, to discounted pharmacy visits, until the present incarnation.

The Cordia School also utilized and implemented the Alliance for a Healthier Generation health curriculum best practices model. The Alliance for a Healthier Generation's Healthy Schools Program is an evidence-based initiative that helps create and sustain healthy environments where students can learn better and flourish through the delivery of age appropriate health curriculum and activities for students. The Alliance for a Healthier Generation helps schools improve physical education, health education, and nutrition and has impacted more than 16 million students nation-wide. A benefit of the Alliance for a Healthier Generation is the school assessment that is conducted and the resulting action plan which outlines small achievable steps that each contribute to transforming the school into a healthier environment. Each action item includes implementation strategies to guide online and offline actions, clear examples of what success looks like, a common place to share notes with your team, and resources and tools to help effectively achieve your goals.

The Lotts Creek Community School first began its partnership with the Alliance for a Healthier Generation in 2009 prior to receiving the grant and began by transforming the school by offering healthy snack options in the vending machine and by offering healthier food options delivered to students in the cafeteria. The Cordia School also eliminated all food-related fundraisers conducted at the

school. The Cordia School was the first K-12 school in the nation to obtain the National Healthy School Award Bronze level (2010) and was the first Silver level in the state of Kentucky (2011).

Under the grant, the partnership with The Alliance for a Healthier Generation was expanded to include delivery of The Alliance for a Healthier Generation's health curriculum through the Knott County Extension Office to school aged children in students grades K-12. The Alliance for a Healthier Generation health curriculum provides age appropriate health curriculum and activities for students. No adaptations or modifications of The Alliance for a Healthier Generation health curriculum were made by the Lotts Creek Community School.

## **B. Description**

The Lotts Creek Community School conducted the following activities:

- 1) Providing yearly exams for all school aged children to screen for at- risk diabetic conditions, and to provide services and track the health of the at- risk children from semester to semester. Due to the high rates of child obesity in the area, the Lotts Creek Community School provided yearly exams for all school aged children to screen for at-risk diabetic conditions and refer students, as necessary, to appropriate health providers to treat the at-risk or pre-diabetic children. With parental permission, the school nurse administered health screenings of students twice a year that included height, weight, and body mass index (BMI). The results were tracked and compared over time. Based on the results, at-risk and pre-diabetic students were referred to appropriate health providers to help treat the students and help prevent the students from transitioning to a status of having type 1 or type 2 diabetes.
- 2) Providing a school-based and community health program from Knott County Extension Office continuing monthly classes with the students and community. At the monthly food drops, an individual from the Knott County Extension Office conducted monthly classes with the community members that received the food. The monthly class topics focused on healthy lifestyle options and healthy food cooking options that was received via the food drop.
- 3) Providing school-based oral health care via the University of Kentucky North Fork's mobile dental unit; once per year to eligible students. Any student who did not have dental insurance was allowed to visit the unit with parental permission. Cleanings, fluoride, and referrals for further care if needed were provided.
- 4) Providing in-home health and nutrition education by working with UK North Fork Valley to hire a community health worker. This health worker made referrals to primary, oral, visual and mental health services as needed to UK North Fork Valley Health Center based on any need found on home visits and/ or walk in clients.
- 5) Serving 50 children year round with a healthy, nutritious weekend meal with a backpack program. Given weekly for grades K-6, the food back packs were sent home on Fridays to help families make ends meet. We worked with God's Pantry Food bank to provide affordable, healthy options. Additional funding was received from local churches and the Save the Children Foundation.
- 6) Promoting and increasing the use of our fitness center and walking track within the school and community through local news coverage, ads on local TV and radio, and fliers.
- 7) Increasing the amount of physical activity and health provided in the school by hiring addition physical activity staff. This was done by partnering with the Knott County Board of Education, with Lotts Creek paying part of the position's salary at the school, with the Board picking up the remainder to make the position attractive to potential hires. This staff was then trained on the Alliance for a Healthier Generation Curriculum and then put into the classroom.

## **C. Role of Consortium Partners**

In an effort to address the barriers listed above and improve the overall health and wellness of the Knott and Perry County community members, the Lotts Creek Community School and Wellness Program was established after a long history of interaction between various groups. Going back 20 years ago the WebMD CEO and WebMD Founder came to Appalachia and saw the abject poverty in the area and asked administrators of Lotts Creek Community School how she could help. This was the beginning of the Medical Assistance Program (MAP) at Lotts Creek where residents used the connection with the WebMD CEO and Founder to

receive their medicines in the mail until 2009. It was then that WebMD decided to use its resources to build a pharmacy in the area and deliver medicine in that model. Thus, the partnership with UK North Fork Valley Community Health Center began.

Our partnership with the Knott County Board of Education comes with Lotts Creek Community School being the last of the 100 or so settlement schools that were founded in Appalachia at the turn of the 20th century. The model was that outsiders would provide the building and some staff in remote regions, and the local school district would provide the remaining services and staff. This model still holds true today with the relationship between Lotts Creek Community School and The Cordia School- with Lotts Creek being the property owner and private non-profit organization, and the Knott County Board of education providing the majority of the teachers for Cordia.

Also under the Lotts Creek umbrella is the 21st Century After-School Program, which is a state funded program that provides after school education enhancement, dyslexic tutoring, physical education opportunities, and even a healthy meal for its participants.

Lotts Creek's other partners in the consortium include the University of Kentucky Cooperative Extension Service- with whom we have had a long relationship and the Alliance for a Healthier Generation who provide technical support and advice on our nutritional and physical activity endeavors.

The UK Center for Rural Health provides a yearly mobile dental unit which sees underserved students in our community.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Lotts Creek Community School utilized HRSA grant funding to conduct a significant number of high impact initiatives for the Knott and Perry community residents to improve overall health and wellness of local residents that included a weekly food backpack initiative for school children, improved fitness center, monthly food drops and associated healthy cooking classes, school-based nutrition and physical education classes, providing key dental services to uninsured school-aged children, and providing services such as prescription medicine assistance through a community health worker.

Each of the school and community initiatives outlined above had very successful outcomes that in total served 37,072 individuals throughout the grant period. For example, over the course of the grant period, 2,961 students benefitted from the food backpack program, two new pieces of fitness center equipment were added to the fitness center, and 10,484 individuals utilized the fitness center and walking trail, 3,302 people were served through the monthly food drops and associated healthy cooking classes, 17,780 students received nutrition and physical education courses, 339 student received preventative dental care and/or received urgent dental care, 2,206 individuals were served by the community health worker through in-home health visits, prescription medical assistance, etc. Each of these numbers includes duplicates of individuals that were served multiple times throughout the grant period.

Two surveys were conducted to assess program effectiveness of whether the amount of fitness center equipment available and the walking trail met community members' fitness needs and if the cooking and food preparation classes and demonstrations offered by a Knott County Extension Office employee at the monthly food drops were beneficial to participants and provided participants with healthy ways to prepare food received. The consensus from survey respondents that utilize the fitness center and walking track was positive with 98% of the survey respondents stating that the current amount of fitness center equipment and the walking track meets community members' fitness needs. In addition, 100% of survey respondents stated the cooking and food preparation classes offered were beneficial and provided healthy ways to prepare food received via the monthly food drop.

Additionally, community members consistently communicated to grant resources how beneficial the fitness center and the walking trail were to the community because they're very few resources like this in the area due the rural, isolated, and poor area in which we are located. Monthly food drop health class participants also consistently communicated to the grant resources that the healthy food preparation classes provided by the Knott County Extension Office resource was extremely beneficial to know how to prepare the food received via the monthly food drop.

### B. Recognition

Our school was recognized by the Alliance for a Healthier Generation as the first Silver Medal level healthy school in the state of

Kentucky. These awards are based on several factors including what is served in school lunches, the amount of health and PE time children engage in, and the amount of physical education received after school. In every year of the grant we have received gold level from the American Heart Association for being a healthy workplace. Again based on several factors, this award looks at physical activity opportunities given to employees, as well as factors such as smoking policies. In addition, the Lotts Creek Community School and The Cordia School were featured in several local newspaper articles for the efforts being conducted locally to improve the health and wellness of the local area through the HRSA grant.

## Part VI: Challenges & Innovative Solutions

The biggest challenge was the relationship with UK North Fork Valley Health Center being a non-compliant partner and having to revamp our community health worker program. Once UK had stopped working with us, we had to find a new way to train our health worker, which we found when the WebMD Health Foundation flew our staff to San Diego to view how their health workers operate. Once we had this training which included prescription assistance, we were able to return to our work. The biggest issue was lost time in the grant with trying to work things out with UK. This lost time could not be made up, so we just worked as hard as we could in the remaining months of the grant. The new model and direction worked fine, and added to the services we offer.

## Part VII: Sustainability

### A. Structure

The vast majority of the grant funded activities conducted during the grant period will be continued after the period with most of them being taken over and absorbed by local consortium partners who recognize and support their critical value and benefits to the residents of Knott and Perry counties. The activities that will not be continued moving forward are primarily due to the declining numbers of uninsured individuals in the local area due insurance coverage options available through the Affordable Care Act. All partners will continue to be a part of the consortium. A benefit of the area is the close-knit, tight relationships between community members and partners. The Lotts Creek Community School has long-established partnerships with each of the consortium partners that existed well before the grant period and will continue long after the grant period ends. The Lotts Creek Community School is in near daily communication with consortium members either in-person, over the phone, or via email. The local consortium partners will meet together in-person on a monthly basis moving forward and will continue collaborating to deliver critical support and resources to the underserved population of the area.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The backpack program will be taken over by the Family Resource Center at Cordia, with assistance from service learning students in the school. The donations from local churches will still be given, as well as grants from Children's Incorporated to continue funding.

The Fitness Center will continue its operation with the sports coaches and community volunteers manning it. It will still be used during 21st Century Afterschool time, as well as be open for the community in the evenings.

The Food Bank Cooking Classes will still continue with support from the University of Kentucky Cooperative Extension Service. Extension will continue to provide personnel and in-kind resources for the monthly classes.

School Nutrition and Physical Education Classes will be provided by the Cooperative Extension Service and the Knott County Board of Education, respectively. Activities in the classroom will continue through in-kind efforts from extension, and the Knott County Board of Education has seen the value in having grade school PE, not only in our school but district wide- and will begin to

have teachers dedicated to Physical Education in the Schools. The Alliance for a Healthier Generation will also continue to provide trainings and refresher courses for our teachers in the district.

The mobile dental unit from the University of Kentucky and the school physicals from Primary Care Centers of Eastern Kentucky will both continue through in-kind contributions. The Dental Unit will make its yearly appointment through the Family Resource Center. The physicals will be made also through the resource center, coordinating with Cordia office staff on best days and times to come.

The Community Health Worker will continue their work through grant funding from the WebMD Health Foundation. While the Affordable Care Act has changed the scope of the role, we are hoping with the added component of prescription assistance the health worker can continue to flourish in the coming years.

### **C. Sustained Impact**

One big long term change will be the multitude of system changes in the school and community. The school will continue to have added health and PE classes using the Alliance curriculum as well as in-kind time from the extension agency as a part of the normal school schedule. In addition, the long term sustained impacts are students' increased knowledge and understanding of the importance of healthy food choices and physical activity through the health curriculum delivered to students at The Cordia School.

We also see a change in the outlook of our community and see increased physical activity resulting in improved health of our local citizens. We now have dozens of people using the fitness center daily. Our walking trail has also increased daily usage with dozens of people also utilizing it as the word gets out about it throughout the year. We have expanded the size of our fitness center as well as the number of pieces of equipment it has for community member usage.

While we have not changed the way our consortium works or interacts together, we have expanded our consortium partners and strengthened the partnerships to create long lasting and tightly networked partnerships and an integrated and collaborative working environment amongst all of our community partners. This integrated network of The Cordia School and various health organizations and the continued initiatives first started with the HRSA Wellness Grant funding will continue and be sustained long after the grant funding ends.

## **Part VIII: Implications for Other Communities**

Other communities interested in implementing a similar program may benefit from our experience and outcomes by using a school as the epicenter or springboard for health related initiatives and activities that impact and improve the health of not only the students but also the students' families and at-large community members. Due to the extremely poor, rural, spread out, and mountainous region in which we are located in eastern Kentucky, it is very difficult to get community involvement and participation for only health related events in the Knott and Perry counties. The Lotts Creek Community School was extremely successful in utilizing The Cordia School as the community center for health related initiatives and events and using the school as a springboard and venue to disseminate and conduct health related initiatives and activities for not only the students of the school but also students' families and the Knott and Perry Counties community members at-large.

The Cordia School is now not only just a school but has transformed into a community center that helps improve the health and physical activity of community members of both the Knott and Perry Counties. The Lotts Creek Community School was also very successful in developing an integrated and collaborative network of partnerships with a plethora of community and health organizations and getting the full maximum out of the grant funding dollars by supporting nine various initiatives to impact and improve the health for this isolated, rural, and poor area of eastern Kentucky.

Another implication for other communities is to be mindful and aware of differences between small, local community partners and large, corporate partners. The Lotts Creek Community School is located in a rural and poor area where the community consists of close, tight-knit relationships. The Lotts Creek Community School has traditionally partnered with small, local community partners in which personal relationships are paramount and decisions and changes can quickly be implemented with consortium partners. In addition, because the community partners are small, they are flexible and able to quickly adjust and make changes in a timely fashion. The Lotts Creek Community School had many lessons learned when partnering for the first time with a large, corporate partner. The first lesson is to allow a significant amount of time for the large, corporate partners to make decisions and turnaround

necessary documentation for the grant (ex: memorandums of understanding [MOUs], job descriptions for shared resources, etc.). Secondly, another lesson learned with partnering with a large corporate partner was that their legal department had to review each and every agreement, which added a large and significant amount of time to action for any partner decisions or agreement that needed to be made. In addition, whereas our tight-knit local community partnerships allow for one person to make the decision regarding a change in approach, decisions or action with the large corporate partner often had to be reviewed and vetted by multiple parties, which again resulted in significant delays in the time to action for decisions or changes in approach for the grant.

# Kentucky

## Marcum & Wallace Memorial Hospital

Part I: Organizational Information	
Grant Number	D04RH23595
Grantee Organization	Marcum & Wallace Memorial Hospital
Organization Type	Critical Access Hospital
Address	60 Mercy Court, Irvine, KY 40336
Grantee organization website	<a href="http://www.marcumandwallace.org">www.marcumandwallace.org</a>
Outreach grant project title	Project HOME (Helpful Opportunities for Medical care Enhancement)
Project Director	Name: John Isfort
	Title: Director
	Phone number: 606-723-2115
	Fax number: 606-723-2951
	Email address: <a href="mailto:jisfort@mercy.com">jisfort@mercy.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Marcum & Wallace Memorial Hospital	Irvine/Estill/Kentucky	Critical Access Hospital
*White House Clinics	Irvine/Estill/Kentucky	Federally Qualified Health Center (FQHC)
*Foothills Clinic	Irvine/Estill/Kentucky	Federally Qualified Health Center (FQHC)
*Juniper Health Care	Beattyville/Lee/Kentucky	Federally Qualified Health Center (FQHC)
*Mercy Health Clinics	Irvine/Beattyville/Lee/Estill/Kentucky	Rural Health Clinic (RHC)
*Bluegrass.org	Irvine/Estill/Kentucky	Community Behavior Health Center
*Kentucky River Community Care	Beattyville/Lee/Kentucky	Community Behavior Health Center
*Westcare, Inc.	Irvine/Estill/Kentucky	Substance Abuse Treatment Center
*Lee County Health Department	Beattyville/Lee/Kentucky	County Health Department
*Estill County Health Department	Irvine/Estill/Kentucky	County Health Department
*Hospice Care Plus	Irvine/Estill/Kentucky	Hospice/Palliative Care
*Estill Development Alliance/Chamber of Commerce	Irvine/Estill/Kentucky	Chamber of Commerce
*Kentucky Homeplace	Beattyville/Lee/Kentucky	Lay Health Worker Agency
*MESA ER Physician Group	Irvine/Estill/Kentucky	ER Physician Group

## Part III: Community Characteristics

### A. Area

The Project HOME Network service area is comprised of two counties located in east central Kentucky. Estill County is located in the 6th US Congressional District and the county seat is Irvine. The total population of the county is approximately 14,000 people. Marcum & Wallace Memorial Hospital (MWMH) is located in Estill County. Lee County is contiguous to Estill and the county seat is Beattyville with a population of approximately 7,500 people. Lee County is located in the 5th Congressional District.

## B. Community description

Eastern Kentucky is situated right in the heart of the Appalachian region that spans thirteen states. It is an area rich in natural resources and beauty but lacking in factors that might promote a healthy, productive workforce. The Project HOME Network spans two counties in Eastern Kentucky: Lee and Estill. Both rural counties are currently experiencing high levels of unemployment and poverty which results in below average household incomes. With the economic downturn in 2008 the unemployment rate and consequently the uninsured rate increased rapidly in both counties over the time period. Households in this area are not typically diverse based on race (almost 100% Caucasian) but cultural preferences such as politics, schools, and industry, vary greatly across county lines throughout the region.

As expected, these areas with high poverty and uninsured rates experience higher than average rates of chronic diseases, cancer deaths, and diabetes. Behavioral conditions such as smoking and oral health are quite high in the two counties. As a potential result of lacking health insurance, diabetes rates, heart disease and cancer death rates are all high. On the positive side, breast cancer and prostate cancer death rates both fall below state and national levels.

## C. Need

As a response to the large number of uninsured patients at MWMH and the overall lack of access of care for the uninsured in Estill and Lee Counties, the administrators at the hospital proposed collaborating with nearby Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs) to determine a mechanism that would provide health care to uninsured and underinsured patients with non-emergency situations living in Lee and Estill County. This also included a focus on connecting patients to primary care, including preventive care, as a means to reducing emergency department visits.

The Project HOME Network was developed to address access to care issues of the uninsured. The use of the Emergency Department (ED) for primary care and the lack of a structured medical home for the uninsured became the primary focus of the network. To address this issue the Project HOME Network developed a Health Care Navigator (HCN) program for the Emergency Department (ED) at Marcum & Wallace Memorial Hospital. A lay health care navigator was placed in the ED to encounter those patients who meet criteria for navigation.

In 2012, the Project HOME Network identified 184 patients that had visited the Emergency Department 6 or more times in the previous 12 months. In addition to frequenting the ED these patients did not have a regular primary care provider (PCP).

Another key component of the grant initiative was lung cancer screening. According to National Cancer Institute data from 2007-2011, Kentucky has one of the highest death rates from lung cancer in the nation at 72/100,000 compared with a death rate of 48.4/100,000 nationally. The area that MWMH serves has an even higher lung cancer death rate of 89/100,000 in Estill County and 92.4/100,000 in Lee County. The high incidence of lung cancer deaths prompted the Project HOME Network to develop a Community Lung Cancer Screening Program.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Project HOME Network was developed using two types of promising practice models. The first model was related to how “networks” can address health care issues within their communities. The second model that was adopted was the health care navigator model used to reduce inappropriate emergency department visits. The specific models that were evaluated and incorporated into the operations of Project HOME are listed below.

Rural Health Networks appear to be having significant success in communities. The organization of these Networks varies by the size of the population as well as the health care priorities defined by the community. There have been several case studies examining the outcomes of networks that focus on the collaboration between the local hospitals and the community health clinics. The following two success stories represent two of the most appropriate “models that work” that informed the overall development of the Project HOME Network.

The Horizon Health Care health care system in South Dakota is a partnership between a Rural Health Clinic and a small rural hospital. Northern Collaborative Care in Michigan is a successful collaboration between Community Health Clinics and the local hospital. These models have worked very well for a slightly larger population than can be found in rural areas of Kentucky. The comprehensive set of services that the Network provides is certainly a model to follow.

As a result of the Network's focus on developing a coordinated patient navigation system, the Network identified the following emergency department (ED) diversion and patient navigation programs to inform their Outreach grant program.

- The Pima Community Access Program (PCAP) - based in Arizona, with a relatively large service area and population, is a comprehensive health care delivery system. PCAP staff first screen for possible public assistance/insurance and then links low-income, uninsured, residents with an affordable, comprehensive and coordinated network of health care providers. PCAP and MCAP are discounted, pay-as-you-go alternative delivery systems. While the navigation process is just one component of the comprehensive system, it is the first point of health care access for the patient and thus very important. PCAP reported several measurable outcomes including a reduction of ER usage for non-urgent care, increasing awareness of programs and services, volunteer contributions, improved health status and increased attendance at work.
- Center for Medicare and Medicaid Services (CMS) Emergency Room Diversion Grant Program - In 2008, CMS awarded twenty grants to twenty states for projects aimed at reducing ED usage by Medicaid beneficiaries for non-critical conditions. Several of these project descriptions are similar to the general framework the Network is suggesting. For example, in the Pike Peak Region of Colorado, the hospital and surrounding health centers proposed to establish a referral program for non-emergency Medicaid patients after receiving initial treatment at the hospital. Within the first five months of the pilot program, 3,500 Medicaid patients had been screened and educated. Of the 3,500 patients screened, only 118 patients returned to the emergency department for unnecessary post-interventions with more than 475 patients receiving follow-up primary care appointments.

The State of Utah recently evaluated their new emergency room diversion program. They were also awarded the 2008 CMS grant mentioned previously. In a 14-month period, there was an estimated 55% reduction in non-emergent use of the ED for cases after an initial intervention. A large share of the patients who received interventions at the hospital also met criteria to be enrolled in a restricted program where the patient only has access to a primary care provider, an urgent treatment clinic and a pharmacy. The cost savings to Medicaid for those patients enrolled in this program were significant.

The Project HOME Network developed an ED Navigation program that was designed as a retrospective model in contrast with the other more prospective models mentioned above. That is, the ED visit was completed and the HCN interviewed the patient after contact by the physician and before discharge. It was at that time the HCN was able to ascertain the needs of the patient and sign them into the navigation program. The patient was informed of the available services of the navigator as well as educated on the appropriate use of the Emergency Department (ED).

In 2013 the United States Preventative Services Task Force (USPSTF) developed recommendations for annual screening for lung cancer with low-dose computed tomography in adults' ages 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. The recommendation calls for three scans over a two year period. The initial baseline scan followed by the second and third scans at 12 and 24 months respectively. In a large research study it was found that low dose CT scan is superior to a chest x-ray in detecting early lung cancers. In addition, the USPSTF recommended that patients who met criteria for CT lung cancer screening be informed of the risk benefit of the screening. A Shared Decision Making (SDM) model was recommended in order for the patient to be informed and make the decision for screening based on evidence and risk/benefits of the procedure. The Project HOME Network developed their model based on the USPSTF recommendations.

## **B. Description**

The activities of the Project HOME Network included Health Care Navigation, Specialty Care Services which included Lung Cancer CT Scan screening, and transportation.

The Health Care Navigation program focused on those patients that used the Emergency Department for primary care and were uninsured. The criteria for navigation included 6 or more ED visits within the previous 12 months, uninsured, no primary care provider (PCP) and residents of Lee or Estill Counties. The purpose of navigation was to move those patients that frequented the ED for primary care into a "medical home" with care being coordinated by a primary care provider, thus reducing ED visits and improving patient care.

The Health Care Navigator (HCN) was based in the Emergency Department and worked a 40 hour work week. The hours worked each day were determined by the busiest time of day in order to maximize patient contact. After hours the nursing staff would provide names to the HCN for possible navigation services. The HCN became integrated into the emergency department staff and

was incorporated as a team member. This allowed the HCN additional access to patients that might benefit from navigation services.

The Community Lung Cancer Screening Program was developed based on the perceived need of the local medical community. The network area has one of the highest death rates from lung cancer in the nation. The Project HOME Network partnered with Marcum & Wallace Memorial Hospital, The University of Kentucky Healthcare Markey Cancer Center and William Witt, MD (Radiologist). The Community Lung Cancer Screening Program was based on the United States Preventative Services Task Force (USPSTF).

Patients for the lung cancer screening program were selected in three ways: 1) each Community Health Center and Rural Health Clinic reviewed their electronic health record (EHR) for patients that meet the criteria; 2) the Health Care Navigator queried each ED navigation patient on whether they meet criteria for screening; and 3) advertisements were placed in the local newspapers, on Facebook and the Internet.

Transportation services were also an activity that was provided by the network. Although the service was made available to all network patients, only minimal transportation services were used. The demand for transportation services never seemed to materialize but remained an option for those who needed the service. Less than 10 patients used the available transportation services during the funding period.

### C. Role of Consortium Partners

Marcum & Wallace Memorial Hospital (MWMH) was the lead agency in the Project HOME Network and also served as the grantee agency. MWMH provided fiscal management of grant funds and oversight for grant compliance. MWMH also employed the Project Director, Health Care Navigator and Administrative Assistant. In addition, MWMH Provided data collection and analysis, primary and emergent care, specialty care and inpatient care. The Health Care Navigator was also provided workspace in the Emergency Department. The Federally Qualified Health Centers (FQHC) provided many services to the consortium. The White House Clinics, Juniper Health Care and Kentucky River Foothills provided medical oversight, primary care, mental health care, dental care, follow-up care, data collection, and case management to the Project HOME Network. Marshall Emergency Services Associates (MESA)/TEAM Health -provided medical oversight/direction, ED data collection, technical expertise, and follow-up. Mercy Health Clinics provided medical oversight, data collection, primary care, follow-up and case management. West Care, Inc., a local substance abuse treatment center provided substance abuse medical oversight, counseling, treatment and housing, data collection, follow-up and case management. Lee and Estill County Health Departments brought the public health perspective to the network. The health centers provided primary care, women's and children's health, data collection, public health medical direction, follow-up care and case management. To bring the community and business perspective to the consortium, the Estill County Chamber of Commerce/Estill Development Alliance was an original partner in the formation of the Project HOME Network. They provided for citizen and business input into activities of Project HOME Network. They disseminated information to the community and assisted with surveys, focus groups and strategic planning. Kentucky Homeplace Program, a regional lay health worker program provided the navigation database, navigator training, data collection and analysis, policies & procedures and protocol development. Hospice Care Plus, a regional Hospice Agency, provided data and support for Project HOME Network. In addition, they provided guidance to the network in areas of grief support, palliative care and end of life issues. Kentucky River Community Care Center and Bluegrass.Org are the two community mental health centers that are part of the Project HOME Network. These organizations provided mental health care oversight, data collection, primary mental health care, counseling, follow-up and case management to the network consortium.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The Project HOME Network has had success in several areas of services as evidenced by results from the program evaluation.

#### Navigation

The ED Health Care Navigation Program started in January 2013. Baseline data was acquired in 2011-2012 which revealed that 184 patients met criteria for inclusion into the Navigator Program. At each encounter the Health Care Navigator (HCN) provides education on the appropriate use of the ED as well as information on the various clinics associated with the Project HOME Network.

An evaluation conducted during the period January 2013 through December 31, 2013, ninety-six (96) patients or 52% were interviewed for the navigation program. Fifty-one (51) patients signed into the program. Forty-three (43) patients declined

navigation services. Two patients were discharged from the program for non-compliance. The preliminary data revealed that there was a significant reduction in ED visits after contact by the Health Care Navigator (HCN). In the group that accepted navigation assistance, there were 345 visits to the ED by 51 patients. After navigation, analysis revealed that there had been 70 visits. This represented an 80% reduction in ED visits after initial contact by the Health Care Navigator. The navigation program has been well received by all the partners in the Project HOME Network as well as the Emergency Department staff.

In July 2014 the Project HOME Network reviewed Emergency Department payor data from 2012-2014. The “self-pay” ED visits decreased from 22% in 2013 to just 8% at the end of June 2014. The data revealed that in the first 6 months of 2014 there was a significant reduction in ED visit by the uninsured and a significant increase in ED visits by the insured and Medicaid patients. It is possible that this increase in ED use by the insured is related to those previously uninsured now being covered by a Qualified Health Plan or Kentucky Medicaid.

#### Lung Cancer Screening Program

The lung cancer screening program is a partnership between Project HOME, Marcum & Wallace Memorial Hospital and the University of Kentucky Healthcare Markey Cancer Center. Project HOME provided funding for 40 patients in the network area (Estill & Lee Counties) to enroll in the Community Lung Cancer Screening Program. The program allowed for 3 CT scans over the course of two years. Those patients without health insurance were the target population. It is realized that with the Affordable Care Act (ACA) patients that were previously uninsured now have the opportunity to enroll in Medicaid or the Insurance Exchange. However, Medicaid and most private insurers still do not cover the cost of Lung Cancer CT Screening. Therefore, the Project HOME Network provided screening to those individuals that were identified as meeting screening criteria. Twenty-five (25) adults were enrolled and screened through the CT scan screening program. Cancer was detected in one patient. Eight patients required 3-6 month follow-up and 16 patients were negative.

#### **B. Recognition**

Due to the success of the Project HOME Network Health Care Navigation program, MWMH was asked to join the Kentucky ED Super Utilizer Task Force that was recently formed by Governor Steve Beshear. The focus of the group is on decreasing the over utilization of the ED for primary care. The ED Health Care Navigator program at MWMH has become a model program that may be replicated throughout the state of Kentucky. The Project HOME Network (PHN) presented findings to this task force in January 2015.

### **Part VI: Challenges & Innovative Solutions**

The initial plan for specialty care was to use the physician specialists (Cardiologist, Orthopedist, Surgeons, etc.) that conduct weekly clinics at MWMH. Specialty care would be provided to the uninsured using a voucher system. The Project HOME Network had previous experience in 2004 with the same providers using a voucher system. In 2011, the majority of specialty clinic providers were independently employed. However, in 2012, the majority of the providers entered into employment with larger clinics and hospital systems. After awarding of the grant funds Project HOME attempted to execute agreements with the specialty providers. Many of the provider organizations were unable to participate for various reasons. This resulted in a change in the policy related to providing care to uninsured. In addition, a cardiology practice was unable to expand their capacity due to a sudden illness of a practicing cardiologist. After multiple attempts to work out an agreement for specialty care without success, the Project HOME Clinical Care Committee met to discuss options. The clinicians discussed the possibility of providing health screening for diseases that are prevalent in the network area. Since lung cancer is prevalent in the service area it was decided that a lung cancer screening program would be a benefit to the uninsured patients.

Transportation services were also part of the Project HOME Network. The Project HOME Network developed contractual agreements with two non-emergency medical transportation companies to provide transport to network patients. Patients that were in need of transportation to and from medical appointments, for medical testing, or to the pharmacy to pick up medications were given vouchers to access the services.

Although the services were promoted to the Project HOME Network clinics the demand for services was not realized. Over the course of the grant period, transportation did not seem to be a barrier as initially perceived. In initial conversations with Project HOME partners, transportation issues were reported to be a barrier to access to care.

## Part VII: Sustainability

### A. Structure

All the members of the Project HOME Network have agreed to continue meeting and addressing the health needs of the community. Some meetings may occur via conference call versus face-to-face as they primarily did during the grant period.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

It was determined that through the planning process the two main programs of the network should continue. All programs have contributed to the overall improvement in the health of the community. The programs are:

1. Health Care Navigator - The Health Care Navigator was able to decrease ED visits in the selected group by over 50% and subsequently place these patients into a medical home. The savings to the health care system was over \$100,000. This program has a clear benefit to the patient and community at large both from a health and financial perspective. The navigation services will continue using care coordinators located in the clinics. Although these coordinators will not be located directly in the ED they will be able to track super utilizers through the robust Electronic Health Record (EHR) Epic. These coordinators will review the EHR data on ED visits using a daily query and contact those patients that meet navigation criteria. In addition, Kentucky is currently amending the state health plan to allow for reimbursement of navigation services.
2. Community Lung Cancer CT Screening Program - The lung cancer screening program was able to detect cancer early in one patient and monitor suspicious findings in several others. The ability to detect cancer early improves survivability and quality of life to patients that have been diagnosed. In addition, detecting cancer early provides a huge cost savings to the health care system. In March the Centers for Medicare & Medicaid Services (CMS) approved Computerized Axial Tomography (CT) as a screening tool for early lung cancer. This means that payors will now cover the cost of the screening for those programs that meet the USPTF recommendations. This activity will now be fully sustainable moving forward.

### C. Sustained Impact

The primary sustained impact of the Project HOME Network is the placement of patients that are currently using the ED for primary care into a Medical Home. Population health will improve as a result of placing patients into a regular source of care that previously did not have a primary care provider (PCP). Other tangible impacts include the strengthening of relationships and the development of new partnerships and the ongoing education of patients on the proper use of the health care system. The community is now better educated on the proper use of the Emergency Department. The ED Navigation program was able to significantly reduce cost to the health care system. In addition, the ability to enroll these patients into a health plan allows the patient to receive the appropriate care in the right environment. A process is in place with Kynectors to assist those without insurance in enrolling in Medicaid or a Qualified Health Plan (QHP). Ultimately, the Project HOME Network made a significant impact on the uninsured in the network area. The Federally Qualified Health Centers (FQHCs) and the Critical Access Hospital (CAH) have an excellent relationship and will continue to collaborate on other health care and advocacy issues. The Community Lung Cancer CT Screening program has the potential to save many lives in an area that has the highest lung cancer death rate in the country.

## Part VIII: Implications for Other Communities

The ED navigation program significantly decreased unnecessary ED visits even among patients that refused navigation. Factors that contributed to the success of the program included placing the navigator directly in the Emergency Department (ED). Other rural hospitals could consider a Health Care Navigator to provide assistance to patients in locating a primary care provider and avoid using the ED as a primary care center. This would likely improve the patient's overall health status if they regularly visited a PCP and received coordinated consistent care versus the episodic care of the ED.

An initial financial assessment of the navigation program revealed a cost savings of over \$100,000 for approximately 100 patients that had contacted the Health Care Navigator. In addition, there was a decrease in ED visits by 55% for both the navigated and declined

navigation groups. The cost savings were compared using the cost of an office visit versus the cost of an ED visit. This difference saved the health care system significant dollars which is part of the Institute for Healthcare Improvement (IHI) Triple AIM initiative of reducing per capita health care cost.

In areas that have a high rate of smoking and lung cancer, CT scan lung cancer screening would be very beneficial and reduce deaths. Rural areas can develop a Community Lung Cancer Screening program by partnering with a cancer center in their respective area and offering the services locally to the community with assistance provided by the cancer center.

# Kentucky

## Montgomery County Health Department

Part I: Organizational Information	
Grant Number	D04RH23603
Grantee Organization	Montgomery County Health Department
Organization Type	Local Independent Health Department
Address	117 Civic Center Mount Sterling, KY 40353
Grantee organization website	<a href="http://www.montgomerycountyhealth.com">www.montgomerycountyhealth.com</a>
Outreach grant project title	Western KY Health Care Access Consortium
Project Director	Name: Jan Chamness
	Title: Public Health Director
	Phone number: 859-498-3808
	Fax number: 859-498-9082
	Email address: <a href="mailto:janm.chamness@ky.gov">janm.chamness@ky.gov</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Saint Joseph Mount Sterling	Mount Sterling, KY (Montgomery County)	Hospital
Sterling Health Solutions	Mount Sterling, KY (Montgomery County)	Federally Qualified Health Center
CHES Solutions Group	Lexington, KY (Fayette County)	External Evaluator
Montgomery County Cooperative Extension	Mount Sterling, KY (Montgomery County)	University Cooperative Extension
Pathways, Inc.	Mount Sterling, KY (Montgomery County)	Mental Health Counseling Center
Montgomery County industrial Authority	Mount Sterling, KY (Montgomery County)	Industrial Authority/Chamber of Commerce
Mount Sterling Public Library	Mount Sterling, KY (Montgomery County)	Public Library
Mount Sterling/Montgomery County Council of the Arts	Mount Sterling, KY (Montgomery County)	Arts Center
Mount Sterling/Montgomery County Parks and Recreation	Mount Sterling, KY (Montgomery County)	Parks and Recreation
Montgomery County Schools	Mount Sterling, KY (Montgomery County)	Public School System
Dr. A.M. Vollmer, DMD	Mount Sterling, KY (Montgomery County)	Dentist

### Part III: Community Characteristics

#### A. Area

The Consortium has worked with a three-county service region which includes Bath, Menifee, and Montgomery counties located in rural Appalachia Kentucky.

#### B. Community description

The 2010 population of the Consortium's three-county service region (Montgomery, Bath and Menifee) is 44,396 residents. More than one half of these residents live in Montgomery County, which serves as a regional hub for business, industry, education,

recreation, and health care. About 93 percent of the service region's residents are Caucasian, with the remainder split evenly between Latino and African American. However, the fastest growing group is Latinos. According to the 2010 U.S. Census, 662 Latinos live in Montgomery County, and another 212 live in other counties in the Consortium service region. However, we suspect that many undocumented Latinos living in the area did not complete a census form. Factors that negatively affect health care access and the overall health status of the population in the service region include poverty, lack of providers, and lack of medical insurance. While Kentucky is poor, our service area is poorer. Before the Affordable Care Act (ACA) went into effect, 21 percent of those in Menifee County reported not seeing a physician in the previous 12 months due to cost. Menifee County is also on HRSA's list of the 200 poorest counties in the United States. While it appears that the most economically advantaged county is Montgomery County, the per capita income there is still well below state and national averages. Prior to the ACA and Kentucky participating in Medicaid expansion, a report from the United Health Foundation found that from 2005 to 2006 the rate of Kentucky's uninsured increased by 27 percent. During the same period, the percentage of children in poverty increased by 11 percent. There are health providers in all three counties of the service area but not enough to properly serve the population in any of the counties. The only hospital in the service area is Saint Joseph Mount Sterling, located in Montgomery County. There is a limited availability of specialists at that facility. All three of the counties in our service area have at least one type of federal underserved designation. Kentucky's ratio of physicians per 100,000 population is 103. The same measurement for our service area of Bath, Menifee and Montgomery counties is 44.8. Cardiovascular disease is of great concern in the counties served by the Consortium. According to a Community Health Assessment conducted by the Montgomery County Health Department, the county's mortality rate from atherosclerosis is 5.4 percent. This figure is more than double the state rate of 2.6 percent. Bath County reports an age-adjusted death rate of 309 (per 100,000) for cardiovascular disease, compared with a national age-adjusted rate of 239. Dental disease and poor oral health are another concern for Kentuckians. In 2004, Kentucky ranked second in the nation for toothlessness among people 65 years of age and older. Federal statistics show that over 38 percent of Kentuckians 65 and older have lost all their permanent teeth. The 2006 Behavior Risk Factor Surveillance Survey (BRFSS) ranks Kentucky as 5<sup>th</sup> in the nation for the amount of extracted teeth. According to CDC data, more than 40 percent of Latino children have untreated dental decay.

### C. Need

The Consortium service area is seeing the same health care issues that are so prevalent in other parts of Appalachia. This region has a high rate of death from chronic disease that directly correlates with high rates of risk-related behaviors and conditions such as smoking, obesity, lack of physical activity and lack of regular preventive medical care. Rural areas in Kentucky face a number of challenges that limit access to dental care services for many residents. These include geographic and travel barriers, fewer fluoridated community water supplies, a shortage of dental health professionals relative to the rest of the country, fewer providers willing and able to serve racial and ethnic minority populations, limited oral health literacy, and a lower rate of people covered by dental insurance. Dental disease also adds to overall health care cost and is a large factor in unreimbursed care. For example, poor families unable to get regular dental care are more likely to use a hospital emergency room when a tooth or gum problem becomes acute – a much more costly treatment than a visit to a dentist's office. Preventive dental care for a child's first six years of life costs \$200 to \$250, but if the teeth are neglected and become diseased, experts estimate that a hospital stay and surgery could cost \$5,000, which in many cases is paid by the tax-funded Medicaid program. The cost of managing untreated dental disease has been apparent during the 9 years of the El Puente program. While it was anticipated that primary care costs would be the larger portion of expenses for the program, the reality is that the costs for dental care far outpaced the cost of providing primary care. While there is still unmet need in the areas of primary care, dental care and mental health care, we have also discovered that the prevalence of chronic diseases is significant and that many Latinos do not have the information or ability to manage their disease appropriately.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

We have based the project on the promising practice of employing Community Health Workers (CHWs) to provide outreach, education, navigation, and care coordination services to clients in order to improve access to care, ability and confidence to manage chronic diseases, and to improve overall health status. Through the course of the project, we have monitored the literature regarding the use of CHWs especially as it relates to clients with chronic disease. This project is innovative in that we can provide an evidence base that demonstrates that CHWs can also be effective in improving clinical measures in patients with chronic disease by improving self-efficacy and improving patient satisfaction. Another evidence based model that is incorporated into the CHW model is the Stanford Chronic Disease Self-Management Program (CDSMP). All CHWs are trained as Lay Leaders for the

CDMSP program, giving them a sound basis for helping each client learn to self-manage their chronic disease and increase their self-efficacy.

## B. Description

Throughout the grant period, we have worked to increase access to health care for the uninsured and underinsured through a variety of ways. Our community health workers (CHWs) have diligently served their clients in helping them navigate the health care system, find a medical home, and establish a payor source for services in both the American and immigrant populations. We have developed a referral process with our Consortium partners to increase the access to care for our clients. CHWs have been educated on numerous chronic conditions through trainings at both the state and local level related to hypertension, asthma, and diabetes. All CHWs participated in the Stanford Chronic Disease Self-Management lay leader training in May 2013 to help clients increase their self-efficacy in self-managing their chronic diseases.

CHWs have worked in a variety of settings to conduct outreach to the target population including providing classes in community settings, organizing art camps for increased cultural awareness, participating in health fairs and community events to promote education and awareness, and utilizing existing volunteer community members who serve as *promotores*. These *promotores* work to promote health in their communities by providing education, referrals to services and some navigation assistance to people in their communities. CHWs established a new teen *promotor* class for Latino youth to provide them an opportunity to serve their community.

As part of the implementation of the Affordable Care Act, all CHWs have been trained as Certified Applications Counselors to enroll uninsured clients and eligible community members in either a qualified health plan or expanded Medicaid. CHWs have used this opportunity again to help establish medical homes and educate on proper health care utilization. Also with the ACA, a state-wide movement has started looking at CHWs as a reimbursable service for public health and other health care delivery systems. Our grant staff has had the privilege of sharing our program and ideas to the established workgroup to recognize a CHW as a valuable member of the health care delivery team. One way we have worked to increase this state-wide awareness was by hosting a conference open to anyone interested in learning more about CHWs. Nationally recognized expert, Carl Rush, MRP, was the keynote speaker for the conference in December 2014. This well received conference had representation from a variety of health care sectors and regions across the state.

## C. Role of Consortium Partners

The El Puente program (known in English as the Bridge Program) funded by the Consortium's Rural Health Services Outreach Grant, has been in existence for over nine years, and has provided medical, dental and mental health visits to the nearly 1,000 people enrolled. Consortium members have continued to be involved with the target population in program planning. Members of the population who serve as volunteer *promotores* regularly attend Consortium and Medical Advisory Board meetings. Consortium members have recognized the importance of having members of the target population involved in needs assessment and program planning. Consortium members keep regular contact with the Outreach Coordinator and community health workers to address barriers and find solutions to challenges that arise. At the end of each program year, staff survey participants in the program, local providers and other stakeholders to gather information that could be used in sustainability efforts. We estimate that 10 percent of the target population has been involved in assessment and program planning. In addition to members of the target population, several community partners, as well as state and national organizations have been involved in the planning and implementation of this project. The partners have a long history of supporting each other and working together to accomplish projects that benefit the community.

# Part V: Outcomes

## A. Outcomes and Evaluation Findings

During the current grant cycle, we enrolled over 200 clients into the Bridge/El Puente program. Fifty two percent of clients are Caucasian and 37% are Hispanic. All fall under 150% of the Federal Poverty Level. Ninety one percent are under the age of 65. English is the primary language spoken in 65% of the homes while Spanish is primary in 34% of homes. Fifty seven percent of clients served are female. Sixty four percent of the clients report having one or more chronic condition with hypertension being the most prevalent.

High blood pressure, arthritis, and mental illness are still the highest diagnosed chronic conditions. Due to the number of clients stating a history of mental illness, data has shown an increase in referrals to mental health counseling. Referrals to mental health

counseling have increased by 2.34% since January 2014. However, the overall number one referral for all clients is to dental providers, accounting for 35% of all referrals.

Initial evaluation data show positive, and statistically significant, improvements in patient outcomes of interest. For example, we are seeing positive changes between the clients' self-efficacy scores from enrollment and at 9 and 12 months in the program. As for the other data points, these have not reached statistical significance yet, but are showing positive progress. As the clients' length of participation in the program increases, attendance at scheduled health care appointments is starting to move in the ideal direction, and the number of visits to the emergency room continues to decrease from enrollment to 12 months in the program. Many clients are continuing to overcome their barriers to appropriate health care utilization such as medication adherence, obtaining medical coverage, and establishing a medical home.

## B. Recognition

The Montgomery County Health Department was the recipient of the Commissioner's Award for Partnership and Community Integration at the 2013 Kentucky Public Health Association annual meeting for their work in collaborating with local providers/Consortium Members in providing access to care for clients in need of primary care, dental care, and mental health services. A recent press release published by the Foundation for a Healthy Kentucky, *Kentucky Healthy Future Initiative launches Health Innovations Across Kentucky*, credits Public Health Director Jan Chamness and the Montgomery County Health Department for developing a care coordination/patient navigation program using CHWs to help clients manage health conditions as an innovative model of care. Mrs. Chamness has also presented at numerous statewide conferences on the success the program has had. The following is a list of those presentations:

*El Puente/Bridge – Grantee Showcase* (Oral Presentation). Office of Rural Health Policy Grant Work shop, Winchester, KY; September 4, 2014

*Emergency Department Super Utilization; Implications on Population Health* (Oral Presentation). Kentucky Public Health Association 2014 Annual Education Conference Louisville, KY; April 14-17, 2014

*The Bridge Program: Using a Community Healthy Worker Model to Connect Rural Appalachian Residents to Health Care* (Oral Presentation). 9<sup>th</sup> Annual CCTS Spring Conference and 4<sup>th</sup> Annual ATRN Summit; Addressing Health Disparities in Appalachia," Lexington, KY; March 27, 2014

*Community Health Workers: Implementing a System in Kentucky* (Poster Presentation) 9<sup>th</sup> Annual CCTS Spring Conference and 4<sup>th</sup> Annual ATRN Summit; Addressing Health Disparities in Appalachia," Lexington, KY; March 27, 2014

*Developing Integrated Care Teams* (Panel Discussion). National Governor's Association Developing State Level Capacity to Support Super-Utilizers In-State Technical Assistance Retreat, Frankfort, KY; March 13, 2014

*Strengthening Community and Clinical Linkages and Care Coordination through Patients Navigation and Community Health Workers* (Oral Presentation). Kentucky Public Health Association 2013 Education Conference, Louisville, KY; March 26-28, 2013

*Community Examples of Successful Partnerships for Population Health. Health Department, FQHC, and Mental Health Collaboration* (Oral Presentation). Fridell Committee for Health System Transformation 2012 Fall Meeting, Lexington, KY; November 11-12, 2012.

CHES Solutions Group, our external evaluators for the program, presented a poster presentation for the Kentucky Association of Social Work Education at the 2012 conference entitled *Baseline Self-Efficacy Measures for Clients in the Montgomery County Health Department Community Health Worker (CHW) Program*. They have abstract accepted to the Community Development Society Conference to be held in Lexington, KY in July 2015. The title of the presentation is *Using the Community Health Worker Model to Improve Outreach Services and Access to Healthcare Among Rural Residents in Western Appalachia Kentucky*.

## Part VI: Challenges & Innovative Solutions

A number of challenges have presented during this grant cycle, some of which were resolved with the opening of a local Federally Qualified Health Center (FQHC) in our community and the implementation of the Affordable Care Act (ACA). Shortly after beginning this three year cycle of funding, it was announced that our community had been awarded an FQHC which opened 6 months into the grant period. This had long been part of our sustainability plan and now would be a reality to increase the resources we could offer our community and clients served. As always finding enough providers willing to serve an uninsured, underinsured population is a challenge. So often we are faced with the quandary of referring someone to medical services without the ability to pay for the care that they need. The FQHC provided a referral source for primary care, women's health, and mental health care appointments to be provided at little or no cost, depending on the patient's income.

Under the ACA the state of Kentucky expanded Medicaid and expanded access to care for many of our clients. It was imperative to have all CHWs trained to be Certified Application Counselors to enroll all those eligible into Medicaid or a qualified health plan (QHP). While this presented the problem of being able to fully navigate Kentucky's marketplace website, KYNECT, as a government agency behind a strong firewall, we managed to work around the issues to still be able to enroll clients in ACA onsite despite our plans to enroll offsite at community events. Though many in our community were newly insured through expanded insurance options, the majority of our Latino population was ineligible for any coverage. However, by assuring that those clients were who eligible for expanded insurance options offered under the ACA and able to see primary care and dental health providers with their coverage, it enabled us to free up grant service dollars to meet the needs of the Latino population.

Another challenge we faced was the change in the CHW model from previous outreach grant cycles. In prior years, the grant was structured to address acute, immediate needs of primary care, dental, and mental health services for enrolled clients. It was based on a navigation model of connecting clients to providers and funding to cover those services they needed. In this current grant cycle, we transitioned to a care coordination chronic disease model where CHWs worked in depth with clients, building relationships and providing education to help increase their self-efficacy, knowing that long term involvement by a CHW improves the health outcomes of the clients. Previous clients were not accustomed to this amount of involvement, only wanting help for the immediate needs. This model has required constant effort to keep CHWs in contact with their clients. In looking at those who have been discharged from the program, loss to follow up with the client still accounts for a large number of those discharges (35.5%). However, 35.5% (an equal number) of the clients were discharged because they had met their Care Plan goals. We implemented two strategies to help keep patients in the program and making progress towards their care plan goals. The program's efforts to help clients obtain a cell phone and providing clients with cell phone minutes on a case by case basis is helping clients met their care plan goals. The CHWs have also started increasing the number of home visits, especially for those clients who are at risk of losing contact with the CHW.

## Part VII: Sustainability

### A. Structure

We have been fortunate to work with outstanding partners to carry out the services and grant work in our service area. The FQHC helped establish a medical home for many who could not afford an office visit prior to the ACA. CHES Solutions Group, Inc. has been instrumental in developing our evaluation plan and data collection tools, advising on program design and development, and providing assistance for reporting requirements. St. Joseph's Mt. Sterling Hospital, the dental providers, and the vision providers have contracted with us to provide medical services to clients who wouldn't receive these services without our assistance. The Industrial Authority, specifically the Mt. Sterling/Montgomery County Chamber of Commerce, has helped us identify possible community partners through local businesses and has also provided information on local demographics. And finally, Pathways Community Mental Health Center has provided mental health services, as identifying mental health issues could lead to the mismanagement of chronic diseases and is a need of the populations we serve.

#### *Continued Partners*

- FQHC
- CHES Solutions Group, Inc.
- St. Joseph's Mt. Sterling Hospital (SJMS)
- Private dental and vision providers
- Private 340B pharmacies
- Industrial Authority
- Pathways Community Mental Health Center

#### *New or Potential Partners*

- *St. Claire Hospital Primary Care Clinics*  
It is our hope that the St. Claire Hospital Primary Care Clinics will play a similar role as the FQHC and the SJMS in providing medical services and contracting with the MCHD.
- *Kentucky Department of Public Health (KDPH)*  
The KDPH and the state have developed the CHW workgroup, which will be informed by existing CHWs from across the state, including our programs' CHWs.

- *Northeast Area Health Education Center (AHEC)*  
With assistance from a Network Development Grant and the CHW workgroup, one of our goals is to develop curriculum and training modules for future CHWs in the state of Kentucky. This training will need to take place at local training and education centers, such as the Northeast AHEC.
- *Eastern Kentucky Public Health, Inc. (EKPH, Inc.)*  
MCHD was recently asked to join EKPH, Inc. This organization is of a group of health departments from Eastern Kentucky who are interested in applying for grants and aren't afraid to go beyond county lines in order to partner with other counties for the benefit of their communities. They also applied for and received money for the Healthy Homes Initiative which helped pay for the training and certification of our CHWs to become Healthy Homes Specialists.
- *University of Kentucky (UK) Center for Excellence in Rural Health*  
The UK Center for Excellence in Rural Health houses Kentucky Homeplace, which is a nationally recognized CHW program. We want to align and partner with this group in an effort to share resources. Even though they use a different model than us, we hope we can all come together and create a consistent CHW training curriculum, certification process, etc.
- *Northeast Kentucky Rural Health Information Organization*  
With the initiation of the ACA, organizations like the Northeast Kentucky Rural Health Information Organization were funded to assist providers in the use of technology and connectivity (specifically electronic medical records or EMR) and how its use can improve the health of our communities. As CHWs gain more popularity and are used more frequently throughout healthcare systems, it will be more important for them to have access to the EMR of their clients in order to accurately report on the clients' clinical outcomes. Moreover, we want CHWs to become a part of the patient-centered medical home (PCMH). FQHCs receive significant amounts of federal funding when they reach PCMH status (enough funding to pay for CHWs) and this is accomplished through their EMR documentation.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Thus far in the CHW programs, we have seen our demographic results mirror that of the target population needs assessment that was completed in 2012 for the project narrative. Here is a summary of the demographics and other descriptors that describe our current clients at enrollment into the CHW programs:

- **Social determinants**
  - 58% are unemployed or not looking for employment.
  - 55% have less than a high school diploma or GED.
  - 51% stated they do not have enough money to pay the bills every month.
  - 43% are utilizing SNAP or food stamps.
  - 11% do not have reliable transportation to and from healthcare appointments.
  - 31% have difficulty accessing or providing housing, food, clothing, or utilities for themselves and their family.
- **Health and Lifestyle**
  - 33% have high blood pressure or hypertension
  - 9% have coronary artery or heart disease.
  - 24% have mental health issues.
  - 16% have diabetes, type II.
  - 9% have been diagnosed with or have a history of cancer.
  - 34% stated they used tobacco products on a regular basis.
  - 34% stated they do not engage in any physical activities or exercise.

- 79% do not have medical coverage.
- 29% do not have a primary care provider.

Given these numbers and the information provided in the needs assessment, it is vital that the CHW programs continue their current program activities. The CHWs provide patient navigation, care coordination, and chronic disease and health education. The CHWs not only help clients navigate the healthcare world, but they also help navigate the social services world. The social determinants listed earlier and others can impede how and when a client seeks treatment or assistance for their health conditions. Helping clients counteract these will improve their focus on their health conditions and what they need to do in order to lead a healthier lifestyle. The CHWs also help clients coordinate their care and provide links to primary care providers and the healthcare exchange (Kynect), where clients can enroll in medical coverage. They educate their clients on the importance of keeping healthcare appointments and adherence to their medication. The CHWs also provide education on numerous chronic diseases and how to manage those diseases. The FQHC and the MCHD have committed to working to ensure that CHWs continue to be employed to provide care coordination, education and other services in the community.

The Rural Health Outreach Services Grant has enabled the MCHD to integrate all chronic disease programming into the CHW programming, including colon cancer screening, healthy homes assessments, care collaborative (blood pressure education and monitoring), diabetes education, heart disease and stroke education, obesity education, and coordinated school health efforts. The MCHD has been able to expand its partnerships and network through relevant referrals to address the clients' identified needs and fund a formative evaluation of the CHW programs with the help of CHES Solutions Group, Inc. The Consortium will continue all of these outreach and program activities from our Rural Health Outreach Services grant.

### C. Sustained Impact

Because these programs use innovative outreach and care coordination components employing CHWs, we have seen health care access and the overall health status of our clients living in the Consortium service area improve significantly. Aside from the outcomes outlined in Part V Section A, the CHWs have become advocates and leaders for their communities and are known as connectors between their clients and the healthcare system. This is evident in that 34% of all referrals to the CHWs come from family, friends, or word-of-mouth. Moreover, there has been a large impact on the Latino population as a bilingual CHW has been relocated to the FQHC, part-time, in order to assist with outreach and other services. This has increased the visibility of the CHWs among the Latino population and has strengthened the partnership between the Consortium and the local FQHC.

#### *Economic Impact and Other Impacts*

As eligible residents continue to enroll in medical coverage through Kynect and the ACA, more resources and funding can be redistributed to the service area's undocumented residents making the programs more sustainable. As more clients enroll in the CHW programs, CHWs have more opportunities to provide healthcare education. With more education on appropriate utilization of healthcare facilities, we are seeing a decrease in unnecessary ER visits, which decreases the amount of charity care given by local providers and facilities. This strengthens the partnership between these local providers and the CHWs, which in the long-term will create more jobs and more openings for CHWs within the local facilities. These sustainability efforts have aided in our receipt of the Network Development Grant and have given us the ability to host a statewide one-day conference in December 2014 featuring Carl Rush, a speaker with significant expertise on the topic of CHWs. In conjunction with these activities, the CHW workgroup was created by the state to investigate the possibilities for the credentialing of CHWs and Medicaid reimbursement for CHW services.

## Part VIII: Implications for Other Communities

We believe a CHW program utilizing a chronic disease model is replicable in most communities, particularly those in the Appalachia region of Kentucky where disease rates, economic standards, health disparities, and ability to access care mirror those of our Consortium service area. As CHWs are employed to connect those underserved population with the resources and tools available to them, giving clients the self-efficacy to manage those barriers and diseases, a long term change in health outcomes is likely to occur. We feel so confident this model works that we plan to use our recently awarded Network Development grant to do just that, to train CHWs and place them throughout the 32 county Appalachia region of Kentucky. We also are working with CHES Solutions Group to conduct an ROI study on our CHW program. We believe the money invested in a CHW to work with a client and educate on chronic disease self-management and proper health care utilization will be less than the cost of that client to seek inappropriate ER services some of which will be uncompensated and mismanaged care.

Communities with FQHCs, especially those seeking for Patient Centered Medical Home (PCMH) designation, would benefit from having a CHW on staff to meet the requirements of focusing on the whole client. The CHW can facilitate the discussion between the client and PCMH staff, helping to find answers to questions, scheduling appointments, and connecting with the client's specialists and pharmacists. CHWs work to coordinate the care of individual clients so that other providers and members of the health care delivery team can work at the top of their skill set in providing the most efficient care.

Communities implementing a CHW program should consider the following: data on population demographics and health disparities, knowledge and awareness of CHWs by local providers, community resources for both healthcare and social services, and healthcare delivery systems in the region. It's important for CHWs to make contact with all individuals and agencies involved in the continuum of care of a client to build that relationship and trust. It is very important that the CHW is of the community being served in order to build and sustain those relationships sooner and be knowledgeable about the community.

# Kentucky

## Unlawful Narcotics Investigations, Treatment & Education (Operation UNITE)

Part I: Organizational Information	
Grant Number	D04RH24757
Grantee Organization	Unlawful Narcotics Investigations, Treatment & Education (Operation UNITE)
Organization Type	Non-profit Community Organization
Address	2292 South Highway 27, Somerset, KY 42501
Grantee organization website	<a href="http://www.operationunite.org">www.operationunite.org</a>
Outreach grant project title	On the Move
Project Director	Name: Debbie L. Trusty
	Title: Education Director
	Phone number: 606-889-0422
	Fax number: 606-889-0874
	Email address: <a href="mailto:dtrusty@centertech.com">dtrusty@centertech.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*KY Substance Abuse & Alcohol Policy (KY-ASAP)	Frankfort, Kentucky	State Government
*Rowan County Court Designated Worker, Rowan County Courts	Morehead, Kentucky	State Government/Administrative Office of the Courts
*Pike County Board of Education	Pikeville, Kentucky	Public Schools
*Appalachian High Intensity Drug Trafficking Area	London, Kentucky	Federal Government
*KY Drug Prevention Services	Frankfort, Kentucky	Dept. for Behavioral Health
*KY Prevention Network	Louisville, Kentucky	Non-Profit, state organization
*Knott Drug Abuse Committee/ a Drug Free Communities grantee	Hindman, Kentucky	Non-Profit, county organization
*Magoffin County Health Dept.	Salyersville, Kentucky	County Public Health Dept.
Operation UNITE (Unlawful Narcotics Investigations, Treatment & Education)	London, Kentucky	Non-Profit, lead agency

### Part III: Community Characteristics

#### A. Area

The Unlawful Narcotics Investigations, Treatment & Education (Operation UNITE) project, On the Move, covers the following Kentucky Counties: Bell, Boyd, Breathitt, Carter, Clay, Elliott, Floyd, Harlan, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lincoln, McCreary, Magoffin, Martin, Menifee, Morgan, Owsley, Perry, Pike, Pulaski, Rockcastle, Rowan, Wayne, Whitley & Wolfe. These 32 counties comprise the Fifth Congressional District in Kentucky.

## B. Community description

The Fifth Congressional District in KY is part of the nation's Central Appalachian Region and is characterized by high levels of poverty of which 28 of the 32 counties are considered "distressed counties" by the Appalachian Regional Commission and rank among the nation's worst 10% economically (based on three-year average unemployment rates, per capita market income, and poverty rates). Three of the remaining counties are considered "at-risk" and rank among the nation's worst 10 – 25% of counties economically. Child poverty is also disproportionate with a district rate of 33.9% compared to Kentucky at 25.6% and the nation at 19.4%. This distressed economic state is also evidenced by its high poverty rate of 26.1% compared to the state at 19.4% and the nation at 14.5%. The household income rate was \$21,915 compared to the state at \$43,036 and the nation at \$53,046. The area is also challenged by its lack of educational attainment with 72.2% having a high school education and 11.2% having graduated from college. According to the 2014 America's Health Rankings Kentucky report KY ranks 47<sup>th</sup> in overall health. Overdose deaths increased by 30% and Kentucky ranks second in tobacco use and tobacco related diseases in the nation. And lastly, according to the recently released 2014 County Health Rankings from the Robert Wood Johnson Foundation, the following is true for the Fifth Congressional District: As high as 41% of the population is obese (Breathitt County) and up to 40% reported no physical activity (Knott and Elliott Counties).

## C. Need

The topic of illicit drug use was chosen because the problem in area schools continues to increase. Many schools in the 5<sup>th</sup> Congressional District had no type of drug prevention curriculum in the schools and presentations in the mobile prevention unit would provide a means to effectively and efficiently engage youth in a large geographic area. Due to a lot of federal program cuts in available funding for behavioral health programs, consortium members felt this program could have great impact with the students. It would also provide for immediate feedback on risk factors that could be addressed by school administrators and Operation UNITE in arranging for additional anti-drug educational programming following "On the Move." Immediate data is available to the schools on the day "On the Move" mobile prevention unit is presented to their students. Student responses to questions throughout the PowerPoint presentation are entered into a Quizdom © computer system with handheld devices given to each student. Data is provided that identifies their responses to each question by both number and bar graph and is available to the school principal at the conclusion of each class. Measurement that combines the responses of all classes is made available to the principal at the conclusion of both 7<sup>th</sup> and 10<sup>th</sup> grade students. UNITE is partnered with the University of Kentucky for analysis of all the data per school district that compares the changes in risk factors between 7<sup>th</sup> and 10<sup>th</sup> grades that is provided to the school district within several weeks following the presentation. UNITE is available to consult with the school district regarding those changes and help them direct additional drug prevention education programs that will address the particular risks identified in their county.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Due to a lack of evidenced-based models for substance abuse in rural areas we did not adopt a specific model. Our consortium developed the curriculum used in both the mobile prevention classroom and the community kits for "On the Move." Therefore, to conduct a coordinated substance abuse education program throughout the Fifth District of KY, We utilized *Health Communication & Social Marketing: Health Communication Campaigns that include Mass Media & Health-Related Product Distribution* (Health Communication Campaign), an evidence-based model cited by the Guide to Community Preventive Services and reviewed by the Community Prevention Services task force, an independent, nonfederal, volunteer body of public health and prevention experts, whose members are appointed by the Director of the Center for Disease Control and Prevention (CDC). Health communication campaigns apply integrated strategies to deliver messages designed, directly or indirectly, to influence health behaviors of target audiences. Messages were communicated through various channels that can be categorized as mass media (e.g., television, radio, press releases); social media (e.g., Facebook®, Twitter ©) and interpersonal communication through group education in both the mobile prevention unit and the community kit presentations. On the Move was combined with the activities regarding impaired driving skills to further influence drug resistance skills in youth.

For the school setting, the consortium utilized NIDA's *Preventing Drug Use among Children and Adolescents* which provides key principles for planning these activities considering the unique context of the family, school, and community as well as principles of delivery which include program structure, content, and delivery. Questions are provided to help the consortium partners consider the needs, readiness, and culture of the community while also providing specific evidence-based and age-appropriate tools for students at the elementary, middle, and high school levels. The consortium ensures that all presentations are in line with the principles of the CDC's Effective Health Education Curriculum. Reviews of effective programs and curricula and input from experts in the field of health education have identified key characteristics which include: focusing on clear health goals and related behavioral outcomes; is research-based and theory-driven; addresses social pressures and influences;

addresses individual values and group norms that support health-enhancing behaviors; and uses strategies designed to personalize information and engage students.

## B. Description

UNITE was awarded the HRSA-ORHP Outreach grant after the official grant period began (May 2012); our award notification came in August 2012. This delayed our initial implementation timeline, however, we established our consortium and began to have regular meetings in late September 2012 and we continued to meet and plan the curricula for the mobile prevention unit and community kits until August 2013.

The initial kick-off for the project was in Clay County Kentucky in October 2013 where we demonstrated the program to the public. Media attention was given and schools were asked to contact UNITE if they were interested in having this project at their schools. The first part is a mobile prevention classroom that comes to the school with the PowerPoint presentation described in Part C of this report. The program is designed to measure risk factors that involve real life situations where kids must make choices about drug use and also about knowledge regarding types of drugs available. While part of a class is in the mobile unit for the PowerPoint presentation the other part of the class participates in three fatal vision exercises that include the following: Simulated Impaired Driving Experience ® or SIDNE ® a battery-powered vehicle that simulates the effects of distraction and impairment from alcohol and other drugs on a motorist's driving skills; Distract a Match ®, a simple shape and color matching game that helps demonstrate the impact of distractions on our reaction time and judgment and extends the lesson to the impact of distracted driving; and Fatal reflections ®, a computer program that generates a personalized multimedia presentation in news story format that puts the student in the middle of a vehicular tragedy. Young people tend to believe that injuries and crashes due to alcohol and other drug impairment only happen to other people. This computer generated program allows the student to view their own reflection following a car wreck. The second part of "On the Move" is a community kit entitled "Life With a Record." This program is aimed to educate youth about the freedoms and citizen's rights they lost with a felony conviction. The program contains actual interviews with people in the UNITE service area talking about their struggles to expunge their criminal records and to have their rights reinstated. It also talks about crimes kids don't think about such as internet crimes and bullying. A total of eight persons are required to present the PowerPoint and fatal vision exercises. We garnered volunteers from our local UNITE Community Coalitions, The Kentucky National Guard, and the Kentucky Association of Retired Teachers to make this project a success.

Both of these programs met requirements for the Kentucky Core Curriculum in the health and wellness portion. Principals and other school administrators attended sessions and were very complimentary about the programming. It started a discussion between UNITE staff and school administrators about problems they encountered due to substance abuse in their schools and initiated further meetings regarding strategies for what type of drug prevention education was needed for their students. The mobile unit was received well by the students that attended presentations. With the community kit, students were very attentive during the presentation and asked many questions following the program. Operation UNITE operates an AmeriCorps program in the schools and our 44 member Corps is trained to teach "Life with a Record" in their own school districts.

To date, 10,392 students have participated in the mobile prevention classroom presentation and fatal vision activities in 62 schools located in 17 Kentucky counties. 2,832 students have seen the presentation of "Life with a Record" in 20 different schools in 10 Kentucky counties.

## C. Role of Consortium Partners

The Consortium members have been professionals that work with families and children on both the state and local level. In the development phase for our community kit and mobile prevention classroom, the consortium met face-to-face on a quarterly basis with conference calls in between those meetings on a monthly basis. Consortium members were only involved in the development of and updates for the curriculum for the projects.

The consortium responsibilities are as follows:

**Operation UNITE** is the lead agency and fiscal agent for the grant. Responsibilities include supervision of project staff, provision of office space for project staff, scheduling and leading consortium meetings, all reporting for HRSA requirements.

**Kentucky Substance Abuse & Alcohol Policy, Office of Kentucky Drug Control Policy** was the resource for all drug prevention policy in Kentucky and for vetting sources of information contained in the presentation inside the mobile prevention classroom.

**Rowan County Court Designated Worker for Rowan County Courts** was responsible for guidance on juvenile law required information for both the presentations inside the mobile prevention classroom and the community kit "Life with a Record."

**Pike County Board of Education** was responsible for information about the Kentucky Core Content for our project and for helping us make sure our program satisfied those requirements.

**Appalachian High Intensity Drug Trafficking Area (AHIDTA)** was responsible for giving us updated and accurate information on current drug use/abuse located within the 32 counties of the UNITE Service Area.

**Kentucky Drug Prevention Services in the KY Department of Behavioral Health** provided information on adolescent drug treatment and behavioral issues within the 32 counties of the UNITE Service Area.

**Kentucky Prevention Network** provided information on past drug prevention curriculum used in Kentucky schools and expertise on making our curriculum useful with rural students.

**Knott County Drug Abuse Council**, a Drug Free Communities grantee that provide a county snapshot on the types of problems seen in the typical court setting as well as schools with adolescent youth.

**Magoffin County Health Department** provided information related to teen substance abuse issues seen throughout local health departments from a medical perspective.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

UNITE's On the Move project has two parts: 1) A mobile prevention classroom traveling to schools in the 5<sup>th</sup> Congressional District in Kentucky, and 2) educational kits. Both of these parts have short-term outcome objectives of increasing knowledge among the target population.

The mobile prevention classroom piece, part one of the On the Move project, aims to increase student knowledge of the dangers of drug and alcohol use. Over the course of the grant period, process objectives that have been achieved include the development of prevention curriculum for the mobile prevention classroom. During this time period, On the Move reached 10,392 students in 62 schools in 17 counties. Short-term knowledge changes are seen among some groups of the students reached. Overall respondents scored an average of 68% on pre-tests for part one of On the Move. This increased to 69% on post-tests. Middle school respondents scored an average of 69% correct answers on the pre-test and this remained the same on the post-test. However, high school respondents saw a two percentage point increase from pre to post-test, moving from a 66% to 68% average score from pre to post-test.

Part two of the On the Move project, Life with a Record, aims to increase student knowledge of the risks of having a felony conviction. A completed process objective for this piece is the development of felony conviction educational kits used as presentations in schools. During the grant period, Life with a Record had reached 2,832 students in grades 7-12 in 20 schools within 10 Kentucky counties. Short-term knowledge changes are seen overall based on pre and post tests given at the time of the educational kit presentations. The average score of correct answers on the pre-test for all Life with a Record respondents was 64% and this increased to 78% on the post-test. Middle school students saw an increase of 12 percentage points (from 63% average score of correct answers at pre-test to 75% post-test) and high school students saw an increase of 17 percentage points (moving from 66% at pre-test to 83% at post-test).

### B. Recognition

There have been numerous press releases on local radio and in newspapers regarding the project being in specific communities. WYMT TV and WKYT TV have both done video segments on the program for local television viewers. On the Move has been described by Jane Beshear, Kentucky's First Lady, as "a unique way to teach our children real-life instances of drug mistreatment, and we hope that it will go toward prevention future abuse and misuses." Innacorp, Ltd., manufacturer of the impaired driving equipment used for "On the Move" featured the project in their October 2014 newsletter which can be viewed at <http://fatalvision.com/news-events/2014/on-the-move-with-sidne-in-kentucky/>. "On the Move" was featured in the UNITE Thought Leadership Roundtable discussion at the National Rx Drug Abuse Summit, in Atlanta, GA. Director Michael Botticelli, National Director for the Office for Drug Control Policy, and Dr. Nora Volkow, Director for the National Institute on Drug Abuse, spoke at a UNITE event.

## Part VI: Challenges & Innovative Solutions

We do feel our program was a success although the 2013-14 academic year was difficult due to inclement weather. We did overcome several near-barriers that were not anticipated at the time the project proposal was written. Man-power was an issue. Originally we thought the mobile prevention unit required only two to three people but during implementation we found that a minimum of eight people were required on-site for each presentation. In addition to UNITE staff we were able to train retired teachers who volunteered for the project. We also found that working with schools could be challenging in getting the program scheduled and logistics of moving the unit into their parking lots and having a gym large enough to accommodate the go-kart and other fatal vision activities. The project coordinator had to make numerous calls to each school to finalize details for each presentation. Due to the distance between consortium members it was difficult for many face-to-face meetings because we had not calculated travel into our budget and meetings had to occur via conference call or Google Hangout.

## Part VII: Sustainability

### A. Structure

The consortium members state they are willing to help develop future curricula for the mobile prevention or future community kits. Currently they are working on development of a kit about marijuana for youth. The positions for the consortium are stated above in **Part II: Consortium Partners** of this report.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

We will continue the current training module in the mobile prevention classroom until we have presented to every school district in the 32-county UNITE service area during the remainder of the grant funding period. We will also continue presenting "Life with a Record" to area schools for the remainder of the grant funding period.

Following the grant period, we secured funding to sustain our project. Appalachian HIDTA (High Intensity Drug Trafficking Area) has offered some funding to sustain our programming past the grant period. UNITE hosts the National Rx Drug Abuse Summit each year and all proceeds from that convention go to support UNITE youth programming of which On the Move and the community kits are a vital part. The Kentucky Office of Drug Control Policy will allow communities in Kentucky with active KY-ASAP (Kentucky Alcohol & Substance Abuse Policy) groups to pay for "On the Move" presentations and fatal vision activities with their mini-grant funding offered to communities each year. We anticipate that both On the Move and the community kits will continue with this funding. We do intend to continue with the evaluation monitoring for the program with the Quizdom system.

### C. Sustained Impact

Sustained impact for On The Move include:

- The project has been very fortunate in having three independent sources of funding for sustainability of our initiative and we do not expect any changes in service delivery for this program. Description of those sources follows:
- Appalachian HIDTA (AHIDTA) is a federal program formed to impact the movement of drugs in a 65 county-area in Kentucky, Tennessee and West Virginia. The 26 Kentucky Counties are located in the UNITE service Area. A portion of their budget must be used for drug prevention efforts each year. AHIDTA has partnered with UNITE's "On the Move" for a multi-year drug prevention effort that will cover travel costs and repairs for the project. AHIDTA has pledged \$140,000.00 to On the Move for the upcoming academic year.
- The Kentucky Alcohol and Substance Abuse Policy program (KY-ASAP) is part of the Kentucky Office for Drug Abuse Policy in Frankfort KY. Every year KY-ASAP gives funding to governing boards that distribute funds for projects through its mini-grant" program for whom the majority of recipients are schools. KY-ASAP plans to recommend the "On the Move" mobile prevention classroom as one of its approved programs for mini-grant applications. The majority of mini-grant applications are \$500.00 each. This will allow "On the Move" to provide programming beyond the UNITE service Area.

Lastly, in 2011, Operation UNITE planned and implemented the first National Prescription Drug Abuse Summit in the United States. Each year this conference has continued to grow the number of attendees with proceeds going for UNTIE Treatment and Education program initiatives. Proceeds go into the UNITE Foundation for this purpose.

## Part VIII: Implications for Other Communities

We feel our program can easily be implemented in other communities. The expense to the program was in the remodeling and maintenance of mobile prevention unit, travel expenses for staff and volunteers, and the impaired vision go-kart (SIDNE). The curriculum for the mobile prevention unit can easily be taught in a school classroom rather than a mobile prevention unit. The community kit "Life with a Record" was taught in a classroom setting. The other impaired driving activities, "Distract a Match" and "Fatal Reflections" are available for purchase at around \$400.00 each. In addition there are many other impaired driving activities available and to take the place of the go-kart. UNITE will be presenting this program at the National Rx Drug Abuse Summit UNITE will make the curricula for the mobile prevention unit and "Life with a Record" free of charge to any community, school or coalition that would be interested in presenting the information to their youth. They can contact Debbie Trusty, Education Director for UNITE at 606-889-0422 or email her at [dtrusty@centertech.com](mailto:dtrusty@centertech.com). UNITE will be glad to share these programs and no cost.

# Louisiana

## Hospital Service District #1A of the Parish of Richland

Part I: Organizational Information	
Grant Number	D04RH23582
Grantee Organization	Hospital Service District #1A of the Parish of Richland
Organization Type	Hospital
Address	407 Cincinnati Street, Delhi, LA 71232
Grantee organization website	<a href="http://www.delhihospital.com">www.delhihospital.com</a>
Outreach grant project title	NE LA Pre-Diabetes Prevention Program
Project Director	Grant Director: Charlotte Poland, RN, CDE
	Grant Manager: Jinger Greer, CPA
	Phone number: 318-878-2845
	Fax number: 318-878-4749
	Email address: <a href="mailto:cpoland@delhihospital.com">cpoland@delhihospital.com</a> ; <a href="mailto:jgreer@delhihospital.com">jgreer@delhihospital.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Franklin Medical Center	Winnsboro, Franklin Parish, LA	Rural Acute Hospital/ Rural Health Clinics (Governmental Nonprofit)
Union General Hospital	Farmerville, Union Parish, LA	Critical Access Hospital /Rural Health Clinics (501c3)
Morehouse General Hospital	Bastrop, Morehouse Parish, LA	Rural Acute Hospital/ Rural Health Clinics (Governmental Nonprofit)
Richland Parish Hospital	Delhi, Richland Parish, LA	Critical Access Hospital/Rural Health Clinic (Governmental Nonprofit)
North LA Regional Alliance	North Louisiana	Rural Health Network (501c3)

### Part III: Community Characteristics

#### A. Area

The target population consists of the rural residents of Franklin, Morehouse, Richland, Tensas, and Union Parishes, as well as those who utilize any and all services available throughout the parishes, regardless of their parish of residence. Additional Outreach activities were also spread into the communities of East Carroll, West Carroll, and Madison Parishes.

#### B. Community description

The five parishes included in the project are located in the most northeastern part of the State of Louisiana serving a population of 96,377. The five parishes collectively represent one of the most severely and chronically distressed regions, not only in the state of Louisiana but also in the United States. The region is an economically underdeveloped region with high rates of poverty and unemployment. Residents of the region experience higher mortality rates, lower health care utilization, and poorer access to health care compared to residents of the state. To date, Louisiana administration has opted not to expand Medicaid coverage, and the implementation of the Affordable Care Act has done little to reduce the high rates of uninsured/underinsured people. Lack of access to preventive and regular primary care negatively impacts health outcomes. Low literacy rates throughout the region also

present barriers to understanding point-of-contact education and treatment regimens for lifestyle changes to decrease the incidence of pre-diabetes and progression to Type 2 diabetes. Northeast Louisiana primarily consists of farming communities where one of the greatest challenges in prevention education is reaching those located in the most rural areas of the parish. All parishes represented are sparsely populated with average growth rates less than the state and the United States. All five parishes have been classified as a Population Group Designation Health Professional Shortage Area (HPSA) (3,000:1 -4,500:1). All are also designated as a Medically Underserved Area (MUA). All have been classified by the Health Resources and Services Administration (HRSA) as “Delta Parishes” falling within the national Mississippi Delta Region.

### C. Need

The data accumulated from all of the Community Needs Assessment activities alluded to a broad spectrum of significant health disparities; however, the data particularly indicated that NE LA residents are at high risk for Diabetic Disease and the related Chronic Diseases resulting in a decreased quality of life and premature death. Findings from statistical research, focus groups and local health screenings and assessments were all included in the process of conducting the needs assessment. Roughly 1,400 persons participated in health screenings and assessments over a three-year period as part of a previously HRSA-funded project. When the data was reviewed, both statistical and anecdotal, a recurrent theme seemed to emerge: the rates of elevated blood sugars were higher than state and national averages, and those with elevated blood sugars were not concerned about reducing them. The Medical Director and other program staff met resistance time and again when counseling participants with elevated blood sugars. Those that were identified with blood pressure, cholesterol, or triglycerides with elevated levels are more apt to seek professional help and/or modify their lifestyles in an attempt to reduce their levels. However, most cannot seem to understand that high blood sugar levels are extremely dangerous and also need to be controlled.

Further research showed that the rate of pre-diabetes in the target area approximately doubled the national average and that we were at great risk of an explosion of true Diabetes Mellitus Type II that would far outpace that of the United States population as a whole. In addition to the greater risk for pre-diabetics to progress towards full blown diabetes, the staff had found during the pilot Richland Parish project that it was difficult to obtain reductions in the blood sugar elevations in these individuals by using only point-of-contact education and simple lifestyle changes alone, which had been the case with elevations in other risk factors. It became evident that a more extensive protocol would have to be utilized by practitioners throughout Northeast Louisiana to achieve a great enough reduction in blood sugar levels to have a significant impact.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Northeast Louisiana Regional Pre-Diabetes Prevention (NE LA RPDP) Project is an expansion of the pilot Richland Pre-Diabetes Prevention Program (2009 – 2012), which was thoroughly evaluated and qualified as a Promising Practice Model Program based on the definition stated in the ORHP Rural Health Care Services Outreach Grant Program Funding Opportunity Announcement. The Richland “TRAC” Pre-Diabetes Prevention Program was successfully developed and implemented as a small-scale pilot project in Richland Parish, Louisiana. The project generated positive outcomes based on the results of rigorous evaluations by Dr. Erica Labrentz of Labrentz Associates and statistical analysis of the project data by Dr. Dexter Cahoy of Louisiana Tech University.

The Richland Promising Practice Model Program was developed and implemented using the American Diabetes Association (ADA) Protocols for Pre-diabetes. This project focused on early detection of pre-diabetic blood sugar levels and diabetes prevention through (a) repeat screenings, (b) health education promoting behavioral and lifestyle changes including diet and physical activity, and (c) medical management with pharmacological intervention, as needed. Screening for pre-diabetes is critically important in the prevention of type 2 diabetes. The American Diabetes Association recommends that testing to detect pre-diabetes should be considered in all asymptomatic adults who are overweight (BMI  $\geq$  25) or obese (BMI  $\geq$  30) and who have one or more additional risk factors. The screening protocol developed as part of the pre-diabetes initiative uses diagnostic values that are consistent with American Diabetes Association (ADA) guidelines. Per the ADA and CDC guidelines, impaired fasting glucose (IFG), or blood sugar, and/or impaired glucose tolerance (IGT) are referred to as Pre-Diabetes. These conditions are characterized by hyperglycemia that does not meet the diagnostic criteria for Diabetes Mellitus. An individual who is identified as having Pre-diabetes is at a relatively high risk for the development of Type 2 Diabetes and Cardiovascular Disease. Individuals with a fasting blood sugar level between 100 -125 mg/dl are referred to as having IFG. Individuals with plasma glucose levels of 140-199 mg/dl after a 2-hour oral glucose tolerance test are referred to as having IGT. Specific criteria for being admitted to the Pre-Diabetes Prevention Program include:

- Impaired Fasting Blood Sugar of greater than 100 to 125; or
- Oral Glucose Tolerance Test (2hr) Fasting Blood Sugar levels of 140 – 199; and

- HgbA1C of 5.7 – 6.4.

The Regional Pre-Diabetes Prevention Project adhered closely to the Richland model as developed, with the only modification being that the 2-hour Glucose Tolerance Test conducted as part of the re-screens was changed from “required” to “as feasible.” This test was found to be a major barrier in conducting re-screens due to participant time constraints.

## B. Description

The grant activities were coordinated and implemented as an outreach of the North Louisiana Regional Alliance Health Network, with the Richland Parish Hospital serving as the hub for the project. The Collaborative partners are all NLRA members and provided clinical staffing support as Pre-Diabetes Prevention (PDP) Coordinators in their respective parishes. Project activities were conducted throughout the five parish region and included:

- Community-based Health Screenings – The Collaborative partners identified locations in their respective communities to conduct the pre-diabetes screenings. Locations ranged from local banks to beauty salons. Many of the screenings were held on-site by local businesses that helped to promote the screenings in advance to both their customers and employees. Project staff and partners conducted extensive outreach into rural communities through the on-site screenings in local business, schools, civic organizations, faith-based community, and other existing venues, promoting of community awareness and reaching out to underserved and vulnerable populations, including rural, minorities, uninsured, and low income residents.
- Point-of-Contact Education – All persons who participated in a pre-diabetes screening received health education at the initial point of contact. Many of those participating were educated not only on their current health status as indicated by the screening, but also on their risk of developing diabetes and other related chronic diseases. Health education provided during the screening process and other health education activities are effective means by which participants and community residents can make health and lifestyle changes to reduce their risk factors for acquiring diagnosable or true diabetes.
- Pre-Diabetes Prevention Program – Persons who are found to be pre-diabetic are encouraged to participate in the more intensive PDP Program. The PDP participants are accepted from both the community screenings or from local clinician referrals. They then receive additional testing to confirm the pre-diabetic state. Pre- and Post-testing is conducted on all participants to provide data for measuring thinking pattern and behavioral change. Components to this strategy include conducting health assessments & screenings, Personal Wellness Profiles, Health Education Sessions and One-on-One Lifestyle Coaching Sessions. PDP Program participants receive frequent education and advice following well-established guidelines on diet and exercise, along with periodic follow-up of risk. Examples of education include a monthly newsletter, bimonthly phone calls, and an annual PDP Dinner.
- Pre-Diabetes Awareness Campaign – Activities have been conducted by the Project Staff and the Collaborative Partners to increase the pre-diabetes awareness of both the provider and the general community at large. The Program Medical Director, who has completed the requirements to become a Certified Diabetes Educator, personally contacted physicians and clinical providers throughout the region concerning pre-diabetes diagnosis and treatment and the role it plays in predicting future development of Type 2 Diabetes. Emphasis was placed on physician/provider outreach, clinical education, and pre-diabetes Collaborative activities to increase provider awareness, collaboration, and referral linkages with the PDP. Community awareness activities included publishing periodic news articles, newsletter distribution, giving educational talks to local organizations, and participating in local events, such as health fairs and school functions.
- Certified Diabetes Education Development – At the beginning of the project, the only Certified Diabetes Educator in the target area was located at the Richland Parish Hospital CDE Program, and she has recently retired. As a result of this project, three (3) clinicians have successfully completed the requirements to become Certified Diabetes Educators, and three (3) more are currently pursuing certification.

## C. Role of Consortium Partners

The Northeast Louisiana Regional Diabetes Prevention Collaborative was created as a Sub-committee of the NLRA Rural Health Network. The NELA RDP Collaborative includes those NLRA Members who have the desire to implement a Diabetes Prevention Program - including a Certified Diabetes Education Program for Program Sustainability – and have the present capabilities of implementing the project in their respective parishes. The concept for the collaborative was first conceived as part of the network’s strategic planning activities. Specific programmatic responsibilities assumed by the Collaborative members included:

- Gave full support to the development of the Northeast Louisiana Regional Diabetes Prevention Collaborative (NE LA DP), the achievement of the project goals and objectives, and the implementation of the project activities, including: pre-diabetes screening, re-screening, point-of-contact education, and community awareness and health education events.
- Assumed the lead role in their respective communities in encouraging and supporting other providers and organizations to adopt evidence-based clinical guidelines for Diabetic Patient Care.
- Designated appropriate Clinical Staff to be the organization's liaison with the NE LA DP Collaborative Program Staff and participate in Collaborative meetings and give them full support in their endeavors.
- Identify a Provider (Physician or Mid-level) Champion within their respective organizations.
- Provided in-kind assistance including administrative time, lead applicant facility space for Regional Community Health Resource Center, and office space, supplies & utilities for project staff by all members.
- Participated in the project monitoring and evaluation process in order to improve the implementation of the NE LA DP Collaborative as well as outcomes and impact in the region.
- Contributed to the process for dissemination of the project's ongoing activities and results.

Working with Richland Parish were Franklin Medical Center (Franklin/Tensas Parish), Morehouse General Hospital (Morehouse Parish), and Union General Hospital (Union Parish). Collaborative partners appointed an employee that served as the PDP Parish Coordinator for health screenings and also performed rescreens on those within their respective communities who were participating in the more intensive PDP Program. The coordinators were responsible for scheduling community screenings within their own parishes and conducting any follow-up activities with persons in their applicable communities who were identified as being pre-diabetic.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In summary, the feedback provided by project staff shows that, from a process standpoint, there has been significant movement forward in (a) the impact of pre-diabetes outreach screening on patient care, (b) the increase in community participation, and (c) the positioning of the hospitals themselves as preventive care providers.

There is good evidence shown that the NE LA Region Collaborative Partnership for pre-diabetes screening is beginning to take hold in the participating parishes. There has clearly been growth in the number of people being screened, and persons with pre-diabetes are being identified in virtually every screening. Hospital administrators and board members are supportive and involved with screening, and community residents themselves are seeking out screening. According to a quote from the Morehouse Parish project staff, the cumulative effect is that "they get it," i.e. the screening helps in developing a continuum of care with patients and in referring unassigned patients to a medical home. There is better community outreach, and physicians are supportive of the screening initiative. It is a win-win in that community professionals such as bankers are able to provide screening as a community service. The Collaborative Member Hospital is promoted at the same time, which helps position the facility as a community leader in wellness and prevention.

The Franklin/Tensas expansion staff indicated that newspaper promotion was helpful in introducing health screening to the community, with increased word-of-mouth promotion. Union, the most recent expansion, appreciates the strong support/flexibility shown by hospital administration, and noted the community is beginning to know that screening is available. By the end of Year 2, the parishes together had more than tripled the amount of newspaper dissemination, increased radio listeners by 688%, and kept TV viewership about the same as in the prior year. The number of educational brochures distributed increased by 81%, community events almost doubled, and contacts with businesses held steady. It is clear that multi-media messages for health promotion and public awareness showed a substantial increase, and overall both the hub and expansion parishes found a variety of ways to get out the message about pre-diabetes across the parish communities.

The project has seen the establishment of strong ties among the partners, a significant increase in momentum for community screenings, and an increasing recognition of the value of the health screenings by the partner hospitals as well as local community leaders. As noted by Hub Staff members, the regional PDP project "creates more trust both within the community and between the community and the hospital," with the each hospital's outreach screening increasingly being seen in the respective communities as a significant "community asset."

Prior to this project, Richland Parish was the only parish in rural Northeast Louisiana with a CDE-credentialed provider and a certified, billable diabetes education program. The completion of the project's activities will enable provider staff from the hub program and the expansion parishes to obtain the required diabetes/pre-diabetes experience to formalize their training and expertise via CDE credentialing. This is a significant step toward establishing credentialed, billable diabetes education programs

in the parishes and supporting sustainability of the overall RPDP initiative. To date, three (3) additional staff members have met the requirements to become Certified Diabetes Educators. This is a significant milestone for these professionals and the Regional PDP Program. Having the CDE credential has enabled these Hub providers to mentor others both within the parish and in the expansion parishes, fill in a significant diabetes education service gap, and promote sustainability through eligibility to bill for services. An additional three (3) Collaborative staff members are currently in the process and are also expected to complete the requirements to become CDEs.

## B. Recognition

- *Louisiana Diabetes Summit: Meeting our Challenge; March 20, 2013* - Dr. Paul Grandon, PDP Medical Director, was asked to present an overview of the PDP Program and the outcomes to date at a statewide conference sponsored by the Environment and Health Council of Louisiana (EHCL) and the Pennington Biomedical Research Center titled the "Louisiana Diabetes Summit: Meeting Our Challenge."
- *Delta Regional Authority Official Notice of Intent Signing Event* – The NLRA PDP Program was recently awarded an ORHP Delta States Network Grant to expand the PDP Program into High Schools in 20 Louisiana Parishes to identify adolescents with pre-diabetes in an effort to prevent them from becoming diabetic. Because the NLRA received the Delta States award, we were also eligible for funding from the DRA Healthy Workforce Initiative. The DRA Co Federal Chairman Chris Massingill traveled to Monroe, Louisiana on December 17, 2013, to attend the Notice of Intent Signing/Press Conference as the official notice to the public for the award. The event was led by State Senator Frances Thompson and well attended by other state and local dignitaries, including the newly elected Congressman Vance McAllister. The event highlighted not only the DRA Program, but also the ORHP Pre-Diabetes Prevention Program and the development of the Adolescent PDP Program through the ORHP Delta States Funding. The event received news coverage, front page coverage on the Monroe News Star, and coverage in the various local newspapers. It was also included in the DRA Press Releases and newsletters.
- *Good Morning ArkLaMiss News Show (Television)* – The PDP Program has been featured annually on a regional morning news show covering northeast Louisiana and southern Arkansas in promotion of the annual "Grin & Bear It Race" that is organized by the PDP Program Staff in an effort to increase awareness of Pre Diabetes.
- *Beauties at Brunch* – The PDP Program was highlighted at an area Women's Health Education event in October 2014. Approximately 300 women from around the region participated in the brunch.
- *Radio Spotlight* – The PDP Program was spotlighted by a local radio station in Franklin Parish for outstanding community service. The radio interviewed the project staff and parish coordinator onsite at a screening sponsored by a local insurance agency. The radio station has an approximate audience of 20,000 from throughout the region.

## Part VI: Challenges & Innovative Solutions

**Expansion of Services into other NLRA Network Parishes** - This project was developed as a replication and expansion of the Richland Parish "TRAC" Promising Practice Model Pre-Diabetes Prevention Program into an additional four parishes that also have member hospitals in the NLRA Network. It was challenging to establish the TRAC Pre-Diabetes Prevention Program in the partnering parishes, but together the project staff and collaborative partners were able to make substantial progress. Providing the project services in the larger service area with the same hub project staff was difficult; the distance and travel time created additional staff scheduling issues. However, the hub project staff was able to assist the parish coordinators in implementing the program in their respective parishes including identifying suitable locations for community screenings and education events. It also proved more difficult to schedule the pre-diabetes prevention program participants for their follow-up screenings and have them return within the correct time frame of 11 – 14 months. Additional staff time was allocated to the project to assist in contacting the PDP participants and encouraging them to return for their follow-up screenings.

**Challenge of "Off Label" Versus "On Label" Use of Screening Tests** – A significant challenge faced during this project was the recent action taken by the Food and Drug Administration (FDA) regarding certain rapid screening tests and instruments in health screening programs, including those of this RPDP. This is based on FDA action to halt the "off label" use of some screening tests, as cited in a January, 2014, letter by the FDA based on earlier agency rulings. Specifically, the FDA action adversely impacts the use of glucometer machines for blood sugar screening purposes because these instruments are FDA-approved only for self-management by diabetic individuals. It also prevents the use of a rapid A1c test for general screening or for providing the rapid A1c results to the individuals enrolled in the IRB-approved study portion of the grant.

Based on the screening tests used in this RPDP program, persons screened are given point-of-contact feedback on whether or not their results meet criteria for pre-diabetes. However, participants who do receive elevated readings in the screenings are also asked to participate in additional diagnostic medical procedures, under medical supervision, including retesting of blood glucose,

A1c, and a two-hour glucose tolerance test. Eligible persons are then invited to participate in the PDP (repeat screening/lifestyle) prevention program. The project managers and medical director immediately changed their program policy and practice to reflect these changes when they became aware of the FDA's policy against the use of a glucometer for off-label screening.

## Part VII: Sustainability

### A. Structure

The NE LA Pre-Diabetes Prevention Collaborative has been developed as a subcommittee of the North Louisiana Regional Alliance. The primary consortium membership includes representatives from the four hospitals that serve as the primary health care providers in the five parishes included in the target area. Representatives from these hospitals have included their Parish Coordinators and other Administrative and Clinical representatives as necessary. Currently all partners plan to continue participating in the collaborative and will continue to work toward implementing the strategic plan that was developed as part of the project. The need for pre-diabetes prevention in the region is great, and the partners are committed to continuing their work to increase awareness of the disease.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

It is anticipated that while some of the services will continue to be provided at the present levels, some will be provided on a smaller scale. Specifically, plans are in place to continue to follow up with the Pre-Diabetes Prevention Program participants. In an effort to provide ongoing support, the participants will continue to receive monthly newsletters, periodic phone calls and annual screens. Every effort will be made to continue to track the blood sugar levels of the participants to determine if and at what point the participants progress from pre-diabetes to full blown diabetes. The data from the study will continue to be tracked in order to determine whether or not the program continues to produce statistically significant positive outcomes.

The community health screenings will also be continued on an as-funded basis. Local businesses have been contacted, and some have expressed interest in sponsoring a screening event. As part of the Community Screening Opportunity Package we have developed, the sponsoring business or community organization will receive individualized marketing for the event.

Plans are already underway for the next annual Grin & Bear It Race in Richland Parish. The race will be held to raise funds for the PDP and Community Wellness Programs and also to raise awareness of Pre-diabetes. Over the past several years, the race has averaged over 100 runners of all ages and from all over Northeast Louisiana. Many local businesses have already committed to providing sponsorships for the race.

We anticipate that the Regional PDP Collaborative partners will continue to provide in-kind and cash support for the program when at all possible. RPH hosts community screening and health education events and will incorporate the diabetes screenings into those events.

The Diabetes Self-Management Education Program in Richland Parish will continue to provide hub services for the surrounding parishes. The RP DSME Program has been further developed and strengthened as a result of this project. Three additional staff members have become Certified Diabetes Educators and are continuing to support the certification of diabetes educators in the other parishes and to guide them in developing a certified diabetes education program at their facilities.

### C. Sustained Impact

The communities in the five-parish service area have become more health-conscious as a result of the education disseminated by the Project Staff, the Parish PDP Coordinators and the Collaborative members. Community residents are more aware of elevated blood sugar levels, the causes and effects, and the impact small lifestyle changes can have on these numbers. For every one person that has been helped to make healthier lifestyle changes, it is believed that several more will be also be positively impacted. For every spouse or parent, there is another spouse or children or friends that are also touched. This ripple effect has been documented in the personal testimonies of those who have participated in the PDP program.

While difficult to measure at this point, a reduction in the cost of medical care, including treatment and pharmacy, can be anticipated as a positive long-term impact as a result of this program. Current estimates predict that one in three Americans born today will develop diabetes over his or her lifetime. The public health burden of diabetes is enormous with total costs per person with diabetes estimated to be \$9,377 per year. The estimated cost-avoidance for each case of diabetes well-managed is \$4,300. It would seem reasonable to assume that cost-avoidance for each pre-diabetic prevented from progressing to overt diabetes would be even greater than \$4,300 per year, as pre-diabetics do not have the same morbidity and mortality as true diabetics, even those under optimal management. Based on these numbers, preventing or even delaying the onset of full blown diabetes can result in a substantial amount of health care cost savings.

The program will continue to have a positive impact on local health care providers in the region. The NELA PDP Program has been operated as a “neutral” and has successfully collaborated with the other providers and avoided the “turfism” issues so common in other areas. The providers should continue to see an increase in patients due to the referrals from the Pre- Diabetes Prevention Program. The Pre-Diabetes Program expansion was created in part as a result of the frustration of local physicians and mid-level providers about the lack of Disease Prevention and Management Programs in their rural areas. They expressed the desire to their respective hospital administrators to develop Certified Diabetes Education programs in their local service areas. The ORHP Funding has provided the resources for the NE LA Regional Pre-Diabetes Prevention Project to fill a need in rural Northeast Louisiana that had been unfulfilled. In addition, the manner in which the providers diagnose and treat patients with either pre-diabetes or diabetes has changed as a result of the increased awareness of pre-diabetes as a condition and the importance of early detection and treatment.

## Part VIII: Implications for Other Communities

When the program’s Medical Director first began researching programs specific to delaying or deterring the progression to Diabetes for Pre-Diabetics, he could find no rural community-based models. The NE LA PDP Program has worked through many issues and has developed a Toolkit to enable others to replicate our program as a model.

One lesson learned by the program team is that the success of the program depends greatly on the partnerships forged with community businesses, civic organizations and the clinics and physicians that are in direct contact with potential participants. Relationships are continually developing and reflect our commitment to improving health outcomes in our community, and we have gained the trust of our community members, which is critical to improving health outcomes.

We recommend that others considering the development of a program such as this should engage a program evaluator as soon as possible. The evaluator’s input can prove invaluable and should be sought even in the planning stages if feasible. In addition to collecting data pertaining to the standard demographics and screening results, it is recommended that programs implement pre-post measures whenever possible. Another measure that has proven beneficial time and again is whether or not the screening participant was previously aware of their levels. For example, was someone previously aware that they had elevated blood sugar levels? This information has been used in assessing community need as well as in the program planning process.

# Louisiana

## Innis Community Health Center Inc.

Part I: Organizational Information	
Grant Number	DO4RH23584
Grantee Organization	Innis Community Health Center Inc.
Organization Type	Federally Qualified Community Health Center
Address	6450 LA Highway 1 Suite B Innis LA 70747
Grantee organization website	<a href="http://www.innishealth.com">www.innishealth.com</a>
Outreach grant project title	School Based Health Center Dental Outreach
Project Director	Name: Linda Matessino, RN, MPH
	Title: Grants Project Director
	Phone number: 225-921-5196
	Fax number: 225-492-3775
	Email address: <a href="mailto:Linda@inchc.org">Linda@inchc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$137,154
	May 2013 to April 2014: \$148,214
	May 2014 to April 2015: \$148,214

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Morehouse Community Medical Center	Bastrop , Morehouse Parish LA	Community Health Center ,School based Health center
*Teche Action Clinic	Franklin , St. Mary Parish ,LA	Community Health Center, School based Health center
*Central LA Area Health Education Center	Alexandria, Rapids Parish, LA	Not for Profit AHEC organization
Our Lady of Lake Medical Center Pediatric Residency Program	Baton Rouge LA East Baton Rouge Parish	Not for Profit Regional Medical Center graduate medical training program

## Part III: Community Characteristics

### A. Area

The project served the following parishes and populations in Louisiana:

- All of Pointe Coupee Parish and Southern Avoyelles Parish
- St. Mary Parish (population served by school-based health center)
- Morehouse Parish (population served by school-based health center)

### B. Community description

The communities served in this grant are primarily rural and have significant geographic barriers to access primary (medical) care and especially to primary dental care. High rates of poverty exist and there is a large number of African American children located in these rural areas where access to care is a challenge and a distinct disparity. Louisiana is ranked 41<sup>st</sup> in the nation for children living in poverty.

In 2010, the parishes of Morehouse, Pointe Coupee and St. Mary were home to 105,431 residents. These rural parishes average only 55.3 persons per square mile as compared to 102.6 persons per square mile in the state (US Census Bureau, 2010). All are designated as Medically Underserved Areas (MUA) and Health Professional Shortage Areas (HPSA). Low educational attainment

is another negative issue among residents in the target area. In the three parishes an average of only 71.4% of the population has a high school diploma, while only 11.9% hold bachelor degrees. Low educational attainment has important implications for health such that those with lower education levels experience a higher level of health problems.

In Morehouse and Pointe Coupee parishes most of the economy is agriculturally based and in St. Mary parish both the agriculture and seafood industries are the primary basis of employment. Louisiana is ranked 35<sup>th</sup> in the nation for children living in families where there is no adult who has full time year around employment. Additionally, the combined percentage of at-risk students (e.g., eligible for free or reduced lunch) in the total target area is 76.8%.

Reasons for inadequate access to primary preventative dental care services for children and adults are many and include a low "dental IQ" among the parents. These areas are designated as dental shortage areas with significant high dental HPSA scores. Even though these parishes all report a high enrollment rate for children in the Medicaid program, there is a lack of dentists enrolled as Medicaid providers to care for these children. Many parents use the emergency rooms as the primary source for their children's dental care due to inadequate access to affordable oral health services. The burden of oral health disease is high, and state studies reported that 41.9% of children in third grade had untreated dental caries.

### C. Need

In Louisiana, oral health disparities exist in access to regular sources of oral health and utilization of these services especially in rural areas. A disparity in dental caries exists across socioeconomic and geographic sub-groups in the target population.

In Louisiana, children's oral health scored a "D" in the 2011 Pew Center Report "which indicated that the state also suffered a dramatic decline in the percent of residents receiving fluoridated water between 2006 and 2008. The need for our evidenced based practice (application of fluoride varnish) was evident in the areas served since fluoridated water is not present in any of these rural areas. Overall in Louisiana, only 40.4% of the population on public water systems is receiving fluoridated water. In the 2010 report by region indicated that three regions served by the state government had a higher percent of children with untreated cavities than the state average.

Other significant findings in the 2010 LA DHH report indicated that African American children have greater untreated cavities, more caries experience, fewer dental sealants and a greater need for treatment for oral problems. In the consortium partner areas the percent of African American children remains significant greater than 50% of their school based clinic enrolled population. Additionally, in 2010, only 40% of children on Medicaid received dental services. Children who are suffering from dental pain cannot focus or concentrate. They have difficulty attending to tasks, and experience high levels of anxiety, irritability and depression. When oral health is neglected in childhood, problems continue into adulthood. Chronically poor oral health has been associated with failure to thrive, compromised nutrition and delayed developmental issues.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Evidence based dental medicine clearly demonstrates that fluoride varnish, our primary intervention, is an effective and safe preventive technique in the battle against childhood caries. Fluoride concentrated in plaque and saliva interrupts the caries process by inhibiting the demineralization and enhancing the re-mineralization of enamel. The American Academy of Pediatrics reports that the use of fluoride varnish leads to a 33% reduction in decayed, missing, and filled tooth surfaces in the primary teeth and a 46% reduction in the permanent teeth. This is the evidenced based practice model serving as the under-pining to the grant.

The grant project focused on children ages 3 to 12 living in underserved rural areas who are enrolled students in school based health centers. School-Based Health Centers (SBHCs) are effective portals that eliminate barriers to primary care access for vulnerable children. Training primary care providers in these SBHCs in the evidence-based practice of fluoride varnish application is consistent with HRSA's recommendations for the integration of oral health and primary care practice. In addition, partnering with other rural SBHCs as consortium members has allowed a higher participation rate in rural communities to meet the healthcare needs of these children.

### B. Description

The oral health outreach activities conducted over the three years of the grant included:

- Application of fluoride varnish on students enrolled in the school based health center during the routine comprehensive physical visit and the provision of oral health education.

- Integrating the oral health assessment findings into the student electronic medical record and documenting the oral health education and the referral of the child for interventions.
- Increasing the provider's assessment skills through education and training, thus changing the assessment practice process to be an essential area of assessment in every comprehensive physical exam.
- Collaborating with the Louisiana State University, (LSU) School of Dentistry faculty to provide the essential training of providers in oral health assessment in the school based health centers and to the residents of the Pediatric residency program within the Our Lady of the Lake pediatric residency program.
- Collaborating with the consortium partners in other rural school based health centers to perform the evidenced based practice of fluoride varnish application and obtain the available oral health assessment skills to the providers within those clinics.
- Providing oral health education during school health fairs and other outreach activities to serve as a valuable community resource for oral health in the community.

### C. Role of Consortium Partners

The Innis Community Health Center (IHC) directed operational and financial aspects of this dental outreach project, including all reporting and the collection and analysis of data. IHC supervised the development of oral education materials, including the creation of a video. IHC facilitated the training of primary care providers and other health staff as well as providing training opportunities for pediatric residents through collaboration with the LSU School of Dentistry faculty. Through its SBHC, IHC provided services under this program, working with local schools and Head Start programs to coordinate and administer fluoride varnishes and conduct outreach by participation in health fairs and presentations.

The consortium partners of Morehouse Community Health Center and Teche Action Clinic participated actively in establishing the evidenced based practice within their SBHCs.

The Central LA Area Health Education program served as a resource to the consortium in the area of health education materials and the promotion of preventive health practices.

The Our Lady of Lake Pediatric Residency Program participated by performing the oral health assessments and documentation of the findings within their electronic medical record (EMR) on children seen in the pediatric clinics as well as the faculty serving as a resource in the area of pediatrics to the IHC. The residents all received the oral health assessment training in the form of the certification course promoted by the American Academy of Pediatrics Oral Health Assessment.

The LSU School of Dentistry served as the resource for primary faculty in the education and training of providers in oral health assessment and the recognition of dental caries and other oral health trauma in children.

Each of these members was eager to participate in the grant initiatives and readily signed the memorandum of understanding at the beginning of the grant period. Throughout the 3 years they were active participants in the consortium and contributed to the formulation of the sustainability plan. Each contributed data as needed to support the measurement /performance outcomes.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In Grant Year 1, the emphasis was on evaluating the status of the data collection system itself, and all data elements needed for assessing project outputs and outcomes. In Year 2, the purpose was to assess the service statistics in relation to grant targets, and to make comparisons with Year 1 to determine levels of increase especially for projects that came on line during mid-year of Year 1.

Accomplishments through the end of year two are:

- 100% of all primary care providers in the SBHCs completed the on line training module for Continuous Medical Education (CME) credit.
- 100% of the primary care providers either viewed or attended Dr. Townsend's (LSU School of Dentistry) on line webinar training module.
- Varnish applications to date:                      Year 1- 357                      Year 2- 801
- Caries Risk Assessments to date:                      Year 1- 439                      Year 2- 855

- Complete Oral Health Exams to date: Year 1- 585 Year 2- 855

The service statistics indicate that all three programs during Year 2 showed an increase in the number of children/youth who received oral visual exams as part of a comprehensive physical. For ICHC, the most established clinic, there was an overall increase of 6%, showing a steady and increasing amount of service provided. In Year 2, the other two consortium members (Morehouse and Teche) performed more consistently in their clinics the oral health assessment and application of fluoride varnish. The level of increase in oral health services in all three locations represents a very significant increase in services in Year 2.

In Year 3 the emphasis was on sustainability of the practice change, data collection, and formulating a plan for expansion of the current initiatives into other school based health centers. It is anticipated that Year 3 service statistics will demonstrate that the grant performed according to plan for volume. In fact, when combining the service statistics for the first two years, the project has already provided 1,158 fluoride varnish (FV) applications, which comes to 93% of the total three-year grant target of 1,250.

This grant project has demonstrated exemplary performance by significantly increasing services provided, initiating expansion to new regions and effectively using the strategy of embedding oral health exam requirements into overall physical assessments by providers along with the application of fluoride varnish into existing compatible system of practice in school based health centers.

## B. Recognition

The LA State Oral Health Coalition, of which ICHC is a member, has been informed of the grant project and the outcomes achieved. Data on volumes of applications in the past two years have been shared at the quarterly meetings. In addition after the first year (2013) of the grant, ICHC presented at the statewide meeting of the LA Assembly of School Based Health Centers, describing the grant's objectives and initiatives to date.

It is planned to write an article in the local newspaper (Pointe Coupee Banner) about the grant program's success in improving children's oral health status in our rural area of the state. This is planned for mid-summer 2015.

## Part VI: Challenges & Innovative Solutions

Challenges experienced in this grant period were minimal since the grantee had experience with the evidenced based practice in a previous grant received in 2009. This 2012 grant was an expansion into other rural areas of the State and a change of access portal to reach more children.

Working in rural areas with the consortium partners remained exciting however. Geographic distances to travel can be somewhat of a challenge in terms of scheduled travel. Conference calls seemed to help in keeping regular communication flowing during the grant period.

Challenges to train providers in this evidenced based practice were resolved through the adoption of a consistent curriculum provided online that could be completed on the provider's own time schedule.

## Part VII: Sustainability

### A. Structure

The grant project consortium will not continue in a formal manner, but the networking among the partners will continue and ICHC will remain an ongoing resource to these agencies' SBHCs in the arena of oral health. ICHC will continue to remain an active participant in the LA Oral Health Coalition.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

All elements of the program will be sustained at the Innis SBHC indefinitely. Some parts of the program will be sustained by the Morehouse and Teche SBHCs. The outreach activities to be continued will be the application of fluoride varnish on the children seen in the school based health clinics along with the completion of a thorough oral health assessment using the caries risk assessment tool and the documentation of all of these practices within the electronic medical record. This has been endorsed by the leadership of the Innis, Morehouse and Teche SBHCs. It has become the standard of practice in the clinics and institutionalized as process in health assessment. The data collection on this practice has been incorporated as a clinical dental measure. This practice change has been valued by the nurse practitioner providers in the clinics and is part of the overall assessment of the child in a comprehensive physical visit. The purchase of supplies (fluoride varnish) will be incorporated into the general supplies budget since this is not an expensive line item to impact the budget substantially. In addition the training for the providers will be continued using the certification course provided online by the American Academy of Pediatrics.

Potential new program activities include the duplication and expansion of this model to other school based health clinics throughout the state, especially in the rural areas. The cost of training for the providers is not significant and offers CME for the providers. Partnership with the LSU School of Dentistry will continue and perhaps may result in collaborative publication of an article in their journals highlighting dentistry and primary medical care.

Since the training provided by the faculty of the LSU School of Dentistry is available on disc and also through webinar hosted by the LA Primary Care Association, the availability of resources for learning will be sustained.

The connectivity with the Our Lady of the Lake (OLOL) Pediatric Residency program will be continued by ICHC. Diane Kirby, MD, has been an invaluable resource to ICHC in the field of pediatrics. Referrals to the OLOL clinic in Baton Rouge are available for ICHC pediatric patients.

### C. Sustained Impact

The long term effect that occurs from this type of grant initiative is improving the overall oral health status of children. This can be measured in fewer days missed in school due to dental issues, less referrals for interventions and improved identification of the child's dental home. It is clear that clinical practice has changed in overall physical assessments which include a more comprehensive assessment of oral health during the exam. The application of fluoride varnish is a routine intervention in the school based health centers.

## Part VIII: Implications for Other Communities

This grant program is replicable in SBHCs and primary care facilities throughout the United States. Dentists or other trained professionals can easily teach health care professionals to conduct basic oral assessments and to apply fluoride varnish applications. However, laws vary across states concerning what types of professionals are allowed to apply fluoride varnish. Therefore, the specific job classifications allowed to apply fluoride varnish in Louisiana are likely to vary from the specific job classifications allowed to apply the varnish in other states.

Data tracking is essential in this type of initiative; therefore, the documentation in the child's school based health record needs to incorporate a more expansive ability to chart findings in the oral health assessment. Now that electronic medical records are becoming the standard in capturing assessments in school based health centers, it is imperative to understand the system's capabilities to capture the needed information.

Gaining buy-in from the local school system in which the school based health center is located is essential in this this initiative. This collaboration can be the fuel that enhances future grant funding to support the initiative whether it is seeking funding from the private or governmental agencies. Data on performance can be impressive to these funders.

# Louisiana

## Louisiana Tech University

Part I: Organizational Information	
Grant Number	D04RH23592
Grantee Organization	Louisiana Tech University
Organization Type	University
Address	Railroad Ave. 1620 Wyly Tower Ruston, LA 71272-0001
Grantee organization website	
Outreach grant project title	Youth4Health
Project Director	Name: Heather R. McCollum
	Title: Project Director
	Phone number: 318-257-4412
	Fax number: 318-257-4014
	Email address: <a href="mailto:mccollum@latech.edu">mccollum@latech.edu</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Boys & Girls Club of NC LA	Ruston/ Lincoln/ Louisiana	Non-Profit
Greater Pleasant Grove B C	Dubach/Lincoln/ Louisiana	Faith
Mount Harmony BC	Ruston/Lincoln/Louisiana	Faith
St. Matthew B C	Athens/Claiborne/Louisiana	Faith

### Part III: Community Characteristics

#### A. Area

The communities of Ruston and Dubach in Lincoln Parish and Athens in Claiborne Parish were served by this grant.

#### B. Community description

Lincoln Parish is a rural parish in north central Louisiana with a population of 47,617 (Population, 2014 estimate). The racial makeup of Lincoln Parish is 55% White, 41% African-American, 0.4% Native American, 1.9% Asian, 0.1% Pacific Islander, 0.50% from other races, and 1.1% from two or more races. 2.7% of the population is Hispanic or Latino of any race. Despite the presence of two higher education institutions, Grambling State University and Louisiana Tech University, about 14.8% of the population does not have a high school diploma. In addition, 30.4% of people of all ages live below the poverty level, and 26.5% children ages zero to seventeen live below the poverty level. Unfortunately 16% of Louisiana's children under the low-income level are uninsured.

Claiborne Parish has a population of 17,195 as of the 2010 Census Bureau. The racial makeup of the Claiborne parish is 51.80% White, 47.37% Black or African American, 0.14% Native American, 0.10% Asian, 0.03% Pacific Islander, 0.08% from other races, and 0.48% from two or more races. 0.76% of the population is Hispanic or Latino of any race. In Claiborne Parish, about 21.40% of families and 26.50% of the total population are below the poverty line, including 36.30% of those under age 18 and 23.20% of those ages 65 or over.

Major employers for Lincoln Parish and Claiborne Parish are the two institutions of higher education, Louisiana Tech University and Grambling State University. Both areas are supported by small privately owned businesses within each of their communities.

### C. Need

Over the last 30 years obesity has approximately tripled among adolescents, and quadrupled among children aged 6 to 11 years. Results from the 2011-2012 National Health and Nutrition Examination Survey (NHANES), indicate the prevalence of adolescents and teenagers with a Body Mass Index (BMI) at or above the 95th percentile is approximately 18 percent. Furthermore, the 2013 Youth Risk Behavior Surveillance reports no changes or improvements in physical activity, fruit/vegetable consumption, or change rates of obesity/overweight). According to the Center for Disease Control, based on School Health Policies and Programs Study (SHPPS), more than 90% of students K-12 do not meet the required amount of daily physical activities. According to the American Obesity Association, today's youth are considered the most inactive generation in history. Being either obese or overweight increases the risk for many chronic diseases such as heart disease, Type 2 diabetes, certain cancers, and stroke.

Childhood obesity is more prominent in the Southern states and in rural areas specifically (Moore, Lutifiyya, 2007). On a state-by-state perspective, Louisiana has the 7th highest percentage (36%) of overweight and obese children in the U. S. Furthermore, based on BMI of 25 or greater, 65.8% of adults in Louisiana are overweight, and there are 31% of adults who are considered obese with a BMI of 30 or greater. *The State of Obesity: Better Policies for a Healthier America* shows Louisiana's adult obesity rate is 33.1 percent, making it the sixth highest adult obesity rate in the nation, according to Healthy Americans Organization. In addition, Louisiana leads as one of the unhealthiest states in the country with an overall grade of "D" for youth physical activity and health in 2012 (Pennington Biomedical Research Center). Locally, a recent study of children attending the schools in Lincoln Parish, Louisiana, showed that approximately 44 % of the children were either overweight or obese (Smity, Scala, Kim, Murimi, 2010). Similarly, research has consistently shown that children's diet quality is poor – consisting of too much energy-dense, empty calorie foods and not enough physical activity. For example a study conducted by Pennington Biomedical Research Center showed that, 75% of youth do not meet physical activity recommendations and that more than 57% engage in sedentary activities for more than two hours daily (Pennington Biomedical Research Center). Further complicating the situation is the fact that Louisiana has one of the highest poverty rates in the nation, and an estimated 27% of children in the state live in poor families (The KIDS COUNT Data Book). More than 50% of students enrolled in Louisiana public schools 2009 -2010 school year received free or reduced lunch (Louisiana Department of Education). Children who qualify for free or reduced price meals through the National School Lunch Program (NSLP) at a public school are more likely to be overweight (Li, Hooker, 2010).

When the Youth4Health program started in 2012, there was no other program in place specifically to address the youth on the subject of obesity and healthier lifestyle choices. An earlier program (2008) directed toward Adults and high school students from Dubach involved educational information about exercise and nutrition. The findings from the Dubach program inspired the Youth4Health grant to focus on youth 9-18 years of age and their families in regards to healthier living.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Youth4Health is an adaptation of the model of Strong Me! program. Strong Me! has been piloted in four states (Louisiana, Tennessee, New Jersey, and New York), producing successful weight outcomes in children and families. For example, a Memphis, TN, pilot of Strong Me! in 2010 (18 children ages 8-18, 83% African American) demonstrated a statistically significant increase in exercising, reading nutrition labels, eating whole grains at breakfast, eating fruit, and drinking milk daily. Additionally, a significant decrease in consumption of fried food, cookies, chips, and sodas was observed. BMI percentiles demonstrated a moderate effect and abdominal girth was statistically significantly decreased.

Strong Me! incorporates four features:

1. Educational sessions are taught by health champions—peer educators who, through motivational interviewing, adapt material to the group's level of readiness to facilitate behavior change. Several studies have confirmed the efficacy of motivational interviewing in improving weight outcomes in children and adults (Heim, Bauer, Stang, Ireland [ 2011], Unnithan Houser, Fernhall [2005], Institute of Medicine [2006] This technique promotes change at a pace that is conducive for each family and child.
2. The program incorporates a systems science approach, in which participants learn about interconnected roles of food systems and industry, environment, and other factors in influencing poor eating and activity behaviors. When parents

become educated consumers, they are able to influence the food choices/behaviors of their children (Savage, Fisher, Birch, 2007).

3. The program integrates a non-denominational spirituality component that fits well within the faith-centric culture of the Mid-South.
4. “Strong Me!” programming emphasizes mindfulness, a psychological concept defined as “*paying attention in a particular way: on purpose, in the present moment, and nonjudgmental*” (Baer, 2003). Participants become acutely cognizant of what they eat and why; this enhanced acuity facilitates positive change. Mindfulness is emphasized to help participants distinguish between physical and emotional hunger, and satiety. Clinical interventions of mindfulness have demonstrated improvements in weight, eating behaviors, and depressive symptoms (Baer, 2003, Dalen, Smith, Shelley, Sloan, Leahigh, Begay, 2010). Finally, the “Strong Me!” emphasis on family wellness rather than on an individual child’s means not just a single family member loses weight and regains health, but entire families transform their eating and exercise habits and progress on a healthier trajectory.

The four major features of the Strong Me! Program listed above were adapted by the consortium and Program Director in addressing the needs of the community. Youth4Health was able to utilize two different settings for the implementation of the program model: three churches and the Boys & Girls Club. By utilizing the churches’ and the Boys & Girls Club’s existing organizational structure, the program had “ready-made avenues” for determining where to hold meetings, who would be involved, and how to connect the new information with existing scriptures. The churches were already meeting during the week for youth to have their Bible study lessons or other youth activities, and the youth leaders were pleased to include the connection between a healthy body and a healthy soul. The Boys & Girls Club met every day after school, so this was a time to assist in learning more about healthy living. All churches and the Boys & Girls Club provided a regular and familiar meeting place in a comfortable location. In both settings, the trust between youth and youth leaders made the existing relationships a safe environment for youth to share and question information on eating well and exercising appropriately.

## B. Description

Youth4Health combined nutrition, physical activity, gardening, and family components to address the growing challenge of childhood obesity. Youth4Health reached young people and their families through youth ministries at local churches and the Boys and Girls Club. The church youth groups met once a week for approximately one hour, and the Boys & Girls Club met in 15-20-minute increments several times a week. The Youth4Health Program Director and Program Coordinator provided all learning materials and activities, tailored to each youth group for their setting and needs. Each month a topic was selected for youth leaders to discuss with their participants, and weekly lessons were developed to build upon and support the topic. Initially, the youth leaders met monthly with the Project Coordinator, who disseminated materials for the month, including weekly lessons in the areas of family communication styles, nutrition, and exercise. An announcement sheet for the monthly meetings was given as part of a quarterly packet to the youth leaders, so that not only the participants but the church congregation would know the topics and activities for each month. Of course, the entire church body was invited to participate, and many adults took advantage of this opportunity. The quarterly packet consisted of:

- Announcement Sheet
- Monthly Curricula with Weekly Lessons
- Nourish Interactive Monthly Calendar (daily suggested family and individual activities)
- Suggested Physical activities
- Bible scriptures pertaining to health and wellness
- Curricula Document Sheets

A gardening component of Youth4Health focused on teaching participants the importance of integrating healthy produce into the daily diet, as well as growing fresh foods versus processed foods. Initially each site was given materials for raised beds, tools, vegetable plants and bulbs, and assistance from a Master Gardener in establishing an on-site garden, which the youth and church members then tended through the year. Additional plants were also distributed seasonally through the years to each youth group.

Throughout the school year Youth4Health hosted several events for participants and their families as an opportunity to learn more about adopting healthier lifestyles. These included quarterly Roundups in which participants enjoyed a morning full of physical activity, followed by a food demonstration and tasting linked with a scripture, and gardening instruction. The physical activities were oriented to family and group interactions – examples include bowling, volleyball, basketball, table tennis, walking. Food demonstrations were provided by nutrition faculty and students. Nutrition education was included with the demonstrations to link

knowledge with practice. The gardening included in-class instruction followed by a visit to a community garden and some “hands-on” work.

The first summer camp was an intense two-week camp held in July at Mount Harmony Baptist Church Family Life Center. We were limited to the use of gymnasium area for all of the camp activity – physical activity, lectures for nutrition and gardening, as well as leadership development. The meals were also served in this area. We used the church fellowship area/ kitchen for food demonstrations. The Program Director, Coordinator, and co-project investigators along with volunteers from the churches provided the supervision and direction for the camp. There were a total of 80 participants, and managing that number of children ages 9 – 18 in that limited area presented some challenges. As a result of lessons learned, the Year 2 summer camp (June 2013) was held at Mount Harmony for three weeks, and the classrooms located upstairs in the Life Center were also utilized. The fellowship area was used not only for food demonstrations but also for serving the meals. The participants were divided into groups by age and maturity, and the classes for gardening, nutrition, physical activity, and leadership were rotated during the day which proved much more efficient. The Project Director utilized volunteer and practicum students from Louisiana Tech University to work, mentor, and serve as group leaders in the camp. The camp provided the LTU students with needed community service as well as providing the camp with additional help in guiding, supervising, and mentoring the participants. The Director, Coordinator, and co-project investigators led the classroom activities, and the volunteers from the churches were present during the day helping to direct participants to their various activities. The student volunteers also led discussion and provided food demonstrations.

The final summer camp (June 2014) was held on the campus of Louisiana Tech University. Building upon the volunteer and practicum program to enlist the help and service of the university students had a greater interest since the camp was on the campus. Utilizing the Lambright Intramural Center opened new areas of physical activities to include swimming, bowling, and rock climbing, volley ball, and soccer. The food program and use of campus dining was a huge success as well. Having more classrooms at our disposal proved very helpful in the lectures and classroom activities. A garden at the Early Childhood Center on campus served a dual purpose; it provided a garden for the participants to have “hands-on” experience and also provided an opportunity for the little ones at the Center to get involved in growing their own food at an early age.

### **C. Role of Consortium Partners**

The members were the three churches (Mt. Harmony, Greater Pleasant, & St. Matthew), the Boys and Girls Club, and the School of Human Ecology at Louisiana Tech University. The Church leaders and the Boys and Girls Club played a pivotal role in the development of the program. The Consortium members provided consumer input into the day-to-day operation of the health outreach project and served as the link between the communities and the outreach project.

Louisiana Tech University provided fiscal management of the grant funds by the Project Director, and the Project Coordinator provided curriculum materials, presentation of information to youth leaders, lesson booklets, and organization of the lesson sessions. There was assistance from a number of other departments at Louisiana Tech University to the Youth4 health program. The nutrition faculty and nutrition students developed food preparation and cooking demonstrations and provided nutrition study sheets. An English professor with Master Gardener certification provided instruction, guidance, and helping hands for building and planting the community gardens. An athletic coach provided inspiration to exercise by developing group exercises for the quarterly Roundups and for the summer camps. Students from the departments of nutrition, family & child studies, kinesiology, psychology, and athletics provided camp leadership in exchange for practical experiences, internships, and class credits.

The churches and Boys and Girls Club provided a youth leader and a meeting place for the youth. Each week the young people and their youth leader met to review nutrition lessons and to spend approximately thirty (30) minutes in physical activities. The groups were encouraged to share the information and experiences with their parents. The parents were encouraged to attend the weekly meetings. The churches gave access to Youth4Health participants to the kitchen and fellowship hall for preparing dishes and recipes demonstrated at the Roundups or recommendations from the lesson plans.

## **Part V: Outcomes**

### **A. Outcomes and Evaluation Findings**

The Youth4Health Program produced greater awareness and participation in healthier lifestyles by the targeted youth and their families, as well as the church congregations. All three churches have agreed to continue health education and their community gardens after the grant cycle end. They have added an exercise component to several of their other activities and have set aside and utilized outdoor space for walking paths. The churches have recruited member volunteers to assume the organizational duties

originally provided by the Project Coordinator. All three churches are jointly planning to continue quarterly meetings for physical interaction and food demonstrations.

The establishment of the community gardens increased the engagement of their elder members with the youth. Elders have gardening/farming knowledge to share and help support the youth with growing vegetables and fruits. They recognize the value of these community gardens and also are developing the area around the gardens for meditation and reflection as well as a place to grow healthy food.

Among the youth participants in the school-year programming, the collected data show an increase in the number of meals eaten at home as well as a decrease in the number of times the youth ate meals at a fast food restaurant after attending the Y4H program. There was also a significant increase in knowledge and understanding proper portion sizes and more willingness to try new /unfamiliar food offerings. Parents indicated awareness of the need to change purchasing habits from less healthy foods to more healthy foods, supported by the urgings of their children who wanted to make a behavior change.

At the end of the three-week summer camp in 2014, participants were asked survey questions focused on the participants' understanding and liking of vegetables and fruits as well as location and frequency of consumption. Responses showed that 75% of the youth did not believe that vegetables taste bad, which is a significant change from earlier reactions. They indicated an increase in vegetables being "usually" served at dinner in their home. In fact, 80% of the youth who attended the 2014 camp retained or increased the number of servings of fruits and vegetables they ate each day. The majority of the youth (89%) agreed that they liked the taste of most fruits after attending the 2014 camp, an increase from 83% before camp. Fruit and vegetable knowledge increased and was noticeable by their ability to correctly categorize fruits and vegetables.

In addition to these outcomes, there is a broadened community awareness and interest in healthier lifestyles. The Mayor of Ruston, LA, has committed support for the goals of Families4Health, a proposed expansion of the Youth4Health program into the greater community. The mayor is exploring structure changes in the city that would support physical activity in town, such as bike paths and sidewalks. Members from two of the larger Baptist churches in Ruston have expressed interest in a program such as Families4Health. Several community nurseries have agreed to provide new plants to aid in establishing more community gardens.

## **B. Recognition**

Our work is being noticed and discussed within the community. A local funding institution in our parish has provided funding to other organizations based on their desire to implement similar support for health as seen from Y4H progress. Specific focus on our gardens and nutrition activities is leading community leaders to build gardens with community access. Several articles have been written and distributed in multiple newspapers, and media venues. In addition, the Program Director has made numerous professional presentations about Youth4Health at national and state conferences.

## **Part VI: Challenges & Innovative Solutions**

From the beginning there have been challenges to face. In the summer of Year 1, the original Program Director accepted a position at another university in a different state. Fortunately the Project Coordinator was able to maintain the program for several months before a new Program Director was appointed. Then there were several more months of adjustment as the new Director assumed leadership of the project.

The timing of the grant award announcement left very little time to prepare adequately for the first summer camp. This resulted in a camp shorter than the number of weeks originally planned but proved very helpful in realizing the needs and requirements to be successful in an offering of this magnitude to the community. The leaders and the few volunteers were severely extended and stretched in their efforts to accommodate the demands of a day camp. The lessons learned helped to shape the future camps in a more realistic manner.

The broad age range of children with their varying developmental stages required careful planning both in programs and in logistics. An overall innovative solution was to divide participants into four age groups and to locate a facility that could accommodate the diversity. We partnered with Louisiana Tech University Fitness Center in order to have access to an indoor pool, outdoor pool, bowling alleys, basketball courts, ping pong tables, volley ball courts, and a rock climbing wall. This gave plenty of space for physical activities and close proximity to the dining hall and classroom space for the nutrition activities.

Since each of the churches sponsored their own summer Bible camp at different times, it was difficult to find a time when all the youth could be available for the full 3-week education program of the Y4H camp. For the future, we have encouraged the churches to form a cooperative scheduling agreement to reserve a 3-week block of time for the Y4H camp in order to facilitate stronger participation rates.

A final challenge was the lack of full participation as originally committed by two organizations: the Boys & Girls Club and St. Matthew Baptist Church. St Matthew Baptist Church showed deep commitment to the program but was plagued with scheduling conflicts. The congregation has a desire but very limited resources. The Program Coordinator tried to address some of these limitations by rescheduling and relocating some of the activities to make them more accessible to the participants. The Boys and Girls Club have an affiliate-mandated curriculum for their participants for health and physical activities. Some of these mandated changes occurred during the course of the program and resulted in more of their time and energy spent with their own program. Due to changes in their summer program very few of the children from the Boys and Girls participated in the Youth4Health Summer Program in 2013 and 2014 compared to 2012.

## Part VII: Sustainability

### A. Structure

The churches that are consortium members agreed that the Youth4Health was very helpful and will continue to be utilized in each youth meeting. Youth leaders have been trained and provided information on nutrition topics and physical activity that they shared with their youth groups. The information packets and handouts will remain with the churches. Physical activity equipment including jump ropes, stretch bands, steps, basketballs, Skillastic games (soccer, basketball), and ladders will also remain with the churches for their continued use during their weekly youth meetings. The Consortium churches agreed to setup a schedule for quarterly meetings. Depending upon the activities, they will rotate meetings at the various sites. The site host will be responsible for the activities at the quarterly meetings.

The gardens that were constructed will remain with the churches and the Boys and Girls Club. The communities continue to collect seeds from previous plantings for reuse in the next planting season. Older members of the church are more engaged in helping the children with the plantings as well as the harvesting. Our Master Gardner will continue her quarterly involvement with the community gardens for the next 12 months in a consulting role. Louisiana Tech University has agreed to allow the Consortium to continue the use of the intramural center and the health equipment. The Extension Service is one of the resources available to the consortium for various topics and has expressed a willingness to participate.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Y4H Consortium intends to continue moving forward and providing the following activities:

- Existing youth activities – includes lesson manual for youth leader, the handouts, equipment
- Resource guide (will be provided as a Tool Kit at the end of the grant period)
- Nutritional and physical activity equipment given to current churches
- Existing gardens

The justification for these activities and their continuation is based on the increase in food knowledge and their improved sense of health. The food demos, the gardens, the group exercising, and participation in multiple activities as a group allows for youth, family, and community interaction and support to continue with new and improved behaviors.

As Louisiana Tech University assumes a facilitation role rather than a leadership role, and the grant monies end, it is necessary to empower the members of the consortium with knowledge on how to acquire future funding to aid in continual development. The Program Director and the Project Coordinator will hold several grant-writing workshops and assist the churches in applying for their first non-profit grant to a non-profit grantor in the area. The grant-writing skills will benefit the churches and their congregations long past the duration of the program. After the grant cycle ends, the Y4H Program Director and Project Coordinator will be available to assist with reviewing and editing future grants. The tool kit provided at the end of the grant will include basic grant-writing information and a list of businesses that have made donations in the past for special events and a contact person. Additional fundraisers will be decided on by each church site as they move forward. The tool kit will also list organizations that have resources and personnel to conduct workshops as well as be available to speak at functions and meetings on various topics.

### C. Sustained Impact

The churches of the Youth4Health consortium established relationships and fellowship that did not exist prior to the outreach. Competition among the youth groups helped maintain interest and will continue to encourage physical activity and fun moving forward. Trained youth leaders are in place and have the necessary lesson materials and physical activity equipment for future weekly youth meetings. The gardens will remain with the churches and the Boys and Girls Club.

The impact of the nutrition demonstrations and lessons is evidenced by the food offerings at one church's "potluck" supper. The Pastor of the church prepared and served *baked* fish with herbs from the garden as opposed to *deep-fried* catfish. The congregation enjoyed the meal, and there were no left-overs. In addition, the MyPlate example is utilized in the planning and preparation of more and more of the meals, both those meals prepared at the church and the meals prepared in the homes of the congregation and brought to the church. Another example of the consortium embracing and moving forward to sustain the Youth4Health lessons learned is the member at one of the churches who cut the grass noticeably lower (in an empty grassy area next to the church) to create a "walking path" for the children and youth as well as adult church members to utilize on Saturday mornings and Wednesdays before midweek service.

Finally, the Youth4Health program has helped the community realize that solutions to childhood obesity and associated complications cannot be defined as being the sole responsibility of a single agency. The enthusiasm manifested by the youth and their families and supporting organizations has caught the attention of the community at large. The expanding interest by the Mayor and other community groups and the business community's willingness to volunteer in-kind support signify a community ready for healthy solutions.

## Part VIII: Implications for Other Communities

Many communities are looking for ways to improve the overall health of its members. Throughout the country emphasis is placed on living better through proper nutrition and physical activity. Cities and towns are incorporating sidewalks and walking and biking trails to address growing demands of their citizens. The Youth4Health program is a uniquely achievable program because it utilizes structure that is already in place. A meaningful lesson learned is to involve community members in the first step of the process – the needs assessment. The reason for early community involvement is to allow the members to take 'ownership' of the project. By supporting ownership in the project community members assume responsibility to identify challenges and develop solutions that they are capable of implementing and sustaining.

Other communities might benefit from incorporating their project or program into an existing established organization, program, and/or ministry with similar objectives to accomplish their goals and desired outcomes. An example would be incorporating nutrition education and physical activities as part of an established youth ministry weekly group meeting. Nutrition and physical activity could also be included as part of midweek service or men/women ministry. Community Gardens are a great way to get healthy fruit and vegetables to people of the community. Working in the garden provides physical activity. Working together allows member to connect socially and develop strong ties. When this is done generationally, gaps are closed.

# Maine

## Mount Desert Island Hospital Organization

Part I: Organizational Information	
Grant Number	D04RH23604-03-00
Grantee Organization	Mount Desert Island Hospital Organization
Organization Type	Hospital
Address	10 Wayman Lane Bar Harbor, ME 04609
Grantee organization website	<a href="http://www.mdihospital.org/">http://www.mdihospital.org/</a>
Outreach grant project title	
Project Director	Name: Cyndi O'Brien RN BSN OCN
	Title: Network Director CCT
	Phone number: 207-460-0863
	Fax number: 207-801-5802
	Email address: <a href="mailto:cyndi.obrien@mdihospital.org">cyndi.obrien@mdihospital.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,993
	May 2013 to April 2014: \$149,993
	May 2014 to April 2015: \$149,993

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Healthy Acadia	Ellsworth/Hancock/Maine	Healthy Maine Partnership
Mount Desert Island YMCA	Bar Harbor/ Hancock/ Maine	YMCA
University of New England	Biddeford/ Cumberland/ Maine	University
Mount Desert Island Nursing Association	Northeast Harbor/ Hancock/ Maine	Home Health
Blue Hill Memorial Hospital	Blue Hill/ Hancock/ Maine	Hospital
Bucksport Regional Health Center	Bucksport/ Hancock/ Maine	FQHC – Federally Qualified Health Center
Maine Coast Memorial Hospital	Ellsworth/ Hancock/ Maine	Hospital
Healthy Island Project	Stonington/ Hancock/ Maine	Community non-profit

### Part III: Community Characteristics

#### A. Area

Mount Desert Island Hospital (MDIH), a 25-bed Critical Access Hospital located on the coast of Maine, operates six primary care clinics which provide care to nine towns in the organization's service area. In 2000, MDIH was designated as a Critical Access Hospital by the Centers for Medicare and Medicaid Services, recognizing the essential role played by small, rural hospitals in their communities. Our critical access facility offers dedicated service to the residents of Mount Desert Island (four towns); outer islands of Swans, Frenchboro, Cranberry and Islesford; and satellite rural communities throughout the Downeast District of Hancock and Washington counties. These counties are Maine's third and fifth most rural, with more than 90% of residents living in an area defined as rural. MDIH maintains 25 beds on three floors and operates a network of nine health centers on Mount Desert Island and in Trenton. The efforts of the hospital's Community Care Team have expanded to include additional areas of Hancock County which include the Blue Hill Peninsula and Deer Isle – Stonington.

## B. Community description

Hancock County has the longest coastline of any Maine county. Commercial fishing and tourism are the county's most important industries. The county contains 2,351 total square miles and has a population of 54,418 (2010 census), or approximately 23 people per sq. mile. Hancock County is characterized by small towns, and there is little or no public transportation. Maine has a long winter season, and geographic isolation is an issue from November through March, especially for elderly and low-income residents without transportation. Limited access to medical care is a concern, as there is 1 primary care physician for every 691 residents, 1 dentist for every 2,021 residents, and 1 mental health provider for every 455 residents.

Socioeconomic disparities that limit access to care include low-income residents, and those without housing or experiencing food insecurity. Of the 53,208 residents, 7,509 or 14.1% are below the poverty line. Many families are working poor, hovering just above the poverty line, including 3,172 households with incomes at or below 50% of poverty level, and 13,553 at or below 150% of poverty level. Within Hancock County it can be estimated that there are >16,000 prediabetics. Hancock County skews significantly older than many other counties in Maine (the oldest state in the country), with 17% of residents aged 65+. Hancock County has a high percentage of the population without usual source of medical care (16%), as well as a high percentage of uninsured (20%). Self-reported overall diabetes prevalence in Hancock County is comparable with the state prevalence (HC=8.3%, ME=10%). The estimated prediabetes prevalence in the District is estimated to be 25%. The Downeast District, which includes the MDI service area, the rest of Hancock County, and Washington County, has the highest diabetes mortality rate in Maine. The Maine diabetes mortality rate is 23.6 per 100,000 people, compared to the Downeast District mortality rate of 31. The national mortality rate is 23.7 per 100,000. Inpatient admissions are also high (Hancock County = 82 per 100,000, Maine =79).

## C. Need

The prevalence of diabetes is at epidemic proportions in the U.S. While there are genetic factors that make diabetes unavoidable for some, it can be prevented in many people by living a healthy lifestyle, which includes regular physical activity, proper eating, and stress management. Traditional medical approaches alone cannot change the rate at which people become obese or develop diabetes. The costs for treating these current and future cases of diabetes through an expensive healthcare system are unaffordable and unsustainable. A more cost-effective approach is to empower people through knowledge, and to support them in making healthy choices in the places where they live, work, learn and play. The mission of the Downeast Community Health Regional Partnership (DCHRP) is to decrease diabetes prevalence and its impact by developing a sustainable, integrated approach to diabetes care. It is only through collective action toward a common vision that we will move ahead in reducing the impact of diabetes in our communities. The DCHRP aims to develop a comprehensive and sustainable continuum of care for diabetes that addresses prevention, detection and treatment, and collaboratively involves community organizations, primary care providers, and hospitals.

The purpose of the grant proposal was to improve the health status of the population with diabetes and prediabetes in rural Downeast Maine, specifically Mount Desert Island and the surrounding areas. The grant's intention was to demonstrate that by adopting an evidence-based practice model, coordinating care with community support services, actively engaging patients with diabetes, and preventing diabetes onset for patients with prediabetes and/ or at high risk for developing diabetes, this consortium could positively impact the health outcomes of those in Hancock County. Mount Desert Island Hospital has convened a consortium of Hancock County non-profit agencies to build a more collaborative approach to expand opportunities for patients to improve their health status through community-based resources. The grant proposal stressed the involvement of community members and healthcare agencies to engage the community in improving the management of diabetes among those with uncontrolled diabetes and in risk reduction through lifestyle intervention among those with prediabetes. The emphasis was the adoption of healthy lifestyle and self-management skills. The consortium would target diabetics who have not participated in a formal diabetes education program. Community Healthcare Workers were to be recruited from the service area and trained to provide health information, screening assistance, and supportive services to patients with poorly managed diabetes or prediabetes.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Mount Desert Island Hospital sent the intention to pursue recognition with the Centers for Disease Control and Prevention (CDC) for the CDC Diabetes Prevention Recognition Program (DPRP) ([www.cdc.gov/diabetes/prevention/recognition](http://www.cdc.gov/diabetes/prevention/recognition)). MDIH currently has "pending" status and has submitted 24-month data and is awaiting word for "full" recognition. Per the CDC: The CDC Diabetes Prevention Program Curriculum (CDC DPP Curriculum) is based on the curriculum from the Diabetes Prevention Program (DPP) research study<sup>1</sup> supported by the National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Disease.

The staff at MDIH employs the DSMT education based on the principles of American Diabetes Association.

The project was based on *The Delta County Health Worker Program – Outreach Grant, Lead Agency Delta Health Alliance Stoneville, MS*. This evidenced based model was researched and then tailored to the needs of the Mount Desert Island service area. This project was also coordinated with the work of the Hancock County Chronic Disease Self Management Network, a formal network started in 2009 through a HRSA network implementation grant. MDIH, Maine Coast Memorial Hospital, Healthy Acadia, University of New England, and Eastern Maine Healthcare System, all of who were involved with this project, are members of this Network, now named Downeast Community Health Regional Partnership.

## B. Description

The project group began with screening of over 900 people at Swan's Island, an island off the coast which can be reached by ferry; and at the Jackson Laboratory, the largest employer on Mount Desert Island. We discovered very large numbers of individuals with at-risk factors for diabetes. We have identified and recruited twenty-two part-time employed CHWs and CHW volunteers. To increase their knowledge and confidence in training CHWs, the grant core staff completed a two day Lifestyle Coach Training presented by Diabetes Training and Technical Assistance Center (DTTAC) Master Trainers. Following this, the Project Manager and Core Staff prepared and delivered training to CHWs on Swan's Island and in Bar Harbor to start. We have implemented the US CDC National Diabetes Prevention Programs throughout Hancock County. To evaluate the DCHRP's diabetes prevention efforts, we have collected data from a number of different sources.

We have been successful in developing a five-year strategic plan. In special dedicated meetings, consortium organization representatives developed a clearly defined shared vision of what we hope to achieve long-term. We have created objectives and activities that are aligned with our vision.

Using models and tools developed by the Maine CDC Diabetes and Control Program, we have disseminated a risk factor and prediabetes screening protocol to primary care provider offices. Clinics now have to react to the importance of prevention and screening versus treating disease. We have successfully implemented a Diabetes Risk Screening Tool in May 2014 at Community Health Center, Southwest Harbor. This tool has, to date, shown us the extent of risk for development of diabetes in this one clinic. The consortium members appreciate the culture shift from shouldering patients' illness and moving towards patient self-management.

Swans Island Health Center (Swans), Swans Island, launched the first DPP course as part of this HRSA grant. This first course had a Swans Island resident as co-facilitator and an MDIH employee, a DTTAC-trained Care Manager RN, to function as Primary facilitator. Swans Island is accessible by ferry only. The following link brings you to a video that was created on Swans Island showcasing the impact of DPP on their community. <https://vimeo.com/69193213> Group #1 was a success and then this co-facilitator island resident was able to connect with a community volunteer on Swans to co-facilitate group #2 on Swans. The island resident facilitator reports seeing "some amazing transformations from participants during our two classes and believe this program has been quite successful for us on Swan's Island."

Our facilitators, while holding fidelity to the CDC curriculum, were able to find creative ways in which to engage DPP participants. With grant funds, MDIH was able to secure "Grab and Go" totes for the DPP courses. The intention of the totes was to streamline the course materials for the facilitators as well as create a standard of visual aids available to the DPP groups. Totes included wands, seen at <http://ideabetes.com/products.html>, that showcased what happens in the bloodstream when one would have a normal HGBA1c and when one would have an A1C of 12 -14. The totes also included laminated menus from area restaurants so that participants would be empowered and could make informed healthful decisions while eating out locally. The totes had a variety of items such as food replicas, measuring tools, "Joy of Stress" video, and a relaxation CD. Our organization was also able to secure a variety of raffle items through the grant funding to incentivize participants. Two of the more popular raffle items were Calorie Kings and pedometers. These items were aligned with the course expectations of food journaling and activity tracking.

Under the 2011 CDC standards, the facilitators were able to bring in a variety of speakers during the post core sessions. Speakers included bringing in a local area chef to have a Holiday Cooking demonstration, a primary care provider who spoke in support of the CDC curriculum, as well as graduates from a prior DPP course. One of our facilitators coordinated a community event in June 2014 at the Community Center in Tremont. All past and present DPP participants were invited to this celebration as well as our Healthy Maine partners from Healthy Acadia. Healthy Acadia was able to have a table to display their efforts at improving health in Hancock County. The Big Moose Band was invited to host a contra dance at this event. There were light refreshments served. The

event was very well attended and many of the local small businesses donated raffle items. The community celebration was very well received and discussion is occurring regarding another community event.

MDI Hospital has also identified value in screening for diabetes risk at our health centers. We implemented a pilot project at Community Health Center in Southwest Harbor in May 2014. All patients 18 years of age and older are screened for Diabetes Risk. Again, screening has resulted in a large number of persons at risk for this disease. A barrier in addressing this concern is the lack of capacity to hold DPP classes to accommodate all individuals.

### C. Role of Consortium Partners

This grant opportunity has further strengthened collaborative relationships among our consortium here in rural Maine.

**Maine Coast Memorial Hospital (MCMH)**, Ellsworth, hosts three rolling Diabetes Prevention Programs (DPPs) annually. These courses are facilitated by a Registered Dietician employed by MCMH. MCMH fully supports these courses through their mission-based budget. There is no charge to the public at this time to participate in DPP. MCMH Provider staff refers 90% of the DPP registrants. MCMH Provider staff appreciates the value of the CDC DPP Curriculum and understand the positive impact on their patient population that participate.

**Mount Desert Island YMCA (MDI YMCA)**, Bar Harbor, has an employee that has successfully co-facilitated DPP within the community since 2013. This individual, along with an MDI YMCA volunteer, will attend the formal DTTAC training in central Maine in March. Through the grant monies, the MDI YMCA received a DPP “Grab and Go” tote. This tote contains all of the essentials to teach the twelve-month curriculum. The MDI YMCA has agreed to partner with MDIH in order to host two DPP courses annually at the facility in Bar Harbor. Participants will be recruited through the MDIH Health Centers, social media, and websites using the CDC screening widget, radio, and newspaper. Participants will not be charged any fee to participate in the DPP course. The MDI YMCA facilitator(s) will submit the class data to the MDIH data coordinator. This data, in turn, will be submitted to the CDC DPRP per protocol set by the CDC. A partner agreement will be obtained stating the MDI YMCA facilitator (s) will hold fidelity to the CDC curriculum.

**Blue Hill Memorial Hospital (BHMH)**, Blue Hill, has an employee trained in DPP. This employee, an RN, has been co-facilitating a DPP course with an MDIH employee also trained in DTTAC on Deer Isle (part of the Blue Hill Memorial Hospital service area). Two more BHMH employees will be completing DTTAC training in March 2015. These employees are both Certified Diabetes Educators. BHMH has committed to two rolling courses annually.

**Healthy Acadia (HA)**, a Healthy Maine Partnership serving Hancock and Washington counties, has an employee who is currently co-facilitating DPP on Deer Isle. This employee is registered for DTTAC training in March 2015. This individual intends to apply for the April Master Select course. If selected and trained as Master Select, this individual would be made available to train DTTAC throughout Hancock and Washington counties. Healthy Acadia is also committed to having their employee available to co-facilitate DPP courses throughout the region.

**Healthy Island Project (HIP)**, Stonington, was also provided a “Grab and Go” tote through the HRSA monies. The agreement was for HIP to implement wellness courses on Deer Isle. HIP launched a “Lifestyle Intervention Program” in January 2015 with 28 participants. This course is based on the CDC curriculum and is being facilitated by an employee of MDIH; HIP is paying a stipend to this facilitator. Although the facilitator is an employee of MDIH, her volunteerism is separate from her MDIH employment. The HIP Director and Vice President assist the facilitator each week with set up and weekly weigh-in. The program is mostly financed through a generous donation from Island Medical Center, Inc. Funds have been budgeted for supplies to copy the books, a stipend to pay the facilitator, and a stipend to pay a physical fitness trainer to work with the participants. In addition, monies are available to pay for half of a monthly membership to the local Physique Fitness Center with training on how to use the equipment. As this initiative does not uphold strict fidelity to the CDC curriculum, no data is being collected.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Biometric data is collected from patient records, including BMI and A1C levels at baseline, 6 months, and 12 months, as well as LDL, fasting blood glucose, and blood pressure readings. There are a total of 97 participants that have baseline and a 6-month and/or 12-month follow-up reading in at least one biometric data element (i.e. BMI, A1C, LDL, FBG, BP), although it should be noted that there are missing values. Information is collected before and after the NDPP program through intake and exit interview

forms. Data elements include participant health history (e.g. smoking history, high blood pressure) as well as health goals and available support for lifestyle changes. Currently, we have collected intake data from 119 participants.

As part of the CDC NDPP Recognition Program, we have also collected information from all NDPP participants at each attended core / post-core session, including demographic (i.e. gender, race / ethnicity, age) information, number of core/post-core sessions attended, weight, and minutes of physical activity. To date, we have collected data from 117 active group participants. Twelve Diabetes Prevention Programs, utilizing volunteer Community Health Workers and reaching approximately 117 people, have been held since the start of the grant process. We have fourteen DTTAC- trained individuals and 8 people trained through co-facilitation for DPP as part of this HRSA grant initiative.

Evaluation of the DCHRP's diabetes self-management training efforts has focused on measuring changes in A1C levels among participants with diabetes before and after the DSMT, as well as frequency of needed eye and foot exams. As of 2014, 30 patients participated in DSMT. 78% of patients were current with their foot exams and 30% were current with eye exams; 29% of patients were current with both. Of these 30, 46% of patients saw a reduction in their A1C levels from baseline to follow-up, while an additional 12.5% kept their A1C levels the same. On average, patients reduced their A1C level by 0.244 from 7.92 to 7.67.

Program evaluation of the DCHRP's diabetes prevention efforts utilized several data sources: patient biometric data including BMI, LDL, fasting blood sugar (FBS) and A1C levels at baseline, 6 months, and 12 months; before/after qualitative information collected from the NDPP program participants on health goals, available support for lifestyle changes, readiness; and information from participants at each session, including weight and minutes of physical activity, collected as part of the CDC's NDPP Recognition Program.

The DCHRP was generally able to maintain a consistent level of attendance among participants. Among those who completed the lifestyle core / post-core sessions (n=38) at the NDPP 18-month reporting interval, the average number of core sessions attended was 10.5 (out of 16). 100% of these participants had attended at least 4 lifestyle sessions (one CDC criterion for NDPP recognition) and 63% had attended at least 1 post-core session.

Means for collected biometric data were compared between baseline and 6 months / 12 months using paired sample t-test.<sup>1</sup> Differences between mean BMI were statistically lower at 6 months (n = 44; p < 0.001) and 12 months (n = 31; p < 0.001). There were also significant reductions in average A1C (n = 51; p = 0.005) and FBS levels (n = 47; p = 0.002) at baseline and 6 months, although not at 12 months (fewer participants had complete biometric information at 12 months, in comparison to 6 months). Average LDL cholesterol levels, while lower at 6 months and 12 months from baseline, were not statistically significant.

Participant weight was collected at each attended session, and was also assessed over the course of the entire core / post-core intervention. Among those who had completed the program, the average weight loss over the entire intervention period (i.e. all core / post-core sessions) was 8.4% (p < 0.001).

<sup>1</sup> It should be noted that many participants do not have complete biometric information at baseline, 6 months, and/or 12 months. For example, not all patients have currently reached 6 months or 12 months in their intervention period. In addition, many patients have also not had labs completed and/or were not examined by their primary care physician, at the 6 mo / 12 mo intervals and thus, do not have all or some biometric information.

## B. Recognition

A story about Swans course #2 was featured in an edition of *The Working Waterfront*. Our Collaborative DPP efforts in the communities of Deer Isle - Stonington were recently showcased in the Bangor Daily News:

<http://bangordailynews.com/community/deer-isle-diabetes-prevention-program-paying-off/>.

## Part VI: Challenges & Innovative Solutions

Retention of Community Health Workers has proved challenging. HRSA monies were used to pay a stipend to the CHW volunteers who had volunteered a set amount of hours, and this did help with retention. MDIH has budgeted monies in kind to continue the stipend for volunteers after the end of the grant funding. We recognize a need for a more consistent schedule of DPP courses in the area and the need for increased public awareness of such.

A minimum number of participants are required to meet the guidelines for holding a DPP class. MDIH's Public Relations department has been helpful in this area and will continue this support. MDIH Public Relations has placed Facebook updates on the MDIH page to announce upcoming DPP courses. Public Relations were also instrumental in linking us with a local radio station for ads related to DPP offerings. This department has also submitted calendar notifications in the local newspaper announcing upcoming DPP events.

The consortium would have liked to have all aspects of our grant work continue post-grant funding. Funding within the healthcare system is challenging in this current climate. DPP courses are yet to be covered by insurers in the state of Maine. It is the intention of MDIH to receive full recognition by the CDC for DPP activities, so that once the payers agree to cover MDIH, we will be properly aligned to continue serving this large cohort.

Data collection and reporting has been a large component of this work. MDIH has been fortunate to have the use of a data coordinator from the Community Care Team (CCT) to perform this critical and arduous task.

Type 2 DM patients wished to participate in DPP when the program focuses on prediabetes and those who are high-risk. While some of these patients received a referral from the Provider giving them permission to attend DPP, we continue to work on the clinical appropriateness of this process via involvement and advice of our Senior Administration and Medical Staff.

Changes in awareness, knowledge, attitudes and behaviors are now occurring at MDIH Health Centers as providers are now more aware of pre-DM diagnosis and able to discuss with patients. Providers are using the Pre-DM ICD 9 diagnosis code on a more consistent basis. Clinics are now seeing importance of prevention and screening versus reaction to disease. The consortium members appreciate the culture shift from shouldering patients' illness and moving towards patient self-management.

An MDIH Health Coach applied and has been accepted to Master Select training. This training will occur May 2015 in Atlanta. This is quite exciting as it opens up great possibilities to extend DTTAC training in Hancock and Washington Counties. A Healthy Acadia employee will apply for Master Select training in hopes of attending the May opportunity.

## Part VII: Sustainability

### A. Structure

Our consortium will continue to collaborate post-grant funding. Our consortium has grown and is stronger due to the wonderful and creative initiatives of this grant project. We will continue our partnership as currently exists. This includes Healthy Acadia, Maine Coast Memorial Hospital, Blue Hill Memorial Hospital, Mount Desert Nursing Association, Healthy Island project, and University of New England.

MDIH intends to implement the US CDC National Diabetes Prevention Program in collaboration with the Maine Seacoast Mission and the Mount Desert Island Nurses Association. We will provide training in the NDPP curriculum, and mentor our partners in utilizing this evidence-based curriculum in their outreach and direct service to their consumers. We will continue to build our working relationship with the Jackson Laboratory. We will continue to receive financial support from them for providing health coaching and related diabetes prevention and self management services at the worksite for employees at high risk of disease progression.

We will also continue to work toward achieving full recognition status as a National Diabetes Prevention Program provider. Achieving this status will position our program to be eligible for any insurance reimbursement which becomes available in the future for pre-diabetes programs. In conjunction with the Maine CDC Diabetes Prevention and Control Program, we will advocate for the implementation of a state policy requiring the reimbursement of pre-diabetes education.

The management structure will be modified going forward to reflect the cost structure and sustainability of this project. The position of Grant Manager will be eliminated. Both the RN and LCSW who were facilitating group classes have been eliminated. We plan to continue with several of the roles as we move into the sustainability phase of this program. Contingent on receiving full recognition status from the CDC, MDIH will provide the following management structure for sustaining this project:

- Director, Care Management: This RN serves to oversee the continued sustainability of the program, budget for the needed structure, and evaluate the effectiveness of continuation of the program.

- The Community Health Educator position will continue at 8 hours per week to provide coordination of volunteer training and coordination of DPP class offerings. The Community Health Educator will oversee the use of existing trained staff and will provide instructors for up to 3 DPP classes on Mount Desert Island each year, if efforts at volunteer recruitment and retention remain a problem.
- The position of Community Care Team Panel Manager will serve as data coordinator for data collection and reporting as required by the CDC National Diabetes Prevention Program and by the program evaluator at UNE through the end of the grant and beyond.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Our consortium met in September 2014 and voted on the importance of sustaining certain efforts beyond the grant phase. As you can see, the consortium wishes for DPP (Diabetes Prevention Program) efforts to continue. During our grant phase we have been able to engage our community partners and train Lifestyle coaches throughout Hancock County. We were fortunate to plant these seeds so our partners can help shoulder the DPP efforts along with MDIH. MDIH has agreed to continue DPP efforts in kind beyond the grant phase.

Our consortium felt strongly regarding screening /clinical services as well. During our grant phase, we were able to engage Community Health Center (CHC) in Southwest Harbor in our screening pilot. All staff at CHC was engaged in the planning and implementation phase of screening for DM risk. What we have discovered through the CHC screening pilot is that we have unroofed a significant amount of patients that are either pre-diabetic and/or at significant risk for developing DM. CHC is a robust patient-centered medical home with intact Care Management staff. Having said this, this screening process, review of all of the data, and linking the patients to appropriate resources is arduous at best. It quickly became overwhelming to the Care Manager. To date, we have not been able to launch DM screening efforts at any of the other MDIH practices until better infrastructure can be established. CHC will continue to screen their patient population for DM.

Another initiative ranked high by the consortium was our DSMT (Diabetes Self Management Teaching) efforts. During our grant phase, Diabetes Educators at MDIH were able to have DSMT appointments with those diabetic patients who lost insurance or had a very high deductible (>\$10,000) that served as a barrier to engaging DSMT activities. Diabetes staff was able to identify a cohort of shut-ins on Mount Desert Island who could not physically come in for DSMT at any of the MDIH sites. Under the grant, we were able to contract with Mount Desert Nursing Association (MDNA) to perform basic DM education for this cohort. Referrals were sent to MDNA from Diabetes staff and Care Management at MDIH. MDNA would then deploy per diem RN staff to meet with qualifying patients on the island. MDNA would communicate the patient care plan and progress back to the referring staff. Post grant, we do not have the funds to continue partner payments to MDNA. DSMT staff will continue to engage DM patients in education efforts. DSMT staff can also refer to the Community Care Team (CCT) for basic Diabetes Education for patients that continue to struggle to reach the practices. Of note, patients must be eligible for CCT services.

A Health Coach at MDIH has applied and been accepted to the next DTTAC Master Select training. MDIH has the potential to tap into state grant funds so she may train others within the state of Maine through partnership agreements. We expect community partners will wish to utilize the new Master Select status to help further diabetes prevention initiatives throughout Hancock and Washington counties. A Community Health Coordinator at Healthy Acadia will apply for DTTAC Master Select training this spring. This individual will continue training efforts in the region as a joint effort between Health Acadia and MDIH.

Because of the high number of patients identified as at risk or with prediabetes in one clinic, it has been proposed that MDIH will host three rolling DPP groups annually. The class sites will be rotated throughout the various communities on the island.

MDIH is committed to providing staff time of the Community Health Educator for ongoing coordination of the DPP classes and coordination of training of volunteers. MDIH will continue to provide staff to submit data as required.

The Maine CDC continues to work with payers to have diabetes prevention activities covered by payers. We will work along with them in their efforts. Maine Community Health Options (marketplace payer) is one payer that is in active conversation with the Maine CDC on this option.

### C. Sustained Impact

We will advocate that offices imbed the protocol in their standard assessment practices to improve the detection and treatment of prediabetes. Changes in awareness, knowledge, attitudes and behaviors have occurred in our clinic practices. Providers are now more aware of pre-DM diagnosis as evidenced by the use of this diagnosis on patient problem lists in the medical record. Providers feel more able to discuss pre-diabetes and healthy lifestyle with patients. Our providers are using the Pre-DM ICD 9 diagnosis code on a more consistent basis.

Using models and tools developed by the Maine CDC Diabetes and Control Program, we have disseminated a risk factor and prediabetes screening protocol to primary care provider offices. This has been done at the Community Health Center in Southwest Harbor. We will advocate that more offices embed the protocol in their standard assessment practices to improve the detection and treatment of prediabetes.

We have been able to host nine people in March 2015 for DTTAC training by having a Master Select trainer travel from Lewiston, Maine to Bar Harbor. Having this Master Select travel and host a 2-day DTTAC training was made possible by using the Maine state SIM grant monies. Two individuals were from Bucksport Regional Health Center, two were from Blue Hill Memorial Hospital, two were from the MDI YMCA, two were from Healthy Acadia, and one was an MDIH employee. Having these Certified Lifestyle coaches serving all the various communities throughout Hancock County is well thought out. MDIH has relationships with all of these organizations and can feed into the DPP courses throughout the County. MDIH is pending signed business agreements so we may be able to submit all DPP data from our formal partners hosting DPP groups.

An area we will continue to strategize and plan for is the need for “Post Graduate” sessions. MDI YMCA will launch “post graduate” monthly groups starting June 2015 at their facility in Bar Harbor. The MDI YMCA will accept any past participant of DPP, regardless of where they attended DPP. These past participants may wish to attend the monthly groups for weigh-in and discussion.

Several of our partners have expressed ongoing commitment to providing DPP classes in various communities throughout Hancock County including Healthy Acadia, Mount Desert Island YMCA and Blue Hill Memorial Hospital. Given the success in establishing commitments from community organizations such as these in providing DPP classes, we will continue to follow up regarding potential new partners. Having at least one Master Select within Hancock County will open more doors as this person can train more Lifestyle Coaches and thus have more options for DPP being hosted throughout the County.

## Part VIII: Implications for Other Communities

MDIH began this grant initiative with the most engaged community champions. The project started small, with an initial focus on the population on Swans Island off the coast of Maine. This launch was successful as the community leader living on this island was able to mobilize community members and co-facilitate a most successful DPP course. It is important to start small with a new initiative, enjoy the success, and then take the activities further out into the communities.

Relationships and having a strong consortium are proving to be most beneficial. We live in rural Maine where few resources exist, so there is great power when these various organizations and community partners pull together. This has been most evident in our ability to spread our efforts throughout Hancock County.

# Maryland

## Allegany Health Right

Part I: Organizational Information	
Grant Number	D04RH23556
Grantee Organization	Allegany Health Right
Organization Type	Non - profit
Address	153 Baltimore St., Cumberland, MD 21502
Grantee organization website	<a href="http://www.allhealthright.org">www.allhealthright.org</a>
Outreach grant project title	Regional Oral Health Pathways
Project Director	Name: Sandi Rowland
	Title: Executive Director
	Phone number: 301-777-7749 ext. 102
	Fax number: 301-777-5162
Project Period	Email address: <a href="mailto:sandi@allhealthright.org">sandi@allhealthright.org</a>
	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Western Maryland AHEC	Cumberland, Allegany, Maryland	AHEC
Allegany County Health Dept.	Cumberland, Allegany, Maryland	Local health department
Garrett County Health Dept.	Oakland, Garrett, Maryland	Local health department
Hyndman Area Health Center	Hyndman, Bedford, Pennsylvania	FQHC

### Part III: Community Characteristics

#### A. Area

The Regional Oral Health Pathways project serves:

- Allegany County Maryland
- Garrett County Maryland
- Mineral County, West Virginia
- Bedford County, Pennsylvania
- (parts of) Washington County, Maryland

#### B. Community description

The geographic area served is located in Appalachia and is characterized by multi-generational poverty and poor health indicators. There is less access to health care and dental services than in more urbanized area. As a result oral health is often neglected. This area of Western Maryland has the highest percentage of adults with total tooth loss and the fewest number of adults who receive regular dental care. There is low health literacy and many community members have poor health habits which aggravate dental conditions such as high consumption of sugary beverages, use of smokeless tobacco, lack of regular brushing and flossing and irregular and infrequent visits to a dental provider. All the areas in the region are Health Professional Shortage Areas (HPSAs) and all are Medically Underserved Areas (MUAs).

## C. Need

The Regional Oral Health Pathways program was designed to address the oral health needs of low income uninsured or underinsured residents in our target counties. Poor oral health, which is prevalent throughout the region, leads to a host of medical issues in addition to pain and suffering from oral disease. Neglected oral health affects a person's capacity to seek and maintain employment, take care of their families and their overall quality of life.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Regional Oral Health Pathways (ROHP) program utilizes the "Pathways Model" developed by Drs. Mark and Sarah Redding for the community Health Access Project of Mansfield, Ohio. The model is oriented around three critical action points, FIND, TREAT, and MEASURE. Also in alignment with the Pathways Model, ROHP has piloted the use of Community Health Workers using a prevention-focused Pathway to educate members of the target population in oral health self-care and support them in getting to preventative care. Allegany Health Right successfully implemented the Pathways Model for "finding" our target population. Based on emergency department data, and geolocation data, we knew that those most in need of dental services were low income and lived in specific neighborhoods of our region. Outreach and education activities by the Community Health Worker (CHW) targeted presentations in these jurisdictions. Under "Treat" the program provided both preventative and acute dental treatment through our network of providers. In adapting the model, we found that most of the demand was for acute dental treatment. We were less successful in referring people to dental cleanings through the local college dental hygiene clinic. In terms of "measure" we monitored our progress by maintaining records of clients seen in outreach events, clients who came through the program for treatment services, the value of care provided and the amount of donated care.

### B. Description

Following the Pathways model described above, Allegany Health Right's Regional Oral Health Pathways Program set out with a vision to "...achieve a culture of health where all residents have access to a seamless system of healthcare, regardless of rurality, income or education." The consortium partners are committed to offering quality oral health care services and reaching underserved populations.

There are several activities conducted through the grant period:

- Using a Community Health Worker to reach underserved populations and increase understanding of health issues, particularly oral health. Over the last year the CHW has focused on low income adults, disabled adults and low income seniors by providing presentations in the community. She has reached over 2,000 consumers and over 500 staff serving consumers with much needed information on oral health self care and how to access dental services.
- We are currently providing over 900 urgent dental treatment visits a year and close to \$600,000 worth of dental care to those in need in our community
- Through consortium partners, the Allegany County and Garrett County Health Department Dental Units we are able to leverage treatment funds in a way that provides extensive dental care for very little cost. By paying a flat hourly rate of \$150 we can get more treatment for more people. This rate results in about an 80% reduction in the actual value of care.
- We are collaborating with the local hospital emergency department (ED) on a dental diversion program, whereby patients presenting with dental conditions are referred to our program for access to dental treatment. This has resulted in a significant decrease in ED use for dental needs.
- In addition to funding through the HRSA ORHP grant, we have attracted additional funding from the State of Maryland (Community Health Resources Commission), the county United Way and several private foundations. We are able to dedicate most all of new grant revenue to direct services benefitting our target populations.
- Local health care providers are being trained in conducting oral health screenings during routine physical exams.
- AHR's Dental Case Manager and/or Community Health Worker work with each of the client's individually to address any barriers in accessing care. Our clients have a low "no show" rate for their dental appointments since barriers to care are addressed ahead of time.

### C. Role of Consortium Partners

The Regional Oral Health Pathways Program worked with four principal consortium partners, Western Maryland AHEC, Allegany County Health Department, Garrett County Health Department and Hyndman Area Health Center. In addition, ROHP is integrated with the regional Mountain Health Alliance (MHA). All of our consortium partners, as well as additional agencies, participate in

this Alliance and it has served as a forum to develop and sustain activities among the partners. Below are more detailed descriptions of our principal partners' roles and responsibilities.

#### Western Maryland AHEC

- Organized training of primary care providers in oral health exams
- Researched training programs for Community Health Worker
- Organized training of the Community Health Worker
- Participated in hiring and recruitment of Community Health Worker
- Organized Mountain Health Alliance activities and meetings

#### Allegany County Health Department

- Served as principal referral source for dental treatment for Allegany County residents based on a \$150 per hour fee structure
- Offered comprehensive urgent dental treatment to AHR referrals
- Offered discounted cleaning services to AHR referrals

#### Garrett County Health Department

- Served as principal referral source for dental treatment for Garrett County residents based on a \$150 per hour fee structure
- Provided intake and eligibility verification for Garrett County residents served

#### Hyndman Area Health Center

- Served as a referral source for dental treatment

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Important outcomes of the ROHP project included:

- Trained 78 primary care providers and 76 health professional students in how to perform oral health screenings during routine physical exams
- Recruited and maintained approximately 15 dental providers as part of the network of providers offering services at greatly reduced rates
- Two Community Health Workers completed CHW training and also specialized training in Oral Health Education. Both CHW workers continue to work with underserved populations in the region
- Over 2,000 people in the consortium region have received presentations and information on oral health care and dental treatment resources in the community
- Initiated an ongoing emergency department dental diversion program with the local hospital, The Western Maryland Regional Medical Center.
- Reduced by 16% the number of ED visits to the Western Maryland Regional Medical Center for dental conditions. This is the only jurisdiction in the state seeing this type of decrease in ED usage.
- Increased the number of low income adults receiving urgent dental treatment from 177 to 549 during the course of the grant.
- Increased the number of dental treatment visits from 279 to 883 over the course of the grant.
- Increased the value of dental care provided from \$162,691 to \$590,016 over the course of the grant
- AHR and consortium partners participated in a local Mission of Mercy event which provided over \$700,000 worth of dental care
- AHR and consortium partners participated in a Department of Defense led Innovative Readiness Training which provided free dental care to over 350 residents.

- AHR’s Community Health Worker and consortium partner, Allegany County Health Department provided focused outreach to underserved seniors in the consortium area offering oral health education and referral to dental treatment for 687 seniors and 152 staff serving seniors
- AHR’s Community Health Worker provided focused outreach to low income disabled adults offering oral health education and referral to dental treatment to 646 disabled adults and 183 caregivers

## B. Recognition

Allegany Health Right’s program has been recognized in various press reports of the Innovative Readiness Training, the Mission of Mercy, and the Disabled Adults Oral Health Initiative. ROHP has also been recognized by the Maryland State Dental Association, and by Maryland’s Oral Health Coalition.

## Part VI: Challenges & Innovative Solutions

One of the challenges experienced during program implementation was changes in personnel. The Project Director left the organization soon after the first year of grant activities. The Executive Director of AHR has since filled this position. Also, the Community Health Worker left after one year in the position. Fortunately, we were able to quickly replace her and provide and accelerated training to a second Community Health Worker so there was little gap in program activities related to this component.

Programmatically, the major deviation taken from the original plan was to abandon the idea of “mini MOMs” this is discussed briefly above. Instead of conducting periodic dental clinics, we followed the model we have been using for over ten years of referring dental clients out on a daily basis to our participating public health dental clinics or participating private dental practices so that clients were seen in the regular daily schedules of those providers.

While treatment funds provided through the grant were exhausted before the end of each grant year, Allegany Health Right was able to obtain funding from other sources to complement HRSA funds so that no eligible clients were denied services.

Toward the end of the grant, consortium partner Hyndman Area Health Center, was not able to accept many referrals for patient treatment. They were experiencing financial and personnel difficulties of their own making it unfeasible for ROHP to refer clients for treatment. Fortunately, other dental providers were able to provide services in their place.

## Part VII: Sustainability

### A. Structure

The consortium will continue, and, as mentioned above, is already integrated into the Mountain Health Alliance. Hyndman Area Health Center will be a less active partner, but as they recover from financial difficulties, we hope that they will come back to more active participation. Allegany Health Right will continue to work closely with the Allegany County Health Department to provide deeply discounted, comprehensive dental treatment. We will work with the Garrett County Health Department as far as funds allow. Once treatment funds through HRSA are used, AHR will be using funds from other sources. Most all of these complementary sources are limited to Allegany County residents. We will continue to coordinate with Western Maryland AHEC as needed through the Mountain Health Alliance. The Community Health Worker will be hired by Allegany Health Right so will no longer be a Western Maryland AHEC employee.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

There are several important activities resulting from the Regional Oral Health Pathways which will be sustained after funding ends from the ORHP.

- Collaboration Among Consortium Partners - One of the most important is the continued collaboration among consortium partners. The Mountain Health Alliance continues to be active in organizing and convening consortium partners as we work to sustain gains made with the ROHP grant and tackle new challenges.
- Partnership with Allegany County Health Department -Another important collaboration which will continue is the partnership with the Allegany County Health Department Dental Unit. Through this collaboration AHR pays a low fixed hourly rate (\$150) for urgent dental services, reducing the regular rate by almost 80%. This has allowed many more people to receive many more services than ever before. This payment model has also proved attractive to other funders as they can see the dollars they invest in the program go that much further.
- Emergency Department Diversion Program - Our local hospital is changing the way they deliver care in the community due to overall changes in health care delivery and payment models. This means they are moving toward efficient, value driven care instead of volume driven care. The fact that ED use for dental conditions is decreasing because more adults in the community have access to appropriate care through a dental provider, is good for both AHR and the hospital. The hospital system continues to be a financial supporter of AHR's program.
- Community Health Worker - The work of the Community Health Worker will also continue. The expansion into oral health education and prevention has been a significant one for Allegany Health Right and other consortium partners. AHR's Community Health Worker has been able to integrate well into the community and coordinate with other Community Health Workers in the area and other consortium partners. There continues to be much need and demand for oral health education. Additional funders are interested in supporting the work of the Community Health Worker particularly in reaching out to underserved communities and populations which have little access to dental services.

### C. Sustained Impact

The Outreach grant has also resulted in long term impacts for our community. While most of the consortium partners knew one another and worked together before the ROHP grant, these partnerships were fostered and deepened as a result of the grant. The grant allowed us the flexibility and funding to try new models of working together. This has given the consortium partners the confidence to continue collaborating in ways that maximize the benefit to the community. Our community is currently engaged in a long term plan to break multi-generational poverty utilizing a "Bridges Out of Poverty" approach, locally adapted to our community's unique characteristics. Many of the consortium partners are participating in this initiative. The dental providers we worked with through this program have also adapted their billing practices to accommodate low income individuals and more and more providers are accepting Medicaid covered adults into their private practices. Our consortium partners continue to advocate for increased adult dental benefits at the state level.

## Part VIII: Implications for Other Communities

The experience of the Rural Oral Health Pathways Program could be relevant to other communities, particularly rural communities that are health and dental professional shortage areas. For many years, those working in public health in our community have been looking at creating a dental clinic to serve low income, uninsured adults. For a number of reasons, this model has not been feasible to pursue at this time in our region. Absent such a clinic, more creative ways must be found to meet the pressing oral health needs of low income adults who otherwise cannot access appropriate dental care. Our model of utilizing existing community providers, including the health department dental clinics, has been successful in helping to address this need. The additions of the Community Health Worker and preventative care efforts have also proven to be a valuable strategy that could benefit other similar communities.

# Michigan

## Spectrum Health Hospitals

Part I: Organizational Information	
Grant Number	D04RH 23621
Grantee Organization	Spectrum Health Hospitals
Organization Type	Hospital
Address	615 S Bower St., Greenville, MI 48838-2614
Grantee organization website	<a href="http://www.spectrumhealth.org">www.spectrumhealth.org</a>
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Jodie Faber
	Title: Director
	Phone number: 616-225-7041
	Fax number: 616-754-4607
	Email address: <a href="mailto:jodie.faber@spectrumhealth.org">jodie.faber@spectrumhealth.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$149,893
	May 2014 to April 2015: \$149,617

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Spectrum Health United Hospital	Greenville/Montcalm/Michigan	Hospital
Greenville Public Schools	Greenville/Montcalm/Michigan	School
Montcalm Human Services Coalition	Stanton/Montcalm/Michigan	Human Services
Spectrum Health Gerber Hospital	Fremont/Newaygo/Michigan	Hospital
Hesperia/Fremont/White Cloud Public Schools	Hesperia-Fremont-White Cloud/Newaygo/Michigan	Schools
Newaygo County Health Care Improvement Council	Fremont/Newaygo/Michigan	Human Services
Spectrum Health Reed City Hospital	Reed City/Osceola/Michigan	Hospital
Reed City Public Schools	Reed City/Osceola/Michigan	School
Together We Can	Reed City/Osceola/Michigan	Human Services

### Part III: Community Characteristics

#### A. Area

We served three counties: Montcalm – Greenville Public Schools service area; Osceola – Reed City Public Schools service area; and Newaygo – Hesperia, White Cloud and Fremont Public Schools service areas.

#### B. Community description

The three counties are very rural. The population of all three counties has seen a steady decline over the life of the grant. Osceola County has approximately 23,169 residents; Newaygo has 47,900 residents; Montcalm, the largest, has 62,893 residents. The decline can be attributed to the poor economic climate in Michigan. Agriculture is abundant, and it is necessary to travel great distances for needed services. These counties lack any public transportation or taxi system. The residents tend to live more than 30 miles from the hospital that services their county. It can often take 30 minutes to an hour for residents to drive to a hospital or to access other community services, such as quality programs for youth. School settings are the hub for most youth activities.

All three counties lag far behind the State of Michigan and the United States in terms of income. The median household income in Montcalm and Newaygo Counties is \$38,143 and \$39,059 respectively, and the median income in Osceola County is \$34,823. While the September 2011 unemployment rate in the United States was a little less than nine percent, the unemployment rate in the three target counties was between nine and twelve percent, greater than the average rate for the entire state. In recent years, unemployment in this area was accelerated by a number of manufacturing plant closings, such as the 2005 shutdown of the Electrolux refrigerator plant in Greenville which moved a staggering 2,700 local jobs from Montcalm County to Ciudad Juarez, Mexico. Earlier that year, Hitachi Magnetics closed its doors, slashing 120 jobs in the process. Other manufacturers who recently left the area, either completely or in part, include Greenville Wire Products (160 jobs lost) and Tower Automotive (founded in Greenville in 1874 - 300 jobs lost). Today the largest employers in all three counties are the healthcare systems and the educational institutions. Much smaller industry has bloomed, but the economic impact has been minimal.

### C. Need

HRSA has reported that children in rural areas tend to have greater risk of developing obesity and overweight than children in urban areas. A Community Health Needs Assessment conducted by the local healthcare agencies in all three counties, along with the Michigan Profile for Healthy Youth (MiPhy), showed that childhood obesity is a significant issue in the rural counties served by the Rural FitKids 360 program. Obesity rates in these three counties are well above the rates in Michigan. Between 15 and 25 percent of the children are obese, while only 11 percent of their peers in Michigan are. Other existing factors that have been linked to childhood obesity, such as high unemployment and low household income, further increased the need for a childhood obesity education program. Consortium partners researched and identified a program which showed promise for changing the attitudes and behaviors of its participants to achieve and maintain a healthy weight.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The evidenced-based program we used was Fit Kids 360. It was developed by healthcare providers from Spectrum Health with First Steps, a Grand Rapids non-profit committed to improving the health of local children. This group noticed that childhood overweight and obesity was rampant in the Grand Rapids area and that a program using evidence-based tools was needed in the community. Fit Kids 360 became this program.

To create Fit Kids 360, various evidence-based teaching tools and practices were combined; the primary evidence-based tool used to create Fit Kids 360 was the Family Nutrition and Physical Activity (FNPA) screening tool. The FNPA screening tool was developed by pediatricians, kinesiologists, dieticians, and physical therapists to measure risk of overweight and obesity in children. This tool measures behavioral, nutrition, and exercise habits in children and combines them into an FNPA score that measures risk of overweight and obesity. Fit Kids 360 teaches children to improve their behavioral, nutrition, and exercise habits that have been linked to increased risk of overweight and obesity.

The group that created Fit Kids 360 included various measurements to be obtained throughout the program. Physical measurements of children such as weight, body mass index (BMI), and waist circumference are collected. To date, three pilot studies of Fit Kids 360 have been conducted. Results from these pilot studies indicate that the program significantly increases participants' FNPA scores indicating that the program reduces the risk of overweight and obesity. These results indicate that Fit Kids 360 is a promising-practice that needs to be developed further to improve the health of more children in the community.

The developers of Fit Kids 360 realized that in order to reach a larger number of children, the program would need to be duplicated at other sites. To accomplish this, they created a seven-week curriculum that can be taught to various healthcare providers and taught at multiple locations. This curriculum provides all of the material needed to conduct a Fit Kids 360 class such as class agendas, lesson plans, activity suggestions, and data collection tools such as questionnaires and logs. Curriculum binders were then created that could be implemented at any location.

In implementing Rural FitKids 360 (RFK) in Montcalm, Osceola, and Newaygo Counties, Spectrum Health United Hospital made a number of logistical modifications for our rural setting. We anticipated that high unemployment and low household incomes in the three target counties would make it difficult for children to attend classes and could negatively affect retention rates in Rural Fit Kids. By partnering with school systems in each county, we were able to provide the program on-site as an after-school opportunity. During the school year, children participated in a 12-week course (later adjusted to 8-week and ultimately 6-week sessions) that taught them behavioral, nutrition, and exercise habits to help them maintain a healthy weight beyond the course instruction timeframe. In the summers, the same children returned for a follow-up, four-day course to reinforce the information they learned in the school-year session. We also provided a Community Health Worker for in-home visits to all children during the program to encourage them and their families to improve their behavioral, nutrition, and exercise habits, as well as answer any

questions on nutrition or healthy lifestyles. The children were regularly surveyed to determine if they have changed their habits and measured to see if they reduced their weight and body mass index (BMI). We discovered over the course of time that the waist circumference measurement did not provide validity to our data as we could not duplicate the measurement sites over time. We therefore, dropped the waist-circumference data from our reporting. Non-tangible measurements such as hours of moderate to vigorous daily physical activity, hours of daily screen time, and nutrition habits are also collected.

## B. Description

Rural FitKids 360 involved partnership between Osceola County-Reed City Hospital, Newaygo County-Gerber Hospital, and Montcalm County-Spectrum Health United Hospital. In all three counties, the RFK program was offered as an after-school opportunity through collaboration with area schools. Each year of the implementation process, the partners made procedural adjustments to reflect their learning, experiences, and evaluations.

**Years 1 & 2:** Two twelve-week sessions were held by each site during the first school year. Initially we had thought that offering the classes for twelve weeks would produce better long-term results. After the first year, we tried shortening the sessions to eight weeks, which helped improve attendance and retention rates without negatively impacting results. Summer Refresher Camp was held for four half-days in June at each of the sites to reinforce what the children had learned in the school-year classes and to measure sustained improvements. Two partner sites opted to hold camp at local summer camp facilities, and one partner utilized the fine athletic facility which is part of their hospital. Refresher camp provided healthy eating, curriculum review, and activities such as swimming, canoeing, volleyball, hiking, biking, etc. Grand prizes were awarded to all participants based on level of improvement.

**Year 3:** Ultimately, we found that six weeks was the ideal session length. Four six-week sessions were held by each site during the school year. After-school sessions were two hours in length and had three focus areas: behavioral change, nutritional change and activity change. The following is a synopsis of the course:

- Lesson One
  - Making choices and changing behavior
  - Goal Setting
  - Support identification
  - 0-8 Messaging
  - Healthy eating, My Plate
  - Exercise & Activity
  - FITT (Frequency, Intensity, Time, Type)
- Lesson Two
  - Emotions
  - Label Reading
  - Grocery Store Tour
  - Activity Circle
  - Exercise Zones
- Lesson Three
  - Bullying
  - My Plate – dinner and beverages
  - Importance of Sleep
- Lesson Four
  - Building Self-Esteem
  - Meal Planning
  - Regular Exercise and limiting screen time
- Lesson Five
  - Communication and Stress
  - Dining out and school lunches
  - Activity goals, exercise as a family, pool time
- Lesson Six
  - Review of all materials and student teach backs.

Throughout the course, a Community Health Worker made home visits to reinforce the weekly messages in the home and provide additional support to the families. These visits proved to be very beneficial as it gave the families one-on-one time with a staff

person to discuss their challenges in their homes. It also gave staff members insight to the barriers that families have but may not be able to articulate.

### C. Role of Consortium Partners

During the initial planning process of this program, all partners were very engaged. They provided insight and feedback to help us develop a quality program. In each county we presented the program to our consortium leaders and asked for comments regarding its potential for success. The following describes each individual county involved in the project.

In Newaygo County, Rural FitKids 360 partnered with our rural hospital, Spectrum Health Gerber Memorial, a number of public school districts, and the Newaygo County Health Care Improvement Council. Spectrum Health Gerber Memorial housed our Community Health Worker. They provided the Community Health Worker with resources to help promote the Rural FitKids 360 program. They also provided staff for the roles of Dietitian and Exercise Specialist. We held our summer camps at the health and wellness facility, Tamarac, which is a member of Spectrum Health Gerber Memorial. We conducted our sessions in local school districts throughout the 3 years. We were able to have classes at Hesperia Public School, Fremont Public School and White Cloud Public School. At each of these sites we were able to use either a classroom or a gymnasium to meet with the families and hold our sessions. Each school also helped with promotion and allowed us to send home flyers about the program or put an announcement in their newsletter. We are also a part of the Newaygo County Health Care Improvement Council. This is a coalition made of area leaders from hospitals, district health department, mental health department and community service non-profits. This group meets monthly, and at the meetings, we had the opportunity to promote Rural FitKids 360 and encourage their support through member organizations.

In Montcalm County, Rural FitKids 360 partnered with our rural hospital, Spectrum Health United and Kelsey Hospitals (SHUK), Greenville Public Schools (GPS), and the Montcalm Human Services Coalition (MHSC). Spectrum Health United Lifestyles (SHUL), a department of SHUK provided the Community Health Worker, the Registered Dietitian and the Exercise Specialist. We were able to provide “grocery store tours” in collaboration with another SHUL program. Greenville Public Schools provided the space for all of our programs throughout the three years. We used their elementary gym and cafeteria, and they also allowed us to use specific gym equipment throughout the duration. GPS also helped with promotion and allowed us to send home flyers about the program and put announcements in their newsletter. We are also a part of the MHSC, a coalition comprising area non-profit leaders representing hospitals, district health department, mental health, community foundation, Michigan State University Extension, law enforcement, ecumenical, DHS, domestic violence, council on aging, area schools, substance abuse prevention, food pantries, homelessness, county commission and law enforcement. At the monthly meetings, each member organization has the opportunity to promote programs and discuss what is going on its organization. There is a healthcare subcommittee that provided the “oversight” of Rural FitKids 360, heard monthly reports, and provided feedback on the program. Many of the suggestions from MHSC were incorporated in the current program (i.e. marketing, retention and recruitment).

The Osceola County consortium included the Spectrum Health Reed City Hospital (SHRC), Reed City Public Schools (RCPS), and the Together We Can (TWC) council. SHRC provided the Community Health Worker and the Registered Dietitian. RCPS provided the Exercise Specialist (a physical education teacher on staff at the school). This consortium was less successful in achieving partner engagement. Turnover in personnel plagued the program. The Community Health Worker, the cornerstone of this model, changed at least three times over the three years. The school system saw many turnovers in leadership over the course of the grant, and as a result, it was difficult to maintain their full participation. Although they provided space for our classes, they were not involved with marketing or promotion of the program. In addition, the TWC council disbanded and reorganized twice over the three years, which made continuity nearly impossible.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Program evaluation was provided by the Community Research Institute (CRI), part of the Johnson Center for Philanthropy at Grand Valley State University. Final data is not yet completed, but the 2.5 years of programming so far have yielded the following positive results with 141 children who participated in Rural FitKids 360 programming.

- Decrease in screen time (TV, video games, computer and cell phone) all days of the week
- Increase in daily activity time all days of the week
- Decrease in consumption of sugar sweetened beverages
- Increase of fruit and veggie intake
- Increase of whole grain consumption

- Continuation of healthy behaviors through the year up to summer refresher camp

The greatest improvement is the decrease in screen time over the duration of the program. While the most significant differences are seen in time watching television, there were notable decreases in time spent playing video games, using the computer, and using cell phones. This impact is apparent in the positive increase in FNPA Screen Time Scores from pre to post.

Another significant outcome of the Rural FitKids 360 programming was the greater awareness and involvement of the parents of participants. We interviewed parents in all three years, and the findings overall demonstrate that participants, their siblings, and parents benefited from their experience with Rural FitKids 360. Participants and their parents gained knowledge about nutrition, the need to modify their diet to include more healthy foods, and the importance of replacing screen time with physical activity. The program increased mindfulness of healthy activities and had a positive behavior modification impact for the majority of respondents. These parent comments reflect their experiences:

*“It made us more mindful of reading packages and thinking about how much sugar, just the nutrition value of the foods you eat, and the importance of exercising.”*

*“We started making meals together so that was a good impact.”*

*“It made me more aware as a parent to drill it in. They have to earn their screen time now. They have to get their homework done and have 30 minutes playing outside or inside before they can have their gaming stuff.”*

One parent highlighted the impact of finding a sense of community and belonging with other participants:

*“My daughter has always been bigger her entire life and she doesn’t have a lot of people her age that are bigger in her school. It helped her to see that she wasn’t alone. It helped her to see that other kids were struggling with the same issues.”*

Finally, a major outcome is that we were successful in modifying an urban-based model to develop a rural model that works! We made careful evaluation of each cohort of children throughout the grant period and considered changes in weight and body mass, enrollment numbers, attendance, level of participation, and habits and behaviors. This process was gradual, often tedious, but steadily we were able to make revisions of goals, objectives, format, and scheduling in order to produce a quality program that fit the needs of the rural environments we were serving.

## B. Recognition

Over the course of the three years, Rural FitKids 360 has been highlighted by newspaper articles in all three counties and radio interviews in Montcalm County. The three healthcare systems have recognized the staff and applauded the success of the program in their communities. Community newsletters sent by the healthcare systems have emphasized the successes, as well as community benefit reporting by each hospital. Staff members have been interviewed on numerous occasions and have had opportunities to speak about the program with their local non-profit organizations. Providers have asked for presentations to their staff to gain a better understanding of the impact of the program.

## Part VI: Challenges & Innovative Solutions

Our challenges fall into four categories:

### Staffing:

- Continuity of staff plagued us. It has been an ongoing process of adjusting to staff turnover, training new staff, and modifying assignments and training procedures. Even the evaluator changed in the first year.
- The Community Health Workers required more detailed education on motivational interviewing and collection of data.
- In the final quarter of the grant period, several staff members resigned to find more secure employment, requiring other staff to assume their responsibilities and finish the program.

### Curriculum:

- Throughout the grant period, it was necessary to make modifications of procedures and content to better fit the time constraints of the two-hour classes.
- We modified the paperwork (logs) to make it easier for participants to complete on a weekly basis – thus improving the return rate of the logs required for each class. When we noted an inconsistency in reporting, we found that many different people were filling out the logs and sometimes just checked the answers they thought we wanted to hear, rather than what was actually happening. We developed a “guide” for all staff about how to present the paperwork – so that we were all conveying the same

message. This provided consistency in the methodology of presenting the surveys, and the use of talking points helped us to achieve success.

- Optional home visits with the Registered Dietitian were added when necessary to ensure integrity of nutritional messaging both in class and at home.
- We found that participants' weight was maintained or improved over time from fall to summer, but weight in winter did not show the same maintenance or improvement. We adjusted the curriculum to provide more fun indoor activities during the winter sessions.
- We were also challenged by the broad age range of children attending our classes. At all three sites, participants/parents have commented that we should be holding two separate classes – one for the younger children (6-11) and one for the older children (12-17). We responded by dividing each class by age for Year 3 of our grant. We offered three stations (nutrition, behavior, and exercise) and then rotated the individual age groups through each station. This worked very well.

#### Data Collection:

- The database was revised to make the data entry easier for clinicians and more significant for the evaluator (e.g. changed terminology and defined terminology for all sites). First year results showed that the change in BMI was not significant and indicated that we needed to track the trajectory instead.
- Evaluation was initially to be at pre/mid/post session; however we decided to omit the midpoint collection as it was too soon in the program to determine statistically significant improvement.
- Our procedures for measuring waist circumference were changed due to inconsistency in determining where the “waist” was on repeat measurements. It was determined that measuring at the “belly button” would be more consistent while maintaining integrity of the data. It was ultimately decided to omit the waist circumference measurement as it was not statistically significant, and youth were embarrassed by having to expose their bellies to staff.
- The PedsQL replaced the Pediatric Symptom Checklist (PSC), the instrument used in previous reports to measure health-related quality of life. The 23-item PedsQL core scales were designed to measure the core dimensions of health as delineated by the World Health Organization. The instrument has been utilized in numerous publications, demonstrating high feasibility, reliability, and validity as a school population measure. The assessment includes both child self-report and parent proxy-report. This was introduced in Year 3, and we are hoping to have more relevant outcomes as a result.

#### Recruitment/Retention:

- Class attendance did not meet our expectations at any of the three sites, with an average attendance of 10 per site. New marketing strategies were discussed and implemented for following sessions, including purchase of banners to place at various sites within the schools and hospitals.
- Marketing was always challenging, particularly at the Osceola location. Our relationship with the school in Osceola continued to be a barrier to our success. The schools there were not engaged as there had been a high turnover in school leadership. While the Exercise Specialist at that location is a public school teacher, he was unsuccessful in garnering additional support for our program. The Consortiums at two of the sites were sporadically non-functioning, so we looked to additional venues to assist in the marketing and oversight of our programs. We marketed the program at area youth events and in school fliers. We also used physician liaisons to reinforce the education to the providers regarding referral processes. This helped to increase enrollment in Montcalm and Newaygo counties. We marketed the program at area grocery stores, hair salons, and other similar gathering places. We also used the Ministerial Association and Parish Nurses in the Montcalm location to market the program, but that did not have a positive impact on recruitment.

## Part VII: Sustainability

### A. Structure

Unfortunately, two of the three sites have chosen not to continue Rural FitKids 360. The Osceola site could never garner enough participation to demonstrate value to the community. Newaygo County made the decision to drop the Rural FitKids 360 program and continue an existing youth obesity program offered at their Tamarac Wellness Center. Since RFK appeared to compete with their existing program, they opted for financial and socio-economic reasons to continue with an already established program.

The Montcalm program has decided to continue to offer the Rural FitKids 360 program, but in an entirely different format. Midway through Year 3, we received an email from a Montabella Public Schools elementary teacher:

*“The students at our school are of the poverty level. I have watched many 6th grade students get their lunch in the cafeteria and throw it away on the way to their seat. Our students do not understand the importance of a healthy diet and regular exercise. We do not have an above average obese population,*

*just a community that is unaware and/or unable to teach their children what a healthy lifestyle looks like. It looks to me like the Rural FitKids 360 program may address most of those issues that students are dealing with on a daily basis.”*

The Montabella Public School system is located in Edmore, MI, in the North/East sector of the county which has little industry other than farming. The student population of Montabella schools is 837 with approximately 70.5% of students qualifying for free/reduced lunch. Montabella schools have no on-site health services.

Our solution to this request is to seek additional local grant funding to support a modified RFK program as described below:

- Rural Fit Kids 360 program (school version): childhood obesity education curriculum, modeled after existing RFK program.
- Holistic approach to address childhood overweight and obesity, teaching families how to improve their behavioral, nutrition and exercise habits that have been shown to lead to overweight and obesity.
- Semester class (1 hour per week, per class) combined with monthly parent workshops to replace the Community Health Worker home visits. We will have essentially a captive audience of sixth graders each semester and can reach a greater market (~86 participants/year).

While the “consortium” members may change somewhat, the intent of the consortium remains intact. One new member will be the Montabella Public Schools, and there may be others as we proceed. It is our hope that if successful, we will be able to target several community foundations within Montcalm County to fund, at least partially, the school-based Rural FitKids 360 programs. We have reached out to other schools, and they have expressed interest, although it will require a change in schedules that must be done before the start of the next school year. We are optimistic at this time that we will be able to make the Rural FitKids 360 work in the school setting.

#### **B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

#### **C. Sustained Impact**

The largest long-term impact of Rural FitKids 360 is awareness. We have increased awareness in the children and parents we served. We continue to hear stories from the families telling us examples of how they are implementing healthier habits. Their children are watching less television, moving more, asking for healthy snacks, and reminding their parents to include a vegetable for dinner. We also have increased awareness in the different school systems. By partnering with the schools and holding our sessions in their buildings, we were able to start a partnership. The schools will hopefully be more open to working with our organization in the future.

We conducted parent interviews at the three-year mark and heard positive comments about the program’s impact on their children and themselves. The major themes that arose were the increase in nutrition knowledge, health consciousness, and eating mindfulness. In addition, building relationships within the family unit and with other families in the program who had similar goals was frequently cited as the best aspect of Rural FitKids 360. One parent’s comment says it most succinctly:

*“Yes, we are still trying to get vegetables in every day, helping each other more in the kitchen, cooking together, make meals together, they are more part of it now; they see what goes into foods and meal preparation; we switched from sour cream to Greek yogurt, switched lots of things like that; we read labels and try really hard to keep going at it.”*

### **Part VIII: Implications for Other Communities**

This program could be replicated in other communities. As part of the implementation, we feel these issues should be considered:

1. Community Support: Find passionate supporters, as you cannot do this alone. Get a specific commitment from those that offer help. When selling your program to others make your request resonate with your particular audience; for example when this program asked the physicians for assistance, the program cited obesity numbers and the correlation to chronic

conditions along with the fact that many of the youth involved were also potential patients. Physicians typically feel that they can handle the obesity issue in the office, and are reluctant to discuss the topic with the parent.

2. Marketing: Marketing in schools is difficult but also the most effective. Make sure you have a good relationship with your schools and that they support this initiative.
3. Simplify: Do not take on too much. Consider small steps that yield a large impact. Just in case you cannot find continued funding, try to implement programs that can be easily absorbed into the existing infrastructure. Find the existing holes and improve upon them. For this program we found that inundating youth and parents with paperwork was not only burdensome, but never completed. Hands-on time and activities got us the best results.
4. Accept that change can be a slow process. It has taken a while to create the current climate and it will take time to make the healthier choice the normal option. Stand your ground as you know the bottom line: creating a healthy environment for our youth will create healthy adults for our future.

# Michigan

## Sterling Area Health Center

Part I: Organizational Information	
Grant Number	D04RH23622
Grantee Organization	Sterling Area Health Center
Organization Type	Federally Qualified Health Center
Address	725 East State St. Sterling, MI 48659
Grantee organization website	<a href="http://www.sterlinghealth.net">www.sterlinghealth.net</a>
Outreach grant project title	Community Health Worker
Project Director	Name: Susan Kaderle
	Title: Network Director
	Phone number: 989-569-6001 ext. 1730
	Fax number: 989-358-3763
	Email address: <a href="mailto:skaderle@alconahc.org">skaderle@alconahc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,939
	May 2013 to April 2014: \$149,933
	May 2014 to April 2015: \$149,475

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location	Organizational Type
*Sterling Area Health Center	Sterling/Arenac/Michigan	FQHC
*Alcona Health Center	Lincoln/Alcona/Michigan	FQHC
*District Health Department #2	West Branch/Ogemaw/Michigan	Health Department
*Primary Care Inc.	Rose City/Ogemaw/Michigan	Rural Health Clinic

### Part III: Community Characteristics

#### A. Area

Our outreach grant serves five counties that include Alcona, Iosco, Arenac, Ogemaw and Oscoda

#### B. Community description

Our service area faces serious challenges for health care access due to high rates of under and un-insured individuals, widespread economic and social deprivation, joblessness, under-employment, geographic isolation, harsh climate, lack of transportation resources, health care personnel recruitment and retention challenges, and a large elderly population with extensive healthcare needs.

#### C. Need

Our program was designed to improve access to health care and increase positive health care outcomes. CHWs provide outreach to the rural medically underserved population that includes un-insured and under-insured individuals, and a disproportionately high percentage of elderly people with high rates of chronic disease. The CHWs facilitate linkages and help maintain communication between patients with cancer or chronic illness, their families, their physicians, and the health care system, and link them with additional supports to meet their basic needs, thus improving their health outcomes and increasing their quality of life.

### A. Evidence-based and/or promising practice model(s)

The model outlined in the 2011 HRSA Community Health Workers Evidenced Based Models Toolkit "**Care Coordinator/ Manager Model**". The document states, "Currently there are many challenges to identifying promising practice models and evidence-based models in rural communities. As such, ORHP recognized the need to develop these for specific issue areas ORHP grantees focus on. ORHP selected Community Health Workers (CHW) as the first topic area due to Agency priorities and the important role CHW's play in rural communities in providing needed health care. The intent was to conduct extensive literature reviews on CHW models that have been proven to work and then share those strategies with rural communities so they don't have to reinvent the wheel. Overall, the care coordinator/manager model was the right fit for the Network. Our program focused on both case management with individuals and also liaising between the clientele and a variety of health, human and social service organizations. Although we did provide case management for many individuals, the need for navigating with the social service organizations, health and human organizations was a rising need among the community. If given another opportunity to have a similar program, one change to consider would be to have more training in care coordination and making sure the CHW is paired with a medical professional for on-going questions.

### B. Description

- During the term of our participation our goal of enrolling at least 300 program participants in the three year cycle through office appointments and outreach in the community was exceeded.
- Over 140 patients and clients that sought services suffered from two or more chronic illnesses including asthma, depression, diabetes, hypertension and obesity.
- Over 1000 promotional items have been distributed in our five county service area, some of which also promote a healthier lifestyle (i.e. hand sanitizer, pedometers)
- Monthly participation in CHW calls with the Michigan Community Health Worker Alliance (MiCHWA) that is actively working at the state level to have CHWs be able to bill third party insurances for services, MI-Connect is a sponsoring partner of MiCHWA
- Attended community events that reach out to our target population and others in our five county service area.
- Participated in local, state and national educational conferences and shared info with other service organizations in our area.
- Facilitated diabetes prevention programs that have had successful outcomes.
- Created a food/personal item pantry to help the needs of our patients/community members in two locations of our membership (funding was secured for this by writing mini-grants to the local foundation offices).
- Coordinated with other organizations in the community (Council on Aging, Human Services Collaborating Coalition, Department of Human Services, etc.).
- Developed promotional materials for program marketing
- Developed program resource books for the use of the clinics and staff
- Actively made appointments and follow-up calls/visits with patients and community members
- Hosted two trainings, a CHW training for MI-Connect staff and CHWs and a full-staff training including the CHWs

### C. Role of Consortium Partners

**Sterling Area Health Center** has been the fiduciary for the Rural Health Outreach grant. They have been a consistent partner and have been an employer and placed a CHW in their clinic. They have been active participants in the program and board meetings for the program. They have also integrated the CHW as an important part of care

**Alcona Health Center (AHC)** has also been actively involved in the project for the entirety of the program including full participation in monthly board meetings. AHC employs two CHWs for the program, one placed in their Oscoda Clinic and one placed in the western part of our service area in West Branch.

**Primary Care Inc.** has been a recent addition to our RHO program, they have clinics placed throughout our five-county service area. They have started full participation in the program, attended monthly meetings and have communicated the new service line with their clinics.

**District Health Department #2** has been a recent addition to our RHO program, they have sites placed throughout our five-county service area. They have started full participation in the program, attended monthly meetings and have communicated the new

service line with their clinics. They have also offered space in one of the sites to make the CHW more accessible to patients and community members.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Our program has assisted over 400 individuals and their families in our five-county service area. We've collected data on where they come from by county, who referred them to our program, what type of insurance they have (if any), also broken down by age, gender and the services they have sought from our program. I've included some other findings from the Foundation grants we've received funding from and also some success stories from our patients/clients. The local Foundation grants allowed the program to help with additional resources such as personal care items, with our clientele. There was a trend from the beginning of our program that in addition to needing resources on chronic illness, there was a huge need for items that aren't covered by state programs, items like deodorant, cleaning supplies, shampoo (lice shampoo and dandruff), bar soap, laundry detergent and much more. During our participation, we were able to help over 230 individuals and families.

**May 2014-** A 28 year old male was referred by his NP at a partner site to the 16 week DTTAC (Diabetes Training and Technical Assistance Center) Program to Prevent Diabetes. He has Cohen Syndrome which is a rare inherited, genetic disorder, 1000 cases known. These patients have developmental delay, intellectual disorder, arms and legs are slender with obesity around torso, small head size, weak muscle tone, etc. There is no cure, just supportive care, and unknown lifespan. He is at great risk for diabetes because he has a strong history of diabetes in his family, including his Mother who is an uncontrolled diabetic. Client weighed 253 # at beginning of class, he's 5'6", and had a BMI of 40.9. He skipped breakfast, ate large portions and a lot of high calorie saturated fat foods. Neither were walking or doing any form of exercise.

This class required he document his weekly weight and count/track every food and beverage he consumed. He is unable to write so his Mother tracked and documented this information and came to every single class with him. Because his Mother is diabetic she wanted to participate but counted carbohydrates and recorded in her tracker too. Both of them offered and shared information during class and were enthused to attend.

At the end of 16 weeks both client and Mother were eating 3 times a day, smaller portions, foods low in fat, low in calories and established an exercise regime. Client lost 12# and his Mother lost 27#. Both were thrilled with their weight loss and lifestyle changes. We had 3 monthly follow up meetings, they were still losing and asking when the next class would begin as they wanted to tell others.

**October 2014-** A client referred by DHD#2, Women's Clinic as she had no insurance. She has diabetes, hypertension, high cholesterol and a BMI of 27.8. She had no diabetic, hypertension, or cholesterol education nor was on a diabetic diet. She injured herself and was off work for an extended period of time. She was given a return to work release with limitations and was told they didn't have a job for her as there had been administrative changes in her time away. She was going to a local free clinic for her health care needs. She was able to collect unemployment for a while but it did run out. She and her family were living on social security of \$1693/month and were having great difficulty making ends meet. She had \$4,000 in medical bills had been turned into collections. She had to see a cardiologist who ordered labs, a Holter monitor, etc. so she now has those medical bills as well as other lab, physician, hospital bills and ER bill as well that she was trying to pay on. Her prescription charges have been increased making them unaffordable. She reported her husband has ten credit cards that she did not know about in excess of \$8-\$10,000 that he owes and has been making payments. She drives a 1996 Ford Explorer which always is in need of repair. At one point she did receive food commodities but doesn't know where to go for that now. Her last diabetic eye exam was in 2004. She also has sleep apnea and uses a C-Pap. She has gotten diabetic supplies from Health Access, which is a medical/prescription assistance resource in the local community.

- The couple was referred to their bank and credit union for a recommendation to a reliable source to help to consolidate the ten credit card bills.
- Contact was made churches for food commodities and was successful.
- Assisted with the application for food assistance with DHS.
- Assisted with contacting Quest Lab and Advanced Diagnostics and was able to get one bill reduced and one written off.
- The couple applied for McLaren's financial assistance program and if client could pay half the bill they agreed to write the other half off...this was done.
- Attempted to work with the organization in order to pay the past due debt off.
- Completed four prescription assistance applications for meds and all were approved.

- Completed Lions application for diabetic dilated eye exam and this was approved.
- Referred to Michigan Works and Experience Works for employment help and suggestions, the couple did follow up on this.
- Provided client with multiple resources related to diabetes, hypertension, cholesterol and weight loss information. Instructed how to read labels, count carbohydrates and use exchanges and reviewed other materials.
- Assisted in Healthy Michigan application, couple was approved.

**April 2013-** A referral from AHC PCP for a 60 year old man who worked as a groundskeeper for a local golf course, but was receiving unemployment and had not started back to work for the season, he was referred to our program because he had no insurance and he had a large lump in his throat. He was very scared because his father had died from throat cancer. This was before Medicaid expansion and the man didn't qualify for Medicaid. A financial assistance application for the local hospital was completed and he was approved to have surgery. The lump proved to be benign and was removed and he was able to return to employment in a few weeks.

**July 2014-** A referral of a 63 year old man was provided by an internal Health Educator. He was diabetic and had no health coverage; he had oral health problems and was pulling his own teeth. A Healthy Michigan application was completed and approved. He has had his teeth pulled by the dental clinic and is awaiting dentures and he follows the diabetic counseling he receives from the health educator. He will be eligible for Medicare in February 2015 and has been enrolled in Medicare D and will continue to be eligible for Medicaid. His health has improved immensely.

A client referred after his wife passed away. He was having trouble with his depression and moving forward. The program and CHW supported him, had ongoing conversations, and developed a work plan with the client along with assistance from an internal behavioral health therapist. Initially the client needed to see the therapist bi-weekly and seeing the CHW monthly to address his needs. He now sees the therapist monthly due to his progress. He also reported he has worked to lose weight and has lost 55 pounds which he reported has made him feel better and decreased his hypertension. The CHW also assisted with applying for disability, medical insurance, utility assistance, and food assistance.

The program received a referral from the local Michigan Works office. He was released from prison after spending all of his adult life there. He sought services/resources related to functioning in the civilian world. This program provided a referral to the internal behavioral health services and medical services. He was connected to Mid-Michigan Community Action Agency for housing assistance, Bay Commitment Access Network to obtain a computer and resources to attend college to become a legal assistant (he is currently working on this degree). He received assistance locating emergency medical services as well as prescription assistance information. He was signed up for Healthy Michigan and located substance abuse rehabilitation services.

### **Community Foundation Grants**

#### **Iosco County Community Foundation**

**May 2013- April 2014, Awarded \$1,000**

**Status: Complete**

The ICCF grant allowed MI-Connect to address basic needs for many low-income or no-income clients by providing individuals and their families in Iosco County and the immediate surrounding area with basic items essential to maintenance of personal health (i.e. shampoo, lice shampoo, laundry detergent, soap, bleach, etc.). We also were able to address our six areas of focus in assisting those individuals with educational materials for depression and diabetes, pedometers and weight scales, first aid kits and related supplies, nebulizers, digital blood pressure cuffs, and gas cards to assist in accessing medical care outside of the immediate living areas. We were able to assist over 50 individuals and families. In addition to this, at our Oscoda office, we have a small food pantry (AHC works with a local supermarket) for individuals struggling to make ends meet. We have partnered with The Iosco County Reduction Coalition to increase the size of our pantry. The United Way has also used us as a gateway and donated items for us to give to those in need. The food pantry has allowed us to help over 75 individuals and families.

**May 2014- April 2015, Awarded \$775**

**Status: In-Progress**

The ICCF grant is allowing MI-Connect to address individuals that have an increased risk for Type 2 diabetes by hosting a preventative educational class to address those at risk, due to the success in the Skidway Lake area in Ogemaw County, the CHW will be starting a six-week course starting in the Spring. Another CHW in our service area, also working closely with the dietician, to help supplement the wellness program with type 2 diabetes related items like fresh produce coupons, gift cards good toward the purchase of walking shoes, books, scales, pedometers, and community memberships for exercise.

**Bay Area Community Foundation**  
**May 2013- April 2014, Awarded \$700**  
**Status: Complete**

The BACF grant allowed MI-Connect to address basic needs for many low-income or no-income clients by providing individuals and their families in Arenac County and the immediate surrounding area with basic items essential to maintenance of personal health (i.e. shampoo, lice shampoo, laundry detergent, toothbrushes, toothpaste, soap, bleach, etc.). We also were able to address our six areas of focus in assisting those individuals with educational materials for depression and diabetes, diabetes monitors and test strips, first aid kits and related supplies and digital blood pressure cuffs. We were able to provide assistance to 148 families in Arenac County.

**B. Recognition**

We have been recognized in the local paper for contributing/participating to community events and also through the local Chamber of Commerce for contributing/participating in local events. The Michigan Community Health Worker Alliance in partnership with the University of Michigan and Michigan Primary Care Association has also provided recognition of the program on their website and at conferences they attend, participated in, and host. The program has been acknowledged by the Iosco County Community Foundation twice as grant recipients as well as the Bay-Arenac Community Foundation.

**Part VI: Challenges & Innovative Solutions**

A significant challenge faced was finding the right employment fit for the Community Health Worker position within a site, mostly the challenge was the difficulty to recruit and retain. We continued to strive to ensure that our application process was very thorough. This was more prevalent in just one of the partner sites. At this time, however, we have stable employment in all three sites. The ebb and flow of the Network partnership was, at times, challenging. When the program was funded, the Network consisted of three partners. Due to leadership/administrative restructuring, we lost an organization but quickly recruited a Health Plan to participate in the network. After the implementation of the Affordable Care Act, the health plan dissolved, leaving an opportunity to recruit an organization that shared a similar mission and vision as the Network. We began reaching out to organizations with goals that aligned. The Network recruited two new partners, one of which is new and the other, we were able to secure through our past collaboration. We continue to grow and maintain a solid membership with commitment to move forward with sustainability and future opportunities.

**Part VII: Sustainability**

**A. Structure**

All four partners will be continuing in the project at least for the upcoming year, and have all made commitment to sustain the program. The partners will be absorbing/institutionalizing the CHW program into their budgets.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

We plan to continue the program by having the three positions remain full-time positions and continue the outreach activities that we have done over the last few years. We do have an approved carry over that will take us into 2016, after that, the partners will be absorbing the costs of the program. We will continue to serve our five-county service area.

**C. Sustained Impact**

The program staff have worked very hard to become known in the community, because of their hard work....the community knows there is a resource that they can count on to help with their needs and resources. Our outreach activities have helped provide a foundation as we have been consistently visible in the community. The training, dedication and service provided by the program, CHWs and Network partners will continue to positively impact those we serve. We continue to solidify relationships with our community, patients and like-minded organizations to better the rural environment that we live in. As a result of the program, we

were able to offer life-changing resources, like medication, food, laundry detergent, shampoo for the young child that came home from school with lice and the grandparent taking care of that little kiddo couldn't afford to buy it....just a few reminders to ourselves and others, what we do, has changed someone's life forever.

## Part VIII: Implications for Other Communities

Based on our outcomes, other communities and/or agencies can learn from our trial and error. They can see where the needs are based on what we've captured during the process from our patients/clientele. It would be beneficial for other agencies, when they're developing their program, to make sure that they are set up to capture more information than needed sometimes, as it may come in handy for reporting purposes. In hindsight, it was more of a challenge than anticipated to implement the CDC diabetic program. It wasn't the right adaptation for our community and partners. Luckily, the program was tweaked to fit the needs of our community and having successful outcomes with our revised class. Lastly, be flexible, be open...partnerships change, it can take you to a newer and stronger place.

# Michigan

## Upper Great Lakes Family Health Center

Part I: Organizational Information	
Grant Number	D04RH23623
Grantee Organization	Upper Great Lakes Family Health Center
Organization Type	Federally Qualified Health Center – Outpatient Clinics
Address	135 E. M 35, Gwinn, MI 49841-9160
Grantee organization website	<a href="http://www.uglhealth.org">www.uglhealth.org</a>
Outreach grant project title	Cross-walk: Integrating Behavioral Health within the Primary Care Setting
Project Director	Name: Donald A. Simila
	Title: CEO
	Phone number: 906-483-1325
	Fax number: 906-483-1394
	Email address: <a href="mailto:Donald.Simila@uglhealth.org">Donald.Simila@uglhealth.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Upper Great Lakes Family Health Center	Gwinn/Marquette/Michigan	Federally Qualified Health Center (FQHC) - Outpatient Clinics
*Great Lakes Recovery Centers	Marquette/Marquette/Michigan	Non-profit behavioral health/substance abuse organization.
*Upper Peninsula Health Plan	Marquette/Marquette/Michigan	Medicaid Managed Care Plan

### Part III: Community Characteristics

#### A. Area

The Upper Great Lakes Family Health Center's program, Cross-walk: Integrating Behavioral Health within the Primary Care Setting, provides services to the entire rural county of Marquette in the state of Michigan.

#### B. Community description

The majority of patients served by Cross-Walk are represented by seven townships in southeastern Marquette County: Ewing, Forsyth, Richmond, Sands, Skandia, Turin, Wells, and West Branch. The two Upper Great Lakes Family Health Center (UGL) clinics within the focus area share provider staff and are seven miles apart. One clinic is within a housing community of K.I. Sawyer; the second is in the town of Gwinn.

The seven township focus area surrounds the decommissioned K.I. Sawyer Air Force Base - a population of 11,062, with a density of 15.2 people per square mile. In the years since the based closed, this once-thriving area has lost industry, high paying jobs, residents, and health care resources. Young individuals and families have been attracted to the low income housing within K.I. Sawyer and represent a population with low income, high poverty, and high uninsured rates. Median family income within the seven township area is significantly lower than state and national incomes and ranges from \$31,797 to \$54,643 among the townships. Individuals with lower incomes experience higher rates of chronic illness, disease, and disabilities, and die younger than those who have higher incomes based on the United States Government Accountability Office's January 2007 report "Poverty

in America: Economic Research Shows Adverse Impacts on Health Status and other Social Conditions as well as the Economic Growth Rate”. Individuals living in poverty are more likely than their affluent counterparts to experience fair or poor health and/or suffer from conditions that limit their everyday activities. While publically unproven, it is generally accepted that the decommissioned air force base provides accessible landing sites for drug runners, and that the area has a higher crime rate than the rest of Marquette County.

### C. Need

Residents of the service area are susceptible to undiagnosed, untreated and undertreated behavioral health issues as a result of their demographics and limited accessible resources. As well, they have limited access to behavioral health specialty treatment services which results in less than optimal compliance rates with referral follow-through and treatment regimes. Primary health care in the service area is not well positioned to adhere to best practices for integrating behavioral health and primary care services. Individuals living in poverty are more likely than their affluent counterparts to experience fair or poor health and/or suffer from conditions that limit their everyday activities. Health problems of the vulnerable populations relate directly to depression and substance use/abuse. Low socioeconomic status (SES) is generally associated with high psychiatric morbidity, more disability, and poorer access to health care. Among the patients served by UGL there are many uninsured, unemployed, underemployed, and families living in poverty. For this reason, it is imperative that the residents and service providers come together to design a health system with the potential to provide accessible primary and preventive care for the health of the community.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Partners for this project adapted the *Four Quadrant Clinical Integration Model and Evidence-Based Practices* (Four Quadrant Model) within a rural setting to address depression and substance abuse for UGL patients ages 13 and older. The Four Quadrant Model is a well-known and widely adopted conceptual system-wide framework developed by Barbara Mauer under the auspices of the National Council for Community Behavioral Healthcare. It focuses on Evidence Based Practices (EBPs) currently under development by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Health Resources and Services Administration (HRSA), as well as referencing other work in public and private healthcare sectors. The Chronic Care Model (CCM) is useful in all quadrants, because the CCM integrates the concept of a registry and tracking of health status, with interventions geared to the appropriate level given the risk and complexity status of the individual.

The Four Quadrant Model was selected for its ability to foster a collaborative system of care which integrates primary care providers and behavioral health providers as partners in treating a person's physical health risk with his/her behavioral health risk. This model allows for co-location to reduce challenges and barriers of integration and patient compliance with treatment recommendations. It uses evidence-based tools for all populations (PHQ-9, CAGE, DAST-10, CRAFFT, PSC-Y). It provides a framework for the proposed project to use evidence-based screening tools at routine health care visits.

Case Management for chronic medical conditions was incorporated into the project's four quadrant model of integration as quadrant one reflects primary care, quadrant two reflects BH, quadrant three reflects care/case management and quadrant four reflects the integration of both BH and care/case management. A graphic of the Four Quadrant Model is provided on the following page. Shaded areas indicate the adaptations made by the partners of this proposal to appropriately serve the target population. The partners named the adapted model "Cross-walk".

### B. Description

During the second year of the Crosswalk grant, (2013-2014) UGL received a supplemental grant in the amount of \$25,000 to provide outreach and health insurance enrollment services to uninsured and underinsured community members in Marquette County. This grant funded UGL the opportunity to hire an application counselor (0.75 FTE) who then successfully completed federal training requirements related to this role within the first few weeks on the job. Grant funds provided the application counselor necessary materials such as a laptop and printer to perform outreach and enrollment activities. The Crosswalk Council worked with the application counselor to develop a written outreach plan which defined activities to be implemented within the clinic as well as Marquette County communities. Group education and promotional activities were conducted in concert with other community resources which ensured an audience and assisted with collaborating efforts among community organizations. Venues consisted of public libraries, community centers, health fairs and community events. Efforts were coordinated to reach the community through various media outlets such as newspaper, radio, TV and social media (Facebook and Twitter). Additionally, posters, brochures, and flyers were developed and placed in key locations throughout the community and mailings were generated to reach those most likely to benefit from enrollment services.

The application counselor educated clinic staff about enrollment services provided through the supplemental grant. Providers and other staff assisted with appropriately identifying potential patients in need of additional financial assistance. The application counselor met individually with uninsured patients who benefitted from assistance with enrolling in available sources of insurance such as Medicare, Medicaid, CHIP and private insurance through the Marketplace. Individual meetings also took place with those identified as being underinsured and additional education and assistance was provided to those recognized as potentially benefitting from UGL's sliding fee scale.

During the third year of the Crosswalk grant, (2014-2015) UGL received another \$25,000 supplemental grant to continue outreach and enrollment activities. Efforts from year two were reviewed and evaluated and all initiatives continued throughout year three. Processes for continuing to educate and involve staff regarding initiatives were conducted more efficiently given the knowledge and experience gained from the prior year.

### C. Role of Consortium Partners

Consortium partners committed to playing an active role in the planning, development, implementation and evaluation of the integrated health care system for behavioral health and primary care services. Partners for this project have been Upper Great Lakes Family Health Center (UGL), a Federally Qualified Health Center, Great Lakes Recovery Centers (GLRC), a non-profit behavioral health organization, and Upper Peninsula Health Plan (UPHP), a Medicaid Managed Care Plan.

UGL, a Federally Qualified Health Center, provided primary care services for residents of Marquette County at two clinic locations- Gwinn and KI Sawyer. UGL primarily focused on serving the low-income, uninsured, underinsured, Medicaid, Medicare, and vulnerable populations. UGL was the lead applicant for this grant and reached out to community-based organizations in search of consortium partners. Once identified, partners met on a monthly basis to further develop, implement and evaluate the integrated health care system as a whole. All developments of the project including clinical operations, quality, finance, outreach, etc. were reviewed and discussed at monthly Crosswalk Council/Integration Committee meetings. Best practice measures were identified on an on-going basis and were intertwined in activities supporting this integration initiative. All partners were actively involved in the development of the sustainability plan and have committed to continuing their involvement at the same level post grant funding.

GLRC is a nationally accredited treatment provider specializing in addiction and behavioral health needs, offering quality substance abuse treatment and relapse prevention services since 1983. GLRC specializes in adult residential substance abuse treatment facilities in Marquette and Sault Ste. Marie as well as the only adolescent residential substance abuse treatment facility for youth ages 12-17 in Upper Michigan. GLRC of Marquette also provides 24-hour on-call mental health consultation and crisis services to UP Health System-Marquette and its emergency department. GLRC has eleven outpatient offices located throughout the Upper Peninsula to serve individuals and families with their specific needs. GLRC is state licensed and nationally accredited by the Commission on Accreditation of Rehabilitation Facilities.

UPHP has been the region's Medicaid Managed Care Plan since 1998. The organization has a network that exceeds 800 providers and has an enrollment of nearly 30,000 managed care members. Managed care product offerings include the Medicaid HMO, MICHild Program and a Medicare Advantage Dual-Eligible Special Needs Plan (SNP). UPHP has been awarded Excellent Accreditation since 2006 by the National Committee for Quality Assurance (NCQA) "for service and clinical quality that meet or exceed NCQA's rigorous requirements for consumer protection and quality improvement" and is ranked 19th among Medicaid managed-care plans in the United States, according to the NCQA Medicaid Health Insurance Plan Rankings 2010-2011.

The Consortium partners committed to the following organizational roles and responsibilities:

UGL: managed the everyday activities and infrastructure for systems of behavioral health integration including administrative responsibilities, fiscal management, medical leadership, and employment of behavioral health director, behavioral health coaches, quality coordinator, medical records staff, billing staff, front office staff and a case/care manager. UGL provided and maintained office space, equipment, supplies and materials (furniture, phones, computers, printers, fax and copy machines and patient education materials) and ensured staff received adequate and appropriate education to support their roles and responsibilities and the on-going commitment to respect patient's rights, responsibilities and privacy. UGL provided performance improvement monitoring and reporting, supervisory support, communication and coordination, development of draft and final documents, actively participated in collaborative efforts with consortium partners.

GLRC: provided UGL behavioral health practitioners access to resources for continuing education, extended training opportunities to UGL behavioral health staff, continued communication and coordination with partners, actively participated in collaborative efforts including attendance at regular meetings, strategic planning and review of deliverables, provided additional support and

resources deemed necessary for on-going project success and ensured a continued commitment to collaboration post grant funding.

UPHP: employed case/care manager(s) to coordinate care for all Medicaid, Healthy Michigan and Medicare/Medicaid UGL patients, continued communication and coordination with partners, actively participated in collaborative efforts including attendance at regular meetings, strategic planning and review of deliverables, provided additional support and resources deemed necessary for on-going project success, provided on-going education for UGL behavioral health staff and ensured a continued commitment to collaboration post grant funding.

Consortium partners entered into this partnership with the intent to prove this project is self-sustaining and partners have been committed to demonstrating collaboration efforts that will serve as a model for Michigan and beyond. SAMHSA has recently acknowledged the time, efforts and outcomes as a result of this project and the Integration Committee has been invited to present program successes to a national audience.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Overall, consortium partners and staff are pleased with project outcomes. A majority of our objectives were met and exceeded. A recent survey indicates UGL Board of Directors, consortium partners, administration, providers and staff have demonstrated close collaboration in an almost fully integrated system where behavioral health staff and primary care staff share the same site, the same vision and philosophy to treat each patient as a whole. The final level to successfully advance to full integration will occur when primary care and behavioral health are able to share the same electronic health record.

Throughout the development of this project, lessons learned include the importance of having an educational system in place to support new and current employees with understanding the cultural impact of integrated care. Efforts to explore new and innovative ways to educate individuals on an on-going basis will continue.

Project success is attributed to the communication, involvement and dedication of patients, staff, community members, consortium partners and guidance from the UGL Board of Directors throughout the development and implementation of activities. The commitment to improve the quality of life for our communities has been well received as is evident based on audit results, patient surveys, focus groups and one-on-one feedback.

Statistical information reflecting current progress is as follows:

- 76% of patients screened for depression
- 68% of patients screened for substance abuse
- 68% Improvement in depressive symptoms
- 51% reduction in substance abuse symptoms
- 381 patients referred to case management (2 yr. period)
- 95% of patients are compliant with treatment plans
- 58% of patients surveyed report improvement in well-being as a result of integrated care

### B. Recognition

UGL was awarded a Blue Cross Blue Shield grant in the amount of \$100,000 to further assist with efforts. UGL was asked by SAMHSA/HRSA to present a webinar on UGL's integration initiatives.

## Part VI: Challenges & Innovative Solutions

The first challenge addressed was the stigma patients had about counseling. Providers experienced resistance from patients when counseling was initially recommended. The team then implemented "warm-hand-offs" where the provider would personally introduce the patient to a behavioral health practitioner. Patients struggled with warm hand-offs to behavioral health practitioners. The title of the behavioral health practitioner was then changed to "health coach". Providers then explained to patients that the health coach would teach them skills to help cope with referral issues. As a result, patients became more open and willing to have a warm hand-off and/or a direct referral to a health coach.

The second challenge addressed was patients not showing for scheduled behavioral health appointments. The cross-walk/integration committee agreed to implement a "Plan, Do, Study, Act" (PDSA) quality improvement project for BH Medicaid no-show appointments.

Activities planned, implemented and studied were; implementing an automated reminder call system, personally reminding patients with a call 1-2 days prior to their appointment, increase warm hand-offs by educating providers and reinforcing process with staff during morning huddles, and using dialectical behavioral therapy skills with patients when scheduling appointments. As a result of these efforts, the no-show rate reduced from 33% to 27% in the next quarter.

The third challenge encountered was successfully implementing and providing group treatment visits. Various attempts were made to increase patient interest. There was a group meeting developed for adults with pain, another one for adults with diabetes, and yet another one for adults with anxiety. Efforts to provide a variety of group treatment visits failed as adults continued to demonstrate a lack of interest. A request from the local school encouraged UGL to provide adolescent group treatment visits. Recognizing adolescents may embrace the opportunity to participate in a group setting, attempts were made to cater to this particular age group. Adolescent patient input was solicited to identify barriers and UGL staff made accommodations to provide group treatment opportunities at different times of the day. Food was used to “bribe” or entice adolescents and adults to participate. Bus tickets were offered for transportation and mileage reimbursement was made available to patients with UPHP insurance. Despite best efforts, patient interest and attendance was non-existent and as a result, group treatment visits were discontinued.

Another challenge was the implementation of tele-psychiatry. Although the concept to expand this service to the community was sound, the ability to coordinate the process took more time and effort than initially envisioned. UGL reached out to five different psychiatric entities: three local facilities and two distant facilities. MSU agreed to contract with UGL during the second year of the project. However, an unexpected staffing change occurred at MSU resulting in their inability to contract with UGL for tele-psychiatry services at that time. UGL began to investigate options again in April 2014, the second year of the grant. In the fall of 2014, MSU contacted UGL and proposed several options associated with tele-psychiatry. Ultimately, UGL decided to partner with MSU again. However, several months were spent revising details pertaining to contract specifics. Once resolved, more time was needed to investigate billing options and develop, educate and implement policies and procedures related to tele-psychiatry.

An additional challenge was the integration of primary care and behavioral health records. UGL’s proposed solution for an integrated record keep system for all UGL clinics is eClinical Works (eCW). Once eCW is implemented, behavioral health records and medical health records are stored and secured separately ensuring appropriate access and confidentiality of patient information.

Lastly, behavioral health staff recognized challenges with clinical education and patient communication. Generally, there is a different understanding of how best to communicate with patients based on providers’ past experiences. The same can be said for nursing staff as well. As a result, motivational interviewing methods are now used for educating clinical staff. This technique has been adapted to help them recognize the patient’s strengths and using these strengths to assist the patient with accomplishing their health goals. However, using motivational interview techniques is a new skill set for many staff and with all new skills it takes time to incorporate into practice.

## Part VII: Sustainability

### A. Structure

Consortium activities will continue as is with the following partners: Upper Great Lakes Family Health Center, Great Lakes Recovery Center and Upper Peninsula Health Plan. Partners will continue to meeting on a monthly basis as UGL explores opportunities to improve the integration of primary care and behavioral health services available to patients in the primary care setting. Continued support from the local hospital, health department, Michigan State University tele-psychiatry department and consortium partners will assist solidifying program developments to ensure integration services are self-sustaining.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

#### **Integrated Care Initiatives:**

- **Screening Patient with Evidence Based Tools:** Primary care staff and behavioral health staff shall continue to identify and serve individuals in need of behavioral health services by utilizing evidence based tools. Patients will continue to have a warm hand-off from primary care providers to behavioral health practitioners when available and coordinated care will continue to be fostered by a team approach to serving patients’ needs.

- **Case Management:** Efforts to coordinate care for patients' overall health and well-being shall continue. Consortium partners have recommended UGL consider revising the job description and responsibilities of the case management position to follow more of a case management model that integrates care coordination and collaborates internal and external resources to meet all payer requirements and maximize reimbursements. UGL is in the process of fine tuning the role of the case manager to ensure all aspects of the position benefit the entire scope of integrated care initiatives.
- **Educating Staff, Patients and Community Members:** UGL board members, consortium partners, UGL administration, behavioral health practitioners, case managers, medical providers and staff shall continue to educate patients and community members about the advantages of integrating primary care and behavioral health services and the availability of experienced coordinated care at Upper Great Lakes Family Health Center.
- **Individual & Family Counseling:** Behavioral health practitioners shall continue to provide individual and family counseling. These services have proven to be beneficial as is demonstrated by patient surveys and audit results indicating patient's depressive and/or substance abuse symptoms have decreased. Furthermore, counseling has proven to be a viable source toward financially sustaining integrated care efforts.

### Overall Initiatives

- **Continue to Develop and Perfect Shared Vision & Philosophy:** Throughout the development of this project, consortium members learned to keep an open mind about what they were trying to accomplish. Throughout various stages of implementing activities, minor enlightenments slightly transformed thoughts and beliefs as to the best means of serving the patient population. The open mindedness and flexibility partners demonstrated allowed initiatives to move forward with a better understanding and deeper support system in place.
- **Promote Integrated Team Model of Care:** Building and fostering relationships with team members directly involved in patient care assists greatly with promoting and practicing a team model of care. It is critical for team members to understand each person's role and recognize each member's various responsibilities in order to work together effectively as a team. Communication is essential in the development and on-going success of working in a team model environment of care.
- **Routinely Assess Policies, Procedures & Protocols:** As the definition of health care continues to evolve, so must systems designed to support overall health care initiatives. It is essential to continuously review policies, procedures and protocols to ensure the safety, health and well-being of patients and staff.
- **Assist Individuals with Access to Health Care Services:** Initiatives will continue through various outreach efforts to educate under insured and uninsured patients with regard to the availability of services. This includes but is not limited to educating individuals about health insurance resources, promoting opportunities for personal assistance and providing tools necessary for individuals to access available services via telephone or on-line. By expanding individual's eligibility, more people will have the ability to have their behavioral health and primary care needs met.

### **C. Sustained Impact**

This project created a new opportunity for primary care staff and behavioral health staff to come together to collaborate coordinated care and ensure patients are being treated as a whole. Using mutually agreed upon evidence based screening tools, the patient, primary care provider, behavioral health clinician and care manager work together in treating the needs of the patient. Because behavioral health services are now available and embedded within the primary care setting, collaboration and patient care are seamless, thus strengthening the well-being of the patient.

Institutional policies and procedures have been revised and/or developed as a result of implementing this project. The orientation program for new employees has been revised to include an educational session about integrating behavioral health services within the primary care setting. Policies have been revised to combine best practices for integration team members regarding confidentiality, care management and referral process. The procedures for educating new hires, and screening patients using evidence based screening tools during wellness exams, new adolescent appointments and sports physicals were developed to assist with identification, assessment, referral and treatment will be sustained beyond the grant. As a result of implementing these procedures, UGL primary care providers have changed their attitudes towards the integration of behavioral health services within the primary care setting as demonstrated in the day-to-day clinic operations as well as in annual provider survey results.

All primary care clinical staff, care managers and providers have been trained in Motivational Interviewing and Dialectical Behavioral Therapy skills to be used with patients who have been identified as having chronic diseases, depression, and/or substance use issues. All staff have been educated regarding confidentiality requirements specifically related to mental health and substance abuse (Federal Rule 42 CFR Part 2) and Behavioral Health practitioners and staff learned about HIPPA rules and regulations. UGL coders and billers learned how to determine eligibility for mental health services by expanding their knowledge of CPT codes and learning the authorization and re-authorization process for behavioral health benefits. Behavioral Health coaches expanded their knowledge by learning more about chronic diseases, medical symptoms and medications.

A new working relationship has developed with the local community mental health agency "Pathways". Consortium partners evaluated local resources and determined Pathways was a valuable ally with whom efforts should be combined. As a result, Pathways has joined the Integration Committee (formerly known as the "Crosswalk Committee") which oversees and coordinate all activities regarding this integration project. Pathways provides invaluable knowledge and gives direction regarding behavioral health consultation and their active involvement will continue beyond the grant period.

Care management services from UPHP have been strengthened. As a result, referrals and care management services for UGL patients with Healthy Michigan benefits have increased. A new referral process for behavioral health and care management services with UPHP was developed to assist with the coordination of care for patients at the UGL clinics and will be sustained beyond the grant period.

Purchased resources for the project such as tele-health equipment, LCD projector, Behavioral Health educational books and patient education materials will remain in the community and will continue to be used by UGL staff and providers for medical and behavioral health services and patient/community education.

## Part VIII: Implications for Other Communities

Other communities would benefit greatly by implementing a similar integration program. Positive outcomes for the community include:

- Patients returning to work
- Increased employment as a result of healthier individuals
- Patients improving their personal relationships and social life
- Decrease substance abuse
- Decreased domestic violence
- Increase in student's attendance at school
- Decrease in students dropping out of school
- Reduced suicide risks
- An increase in awareness of depression, alcohol and drug use and local resources that are available to assist with interventions
- Improving health outcomes
- Increasing life spans
- Improved working relations amongst clinic staff to better support patients

As others consider developing and implementing similar programs, suggestions include identifying a solid method for measuring, reviewing and evaluating progress throughout implementation and beyond. Recognizing baselines and communicating progress is vitally important to analyzing data and further determining on-going efforts.

# Michigan

## Western Upper Peninsula Health Department (WUPHD)

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23624
<b>Grantee Organization</b>	Western Upper Peninsula Health Department (WUPHD)
<b>Organization Type</b>	Local (five-county) public health department, a special unit of government in Michigan
<b>Address</b>	540 Depot Street, Hancock, MI 49930
<b>Grantee organization website</b>	<a href="http://www.wupdhd.org">www.wupdhd.org</a>
<b>Outreach grant project title</b>	CATCH-UP (Coordinated Approach to Child Health in the Upper Peninsula)
<b>Project Director</b>	Name: Ray Sharp Title: Manager, Community Health Promotion Division Phone number: 906-482-7382 ext. 163 Fax number: 906-482-9410 Email address: <a href="mailto:rsharp@wuphd.org">rsharp@wuphd.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000 May 2013 to April 2014: \$150,000 May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Bessemer Area Schools	Bessemer, Gogebic County, Michigan	Local public school district
*Baraga-Houghton-Keweenaw Child Development Board	Houghton, Houghton County, Michigan	Non-profit education organization
*Copper Country Intermediate School District	Hancock, Houghton County, Michigan	Regional public school district
*Dollar Bay-Tamarack City Schools	Dollar Bay, Houghton County, Michigan	Local public school district
*Hancock Public Schools	Hancock, Houghton County, Michigan	Local public school district
*Houghton-Portage Township Schools	Houghton, Houghton County, Michigan	Local public school district
*L'Anse Area Schools	L'Anse, Baraga County, Michigan	Local public school district
*Lake Linden-Hubbell Schools	Lake Linden, Houghton County Michigan	Local public school district
Adams Township Schools	South Range, Houghton County Michigan	Local public school district
Baraga Area Schools	Baraga, Baraga County, Michigan	Local public school district
Calumet-Laurium-Keweenaw Public Schools	Calumet, Houghton County, Michigan	Local public school district
Ontonagon Area Schools	Ontonagon, Ontonagon County, Michigan	Local public school district
Stanton Township Schools	Rural Houghton County, Michigan	Local public school district

## Part III: Community Characteristics

### A. Area

The Western Upper Peninsula Health Department's (WUPHD), Coordinated Approach To Child Health in the Upper Peninsula (CATCH-UP) program served the five westernmost counties of Michigan, the rural, rugged and remote Western Upper Peninsula region, Baraga, Gogebic, Houghton, Keweenaw and Ontonagon counties, in elementary schools located in the towns or villages of Calumet, Lake Linden, Dollar Bay, Hancock, Houghton, South Range, Baraga, L'Anse, Ontonagon, Bessemer, and Stanton Township, near the shore of lake Superior in Michigan's 1<sup>st</sup> Congressional District..

### B. Community description

Michigan's five rural Western Upper Peninsula counties have a population of 70,000 residents, less than one percent of Michigan's population on 10 percent of the state's land area. The region, once a center for copper and iron mining, is now largely devoid of industry and beset by high rates of poverty and unemployment. Each county is a federally designated health professional shortage area for primary care, either for a location, for low income, or for the entire county. Because of emigration by young people seeking economic opportunity, the counties have declining populations and low tax bases, and more than 20 percent of residents are older than 65, compared with about 13 percent in the state and nation. One in ten residents has diabetes, and diabetes death rates are comparatively high. About 23 percent of adults are current smokers and an estimated 12 percent are heavy drinkers, from recent BRFSS data, and as many as 35-40 percent of pregnant women have self-identified as smoking while pregnant in recent years in some counties. Local teens have high rates of alcohol, tobacco and marijuana use according to recent surveys. About 40 percent of teens, and 65 percent of adults, are overweight or obese. Low-income children and adults are less likely to access periodic preventive health and dental care, and have higher rates of chronic disease and depression. There is no YMCA or similar affordable family exercise facility in the region.

### C. Need

The poor rural communities and school districts in the Western Upper Peninsula of Michigan did not have the facilities, equipment, training, policies and environments to support child health and wellness to the extent recommended by current guidelines and best practices for daily physical activity, nutrition, health education and healthy lifestyles. Even at the elementary school level, not all students received daily physical education and opportunities for aerobic and muscle strengthening activities. Schools were struggling with questions of how to comply with new federal school dietary guidelines and how to reconcile the need for healthier nutrition within budget realities. The vast majority of students no longer walked or bike to school, even in the best of weather, due to school consolidation that caused greater driving distances for most families, and concerns about safety on the roadways nearer to schools. And even though the Michigan State Board of Education recommended daily physical education at all grade levels, the pressure to increase the rigor of instruction even at the early elementary levels to prepare for standardized testing created the impression of child health as a distraction, not a core value, even as research was showing that healthier, more physically active children perform better academically.

In this environment, CATCH-UP aimed to improve health and wellness, and reduce childhood obesity and the risk for chronic disease by: providing the CATCH comprehensive child health curriculum, equipment and teacher training, and by creating school health and wellness committees to assess health and nutrition policies and implement Safe Routes to School and other policy, system and environmental (PSE) interventions to make child health programming sustainable in elementary schools and surrounding communities..

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The foundation of the CATCH-UP (CATCH in the Upper Peninsula) project was the CATCH (Coordinated Approach to Child Health) curriculum, which was provided to 12 elementary schools and nine after-school/summer sites, along with CATCH-specific equipment and teacher training.

*From the CATCH web site: "CATCH (Coordinated Approach to Child Health) is the most proven program to prevent childhood obesity and launch kids and communities toward healthier lifestyles. By impacting a child's nutrition, level of physical activity, classroom environment and community, CATCH has changed lives in over 10,000 schools and communities nationwide. CATCH creates an environment that makes healthy decisions fun, and our "Coordination Kits" make it easy for schools and childcare programs to use the program effectively across disciplines. CATCH has the largest evidence base of any obesity prevention program, and is championed by health professionals and school administrators nationwide. The original CATCH study was the*

*largest school-based health promotion study ever conducted in the United States. CATCH continues to be tested and improved by researchers with The University of Texas School of Public Health. More than 25 years of research and real world implementation has gone into this well-renowned, successful program. CATCH has been expanded beyond elementary school and now has programs for early childhood through middle school, including the after-school and childcare settings.”*

We provided CATCH curricula for each grade level and for school policy improvement, and accompanying equipment packs with flags, balls, hoops and other objects used in CATCH physical activity games, and brought in a national CATCH trainer every year to train teachers. Supplementary training and demos were provided throughout the year by our health educators, who visited classes at each partner site and did lessons and “brain-break” activities, brief high-energy games that can be done inside or out, in a gym or classroom space. The program was implemented somewhat differently in terms of fidelity and intensity for each school and individual teacher, based on their interests and needs. Our aim was to provide the knowledge, skills and resources to each teacher in each independent school district. Some teachers were early adopters; others were less likely to fully utilize CATCH.

We bolstered the CATCH model by creating school health and wellness committees in each CATCH school, with participation by administration, teachers and other staff (including food service), parents, students from upper grades, and community members. The aim of these committees was to build support for policy, systems and environmental (PSE) approaches in schools and to sustain PSE changes. The most common platform for beginning PSE work was the nationally recognized Safe Routes to School model. The school health and wellness committee, or a subset thereof, would recruit additional parents and students who live within a mile of the school to form a Safe Routes Team. The schools distributed Safe Routes surveys to parents and students grade 3-5; classroom tallies were conducted for a week for baseline data on student modes of transportation to and from school; and walking and biking audits (tours of the surroundings) were conducted after school to note areas of concern such as lack of sidewalks or appropriate signage. From these findings, plans were formulated using the 5E’s method (Evaluation, Engineering, Education, Encouragement, and Enforcement), with recommendations for school and community changes, including education and awareness campaigns and improved roadways and crosswalks. These proposed engineering projects have been incorporated into city or township master plans, and, in the case of Barkell (Hancock) Elementary School, an enhanced and safer school crosswalk and driveway will be constructed in summer 2015 with funding from the Michigan Department of Health and Human Services and the City of Hancock.

From the Safe Routes to School National Partnership web site: *“Safe Routes to School is a national and international movement to create safe, convenient, and fun opportunities for children to bicycle and walk to and from schools. The program has been designed to reverse the decline in children walking and bicycling to schools. Safe Routes to School can also play a critical role in reversing the alarming nationwide trend toward childhood obesity and inactivity. In 1969, approximately 50 percent of children in the US walked or bicycled to school, with approximately 87 percent of children living within one mile of school walking or bicycling. Today, fewer than 15 percent of schoolchildren walk or bicycle to school. As a result, kids today are less active, less independent and less healthy. With the 2012 federal transportation bill MAP-21, Safe Routes to School is still an eligible program. Communities are using this funding to construct new bicycle lanes, pathways and sidewalks, as well as to launch Safe Routes to School education, promotion and enforcement campaigns in elementary and middle schools. Safe Routes to School programs are built on collaborative partnerships among many stakeholders that should include educators, parent, students, elected officials, engineers, city planners and engineers, business and community leaders, health officials, and bicycle and pedestrian advocates. The most successful Safe Routes to School programs incorporate the Five E’s evaluation, education, encouragement, engineering and enforcement. The goal of Safe Routes to School is to get more children bicycling and walking to schools safely on an everyday basis. This improves the built environment and increases opportunities for healthy physical activity for everyone.”*

## **B. Description**

CATCH-UP provided the evidence-based CATCH curriculum, equipment and professional teacher training to schools and after-school and summer programs, serving some 3,550 children aged 5-12 in 12 school districts by 2015, with nine after-school and summer sites and some 900 students participating in 2012-13, seven elementary schools added for a total of more than 2,400 students in 2013-14, and five additional schools in fall 2014. In each implementation phase, CATCH curriculum and equipment and multiple teacher workshops were provided. Full-day teacher trainings were provided by external certified CATCH trainers, and additional local trainings were led by the CATCH-UP Coordinator and other health educators from grantee Western Upper Peninsula Health Department (WUPHD). More than 100 teachers and after-school and summer workers received training over the three-year grant period. Health department staff also facilitated school health and wellness committees in all schools to assess school and community needs and resources and to help develop policy, systems and environmental (PSE) initiatives to support child and family health and wellness and enhance access to daily physical activity and good nutrition.

The role of the grantee, Western UP Health Department, was to provide CATCH materials and training to schools, to support their efforts by visiting each site on a regular basis to demonstrate CATCH activities in classrooms, and to facilitate school health committees. The health department was the regional coordinator and convener of community partners as well as a direct service provider to teachers and to the target population of children age 5-12. When CATCH program staff visited schools and demonstrated various CATCH lessons and activities, they engaged students in fun and healthy physical activity, added health and nutrition concepts to the content of the games, and demonstrated to classroom teachers, many of whom were not highly experienced with physical education and health topics, ways to incorporate health and wellness into the daily classroom routine. CATCH activities can be performed in a classroom, gymnasium, or playground, and can be adapted and modified to the number of participants and their age and developmental abilities. One of the 12 schools is a special education center where students have a wide range of moderate to severe physical and cognitive challenges, but the CATCH-UP staff and local special education staff found that CATCH has many accommodations for people of different abilities.

In CATCH-UP schools and after-school and summer sites, teachers now incorporate movement and play more often into the daily schedule and integrate health activities and topics into learning across the curriculum. And due in part to recommendations made by school health and wellness committees, school meals are healthier, with more servings of fruits, vegetables and whole grains. Schools have also eliminated sweetened and carbonated beverages and implemented new policies for healthier snacks and foods served at special events. Each CATCH-UP partner also received grant funds each year, based on student counts, to enhance their programs to meet needs identified by the school health committees. Funds were used for a variety of programs and infrastructure improvements, including the purchase of snow shoes, installation of salad bars, and field trips to swimming pools.

In addition to helping 12 school districts implement CATCH successfully, the health department worked with schools and communities to enhance the environment for child and family health with supplemental funding from other public and private sources by leading Safe Routes to School planning, school and community garden development, farm to school nutrition programs, and active transportation policies and plans (including Complete Streets ordinances and non-motorized transportation network plans) in the small towns where schools are located. CATCH-UP partner communities have passed four Complete Streets ordinances, developed three non-motorized transportation network plans, and developed two new farmers markets that accept electronic benefit cards for the federal Supplementary Nutrition Assistance Program (SNAP). The health department has helped six CATCH schools start or expand school gardens which are used as outdoor classrooms where nutrition messages are reinforced through hands-on activities. And new for 2015-16, seven CATCH schools anticipate implementing food tasting and cooking classes for all 3<sup>rd</sup> and 5<sup>th</sup> graders.

### **C. Role of Consortium Partners**

BHK Child Development Board, which provides summer and after-school programs at nine school sites through funding from a federal 21<sup>st</sup> Century Learning Community grant administered by the Michigan Department of Education, and five local public health school districts, met in 2011 to discuss ways to address the burgeoning epidemic of childhood obesity through comprehensive school health policies and activities. Because several coordinated initiatives involving healthy eating and daily physical activity were already under way at the parenting, early childhood and preschool levels, we decided to focus on elementary schools as the next logical step in building coordinated systems for childhood obesity prevention. BHK's "Great Explorations" (GE) after school/summer program at nine sites was chosen for Phase One of program implementation, in fall 2012. In fall 2013, seven elementary schools (K-5 or K-6) were added, and five more schools were added in 2014, bringing the total to 12 schools located in four counties (and serving students in a fifth county, Keweenaw County, who attend school in neighboring CLK Elementary School.)

Partner roles and responsibilities include sending teachers (and school principals or other staff as desired) to CATCH curriculum training and integrating CATCH activities into scheduled PE classes and/or brief fun activities/brain breaks in all classrooms, all grades. Partner schools also recruit members for school health committees, including staff, parents, students and community members such as police officers, city planners, and local food growers. Schools host at least three meetings per year of these school health teams, where they conduct policy scans, improve nutrition programs, conduct Safe Routes to School planning, and other activities to make a healthier school environment. All schools also complied with data collection required for evaluation, including heights and weights every October and April, and surveys of knowledge, attitudes and behaviors of 4<sup>th</sup> and 5<sup>th</sup> graders every April.

### A. Outcomes and Evaluation Findings

CATCH-UP provided the evidence-based CATCH curriculum, equipment and professional teacher training to schools and after-school and summer programs, serving some 3,550 children, aged 5-12, in grades K-5 or K-6, depending on the school, by the 2014-15 school year. The count of 3,550 is for unique individuals served, not double-counting for participants in both school and after-school or summer programs. Some students have been involved for up to 3 years including after school and summer, or two years in schools. The total number of participants for three years was more than 6,000. We implemented CATCH-UP in nine after school programs fall 2012, nine summer sites summer 2013, seven elementary schools fall 2013, and five additional schools fall 2014.

Evaluation included periodic, twice-annual data collection on child BMI, and changes in child knowledge, attitudes and behaviors, analyzed by an independent evaluator. Heights and weights on all students were collected in October and April each year, with help from volunteer nursing students, using an NIH protocol. Student data were entered in coded lists where students were assigned random participant numbers. These identifiers, from master lists, were conserved throughout the project, so that changes in BMI could be evaluated for individuals over time. Students in grades 4-5 also completed on-line surveys of knowledge, attitudes and behaviors twice annually, using the same student identification numbers.

Preliminary data indicate improvements in knowledge, attitudes and behavior from Phase One and Two cohort schools. Data from the 2014-15 school year is currently being evaluated. Students in grades 4-5 have demonstrated gains in knowledge about nutrition and exercise principles and benefits. They also are more likely to consider behaviors like daily physical activity and eating fruits and vegetables to be important for their health. There also seems to be, from last year's school data, a mild effect from the local program of increased fruit and vegetable consumption.

BMI data are less conclusive. To date, we have not observed correlations between program participation and reduction of rates of overweight and obesity. Considering the complexity and multiplicity of factors involved in changes in child body composition over the last three decades, we are not surprised to see no immediate effect of this program, but we see the changes taking place in school nutrition programs and community awareness as necessary steps in what will certainly be not just a program, but a long-term movement, to reduce childhood obesity locally and nationwide.

### B. Recognition

CATCH-UP was featured in several articles in the Daily Mining Gazette (Houghton, MI) newspaper, the region's local paper with a circulation of 11,000. CATCH-UP related projects like Bike to Work Day, Safe Routes to School planning, kids summer mountain biking camps, a CATCH-sponsored triathlon with 200 children in summer programs participating, and a new farm to school program were featured in local media (newspaper, radio and television news.)

Project Director Ray Sharp was one of 26 people from 20 states who were invited to St Louis, MO on January 13-14, 2015, to participate in the Change Lab Solutions National Rural Obesity Prevention Roundtable. He talked about how CATCH-UP, with funding from HRSA, was helping schools and communities make Policy System and Environmental changes to support daily physical activity and good nutrition. Change lab is developing a policy toolkit for rural communities, similar to its National Policy & Legal Analysis Network (NPLAN) materials on community planning and health topics.

## Part VI: Challenges & Innovative Solutions

The chief challenge in implementing a program in 12 independent school districts, each with its own school board, administration and teacher and support staff bargaining units, and in distinct communities with their own ways of doing things, was getting teacher and staff buy-in and program fidelity. WUPHD staff visited schools monthly to demonstrate CATCH activities in several classes or grade levels per visit. This hands-on training for teachers demonstrated to them the ease of using CATCH materials and equipment, and how activities can be adapted to work in cluttered classrooms as well as in larger spaces such as playgrounds and gyms. Teachers reported greater confidence in using CATCH in their classrooms following visits from program staff.

Another challenge was in helping school health and wellness committees to understand that PSE changes are more sustainable and potentially impactful than one-time programs. In order to demonstrate the power of PSE interventions, we began schools working on Safe Routes to School, with its 5E's planning process (engineering, encouragement, education, enforcement, and

evaluation and planning) as an example of how to work across domains for more coordinated changes in policy and environments that support child health.

## Part VII: Sustainability

### A. Structure

WUPHD is the regional leader in school/community obesity and chronic disease prevention assessment, planning and strategies and participates on all school and community wellness committees, including 12 school wellness committees, 8 of which have Safe Routes to School Teams. WUPHD also leads three city or village bike and pedestrian committees that work on policy and environmental strategies to promote safe walking and biking, especially on routes leading to schools. Schools and city councils are autonomous units that make policy decisions based on local needs and budgets, not under the direction of any consortium, but regional assessment and planning by the health department ensures that resources are shared as appropriate and that complementary strategies are undertaken.

At the health department, Ray Sharp coordinates all community health promotion programs with a staff of six workers, which has tripled from two workers to six over the last three years. Principal programs include Safe Routes, Local Food System Development, Active Transportation/Complete Streets, SNAP-Education, and evidence-based substance abuse prevention. The health department serves five counties with a population of 71,000. Sharp is a division manager who reports to the Health Officer/Administrator. WUPHD is a special unit of regional government overseen by a board of county commissioners from the constituent counties. Sharp manages \$0.5 million annually in health education programs funded primarily by state, federal and private grants.

A broad array of partners work with WUPHD on various aspects of child health and wellness, obesity prevention and health promotion, through policy, systems and built environment changes (PSE) and by sustaining direct health programming in area schools using CATCH curriculum, training and equipment. Western UP Health Department provides consortium leadership.

Partners include:

12 School (and their school health and wellness committees) : Adams Township Schools (South Range Elementary School); Baraga Area Schools (Baraga Elementary School); Bessemer Area Schools (Washington Elementary School) ; Copper Country Intermediate School District Learning Center; Calumet-Laurium-Keweenaw Public Schools (Calumet Elementary School) ; Dollar Bay-Tamarack City Schools (Thomas R. Davis Elementary School); Hancock Public Schools (Barkell Elementary School); Houghton-Portage Township Schools (Houghton Elementary School); L'Anse Area Schools (C.J. Sullivan Elementary School); Lake Linden-Hubbell Schools (LL-H Elementary School); Ontonagon Area Schools (Ontonagon Elementary School); and Stanton Township Schools (Earl B. Holman School). Community, Government and Health Care partners include: Aspirus Hospitals in Laurium, Ontonagon and Ironwood Baraga County Memorial Hospital; Calumet Village Bike and Pedestrian Committee; Hancock City Bike and Pedestrian Committee; Houghton City Bike/Pedestrian Committee; Keweenaw Co-op Natural Foods Store and the Food Day Committee; NorthCare Substance Abuse Prevention Program; Superior Health Foundation (UP-Wide Smiles Fluoride Project); UP Food Exchange (with Marquette County Food Co-op and Michigan State Extension); UP Health System-Great Lakes Family Federally Qualified Health Clinics; and, Western UP Food Hub and Farm to School planners .

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

CATCH curriculum will be sustained through established partnerships in schools and community groups. Schools will continue to have visits through the Western Upper Peninsula Health Department to promote physical activity and nutrition as outlined by the CATCH curriculum. Brain breaks have been proven to give students an opportunity for 10 to 20 minute breaks from the school K-5 curriculum to provide mental stimulation and creating better learning capacity.

The farm to school program providing fresh and nutritious local food to Adams Township School District and the Cooking with Kids curriculum in classrooms at South Range Elementary School will continue and be implemented in six other area school districts, pending SNAP-Ed funding. School wellness committees that include city managers, police departments, school administration, teachers, parents and students will work on policy changes and wellness activities that will continue a healthy climate change in all 12 school districts. Dental fluoride rinse programming has been created to provide weekly fluoride rinses to prevent tooth decay grades K-6 in all area schools with trained school staff and parent volunteers to sustain the program with funding from a regional health foundation for supplies.

In 2015, WUPHD is funded by Michigan Department of Health and Human Services for Building Healthy Communities projects including safer sidewalks and crosswalks in Houghton and Hancock, a school garden and hoop house at Jeffers School, work on Complete Streets policies in Calumet, Bessemer and L'Anse, and a non-motorized plan for Hancock. Farm to school training offered to all schools and local growers is planned for April in Ontonagon. In June, teachers will learn about integrating gardening into curriculum and learn to compost and build low-tunnel hoop houses. We are pursuing funding for 2016 to continue Building Healthy Communities PSE initiatives, and to expand SNAP-Ed funded Cooking with Kids to nutrition lessons to additional schools. We also are seeking increased Safe Routes funding for walking school buses and bike trains.

### **C. Sustained Impact**

Our goal with CATCH-UP has been to develop a culture of health and wellness in elementary schools, and to engage school and community partners to build relationships and work together to implement policy, systems and environmental changes that support healthy choices. We hope the long term impacts will go beyond the changes in knowledge, attitudes and behaviors of students who participated over the last 1-3 years. Schools and communities are working to improve the safety of streets and neighborhoods for pedestrians, and working with local farmers to increase the use of whole foods, including fresh fruits and vegetables, in school food service. We envision schools where all students are physically active every day and have access to healthy meals and snacks, situated in communities with walkable, bike able streets and access to affordable fruits and vegetables, in short, where the healthy choice is convenient and the norm.

## **Part VIII: Implications for Other Communities**

CATCH is well established as one of the best program models for school health improvement. We believe our contribution to best practice is how we systematically pair CATCH as a classroom program with broader school and community policy, system and environmental change through Safe Routes to School, school gardens, farm to school programs, and other models for school and community transformation, through the establishment of vibrant school health committees with parent, student and community participation.

# Minnesota

## County of Koochiching

Part I: Organizational Information	
Grant Number	D04RH23568
Grantee Organization	County of Koochiching, International Falls MN
Organization Type	County (Public Health and Human Services)
Address	1000 5th St, International Falls, MN 56649-2243
Grantee organization website	<a href="http://www.co.koochiching.mn.us/">http://www.co.koochiching.mn.us/</a>
Outreach grant project title	Universal Home Visiting
Project Director	Name: Ric Schaefer
	Title: Director
	Phone number: 218-724-3312
	Fax number: 866-822-2598
	Email address: <a href="mailto:ricschaefer.sc@gmail.com">ricschaefer.sc@gmail.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Koochiching County	International Falls, MN (Koochiching Co.)	County Public Health & Human Services
Carlton County	Cloquet, MN (Carlton Co.)	County Public Health & Human Services
Lake County	Two Harbors, MN (Lake Co.)	County Public Health & Human Services
Cook County	Grand Marais, MN (Cook Co.)	County Public Health & Human Services

### Part III: Community Characteristics

#### A. Area

Services were provided in the Minnesota counties of Carlton, Cook, Lake, and Koochiching. Minnesota is primarily a rural state, with approximately 30% of the state's population located in urban or metropolitan areas (Minneapolis/St. Paul/Duluth/Rochester) and the remainder residing in rural farmlands in the western and southern parts of the state and along the lakes and forests of the northern region. The service area for this project is the upper, northeastern corner of Minnesota. This area is commonly referred to as the "Arrowhead" region as it encompasses the triangular, arrowhead-shaped portion of the state. The northern edge of this region borders Canada, while the eastern border is the northwestern shoreline of Lake Superior. All four counties (Carlton, Cook, Lake and Koochiching) are predominately rural, with the majority of the terrain comprised of heavily wooded, sparsely populated forestlands. The four counties in this service area range in size from 5,472 in Cook County to 34,327 in Carlton County, with a total combined population of 63,537. Although these four counties comprise less than 2% of Minnesota's population, their combined geographic size is nearly 12% of the state, an area larger than the state of Vermont.

#### B. Community Description

Population density is of particular concern for Cook, Lake and Koochiching counties. Minnesota's average population density is 61.8 people per square mile. Of the 87 counties in Minnesota, Cook County ranks 86<sup>th</sup> (density of 3.6), Koochiching County ranks 85<sup>th</sup> (density of 4.6) and Lake County ranks 83<sup>rd</sup> (density of 5.3). While Carlton County's population density (36.8) is greater than

the other three consortium counties, it is still 50% lower than the state average. Low population density impacts funding for services and contributes to access barriers (increased windshield time, limited workforce, transportation barriers, etc.). While funding formulas consider overall population and demographics, many do not adequately account for population density. As a result, limited funding for services in a large, rural, sparsely populated area does not adequately support start-up costs for programs to address unmet health care needs. Each of the consortium counties has one or two population centers (larger communities) where most of the health care and human service/social service providers are located. However, the majority of county residents (65%) live in rural areas outside of these communities.

The primary population served includes women and children with specific focus on prenatal and postpartum care of mother and child. Contributing factors to need include:

The number of children living in poverty in the four county area ranges from 11.2% in Carlton to 18.3% in Koochiching with a four county average of 13.7% compared to the statewide average of 11.6% (*US Census*). On average, one of every three of children (35%) living in the four county area are enrolled in Food Support (*Children's Defense Fund, 2011*). According to the Minnesota Department of Health, the percentage of births to Native American women is significantly higher in Carlton (12.6%), Cook (14.3%) and Koochiching counties (2.5%) than the statewide rate of 2.1%. The percentage of births to teen mothers is significantly higher in Carlton County (32.1%), Lake County (36.5) and Koochiching Counties (29.2%) than the state rate of 26.6%. The percentage of births to unmarried mothers in the four-county area is also higher than the state average (35.5%) and national average (36.8%) in Carlton (38.2%) and Koochiching Counties (44.5%). The rate of mothers who smoked during pregnancy in each of the four counties is more than double the statewide rate (Cook 19.6%, Carlton 18.7%, Lake 17.9%, Koochiching 25.4%) compared to 9.9% statewide and 10% nationally. The percentage of women receiving prenatal care in the first trimester is lower in Cook (71.8%) and Lake (74%) counties than the statewide percentage (85.9%) and 71% nationally. Two thousand two hundred and twenty-nine women, infants and children in the four counties participate in WIC. 50-70% percent of out of home placements had parents' use of alcohol and drugs as a primary factor in these placements (*county data*).

### C. Need

Project activities focused on serving families at high risk for poor parenting outcomes, including teen parents, low income pregnant women, families involved with child protection services, children with developmental delays, parents at risk for child maltreatment, pregnant women with a history of chemical dependency and parents with mental health issues.

Unmet health care needs of the target population have been identified through analysis of statewide and county-level health statistics, a multi-year regional needs assessment (Bridge to Health) and local surveys distributed to the target population. Data suggests that pregnant women and those with infants/young children in the four county area are likely to be poorer, more isolated/rural than others in the state, less likely to be employed, more likely to smoke, more likely to be Native American, less likely to have prenatal care in the first trimester, more likely to be on medical assistance, more likely to have postpartum depression and more likely to encounter barriers to accessing health care and community based services than others in the state.

The project improves health outcomes for women, infants and children in a very rural, remote and underserved region of northeastern Minnesota by enhancing public health home visiting services through implementation of the STEEP™ program (Steps Toward Effective, Enjoyable, Parenting) and promoting positive parenting through implementation of Seeing is Believing®.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Project partners worked to strengthen and expand service delivery while gathering meaningful program outcome data to enable sustaining service through available funds (county levy support, Temporary Assistance to Needy Families funding, etc.). The project advisory committee considered a myriad of evidence-based programs and promising practices, including Nurse Family Partnership and Healthy Families America, before deciding that STEEP™ implementation was the most feasible option for meeting local needs with available resources. This program was selected for several reasons. It was developed and tested by the University of Minnesota, affordable training and support is currently accessible through the University of Minnesota Center for Early Education and Development, and project partners had already implemented some of the STEEP™. STEEP™ also allows sites to implement segments of the program without requiring stringent fidelity to the original model, unlike Nurse Family Partnership or Healthy Families America. While they have a strong history and strong evidence base, the restrictions to only serving first time parents and the staffing/supervisory requirements were identified as barriers to implementation in this rural region. STEEP™

provides many of the same outcomes – responsiveness to infant cues, stimulating home environment, reduction in child abuse potential, reduction in symptoms of depression, increase in social support, more time between pregnancies and fewer pregnancies – with fewer barriers to implementation and replication of successful program components.

STEEP™ is an attachment-based home visiting and group support program that promotes healthy parent-infant relationships and prevents social-emotional problems among children. STEEP™ supports parents early in the parenting process and prevents costly intervention down the road, where negative patterns and behaviors may become established and more difficult to address. Seeing is Believing® is a stand-alone component of STEEP™ that provides an opportunity for parents to learn about child development and parent-child interaction in a way that is supportive and encouraging through videotaping child/parent interactions.

The four consortium partners used the Omaha System to track outcomes and to demonstrate the impact of this project.

## B. Description

The project offered prenatal and postpartum home visits (based upon STEEP™ guidelines) to all pregnant women and women with infants in each of the four consortium counties.

### Prenatal Visits

Prenatal visits targeted women who were identified as high risk, with efforts made to expand the range of women receiving prenatal visits as resources permitted. Topics covered during prenatal visits include: fetal development, nutrition, risk behaviors (smoking, alcohol use, etc.), labor and delivery, breastfeeding, pre-term labor signs, exercise, newborn characteristics and cares, postpartum characteristics and cares, community resources, prenatal and infant safety (seatbelts, car seats, exposure to lead, etc.), and parenting. The nurses also assessed health history, weight, blood pressure, promoted routine prenatal medical care, and provided support.

### Postpartum/Universal Visits

A minimum of two postpartum visits were offered to all mothers of newborns in each county. Topics covered during the postpartum/universal home visits included a review of the labor and delivery experience, breastfeeding, postpartum physical status, nutrition, emotional status, support systems, fatigue level, role change, contraceptives, blood pressure, community resources, personal safety (domestic abuse), infant safety (car seats, environmental hazards), physical assessment of infant, weight of infant, infant development, immunizations and disease prevention, infant's sleeping, eating, bowel and voiding, infant cues, child development, and positive parenting.

Attempts were made to schedule the first postpartum visits within 7 to 10 days following the baby's birth, with the second visit scheduled one week later. Efforts were made to accommodate the needs and preferences of families participating in the program and to make the program culturally acceptable, "user-friendly" and non-threatening.

## C. Role of Consortium Partners

**Carlton County, Cook County, and Lake County Public Health and Human Services** all implemented Steps Toward Effective Enjoyable Parenting (STEEP™) within a universal home visiting program. Each health department also implemented Seeing is Believing® and the Omaha System for documentation and clinical pathway development. They committed the necessary administrative and public health nursing time to become fully trained and familiar with the process and procedures.

In addition to implemented the program, **Koochiching County Public Health and Human Services** also served as the fiscal agent for the grant.

County Commissioners who serve on the Arrowhead Head Alliance Joint Powers Board provided project oversight.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The consortium partners have implemented the evidenced based Omaha System to track client outcomes. This includes the "Knowledge/Behavior/Status" (KBS) system. The KBS is used as a tool for rating assessments of selected components taken upon

admission and at discharge to include “knowledge” (what the client knows), “behavior” (what the client does) and “status” (how the client is). Ratings are on 1 to 5 scale ranging from “none” to “superior”.

Our project focused on seven specific areas including: Pregnancy, Post-Partum, Caretaking/Parenting, Mental Health, Healthcare Supervision, Income and Residence.

The consortium is still in the process of evaluating data for the entire project. A sample subset (taken in 2014) of clients served indicated improved knowledge, behavior and status in all areas with the greatest improvements in Pregnancy and Post-Partum outcomes.

## B. Recognition

Local newspapers within the consortium member counties published the notice of grant award as reported to individual County Boards.

## Part VI: Challenges & Innovative Solutions

The greatest challenge was collecting and sharing data. Barriers include multiple county systems with dissimilar record storage applications and no common data base. The project partners developed common PDF forms to be used by all consortium members to track data manually. The PDFs are collected and data are entered into an Excel spreadsheet by the Project Director.

## Part VII: Sustainability

### A. Structure

The four original members of the consortium (Carlton, Cook, Lake, and Koochiching Counties) remain members of Arrowhead Health Alliance. In 2012 St. Louis County also joined AHA. The (now) 5 Counties will continue to work together on health and human services initiatives.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Home visiting will continue in all four of the original member counties.

**Koochiching County:** Koochiching County's home visiting program will continue to provide universal maternal and child health (MCH) visits using evidence-based practices. The program will be sustained with continued MCH and TANF grant funds, billing of insurance and county contributions.

**Lake County:** Home visiting will continue under Healthy Families America and Universal visiting. Funding will include a combination of grant funds, third party billing, and county funding.

**Cook County:** Home visiting will continue in Cook County. The specific evidence based or promising practice approach is still being determined.

**Carlton County:** The home visiting programs will continue under the following program areas: Nurse Family Partnership, Healthy Families America, Universal Home Visiting, Family Home Visiting and Young Student Parents Home Visiting. The funding for these programs will come from grants, and third party billing.

### C. Sustained Impact

On a consortium or regional provider level sustained impacts include improved relationships among consortium members, improved knowledge of evidence based and promising practice approaches (STEOP/Omaha), and replicable tools of data collection.

For clients served, current research shows that public health nurse home visitation, especially for pregnant women and families with young children, is effective at helping families improve health status, achieve economic self-sufficiency, improve positive parenting, reduce child maltreatment, reduce juvenile delinquency, achieve maternal goals such as child spacing, education and employment, and establish links to community resources

Studies conducted by the Minnesota Department of Health demonstrate families who receive home visiting services have fewer incidents of child abuse and neglect investigations, are less likely to have children placed outside of the home, use fewer emergency health services, the children have fewer developmental delays and learning disorders and they have fewer arrests and adjudications.

## Part VIII: Implications for Other Communities

The consortium members provide client services in a very rural/rural remote area of the state. Often evidence based systems are not a good fit for rural areas as individual counties or even groups of counties cannot meet the fidelity standards required to participate. We feel other communities could learn from our experience of working together to implement promising practice and evidence based systems using limited resources across a large geographic region.

# Minnesota

## Mississippi Headwaters Area Dental Health Center d/b/a Northern Dental Access Center

Part I: Organizational Information	
Grant Number	D04RH23601
Grantee Organization	Mississippi Headwaters Area Dental Health Center d/b/a Northern Dental Access Center
Organization Type	Community Dental Clinic, Nonprofit
Address	1405 Anne St NW, Bemidji, MN 56601
Grantee organization website	<a href="http://www.northerndentalaccess.org">www.northerndentalaccess.org</a>
Outreach grant project title	Rural Health Care Outreach Grant Program
Project Director	Name: Jeanne Edevold Larson
	Title: Executive Director
	Phone number: 218-444-9646
	Fax number: 218-444-9252
Project Period	Email address: <a href="mailto:Jeanne.larson@northerndentalaccess.org">Jeanne.larson@northerndentalaccess.org</a>
	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,200
	May 2013 to April 2014: \$148,300
	May 2014 to April 2015: \$149,900

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Community Resource Connections	Bemidji/Beltrami/Minnesota	Community association of nonprofit health and human service providers
Beltrami Area Service Collaborative	Bemidji/Beltrami/Minnesota	Consortium of mental health providers
Evergreen Youth & Family Services	Bemidji/Beltrami/Minnesota	Support and resources for homeless and marginalized youth and their families
Northern Dental Access Center, Lead Agency	Bemidji/Beltrami/Minnesota	Nonprofit, community dental clinic

### Part III: Community Characteristics

#### A. Area

This program served the following areas in Northwestern Minnesota:

Counties include: Beltrami, Cass, Clearwater, Hubbard, Mahnommen, Pennington, Polk, Red Lake, Lake of the Woods, Roseau, Marshall, Kittson, Roseau and more.

Communities include Bemidji, Blackduck, Red Lake, Bagley, Fosston, Crookston, Walker, Cass Lake, Kelliher, Thief River Falls, International Falls and more. Area American Indian Reservations are also noted in shaded areas; these include Red Lake Nation, Leech Lake Reservation and White Earth Reservation.

## B. Community description

Northern Dental Access Center serves low-income residents (at or below 200% of federal poverty guidelines) who live in and around Beltrami County. The median household income in Beltrami County is \$44,700. 39.9% of the population live in poverty, the second highest poverty rate of 87 counties in Minnesota and much higher than the national poverty rate of 14.3%.

The health ranking of Minnesota counties shows Beltrami as the 82<sup>nd</sup> healthiest of Minnesota's 85 ranked counties. The county is low density and rural with an average population of 15.7 per square mile compared to a statewide average of 61.8 per square mile. Beltrami County ranks: 85<sup>th</sup> in health behaviors (smoking, diet and exercise, alcohol use and risky sex behavior); 84<sup>th</sup> in social and economic factors (education, employment, income, family and social support, and community safety); and 39<sup>th</sup> in physical environment (environmental quality and built environment). More alarming are rates of HIV infection: 17%; binge drinking: 22%; and physical inactivity: 19%. Sixty-one percent of Northern Dental Access Center patients self-report they smoke; of those, 70% would like to quit. Additionally, according to the US Census Bureau Small Area Health Insurance Estimates, the number of uninsured people in our region is 15%, 50% higher than the Minnesota state average.

## C. Need

This project was proposed as an expansion of services, adding a new, critical patient support service of mental health screening and referrals, which would address a significant barrier to effective patient care. The project's intent was to connect marginalized populations with the oral and mental health care available in our community.

Northern Dental Access Center serves low-income residents (200% of federal poverty guidelines) who live in rural areas in and around Beltrami County. The median household income in Beltrami County is \$44,700 with 39.9% of the population living in poverty, the second highest poverty rate of 87 counties in Minnesota and much higher than the national poverty rate of 14.3%.

This project's focus was to build on the already existing patient advocacy and support services which were made possible through funding by our original HRSA grant in 2009. The community's lack of mental health resources, coupled with our own observations of what contributes to extreme dental anxiety, barriers to attending appointments, and ultimately following through with treatment completion pointed toward connecting the patients we serve to much needed mental health providers whenever possible.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Achieving the goals of this project has required a community-based solution that blends a number of evidence-based practices:

- Ruby Payne Bridges Out of Poverty community framework (*Devol, Payne, Smith, 2006*)
- The 4 C's of Information and Referral (*US Dept of Housing & Urban Development, 2010*)
- Mental Health and Screening Referral Capacity for Children (*Sosna, 2005*)
- The Dental Home Model (*a joint project of The American Academy of Pediatric Dentistry Foundation, Dental Trade Alliance Foundation & American Dental Association, 2007*)
- Community Health Worker Integration (*US Dept. of Health and Human Services, 2007*)

The Outreach project maintained the core successes of the original three-year project: patient advocacy, patient transportation, public health services, child supervision, insurance counseling and a patient advisory group—and expanded to include mental health screening and referrals—the remaining gap that prevents many people in the target population from getting oral care.

### B. Description

The project connects marginalized populations with the oral and mental health care services available in our community. The project adds an expanded safety net beneath the most vulnerable patients and augments dental care with integrated patient support and outreach. Through a consortium of three providers, we serve the target population with dental care, mental health screenings (and referrals where necessary), and insurance counseling and community support referrals to help reduce barriers to care. Program activities provide patient advocacy, patient transportation, information and referral, universal screening of children at Northern Dental Access Center, universal screening of adults at Northern Dental Access Center, referrals to mental health providers for intervention/treatment, internal methods of managing mental health issues/incidents among patients, patient involvement, integrated patient information among providers, integration of Community Health Workers, and insurance counseling.

## C. Role of Consortium Partners

Early on, Beltrami Area Service Collaborative (BASC) was the key agency responsible for educating Northern Dental Access Center staff on how to utilize the mental health screening tool, as well as acted as the main source of information, referrals, and assessments, contacting patients with assessment scores and connecting them with the appropriate mental health professionals as needed.

Community Resource Connections had the role of conducting monthly checks on insurance status for all current patients with inactive coverage to identify gaps in enrollment that could be rectified; offering to assist those patients immediately so they can continue with treatment, and work with area County Health and Human Services departments to manage enrollment issues in a timely manner.

Evergreen Youth & Family Services was added as a consortium partner when key personnel involved with the project from BASC were no longer available. The addition of Evergreen provided an opportunity to connect with marginalized youth and families as well as access that agency's mental health connections and referral resources.

Northern Dental Access Center, the lead agency, provided the basic infrastructure for patient advocacy activities, patient support services, education and outreach, increased access to our mutual target population by other community support agencies, and provided the Performance Management Team to collect data from all involved partners for evaluation.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Our evaluation findings show the project's impacts include:

- 13% increase in patient appointments (*from 2013*)
- 12% increase in new patient registration
- 463 people helped with transportation to appointments
  - Taxi service: 64.78% increase in use 2012-2013, 14.96% increase in use 2013-14
  - Gas Cards: 6.59% increased use 2013-14
- 30% reduction in external referrals for specialty care
- 15% increase in completed dentures
- 32% reduction in patients reporting using the emergency room for dental emergencies
- 18% increase in oral cancer screens
- 984 people assisted with MnSure or Medical Assistance application and enrollment, a 140% increase over 2013
- Over 650 patients received one-on-one assistance in addressing barriers to care (*we call this Patient Advocacy*)
- On average, 100 patients per year receive chemical dependency assessments and mental health screenings
- 99% of patients responding to exit survey questions
  - rate the quality of their dental care as good or excellent;
  - rate the facility as having a welcoming environment as good or excellent;
  - report our staff being friendly, knowledgeable and helpful; and
  - report they would recommend Northern Dental Access Center to a friend or family member

### B. Recognition

Since opening, Northern Dental Access Center has enjoyed broad support and enthusiasm for the collaborative approach to our work. Multiple regional and state awards have been received, including the recent 2014 Mutual of America Community Partnership Award. Mutual of America Foundation's mission is to "recognize outstanding nonprofit organizations in the United States that have shown exemplary leadership by facilitating partnerships with public, private or social sector leaders who are working together as equal partners, not as donors and recipients, to build a cohesive community that serves as a model for collaborating with others for the greater good."

A team from Northern Dental Access was flown to New York City for a luxurious awards banquet, and featured in the Foundation's annual publication. In May of 2015, Foundation representatives visited Minnesota to provide a "Hometown" awards ceremony so that partners could also share in the accolades.

Most recently, the only regional community foundation has informed us of the upcoming 2015 Northwest Minnesota Foundation Award of Excellence. A banquet honoring partners and leadership of Northern Dental Access is slated for May 14, 2015.

## Part VI: Challenges & Innovative Solutions

Since adding mental health screening and referral to the menu of services available at the Access Center, several unexpected changes within the consortium have transpired; the most significant being the internal changes in consortium partner Beltrami Area Service Collaborative. The departure of their Shared Care Coordinator and Executive Director created a leadership challenge that delayed implementation of their activities and ultimately, made this partnership no longer manageable.

To address this challenge, it was determined that Northern Dental Access Center would continue to offer mental health screenings as part of the new wellness program it was launching through the hiring of a part time registered nurse who would enhance our patient support services with child and teen wellness exams, tobacco cessation counseling, blood pressure checks and monitoring, chemical dependency assessments, chronic disease counseling and medical nutrition therapy.

As the registered nurse made the personal decision to pursue collaboration with a local medical practitioner, her commitment to the clinic transitioned from employee to contractor. The scope of her work also changed to conducting chemical use assessments and mental health screenings through a partnership between Beltrami County Health and Human Services and Northern Dental Access Center.

Thanks to the vast number of collaborative partners that Northern Dental Access Center and Community Resource Connections enjoy, it was not difficult to identify a mental health provider to enthusiastically step up as a consortium partner. Evergreen Youth & Family Services is a regional nonprofit that supports homeless and marginalized youth; their street outreach activities were a great match for our desire to connect this population to a dental home and to mental health resources.

Another factor that has had a significant impact on the partnership between Community Resource Connections (CRC) and Northern Dental Access Center is the Affordable Care Act and the MnSure Marketplace (*Minnesota's Insurance Exchange*). As the main resource for Medicaid application support in our clinic, CRC has been heavily relied upon to assist us with ensuring patients can still receive much needed dental treatment. In addition to answering that immediate need, their entire staff are also MnSure Navigators; screening hundreds of patients a year for eligibility for Medicaid, MinnesotaCare, and MnSure programs available through the Affordable Care Act.

As mentioned above, the new access to marginalized youth through Evergreen has added a dimension of direct care that leverages the outreach and patient support investment. In addition to the mental health screenings and referrals, our community based oral health team is able to deliver preventive dental care onsite and connect vulnerable patients to the breadth of support services available to help them stay healthy. Direct access to homeless youth and families has been a great opportunity to reach patients where they are and introduce them to the wealth of resources available to them.

## Part VII: Sustainability

### A. Structure

The breadth and depth of Northern Dental Access Center partnerships are not limited to this consortium. While a formal consortium structure may not remain in place—daily, weekly and monthly interaction will continue as we all serve to reduce barriers to care and decrease the health disparities among our mutual target populations. Our patient outreach and support activities will continue to include these partners:

- Northern Dental Access Center
- Community Resource Connections
- Beltrami County Health and Human Services
- Evergreen Youth and Family Services
- Legal Services of Northwest Minnesota
- Sanford Health
- Veterans Services
- Area Head Starts
- National Children's Oral Health Foundation (*recently granted formal affiliation status*)
- Minnesota Department of Health
- PrimeWest Health
- Assurance Wireless (*free cell phones and service to those in need*)

## B. On-going Projects and Activities/Services To Be Provided

- All elements of the program will be sustained
- Some parts of the program will be sustained
- None of the elements of the program will be sustained

Current Program Activities that will continue include:

- *Patient Advisory Group*: Northern Dental Access Center can continue to support this activity within its operating budget, and where possible, build in some costs into the evaluations of other grant funded projects.
- *Transportation Assistance Services*: Transportation funds for patients can be integrated into other, project specific grants (for example, a grant from Medica Foundation supports patient travel within the activities of a pediatric case management project), as the return on investment is simply too great to ignore. In our efforts to make data driven decisions, this is one program that has proven its worth time and again; as well as being one of the most widely utilized services we offer to our patients.
- *Patient Advocacy Services including insurance counseling, information, education and referral services*: Our ability to provide these services is linked directly to Community Resource Connections and their sustainability as an organization. It is in our best interest to provide (at a minimum) the needed office space and technical support at no cost, as we continue to rely heavily on this partnership that has proven to be critical to helping patients keep appointments for dental treatment.
- *Chemical Use Assessments*: Chemical use assessments for low income patients can still be available through a contract with Beltrami County Health and Human Services which covers the cash outlay of the service; Northern Dental can continue to provide the space for no charge.
- *Performance Management Team Activities (data collection and evaluation)*: The performance management team is and will always be comprised of cross-department team members and is supported by the operating budget of Northern Dental Access Center.
- *Mental Health Screenings and Referrals*: Thanks to our newly formed partnership with Evergreen Youth & Family Services, we are able to continue offering support through cross-agency referrals and connections for area youth and families to mental health providers, dedicated dental appointments for Evergreen's clients, and access to transportation services for mental health appointments. Additionally, Northern Dental Access will continue to support Evergreen and its clients with oral health toolkits as well as oral hygiene supplies at their shelters and drop-in center.

## C. Sustained Impact

The Outreach grant's most noteworthy impact is the effect it has had on helping Northern Dental Access Center solidify its vision in delivering the mission, *providing access to a dental home for those in need*. While the other consortium partners, Community Resource Connections and Evergreen Youth & Family Services, have a long history of providing support and information and referral services, Northern Dental Access Center, in its short 6 years has attempted to instill the same entrenched approach to advocacy, referral and support for its patients, all within a fast-paced, high-stress clinical setting using technically-trained personnel. This Outreach grant, along with the Consortium's open communication, shared resources, and trust, have contributed immensely to the success of Northern Dental Access Center and its future.

Northern Dental Access Center's performance management Team has worked endlessly the past 3 years to create a data tracking system within the dental software program currently in use. While the extra coding can be burdensome at times, the value of knowing the impact the clinic has on patients, the community, and the region is understood and supported by all. Weekly, monthly, quarterly and annual reports are compiled, analyzed, evaluated and summarized by this team; surveys are conducted on patients upon intake, at the end of treatment, on patient advocacy services, and patient satisfaction and are entered into Survey Gizmo for report and analysis by this team. The performance management team also collects and compiles data from consortium partners for evaluation purposes. Ultimately, this team clarifies the return on investment for those who may question the potential dollars spent on non-reimbursable services.

It is this level of measurement and evaluation that allows the organization to make data driven decisions to manage resources in the best interests of all stakeholders. To that effect, transparency and our willingness to share our model and approach with others leverages other investors interested in similar impacts.

## Part VIII: Implications for Other Communities

The patient outreach and support services funded by the first HRSA grant made it possible for us to deliver dental care *differently*, by helping us create a comprehensive continuum of care for children and families in an environment that is welcoming and nonjudgmental.

Lack of community mental health resources in our area combined with passionate leaders and the trust our target population has in Northern Dental Access Center allowed us the opportunity to partner with agencies at the forefront of this struggle and to support those most in need of these limited resources by helping them gain access to the target population within our reach.

Creating a systematic approach to information and referral coupled with data collection, analysis and evaluation have been key factors in our ability to succeed in connecting patients and clients with services above and beyond their dental needs. Our dedication to making data-driven decisions allows us to adapt to the many changes that can take place in a consortium over a 3 year span, all while continuing to focus on the service delivery and ensuring our target population and funders' expectations are always met.

Numerous factors go into comprising the following statement: Ninety-seven percent of patients report feeling welcome here. This success has garnered us both state and national recognition—and will poise us to leverage that success in our pursuit of a new clinical facility to meet the needs of our growing patient base.

# Mississippi

## Central Mississippi Residential Center

Part I: Organizational Information	
Grant Number	D04RH23563
Grantee Organization	Central Mississippi Residential Center
Organization Type	State Mental Health Treatment Facility
Address	701 Northside Drive, Newton, MS 39345
Grantee organization website	<a href="http://www.cmrc.ms.gov">http://www.cmrc.ms.gov</a>
Outreach grant project title	Rural Health Care Services Outreach Grant Program
Project Director	Name: Debbie Ferguson
	Title: Director
	Phone number: 601-683-4201
	Fax number: 601-683-4210
	Email address: <a href="mailto:dferguson@cmrc.ms.gov">dferguson@cmrc.ms.gov</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
* Central Mississippi Residential Center	Newton/Newton/Mississippi	State Mental Health Treatment Facility
* The Care Lodge Domestic Violence Shelter	Meridian/Lauderdale/Mississippi	Domestic Violence Shelter
*Mississippi Department of Mental Health Bureau of Alcohol and Drug Abuse	Jackson/Hinds/Mississippi	State Agency
*Mississippi State University Extension Service – Newton County 4-H	Newton/Newton/Mississippi	University
*Newton Police Department	Newton/Newton/Mississippi	Law Enforcement
*Mississippi Attorney General Office	Jackson/Hinds/Mississippi	State Agency
*East Central Community College	Decatur/Newton/Mississippi	Community College
Newton Fire Department	Newton/Newton/Mississippi	Fire Rescue

### Part III: Community Characteristics

#### A. Area

The project area is a nine-county rural area in east central Mississippi, bounded by Alabama to the east. The area is 5,822 square miles and the counties served are Newton, Leake, Neshoba, Kemper, Scott, Lauderdale, Smith, Jasper, and Clarke.

#### B. Community description

The estimated population for the project area in 2013 was 243,649 with 57% of the population identifying as White, 38% African American, and 4% is Native American. The Native American population is slightly higher in the project area than other areas of the state because part of the Mississippi Band of Choctaw Indians' reservation is located in the project area. According to the Annie E. Casey Foundation Kids Count Data Center, children in Mississippi live in a substandard situation. The average per capita

income is 18,082.44 and the high school graduation rate is 78% while the percent of population with a bachelor's degree is only 12%. The average percent of children living in a single-parent household was 47.86% in 2013. Kids Count ranks Mississippi 50th overall for child well-being.

### C. Need

All counties in the project area are medically underserved rural areas with mental health care provider shortages. Substance abuse is a common problem among youth in the community and almost 15% have experienced dating violence. Neshoba and Kemper counties in the project area rank 3rd and 4th in alcohol use, prescription drug misuse, and other drug use by 6th to 11th graders statewide. Lauderdale and Kemper counties rank 5th and 6th in marijuana use by 6th to 11th graders statewide. Suicide is the third leading cause of death in Mississippi (ages 15-24) and the second leading cause of death among Native American Indians (ages 15 to 34). Mississippi has the 17th highest suicide rate in the country with 13.72 deaths per 100,000. Three counties in the project area exceed the state suicide rate (Smith 25.5, Kemper 18.3, and Lauderdale 14.1). Nationwide suicide is the second leading cause of death among American Indians/Alaska Natives ages 15 to 34-years (Centers for Disease Control and Prevention, 2012).

The community is uneducated about mental health issues due to stigma and disparities. For these reasons, students need programs that address emotional and behavioral health issues including suicide, substance abuse, and dating violence. It is not only critical to their mental health, but also to their physical health and well-being.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The project is modeled after the evidenced-based SOS Signs of Suicide Prevention Program. Experience from implementing the *I Got You* Program for the past 4 years, has led to a program expansion to include presentations from area providers about other mental health issues, prevention of risk behaviors, promotion of healthy choices, coping skills and healthy relationships. These presentations adapt the same evidence-based format used by the SOS program to teach students the signs and symptoms of mental illness and to encourage them to seek help by utilizing the ACT model (Acknowledge, Care, Tell a Trusted Adult).

### B. Description

The goal of the *I Got You* program was to improve the mental health of students in the project area, thus improving overall community health. The project was designed to impact community health by increasing students' knowledge about mental illness and improving the perception of mental illness. The program was also designed to decrease behavior-related office discipline referrals in schools and reduce the number of students considering suicide. Reduction of substance abuse and dating violence among students was also a need to be addressed.

Students travel to Central Mississippi Residential Center's facility during school hours, once as 8th graders and again as 10th graders for a two-day workshop to learn about topics including suicide prevention, dating violence, and alcohol and drug abuse prevention. Activities conducted throughout the Outreach grant program included: identification of participating schools; identification of speakers for each of the topic areas for the IGU event; development of the IGU schedule with project dates; purchase audio/visual equipment and promotional materials for IGU project; coordinate and prepare school staff on logistics and possible outcomes of the event; host the IGU event; and, acquire an independent evaluator for data collection and analysis to monitor and evaluate project results.

IGU resulted in the development of partnerships between mental health organizations, local schools, the State Attorney General's office and the State Department of Education. The IGU team presented at multiple state level conferences.

### C. Role of Consortium Partners

CMRC provides project management and oversight. The Project Director is the management authority for CMRC and is ultimately responsible for all program activities outlined in the work plan. The Project Director's responsibilities include establishing objective and performance measures, fiscal accounting and budgeting activities, providing administrative leadership in support of program objectives, maintaining effective public relations with other organizations and the public, evaluation and reporting, and supervision of staff.

The Project Manager is responsible for the implementation of the program activities outlined in the work plan under the supervision of the Project Director including the program planning, consortium management, and suicide prevention program presentation.

The Project Manager is a Certified Suicide Prevention Trainer for the State of Mississippi, which has adopted the evidence-based SOS Signs of Suicide Prevention Program as its state suicide prevention program.

The Care Lodge Domestic Violence Shelter key staff member is responsible for participating in the consortium to assist with developing the program and delivering the presentation on dating violence. The Mississippi Department of Mental Health Bureau of Alcohol and Drug Abuse key staff member is responsible for participating in the consortium to assist with developing the program and delivering the presentation on substance abuse. The Newton Police Department key staff member is responsible for participating in the consortium to assist with developing the program and providing onsite drunk driving simulations. The Newton County Extension Office 4-H Youth Program key staff member is responsible for participating in the consortium to assist with developing the program and with focus groups and other presentations as needed.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Evaluation of the first and second year data indicate the program's success. IGU utilizes a community-based approach of addressing multiple behaviors associated with mental, emotional and behavioral disorders is an effective strategy for prevention of and promotion of healthy behaviors. The youth served by IGU exhibited pronounced challenges related to schooling, peer relationships, family problems, body image and mental health. Evaluation findings indicate that there is close alignment between student needs and program topics.

The evaluation demonstrated that IGU has significant and long-term impact on a wide range of youth dispositions and attitudes. The post test results indicated improved self-concept, stronger anti-bullying orientations, awareness, and stronger anti-drug dispositions also demonstrated improved awareness of healthy relationships, increased awareness of mental health issues, decreased stigmatization of mental illness and increased willingness to confide in an adult. IGU post surveys regarding program satisfaction indicated that 95% of students believed the program would make a difference in their lives and 79% of students reported that they "learned a lot" from the program. Evaluation results indicate this is a "promising" practice.

### B. Recognition

As a result of this grant funding, numerous newspapers have written articles on the success of the IGU program, including the Newton Appeal and the Meridian Star. WTOK, one of the state's leading television stations, has covered many IGU events. The program was included in the Mississippi Attorney General's Office 2013 Annual Report and in 2012 the Mississippi Association of Partners in Education awarded the IGU program with the 2012 Governor's Award. Many state and community leaders as well as school administrators have recognized the IGU program as beneficial and informative to students and staff. The IGU team presented at multiple state level conferences. The team has received requests from across the state as well as nationally to provide the program. In short, the demand for the program far dwarfs IGU's resources to provide the program.

## Part VI: Challenges & Innovative Solutions

CMRC has been able to provide the program to schools in seven of the nine counties in the target area. The physical building utilized for the IGU training can only accommodate 200 students in one sitting which was a barrier in meeting the goal to provide IGU to all schools in the nine county target area. However, this issue has been resolved in our final year by partnering with local community colleges to host the program. Now the program can accommodate over 800 students in a single sitting and has reached over 4000 students each year. Additionally, partnering with local community colleges provides students the opportunity to visit a college campus and learn more about continuing their education beyond high school.

## Part VII: Sustainability

### A. Structure

The consortium has been a vital part of the IGU project success and will continue. Consortium members were selected based on their positive contribution to the project. Each has been an integral part of the program since its inception in 2008. Organizations were asked to participate in the project as a result of their knowledge/expertise in one of the topic areas as well as their commitment to making a difference in the lives of Mississippi's youth. The consortium has developed collaborative relationships that will enable IGU to continue to expand and contribute to community building. Continuing partners are Central Mississippi Residential Center, Care Lodge Domestic Violence Shelter, Mississippi Department of Mental Health Bureau of Alcohol and Drug

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The IGU program will continue to be provided to schools in the nine-county catchment area, however, schools will no longer be provided a travel allowance to assist in covering the cost of transportation of students to the central location. CMRC will continue to seek foundation and corporate support for the project. However, until additional funding is secured the evaluation component cannot be sustained and therefore continuing the work to establish the program as an “evidence-based practice” will be halted.

**C. Sustained Impact**

As a result of the IGU program, CMRC anticipates that mental health awareness of participants will sustain. Participants will know how to recognize mental illness, how to get help for mental, emotional and behavioral disorders, and participants will seek help for themselves and others. Suicide attempts, substance abuse, and unhealthy dating relationships will be reduced within the target population. Due to the lack of mental health awareness and prevention programs in the project’s geographic area, it is likely that the project will contribute to an improvement in the mental health of the target population. School policy changes concerning how teachers communicate and respond to student needs is also a sustained impact of the program.

**Part VIII: Implications for Other Communities**

The issues addressed in IGU affect youth in other communities. Youth benefit from addressing all of the issues together in an intensive one day program rather than learning about the issues separately in isolation. An unexpected outcome from this program has been the tremendous community building that takes place through the collaboration of multiple agencies, programs and organizations to make IGU possible. Schools report that as a result of the program, they have observed an increase in help-seeking behavior and a decrease in behavior-related office referrals.

# Missouri

## Citizens Memorial Hospital District

Part I: Organizational Information	
Grant Number	D04RH23566
Grantee Organization	Citizens Memorial Hospital District
Organization Type	Hospital District
Address	1500 N. Oakland, Bolivar, MO 65613
Grantee organization website	<a href="http://www.citizensmemorial.com">www.citizensmemorial.com</a>
Outreach grant project title	Show Me Healthy People
Project Director	Name: Angela Davison
	Title: Project Director
	Phone number: 417-328-6561
	Fax number: 417-777-1434
	Email address: <a href="mailto:adavis@citizensmemorial.com">adavis@citizensmemorial.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Burrell Behavioral Health	Springfield/Greene/Missouri	Mental Health Service Provider
*Polk County Health Department	Bolivar/Polk/Missouri	County Public Health Department
*Citizens Memorial Hospital District	Bolivar/Polk/Missouri	Rural Acute Care Hospital

### Part III: Community Characteristics

#### A. Area

The Citizens Memorial Hospital District's program, Show Me Healthy People, provides services to three rural counties in southwest Missouri: Cedar, Polk and Dallas Counties. Polk County is home to Citizens Memorial Hospital (CMH), a 75-bed acute care hospital which includes a Geriatric Psychiatric Unit which is directed by a fulltime psychiatrist and staffed with a contracted psychiatrist provided by one of our partners in this project, Burrell Behavioral Health. In addition to the hospital being in Polk County, we have five rural health clinics (RHC) and two long term care facilities. The Pleasant Hope Clinic in Polk County has been a project site for our program. The Polk County Health Department located in Bolivar, MO has also been a site project site for the program. In Dallas County, Citizens Memorial Hospital has both a rural health clinic and a long term care facility. The Dallas County Family Medical Center has been a project site for our program there. In Cedar County, Citizens Memorial Hospital has a Rural Health Clinic and two Long Term Care Facilities. The Stockton Family Medical Center has been a project site for our program. In addition, we've been able to utilize psychiatry services by telehealth from Citizens Memorial Hospital to Lake Stockton Health Care Facility and Community Springs Healthcare Facility in El Dorado Springs.

#### B. Community description

Cedar County, Missouri has a population of 13,913. Nearly a quarter of the population is over the age of 65. The median household income is \$30,302 which is over \$22,000 less than the median for the U.S. Twenty-two percent of the population lives in poverty and in 2012 there was an estimated 20% without health insurance.

Polk County, Missouri has a population of 30,974. The median household income is \$39,512 which is over \$13,000 less than the median income for the U.S. Twenty-two percent of the population lives in poverty and in 2012 there was an estimated 17.6% without health insurance.

Dallas County, Missouri has a population of 16,535. The median household income is \$40,120 which is nearly \$13,000 less than the median income for the U.S. Twenty two percent live in poverty and in 2012 20.4% were without health insurance. According to the Missouri Rural Health Biennial Report 2010-2011, Dallas County has a significantly higher rate of suicide than the state average.

### C. Need

Our program was designed to help identify and screen for mental health/behavioral health needs in patients who would not have accessed behavioral health care on their own or through referral from their primary care physician in rural areas. Identified reasons for missed referrals could include the inability to access behavioral health care due to the rural location of their community; limited resources and stigma of mental health conditions either by the patient or provider; knowledge deficit regarding the availability of behavioral health services and/or financial constraints. The focus population was located in rural health clinics in Polk, Cedar and Dallas counties and the Polk County Health Department. The Missouri Department of Mental Health reports that 1 in 5 Missourians suffer from a mental illness and 1 in 13 from a substance use disorder. We knew there was a need to identify those who could benefit from early interventions whether that is decreasing risky behaviors like tobacco, alcohol or drug use, developing coping skills and healthy behaviors for those with chronic illnesses such as diabetes, or identifying and referring patients with mental health conditions to the appropriate services.

In the Missouri Rural Health Biennial Report 2012-2013, it is reported that the suicide rate in rural areas increased by 25% from 2000-2011. We must not miss an opportunity to screen these patients for unhealthy behaviors, depression and suicide risk. The Citizens Memorial Hospital service area is in a Mental Health Provider Shortage Area due to poverty and this is estimated to be a ratio of 20,000:1 full time psychiatrist. Citizens Memorial Hospital provides over 20,000 mental health visits per year in our primary care clinics and long term care facilities utilizing licensed clinical social workers, clinical psychologists and two fulltime psychiatrists. We continue to see patients struggling with uncontrolled medical conditions who have not sought treatment for underlying mental health or behavioral health conditions that may contribute to their poor outcomes. In addition, the high incidence of risky behaviors that go unrecognized and untreated lead to poor outcomes. While it seems easy to identify the need to diagnose and treat both mental health, alcohol and substance use, there's a culture change that has to occur in primary care in order to shift to an open communication between providers and patients regarding their mental health and how it relates to their physical well-being.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

We adopted the Cherokee Health Model out of east Tennessee and added the Standards of the Patient Centered Medical Home. In this model we work to integrate behavioral health care into the primary care environment rather than to separate the two completely. In this model, a Licensed Clinical Social Worker is within the walls of the primary care clinic. They work side by side with the medical provider and staff. Their role is to help identify patients with risky behaviors and to provide an immediate response to a medical provider, staff or patient request to work with a patient to set goals for improved outcomes or risk reduction, identify the barriers to meeting these goals and then work with them by providing support and accountability. The behavioral health consultant in this model sees the patient 6-8 times for follow up and/or brief interventions before asking the patient to continue with the plan set before them and communicating this plan with the team, or referring to an appropriate resource for ongoing counseling or treatment based on need.

In order to begin the process of screening all patients in primary care, we identified a need to engage the staff and primary care physicians. Doing this would also allow the licensed clinical social worker to increase the amount of time spent working with patients. This required the medical staff and nursing to decide on a standardized and evidenced based screening tool. Then the IS team built the tool into the electronic medical record. Staff was trained to administer the screening, record the data and report to the provider. So by implementing the use of a standardized tool in all of our primary care practices, we were able to reach many patients and have a referral source to send them. Since we were screening in multiple physician clinics we needed a way to reach the patients in the clinics and long term care facilities where the behavioral health consultant was not located. This is what telehealth technology can do for us and we continue to work toward making this technology easy for staff and patients to use so we can continue to expand.

## B. Description

Citizens Memorial Hospital partnered with Burrell Behavioral Health who provided a Licensed Clinical Social Worker (LCSW) to serve patients through the Show Me Healthy People Program. Through this process the LCSW became a Certified Behavioral Health Consultant. Following the Cherokee Health Model and the Standards of the Patient Centered Medical Home, she has provided services to patients in rural clinics including Stockton Family Medical Center- Cedar County, Pleasant Hope Family Medical Center- Polk County, Dallas County Family Medical Center-Dallas County and the Polk County Health Department. Our outreach program has changed processes in primary care clinics to include consideration of the mental health status in far more patients whether they're being seen for a chronic medical condition or a recognized mental health disorder.

The behavioral health consultant sees a patient curbside with the primary care physician for any condition which may have an underlying behavioral health component. For example, patients with uncontrolled diabetes, struggling to manage their chronic illness, may have an undiagnosed depression which is a barrier to them self managing. Using the model we have, the primary care provider sees that their patient is not meeting treatment goals and then comes out of the room and provides a warm hand off of the patient to the behavioral health consultant. The behavioral health consultant then works to identify the barriers contributing to the patient's lack of success and helps the patient develop self-directed goals for improvement. The behavioral health consultant meets or contacts that patient for brief interventions 6-8 times which may involve education, counseling, coping skill development, referrals to community resources, revision of the goal or action steps. If they respond well to the brief interventions and seem to be engaged and dedicated to following the strategies developed, they are turned back to the primary care physician and encouraged to discuss the need for further follow up if progress does not continue or symptoms worsen.

When the behavioral health consultant is not in the clinic with the PCP and a warm hand off is needed, the PCP or the clinic staff can request a telehealth consultation from one clinic to another or from the clinic to a long term care facility where the PCP may be seeing a patient. Telehealth has proved to be a wonderful model for tele-psychiatry in long term care facilities. A Citizens Memorial Hospital psychiatrist who has an office in Bolivar at the hospital and has made himself available to do visits with LTC residents in rural areas, and a neurologist, uses tele-health to provide dementia follow-up visits with residents in LTC. In our rural clinics we have two psychiatrists traveling between locations throughout the week so telepsychiatry in the clinic has not yet been needed, but through our efforts with this project to identify patients with mental health/behavioral health needs we have seen an increase in diagnosis. Our focus on identifying patients with at risk behaviors of underlying mental health disorders has been proven effective in our data.

At Dallas County Family Medical Center, alcohol related disorders diagnosed went from 46 in 2012 to 91 in 2014. Anxiety disorders including PTSD went from 550 cases diagnosed in 2012 to 751 cases in 2014. Attention deficit hyperactivity disorder was diagnosed 98 times in 2012 and 126 times in 2014. Depression and mood disorders increased from 750 diagnosed in 2012 to 983 in 2014.

At Pleasant Hope Family Medical Center, alcohol related disorders diagnosed went from 20 in 2012 to 30 in 2014. Anxiety disorders including PTSD went from 224 cases diagnosed in 2012 to 330 cases in 2014. Attention deficit hyperactivity disorder was diagnosed 80 times in 2012 and 158 times in 2014. Depression and mood disorders increased from 270 diagnosed in 2012 to 405 in 2014.

At Stockton Family Medical Center, alcohol related disorders diagnosed went from 14 in 2012 to 29 in 2014. Anxiety disorders including PTSD went from 65 cases diagnosed in 2012 to 152 cases in 2014. Attention deficit hyperactivity disorder was diagnosed 21 times in 2012 and 42 times in 2014. Depression and mood disorders increased from 176 diagnosed in 2012 to 300 in 2014.

Depression screening using a standardized tool in Citizens Memorial Hospital clinics went from virtually zero in 2012 to 23% of our population receiving a formal screening in 2014. In the clinics where the behavioral health consultant was located, the number continued to increase to 33% in the fourth quarter of 2014. The Dallas County clinic has screened 41% of their clinic patients seen in the last 12 months.

## C. Role of Consortium Partners

Burrell Behavioral Health played a key role in this project. Early in the development of the project Burrell worked with us to find staff a training site where the evidenced based care model was being utilized. They helped to develop the structure of the program and met with staff and providers to discuss the model and an implementation plan. We were able to utilize the expertise of a full time LCSW in the capacity described above because of them. Throughout the project they supported the effort to try to arrange for full time hours rather than only part time so that more time could be devoted to outreach. Burrell acts as a referral source and Citizens Memorial Hospital a referral source to Burrell for treatment of patients based on their individual needs. They

provided assistance with reporting and contributed to the advisory committee meetings primarily providing insight into billing practices and clinical application of the LCSW.

The Polk County Health Department coordinated the behavioral health consultant visits with free clinics and provided space for the LCSW to see patients. They worked with us to screen patients with the standardized tools we had chosen and supported the goal of the project. Citizens Memorial Hospital physicians who volunteer at the free clinic worked with the behavioral health consultant to treat patients found to have mental health needs.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

To summarize the outcome of this project, in the clinics where the behavioral health consultant worked routinely and processes were reinforced, there were 492 more patients identified and diagnosed as having depression or mood disorders than the year 2012 when we began.

During the past 15 months, with one behavioral health consultant, we have had 454 documented visits with patients not otherwise being seen by a mental/behavioral health professional. These patients were referred either with a warm hand off from the primary care provider or by clinic staff after administering the SBIRT/PHQ screening. Only 50 patients were identified as not having any source of insurance coverage. This finding may support the idea that mental health issues are not being addressed as often as they should be in primary care and that it's not solely a matter of financial barriers that keep them from accessing mental/behavioral health services. In fact, 271 patients were seen for depression or anxiety as a result of the screenings that may not have had an opportunity to explore their options for treatment had this program not provided resources to make these changes.

In addition to identifying patients with depression and/or substance use disorders, the behavioral health consultant was available for brief education/brief intervention of any medical patient that was unable to cope or control their chronic illness in which the medical provider felt there was an underlying mental/behavioral health problem. During the past 15 months, the behavioral health consultant made 67 documented visits for patients with obesity and morbid obesity, 26 for uncontrolled Diabetes, 38 for tobacco abuse/tobacco cessation, 22 for chronic pain, 5 for substance abuse referral/placement and 25 for other diagnosis or conditions.

Of the patients seen by the behavioral health specialist for uncontrolled blood sugars, 72% have a hemoglobin A1C less than 8% and 11% remain above 9%. 46% of patients seen for obesity lost weight after meeting with the BHC.

Documentation of these visits followed the recommendations for coding and billing of HBAI codes in Missouri. These require documentation of a psychosocial component leading to the barrier to self-care; referral source, the medical diagnosis, frequency, intensity, duration and functional impairment relating to the condition; mental status exam including the patient's ability to understand and respond meaningfully; as well as a care plan with timely, specific, achievable goals and the patient's stage of change. This led us to also develop IS tools for all behavioral health consultants at Citizens Memorial Hospital to utilize for documentation of medically related brief interventions.

### B. Recognition

The LCSW working on the project received certification from St. Louis Behavioral Medicine as a behavioral health consultant. This required several online courses and an onsite practicum to obtain certification in this role.

We were able to gain NCQA recognition as a patient centered medical home which involved identification of high risk patients and using standardized tools for screening patients and providing a referral source to patients in need.

## Part VI: Challenges & Innovative Solutions

All along we wanted to be able to find a way to sustain the behavioral health consultant in the model developed. One of our hopes was that Missouri Medicaid would begin paying for the type of work that she was providing. We knew that we should continue to work toward this goal and therefore we built templates that met all the criteria of billing and sought certification required for billing. Prior to the end of the project we learned that they would begin paying for this service, but not if the salary of the certified behavioral health consultant was being paid by the patient centered medical home or through a grant unless authorization was given by the entity providing the grant. We worked with our advisor and received authorization to do this. Now the challenge is to carve out time, space and staffing time from the rural health clinic budget to allow us to bill the HBAI codes for behavioral health consultant services.

Another challenge for us was to train the staff and providers in all locations on how to administer and record the results of the standardized screening tools. We used the SBIRT to screen for alcohol and substance use in adults and the CRAFFT for adolescents. For depression screening we utilized the PHQ and the PHQ-A. The solution for reaching the staff was to provide a WebEx and provide question & answer sessions at monthly meetings. In addition, the tool was built into the Electronic Medical Record (EMR). The links to get to the screening tools and instruction sheets are also available in the EMR.

Another challenge for us has been utilization of telehealth throughout the project. The units we have in Clinics and LTC are hardwired which requires the patient be taken to another area in the clinic, often times in a procedure room or office where the clinic or LTC have room to store it when not in use. The staff and providers see this as a barrier and time consuming. Our IS team worked to move cable and relocate units and now has a way to make the units wireless and able to be taken to the patient, eliminating the need to move the patient or leave the clinical area to stay with the patient.

## Part VII: Sustainability

### A. Structure

Citizens Memorial Hospital will continue to work with Burrell Behavioral Health and the Polk County Health Department for years to come. These two partners are integral parts of the healthcare system in our area. We share many of the same patients and provide support to one another. We act as a referral source to one another. For example, with the supplemental funding we received at Citizens Memorial Hospital for the Health Insurance Marketplace, Citizens Memorial Hospital trained and employed CACs, but the Polk County Health Department referred patients to us when they identified the uninsured and provided contact information for Citizens Memorial Hospital to their clients. Citizens Memorial Hospital has more than one contracted employee from Burrell. They continue to be a valued partner in providing qualified mental/behavioral health professionals to us to enhance patient care. Presently Burrell provides contracted psychiatrists to Citizens Memorial Hospital for our Geriatric Psychiatric Unit.

This activity has to continue because of the added benefit to the patient and improved outcomes. A provider at the Dallas County location said, "I don't know how we would operate without her now." This Provider has been inspired to set up a program for addiction recovery treatment from his primary care clinic. Also as a result of this Outreach grant and the funding to provide telehealth equipment to our facilities, we have begun providing psychiatric services via telehealth to our rural long term care facilities in Stockton and El Dorado. The neurologist at Citizens Memorial Hospital who recently opened the Citizens Memorial Hospital Memory Center is now using telehealth to see patients with dementia in long term care for follow-up visits. Our behavioral health consultant in primary care is now also seeing patients in other counties via telehealth. We certainly will continue to provide services by telehealth in order to get providers to the patients for services. Through some other grants we have received other telehealth equipment and can reach nearly all primary care clinics and LTC facilities by telehealth services now. We continue to work toward making it as easy as possible for patients while delivering the highest level of care possible.

Given the incorporation of the Patient Centered Medical Home Model, we will utilize the behavioral health consultant in an integrated role in primary care. Financial support to sustain the behavioral health consultant in primary care will come from the payment structure currently in place at Citizens Memorial Healthcare through the MoHealth net patient centered health home payment for time spent with MoHealthnet patients providing screening, brief interventions, referrals and treatment and depression screenings as well as seeing patients for health and behavior related issues.

Citizens Memorial Hospital has always had a strong relationship with the Polk County Health Department and will continue in the future to provide patients with the services they need.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained (i.e. the program will completely end after the grant period)

Citizens Memorial Hospital will continue to utilize an LCSW in the role of behavioral health consultant in primary care clinics. We will continue the same process we currently use with improvement of the utilization of telehealth to clinics and LTCs. In addition a

recovery clinic at Dallas County Family Medical Center will utilize the behavioral health consultant for routine follow-ups of patients being seen for addiction recovery one day a week.

### C. Sustained Impact

The model of behavioral health consulting in primary care at the time of the medical visit can have a huge impact on a community. Consider the limited time a PCP has with a patient who has multiple co-morbidities. At the most, the provider might see them quarterly and get 20 minutes with them. That's less than 1.5 hours a year spent reviewing lab results, vitals and medication refills needed until the next visit. When is there time for that person to discuss barriers, fears, concerns, questions, questions they don't even know they have because their health literacy is low? How do they really even know where to start to improve an overwhelming situation? For the provider like a teacher in a classroom, it's easy to identify those who are struggling to be successful. Unfortunately, we don't always have the resources or the time to say, 'Hey, I see you're struggling, let me have you talk to our behavioral health consultant and see if they can help you identify some of the problems and help you develop solutions.' Our behavioral health consultant has worked with patients struggling to gain control of obesity, diabetes, tobacco abuse, alcohol or drug misuse, depression, anxiety and the list goes on. These are people that would not have asked for help, known to ask for help or feared what asking for help might mean had we not developed a process in which we started asking them.

## Part VIII: Implications for Other Communities

In our primary care clinics where a behavioral health consultant has worked with patients in this model, we've seen great improvements in quality outcomes. Primary care providers who embrace the model of behavioral health integration can benefit greatly by adding another team member that is dedicated to listening, identifying both internal and external barriers that keep their patients from being successful, and teaching their patients how to set goals that are realistic and attainable. Having someone in the office who contacts the patient outside of a scheduled visit to offer support, education, and encouragement makes the patient feel they are accountable and there's an expectation that we will work together to help them achieve better health and well-being.

Given the link between many chronic illnesses and depression, if we want to begin seeing improved outcomes for patients in our practices, it's important that we not separate the body from its mind and emotion. For many years now, we have made distinct differences between which office we go to for mental health vs. medical health - which side of the office the patient sits in if they're being seen for a mental health visit vs. a medical visit; how the patient is billed, what insurance will cover for one or the other; and how we as patients, healthcare providers and people feel about discussing and treating the mind and body rather than one or the other. Communities who truly want healthy populations will need to begin addressing the whole person and this model helps to bridge the gap and make the clinical staff in primary care, feel as though they have the resources at hand to offer and support to assist them if needed.

# Missouri

## Freeman Neosho Hospital

Part I: Organizational Information	
Grant Number	D04RH23574
Grantee Organization	Freeman Neosho Hospital
Organization Type	Critical Access Hospital (CAH)
Address	113 West Hickory St. Neosho, MO 64850
Grantee organization website	N/A
Outreach grant project title	Regional End of Life Initiative (RELI)
Project Director	Name: Gwynn Caruthers, BSN CHPN
	Title: Grant Program Coordinator
	Phone number: 417-347-7354
	Fax number: 417-347-9880
	Email address: <a href="mailto:gicaruthers@freemanhealth.com">gicaruthers@freemanhealth.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Freeman Neosho Hospital	Neosho, Newton County MO	CAH
*Barton County Memorial Hospital	Lamar, Barton County MO	CAH
*Freeman West	Joplin, Newton County MO	Acute Care – Not for Profit

### Part III: Community Characteristics

#### A. Area

The grant program served Barton County, Jasper County, Newton County and McDonald County, the four most southwestern rural counties of Missouri.

#### B. Community description

Regionally, rural Barton, Jasper, Newton and McDonald Counties in southwest Missouri are HRSA-designated Health Professional Shortage Areas as well as Medically Underserved Areas. The population of the entire state of Missouri is 6,063,589, while population in total for these four counties is approximately 210,076. The median number of citizens 65 or older in the 4 counties is 15.7% while for the state of Missouri that is 15.0%. 18.475% live below poverty level in our focused counties compared to 15.5% for the state of Missouri. (U.S. Census Bureau: State and County Quick Facts. Feb 2015).

Joplin is the largest city in the metropolitan service area, but its population of approximately 40,000 belies the fact that the daytime population swells to 250,000, and the service population of the health systems is approximately 450,000 across four states: Missouri, Kansas, Oklahoma, and Arkansas

Newton County and Barton County each have one Critical Access Hospital. Limited Rural Health Clinics and limited specialty physician clinics are available. McDonald County, population 23,083, has no hospital, urgent care clinic, specialty physicians, or eye or ear clinics.

### C. Need

In order to determine the existing environment and identify special needs of the target population, the Regional End-of-Life Initiative (RELI) Network Partners established a baseline by conducting an end-of-life community needs assessment in August-September 2011. The assessment was administered by Community Asset Builders of Jefferson City, Missouri, as part of a HRSA Rural Network Planning grant project. Various tools and methods used to collect information included focus groups, surveys, and interviews, with a total of 68 stakeholders participating. Community members in each of the four counties were included. Physicians and other professional caregivers, clergy, social workers, well seniors and family member caregivers provided input (n=26). Common themes centered on a need for more local providers, improved coordination between rural providers and those in larger health care settings, and a need and desire for end-of-life education. One senior citizen in the rural community commented, "I don't want to have to leave my house, and if I have to leave my house, I don't want to leave my community, and if I have to leave my community, I feel like I have lost my voice."

Throughout the four counties only two physicians held Board Certification in Hospice and Palliative Medicine. Each hospital in Joplin had active palliative care programs, but neither included a dedicated palliative physician. At the partnering Critical Access Hospitals in rural Barton and Newton Counties, palliative care was not offered to their patient population.

On May 22, 2011 an EF-5 tornado churned through the middle of Joplin and the landscape has literally and figuratively changed. Health care demand spiked, patient acuity increased, and the availability of services simultaneously decreased. The tornado destroyed more than 7,000 homes and 800 businesses, including an eight-story hospital, numerous physician clinics, more than 50 percent of dental offices, three long-term care facilities, inpatient psychiatric facilities, and community nonprofits. The tornado disaster has resulted in an increased willingness to partner in collaborative projects and an unprecedented need for effective and relevant outreach.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The End-of-Life Nursing Education Consortium (ELNEC) developed by Robert Wood Johnson Foundation was the framework for developing palliative nurses in the Critical Access Hospitals. The Project Coordinator, Gwynn Caruthers, BSN, Certified Hospice and Palliative Nurse (CHPN), served as a nurse mentor to the nurses in the CAH. ELNEC resources were utilized to lay the foundation for much of the palliative care instruction. The eight educational modules included in ELNEC are: Nursing Care at the End of Life; Pain Management; Symptom Management; Ethical/Legal Issues; Cultural Considerations in End of Life Care; Communication; Loss, Grief, Bereavement; and Preparation for and Care at the Time of Death. ELNEC provides education and training to nurses so that they can return to their communities and then teach essential information to practicing nurses or nursing students. To date, over 19,500 nurses and other healthcare professionals have received ELNEC training through national courses. It is estimated that since its inception, ELNEC trainers have trained over 500,000 nurses and other healthcare workers in their communities. ELNEC promotes its robust evidence-based bibliography as well as instruction on how to teach the adult learner. (American Association of College of Nursing. Updated February 2015)

RELI identified an actionable medical order set that travels with patients across health care settings. Physician Orders for Life Sustaining Treatment (POLST), which exists in 45 states, is the tool that meets this objective. POLST continues to gain momentum nationally as best practice to communicate end of life medical care preferences for people with significant life-threatening illness. The evidence in support of POLST continues to grow. *The Institute of Medicine's (IOM) September 2014 release of Dying in America* includes five Key Recommendations. Key Recommendation Four, Policies and Payment Systems to Support High-Quality End-of-Life Care, "encourages states to develop and implement a Physician Orders for Life Sustaining Treatment (POLST) paradigm program in accordance with nationally standardized core requirements." Transportable Physicians Orders for Patient Preferences (TPOPP) is the Kansas-Missouri named POLST Paradigm. The national POLST organization released the results of the largest research project to date on the outcomes of the POLST Paradigm. It demonstrates that people with a POLST indicating Comfort Measures Only or Limited Additional Interventions are significantly less likely to die in a hospital than people without a POLST. Just as importantly, research reveals that people with a POLST indicating Full Treatment are significantly more likely to die in a hospital. (*Journal of American Geriatric Society*. Volume 62. Issue 7. Pages 1246-1251; July 2014)

### B. Description

Using the models described above the Regional End-of-Life Initiative (RELI) Network Partners worked to develop two approaches to end-of-life care, based on the Community Needs Assessment.:

1. To implement palliative care services for their patients.

2. To implement the use of an out-of-hospital order set, based on the POLST Paradigm (Physician's Orders for Life Sustaining Treatment), for use with patients with significant illness. In Kansas and Missouri, this paradigm's order set is called Transportable Physicians Orders for Patient Preferences (TPOPP).

RELI members determined that developing both palliative care services and TPOPP in their respective communities would better support patients with significant illness in the rural settings. The development of palliative care nurses and POLST/TPOPP intersected numerous times through the educational process but were kept distinct as they were developed.

#### **Palliative Care:**

Grant Project Coordinator, Gwynn Caruthers, BSN, CHPN (Certified Hospice and Palliative Nurse) met with the Regional End of Life Initiative (RELI) partners individually in the process of identifying nurses for palliative care training. Caruthers, who served as the nurse mentor, used various articles and other media to educate, inform, and discuss with the nurses current palliative care definitions and practice. Two nurses were identified at each Critical Access Hospital (CAH) to receive continuing training with the goal of becoming the palliative nurse for their CAH. Through the course of the grant each CAH lost one of the initial nurses, and at end of grant cycle, each CAH had one palliative nurse. Caruthers continually charged the palliative nurses to be aware of other nurses who may want to receive specific training. Caruthers and RELI also partnered with area hospices for the initial palliative education. While hospice is only a small segment of palliative care, none of the nurses had been exposed to hospice practice. Caruthers felt it would be beneficial for the nurses to identify the importance of supportive and symptom management treatment, in contrast to the curative approach to medicine generally known in the hospital setting.

The End of Life Nursing Education Consortium (ELNEC) curriculum was adapted for educating the nurses in the CAHs. The nurses identified the modules that they wanted as the initial focus of their palliative education. Communication, Pain Management, and Preparation and Care for the Time of Death Modules were identified. Caruthers traveled to the CAHs initially for this instruction. The remaining five modules were covered as well. Once physicians were informed of the newly formed service, Caruthers made visits with nurses to reinforce all the instruction during individual patient consults. Because of the low volume of patients, Caruthers continued the visits for 2.5 years of the grant period. She scheduled bi-monthly phone conferences to provide a forum for nurses at all 3 hospitals to share and discuss patient cases. Due to low patient volumes, the calls were an opportunity to reinforce training and provide support and encouragement. The newly developing palliative nurses prepared in-service trainings related to palliative care and presented them to staff at their respective CAH. The nurses also attended state and national hospice and palliative care conferences, adding to the value of their palliative practice.

#### **TPOPP:**

Key staff members attended an initial Transportable Physician Orders for Patient Preferences (TPOPP) educational opportunity in November of 2012, in Kansas City, sponsored by the Center for Practical Bioethics. This opportunity conveyed clear evidence to the members that TPOPP would positively impact the patients with serious illness in their care transitions through health settings.

The consortium developed an educational plan for those staff members named as Planning Partners. The Planning Partners' role is to guide the patients through the 'TPOPP Talk' and fill out a TPOPP form if the patients choose to complete one. Nurses, social workers, and chaplains were identified as appropriate staff to act as Planning Partners. The grant project coordinator, along with the Planning Partners, used films, "Wit", and documentaries "Consider the Conversation" and "Consider the Conversation 2" as springboards for discussion and role-playing around advance care planning. Recently published articles and books pertaining to advance care planning and end-of-life care were shared within the group, and guided discussions followed.

Advance care planning tools were provided in outpatient clinics and physicians' offices for patients to pick up if they were interested. Life Choices, a publication by the Missouri State Attorney General for the purpose of making informed decisions about all aspects of end-of-life care and care planning, was one of the resources made available. The Conversation Project by Ellen Goodman, adopted by the consortium as a care planning tool, was also made available.

July 2013, RELI executed an informative "Palliative 101" seminar featuring Jennifer Clark, MD, Tulsa, OK. Physicians, health care providers and the community were invited. This opportunity proved to be an exciting catalyst for partner Freeman West Hospital, an acute care facility. Dr. Saba Habis, Freeman VP of Medical Affairs, was in attendance and further discussions with Dr. Clark proved to be an inspiration to expand palliative care at Freeman West Hospital. Following this meeting and important fact-gathering at the Hospice and Palliative Care Annual Assembly in March 2014, he appointed a team to look at growing the palliative service. As a result of his advocacy, the palliative service will be expanded at Freeman West in 2015 to include a board-certified palliative care physician and an additional palliative nurse.

RELI also sponsored members of the TPOPP leadership team to hold educational opportunities in the grant service area. Sandy Silva, J.D., TPOPP manager, Center for Practical Bioethics Kansas City, MO, spoke to 25 members of the leadership team from Freeman Health System. Silva's presentation met the goal of informing and educating leadership of the value and use of TPOPP between hospital and community settings. Angela Fera, B.A., Paramedic, serves on the TPOPP state leadership team and is the EMS advisor for the National POLST Paradigm. Fera made three trips to Southwest Missouri to present TPOPP to community stakeholders in Newton and Barton counties. Fera, like Dr. Clark, made a favorable impression as she informed the rural stakeholders of TPOPP, including area hospices, home health agencies, long term care facilities, CAH staff, and emergency personnel.

RELI highlighted National Healthcare Decisions Day, with activities and free resources at each partner hospital. Area hospices also partnered with the hospitals and sponsored booths with media attention on the importance of advance care planning. As well, RELI sent free resources to 100 businesses that contract with Freeman Occupational Medicine, including a letter that advocated for "having the talk" about advance care planning prior to a medical crises occurring. Members of RELI saw this as a novel approach to inform the "sandwich" generation (those people who may still have children at home but are also taking an active role in the care of aging loved ones as well) of the importance of advance care planning conversations and documents.

Members of the RELI team also used the documentaries: "*Consider the Conversation*" and "*Consider the Conversation 2*" as community education. Each of these documentaries highlight the necessity of excellent communication between patients, families and health care providers to ensure that end of life is patient centered rather than systems centered. These films were viewed by senior citizen groups, the faith community, nursing and medical students, and health care providers alike. Discussions were held after the screening that allowed participants to ask questions and debrief. These documentaries were used as tools to highlight the importance of communication (and the skill necessary) to achieve excellent end of life care.

### C. Role of Consortium Partners

The contributing partners of RELI include two Critical Access Hospitals (CAH), Barton County Memorial (BCM) and Freeman Neosho Hospital (FNH), as well as the acute care hospital, Freeman Hospital West (FHS). Due to the acquisition of McCune Brooks Hospital by Mercy Joplin after the tornado, the former did not have the same administrative and staff commitment to RELI throughout the grant project period. Nonetheless, the key staff was continually included in RELI processes and decision-making, in order to maintain open communication.

The RELI Partners met for bi-monthly conference calls to disseminate and share information related to both projects moving forward. The Project Coordinator also met individually with hospital leaders as the program developed in their facilities. In the first year of the grant cycle, teams at each CAH met regularly with the Grant Project Coordinator for identification and training of palliative staff. The Project Coordinator also met with RELI Partners to discuss the implementation of Transportable Physician Orders for Patient Preference (TPOPP).

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The three partners have worked steadily to integrate palliative care and TPOPP into their programs throughout this grant cycle. With the advent of the palliative nurses and the continued growth of TPOPP, the three hospitals are committed to continuing these programs. These programs will have a positive impact on patient care for the most vulnerable patients that are served.

The providers in the Critical Access Hospitals (CAHs), as they were informed of the palliative nurses, began to make referrals, which was a practice change for these physicians. As patients and staff members made positive comments to the physicians regarding the new palliative program, the physicians proved more likely to make referrals. Initially physicians were making referrals at the recommendation of nurses and social workers, but toward the end of Year Three, physicians were initiating referrals themselves.

During Year One of the grant there were two physicians who were Board Certified in Hospice and Palliative Medicine and one Certified Hospice and Palliative Nurse in the four Service Outreach counties. At the close of the grant the same four counties now boast seven palliative care physicians and one additional Certified Hospice and Palliative Nurse. RELI members encouraged four of these physicians to sit for the board exam, and grant funding reimbursed them for the exam. During the community needs assessment it was also noted that the more rural areas were lacking of actual hospice providers. During the first year of the Service Outreach grant, a hospice office did open in Lamar, Mo (Barton County).

Barton County Memorial Hospital had three palliative referrals the initial year of the grant. During Year 2, ten patients were seen by palliative care, and in Year 3 twenty-one patients were seen by the palliative nurse at Barton County Memorial Hospital. At the close of Year 3, physicians at BCMH are now initiating and collaborating with palliative care for better patient outcomes, including hospice discussion. Eden Ogden, Administrator from Barton County Memorial Hospital, noted, "This project is a success because we can now offer palliative care to our patients that previously we did not have available. The patients, their families and our staff have been positively impacted!"

Freeman Neosho saw one palliative patient during Year 1. There were six palliative patients seen during Year 2, and eight patients seen Year 3. It must be noted that six of the palliative referrals in Year 3 came after January 1, 2015, when a new physician moved from Joplin to Neosho. Dr. Blankenship is one of the physicians that RELI encouraged to become Board Certified in Hospice and Palliative Medicine.

Tool kits were developed by the nurses for both Palliative Care and Planning Partners. The nurses discussed the aspects which brought the most meaning to the development of their expanded palliative practice. These were included in an overview that could be used in other facilities to develop palliative care.

## B. Recognition

Gwynn Caruthers, Grant Project Coordinator, was asked to participate on the State TPOPP Leadership team as well as the National POLST Communication Committee. Caruthers looks forward to her continued work at the state and national level

## Part VI: Challenges and Innovative Solutions

It has been both challenging and rewarding to introduce new palliative care concepts to these communities. As with most new concepts, palliative care and Transportable Physician Orders for Patient Preference (TPOPP) have been cautiously embraced. Despite nurses, chaplains, and social workers at the bedside agreeing that palliative care and TPOPP were "needed yesterday," policy and procedure implementation have been slower in coming. However, written TPOPP policies are making their way through approval processes and implementation at the hospitals is in sight.

A noted challenge is the close relationship between rural physicians and their patients, which not only spans decades, but can span generations. While this relationship may ultimately be a benefit, initially it made physicians more reluctant to recommend palliative care, because of the association between "palliative" and "imminent end of life." Initially it was thought that Board Certified Hospice and Palliative Medicine physicians who work as hospice medical directors would be eager to advocate for earlier palliative care for their patients. It was noted that while there is a distinct overlap between hospice and palliative care the transitions from hospice to palliative care was slighter longer in coming. The Project Coordinator continued to encourage CAH staff to work steadily, and as "patient wins" occurred, it would influence a broader number of physicians to make referrals. This trend was noted. Difficulty in making the transition from hospice philosophy to the broader scope of care in palliative medicine has been noted.

For rural physicians to buy in, TPOPP must be established in the acute care setting. It is not feasible for rural providers to have completed a TPOPP with a patient in the outpatient setting if they are not confident that it will be understood and followed at the hospital. We understood through this process that our sight must be on the end user in the acute care setting. Therefore, the sustainability strategy is to devote resources at the acute care setting, while advancing the TPOPP policies and procedures in rural hospitals, long term care, and in the public domain.

Other challenges to the project have included competition with EMR implementation for physician time and energy. The physician champions remained aware of the development of palliative care but were often in the midst of intense EMR training, and this lessened their level of input initially. It was found that having the palliative nurse at the nurse's station when the physicians made their rounds was an effective reminder of palliative care and increased referrals. Conversely, when the nurse was unable to be at the nurse's station, PC referrals dropped off. Physicians need frequent reminders that palliative care does not equate to hospice. This will be an ongoing learning opportunity.

The Center for Practical Bioethics, Kansas City, MO was named as the manager by the National POLST Paradigm for Missouri and Kansas. Caruthers and the RELI consortium met with the leadership team of The Center in November of 2012. RELI representatives decided that it would be in the best interest of TPOPP and the citizens of the counties served by RELI to work with in the Center's framework. This consideration positioned RELI to be increasingly mindful of the statewide development of TPOPP.

**A. Structure**

Barton County Memorial Hospital, Freeman Neosho Hospital and Freeman West will continue as informal partners furthering palliative care and the “Transportable Physician Orders for Patient Preferences (TPOPP) effort. A collaborative effort among palliative nurses at BCMH, FNH and FHS for educational purposes as well patient care issues will continue. Caruthers will continue to shepherd TPOPP policy and education through the Freeman Health System, including both palliative nurses at the CAHs to engage their hospitals and communities. The palliative teams from the three hospitals will also work together to plan for community education for TPOPP and palliative care. Because of the Services Outreach grant, positive working relationships have developed between the nurses of the BCMH, FNH and FHS. Each nurse has verbalized the hope that these relationships continue for educational as well as referral purposes related to palliative care and TPOPP.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Palliative care in small rural hospitals will continue, as a result of the RELI project. The palliative nurse at BCMH is employed PRN and will be available as palliative care consults are ordered. This has proven to be mutually effective for both nurse and CAH. This cost and service will be absorbed by BCMH with the added value of a new palliative nurse service line and the cost savings for patients and hospital.

FNH will support a 0.2 FTE palliative nurse with its operating budget. Due to an anticipated increase in palliative referrals, that time may not be sufficient to accommodate patient/family demand. FNH Physician Champion Craig Pendergrass, DO, has stepped away from his duties as medical director at two rural long term care facilities. These facilities are an appropriate fit for TPOPP, and Dr. Pendergrass has helped assure continuity by engaging the new medical director, Dr. Bob Sweeten, in the scope and breadth of TPOPP for patients in long term care. Caruthers has moved forward with the introduction of TPOPP to long term care facilities such as Golden Living Center and Seneca House, which are reviewing TPOPP information.

As previously reported, FHS is expanding its palliative program and is adding a 1.0 FTE board-certified physician, a 0.8 FTE RN, and a 0.5 FTE social worker to create a physician-led palliative care team. The expanded palliative service will prove to be cost-effective for both patients and hospitals. It is widely held that getting palliative professionals involved, with skilled communication and symptom management supports patients/families as they make care choices in alignment with their goals. Most often it is NOT aggressive (and expensive) medical care which proves to be non-beneficial. According to Center to Advance Palliative Care (CAPC) increased patient satisfaction is another documented benefit from palliative consults. That has proved true with the feedback from families that utilized palliative care at the CAHs.

RELI has devoted time and resources to the development of Planning Partners. These staff members are chaplains, nurses and social workers. Once a physician identifies a patient that is “TPOPP appropriate” and introduces the concept of TPOPP, these Planning Partners can spend time with patients and families asking and answering questions based on values and goals that patients may have in the face of life-threatening illness. RELI is looking forward to utilizing Planning Partners in the future when TPOPP is fully instituted.

**C. Sustained Impact**

We intend to extend the grant-funded work of RELI through February 2016, with attention focused on moving TPOPP forward so that ultimately, many patients in our community will have a physician-signed TPOPP form.

It is clear that the project impact is far reaching:

- There is new awareness of palliative care and its importance in the rural communities.
- TPOPP has been introduced and is being adopted as an evidence-based best practice for value-aligned care at end of life.
- Palliative Care and TPOPP policies have been developed at partner facilities.
- Staff has been trained in palliative care.

- Communication networks have formed within the palliative care nursing staff for BCMH, FNH and Freeman West
- Development of TPOPP at the state level is beginning. Gwynn Caruthers has been asked to join the TPOPP Leadership Team for Missouri/Kansas, as well as the newly forming CoxHealth (Springfield, MO) Leadership Coalition.

As palliative care is developed and perfected in the three partner hospitals, continued positive outcomes will be evident for patients, families, and payers. We look forward to the time when patients will live longer with a higher quality of life with palliative care involvement. It is anticipated that hospitals will note higher patient and family satisfaction as a result of better communication, greater comfort and patient preferences being met. As the goals are being realized, we also see evidence for shorter length of stays in the ICU and in the hospital as well. With the potential increase in the hospice referrals, it is anticipated there would be fewer ED visits, hospital admissions and readmissions.

## Part VIII: Implications for Other Communities

Development of palliative care at the Critical Access Hospitals (CAH) has been challenging but overall the impact for patients and staff has been extremely positive. Vital to this project is having Administration support prior to and throughout the development of palliative care. It also proved effective to partner with area hospices in the development of palliative nurses for the purpose of building not only knowledge and skill but relationships as well. Vital to the success of this project has been the selection of the palliative nurse mentor as well as the selection of nurses to be trained in palliative nursing. Utilizing the Grant Project Coordinator as the nurse mentor allowed two Critical Access Hospitals to have access to expert palliative care. Newly developing programs should also realize that education of the hospital staff (nurses, social workers and nurse techs) will be an ongoing process

The development of Physician Orders for Life Sustaining Treatment (POLST) document in the rural community must be done in accordance with statewide work. In Missouri and Kansas Transportable Physician Orders for Patient Preference (TPOPP) is to be adopted as Standard of Practice. Thus, each community throughout both states should meet the standards by the TPOPP manager (The Center for Practical Bioethics) but are able to develop the program fitted for their communities. The rural regions are aware of the stakeholders in their areas and can work in accordance with the state level. It is felt that POLST is valuable in every area, but RELI remembers the statement from a rural citizen: “when I had to leave my home and town and go to a bigger city for health care – I feel like a lost my voice.” For this reason, the adoption of POLST/TPOPP will be the solution, especially in rural areas.

## Health Care Coalition of Rural Missouri

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23579
<b>Grantee Organization</b>	Health Care Coalition of Rural Missouri (HCC)
<b>Organization Type</b>	Rural Health Network
<b>Address</b>	825 S Bus. Hwy 13, Lexington, MO 64067
<b>Grantee organization website</b>	<a href="http://www.hccnetwork.org">www.hccnetwork.org</a> , <a href="http://www.livewellcenters.org">www.livewellcenters.org</a>
<b>Outreach grant project title</b>	Addressing the Prevalence of Diabetes and Depression in Rural Missouri
<b>Project Director</b>	Name: Toniann Richard
	Title: Executive Director
	Phone number: 660-259-2440
	Fax number: 660-259-2440
	Email address: <a href="mailto:toniann@hccnetwork.org">toniann@hccnetwork.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*I 70 Community Hospital	Sweet Springs, Saline, MO	Hospital
*Carroll County Memorial Hospital	Carrollton, Carroll, MO	Hospital
*Lafayette Regional Health Center	Lexington, Lafayette, MO	Hospital
*Pathways Community Health	Across State of MO	Mental Health Facility
*Health Care Coalition of Rural Missouri (HCC)	Lexington, Lafayette, MO	Rural Health Network

## Part III: Community Characteristics

### A. Area

The grant focused on residents in three counties: Carroll, Lafayette, and Saline. In addition to providing services in those three counties, the grant served residents from 13 additional counties: Caldwell, Cass, Clay, Jackson, Johnson, Livingston, Marion, Monroe, Pettis, Platte, Ralls, Ray, and Shelby.

### B. Community description

The three counties (Carroll, Lafayette, Saline) represent a very rural population of over 65,000 in West Central Missouri. Employment consists of farms, orchards, light manufacturing, and services. Many of the people in all three counties have incomes below the poverty rate (13.1% in Carroll; 10.7% in Lafayette; and, 21.1% in Saline; children in poverty have even higher levels [data from *Summary of Social and Economic Indicators*, OSEDA, University of Missouri Extension, 2015]). The population is mostly Caucasian/White, however, the racial/ethnic mix is increasing, especially the Hispanic/Latino population who are permanent and migrant workers in the counties. The primary care provider ratios are high in Carrol (3029:1); Lafayette (3007:1), and Saline (1667:1) counties. Mental health provider ratio is similarly high in Carroll (9127:1), Lafayette (1098:1), and Saline (1011:1) [2015

County Health Ranking Missouri Data]. In addition to an inadequate number of health care providers and low incomes, until the Affordable Care Act (ACA) many of the residents had no insurance to help with the cost of transportation, billing, and medicines. The counties have been gaining momentum in the last ten years with provisions for underserved and unserved populations for primary, mental and dental care as well as education and infrastructure to facilitate a healthy, active lifestyle.

### C. Need

The long-term goals of the Outreach grant program were to improve access to education and health care outcomes for people diagnosed with diabetes and/or depression in the three-county area by expanding methods of disseminating information and education; using evidence-based practices; and, incorporating the use of Telemedicine.

Roughly one-third of the adult population in the three counties is obese. The extreme rise in diabetes hit our area hard. The percent of adults with diabetes in each of the three counties ranges from 9.2% in Lafayette to 10% in Carroll and 10.3% in Saline, compared to a state average of 9.6%. All three counties have higher rates of diabetes than the State. Additionally, the rates for suicide and heavy alcohol use are high in all three counties. Suicide rates in 2007 per 100,000 was 8.9 for Lafayette, 17.2 for Carroll and 9.2 for Saline compared to 12.7 for Missouri overall (MO DHSS). Additionally while County rates for depression are not readily available, rates for Missouri indicate that it is one of the states with the highest incidence of adult depression – 9.2%-10.3%. (BRFSS, 2008). Suicide and heavy alcohol use are often co-occurring behavioral disorders with depression. These facts compelled us to tackle these diseases. The co-occurring diagnosis of diabetes and depression was also intriguing in that research has linked the two diseases. For example, the CDC (2008) in its comparison of States on Incidence of Depression notes that "Depression can adversely affect the course and outcome of common chronic conditions such as arthritis, asthma, cardiovascular disease, cancer, diabetes and obesity." And, according to an article in *Medical Care* (vol. 36 no. 7, 1998, 1098-1107), the authors show the rural connection, "Although there were no rural-urban differences in the rate, type, or quality of outpatient depression treatment, rural subjects made significantly fewer specialty care visits for depression. Depressed rural individuals had 3.05 times the odds of being admitted to the hospital for physical problems ( $P = 0.02$ ) and 3.06 times the odds of being admitted for mental health problems ( $P = 0.08$ ) during the year."

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The HCC based this program on two Promising Practice Models: *Project Access Dallas* and *KC Free Clinic*. Both of the programs are based on the desire to serve a population that is underserved. Sustainability is built into each program, allowing continual growth. These two Promising Practice Models are located in urban areas, thus, we adapted the best ideas from them which we felt applied to our rural areas. *Project Access Dallas* was started by the Dallas County Medical Society in collaboration with several community partners to provide compassionate care for their community's uninsured patients who have no access to health care. The program is a network of volunteer physicians, partnering hospitals, community charity health clinics, and ancillary partners who volunteer to care for working poor patients. *KC Free Clinic* provides an individualized care plan to assist patients in seven key health navigation responsibilities. The care coordination team makes regular phone calls and visits to determine progress toward health goals, active referrals to community resources, health education and health literacy.

The strong collaborative model that *Project Access Dallas* created informs program structure from the health care providers to the Care Coordination Team to the commitment for sustainability. Our program used this same informative model for operations. We were impressed with the Care Coordination Program at *KC Free Clinic* which is an individualized care plan to assist patients in seven key health navigation responsibilities. In contrast with the *KC Free Clinic*, our program is more goal-oriented wherein patients are guided and monitored by a registered nurse. The *KC Free Clinic* shared its existing screening and evaluation tools with us so that we did not have to "reinvent the wheel" in developing these resources.

When HCC took ownership and management control of a rural health clinic in Waverly, Missouri, we were able to incorporate some of the clinical aspects of these Promising Practices Models as well. Both models mirrored HCC's desire to provide education and information along with care to the underserved in our communities.

### B. Description

Implementation began with a planning effort composed of HCC staff and its partners which included staff from five health care clinics affiliated with Lafayette Regional Health Center, two clinics affiliated with Carroll County Memorial Hospital, two clinics

affiliated with I-70 Community Hospital, two Pathways Community Behavioral Health offices, and local community agencies. Planning initially focused on how to build awareness of the health problems related to diabetes and depression while simultaneously building the Program. The team utilized a Plan-Do-Study-Act (PDSA) Cycle Model for continual program improvement.

During the Planning Phase, the team gathered information from health care providers, staff and residents as well as created and tested a packet of information to be completed by each client (patient) enrolled in the program. The packet included a Notice of Privacy Practice, HIPPA patient authorization form, registration forms, patient history, contact information, provider and patient FAQ's, marketing evaluation questions, and surveys pertaining to diabetes and/or depression.

Patients who enrolled in the program received free blood screenings which provided A1c, cholesterol, glucose, triglycerides along with height, weight and BMI measurements. Patients received written and oral information about how to understand the blood screening information as well as a listing of resources that they could use for further care. Additionally, enrollees received online information that included healthy eating menus, activity suggestions, and available resources. Patients also completed a Patient History Questionnaire (PHQ9) for a pre-screening for depression.

A financial plan was also developed to instruct clinics on how to bill for the services provided under the Program. A dedicated Web Site and database were created which housed all surveys and paperwork allowing clients to provide information in a secure electronic environment, if desired. In addition, a marketing plan was created and implemented which included brochures, press releases, display boards, posters, and radio announcements.

The Community Health Manager performed bimonthly visits to participating locations to collect completed information packets, instruct/educate providers on how to accurately implement the program, and to answer questions. Outreach efforts were conducted at the various health fairs and community-wide events across the three counties as well as via presentations at civic and community group meetings.

Telehealth was actively pursued during the first half of the grant period and was put into effect during Year 2. The first use was to provide mental health services for appropriate patients with a psychiatrist located approximately 50-60 miles from Lafayette County. This success has led to greater use of telehealth for specialty care, thus reducing the time and resources for those patients who could go to a nearby city as well as providing specialty care to those who would not be able to get this care in any other manner.

### **C. Role of Consortium Partners**

The primary partners for this project included regional Critical Access Hospitals, Rural Health Clinics, and HCC's Federally Qualified Health Centers. It is important to recognize that these partners have been working together for the better half of the last ten years. The leadership at the hospitals has been relatively consistent and there was an understood partnership for new programs and services. HCC staff and network members knew the opportunity for growth was substantial and supported an "all in" approach.

In the beginning, hospital and rural health clinic staff were primarily responsible for the implementation of the program and HCC staff provided administrative and financial support. Eventually after the FQHC opened in Waverly, there was a significant opportunity for HCC staff to provide services as well. It became evident that there was a major change in service delivery for our area. We finally had a collaborative service delivery model that focused on the Triple Aim. Patients with diabetes and/or depression could be served in the right place, at the right time, and for the right cost. HCC staff and network partners were happy to partner, serve, and lead the direction for other rural communities.

In our third year we were accepted into the Missouri Primary Care Health Home project through the Department of Health and the Missouri Primary Care Association. This program will sustain the Prevalence of Diabetes and Depression in Rural Missouri program for those with a diabetic diagnosis and who receive Medicaid benefits as well as expand the program to reach patients with other chronic illnesses. The partners have remained committed to the project and are currently partnering with HCC on similar projects including pain management, medication management and coordinated care for chronic disease.

Partners met regularly throughout the entire grant period to assess implementation progress, make suggestions and decisions regarding changes or re-direction. This was especially critical when HCC began operating the Waverly Clinic as work in other

areas of the Network came to a halt. While it slowed down the outreach efforts of this program temporarily, it allowed HCC to bring on a Chronic Disease Manager and LCSW Behavioral Health Consultant. These efforts increased the quantity and quality of patient visits and outreach efforts. The “warm-hand-off” approach from the primary care provider to the Behavioral Health Consultant and then to partnering mental health providers increasingly became a key component of the program.

Partners’ roles and responsibilities also included speaking engagements wherein the program would be discussed; providing the brochures and other relevant information in their offices and waiting rooms; reviewing operations and processes and make adjustments as needed. For example, the billing process originally developed was not being used as planned. The partners who were knowledgeable in this area of clinical testing and billing were able to provide expert advice to the team about strategies. The strategies were implemented and the process became seamless.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Clients who had scores of 5 or greater on the A1c received follow-up calls and given free lab work every 90 days to monitor levels. Regardless of A1c level, all clients were provided with educational materials and information to address their diet and activity. All Patient Health Questionnaire (PHQ9) screenings were reviewed by a LCSW Behavior Health Consultant. This strategy was effective in analyzing the PHQ9 for each client and making decisions about the next step based on which questions were answered. Then, based on the recommendation of the LCSW Behavior Health Consultant, referrals for treatment were made.

Through December 30, 2014, 837 individuals participated in the program’s health screenings. Patient demographics indicate that slightly more than one-half are female (57%) and 9 in 10 are Caucasian/White with nearly 1 in 10 reporting Hispanic/Latino ethnicity.

The tests revealed that 88% had a normal A1c of less than 7; 12% with A1c greater than 7. Of those with an A12c less than 7, 22% were determined to fit the profile of the program as prediabetic with an A1c of 5.7 to 6.9. More than one-half (58%) of the patients received additional health screenings which included Total Cholesterol, HDL, LDL, Blood Pressure as well as BMI. Comparison data from initial screening and 90-days following initial screening were available for 48 people. Of those 48 individuals, results showed lower A1c’s for 19 individuals (40%) with 17 individuals (35%) showing a decrease in their PHQ9 scores. Paired Cases T-Test was conducted for BMI, PHQ9 and A1c at Time 1 (Initial Screening) and Time 2 (90 day follow-up). No statistical differences were found for these three health indicators.

As important as the evidence-based evaluative findings are, it is also important to view the program’s success in the bigger picture. Through this grant, HCC was able to provide lab work, blood pressures, height and weight, BMI, mental health screenings along with many educational resources to individuals who have not had routine health visits in many years. The screenings were done at no cost to the client and future office visits were also paid to assist in addressing problems discovered.

By being in the community, building awareness about the consequences of undiagnosed diabetes and depression, providing solid and useful nutrition and active living education and information, and providing the warm hand offs and friendly face when referring patients to specialists, HCC with the program has made an impact directly and indirectly. As a result, individuals learn to be proactive about their health and their family members’ health. In some cases, individuals were screened who had critical A1c levels, PHQ9 scores, and/or critical blood pressure readings that required immediate intervention. HCC was able to make sure those individuals received the care they needed when they needed it.

Additionally, the countless outreach events across the many rural communities that make up the three-county service area allowed HCC to share its story and talk about the need for health care in order for all the communities to grow and prosper. HCC added new network members and continues to grow its network of committed partners.

### B. Recognition

The program funding allowed our Licensed Clinical Social Worker and our Chronic Disease Manager to become certified as Lifestyle Coaches in the National Diabetes Prevention Program through the Centers for Disease Control and Prevention (CDC). This allowed the staff to be able to facilitate more comprehensive diabetic teaching as well as classes. This was a very beneficial certification and will be instrumental in the sustainability piece of this program.

## Part VI: Challenges & Innovative Solutions

The program was originally designed to reach the targeted populations through the Network Partners' clinics and health care facilities. Using those venues made the most sense to the team since patients would be coming in for various reasons. Diabetes and depression screenings could be folded into the regular flow of work. What we discovered, however, was that this was not as effective as everyone had believed. The clinics and health offices were busy, often understaffed, and not able to process the paperwork and follow the required billing procedures for the A1c screenings.

Thus, while we began doing outreach in the rural communities through health care facilities, late in year one, we realized that in order to be effective, we would need to conduct the outreach directly to the consumer (client/patient). Direct community outreach efforts were conducted at multiple locations and community-wide events across the three counties; and, staff and partners gave presentations to civic and community groups to build awareness. The partners continued to assist in the outreach efforts but not perform the primary function of conducting the screenings or providing the direct feedback to the patient. As a result, the number of people reached grew approximately 600% in one year!

Another key lesson learned during implementation was that there was little interest from the participants, regardless of age or gender, to complete the forms and surveys electronically. When this difficulty first emerged, it was thought to be primarily among the senior population; however, it soon became clear that it also applied to younger individuals, men and women.

The effect of these two challenges – effective outreach and electronic data collection - was to guide the Team to gain a better understanding and appreciation of the clinics' needs and time demands as well as tolerance of clients to provide information about their health status electronically. The client surveys were reconstructed to make data efforts easier and quicker. We found that a major lesson learned is the program requires a personal touch from a health care professional to engage patients and keep them engaged even when screenings are provided at no cost.

Another major challenge surfaced in using telehealth – a mainstay of the program – in the rural environment. The technological infrastructure to provide telehealth sessions at the physicians' offices, clinics, and via community centers proved to be far more difficult than anticipated. It was nearly 18 months into the program before direct client/doctor sessions could be offered via telehealth and this was only for mental health. Firewalls within the various clinics, hospitals, and offices proved difficult to link even with the assistance of a specialized company under contract with HCC to install the required software, etc.

Challenges arose throughout the development and implementation of the program. Along with those challenges, however, were opportunities. HCC's move into owning and operating two rural health care clinics was a huge opportunity for the organization and the rural community it serves. Additionally, the program enabled HCC to grow its relationship with the Migrant Farm Workers Project. This very unique program based in Lafayette County serves the seasonal and permanent orchard workers and their families. Created by an attorney with Legal Aid Society, the Migrant Farm Workers Project seeks to provide support in all facets to these families, including children. The program has been able to conduct diabetes and depression screenings with the help of translators, and work with them to follow up with nutritional information and referrals as appropriate.

## Part VII: Sustainability

### A. Structure

The partners who were key in creating and implementing this program will continue to partner with HCC as Network Members and allies: five health care clinics affiliated with Lafayette Regional Health Center, two clinics affiliated with Carroll County Memorial Hospital, two clinics affiliated with I-70 Community Hospital, two Pathways Community Behavioral Health offices, and local community agencies.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The program will continue after this grant cycle is complete. HCC is poised to continue its work by submitting a new Rural Health Outreach Grant proposal with a primary focus on those who are considered “prediabetic” (A1c between 4.6 and 5.9). Based on what we have learned, a much stronger emphasis needs to be made with the population considered “at risk” of becoming diabetic.

The Web Site with its information and education about diabetes and depression will remain an important community asset. Outreach focused on nutrition and active living with messages about the importance of diabetes and depression screenings through local health clinics will continue through HCC and its partners. HCC realized the benefits of providing these screenings in the community so the staff will continue to do glucose, blood pressure, height, weight and body mass index screenings and provide nutritional information handouts, as well, at the community events.

### C. Sustained Impact

The Outreach Grant impacted individuals, communities, counties, and not least of all, HCC and its partners. The program was developed collaboratively with both experienced and new partners who were all engaged throughout the entire process. The grant initiative provided an opportunity to learn together how to better meet the needs of the clients we are all trying to assist.

The focus on evidence-based results/outcomes also provided structure for a focus not just on activities but on the result of our activities to the client/patient and to the community. The amount of information and education that continues to be used in our three counties and in other communities is impressive and will continue to be valuable assets. Of particular importance was our acknowledgement that there was a low number of clients who did not follow through and continue their screenings. This fact led us to investigate other methods of client education and motivation to ensure that these important messages are accepted by those at risk and that they learn the skills necessary to make changes. HCC staff has been trained and received certification in the National Diabetes Prevention Program (DPP) curriculum to provide lifestyle coaching. This program has been researched and found to be very successful and may be included in the network offerings in the future.

Many new opportunities have arisen within HCC since it has become a direct health care service provider. Quality programs in the planning stage include: The National Committee for Quality Assurance-Patient Centered Medical Home (submitted), Meaningful Use (awarded stage 1), Clinical Quality Measures, Unified Data System reporting. The Quality Improvement efforts in planning will be laid over the current Quality Improvement program to help strengthen our internal program. Additional activities include worksite wellness, school based wellness, cultural competency, and care coordination. These activities extend HCC and its Network Partners to meet current needs within the rural communities served.

Last but certainly not least is the impact that having the Outreach Grant for 3 years to investigate a special population using a variety of methods and tools has made the Network stronger and larger and even more informed of the health factors affecting our residents.

## Part VIII: Implications for Other Communities

Lessons learned are the most valuable result from our program to other communities. Using the Plan-Study-Do-Act Continual Improvement Model was a major reason for the agility with which we were able to make major shifts in the program processes while maintaining the goals and objectives. Focusing on a few health factors, such as diabetes and depression, helped maintain the laser-like attention to evidence-based results/outcomes at the patient level. Additionally, questioning our assumptions about technology adoption and use by clients as well as partners ensured that we continued to build our technological infrastructure while meeting the less-technological demands.

Having a strong and dedicated, committed Team for the program composed of staff, partners and clients also enabled the program to be well-rounded in its approaches and realistic in its expectations. We strongly believe that if we had another year or year and half, we would have met or surpassed all of our goals. It always takes longer than we think.

# Missouri

## Northeast Missouri Health Council, Inc.

Part I: Organizational Information	
Grant Number	D04RH23608
Grantee Organization	Northeast Missouri Health Council, Inc.
Organization Type	Federally Qualified Health Center
Address	1416 Crown Drive, Kirksville, MO 63501
Grantee organization website	<a href="http://www.nmhcinc.org">www.nmhcinc.org</a>
Outreach grant project title	Improving Oral Health Access for Vulnerable Populations
Project Director	Name: Tim Herbst, DDS
	Title: Dental Director
	Phone number: 660-665-2741
	Fax number: 660-627-5802
	Email address: <a href="mailto:mherleth@nmhcinc.org">mherleth@nmhcinc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Northeast Missouri Area Health Education Center	Kirksville/Adair/Missouri	AHEC
Northeast Regional Medical Center	Kirksville/Adair/Missouri	Regional Hospital
Adair County Health Department	Kirksville/Adair/Missouri	Health Department
Clark County Health Department	Kahoka/Clark/Missouri	Health Department
A.T. Still University	Kirksville/Adair/Missouri	Medical School

### Part III: Community Characteristics

#### A. Area

The project targets rural Adair, Clark, Knox, Lewis, Schuyler, Scotland Counties in northeast Missouri (total population=56,362).

#### B. Community description

In terms of *demographics*, 96% of the population is white, 1.4% is black, 1.5% is of Hispanic or Latino origin, and 22.4% is under 18 years old. With regard to *health status indicators*, an estimated average 17% of the population reported overall poor or fair health. This rural and underserved region has a high concentration of need and a low financial capacity. According to the *U.S. Census Bureau (2009)*, 19.8% of the residents of the service area are uninsured, and 43% live at or below 200% Federal Poverty Level. Like most rural areas in America's Heartland, northeast Missouri has major health care issues and challenges. Service area prevalence rates for high blood pressure, high cholesterol, and obesity exceed the state rates. Additionally, 2011 data from *County Health Rankings: Mobilizing Action Toward Community Health*, ranked three of the counties (Clark, Knox and Schuyler) to be in the 60+ of 114 counties in Missouri (1 being considered the *healthiest* county in the state). All six counties are designated medical and mental health Health Professional Shortage Areas (HPSA) and five of the six counties are dental HPSAs. While U.S. Highway 63 that runs north and south through the service area has been improved to a four-lane highway, most residents in the six-county area live and travel on two-way county roads and gravel roads, many of which are substandard. Although residents

may only live 20 miles from a healthcare provider, due to the hilly, curvy roads that are not made for passing, travel time is substantially longer. The nearest metropolitan areas are Columbia 90 miles south, St. Louis 210 miles east, Kansas City 180 miles west, and Des Moines, Iowa, 150 miles north.

### C. Need

Through the Outreach grant program, the Oral Health Alliance (OHA) sought to expand oral health services for two vulnerable/underserved populations in a rural six-county region of northeast Missouri: 1) *pregnant women, infants, and children*, and 2) *special needs individuals*.

Ranking 49<sup>th</sup> nationally, Missouri has a low percentage (61.8%) of residents who regularly visit a dentist (national average is 65.5%), and an estimated 11% of Missourians have never even seen a dentist. Locally, an October 2011 Oral Health Alliance survey of pregnant women/guardians of children 0-5 years revealed that *only 44% of pregnant women reported visiting the dentist while pregnant* and a similar percentage of non-pregnant women reported visiting a dentist for preventive checkups and cleanings. The survey also gathered data from women/guardians on the oral health of their children ages 0-5. Of 282 children identified, *100 (34%) of children have never seen a dentist* and of those that have seen a dentist, 48% did not see a dentist until they were 4+ years.

*Special needs and medically compromised individuals* also suffer from preventable oral health conditions similar to the rest of the population. As reported in the 2000 Surgeon General's Oral Health Report, this population has a "greater risk for oral diseases". As expected, the special needs target population in the project service area also suffers from oral health complications associated with other health problems such as diabetes, respiratory disease, and cardiovascular disease. In addition, these individuals encounter more challenges (i.e., needs for specially trained competent dentists/clinic staff and special equipment) when seeking oral health care.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Oral Health Alliance modeled its rural health services project after the *Oral Health Disparities Collaborative*, which was launched to improve access to oral health care services for low-income children ages 0-5 years and pregnant women. This program was a part of the HRSA Health Disparities Collaborative, which fostered development of high quality, evidence-based systems of care in the nation's FQHCs. The Oral Health Disparities Pilot began in 2005 with the "aim of developing comprehensive primary oral health care system change interventions to generate improvements in perinatal oral health and the prevention and treatment of early childhood caries." The project used the Chronic Care Model as the framework for system redesign, the Model for Improvement as a rapid change methodology, and a measurement system of process and outcome measures targeting pregnant women (perinatal) and children age 0-5 years of age (early childhood). Four pilot sites participated: 1) High Plains Community Health Center in Lamar, Colorado, 2) Salud Family Health Center in Fort Lupton, Colorado, 3) Sunrise Community Health Center in Greeley, Colorado, and 4) Community Health Partners in Livingston, Montana.

The Alliance selected the Oral Health Disparities Collaborative for a number of reasons. First and foremost, the Collaborative targeted two of the Oral Health Alliance's targeted population groups (pregnant women and infants/ children). The Oral Health Disparities addressed access, usage, referral, knowledge, and behavioral needs among low-income, vulnerable populations to promote participation in preventive care and self-management plans. These resources were readily available via the National Network for Oral Health Access website. The Oral Health Disparities Collaborative engaged FQHC sites (including those in rural areas) with other local medical and dental providers and community-based agencies. Therefore, this model type aligns with the membership configuration of the Oral Health Alliance and its extended network of county health departments, medical providers, Head Start programs, and school districts.

In addition, the Oral Health Disparities Collaborative followed the Chronic Care Model, which fits with unique care needs of special needs populations. The Chronic Care Model (CCM) identifies the essential elements of a health care system that encourages high-quality chronic disease care. These elements are the community, the health system, self-management support, delivery system design, decision support and clinical information systems. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. This model was very adaptable to the Oral Health Alliance and provided a framework for developing a program that focused on quality outcomes in perinatal oral health, risk assessment, and treatment of Early Childhood Caries.

NMHC and the Oral Health Alliance particularly followed the delivery system design and community components of the model. Focusing on pregnant women, infants and children, NMHC dental clinics restructured their workflow and scheduling to allow for more appointments for children under the age of five. In addition, increasing the education of the importance of oral health during pregnancy with NMHC's prenatal patients, the OB/GYN and dental clinics worked in tandem to help assure the pregnant women in need of oral health care scheduled their appointments and kept them. When possible, the dental appointments were scheduled on the same day as an OB appointment to reduce travel and time barriers. Increasing outreach efforts with local organizations that provide services to pregnant women, mothers and children (WIC and Head Start), helped raise an awareness of the importance of oral health, leading to enhanced oral health access and positive outcomes.

This model also offers extensive resources to support program replication/adaptation, which greatly assisted the Oral Health Alliance in the planning, implementation, and evaluation for this Rural Health Care Services Outreach project. Specifically, *HRSA Oral Health Disparities Collaborative Implementation Manual* offers 60+ pages of critical background information and detailed guidance for facilitating high leverage changes and implementing the recommended strategies. Framed within the Chronic Care Model, the manual delivers clear guidance for forming improvement teams, developing aims, defining the population of focus, tracking patient participation, and measuring outcomes. The National Network for Oral Health Access further supports medical-dental provider collaboration to optimize patient care, and to that end, provides free web-based access to 20+ documents and tools that are referenced throughout the *Oral Health Disparities Collaborative Implementation Manual*. Resources of particular importance are the *Pedio Caries Risk Assessment*, *CAMBRA Risk Assessment*, anticipatory guidance, *Oral Health Patient Satisfaction Survey*, perinatal health PowerPoint presentation and prenatal patient education materials.

## B. Description

With funds from the Outreach Services grant, Northeast Missouri Health Council (NMHC) hired an outreach coordinator to help manage patient referrals, coordinate care, provide patient navigation support, deliver education/ training activities, and engage partners/stakeholders. This position has been key to the success of the project. The coordinator has worked diligently to build relationships with staff and administrators of local service agencies that provide services to the target population (i.e., WIC participants, health department clinic clients, Head Start families), school districts, and other healthcare providers.

One of the Oral Health Alliance's biggest accomplishments has been the increased outreach efforts with the schools in the six-county service area. Prior to receiving the Outreach Services grant, NMHC was providing the *Preventive Services Program* (PSP) oral health screening and fluoride varnish program to three schools in Adair County reaching approximately 630 children in grades K- 6. By the end of Year 1, the OHA was in 13 schools reaching over 1,700 children, and at the end of Year 2, 2,187 students were reached in 16 schools. During this final grant year, over 2,300 children have received screenings and fluoride varnish through the PSP program. Throughout the three-year program, the outreach coordinator has worked closely with school nurses to help students who are identified as needing urgent care, receive care. While many of the nurses are overwhelmed and do not have the time to follow-up with parents, we have had success with some of the nurses and are working with the school and parents to address any barriers. As a result of the collaborative efforts, more of the students are receiving the needed oral healthcare services.

In addition to school screenings, the Oral Health Alliance partnered with the six area health department WIC clinics in the grant service area to provide screenings and client/patient education. A dental hygienist provided services bi-monthly at two WIC clinics and offered a minimum of two screenings a year at the other four clinics. During the three-year period, over 1,300 pregnant women, women, infants and children were reached through screening and education activities. Educational programs and activities focused on the importance of oral health care, proper tooth brushing and flossing techniques, educating parents about baby bottle tooth decay, the importance of keeping baby teeth healthy, and the importance of preventive oral health care.

Another accomplishment has been training for area healthcare providers and agencies that work with the target population. Six WIC clinics participated in oral health education trainings with 38 clinic staff receiving training. In addition, 23 healthcare providers, 25 medical students and residents, and 52 Head Start staff participated in trainings. These trainings were well received and the OHA has received positive feedback from WIC staff on how they are implementing teeth checks and proper oral healthcare into their visits. Oral health supplies are provided to these agencies to distribute to their clients in need.

The installment of the Versatilt wheelchair exam chair has greatly increased access to care for the regions medically challenged population. Due to the difficulty of chair transfers, which can be dangerous for all involved, wheelchair bound patients often had to travel 2 – 3 hours to visit a dentist who could accommodate their special needs. Once the chair was installed in the Northeast

Dental clinic, area agencies that work with physically disabled patients were invited to the clinic for a demonstration of the chair. In addition, the outreach coordinator and dental providers provided educational programs for staff, care givers, and patients on the importance of and how to properly care for teeth. Oral health supplies are also provided to all the agencies to distribute to their clients in need.

### C. Role of Consortium Partners

The Oral Health Alliance project promotes rural healthcare services outreach by expanding the delivery of quantified, needed, oral healthcare services in northeast Missouri. Alliance members have been actively engaged in project since September 2011. The table below identifies the Consortium members, and their project roles.

Core Member	Project Role
Northeast Missouri Health Council (Lead applicant)	Refer patients for oral health services; expand/deliver direct oral health services/ care coordination via its rural FQHC dental and medical clinics
Northeast Missouri Area Health Education Center (NEMO AHEC)	Coordinate development and delivery of public oral health education/awareness campaign
Northeast Reg. Medical Center	Refer medical patients to the expanded outpatient oral health services; distribute awareness materials to new mothers; educate population
Adair County Health Dept.	Refer WIC clients for oral health services; host screening and educational activities; distribute awareness materials; educate target population; serve as key liaison to outlying rural county health departments.
Clark County Health Dept.	Refer WIC clients for oral health services; host screening and educational activities; distribute awareness materials; educate target population; serve as key liaison to outlying rural county health departments.
AT Still University	Expand local FQHC dental workforce and service capacity by infusing/training new dental students in FQHC clinics, exposing dental students to rural, underserved, and special needs populations.

Service delivery methods have included, but are not limited to: 1) community-based oral health screenings and preventive services at WIC, Head Start, and area schools; 2) regular oral healthcare at two CHC sites (i.e., Northeast Dental and Kahoka Dental), which includes a Kirksville-based special needs operatory; and 3) a six-county oral health literacy and awareness campaign, featuring both traditional methods and highly innovative social media tools.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

NMHC and the Oral Health Alliance have contracted with the Center for Applied Statistics and Evaluation (CASE) at Truman State University to conduct the majority of evaluation activities. Baseline data using quantitative clinical and demographic data using the time period May 1, 2011 – April 30, 2012 was established. Focus groups and surveys were conducted in Year 1 to help form qualitative baseline data and are being repeated in Year 3. NMHC patient demographic, clinical and outreach data was used to establish quantitative baselines.

As previously discussed, the OHA has reached over 4,000 students through the Preventive School Program (this is an estimate of the 6,000 children reached because some were repeats each year), identifying over 800 children that needed follow-up care and an additional 212 that were in need of urgent oral healthcare. Over 3,200 residents were reached through community outreach events such as health fairs, back to school fairs and puppet shows; and an additional 1,300+ WIC/health department clients were reached through screenings and educational programming.

While we do not have a hard data to report at this time the NMHC dental clinics have seen an increase in the projects target population - children enrolled in Medicaid and pregnant women. When looking at new patient referrals, our outreach efforts in

schools and health departments have proven to be successful in reaching this population. While referrals from primary care providers have not reached the point we would like, there has been a definite increase in referrals for oral health services from the medical community.

The OHA is in the process of conducting focus groups and surveys to evaluate the knowledge gained, and change in attitude and behavior during the three year outreach project.

## B. Recognition

Throughout the grant project, the Oral Health Alliance and Northeast Missouri Health Council have worked with local media outlets to promote the Oral Health Alliance and oral healthcare. The Kirksville Daily Express (the area's regional newspaper) has done several stories on the services offered at Northeast Dental and the importance of oral health. The newspaper also did a full story on the addition of the wheelchair tilt operator and how it will greatly improve access to oral healthcare services for the area's medically challenged residents who were going without treatment. Northeast Missouri Health Council dental services were also highlighted with a full page story in the 2012 Progress edition which showcases top stories and organizations from the year.

Additionally, KTVO, the local television station, also often featured the Oral Health Alliance and oral health care during their Health Beat segment, and also did oral health stories focusing on children's health during February's "National Children Health's Month".

In late 2014, the Missouri Foundation for Health approached Northeast Missouri Health Council about the Oral Health Alliance and the structure of the program. The Foundation was particularly interested in how the outreach coordinator was being utilized, and what successes the OHA were seeing. They were impressed with how well the Consortium worked together to reach so many underserved woman, infant, children and medically challenged and of all the successes the group has accomplished over the past three years. Looking at the success of the OHA project, the Missouri Foundation for Health is developing a grant funded program that focuses on oral health care coordination and outreach efforts. NMHC will work with the Oral Health Alliance to develop a grant application to help continue our efforts and also expand the service area or activities targeting pregnant women, infants and children.

## Part VI: Challenges & Innovative Solutions

Although all of the Oral Health Alliance members work with the target population in some aspect, each member agencies concentrates on a focused population, making it difficult at times for the OHA members to get out of their "silos". While health department members are key to working with the other health departments and in reaching WIC clients, they have no "connection" to the *Preventive School Program*, which is very focused on school children. The hospital's role primarily focuses on the new mothers who deliver at the hospitals, and the medical and dental schools involvement in the OHA is focused on student training and exposure to community outreach. Even though the OHA works together on common goals, when it comes to project activities and program areas, members are separated to a point by the agencies specific focus areas and client/patient base.

While this was a challenge, it did not directly affect the program's activities or successes. During Alliance meetings, there is open discussion where members offer suggestions and ideas and help brainstorm, even if the activity does not directly relate to their agencies. And when it comes to specific agency type events, the agency that is directly involved, assists with the activity.

## Part VII: Sustainability

### A. Structure

With Consortium members continually facing funding cuts and limited staff availability, it has been a challenge to have consistent participation from all members, but at the present time, all Oral Health Alliance members have stated they intend to continue with the Consortium. However, the members have identified the need to re-evaluate the Consortium structure and continued goals of the OHA once the grant period ends. The OHA believes the partnerships that have been forged, the expansion of the Preventive School Program, and development and implementation of outreach screenings, trainings and educational programs are firmly in place and that the Consortium has achieved the majority of goals set through the strategic planning process. As the Consortium looks beyond the grant funded project period, they will work together to define the Consortium and the role they see their agency playing.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

In looking at what program activities could and should be maintained, the Oral Health Alliance identified program activity successes and challenges, and then broke each activity down by cost effectiveness, whether it met the identified needs, and if the activity is measurable.

The OHA unanimously identified the Preventive School Program as an activity that needed to be continued. As discussed on page five, as a result of the Rural Health Care Service Outreach project, more than three times the number of school children than previously reached, received an oral health screening and two fluoride varnishings. This project not only serves as preventive care, but is an ideal way to identify children who are in need of follow-up exams and treatment, who may otherwise not be seen by an oral health provider. This program has also strengthened NMHC's relationship with the schools, leading to the nurses taking a more active role in not only children's medical health, but also their dental health.

WIC/health department screenings were also collectively identified as an activity that should be continued. The partnerships with WIC and health department clinics have been a very successful avenue for reaching the target population - pregnant women, infants and children. Over the past two and half years, 1,300 women and children have been reached through screenings and educational activities. The clients identified as needing follow-up and urgent care are encouraged to schedule an appointment, and in some instances the hygienist will call the dental clinic while she is with the client and schedule the appointment for the woman. Pregnant women are given priority to help assure the woman's dental work can be completed while she is enrolled in the Medicaid for Pregnant Women program which covers dental work during pregnancy and up to 90 days following delivery. Many of these women have multiple oral health issues that require several visits to complete the treatment, so getting as much done as possible while they have coverage is a priority.

In addition to the screening and educational programs targeted to schools and WIC/health departments, community oral health awareness programs will continue. While there will not be the funds to print posters and brochures, develop Public Service Announcements, or purchase as many oral hygiene supplies, health awareness and education will still take place in the region. The number of events/activities that are held may have to be scaled back due to travel costs and staff time, but providing screenings and education for this population will remain a priority.

## C. Sustained Impact

The Oral Health Alliance has identified several program impacts that will be sustained at the conclusion of the three-year project. While OHA members have collaborated on a variety of projects and programs through other consortiums, this is the first oral health focused consortium in northeast Missouri. The awareness and attitude changes among OHA members regarding 1) the importance of oral health on one's overall health, 2) the impact poor oral health can have on pregnant women, 3) oral health care for infants and toddlers, and 4) access to oral health services for the underserved population, has had a huge impact on how OHA members work with their clients and communities, and this practice will be sustained within the member agencies.

Additionally, the oral health education and trainings delivered to healthcare providers, healthcare agencies, school nurses, patients and agency clients will support long-term delivery of community oral health awareness and education. The tools and resources gained through the outreach education and training activities will continue to be utilized and implemented by these groups, who will continue to reach their patients, clients and community members.

The wheelchair tilt purchased in Year 1 will also be sustained with Northeast Missouri Health Council absorbing all maintenance costs, and will continue to promote the service to area agencies and medical providers. Having this service available in the region has been a tremendous resource for the areas medically challenged population.

As a result of the Rural Health Care Services Outreach funding, Northeast Missouri Health Council, with input from the Consortium, has developed and improved clinic workflow, referral processes, and tracking mechanisms and processes. These

processes have helped improve clinic efficiency, and awareness and knowledge of NMHCs services, which in turn has increased access to care for patients who have been reached through outreach efforts. In addition, NMHC added fluoride varnish application to the available services provided at NMHCs pediatric and family health clinics. By offering varnishings during medical visits, more children that have never seen the dentist are being reached.

## Part VIII: Implications for Other Communities

The Oral Health Disparities Collaborative and its resulting strategies and resources provided an excellent foundation from which to launch the Oral Health Alliance project. The activities have had a significant impact on the target population, as well as the Alliance members and the participating community partners. Increased medical-dental collaboration also positively impacted the regional healthcare environment through increased referrals, cross-training, and improved systems of operation. The care coordination, education, and patient navigation services offered by the OHA yielded self-management and health literacy strategies that will be useful to other rural communities with similar needs. Since NMHC is a FQHC, there is the potential for this project to serve as a model for implementation at community health centers nationwide.

# Montana

## Butte-Silver Bow Primary Health Care Clinic, Inc.

Part I: Organizational Information	
Grant Number	D04RH23562
Grantee Organization	Butte-Silver Bow Primary Health Care Clinic, Inc.
Organization Type	Federally Qualified Health Center
Address	445 Centennial Ave., Butte, MT 59701
Grantee organization website	<a href="http://www.Buttechc.com">www.Buttechc.com</a>
Outreach grant project title	Integrating substance use in primary care
Project Director	Name: Jessica Cotton
	Title: CEO
	Phone number: 406-496-6018
	Fax number: 406-496-6035
	Email address: <a href="mailto:jhoff@buttechc.com">jhoff@buttechc.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Montana Chemical Dependency Center	Butte MT	Public treatment facility
*Butte-Silver Bow Health Dept.	Butte MT	Public health department
*BSB Drug Court	Butte MT	Public drug treatment court
Western Montana Mental Health	Butte MT	Public mental health facility
Start program/CCCS	Butte MT	Private nonprofit treatment facility
Focus on recovery	Butte MT	Private, grassroots group
Montana Tech	Butte MT	Public university

### Part III: Community Characteristics

#### A. Area

The community served by this Outreach grant is Butte-Silver Bow County. The population center is Butte, Montana, but other smaller outlying areas are included in that population center.

#### B. Community description

Butte-Silver Bow County is home to nearly 34,000 people in an area of 718 square miles. It is a beautiful frontier area and the population is overwhelmingly white. One of the primary factors in this mining town is the large population of poverty which rivals parts of Appalachia in terms of income, health disparities and outcomes, and the social problems associated with a poverty rate that hovers around 17 percent and nearly 25 percent for children. It also has high rates of child maltreatment, domestic violence, driving under the influence, and other substance use issues and crime. It also lacks the infrastructure and funding to fully address these complicated community issues.

## C. Need

This Outreach grant program was proposed to address the lack of substance use treatment programs. A longtime county outpatient program was closed because it was nearly \$1 million in the red. As a primary healthcare clinic concerned with the lack of services for these patients, this project was proposed to alleviate the gap. Another goal of the project was to support a consortium that would collaborate on ways to improve access within the local system. The former system was unwieldy and confusing to vulnerable populations who needed help, but were unable to get it. The created the largest barrier in accessing screening and treatment for substance use disorders.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

SBIRT (Screening, Brief Intervention and Referral to Treatment) was the evidenced-based model adopted by the program. Brief interventions are evidence-based practices design to motivate individuals at risk of substance abuse and related health problems to change their behavior by helping them understand how their substance use puts them at risk. Healthcare providers can also use brief interventions to encourage those with more serious dependence to accept more intensive treatment within the primary care setting or a referral to a specialized alcohol and drug treatment agency.

The two most common behavioral therapies used in SBIRT programs are brief versions of cognitive behavioral therapy (CBT) and motivational interviewing, or some combination of the two. Motivational Interviewing (MI) is evidenced based, goal-directed and client-centered. It helps patients and resolves ambivalence that accompanies substance use. The operational assumption in MI is that ambivalent attitudes or lack of resolve is the primary obstacle to behavioral change, so that the examination and resolution of ambivalence becomes the key goal. MI has been applied to a wide range of problem behaviors related to alcohol and substance abuse as well as health promotion, medical treatment adherence, and mental health issues.

Cognitive-behavioral strategies are based on the theory that in the development of maladaptive behavioral patterns like substance abuse, learning processes play a critical role. Individuals in CBT learn to identify and correct problematic behaviors by applying a range of different skills that can be used to stop drug abuse and to address a range of other problems that often co-occur with it.

Problem-Solving Treatment (PST) is a brief form of evidence-based psychotherapy that was originally developed in Britain for use by medical professionals in primary care. It is also known as PST-PC or Problem-Solving Treatment – Primary Care. PST has been studied extensively in a wide range of settings and with a variety of providers and patient populations.

Alcohol Use Disorders Identification Test (AUDIT) is a 10-item questionnaire that screens for hazardous or harmful alcohol consumption. Developed by the World Health Organization (WHO), the test correctly classifies 95% of people as either alcoholics or non-alcoholics. The AUDIT is particularly suitable for use in primary care settings and has been used with a variety of populations and cultural groups. It should be administered by a health professional or paraprofessional. DAST is a 10-item, yes/no self-report instrument that has been condensed from the 28-item DAST and should take less than 8 minutes to complete. The DAST-10 was designed to provide a brief instrument for clinical screening and treatment evaluation and can be used with adults and older youth. Both of these evidence-based screening tools were easily used in a primary care setting because they were short screening tools and are not burdensome on patients or providers. However, because of the use of the electronic medical record, the results had to be entered manually into the system. We developed a protocol for this but it is still time consuming.

### B. Description

There were many activities conducted through this Outreach program. Because the clinic selected a new service to integrate into the primary care model, work ranged from basic procedural work to advanced clinical protocols. In the beginning of the grant, the staff wrote policies and procedures to align with the administrative rules of Montana. That was followed by an educational scouting trip to an Oregon-based substance use program to explore best practices in a primary care setting. To facilitate clinic understanding of substance use, the clinic invited experts to talk about Addictions 101. There were also several visits with clinical and pharmacy staff. Dr. Catalanello provided a well-received substance use presentation to clinical staff and Dr. Nauts, a psychiatrist from the Montana State Hospital, presented a talk on medically-assisted treatment. To prepare for patients, all behavioral health staff was trained in motivational interviewing. The clinic took the next step toward integration by standardizing procedures on assessing patient chemical use history and nurses were trained on protocol for taking use history.

With the medical director leading the way, the evidence-based tools and screening instruments were placed in all exam rooms and nurses' stations. The same instruments were incorporated electronically within the electronic medical record. For patient education,

posters on standard drink sizes, health risks and information were placed in all patient exam rooms. CRS 42 confidentiality forms were redone to comply with substance use federal regulations. Assessment tools were built into dot phrases for use in EPIC, the electronic medical record. The Shedler Quick Psycho-Diagnostic Pane and other assessment tools were utilized to determine if there was a co-occurring mental illness. To facilitate access, a second licensed addiction counselor was hired.

To help publicize services and educate the community, providers and staff volunteered at the local Farmer's Market. A media blast featuring the viewing of *The Anonymous People*, an award-winning documentary on substance use and recovery, was conducted and resulted in a community forum with more than 200 participants. The film was also shown to all CHC employees as a part of anti-stigma training. Other community efforts included a Recovery Fair, sponsored by several consortium partners and corporate sponsors. A Run for Recovery was featured on July 4. Recovery Month was observed including buttons for staff and media events throughout the month. Staff also gave a presentation on the clinic's screening tools and their use at a state conference. Work flow around providing substance use services was finalized which was the last step of integration of the service. Finally, as an outgrowth of the work of the consortium, St. James Healthcare, the local hospital, is heading up a group to explore the possibility of a detox center in Southwest Montana and is meeting with Rimrock and the Recovery Center in Missoula.

### C. Role of Consortium Partners

Partnering with the CHC to form a community consortium were eight respected community organizations. The consortium understands the mining community now finds itself with the highest rate of DUIs, an exploding drug offense rate and a climbing domestic abuse caseload in the state of Montana. Partner responsibilities were as follows: **AMDD (Addictions Mental Disorders Division)** lead the planning and follow-up action for the development of a detox center. Those discussions are ongoing. **Montana Tech** hosted a viewing of *The Anonymous People*. The college also decided to offer Recovery Coach Certification to students who are working on a minor in addiction studies. **The Butte Silver Bow Health Department** participated in and promoted the Recovery Fair. **Western Montana Mental Health** participated in the Recovery Fair and had representation on the committee to create a universal application for patient intake and detox center exploration committee. **Montana Chemical Dependency Center** participated in the Recovery Fair and the committee to create a universal application for patient intake. **Addictive and Mental Disorders Division**, through Local Advisory Committee, helped organize the Run for Recovery. **Focus Recovery** helped to organize the Run for Recovery, the Recovery Fair, the Recovery Coaches Training and had representation on the committee for exploring the possibility of a detox center in Southwest Montana.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In order to fully integrate substance abuse treatment into the primary care setting, substance use education and trainings were arranged for staff of which 80 percent of the clinic staff attended. The clinic agreed on system-wide substance use screening tool and a short-term intervention and treatment curriculum was developed.

Media activities were numerous throughout the life of this grant. Nearly 600 pamphlets were given out at community events and in the waiting rooms of the clinic. In addition, nearly 200 people attended a screening of "The Anonymous People", an award-winning documentary on substance use which led to the formation of a grass-roots group devoted to promoting recovery from substance use.

Another great outcome for this grant is that all consortium partners remained with the program and the group grew by several members. Through the consortium, several groups developed including a working group to examine whether a detox center was feasible in Southwest Montana since there are no public detox centers in the state. Another success of the consortium is the formation of Focus Recovery, which is working to establish sober living houses in Butte. The grassroots group is devoted to celebrating recovery. Focus Recovery organized and sponsored a two-day workshop on substance use and held a community-wide Recovery Celebration at the local mall involving several agencies and groups.

The Community Health Center was certified by the state of Montana as a state-approved substance use treatment site.

A universal screening tool created for use by all agencies and groups involved in treating substance use clients was developed and is being used by all partners in the county. In addition, a template for substance use was integrated into the clinic's electronic medical record and developed into a user-friendly tool for providers to quickly see how a patient is doing.

### B. Recognition

The CHC was recognized for its efforts in calling attention to the issue of substance use in the community. It was featured in

several publications for offering the screening of “The Anonymous People” and panel discussion which lead to the formation of the Focus Recovery group. This group has been hosting and holding community events since that time. The CHC efforts and Focus Recovery was featured in “The Montana Standard”, “The Butte Weekly” and radio stations and KXLF television.

## Part VI: Challenges & Innovative Solutions

A challenge for the clinic in this program is the fact that traditional substance use programs are not feasible at a primary care clinic like Butte. The faster pace or primary care coupled with a severe lack of space made traditional therapy, including group therapy, and substance use treatment unsuitable. To combat this, the CHC insisted on dual-licensed therapists, licensed in clinical social work and licensed addiction counseling. This enabled the clinic to offer short-term substance use therapy with behavioral health services, both of which can be billed for under the dual license.

Another challenge was integrating substance use into a clinic that suffers from change fatigue and heavy burdens. The thought of another program was not popular with providers. However, leadership overcame that barrier by demonstrating how addressing substance use with current patients improves patient care and helps providers to understand the whole patient. Further, the clinic paced educational opportunities throughout the year during already established clinical times so it didn't feel like a large burden.

A third challenge remains at the clinic with no resolution. The clinic worked on capturing Medicaid dollars for patients undergoing substance use care. However, the state is not willing to pay for this service due to budget constraints. Again, use of a dual-licensed therapist is key, so that suitable therapy for co-occurring disorders can be billed when just billing for substance use is not feasible.

## Part VII: Sustainability

### A. Structure

The substance use consortium will continue and all partners are committed to continuing the work. In fact, work has gathered momentum in the last year with different workgroups exploring detox centers. There has also been an interest by local law enforcement working to establish sober living houses. The change in the consortium is that the CHC will not necessarily be the lead agency, but it will be a shared responsibility of all partners, including those that have joined in the last three years.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained. However it is important to note that the consortium will be its own entity. The CHC will continue to be part of the consortium but will not necessarily be the leader of the group as stated above.

Some parts of the program will be sustained

None of the elements of the program will be sustained

All activities, including screening and short-term treatment provided by the CHC will continue under this program and will be sustained by billable services, Medicaid, and sliding fee scale payments. Educational opportunities surrounding substance use will continue at the clinic as well as be incorporated in the clinic's workgroups and other processes. Prevention work will continue in the guise of provider education with patients and materials available for patients in our waiting rooms and treatment rooms. Consortium work will continue with the group directing its own activities as equal partners. Monthly meetings with minutes will also continue to be documented.

### C. Sustained Impact

With the valuable RHO grant ending this year, the clinic and its partners evaluated services going forward to determine which program activities will be continued and what funding level is needed to support them. Criteria used to guide these decisions included: the impact on individuals, impact on the community, the cost-effectiveness of services, a positive return on investment, the kind of support that can be expected from the community and on the county-level, continued existence of the need, resources available for continuation and, whether or not discontinuation of present service would have a negative impact on the community.

Using these criteria, all three initiatives will be continued, although not all activities under those initiatives will be pursued. The clinic's medical and leadership staff has decided to continue all screening activities for adult patients. These screenings will be expanded to adolescents as well. The clinic is also committed to providing brief interventions and treatment for patients with

positive substance use screens. While the grant currently funds two full-time dual-licensed therapists (licensed addiction counselor and behavioral health therapist), the clinic will continue to fund these position after the grant ends. The therapist's costs will be absorbed by billing for therapy visits as part of the behavioral health team and for allowable costs for advanced, intensive screening under the AUDIT and DAST-10 screening tools. Because the clinic has not been successful in billing Medicaid for substance use visits, it will rely on billing for visits for behavioral health needs. This remains a commitment by the clinic to ensure access to treatment and referral options for high risk patients. As part of this process, the clinic also plans to continue education for staff and providers on substance use, but will rely on lower-cost options to provide education. There will be no travel or bringing in costly experts to provide educational opportunities for staff.

The Butte Community Health Center will continue to participate in monthly consortium meetings to support the group but will not provide significant financial support unless it is successful in securing a grant to continue consortium work. The clinic will continue to work with others on the detoxification center proposal using existing staff time but will not commit monetary resources. It will continue to support and nurture the Focus Recovery group using staff relationships. The group, in addition to activities listed above, is also studying the feasibility of establishing a sober living house in Butte. For the consortium, the clinic will continue monthly meetings and provide a channel for communication and education on local substance use needs and issues. It will provide oversight in the manner of keeping meeting minutes and providing structure, but decision-making belongs to the consortium.

Partnerships remain critical to the success of screening and providing brief treatment. Although the clinic will absorb the costs of these services, the partnerships with Community Counseling and Corrections, the Montana Chemical Dependency Center, St. James Healthcare and the local health department are critical to the success and spread of the CHC substance use program. Staffing and oversight of patient screening and treatment will be the CHC's responsibility. Staffing remains the same as under the grant with no changes. However, the clinic will continue to work and enhance communication with its longtime RHO grant partners and new partners who joined the consortium to ensure the system in place for substance use patients remains open and viable. The clinic will also continue to find and build relationships with new stakeholders, particularly government agencies who have not been active in educating them on the clinic's substance use services available on a sliding fee scale.

## Part VIII: Implications for Other Communities

A community looking at implementing SBIRT into a primary care setting would benefit by first focusing on their clinic's culture: existing institutional stigma, personal bias and the possibility for discrimination. Education on Substance Use Disorders as a chronic relapsing brain disorder was the foundation of our system change. Once a welcoming culture is created, individuals who are struggling with their addiction and those at risk for developing an addiction will feel safe and assured that their disease will be addressed with the same clinical concern and excellence as any other chronic disease. Looking back, more education and a greater emphasis on the benefits of Medication Assisted Treatment in the early stages of implementation would have been helpful.

# Montana

## Granite County Medical Center

Part I: Organizational Information	
Grant Number	D04RH23578
Grantee Organization	Granite County Medical Center
Organization Type	Hospital
Address	310 Sansome Street, P.O. Box 729, Philipsburg, MT 59858
Grantee organization website	<a href="http://www.gcmecenter.org">www.gcmecenter.org</a>
Outreach grant project title	Granite County Dental Collaborative
Project Director	Name: Sharon Fillbach
	Title: Project Coordinator
	Phone number: 406-859-3271
	Fax number: 406-859-3011
	Email address: <a href="mailto:Sharon.fillbach@granitecmc.org">Sharon.fillbach@granitecmc.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Granite County Medical Center	Philipsburg, Granite, Montana	Hospital
*Dr. Russell Blackhurst, DMD	Missoula, Missoula, Montana	Dentist
*Missoula Public Health	Missoula, Missoula, Montana	County Health

### Part III: Community Characteristics

#### A. Area

The project serves Granite County, Montana, including the communities of Philipsburg, Drummond, Hall, and all outlying areas of this region. Neighboring Powell, Deer Lodge, and Missoula counties were also reached, especially small communities and areas near the Granite County border.

#### B. Community description

Our community consists of several small towns spread out over a large land mass in Western rural Montana. Granite County has a population of just over 3,000 residents. A large percentage of these residents work in the ranching, forestry (logging), mining, and small business industries. Another segment of the population consists of retired people who have lived in the area their entire lives. The geographic location of Granite County is mountainous terrain with high grassy valleys, and it is served by one secondary highway. This makes travel for health services and other daily needs a challenge for many residents, as it often entails a 60-160 mile round trip to attain these necessary services. Granite County's population is almost entirely white Caucasian middle to lower class income workers and retired workers from the area, and others who have returned to Montana to enjoy retirement. In the past few years it has also become a tourist attraction, which has given the area a much needed economic boost.

## C. Need

Before the start of our program, Granite County had lacked dental services entirely for more than a decade. The need for oral care access had been identified as a top priority by residents in our Community Healthcare Development Survey. It became our mission at Granite County Medical Center to seek out a solution to this critical healthcare need.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

To develop our clinic, we relied in part on the Inter-Lakes Dental Clinic model which provided a fixed dental clinic for underserved populations. Like us, a key to their success was recruiting dental staff committed to working in an underserved area. The primary difference is that of scale: Their clinic entails six operatories, and their patient caseload numbers 4,337 people—more people than we have countywide.

Another helpful model for us has been that of Carilion Clinic Dental Care—Pediatrics. That clinic focuses solely on pediatric dentistry and provides a greater scope of restorative care. However, like us, their clinic is sponsored by a hospital that absorbs much of the clinic's infrastructural costs, including physical space, utilities, equipment, and human resources. We are also emulating the clinic's approach to achieving financial stability: boosting patient volume, thereby increasing the amount of Medicaid reimbursement and other revenue so that revenue covers the majority of direct expenses.

In addition to our hospital-based clinic, our school-based service was based on the Anderson Center for Dental Care model. The group conducted oral health screenings, created a Community Health Advisor model for fluoride varnish application, and ensured follow-up referrals and care for children with urgent needs. Logistically, the program is similar: a model built to provide varnishes to schoolchildren, many underserved, approximately 200 children in a setting. However, their operations are based in California, which means that regulations regarding varnishes, systems of Medicare reimbursement, and state models for data collection are different. According to the Montana Department of Oral Health, we are the first program in the state to initiate a school-linked fluoride varnish program, and we are helping the department develop a model for application statewide. There is broad agreement that fluoride varnish is an effective intervention for reducing the incidence of dental caries in at-risk children. Both the Centers for Disease Control and the American Dental Association maintain that the quality of evidence for the efficacy of fluoride varnish in preventing and controlling dental caries in the permanent teeth of moderate/high-risk children is high.

### B. Description

Our program featured:

- Establishing a fixed, hospital based dental clinic.
- Growing to a two-chair service operating two days a week
- Providing outreach at health fairs and issuing articles about our dental services
- Formalizing and reviewing dental policies and procedures
- Integrating the dental clinic with the hospital's long term care facility
- Providing oral health screenings to all schoolchildren in our county
- Reviewing yearly data of clinic's operational and financial performance

### C. Role of Consortium Partners

The project consortium consisted of three partners:

- Granite County Medical Center (GCMC) – responsible for (1) equipping, hosting, and managing the fixed dental clinic; (2) organizing and running the school-based dental program; (3) and maintaining scheduling, billing, supplies/purchasing, grants reporting, and other administrative services. GCMC also provides long-term indirect support to the fixed and school-based dental clinics.
- Russell Blackhurst, DMD – Dr. Blackhurst is a dentist in private practice who serves as the lead provider for the project's fixed dental clinic and school-based program.
- Missoula City-County Health Department (MCCHD) - MCCHD's public health nurse assigned to Granite County conducted outreach to promote dental services countywide. She also assists with the logistics of the school-based dental program and with clients who have significant home health needs.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In terms of process, our goal in the first months of the grant in 2012 was to convert our temporary one-chair clinic equipped with portable tools into a fixed dental clinic with standard permanent equipment. We were operating a clinic with portable equipment and a dentist on one day and a hygienist on another day each week. The new permanent clinic was operable in January 2013. Our patient load continued to grow and on March 6, 2013 we added another dental day and a new dentist. Our new fixed dental clinic was in operation and we were able to begin services with 2-chairs. We now had the ability to provide both hygiene and dental services on the same day.

In terms of services, we were able to see 509 patients in Year 2 (our first full year of operating the fixed-based clinic), exceeding our projected goal of 500 patients. Our Year 2 operating revenue of \$104,000 was just under our projected goal of \$109,000. The largest proportion of our 600 patient base has been in the age range of 40 to 70, and our payor mix is approximately 40% Medicaid, 40% self-pay, and 20% private insurance. Our Year 3 performance is on track to exceed our goals, but final results are still being analyzed.

In addition to our fixed based clinic, we provided about 300 oral health screening and fluoride varnishes in our county's three school districts. These screenings resulted in many referrals for additional care, and our clinic saw 61 patients between the ages of 7 and 16 during the year.

### B. Recognition

The Granite County Dental Collaborative has received significant recognition, including:

- National Rural Health Resource Center, certificate of recognition for exemplary leadership and innovation in the area of community engagement, August 2013.
- Montana Rural Health Association, Program Overview, Spring 2013 publication,
- Open House for a 2 chair fixed clinic, TV coverage KTVM and Fox News, also representatives from Senator Tester's office, Senator Max Baucus, and Representative Steve Daines, April 2013.
- The Missoulian Newspaper Sunday Rural Montana, feature story, October 2013,
- ORHP News, May 1<sup>st</sup> 2013 publication,

## Part VI: Challenges & Innovative Solutions

The project faced a number of challenges. Foremost was our need to provide dental services to many low-income uninsured patients. In response, we established a sliding fee scale and policies for qualifying patients. We worked with our hospital billing office to set up payment plans, and assisted many uninsured patients with Medicaid enrollment.

Another difficult challenge has been the health of our critical access hospital. The hospital has been struggling to financially keep its doors open with all the changes in healthcare, Medicare, insurances, and economics. Had the hospital closed its doors, the dental clinic would have faced some difficult decisions. In response, our hospital foundation has created a marketing team/committee to help find new and innovative ways to market our services as a critical access hospital. Through the HRSA BHIS grant, we have formed community focus groups to discuss services needed, community needs, working together in our county. We also continue to reinforce the importance of patient satisfaction and services with our staff.

We are also facing a potential challenge that has yet to materialize. Two years ago, a dentist from a neighboring county announced plans to open a practice in the town of Philipsburg, also the home of our hospital and dental clinic. Since that time, a sign has hung in the window of a storefront building in the downtown area, but with no apparent action. The announcement and signage has confused some of our residents about the availability of dental services in our area, but our clinic operation continues to grow. Should the new dental practice open, we hope to build a working relationship with the new dentist if possible.

## Part VII: Sustainability

### A. Structure

Our consortium will remain the same in both structure and partners.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

We will continue to provide dental services in the same manner as we currently have in place: a two-day-per-week dental service. The patient base has been increasing at a steady pace over the course of five years since our first temporary clinic was established. We may reach a point when we will add another dental day per month. Our current patient load is around 600, and we will continue to maintain at that level and hopefully see a steady increase. We will continue to promote the fact that we are the only dental source in our county, and one of the few in our area that provides both a sliding fee scale and access to oral care for Medicaid patients. We have added an oral health exam to the incoming long term care resident's health evaluation. We also have ongoing referrals from our medical clinic providers to our dental clinic providers. Our HRSA funds were budgeted well and we were able to purchase a panoramic X-ray machine in March of 2014. This machine has greatly enhanced our dental office services. We can now offer a wider scope of care regarding wisdom teeth treatment, bone loss, infections, teeth and bone structure in children and young adults.

Our best strategy going forward is to maintain steady hours of operations, steady providers, and professional quality of services. Our best marketing tool is word of mouth in our small communities. We are striving to be known as a "Trustworthy and Professional Dental Service."

## C. Sustained Impact

The Outreach grant program has provided our community with dental services that were not in existence for over a decade. We are now in our 5<sup>th</sup> year providing dental services to our community and areas nearby. Winning two consecutive HRSA outreach grants has enabled us to go from a mobile dental service to a two-chair fixed state of the art clinic in our critical access hospital. Providing a dental service to the underserved, western frontier of Southwest Montana has enabled us to become a role model for critical access hospitals. In 2010 we received the Innovation in Health Care Award from the Montana Health Association. We have not only impacted our community but our state as well. Three of our dental staff members and families live in our community and two live in the neighboring county. We support our community with free dental screenings for all kids. We use all our local sources for advertising and supplies. We have helped to promote a healthier community and the community has felt involved from the first days of receiving the initial grant.

## Part VIII: Implications for Other Communities

Our dental outreach program has been a "pioneer" in providing dental services through the innovation of our mobile dental clinic to take dental health to underserved rural areas. Our clinic is the first of its kind in Western Montana to be incorporated within our critical access hospital to create a "dental home" for all residents in Granite County and surrounding areas. We started with a most needed survey and from that survey began a six-year journey to fulfill the need for oral health care. We believe that we have developed an excellent model for other rural and frontier communities to consider that could and should be available to all individuals. Combining health services under one roof has been a cost-saver for the hospital and patients, and we have seen a gradual increase in usage of both medical and dental services.

# Montana

## Madison Valley Hospital Association

Part I: Organizational Information	
Grant Number	D04RH23594
Grantee Organization	Madison Valley Hospital Association
Organization Type	Hospital
Address	305 North Main Street, Ennis, MT 59729
Grantee organization website	
Outreach grant project title	Rural Behavioral Health – Primary Care Collaborative
Project Director	Name: Sara Laney
	Title: Project Director
	Phone number: 406-243-5575
	Fax number: 406-243-4141
	Email address: <a href="mailto:sara.laney@mso.umt.edu">sara.laney@mso.umt.edu</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,426
	May 2013 to April 2014: \$148,474
	May 2014 to April 2015: \$148,474

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*The University of Montana Department of Psychology	Missoula/Missoula/Montana	University
*The University of Montana School of Social Work	Missoula/Missoula/Montana	University
*Western Montana AHEC	Missoula/Missoula/Montana	Area Health Education Center (AHEC)
*Madison Valley Hospital Association	Ennis/Madison/Montana	Critical Access Hospital
*Clark Fork Valley Hospital	Plains/Sanders/Montana	Critical Access Hospital
*Deer Lodge Medical Center	Deer Lodge/Powell/Montana	Critical Access Hospital
*Frances Mahon Deaconess Hospital	Glasgow/Valley/Montana	Critical Access Hospital
Flathead Community Health Center	Kalispell/Flathead/Montana	Federally Qualified Health Center
*Northwest Community Health Center	Libby/Lincoln/Montana	Federally Qualified Health Center

### Part III: Community Characteristics

#### A. Area

The Madison Valley Hospital Association's program, Rural Behavioral Health – Primary Care Collaborative, provides services to five rural counties in Montana: Sanders, Powell, Valley, Flathead and Lincoln Counties.

#### B. Community description

Montana is the fourth largest state in total area (147,040 square miles), ranking behind Alaska, Texas and California. The 2013 estimated census population of Montana is 1,015,165. Thus, population density is 6.9 persons per square mile. According to a 2011 Montana Department of Health and Human Services report, 90% (or 133,133 square miles) of the state is deemed "frontier," here defined as areas with a population density of fewer than six persons per square mile.

The 2007 Montana Behavior Risk Factor Surveillance Survey included the Mental Illness and Stigma Module which uses the Kessler-6 measure (K6). The K6 measures Serious Psychological Distress (SPD) in the adult population. Survey results indicated that, in Montana, approximately 24,000 adults (3.5%) were classified as having SPD. Nationally, in the 35 states, the District of Columbia, and Puerto Rico, that implemented the module in 2007, about 4% of adults reported SPD. The highest prevalence of SPD was reported in Mississippi, Kentucky and Puerto Rico at about 6.6% and the lowest prevalence of SPD in Iowa, Alaska and Nebraska at about 2.4%.

Montana adults who experienced SPD were also more likely to have diminished quality of life as measured by the number of physically or mentally unhealthy days in a month, life satisfaction, social and emotional support, activity and work limitations than those adults without SPD. Difficulty functioning in one or more major life areas is characteristic of persons with SPD. Montana adults with SPD were significantly more likely than those without SPD to be restricted from working on 14 or more days in a month. They were also limited in doing regular activities such as self-care or recreation on 14 or more days in the past 30 because of poor mental health. People with SPD were also almost four times more likely than those without SPD to report 14 or more days in the past 30 where their physical health was not good. Striking differences were apparent in all these measures by SPD status, suggesting poorer quality of life.

In Montana, adults with SPD were also more likely to be taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem than those without SPD. Because Montana's rural/frontier communities are so small, city and county level mental illness data are more challenging to obtain. However, more than 11,000 adults with SPD (46.6%) reported not receiving any medication or mental health treatment. Additionally, in the past year, 37% of Montana adults with SPD reported not seeing a doctor due to cost, in contrast to 11% of adults without SPD who went without care due to cost. These results imply a higher prevalence of incomplete health care or perhaps intermittent coverage among the SPD population, which can result in under-treatment for mental health conditions, something that has severe implications for overall levels of health and well-being. These Montana state-wide statistics indicate that serious psychological distress is a public health issue worthy of attention.

### C. Need

#### *Montana Health Care Delivery Systems*

There are 61 hospitals in the state, of which the vast majority are federally designated Critical Access Hospitals (CAHs). As of October 2010, the Montana Department of Public Health & Human Services listed 50 Rural Health Centers (RHC) in Montana. Of the 50 RHCs, 44 are provider based and the remaining six are freestanding. Most of the provider based RHCs are administered by a CAH.

Montana's counties are very large geographically and often one mental health center serves the entire county. This greatly impacts rural community members' access to these vital services. There are 69 Mental Health Center locations in Montana. The Western Montana Mental Health center serves 15 counties, Eastern Montana Community Mental Health Center serves 17 Counties, South Central Montana Regional Mental Health Center serves 6 counties, and the Center for Mental Health serves 11 counties.

#### *Mental Illness in Montana and the United States*

Mental health is an important component of overall health; mental illnesses, many of which are chronic diseases, are leading causes of morbidity and mortality in the United States. While rural residents often have a greater need for mental health services, they have less access to care than their urban counterparts. Rural areas have a higher proportion of people who are at risk for mental and behavioral health problems, especially older adults and the chronically ill. State Offices of Rural Health have identified suicide, stress, depression, and anxiety disorders, and lack of access to mental and behavioral health care, as major rural health issues. In a 2002 report from the Institute of Medicine, an estimated 90% of persons who commit suicide suffer from a diagnosable psychiatric disorder at the time of their deaths. By the late 1990s, rates of suicide were 54% higher in rural areas than in urban. Suicide is the second leading cause of death in states with primarily rural populations. The nation continues to face challenges in providing equitable and adequate health care for rural Americans. This is especially true for mental and behavioral health care.

Data obtained by the National Health Interview Survey found that the prevalence of major depression was significantly higher among rural (6.11%) than among urban (5.16%) populations. The National Institute of Mental Health reports that rural residents have an equal or even greater likelihood of suffering from substance abuse problems than urban residents. Rural residents are more likely to report fair to poor health status than urban residents and are more likely to have experienced a limitation of activity caused by chronic conditions than urban residents.

Rural residents are underserved by mental health professionals. Of the almost 3,300 federally designated mental health professional shortage areas, 66% are in rural areas. The shortage problem of mental health providers is particularly acute for those specializing in children and older adults. Mental illnesses are associated with chronic diseases such as heart disease, diabetes, and arthritis in addition to adverse health behaviors. As a serious public health threat, mental illnesses cause suffering, disabilities, and in some instances, death.

There are approximately 39 psychologists per 100,000 residents in urban/suburban areas (Metropolitan Statistical Areas) but only 16 psychologists per 100,000 residents in rural areas (non-Metropolitan Statistical Areas)—less than ½ those in urban/suburban areas according to a survey conducted by The Center for Health Policy, Planning & Research for the American Psychological Association (October 2007). Due to the shortage of mental and behavioral health providers, primary care physicians, who do not have the sufficient training and skills to deal with mental and behavioral health issues, provide as much as 60%-70% of mental and behavioral health services in rural areas. The federal Community Health Centers Program has urged the nation's underserved communities to weave together primary care, mental health, and substance abuse services in order to adequately serve underserved populations.

In 2010, the Montana Department of Public Health and Human Services published a special report "*Mental Illness and Stigma*" that was produced from data collected in the 2007 Behavior Risk Factor Surveillance Survey. The following information is taken from that report:

In Montana, of the ten leading causes of death of all residents in 2007, seven were chronic diseases including cancer, heart disease, chronic lower respiratory diseases, and cerebrovascular disease, Alzheimer's disease, diabetes, and liver/kidney diseases. Unintentional injuries were the fourth leading cause of death in Montana and suicide ranked eighth following diabetes. Between 2000 and 2007, suicide was the number two cause of death for children ages 10-14, adolescents ages 15-24, and adults ages 25-34, behind only unintentional injuries.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Our endeavor was based on multiple evidence-based models: (1) integrating behavioral health care into the primary care setting to improve access and increase opportunities to improve health outcomes; (2) building workforce recruitment with training and financial incentives; (3) establishing community outreach services that have been tested and empirically proven to significantly improve behavioral health and/or wellness.

One note about our evidence-based practices: In the effort of building workforce recruitment, our trainees were at the post-degree pre-licensure level, rather than students in a graduate program. In addition, the post-graduate training we provided is deep and varied in experience and extended over more than a year's time (two years in the case of the social work trainees), rather than being a single practice module or component of a rotation that includes exposure to rural-based practice. We recruited pre-licensed behavioral health specialists with an interest in working in a rural area, and then provided them with (and paid for) their university-based distance-supervision. This innovative practice, through our initial effort, resulted in a workforce strongly committed to their placements.

Evidence for integrating and co-locating behavioral health into the primary care setting comes from a 2010 report from the Milbank Fund, "Integrating mental health services into a primary care setting offers a promising, viable, and efficient way of ensuring that people have access to needed mental health services. Additionally, mental health care delivered in an integrated setting can help to minimize stigma and discrimination, while increasing opportunities to improve overall health outcomes." The evidence for integrated behavioral health care is now so extensive that researchers and policy-makers are urging a shift from a research approach to direct implementation.

In our model, behavioral health teams provided assessment, evaluation (including psychological testing), treatment services, and consultation to medical staff. As with what the Milbank report calls "close collaboration in a fully integrated system," providers identified and networked with available systems of care to function as members of community-based treatment teams.

We found that our behavioral health specialists fulfill two overlapping roles: First, they function as integrated members of the primary Care Team; second, they serve as more traditional providers and referral sources for specific mental health services such as psychotherapy, psychological evaluation, and case management. Because of the scarcity of mental health providers in the communities being served, the pre-licensure trainees must be available as both Primary Care Team members and as providers

of—for example—longer-term individual psychotherapy. At pilot sites, for example trainees found a great need for child and adolescent assessment and psychotherapy services, and their training and supervision adjusted accordingly. This “hybrid” behavioral health model is facilitated by co-location of behavioral health and other PC services.

At community health centers, services were co-located with primary care providers. At critical access hospitals, services were integrated into rural health clinics, with wrap-around services to patients seen at the affiliate critical access hospital. To facilitate this level of coordination, team specialists were full-time, permanent employees of the critical access hospital and have allied health privileges.

Each of our medical partners is part of a community with a variety of service delivery mechanisms. One site has only a critical access hospital (Powell), while others have a critical access hospital and mental health center (Sanders and Valley), and still others a critical access hospital, community health center, and mental health center (Lincoln). Two counties, with greater populations, have these facilities, plus a trauma hospital and additional service agencies, but serve significant numbers of the rural poor or those in poverty (Flathead). What they all have in common is difficulty with integration of services because of different funding streams, different boards of directors/administration, and extremely busy work schedules across all agencies involved in patient care.

The Rural Behavioral Health-Primary Care Collaborative sought to alleviate the challenge of integrated services by encouraging behavioral health professionals to collaborate with various agencies, specialty areas, and community members. This collaborative effort served the purpose of improving patient care.

## **B. Description**

### **Evidence for increasing workforce retention**

According to the National Institute for Health Care Reform (2011), it has been demonstrated that health professionals are highly likely to remain where they train and that students recruited through targeted training programs are more likely to enter primary care in underserved areas. This trend holds true for rural areas.

Further, Daniels et al. (2007), in investigation of techniques for recruiting and retaining health professionals for rural practice, determined that successful recruitment was supported by rural training programs and practicum experiences, loan forgiveness programs, and competitive salaries and professional opportunities. Moreover, retention was effective when focused on the provision of economic incentives, such as earnings potential and promotion opportunity, professional development, and community appeal. With these evidence-based practices at the fore, we developed the following model for recruitment and retention of behavioral health specialists, with a few innovations:

(1) Our program offered behavioral health practitioners a unique opportunity, working in teams of two, to serve in post-graduation, pre-licensure positions as full-time, permanent employees of a critical access hospital (CAH) or community health center (CHC). Each team consisted of a pre-license clinical psychologist and a Masters in Social Work graduate.

(2) Social work and psychology graduates in Montana indicated a desire to practice in a rural setting. However, social work requires 3,000 hours of supervision by a licensed professional and psychology requires 3,200 hours (1,600 of them postdoctoral) to be eligible for licensure. Because licensed behavioral health professionals are rare, or nonexistent in rural areas, a limiting factor for rural placement was obtaining the necessary supervision.

Thus, our model was organized to provide this benefit. Via tele-supervision and distance education, trainees received consultation, supervision, and support from The University of Montana School of Social Work and Department of Psychology during the pre-licensure required period. Supervision was structured to fulfill requirements of post-degree hours toward licensure and the unique demands of rural behavioral health professionals. This practice improved both recruitment and retention.

Whenever possible, newly graduated social work (MSW) and psychology (Ph.D.) students looking to practice in rural Montana were recruited for these positions. They were ultimately hired as permanent employees by the CAH or C-HC and have planned on settling in these communities for the long term.

This model has previously been tested with demonstrated success: From 2011-2014, we successfully placed seven behavioral health professionals (four social workers and three psychology trainees/psychological residents) at four sites with primary care health professional shortage designations. (From 2014-2015, two more were placed at a newly recruited partner site.) As previously mentioned, this pilot effort was in large part supported by the 2012-2015 Outreach grant. It is noteworthy that nearly every position we filled to date has remained, and the one exception was recruited and filled quickly. Just as important, all CAH and CHC facilities are steadfastly committed to sustaining these much-needed staff.

We have applied for a second round of this Outreach grant, with a proposed timeframe of 2015-2018. If awarded, we will continue to use this model and assess its sustainability, with the objective of permanently placing and additional seven behavioral health professionals (four social workers and three psychologists) at three sites in three primary care health professional shortage areas. With the use of tele-supervision, this model is replicable in any rural community in the United States.

A second means of increasing workforce retention was by providing financial incentive—most commonly the practice of loan forgiveness, which results in much lower dropout rates and higher retention and satisfaction. In our model, graduates are eligible for a variety of federal student loan forgiveness, forbearance, and repayment programs. An added incentive was coverage of the cost of supervision: \$16,000 for a social worker and \$4,750 for a psychologist. (The length of time required for a supervising psychologist is less as psychology graduates have already obtained a year of supervision during their internship rotation.)

Supervision entailed a high level of support: one-on-one review, 24-hour on-call service, group sessions, support for tele-behavioral implementation, and reading of practice notes. This level of supervision was essential, given the many challenges to trainee assignments: reducing decades of underserved need in rural and frontier Montana while building new services (telehealth and community outreach programs). With high-quality supervision, trainees were more likely to feel comfortable with developing an integrated practice and with their placements.

### C. Role of Consortium Partners

Our medical partners first had to agree that this was a service that could benefit both their patients and providers. This model, when functioning optimally meant patients had the opportunity to have their healthcare needs more appropriately met and providers were able to “hand-off” patients who required care by someone with behavioral health expertise.

Additionally, our medical partners were responsible for providing the necessary infrastructure for providing behavioral health services. The hospital sites provided proximity to primary care providers so that our behavioral health specialists could be available to provide care to those patients whose needs were more appropriately met via behavioral health services.

These partner sites were required to pay half of the salary and benefits for pre-licensure psychologist and Masters in Social Worker, as well as provide both office and clinical space.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Although our evaluation is still in progress, with a final report to be submitted on June 30, 2015. Because of these grant funds, four sites with behavioral health teams have been put in place. We are recruiting a behavioral health team for a fifth site. The teams at these sites have been maintained over the past three years.

During this time all four sites have maintained supervision through the University of Montana, with Rita Billow, PhD in Libby becoming fully licensed. In Glasgow, Robyn Hardie will soon take the Montana Board of Psychology’s oral exam for full licensure in April 2015. Pam Dance, MSW (Glasgow), Deverie Kelly, MSW (Deer Lodge), and Diana Reetz-Stacey (MSW), along with Kate Whipple-Kilmer, PhD (Plains) are all currently earning supervision hours.

We have recruited and maintained providers at these four sites, and are currently recruiting for a fifth site, Flathead Community Health Center, in Kalispell, MT. Below is feedback from providers, administrators, and patients, involved and affected by this project:

An initial evaluation of the experiences of providers, clinic staff, and patients was conducted through a focus group and telephone interviews. The behavioral health specialists have been fully integrated into the primary care clinic for one year. Both NWCHC providers and patients indicate that this model is vitally important to providing quality care and improving provider job satisfaction.

In a structured focus group with the Providers, the Clinic Manager, and the Executive Director, the following statements were made. “Our patients feel empowered because they are now getting the attention they need.” (Provider) “My time is now spent practicing medicine.” (Provider) “It is so satisfying to see my chronic pain patients reduce their medications and improve their quality of life.” (Provider) “For years, a high percentage of time in our staff meetings was spent on mental health issues and the challenges of these patients’ behavior. Since we integrated the behavioral health specialists, mental health issues no longer dominate our meetings.” (Executive Director) “I no longer have to talk my nurses down from the ledge because of challenging patient behavior. They know they can turn to the behavioral health specialists for help.” (Clinic manager)

In telephone interviews patient stakeholders made the following statements. “The team approach worked really well for me.” (Patient) “I liked being more involved in my care.” (Patient) “Were it not for these services, I might not still be alive.” (Patient) “Because I can get mental health services at my primary care clinic, no one in my small town knows what I am doing.” (Patient).

Additionally, our behavioral health specialists have not only integrated into their primary care setting, but they’ve simultaneously integrated into the communities they serve and reside. Here are a few examples of the community activities in which they’re involved:

#### Glasgow Site:

- Psychoeducation on Behavioral Health and Self-Care for EMT refresher course, Jordan, MT
- Psychoeducation for Depression PEO for women’s faith-based group
- Robyn Hardie was elected chair of Early Career Psychologist Committee for Montana Psychological Association
- Glasgow Courier newspaper, bi-monthly Wellness insert. Wrote feature article announcing behavioral health services Glasgow Clinic/Frances Mahon Deaconess Hospital
- Psychoeducational presentation on Suicide: Prevention, Intervention, and Post-intervention for Nurses & Primary Care Providers, Annual Sarah Bell Memorial Nurses Conference
- Psychoeducation on Self-Care for nurses and PCP’s, Sarah Bell Conference
- Wellness and Self-Care for FMDH Vitality Program
- Psychoeducation for FMDH Vitality Program: Dealing With Depression
- Pam: elected to FMDH Foundation Board of Directors
- Psychoeducation presentation to EMT’s in Malta, MT
- Community Art Project: wall mural produced by teens with self-harm behaviors to benefit Milk River Activity Center for developmentally disabled
- Bi-monthly participation in Local Area Council meetings (mental health agencies collaborative)
- Proposed weekly skill-based support group for parents of children with behavioral health challenges

#### Deer Lodge site:

- Alzheimer’s support group every other week.
- DUI Taskforce board member
- Red Ribbon dodge ball tournament for kids and families to promote healthy choices, “tall cop” community presentation for parents, teachers and law enforcement about drug use and gangs
- Academy of Living History board member
- Presentations re: behavioral health to Rotary, Women’s Auxiliary, Hospital Board
- FICMAR (Fetal, Infant and Child Mortality) review team member
- Involved with hospital community events- Homecoming float for high school, high school concession stand volunteer, and community chili feed fundraiser for Philippine typhoon victims
- Working with Tina’s house (domestic violence shelter) on their fundraiser
- Member of the Community Caregiver Coalition
- Arranged in service trainings for hospital staff re: domestic violence

#### Plains site:

- Co-authored a grant proposal was awarded the grant, attended training in Helena, became a certified instructor, and is currently assisting with PR and planning for two, six-week classes to be held in Thompson Falls and Plains in the spring. Two other classes will be offered in the fall for a Chronic Disease Self-Management evidenced-based program
- Facilitated community collaborations by meeting with staff from various community organizations including: the Sanders Council on Aging, the Thompson Falls/Sanders County Office of the Flathead Valley Chemical Dependency Clinic, Sanders County Health Department, the Regional Ombudsman, Sanders County Transition Team and Hot Springs Senior Center, Thompson Falls Trails Committee
- Attend the Local Emergency Preparedness Council as a Mental Health representative

## B. Recognition

The Rural Behavioral Health - Primary Care Collaborative was selected for National Rural Health Association’s (NRHA) Outstanding Rural Health Program for 2015. This program was funded in part by a HRSA Outreach Grant, and in part by five critical access hospitals and FQHC’s across the state. The success of this program is due to an integrated model of placing

dedicated behavioral health specialists at those sites. Their work has touched the lives of rural Montanans with previously limited access to behavioral health services. Only in its third year, the Rural Behavioral Health Primary Care Collaborative has established the foundation necessary to sustainably continue these services.

The collaborative would not have been possible without HRSA Outreach Grant funds to assist these CAHs and FQHCs in integrating behavioral health services into their offerings. There was a natural partnership with Western Montana AHEC, which ensured the necessary advisory role for the administration of programming. Western Montana AHEC provided the infrastructure and shared aim to recruit, train, and retain a health professions workforce committed to underserved populations. By placing trainees in rural areas while they work toward licensure, the Rural Behavioral Health Primary Care Collaborative is able to improve access to quality healthcare and facilitate opportunities for providers to sustainably serve the rural parts of this state.

Furthermore, the following comments were made by individuals at the sites who were involved in the grant in some capacity:

- **Lincoln.** A provider noted, “I cannot imagine practicing medicine without the behavioral health specialists. I can now make accurate diagnoses, which lead to legitimate treatment plans.”
- **Powell.** The social worker noted “good cooperation” with the doctors here and has had referrals from everyone.
- **Sanders.** An administrator noted that he was seeing “a very strong bond” between primary care providers and the behavioral health specialists. “I can see that relationships are developing that will continue to support providers and patients.”
- **Valley:** An administrator noted that both patients and providers appreciate the service and that there was “good integration.”

## Part VI: Challenges & Innovative Solutions

At one of our sites only one behavioral health specialist was placed - a social work trainee. This trainee has experienced professional isolation. She’s mentioned that it would be helpful to have someone down the hall with whom she could confer regularly. At another site, the psychology and social work trainees expressed a need for more professional input once their supervision ended. To meet this need they started a “Behavioral Health Specialist” group with professionals in a town nearby. We will be implementing “virtual meetings” via video conference, so that our behavioral health specialists can discuss their most challenging cases. Additionally, all of our sites will work toward “Behavioral Health Specialists” group meetings with other area providers.

## Part VII: Sustainability

### A. Structure

It is expected that upon completion of this grant, the sites will continue to function as a consortium, including participation in bi-annual face-to-face meetings. Each facility will cover the cost of travel to these meetings, and will allow for monthly group meetings via web-conference. The behavioral health specialists provide valuable services to not only the primary care settings where they are located, but more importantly to the communities they serve. These sites are willing to fund bi-annual travel, and time for monthly web-conferencing to ensure that professional development and dialogue is maintained.

Upon the completion of the grant it is expected that the behavioral health specialists will be fully functioning providers, complete with fully billable caseloads. This is either partially or fully happening at all sites currently. Full caseloads that are billable are an important step to the continuation of program activities at these sites. This has been and will continue to be demonstrated.

The sites’ activities are enhanced by the consortium. Providing direct services at the sites; facilitating networking and collaboration through regular face-to-face meetings; and the availability of faculty expertise both for supervision and for general guidance, are all necessary components to the success of this program that will continue beyond the life of this grant.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The grant will be carried out as the project was intended. Our sites have a pre-licensure psychologist and pre-licensure master in social worker that will become licensed at the end of their allocated supervision period. At that point they will bill fully for their services as revenue contribution practitioners at their respective sites.

Any consortium activities (i.e. face-to-face meetings), will be absorbed by partner sites.

### **C. Sustained Impact**

These efforts in rural and frontier Montana will bring about multiple impacts. They will continue to reduce the mental health provider workforce shortage, which will improve the mental health and wellness for the underserved (veterans, children, and the elderly; and the un- and under-insured, and those on Medicaid). By co-locating in a primary care setting, the stigma of seeking and obtaining mental health services will continue to dissipate, which will funnel consistent referrals to these providers.

For these impacts to endure it will be necessary for behavioral health specialists to continue to work and reside in the partner sites. Having behavioral health specialists on-site will also enhance the financial sustainability of CAHs and CACs as it increases the number of billable services offered. The work of these specialists is self-sustaining in part due to Montana Medicaid approval obtained at the beginning of this project, to reimburse for the pre-licensure clinical psychology and clinical social work graduates. In addition, approval for reimbursement from Blue Cross Blue Shield (Montana's major health insurer) was obtained. Because we applied to Montana Medicaid to reimburse the pre-licensed social workers and psychology graduates at the sites involved in our Outreach grant, Montana Medicaid has also allowed for this reimbursement at all 15 of the Community Health Centers and their 12 satellites. This is a major accomplishment in making it financially viable for CHCs to recruit and retain behavioral health specialists in rural Montana. By adhering to our sustainability plan, we anticipate a program that continues for the long-term.

## **Part VIII: Implications for Other Communities**

The Rural Behavioral Health-Primary Care Collaborative can be replicated in any rural community in the U.S. with a critical access hospital or community health center. With distance supervision, university faculty or other licensed providers can serve in this role. Through the demonstration of patient, staff, and community satisfaction with this program, we believe that other medical facilities will see the benefits of adopting a similar model.

# Montana

## Missoula City-County Health Department/Partnership Health Center

Part I: Organizational Information	
Grant Number	D04RH23602
Grantee Organization	Missoula City-County Health Department/Partnership Health Center
Organization Type	Health Department, Community Health Center
Address	323 West Alder Street, Missoula, MT 59802
Grantee organization website	<a href="http://www.co.missoula.mt.us/phc/">www.co.missoula.mt.us/phc/</a>
Outreach grant project title	Seeley Lake Dental Clinic
Project Director	Name: Kim Mansch
	Title: Executive Director
	Phone number: 406-258-4191
	Fax number: 406-258-4180
	Email address: <a href="mailto:manschk@phc.missoula.mt.us">manschk@phc.missoula.mt.us</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Seeley Swan Hospital District	Seeley Lake, Missoula County, Missoula, MT	Hospital District
Providence Saint Patrick Hospital	500 West Broadway, Missoula County, Missoula, MT	Hospital

### Part III: Community Characteristics

#### A. Area

Our project served the Seeley Swan Valley. The dental clinic was stationed in Seeley Lake, Montana, which is located in Missoula County.

#### B. Community description

Situated along one of the most scenic drives in Montana, Seeley Lake is surrounded by the peaks of the Mission and Swan mountain ranges. Named for the 1,025-acre lake nearby, Seeley Lake has a year-round population of about 2,000 people. Its population swells to more than twice that during the summer months when seasonal residents come to enjoy their mountain cabins. Seeley Lake is one of a half dozen lakes in the Clearwater Valley known as the Chain of Lakes, through which the Clearwater River flows.

Seeley Lake is known throughout the northwest as a resort community; the timber industry that has traditionally provided most of the permanent jobs for local residents has fallen on hard times. The gap between the haves and the have-nots in the community is wide and plays out conspicuously in the socio-cultural fabric of the community. There are developments for wealthy residents featuring luxurious amenities located near residential areas that are pockets of deep poverty.

### C. Need

There are numerous studies and data sets to validate that Montanans have the worst oral health in the nation. For example, Montana received the *lowest* grade in the nation, and one of a few 'D's', for the overall status of oral health by *Keep America Smiling-Oral Health in America National Grading Project*. According to the Center for Disease Control (CDC) *Behavioral Risk Factor Surveillance System*, only 68% of Montanans visited a dentist in 2007. Additionally, lack of fluoridated water combined with the fact that children in Seeley Lake are less likely to have sealants (30.46% compared to 35.56% for the State), set the stage for oral health disease later in life.

In response, the consortium worked together to establish a dental clinic in Seeley Lake with this funding opportunity. Specifically, grant funding and program income were utilized to bring a dental care team to the community, to include dental hygiene and education services.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The dental clinic model utilized with this grant opportunity was one that has been implemented throughout the nation. Endorsed by the Health Resources and Services Administration and the National Network for Oral Health Access (NNOHA)—a nationwide network of dental providers who care for patients in safety-net systems and whose members are committed to improving the overall health of the country's underserved individuals through increased access to oral health services—the model has proven to be cost-effective with quality results. Given that oral health needs are urgent in rural states like Montana, organizations such as NNOHA propose that creative, broad-based, and collaborative solutions can alleviate these needs. Values promoted by NNOHA in developing oral health access for underserved populations include the following:

- Oral health is integrated with primary care.
- Evidence-based dental disease management models are in place.
- Every health center has an oral health program.
- Oral health providers have the information, education, skills, resources, and support they need to deliver efficient, high quality services.
- We value collaboration with other entities as we pursue our vision.

Partnership Health Center's (PHS) model in delivering primary health care overall, including oral health care, is built around these same values, all of which were incorporated into implementing oral health care in the Seeley Swan Medical Center. In all their endeavors, Partnership Health Center collaborated with other agencies to build capacity and create access to the primary health care delivery system utilized by underserved individuals in the service area. This project involved a collaborative effort among Partnership Health Center, Providence Saint Patrick Hospital, and the Seeley Swan Hospital District Board to solve the problem of deficient oral health access in the Seeley Swan Valley. By incorporating oral health services into an already-existing medical clinic in Seeley Lake that provides medical services to underserved residents in the area, access for uninsured and underserved populations was increased. This was based on the health commons primary care model endorsed by HRSA. These evidence-based practice models are supported by a coalition of motivated stakeholders that includes community leaders, safety net providers, insurers, and medical, dental, and public health providers, such as the one utilized with this project.

### B. Description

This Outreach Grant Program has assisted in the development and implementation of dental services in the rural community of the Seeley Swan Valley through the establishment of a permanent dental clinic. Originally co-located with a primary care clinic operated by Providence Saint Patrick Hospital, operation of both the medical and dental clinics has been subsumed by Partnership Health Center as a new FQHC access point.

The clinic provides urgent and preventative dental services, as well as education at the clinic and at the local schools. Culturally and linguistically appropriate outreach material for the target population has been developed and focus groups have been conducted to ensure that we were addressing the needs of the community.

Quality improvement systems included developing templates within the electronic health records to track routine screening for oral and pharyngeal cancer. We have also identified patients who use or abuse drugs/alcohol, as well patients who are at-risk for diabetes, heart disease or other co-morbidities. Many of these patients have been connected to care through our adjoining medical clinic.

### C. Role of Consortium Partners

The Seeley Swan Hospital District is the owner of the building where services are being delivered. They were responsible for expansion of the clinic to include space for three dental operatories. The Board of Directors for the District was also involved in communicating that services were available in the community.

Partnership Health Center was the grantee and was responsible for providing staff and dental services at the clinic. Partnership Health Center operates the clinic in accordance with all state and federal regulations. Additionally, quality assurance and improvement programs were implemented and maintained utilizing existing Partnership Health Center programs. As such, Partnership Health Center provided the program evaluator for the dental clinic. Electronic Health Records were also maintained as a separate facility within the eClinical Works Health Record system.

Providence Saint Patrick Hospital operated the medical clinic located in the same facility as the dental clinic up until Partnership Health Center received HRSA New Access Point funding. Reception staff, in collaboration with reception staff provided in this grant, directed clients to the clinic. Additionally, the computer network for Partnership Health Center is housed with Providence Saint Patrick Hospital. Partnership Health Center made the transition to Providence Saint Patrick Hospital earlier in 2010 to provide more reliable and cost-effective information services. Their staff of 20 employees provides a wealth of information and expertise to assist Partnership's own information services staff. Since the new dental clinic was located in the same building as the Providence Saint Patrick Hospital clinic in Seeley Lake, connecting the network services was seamless and maintenance fit into existing operations.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In May of 2012, PHC began providing dental services in Seeley Lake with our mobile equipment. The mobile equipment limited the amount of work that could be done in a session due to the uncomfortable nature of the chair for patients and some physical limitations for the dentist. Despite those limitations, 96 unduplicated patients were treated between May 1, 2012 and March 15<sup>th</sup> of 2014 when the first permanent chair was installed in a renovated closet. 224 unduplicated patients were served in the newly installed chair.

A larger construction project over the course of that year resulted in the installation of three permanent dental operatories in a beautiful suite facing a forest of pine trees. This construction was completed on March 15, 2015. Since the new chairs have opened, just five weeks ago, 72 unduplicated patients have been seen, among them 23 new dental patients. In an effort to link people to integrated medical, dental and behavioral health care, of the 331 unduplicated dental patients seen during this grant period, 191 were referred to, and established, medical care. Among those patients were 17 diabetics and 5 people with advanced chronic lung disease. 46 children were served and 70 patients over 65 years of age. For the elderly, the challenge of having no Medicare dental coverage was compounded by the distance they needed to drive prior to PHC opening services in Seeley Lake.

### B. Recognition

The Seeley Swan Medical Clinic has received extensive local attention as the community has enthusiastically utilized the services of the clinic. Within one year of obtaining the HRSA New Access Point funding, Partnership Health Center has provided services for over 1,500 individuals. Almost all of our dental patients also utilize our medical services in a patient centered delivery system of care. The presence of the dental clinic also resulted in over \$200,000 in grant funding to assist in expanding the clinic for the dental operatory.

## Part VI: Challenges & Innovative Solutions

The most significant challenge was the time that it took for the expansion of the building to be complete; the expansion was necessary for the required three dental operatories. The Seeley Swan Hospital District was responsible for the expansion, and it required approximately \$1 million to complete the project. It took time to acquire the necessary funding and the expansion has just recently been completed, in the third year of the grant program.

Due to the limited size of the clinic, we had difficulties attracting a dentist. Once the construction was underway, we received inquiries from several applicants and have since hired a full time dentist.

## Part VII: Sustainability

### A. Structure

The consortium will not continue in the format that we utilized during the grant period as Partnership Health Center has assumed all operations in Seeley Lake. Although the original consortium partners will not continue to meet on a formal monthly basis, our relationships have been strengthened by this project, and we anticipate that we will continue to work together on existing and new projects that become available.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Partnership Health Center was able to obtain HRSA New Access Point funding. As such, Partnership Health Center now provides medical, dental and behavioral health services out of the Seeley Swan Medical Clinic. We have been able to sustain the dental project with this funding. Staffing includes a dentist, dental assistant, dental hygienist and appropriate administrative support staff.

### C. Sustained Impact

Dental services have been identified as a compelling need for the target population through the variety of strategic plans and community assessments that all members of the consortium have conducted. Key stakeholders have always been involved in the strategic planning process of these organizations, and we have all identified the need to provide dental services as a critical area in the strategic planning process. In fact, providing dental access for the Seeley Swan area was the number one strategic goal for the Seeley Swan Hospital District. Similarly, increased access, including dental care, for Missoula County and surrounding areas was the major goal of Partnership Health Center in their latest strategic session.

This project will have an extremely positive impact on the target population, and it is estimated that the program will provide 2,567 dental visits for 1,027 patients annually. Dental services that had been inaccessible, for this population, are now a reality. Barriers to access, transportation and affordability have been eliminated. Funding has been utilized to assure dramatic and sustainable access in healthcare services to the target population.

## Part VIII: Implications for Other Communities

Partnership Health Center, along with our consortium partners, believes that the delivery of health care services in a patient-centered medical home is the most effective method of delivery. Dental services are instrumental to this care system. Due to the lack of dental care in the past, change may take time and continued work and patience is necessary.

As anticipated, the bulk of our first years of operation focused heavily on the emergent needs of the community. Due to the inability to access services previously, a large number of patients had dental needed immediate care. In addition to taking care of these needs, the dental clinic became immersed in the community immediately, attending the local health fairs and visiting local schools. Education for proper dental care was directed at the children in grade school, ensuring that prevention and appropriate attention to dental issues are critical for the overall health of the individual. One of the over arching goals that we will focus on is the delivery of care from emergent to preventative over the next few years.

## Nebraska Association of Local Health Directors

Part I: Organizational Information	
<b>Grant Number</b>	D04RH2360
<b>Grantee Organization</b>	Nebraska Association of Local Health Directors
<b>Organization Type</b>	501(c)3 Professional Association
<b>Address</b>	5807 Avenue P Place, Kearney, NE 68847
<b>Grantee organization website</b>	<a href="http://www.nalhd.org">www.nalhd.org</a>
<b>Outreach grant project title</b>	Outreach Partnership to Improve Health Literacy (OPIHL)
<b>Project Director</b>	Name: Susan Bockrath
	Title: Executive Director
	Phone number: 402-904-7946
	Fax number:
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who have signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Nebraska Association of Local Health Directors (NALHD)	Kearney, NE	501(c)3 Professional Association
Central District Health Department*	Grand Island, NE	Local Health Department
Dakota County Health Department*	Dakota City, NE	Local Health Department
East Central District Health Department*	Columbus, NE	Local Health Department
Elkhorn Logan Valley Public Health Department*	Wisner, NE	Local Health Department
Four Corners Public Health Department*	York, NE	Local Health Department
Loup Basin Public Health Department*	Burwell, NE	Local Health Department
North Central District Health Department*	O'Neill, NE	Local Health Department
Northeast Nebraska Public Health Department*	Wayne, NE	Local Health Department
Panhandle Public Health Department*	Hemingford, NE	Local Health Department
Public Health Solutions District Health Department*	Crete, NE	Local Health Department
Scotts Bluff County Health Department*	Scottsbluff, NE	Local Health Department
South Heartland District Health Department*	Hastings, NE	Local Health Department
Southeast District Health Department <sup>1</sup>	Auburn, NE	Local Health Department
Southwest Nebraska Public Health Department <sup>2</sup>	McCook, NE	Local Health Department
Three Rivers Public Health Department*	Fremont, NE	Local Health Department
Two Rivers Public Health Department*	Holdrege, NE	Local Health Department
West Central District Health Department*	North Platte, NE	Local Health Department
University of Nebraska Medical Center College of	Omaha, NE	University

<sup>1</sup> Participated in Year 1 Only

<sup>2</sup> Participated in Year 1 Only

Public Health (UNMCCoPH)*		
The Great Plains Public Health Training Center (GPPHTC)	Omaha, NE	University
Nebraska Department of Health and Human Services Office of Health Disparities and Health Equity (OHDHE)	Lincoln, NE	State Government

### Part III: Community Characteristics

#### A. Area

The Nebraska Association of Local Health Directors' (NALHD's) Outreach Partnership to Improve Health Literacy (OPIHL) project focuses on building health literacy skills and capacities of two primary target populations: those working in the Public Health System and the community members who seek services within that system. The OPIHL project includes public health districts serving 75 rural counties in Nebraska that are home to 760,000 rural Nebraska residents. Through OPIHL, NALHD also engages with health departments serving the Omaha, Ponca, Santee-Sioux, and Winnebago tribes.

#### B. Community description

The Nebraska Association of Local Health Directors (NALHD) is a consortium of 15 local health departments that cover 75 of Nebraska's 93 counties. All local health departments (LHDs) in Nebraska are stand-alone agencies with distinct governance, structure, and programs. Through NALHD, LHDs formalize, support, and amplify their collective efforts to impact local public health. NALHD-member LHDs range in size from five to over 160 employees with annual budgets between \$400,000 and \$11.7 million.

Each LHD participating in OPIHL covers districts that include from 3 to 11 rural counties. The U.S. Census designates 61 Nebraska counties rural, frontier or outlying micropolitan. Nebraska's population density of 23.8 persons per square mile (compared to 87.4 nationally), ranks it 43rd in the nation. Over 802,000 individuals (or 44% of the total state population) live in two counties, leaving the remaining 91 counties with a population density of just 13.5 people per square mile.

#### C. Need

Health literacy is the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions (U.S. Department of Health and Human Services, 2000). Both healthcare providers and consumers need health literacy skills in order to achieve desired health outcomes. Nine out of ten (90%) adults struggle with written health information. A growing body of research links limited health literacy and negative health outcomes for adults of all races, ages, and economic statuses. Health literacy impacts the use of preventative services, self-management of diseases, the length and frequency of hospital stays, readmissions, emergency room visits, appropriate use of medications, the costs of health care, and how one responds in a public health emergency.<sup>3</sup>

NALHD is addressing the health literacy problem at the public health system-level, starting in Nebraska's rural communities. The goals of OPIHL are to 1.) Provide Nebraska's LHDs, including tribal health departments, with the health literacy training and evidence based tools needed to implement health literacy best practices, 2.) Develop an infrastructure for health departments to access expertise and resources and to collaborate to improve health literacy, and, 3.) Assist local health departments in implementing health literacy practices into programs for their communities and target populations.

### Part IV: Program Services

#### A. Evidence-based and/or promising practice model(s)

Nebraska Association of Local Health Directors (NALHD) conceived the OPIHL project based upon several models and continues to incorporate (and add to) new evidence and models developing in the fast-evolving field of Health Literacy.

At the onset, NALHD relied heavily on tools and strategies from the Agency for Healthcare Research and Quality (AHRQ) Universal Precautions Toolkit. This evidence-based resource was designed to help health organizations ensure that systems are in place to promote better understanding by all patients. This tool addresses each of four key change areas: Improve Spoken

<sup>3</sup> DeWalt, Berkman, Sheridan, Lohr and Pignone, 2004

Communication, Improve Written Communication, Improve Self-Management and Empowerment, Improve Supportive Systems. NALHD used this toolkit in the early stages of the project—as a means of gathering relevant information and for planning and development of appropriate technical assistance to local health departments. The tool and its cited resources continue to help OPIHL project staff develop observation protocols and surveys for the needs assessment and evaluation, identify health literacy strategies that are more relevant to population-level communication, and develop teaching and practice tools (checklists).

Shortly after the OPIHL project was funded, the IOM released its 10 Attributes of Health Literate Health Care Organizations.<sup>4</sup> This model provides a useful lens for the overall OPIHL project and has become one of the frames NALHD uses for evaluating OPIHL. The Attributes also provided a guide for several LHDs that have developed quality improvement plans and performance management processes related to health literacy. The OPIHL project's use of the Attributes was featured in an IOM Roundtable on Health Literacy's November 2013 Workshop on the Implications of Health Literacy in Public Health.

All OPIHL-related training and technical assistance has featured and continues to feature evidence-based strategies, such as using Plain Language and the Teach Back method, as well as evidence-based tools such as the Centers for Disease Control and Preventions' Clear Communications Index and AHRQ's new PEMAT (Patient Education Materials Assessment Tool).

NALHD uses the Plain Language Checklist and the CDC Clear Communications Index in the OPIHL project to guide participants in the workshop portion of the health literacy training as they engage in peer review and editing exercises. A Teach Back simulation exercise engages participants in a triad experience, which includes utilizing an observation checklist tool.

Finally, the National Association of County and City Health Officials' (NACHHO) Mobilizing for Action Through Planning and Partnerships (MAPP) process supported the OPIHL project's work to assure that LHD health literacy efforts contributed to larger community priorities. MAPP is a community-driven strategic planning process for improving community health that is routinely used by NALHD-member LHDs. This framework helps communities apply strategic thinking to prioritize public health issues and identify resources to address them. Through the MAPP process, LHDs have established strong relationships with all stakeholders in the Local Public Health System that facilitate their efforts to engage providers in health literacy activities and conversations.

## B. Description

The goals of NALHD's OPIHL project continue to be addressed through: a) defining the health literacy education and training needs in Nebraska's rural local health departments, b) developing and implementing comprehensive, evidence-based health literacy education and training programs, including specific health literacy strategies, for local health department personnel, c) reducing the health literacy burden on and/or improving the health literacy skills of rural populations participating in specific programs and d) increasing health departments' and community partners' understanding of the role of health literacy in health outcomes.

In 2013, OPIHL surveyed 230 LHD personnel for baseline needs and assets as well as provided on-site assessment and training for 19 sites, working directly with 144 health department staff. These activities revealed an interest in and need for skills related to health literate writing, technical assistance to apply health literacy skills, and more robust opportunities for LHD staff to collaborate with others in Nebraska who could help build their health literate skills and who had experiences with similar public health programs. NALHD developed a 5-year Strategic Plan (Feb 2013) for OPIHL to address longer-term education and training needs and continues to guide the development and implementation of health literacy education and training programs targeting LHD personnel and their partners. The activities in this plan aim to reduce the health literacy burden placed upon consumers and to address the health literacy skills of rural community members. Highlights of the first 3 years of implementation, supported by the Outreach Grant, include:

- OPIHL staff organized two large-scale, in-state conferences and training opportunities focused on health literacy. These were the *Health Literacy Nebraska 2013 Summit* and the *2014 Minority Health Conference: Linking Cultural Competency and Health Literacy*.
- OPIHL provided Health Literacy Advisor software licenses and associated training to all participating LHDs to use as a tool for producing more health literate materials.

---

<sup>4</sup> Brach, Keller, Hernandez, Baur, Dreyer and Schillinger, 2012.

- In January 2014 OPIHL began providing regular Collaborinars that allow geographically separated, rural LHD personnel to implement health literacy writing practices in a supported, workshop environment.
- In 2013 and 2014, OPIHL provided financial support to 16 LHD staff from across the state and strategically representing various staff positions within health departments to participate in the Institute for Healthcare Advancement Health Literacy Conference in Irvine, CA.
- OPIHL staff provided technical assistance to LHDs implementing Health Literacy Pilot Projects. These pilot projects fell into three broad categories: internal health literacy policy and procedure development, health literate services to Limited English Proficient (LEP) populations, and health literacy community education with community partners. Through pilot projects, LHDs continue to take supported steps toward implementing health literate strategies across rural Nebraska.

### C. Role of Consortium Partners

The Nebraska Association of Local Health Directors (NALHD) is a 501c3 organization comprised of 15 local health directors. All members serve on the NALHD Board of Directors (BOD). The NALHD BOD and its Executive Committee have authority and are responsible for oversight and making final decisions related to all OPIHL activities. NALHD was the applicant organization for the Outreach Grant program and acted as the grant's fiscal agent.

The local health departments (LHDs) receiving direct services from this grant (listed on page 1 of this summary) are responsible for participating in needs assessment and evaluation, staff education and training, and the work to develop and implement plans to incorporate health literacy training and tools into the LHD programs and materials.

Project Staff: The OPIHL Program Director/Grant Administrator role is filled by the NALHD Executive Director. The OPIHL Project Director coordinates activities related to implementing the OPIHL Strategic and Sustainability plans. These two individuals work closely to coordinate OPIHL activities and communication. The OPIHL Project Evaluator evaluates OPIHL activities and outcomes. NALHD's OPIHL staff team coordinates and supports the work of the participating LHDs.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

NALHD's Outreach Partnership to Improve Health Literacy (OPIHL) provides on-site and web-based health literacy training, resources, and technical assistance to rural local health departments (LHD) and their partners. This work enables LHDs to incorporate health literacy best practices into their existing programs and contribute to emerging statewide health literacy initiatives. As a result of this work, NALHD member LHDs and their staff are *the* frontline promoters and implementers of health literate practice in rural Nebraska.

#### Wide-spread Health Literacy Expertise and Engagement Across the Public Health System

When OPIHL began, only one LHD serving four counties described itself as having health literacy expertise. Now, multiple staff members at 15 sites, covering over 80% of the state, have participated in training and technical assistance.

To date, OPIHL has provided nine, day-long, in-person Health Literate Writers Workshops across the state. Of the 140 individuals who have attended, 27 (19%) were from partner organizations (such as hospitals, Federally Qualified Health Centers, Head Starts, and Cancer Centers), 102 (73%) were LHD staff, 6 (4%) were tribal health department staff, and 5 (4%) were Nebraska Department of Health and Human Services staff. As a result of the workshop, the overwhelming majority (90-95%) of participants reported that they are better prepared to:

- Explain principles of writing easy to read materials
- Critique materials based upon easy to read principles
- Apply easy to read principles to modify written materials
- Know key components of usability testing
- Describe and support health literate writing processes
- Describe and support health literate standards appropriate to their workplace

These trainings will continue and help sustain the diffusion of health literate expertise across the state, further strengthening the health literacy system and ultimately resulting in positive health outcomes among Nebraska residents.

Results from Health Literate Writers Workshops follow-up surveys confirmed that participants continued to find value in what they had learned during workshops and felt that their health literacy knowledge had grown. The Health Literate Writers Workshops are meeting the goals of increasing the health literacy knowledge and skills of local health department staff.

Since the winter of 2013, OPIHL staff played lead roles in developing two large-scale, in-state conferences and training opportunities. These were the *Health Literacy Nebraska 2013 Summit* (with 124 registrants, and 59 in attendance, due to a snow storm) and the *2014 Minority Health Conference: Linking Cultural Competency and Health Literacy* (with over 200 participants). Overall, breakout sessions and workshops of the *2014 Minority Health Conference: Linking Cultural Competency and Health Literacy* focused on practical, health literacy skills that participants could use immediately. These sessions were highly rated (with an average score of 4 on a 5 point scale, where 5=strongly agree) in the following categories: learned useful information; program content was appropriate; presentation was effective; and likelihood of applying what the participant learned.

In January 2014, OPIHL began providing web-based Collabinars that allow geographically separated, rural health department personnel to implement health literacy writing practices in a supported workshop environment. To date, 101 have attended 12 Collabinars. Of the 101 attendees, 63 (62%) were from LHDs, 26 (26%) were from partner organizations such as hospital/clinics and Head Start, and 12 (12%) were from various offices within Nebraska's DHHS. Nearly 80% of survey respondents (n=83) indicated that they are better prepared to apply health literate techniques. OPIHL's Listserv and Collabinars provide a platform where LHD staff members are able to engage one another with questions and ideas for sustaining high-quality work.

OPIHL's work with LHDs and other partners (including Health Literacy Nebraska and various divisions of the Nebraska Department of Health and Human Services [DHHS]) has built the statewide understanding of health literacy's role in improving health outcomes. OPIHL has co-sponsored 4 webinars (*Health Insurance Literacy in Nebraska, Nuts and Bolts of Language Access Program Planning, PEMAT, and Health Literacy at the Pharmacy Counter*) with Health Literacy Nebraska for over 100 attendees. To date, 107 have attended 4 events. Of the 107 attendees, 26 (24%) were from LHDs, 48 (45%) were from partner organizations such as hospitals/clinics, insurance companies, and community organizations, and 33 (31%) were from various Nebraska DHHS departments. Additionally, OPIHL provided trainings for Public Health Association of Nebraska (2013), Nebraska Rural Health Association Conference (2013), and at various other webinar and lunch-and-learn-type events. NALHD continues to partner with key organizations, such as Health Literacy Nebraska, to disseminate related trainings. On a national level, OPIHL was featured in an Institute of Medicine (IOM)-commissioned case study about the role of health literacy in Public Health and OPIHL's Director was an invited presenter at the IOM Roundtable on Health Literacy's November 2013 Workshop.

#### Models for Formal Health Literacy Policies and Procedures

The OPIHL project implemented the Plan, Do, Act, Evaluate, Sustain process throughout project, and LHDs have adopted this process during the implementation of their pilot projects. Several individual LHDs are working toward formalizing Continuous Quality Improvement-informed strategies related to health literacy for Nebraska organizations. These will result in tested, workable processes to identify or develop usable, health-literate messages that are accurate, accessible and actionable. Four LHDs are in the process of formalizing their internal Health Literacy Policies and Procedures as part of their pilot project implementation. The products of this work will provide locally relevant and easily modifiable models for all OPIHL LHDs (and interested community partners) to use going forward.

As a culminating activity of the current funding, 14 LHDs participated in pilot projects spanning 44 counties that allowed LHD staff to put health literacy tools to work in their respective health districts. OPIHL staff provided technical assistance specific to the LHDs' selected pilot projects. These health literacy pilot projects fall into three broad categories: internal health literacy policy and procedure development, health literate direct services (focusing on seniors, vulnerable children, pregnant women, Limited English Proficient [LEP] populations, and pediatric oral health) and community education with community partners (focusing on raising health literacy awareness and developing health literate education materials.) While no two pilot projects were the same, about 1/3 of LHDs tracked the number and demographics of the participants involved in their project. From these reports, there were nearly 900 participants, the majority of whom were of Hispanic ethnicity, who directly received a service from the pilot projects with a potential reach of over 3,000 people.

## **B. Recognition**

The OPIHL project was featured in an Institute of Medicine (IOM)-commissioned case study entitled *The Strength of Weak Ties*, about the role of health literacy in Public Health. NALHD's Executive Director was also an invited presenter at the IOM Roundtable

on Health Literacy's November 2013 Workshop. See: <http://www.iom.edu/Activities/PublicHealth/HealthLiteracy/2013-NOV-21/Videos/Panel1/Introduction.aspx>.

NALHD formally presented peer-reviewed posters and/or sessions about the OPIHL project at both in-state and national conferences:

- Institute for Healthcare Advancement Health Literacy Conference 2014, Irvine, CA.
  - *Collabinar: a Strategy for Affordable Care Act and Health Literacy Education for Rural Areas* (poster)
  - Institute of Medicine (IOM) Health Literacy Roundtable Workshop: Implications of Health Literacy for Public Health November 21, 2013, Irvine, CA.,
  - *Current Public Health Efforts in Health Literacy, Nebraska* (invited lecture)
- Nebraska Rural Health Association Annual Conference 2013, Grand Island, NE.,
  - *What two statewide initiatives are doing to bring Plain Language to the plains* (lecture)
- Institute for Healthcare Advancement Health Literacy Conference 2013, Irvine, CA.
  - *Health Literacy Nebraska: Connecting a community across 90,000 square miles* (poster)
  - *Applying the Attributes of Health Literate Healthcare Organizations to Local Health Departments: the NALHD Outreach Partnership to Improve Health Literacy* (poster)
  - *Does a single-item Health Literacy Screener belong on the BRFSS?* (poster)

NALHD has been selected to deliver a Health Literacy workshop (*Make a Difference with Public Health Messages: Health Literacy Strategies that Get Results*) as part of the National Association of County City Health Officials (NACCHO) annual conference in Kansas City, July 2015.

## Part VI: Challenges & Innovative Solutions

In December 2012, staff of NALHD's Outreach Partnership to Improve Health Literacy (OPIHL), community partners, health directors and staff from 12 local health departments (LHDs), along with the director of one Tribal Health Department attended a day-long strategic planning meeting. Participants contributed to a Strengths, Weaknesses, Opportunities, and Threats (SWOT) Analysis. Cited weakness and barriers emphasized how LHDs are overstretched and therefore might find it difficult to participate in OPIHL, limited infrastructure to support ongoing health literate practice, and that some LHD personnel were not convinced of the need for increasing capacity to address health literacy. These concerns/weakness were, in some instances, echoed in early evaluation findings, including those that pointed to limited institutionalization of health literate practices early on. The OPIHL project work addressed and continues to address these issues.

LHDs are overstretched and addressing health literacy can feel like an added burden. OPIHL staff was aware that most LHDs are actively pursuing accreditation from the Public Health Accreditation Board (PHAB), which is a time-intensive process for the LHDs and a major factor of LHDs being overstretched. Because several of the PHAB accreditation standards specifically include health literacy, OPIHL staff intentionally designed the health literacy training to the accreditation standards, thereby assisting LHDs to meet initial accreditation requirements (and maintain accreditation status in the future) as health literate practices are incorporated into everyday LHD activities. This approach helped to engage LHDs from the start and should contribute to the sustainability of health literate practice.

Limited infrastructure (both in terms of staff and of expertise to address some health literacy concerns) within the LHDs, and the challenge of being geographically separated, prompted OPIHL project staff to creatively leverage technology which lead to the development of "Collabinars" and a health literacy ListServe, as well as the NALHD website's health literacy resources, including the Health Literacy Check-up. *Collabinars* were facilitated by OPIHL staff and utilized a web-based, webinar format whereby geographically separated individuals and groups shared their knowledge with one another by collectively reviewing written materials for health literate best practices. Initially, the *Collabinars* were conducted at a set time every month. At present, *Collabinars* are scheduled to meet LHDs' requests.

Early efforts to incorporate health literacy were not formalized and lacked mechanism for accountability within LHDs, making gains in this area vulnerable in terms of long-term sustainability. The Health Literacy Check-up process was designed as a major component of the Sustainability Plan, to formalize of health literacy practice and ongoing Quality Improvement. The Health Literacy Check-up process includes a Health Literacy Check-up assessment tool, an Action Plan template, and access to NALHD's online resources and OPIHL Technical Assistance. The assessment and action plan tools provide the evidence necessary to determine an LHD's (or other organization's) "Health Literacy Champion" status. The Health Literacy Champion designation directly assists in the capacity-building

of local resources by outlining a process for integrating health literacy at an organizational level. It also provides a mechanism for organizations to demonstrate how they and their staff are accountable for implementing health literate practices. LHDs as local health literacy content experts is a sought after piece of several current and pending contracts that NALHD is part of. Health Literacy Champion LHDs will be eligible sub-contractors for these opportunities.

Early on, some LHD personnel were not convinced of the need for increasing capacity to address health literacy. This was addressed by adding training objectives that included increasing awareness of the pervasiveness of the health literacy problem as well as the impact on patient and population based health outcomes. Going forward, NALHD will be able to apply Nebraska-specific BRFSS data on health literacy to describing and addressing the need for ongoing attention in this area.

## Part VII: Sustainability

The rural districts represented in Nebraska Association of Local Health Directors (NALHD) will remain principle partners in the Outreach Partnership to Improve Health Literacy (OPIHL). OPIHL has and will continue to work with a long list of community, state, and national partners including: Health Literacy Nebraska, the Office of Public Health Practice at the University of Nebraska Medical Center's College of Public Health, the Nebraska Department of Health and Human Services (DHHS), and Tribal Health Departments. OPIHL is also engaging in new work with partners, such as the Nebraska Comprehensive Cancer Control and Prevention Program.

### A. Structure

OPIHL will continue to be a project of NALHD. NALHD's Executive Director oversees the OPIHL Project Director who is contracted to provide oversight and content expertise to the project. OPIHL will continue to engage its Advisory Committee at least twice annually. This committee includes both NALHD Board Members as well as partner representatives. As NALHD continues to succeed in building its members' reputation as local health literacy experts to turn to for technical and other assistance, NALHD's Executive Director and OPIHL's Project Director will oversee the Health Literacy Champion process (described below) and engage LHDs as technical assistance subcontractors, as appropriate.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Nebraska Association of Local Health Directors (NALHD) has worked to ensure that key elements of its Outreach Partnership to Improve Health Literacy (OPIHL) will be supported and sustained going forward. NALHD is also actively pursuing opportunities to continue to sustain the capacity built and to expand OPIHL's scope. NALHD's staff now includes health literacy experts who will continue to provide leadership and support to all NALHD members and who strive to apply health literacy principles to all of the association-level work. Additionally, the work and training to date has resulted in two of the Association's regular contractors developing significant health literacy expertise. These individuals have been and will continue to be centrally involved in NALHD's work related to OPIHL. This established multi-level capacity will allow NALHD to continue to expertly facilitate core OPIHL activities such as:

- In-person trainings, including Health Literacy Workshops and Health Literacy Policy Development for LHDs and their public health system partners.
- Collaborinars and other web-based training that can allow participants to continue to stay current on the latest health literacy tools and research. Collaborinars, in particular, also allow for practicing health literate writing skills, receiving feedback from a facilitator, and reviewing the appropriate use of the Health Literacy Advisor Software tool and other tools.
- Health literacy resources (local, state, national, and international) of particular relevance to NALHD members disseminated by way of the health literacy pages on the NALHD website ([www.nalhd.org](http://www.nalhd.org)), direct email, and the NALHD Health Literacy Listserv. NALHD will maintain and promote all three communication channels. The content of the website will grow to include exemplar written materials selected using an established rubric consistent with OPIHL priorities. These reviewed materials will serve as examples of successfully executed application of health literate best-practices.

Recognizing the need to more purposively support health literacy policies and practices within LHDs, OPIHL will continue to support LHDs as hubs of health literacy expertise with two new efforts.

- “Health Literacy Check-up” formalizes LHD health literacy training goals and processes. Check-ups are accomplished via online tools available to all NALHD members and selected partners. The Check-up includes:
  - Health Literacy Check-up Checklist: provides a succinct assessment and scoring of health literate policies and procedures relating to performance management, development of educational materials, and community involvement.
  - Health Literacy Check-up Action Plan: provides a template to determine SMART<sup>5</sup> health literacy goals, as they relate to the Checklist, and how to integrate these goals into other initiatives.
  - Health Literacy Pledge: With the Pledge, participating LHDs acknowledge the checklist score and commit to implementing the Action Plan.
- The Health Literacy Champion designation will be awarded based upon an LHD’s Check-up performance. NALHD members who achieve Champion status will be formally recognized for their health literate best practices and may be eligible as subcontractors when NALHD is sought as a health literacy technical assistance provider. In addition to providing a public verification of an LHD’s commitment to health literacy, the Check-up and Champion designation process will contribute to all LHDs’ efforts to meet Public Health Accreditation Board (PHAB) Standards in Domains 3, 7 and 8.<sup>6</sup>

To support the ongoing capacity and activities described in II-A (above), NALHD will provide LHDs with ongoing technical support and in-person training opportunities, at least twice annually. The NALHD tools, services, and resources outlined here are also available to LHD community partners who are interested in building their internal health literacy capacity.

### C. Sustained Impact

NALHD’s work with the OPIHL project positions members to continue to tap into and build on health literacy expertise as a tool for maximizing local health departments’ (LHDs’) impacts across Nebraska.

*Statewide Community of Public Health Literacy Expertise:* Through the OPIHL project, over the past 2.5 years, NALHD has provided onsite and web-based health literacy training, resources, and technical assistance to rural LHDs and their partners to enable them to incorporate health literacy best practices into their existing programs and contribute to emerging statewide health literacy initiatives. Project staff have also underscored how these efforts contribute to PHAB accreditation and have established methods for LHDs document their work in this area.

*Models for Formal Health Literacy Policies and Procedures:* NALHD and several individual LHDs are working toward formalizing Continuous Quality Improvement-informed strategies related to health literacy for Nebraska organizations. These are resulting in tested, workable processes to identify or develop usable, health-literate messages that are accurate, accessible, and actionable. Four LHDs have formalized their internal Health Literacy Policies and Procedures as part of their pilot project implementation. The products of this work will provide locally relevant and easily modifiable models for all NALHD LHDs (and interested community partners) to use going forward. NALHD’s work finalizing its Health Literacy Check-up process and Champion designation (described in Part B) was informed by these pilots and will serve to support their promising practices. By formalizing the process and strategies expected, LHDs are poised to continue to develop, deliver, and support health literate messaging around their community health priorities. LHDs also share these strategies with local partners, including hospitals, through collaborative discussions and by facilitating training sessions, thereby positively impacting the health and well-being of their communities.

By integrating the health literacy pilot project with an existing LHD program, LHDs could easily implement health literacy within their LHDs and sustain the changes made to existing programs impacting the populations they serve and improving health outcomes. Four of the 14 LHDs implemented health literate organizational policy change by way of developing staff training plans, designating a point person to act as the health literacy resource, and formalizing organizational policy and plans to reflect health literate best-practices for organizations. Anticipated impact of the OPIHL project sustained by this organizational policy change not only includes LHDs becoming more familiar with health literacy and embracing health literacy into the role of all the health department functions (i.e. health education presentations, clinical interactions, materials developed, contracts, etc.) but includes a health literacy ripple effect to other organizations (local, state, regional) who partner with these LHDs. In many communities LHDs

---

<sup>5</sup> SMART GOALS: S-Specific, M-Measurable, A-Actionable, R-Relevant, T-Timely

<sup>6</sup> Public Health Accreditation Board (PHAB) Domain 3: Inform the Public About Public Health Issues and Functions, Domain 7: Promote Strategies to Improve Access to Health Care Services, Domain 8: Maintain a Competent Workforce.

have moved from health literacy *learner* to health literacy *trainer*. Nebraska LHDs are making the case, providing models, and (often) providing the technical assistance needed for health literacy to be implemented across the public health and healthcare systems.

*Broader Health Literacy Engagement Across the Public Health System:* NALHD's work with LHDs and other partners (including Health Literacy Nebraska and various divisions of the Nebraska Department of Health and Human Services [DHHS]) has built the statewide understanding of health literacy's role in health. Through OPIHL, NALHD has co-sponsored webinars and statewide conferences where health literacy training, tools, and research were the focus. Additionally, NALHD provided health literacy trainings for Public Health Association of Nebraska (2013), Nebraska Rural Health Association Conference (2013), and at various other webinar and lunch-and-learn-type events. On a national level, NALHD's work was featured in an Institute of Medicine (IOM)-commissioned case study about the role of health literacy in Public Health and at the IOM Roundtable on Health Literacy's November 2013 Workshop.

*Health Literacy Surveillance:* Through local and regional efforts, NALHD has positioned local and state leaders to continue to learn more about the impact of health literacy and to start to measure it at the population level. NALHD led efforts to include 3 health literacy questions in the Nebraska state Behavioral Risk Factor Surveillance System (BRFSS) in 2014 and 2015. Data from the first round of health literacy questions will be available to NALHD in the fall of 2015. Of note, the Nebraska-developed data collection items were adopted in neighboring Iowa and Missouri for use in 2015.

## Part VIII: Implications for Other Communities

Health literacy is a tool that can position local health departments (LHDs) across the country to maximize the impact and reach of their often-limited resources. The Health Literacy Pilot Projects supported through NALHD's Outreach Partnership to Improve Health Literacy (OPIHL) are concrete manifestations of health literacy's implication for LHDs. Fourteen LHDs in Nebraska implemented health literacy pilot projects that poised LHDs to better address specific needs defined by local communities. Though distinct, the most successful pilots included key components that can be illustrative. These were:

*Peer learning/communities of practice:* OPIHL's effort to build relationships both within and between LHD staff helped those individuals find support and resources among peers with similar experiences, even when separated by hundreds of miles. Peer learning was fostered by the OPIHL project's health literacy training, whereby staff from multiple LHD sites came together for training, tools, and peer editing. These interactions were supported/continued with the help of technology—including peer editing using a webinar platform ("Collabinars"). Additionally, the use of a listserv and dedicated project web page provided a means for sharing strategies and edited materials between LHDs and encouraged collaboration between sites on similar written projects.

*Explicit attention to formalizing health literacy policies:* Some of the pilot projects resulted in the development of a policy, procedure, and/or training curricula for use within a given LHD's staff. These products institutionalize the importance of health literate practices and are being shared as models for other consortium members. These products also provide the processes and documentation called for by the Public Health Accreditation Board (PHAB). NALHD's new Health Literacy Check-up process is another tool offered through the OPIHL project that provides a framework for formalizing health literacy in a documented process of Continuous Quality Improvement.

*Deliberate grooming of internal, health literacy capacity at a LHD level:* Each pilot project had one lead point of contact. These points of contact have become the internal LHD health literacy resource person and promoter, both informally and in one case formally.

*Active sharing of LHD expertise with community partners:* LHDs have strong relationships with their community partners, and through the work with the OPIHL project, LHDs have added value to their communities. Health literacy interventions and strategies that build logically on LHDs' strengths in community engagement and communication have made LHDs a go-to expert for others in their community systems, including hospitals. This dynamic validates the expertise and value of LHDs and also motivates LHDs to maintain and build on their health literacy capacity.

*What gets measured matters:* As a result of the efforts of many of those associated with the OPIHL project in Nebraska and of health literacy advocates elsewhere, health literacy items are now included on the Behavioral Risk Factor Surveillance System (BRFSS) survey in multiple states. Health literacy is now starting to be measured along with other variables long associated with the negative health outcomes that public health is most concerned with. This shift positions LHDs and their partners to address, head-on, those who continue to doubt the important role health literacy plays in local health interactions and outcomes.

# Nebraska

## Public Health Solutions District Health Department

Part I: Organizational Information	
Grant Number	D04RH23610
Grantee Organization	Public Health Solutions District Health Department
Organization Type	Local Public Health Department
Address	995 E. Highway 33, Suite 1, Crete, NE 68333
Grantee organization website	<a href="http://www.phsneb.org">www.phsneb.org</a>
Outreach grant project title	Healthy Pathways
Project Director	Name: Laura Wooters
	Title: Health Services Manager
	Phone number: 402-826-6682
	Fax number: 402-826-4101
	Email address: <a href="mailto:laura@phsneb.org">laura@phsneb.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Fillmore County Hospital	Geneva/Fillmore/Nebraska	Hospital
*Beatrice Community Hospital and Health Center	Beatrice/Gage/Nebraska	Hospital
*Jefferson Community Health Center	Fairbury/Jefferson/Nebraska	Hospital
*Crete Area Medical Center	Crete/Saline/Nebraska	Hospital
*Warren Memorial Hospital	Friend/Saline/Nebraska	Hospital
*Thayer County Health Services	Hebron/Thayer/Nebraska	Hospital
*Public Health Solutions	Crete/Saline/Nebraska	Local Health Department

## Part III: Community Characteristics

### A. Area

The project area is composed of five rural counties in Southeast Nebraska: Fillmore, Gage, Jefferson, Saline, and Thayer. Total population is 55,612, with a land area of 3,144.87 square miles and a density of 17.68 people per square mile compared to Nebraska (23.42) and the nation (86.06).

### B. Community description

The five counties involved generally look similar in their population, with a few important variations. According to Census estimates, Saline County has the lowest percent of the population over 65 (14.6 %). Gage county follows at 19.0%, with Jefferson (22.0%), Fillmore (22.3%), and Thayer (25.8 %) rounding out the district. Statewide, 13.5% of the population is 65 or older. Another key population for our district is the 18 and under demographic. Saline County also has the highest percentage of this young population, at 24.4%, with the lowest population in Jefferson County at 21.3%. Thayer (21.4%), Gage (23.0%), and Fillmore (23.8%) are in the middle, according to the 2010 Census estimates. The Nebraska average for this age group is 25.1 %. These are two important groups as they are the populations that are more likely to be eligible for Medicaid.

Poverty among these counties varies slightly, but holds consistent with the Nebraska rate. Economic hardships, transportation issues, and unsteady employment that are widespread in this district have always contributed to poverty and to greater access issues. Nearly 4 out of 5 uninsured households live at or below 200% of the federal poverty level, which includes 63% of those having the head of household employed.

With regard to racial and cultural demographics, all five counties, like the rest of Nebraska, are primarily white. However, Saline County has a much larger Hispanic population (20.2%) than the other counties and even surpasses the state average. Saline County is the only county that has seen a population increase in the last decade. The other four other counties are seeing a subtle erosion of the population each year, primarily among those under age 65. It may be helpful to give further explanation to this 'phenomenon' of Saline County. The largest community in Saline County is Crete, with a population of almost 7,000 residents. Once primarily a mix of German and Czech immigrants, Crete now draws in a dozen or more nationalities for work. Farmland Foods, a large meat packing plant located a mile from town, draws many Hispanic families to the area. According to the U.S. Census Bureau, there were as few as 24 Hispanic individuals reportedly living in Crete fifteen years ago. Today, it is anticipated that the Hispanic population makes up an estimated 36% or more of the city's population. Though it appears that the biggest need for culturally appropriate services is in Crete and Saline County, the full constituency of approximately 55,000 in the service area is impacted by this population shift and all counties must find a way to address it.

## C. Need

The following section describes some key areas highlighting the need that informed the development of the Healthy Pathways program:

- Target Population

Indicators that were identified by the five counties during the "MAPP for a Healthy Future" planning process as areas for improvement include: Access to Health Care, Health Education and Promotion (particularly regarding obesity, risk factors for cardiovascular disease and heart attack, and sedentary lifestyle), Preventive Care, and Population Decline and the Impact on Health Services.

- Consumer Behaviors

One source of data that is extremely helpful in understanding the issues related to health care access is the CDC Behavioral Risk Factor Surveillance System (BRFSS), which is implemented in Nebraska by the Department of Health and Human Services. PHS contracts yearly for the oversampling of each county in the District, one county per year. Saline County is unique in the District as it has a high proportion of the Hispanic population. In the report for Saline County, data from respondents that identified themselves as Hispanic are indicative of the dire circumstances regarding health care that they experience. For Saline County Hispanics, a staggering 49.1% had no personal health care provider, nearly half have no health insurance, and 23.3% were unable to see a doctor in the past 12 months due to cost, compared to 11.5% for the general population.

For the District, as a whole, gaps in health coverage and health behaviors were identified as follows:

12% of the population are Medicaid eligible, 18.1% report no health care coverage, 68% report being overweight or obese, 19.2% smoke, 7% report being diabetic, 27.4 people/100,000 report being hospitalized for diabetes, 28% report no leisure time activity, and 30.3% report having high blood pressure. It is clear that chronic disease management, including diabetes, heart disease, and stroke, are priority health issues for the residents of PHS' five counties.

- Health Care in the Service Area

One of the greatest obstacles in accessing care is having enough providers in the district. Nebraska, 50 of the 93 counties are in a primary care provider shortage, while 45 of the 93 counties have a nursing shortage. Four of the five counties in PHS fall under these categories, either in part or in their entirety. Among the five counties in the PHS District, Gage has the largest amount of providers. All of Fillmore, and Saline Counties have been federally designated as a Medically Underserved Area or Population. All of Thayer County has been federally-designated as a Health Professional Shortage Area.

Another alarming number is the age of the providers. Almost one-third of doctors and one-third of nurses are over 50. Over half of the dentists are over 50. This can create greater shortages in the future as this portion of the work force retires and is not replaced at the rate of retirement; thus, creating more access issues.

#### A. Evidence-based and/or promising practice model(s)

In the planning phase, the consortium looked at various models which had been successfully implemented elsewhere as potential routes to address their common concerns. It became apparent to the group that the desired strategy is a close working partnership between a case management provider and the hospitals. This sparked an interest in the implementation of a community-based patient care model involving PHS as the community-based care management provider working in close partnership with the hospitals. This use of the health department for case management would provide an economy of scale, and the collaborative approach would also enable the eventual development of a health coaching capacity within the hospitals. A similar approach had been taken nearby in Lincoln, called E.D. Connections, with a shared case management service supported by the two hospitals located there.

In the development of the consortium project, information was gathered on what others have done within the state, as well as through references regarding models that work. The operation of the Emergency Department Connections Program ('ED Connections') was discussed in particular. It is run by the two hospitals in nearby Lincoln, and has attracted attention because of its success in addressing many of the commonly held concerns of consortium members. In fact, the savings resulting from the reduction of inappropriate emergency department use alone was enough to more than pay for the program into the future. This showed not only its effectiveness but its viability, two key factors that made it very attractive to our consortium. Other projects were also explored that likewise demonstrated effectiveness. Three of these are highlighted below, as they were a basis for program design. These are:

1. The **Community Access Program** in West Virginia that focused on improving health care services for people with selected chronic diseases through case management. These services resulted in a 65 % reduction in hospitalizations, emergency room visits and outpatient services. However, these savings were not considered as a way to achieve sustainability, but were instead used for other priorities, so the project folded when the grant ended.
2. The second program is the **SMART: Diabetes and Hypertension Education and Outreach Program** in Florida, which established a case management program, supplemented with a screening initiative. The case manager was shared among the critical access hospitals for an economy of scale. Nearly 450 participants completed the self-management educational sessions. This project succeeded in reducing hospitalizations among program participants by nearly 70 percent and enabled 450 people to be drawn into self care programs through the screening initiative.
3. The **Richland Health Network** in Montana was a hospital/health department/aging agency partnership that did case management using a nurse and a social worker. It developed a common database as well. During the project's operation, 14 percent of the general population over age 54 was re-hospitalized during the targeted 30 - 90 day time range. During the same period, only 8 percent of the clients served by the consortium's case management program were re-hospitalized within the 30 - 90 day range. In addition, 478 people were drawn into the system through the use of health assessments and health screening.

Our consortium decided to take the best of all four programs to design a case management initiative to improve health outcomes, increase access and reduce inappropriate use of services. The proposed design had four elements: (1) a community based case management system (using nurses and lay people that enable an economy of scale and the ability to track patients as their source of care changes). (2) It was intended to establish the use of a common information system at each consortium site to enable better communication and coordination of care; however Crete Area Medical Center was the only hospital that ended up participating in this effort. (3) Involvement of hospital staff in the case management process and not just simply as a source of referrals. This was expected to result in a greater rate of referrals and a foundation for the eventual incorporation of health coaching into their care systems. (4) An early focus on sustainability – based on projects that had both been successful in implementation and sustained their efforts by planning ahead to invest the cost savings from implementation into the continuation of the project.

#### B. Description

Based on the strategic planning performed by the consortium, and the review of the various EBPs, a community based patient care model with PHS as the community-based care management provider was established. The case managers worked in close partnership with the hospital. The overarching goals of the program were to: improve patient health outcomes, increase access to quality health care in the most appropriate setting, and reduce inappropriate use of hospital resources. There were many activities which took place to prepare us for our "Live" introduction and program implementation.

First, all six hospitals signed a memorandum of understanding in support of the project. Next on the timeline was the installation, development, and training on the Penelope Electronic Information System. All client data, documentation, surveys, action plans, client and provider letters, and reporting occurred within this database.

While the database was under development, other staff worked on the development of a community resource directory which includes a listing and brief summary of services available by a variety of health care providers, social service organizations, economic resources, childcare, etc. This directory requires regular updating and each case manager is responsible for adding/updating the directory as new information is available. We are currently working on making this directory available on our department website so that it may be accessed by all community members and service providers.

During the last 6 months of the planning and program development period, program staff were hired: A lead nurse case manager, a community health worker, and a social worker. An experienced Medicaid case management nurse transitioned to this program to assist with training of PHS staff and hospital staff. The lead nurse case manager was responsible for the development and operation of an enhanced case management program. An experienced nurse Case Manager was hired to oversee the day to day operation referrals, intake, and case management. This Lead Nurse Case Manager, in collaboration with hospital staff, developed protocols, procedures, care pathways, and integrated them into an operating manual for case management.

The PHS Health Director assured that there was a process in place for quality and performance measures. Two outcome assessments were utilized by building them into the Penelope database and instructing staff on their usage: Patient Activation Measure-13 and the QualityMetric's SF-12(v2) Health Survey. The PAM-3 (Patient Activation Measure), a self assessment which is completed by the client to determine their motivation in making positive changes toward improved health and self-care management. The SF-12 is a shortened version of a longer, 36 question health survey. The SF-12 uses only 12 questions in 8 domains to measure functional health and well-being from a patient's point of view. Taking only two to three minutes to complete, the SF-12 is known to be a practical, reliable, and valid measure of physical and mental health. Each of these surveys are completed by the longer term case management clients to measure improvements in client scores over the time the community health worker or case management nurse is working with the client.

An action (care) plan was developed based on the assessment results, referring party request, and client's preferences. Through care management, we assisted the client in establishing a medical home, provided health education regarding their diagnoses, health prevention behaviors, self-monitoring, and self-advocacy, and appropriate vs. inappropriate use of health services. Clients were referred to other community organizations or providers as determined by their assessments/needs. Clients were reminded of provider appointments, accompanied to appointments by the case manager as needed, and monitored for compliance with physician directives. Clients were reassessed at appropriate intervals to determine changes in health functioning. Satisfaction surveys for clients as well as providers were developed.

PHS purchased Prescription Assistance Program Rx (PapRx) software to facilitate application assistance for clients with limited resources to obtain medications for chronic health conditions. PHS case management staff were trained and clients enrolled in the program. To date, we have been able to save clients over \$232,000 of the average wholesale cost (AWC) of medications through the use of this software.

Ongoing communication and relationship building has occurred with consortium members and hospital staff, as well as medical clinics. Through the course of our work it became apparent that our best sources of referrals were from medical clinics and hospital social service departments, rather than hospital ERs. This concept will be discussed in greater detail under Part VI.

### **C. Role of Consortium Partners**

The consortium was composed of the CEO of each of the 6 facilities. Each facility was to designate a lead person through which communication was to pass. These hospital designated leads were to be the focus of hospital participation in the project. The consortium did play a central role in determining the priorities for focus of effort and selection of an evidence based model. During the first 6 months of the planning and development period, the consortium established the overall strategic direction of the Outreach program and collaboration beyond the grant funding period. Other activities by the consortium during this period included identification of focus areas based on results of environmental scan, creation of long-term consortium goals/objectives, and strategic planning regarding the work and sustainability of the Outreach initiative. As stated in the memorandum of agreement, consortium members committed to continuing collaboration towards long term success and sustainability, to include communicating the value of the program to its members and policy makers.

## A. Outcomes and Evaluation Findings

In total, 3,232 referrals were made to the program as of January 30, 2015. 94% (3066) of these came from the 5 county area and 166 came from entities outside of the district. The majority of district referrals were from Gage County (1,577), 753 were from Saline, 413 from Jefferson, 190 from Fillmore and 133 from Thayer. All referrals were accepted into the program and managed, regardless of location of residence. Of those referred to us, a majority could not be contacted. This was expected given the nature and manner of referrals from the facilities and from those that came from Medicaid. Contacts were made with clients that were self-referred and/or referred by a physician or community organization or agency.

While the needs of those successfully contacted varied greatly, they did have some commonalities. 72% were uninsured, 93% were low income, 23% were recently unemployed or underemployed, and 38% of the unemployed clients were disabled. Many of the clients had gone without health care, had chronic illnesses, behavioral health issues, they had housing problems, and could not get health services because their accounts with their primary care provider were in arrears and the clinic would not allow appointments to be made until a payment on their account was secured. A large portion of those referred were given application assistance for Medicaid, SNAP, disability determinations and ACA. Referrals for housing assistance and other support services were made to other agencies as possible. Of those referred who had one or more behavioral or medical diagnoses, 31% had a behavioral health diagnosis, 23% of these clients were diabetic, 13% had asthma, 13% had hypertension, and 10% were pregnant. As the program evolved with time and experience, the program began to see more referrals of those with chronic diseases such as COPD and heart failure. Those with a need for medications or simple information and referral were assessed, assisted with their immediate needs, and entered into short term case management. Staff then worked with the patient and health care provider to get needed medication and make necessary referrals. The focus for patients who were recently released from a hospital or who were newly diagnosed was education and assuring that each patient was prepared to care for himself. In each case of staff service, staff advised the physician of record about what had been accomplished for the patient/family, as well as the observed condition of the patient. Clients with more complex problems such as chronic illness and no medical home or those with acute needs were opened to longer term case management.

Services added to the project were: diabetes prevention, home visitation for at risk children, development of satellite primary care services, and dental preventive services for children. These were added based on the frequency and intensity of problems and the perceived ability to take action to reduce or resolve them. One example of quantitative data which validated the success of case management came in the form of HgA1c measurement. Diabetic clients receiving case management and home visitation saw an average reduction of 2 points in their HgA1c over a 12 month period.

By comparing initial SF-12 scores on client's enrolled into case management with subsequent SF-12s, we found an increase of 44% in client's perceived improvements in mental and physical functioning and overall health-related quality of life.

Of clients referred to the program without a primary care provider, we were successful in establishing a medical home for 55%. Of those for whom a medical home was not established, some clients declined our offer to help, preferring to seek services on their own, others were non-compliant in keeping appointments that had been set up for them. There were also clients who were unable to establish care based on an inability to pay a local provider. Some clients who had available transportation, we referred to an FQHC in Lincoln, Grand Island, or Omaha.

## B. Recognition

Although the program did not receive formal recognition, the project director and lead case management nurse have received positive comments from hospital partners, health care providers, and clients. Most of the physician feedback has occurred during phone conversations between the case management nurse and health care provider, in statements such as "Mrs. X has been a patient of mine for 14 years and experienced poorly controlled diabetes most of those years, particularly so the last 5. Since you have been teaching her self-management techniques that fit her lifestyle and personality, and providing her with free insulin and diabetic supplies, her A1c has dropped 5 points and she is now able to walk three blocks to the grocery store, which she was incapable of 6 months ago. I am amazed at her progress under your care." The medical chief of staff at Beatrice Community Hospital told the project director in March, 2015 that the work that is being done in the Healthy Pathways program is exactly the type of work the hospital is striving to develop with their medical clinics in working towards meaningful use and patient centered medical home recognition. Another example is one client who was referred to the program from a hospital that stated this client had presented inappropriately to the ER 26 times in a 12 month period (for minor complaints), had only 6 ER visits during the 10 months subsequent to her referral to the program.

Almost from the start, problems with the project emerged within the facilities. The designation of hospital leads was very slow in coming and the understanding and commitment of the hospital administrators varied widely. Data regarding ER and inpatient usage by district residents was requested in order to quantify the number of patients by diagnosis and by payer source. The data included was the residence of patient, initial diagnosis, final diagnosis, payer source, cost of service, and service charge. Regrettably, this information was not collected in a uniform fashion, so no quantification could be made regarding either the number of patients who were self pay, or the cost of uncompensated care. An examination of the data did reveal that use of emergency rooms was occurring for non-emergent care. As expected, two observations could be made. First, District residents were drawn to Lincoln for services. While this would be expected for more specialized services, services provided through Lincoln facilities did not appear to be significantly more complex or specialized than those provided in district hospitals. Those counties closer to Lincoln showed greater patient loss than did those more distant.

Second, while a count was not conducted, the use of emergency rooms for primary care was strongly evident in the range of diagnoses and the amount of charges per visit. Typical non-emergent diagnoses were: respiratory symptoms, gastrointestinal symptoms, minor injuries, constipation, rash, fever illnesses, cramps, etc. While it could not be detected in the data, staff reported several ER super-users, even those arriving by ambulance.

Several adverse events and trends interfered with the project. First, with the discussion and passage of ACA, significant market shifts and affiliation arrangements occurred. What had been fairly collegial relationships, became more competitive. The two major hospital systems in Lincoln worked to draw the district hospitals into closer association with the urban centers. As the debate about costs continued at a national level, district facilities began to back off reduction of hospital overuse. The philosophy became one of 'any patient is better than loss of patients'. The seeming protection of Critical Access designation and cost-based reimbursement was a buffer to concerns about uncompensated care. Second, with the changing trends, came a weakening confidence in administration. Five administrators were replaced, and four had significant changes in physicians and or medical staff structure. Five hospitals had changes in key staff.

Most significant were changes to the health department itself. The Medicaid Access program funded with Medicaid administrative dollars was abruptly terminated by the state. Despite assurances to the last, the funding for 4 staff members was cut with no more than 30 days notice. This profoundly affected the service model that was proposed, as well as the ability of the department to maintain staffing and roll out the program as had been planned. In addition, this reduced confidence in the department by its partners and among potential employees.

The department had an extraordinarily difficult time engaging emergency room staff in the project. In retrospect, we see that we were not able to properly engage ER staff because the physicians were not engaged. We also overestimated the ability of administration to make a case to the physicians. Consequently, if we got referrals from emergency rooms they were of poor quality. Rarely did we get a referral that was anyone other than patient with a long record of non-compliance and inappropriate, frequent utilization of emergency room care. In addition, we did not get information regarding the hospital staff's concern about the patient's use of services. As time went on, we found that our successes came when referrals were from the physicians themselves (private practices), or from hospital social workers or discharge planners.

Aside from the model based on referrals from ERs, we overlooked the fragmented care of emergency room patients. There was no one really invested in the continuum of care of these patients because the ER staff functioned independently from practitioners. So if we pleased the ER staff by reducing ER, those successes were not recognized. What happened in the ER was not monitored, given the lack of an EMR.

Our means of involving our partners was flawed from the start. We say in retrospect, we should have focused on medical providers as they are the center of care; the hospitals had not yet accepted the emerging models for care which would achieve the three aims, and the changing leadership among the hospitals did not provide an adequate base for discussion. Since the start of our project, thinking among our hospitals and policy makers has come full circle. The value of case coordination and the value of the medical home are just now coming to light for many, including legislative leaders. The department received a 1422 grant award from the state (via CDC) which was designed in part to expand the physician team to improve health, improve care, and reduce expense. We will be working with physicians to more directly assist them in reorganizing their practices and teach them how to use other team members to achieve compliance of patients and improved health. We have also developed relationships with other partners who work with us to engage in case coordination and case management.

**A. Structure**

Of the original 7 partners of the Consortium, two will likely not participate (Thayer County Health Services and Warren Memorial Hospital). Thayer County Health Services has the one of the newest CEOs and may not yet be positioned to resume the association. Warren Memorial Hospital also has a newer CEO and the facility may be still in transition. Blue Valley Community Action Partnership (BVCA) is being added through our recent project. There is a desire to add two others. These are Blue Valley Behavioral Health (BVBH) and the satellite of Peoples Health Center (FQHC). There has been resistance from BVBH to join, but we will continue to work on this addition. Our work in the program has clearly demonstrated the need for increased collaboration between partners for improved behavioral health. The fact that we have saved clients over \$232,000 of the retail cost of their medications through our prescription assistance efforts, we would hope BVBH would understand the value of our collaboration with them as medication compliance is key to improved behavioral health. The preference would be to establish a formal partnership, but more discussions need for this to occur.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

No parts of the program will be sustained

At minimum, PHS will continue its role of serving as a community resource for strengthening of medical, dental, and vision homes. It will continue its role in case coordination for those who will continue to need the assistance of multiple service providers. It will continue the Healthy Pathways program as well as its preventive services program. These include dental preventive services, diabetes prevention programs and its medication assistance program. The Department will also continue its work with health care providers and other community entities to develop the network of services and collaborative projects to improve the health and wellbeing of the population, improve the strength and effectiveness of the health care system, and reduce costs. Specifically, this includes the development of additional primary care services to increase access to care. These activities must continue, otherwise there will be a decline in the health of the population. PHS has committed to retaining one public health nurse case manager for the Healthy Pathways program as there has been demonstrated a great need for Gage County and Saline County residents, in particular, due to the high incidence of type II diabetes in these counties.

**C. Sustained Impact**

The sustained impact of this project has been the demonstrated value of network development and collaboration among the hospitals, health care providers and community agencies. Another sustained impact is the demonstration of the need for the development of primary care services. The resources in the district are simply not adequate for the need. The Health Director had a promising meeting with the director of People’s Health Center (FQHC) in Lincoln regarding establishment of a satellite FQHC within our district, but this meeting proved unsuccessful upon further investigation by the FQHC director, who reported that in order for an FQHC to be financially stable, a certain percentage of the population base must be clients with health care insurance. The local physicians anticipated this to be a drain on their client caseload and a financial threat to their own practices, and were thus unsupportive of this approach.

The most significant impact of the program has been an increased awareness about the problems of access to care, the needs of the population, and what alternatives may exist to resolve these problems; and thus improve the health and wellbeing of the population. This information has already served as the impetus for further action and collaboration. Funds have been successfully secured to advance our work in this area. Some of the effects of the increased communication and collaboration between partners is a validation of the Community Health Improvement Planning Committee’s selection of priorities for the district: Access to Care, Strengthening Families, Behavioral Health, and increased support for Preventative Health. The overwhelming majority of clients referred to the Healthy Pathways program presented with one or more of these priority issues. Because of this increased awareness of priority needs, there is increased support throughout the district for collaborative efforts to address these issues.

Over the course of the Healthy Pathways projects period, the following projects have been applied for and funded based on health barriers demonstrated in the Healthy Pathways program: 1. Health Hub and Every Women Matters projects to provide increased cancer colon, breast, and cervical cancer screening which prevents late stage cancer diagnosis. FOBT and mammogram screenings were offered to 100% of eligible Healthy Pathways clients. 2. Prescription assistance and behavioral health referral and

case management which has resulted in increased behavioral health, stronger families, and a reduction in the many negative consequences of behavioral health crises. 3. Tai Chi, STEDI and Stepping On are all evidence based programs for injury prevention in with older adults. 4. Rural Road Safety initiative to decrease the rates of unintentional injuries. 5. Increased immunization efforts by PHS which included district-wide influenza immunization clinics (potentially resulting in a decrease in infectious disease presentation in ERs) and a state-funded immunization grant to increase the uptake of Gardasil which will results in fewer cases of cervical and penile cancer, and 6. A child dental screening program which will results in decreased incidence of clients presenting to the ER with acute dental issues.

## Part VIII: Implications for Other Communities

The district lacked an existing formal alliance that regularly met to discuss medical concerns in the district. The establishment of such an alliance would be a functional first step. This should include not just hospital CEO staff, but other pertinent hospital staff such as social workers. It should also include other agencies in the district, including front line staff, with similar concerns or that may be able to help in different ways. The department had a very difficult time engaging emergency room staff in the project. It was difficult to properly engage Emergency Department staff because the physicians overall were not engaged. It was difficult to even get to the front line physicians. We overestimated the ability of top administration to make a case to the front line physicians. Having the group work of an alliance that could engage providers before trying to put in place this kind of program could have been helpful. It is vital to get information regarding the hospital staff's concern about the patient's use of services. This would have been helpful in getting referrals from the hospital staff for appropriate referrals, not just those patients with a history of frequent use and non-compliance.

We also experienced multiple administration changes at all of our hospitals throughout the grant. This did not provide for an adequate base of support. Since the beginning of our grant though, we have experience increased success with getting the right "players" together, however the resources we have are not adequate for the need. We have five counties in our district-all different sizes. In those five counties, we have six Critical Access Hospitals at different stages of development. Looking back, maybe it might have been a better path to find the counties that were ready to implement such a project.

We utilized two evidenced-based tools to collect information from patients. We utilized the SF-12 (Short Form-12 Questions) and the PAM-13 (Patient Activation Measure). There are many varieties of SF questionnaires that are widely used and considered scientifically valid. The SF-12 is a practical measure of physical and mental health from the patient's view point, although it is a tool that is best when looking at population data. The PAM-13 is a tool that measures if a patient is ready to make changes and how ready they are. We would recommend a community investigate which tool might best help them.

# New Hampshire

## Mary Hitchcock Memorial Hospital

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23597
<b>Grantee Organization</b>	Mary Hitchcock Memorial Hospital
<b>Organization</b>	Quaternary Hospital
<b>Address</b>	1 Medical Center Dr., Lebanon, NH 03756-1000
<b>Grantee organization website</b>	<a href="http://med.dartmouth-hitchcock.org/telehealth.html">http://med.dartmouth-hitchcock.org/telehealth.html</a>
<b>Outreach grant project title</b>	Rural Health Care Service Outreach Grant Program
<b>Project Director</b>	Name: Sarah Pletcher
	Title: Principal Investigator
	Phone number: 603-650-6720
	Fax number: 603-653-6843
	Email address: <a href="mailto:sarah.n.pletcher@hitchcock.org">sarah.n.pletcher@hitchcock.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
* New London Hospital	New London, Merrimack, NH	CAH Hospital
* Upper Connecticut Valley Hospital	Colebrook, Coos, NH	CAH Hospital
* Weeks Medical Center	Lancaster, Coos, NH	CAH Hospital
* Northeastern Vermont Regional Hospital	St. Johnsbury, Caledonia, VT	CAH Hospital
* Cottage Hospital	Woodsville, Grafton, NH	CAH Hospital
* Valley Regional Hospital	Claremont, Sullivan, NH	CAH Hospital
* Alice Peck Day Memorial Hospital	Lebanon, Grafton, NH	CAH Hospital
* Gifford Medical Center	Randolph, Orange, VT	CAH Hospital
* Mt Ascutney Hospital & Health Center	Windsor, Windsor, VT	CAH Hospital
* Springfield Hospital	Springfield, Windsor, VT	CAH Hospital
* North Country Hospital	Newport, Orleans, VT	CAH Hospital
* Grace Cottage Hospital	Townshend, Windham, VT	CAH Hospital
* Brattleboro Memorial Hospital	Brattleboro, Windham, VT	Community Hospital
* Cheshire Medical Center	Keene, Cheshire, NH	Community Hospital
* Monadnock Community Hospital	Peterborough, Hillsborough, NH	CAH Hospital
* Speare Memorial Hospital	Plymouth, Grafton, NH	CAH Hospital
* Southwestern Vermont Medical Center	Bennington, Bennington, VT	Community Hospital

## Part III: Community Characteristics

### A. Area

The CREST program serves six counties in New Hampshire – Cheshire, Coos, Grafton, Hillsborough, Merrimack and Sullivan, as well as six additional counties in Vermont – Bennington, Caledonia, Orange, Orleans, Windham and Windsor.

### B. Community description

Two-thirds of the residents of New Hampshire and Vermont live in very rural areas. Most counties in these states have a physician-to-patient ratio that falls far below federal standards and are designated health professional shortage areas, or medically underserved areas. There are regional practitioner shortages in many specialty areas of medicine. Rural residents of New England are, on average, significantly older, poorer, and less well educated than their non-rural counterparts. The favorite phrase used when giving directions in Vermont and New Hampshire is “You can’t get there from here,” as both mountains and waterways eliminate the possibility of flat, direct road systems. The climate is characterized by long, cold winters with notoriously challenging weather which impedes the transfer of patients to trauma centers, sometimes so severely that a rescue helicopter cannot be used. Winters are followed by an officially recognized “mud season” during which many of our thousands of miles of dirt roads become difficult to manage and, at times, are impassable. It is not uncommon to hear that a 100-mile round trip may take over three hours for a patient. Unfortunately, public transportation is rarely available given access barriers that accompany low population. Poverty in the counties with CREST member hospitals range from a rate of 10.8% to 18.4% and a child poverty rate of 14.9% to a high of 22.8%. In the 5 NH counties with CREST member hospitals, poverty rates range from 8.4% to 13.6% of the populations, and child poverty rates running 14.4% to 22.6%. Vermont was one of the first states to roll out expanded Medicaid, and New Hampshire began its expansion on July 1, 2014.

### C. Need

Our overarching goal was to strengthen the healthcare system in rural Northern New England so that patients in this region have access to high-quality specialty care at every phase of treatment. The emergency departments (ED) at local hospitals are often staffed by midlevel providers with little training in emergency care or trauma. Staff recruitment and retention is a perennial issue. There is a constant struggle even to cover shifts. Staff must often wear multiple hats, a busy floor nurse, for example, may also have to cover the emergency room; an ED provider also serves as the paramedic who must leave his shift to drive patients by ambulance to a larger facility, and so forth. The staff often lack training in essential skills especially high intensity/low frequency skills such as intubations or central lines and almost always lack the patient volumes required to maintain those skills. The hospitals lack much of what larger hospitals view as the bare essentials of both diagnostic and clinical equipment. As a result many patients are quickly transferred to a trauma center, and many of those are unnecessary transfers, resulting in bed shortage for complex cases, and a loss of revenue for the local hospital.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

#### AVERA eCARE

We have worked on developing a suite of services that provides 24/7 access to specialty care physicians for rural and critical access hospitals. We have adapted the model by using in-house physicians to support the service, and have also contracted with Mayo for additional physician coverage. While transferring hospitals have been accustomed to telephoning Dartmouth Hitchcock Medical Center (D-H) for consultations, moving them to a videoconferencing model where the consulting physician can also examine the patient, has had its own learning curve. We have developed Telestroke which is a high user of physician exams. Teleneurology relies a great deal on radiologic imaging and we have developed HIPPA compliant methods of sharing. The area of greatest demand in the rural EDs is for mental health services. We are including telepsych as part of our emergency services, rather than a general consult service as the AVERA model provides.

### B. Description

We began the project by establishing a Steering Committee with representatives from a variety of ED related services. Through that process we noticed the need for stroke –specific consultations. We worked with a D-H stroke specialist, Timothy Lukovitz, MD, to provide telemedicine consults in that area. We investigated all of the state and federal regulations and began to navigate the credentialing and privilege process. At the same time, began working with our scheduling, billing and transfer centers to organize and integrate the processes between hospitals. Clinical protocols were reviewed. Two hospitals were designated as pilot sites, one rural and one non-rural.

Our Information Technology (IT) Department met with the hospitals to access their internet capabilities and connectivity issues. They also assessed the staff for familiarity with technology, and began to develop training programs. During this time, The Center for Telehealth also received a USDA grant to provide telehealth carts to 40 sites in New Hampshire and Vermont, including 14 of 18 CREST sites. Our first Telestroke consult was on October 31, 2013 and the second site was operational in September of 2014. We are currently training staff at 2 more rural sites and expect tele-stroke and tele-neurology to be live at those sites in the next 3-6 months. An additional two rural sites will be online by the end of 2015.

CREST has worked during the past three years to strengthen rural emergency health care through our activities: our hallmark annual Rural Emergency Services and Trauma Symposium, clinician education, skills training, quality improvement, data sharing, best practices/protocol sharing, and an emergency medicine resident rural rotation program. Essential to our success of our network and innovative programming has been our ongoing collaborative relationship development, and commitment to addressing the unique needs of rural emergency and trauma care.

We recently completed our 7<sup>th</sup> annual Rural Emergency Services and Trauma Symposium. Annually we recruit approximately 14-18 speakers, including renowned keynote speakers, such as Judith Tintinalli, MD, MS, FACEP. Symposium attendees, as well as attendees of our emergency medicine education series, skills workshops, and nursing webinars, qualify to receive continuing education AMA PRA credit or nursing contact hours. Project management methodologies are used in the planning of this event. We collaborate with D-H's Center for Continuing Education in the Health Sciences (CCEHS) and Marketing departments to employ most effective marketing/advertising strategies.

CREST's Emergency Medicine Education Series incorporates case reviews, trauma/acute surgery and outreach rounds. This series, offered twice a month, may be attended in person or remotely via webinar or telephone. We maintain attendance records and survey results for CME and CNE accreditation, and CREST tracking/reporting purposes. Topics covered include pediatric respiratory infection, cervical spine injuries & EMS spine protocols, necrotizing soft tissue, traumatic cardiac injury, pediatric critical care, penetrating neck trauma, stroke, thoracic & lumbar spinal cord injury, sepsis, and vascular access. To promote greater understanding of rural emergency services and trauma, the medical Residents along with CREST members will attend the twice per month emergency medicine series (outreach lecture, trauma/acute surgery & CREST case reviews). Not only will this benefit the medical Residents, making them more aware and sensitive to the needs of rural hospitals and populations, but also it should make for more robust, interactive webinars, which we hope will help increase member engagement and speaker satisfaction.

We use a continuous improvement model, which has helped us adapt to the changing needs of our members. In response to a request from multiple CREST providers to have educational content accessible 24/7, we are collaborating with D-H's CCEHS and Video Conferencing Services to develop podcasts created from the content presented at our 2014 symposium. These podcasts and other educational content will be housed on the CCEHS website. In 2013 we created a "Virtual Library" accessible only thru the CREST website, which we planned to expand. However, we found this venue to have few users. After consulting with D-H's Center for Continuing Education in Health Science (CCEHS), D-H Marketing department, and CREST members, CREST Leadership decided to centralize online educational content at CCEHS. This also provides members greater visibility to other learning opportunities available thru D-H, many of which are free.

Other program activities include sharing of comparative transfer and STEMI data to member hospitals to help identify gaps and opportunities, opening discussions for potential solutions. CREST's medical director and program manager facilitate communications between network members and various D-H departments.

Our linkages both externally and internally have grown and strengthened over the grant period. The addition of a program manager has enabled greater collaboration with other internal and external stakeholders, including the following: Citizens Health Initiative NH ACO Project, Citizens Health Initiative NH Depression Workgroup, National & State Rural Health Organizations, North Country Health Consortium, North Country Health Consortium, D-H Transfer Center, D-H STEMI/Cardiology, D-H Trauma Department, D-H Children's Hospital at Dartmouth (CHAD), D-H Advanced Response Team (DHART), D-H Marketing, D-H Office of Professional Nursing (OPN), D-H Center for Continuing Education in the Health Sciences (CCEHS), NH Hospital Association's Foundation for Healthy Communities.

### **C. Role of Consortium Partners**

The governance of CREST has evolved, and now includes an Advisory Board, which ensures that every hospital that joins the Network has equal voice and representation. The current governance and operations of CREST encourages regular input from relevant and concerned internal and external entities within the health sector via needs assessments, stakeholder input, and meetings with partners.

The consortium responsibilities are as follows:

Member involvement is critical to the success of CREST. All members are involved with program development, and have the opportunity to propose and assist in the development of new programs; volunteer to be a pilot site for new programs; receive project data and summaries; help to resolve credentialing obstacles; identify a staff person to act as a liaison with CREST and CTH; identify a physician champions for telemedicine technology; jointly investigate mechanisms for sustainability. In Kind Support has been provided by participating organizations through administrative, clinical, and IT support staff time as well as other resources (e.g. use of space and existing equipment) to support the Outreach Grant Program activities.

D-H has additional roles which include the following: maintain transparency with the Advisory Board for all CREST projects, data and grant expenditures; maintain website and network communication; make day-to-day decisions needed to meet objectives based upon the expressed wishes of the Advisory Board. D-H as the lead agency provided additional resources, including personnel who function in D-H regional activities, physician service management, administration, and quality assurance.

CREST Leadership networks with community agencies to create linkages and form collaborative relationships including the following: regular updates in regional newsletters e.g. Rural Health Roundtable, New England Telehealth Resource Center; submission of promising practice information to the US DHHS' Rural Assistance Center and the National Rural Health Association; D-H Community Relations reports on grant projects to local and state media; report submission to telemedicine publishing venues in print and electronic media; HRSA annual meeting storyboard and other presentations; CREST's Annual Northern New England Rural Emergency Services and Trauma Symposium; D-H Center for Telehealth's Annual Northern New England Telehealth Summit; venues available through the National Rural Health Association; presentations at state medical chapter meetings, and in their publications.

Regarding telehealth implementation, we actively participate on local, regional and national organizations. We are in close contact with all members and respond to their telehealth needs. We work closely with each partner hospital to integrate the telehealth service into their workflow, and help them to understand the data and record requirements.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The educational outreach made possible through CREST core activities has had a positive impact on the educational needs of rural medical providers. The Emergency Medicine Rotation that began in mid-2012 remains a core component of the Residency experience at Dartmouth-Hitchcock Medical Center. To promote greater understanding of rural emergency services and trauma, the medical residents along with CREST members attend the twice per month Emergency Medicine Education Series (outreach lecture, trauma/acute surgery & CREST case reviews). CREST members consistently report that this is a valuable offering, which helps them to stay current with best practices.

Our Symposium consistently yields positive feedback, and has been consistent with results, such as these, from the 2014 Symposium: A rating of 4.3+ out of 5 for interesting, learning something new, topics relevant to my job, plan to use this information, speaker effectiveness (presenter was knowledgeable on subject matter and linked concepts to practice). Regarding recommending the symposium to others, and attending in the future, the average ratings were 4.7 and 4.6, respectively.

Likewise, the Skills Workshops are well received and attended; the most recent was filled by providers from CREST hospitals to capacity of 12 attendees. One physician mentioned that one of the most valuable parts of attending skills workshops is the opportunity to network with fellow rural colleagues, and establish relationships. We have heard similar sentiment from attendees at the Symposium. One ED provider said it best, stating, "Without CREST we'd be out here alone."

Over the past year and a half, we have been able to monitor our ability to collect and manage pertinent data streams that will allow us to focus on measures that impact healthcare, including the quality of care, appropriate use of technology, access, clinical outcomes, and efficiency / effectiveness of care delivery so that we can determine the success of our telemedicine programs, which encompasses improving and expanding healthcare in rural communities by establishing telemedicine consult services.

We are developing a robust data capture in order to understand how well our services are operating, that is, the volume of calls, the responsiveness to calls, and the successful transmission of information within our medical record and image sharing platforms. Analysis of videoconferencing logs is allowing our team to quantify the technical capacity of our network's infrastructure. We

attempt to collect a survey from the patient (or family member on his or her behalf), a provider caring for the patient, and our telestroke neurologist for every consult completed. We average an 80% response rate from patients, a 10% response rate from providers, and a 15% response rate from our telestroke neurologists. Efforts to increase response rates from providers and to develop a survey for nurses to complete are underway.

Additionally, clinical data is captured and shared between institutions with adequate protocols and policies to ensure the safety and security of this process. Evaluation measures have been applied to the data that is being collected in order to evaluate the cost/impact of this project as follows: for process measures, the volume of telemedical consults is reviewed weekly, while door-to-needle time for tPa administration to stroke patients is reviewed monthly; for outcome measures, the rate of tPa administration for stroke patients, the disposition of patients, and the percent and length of stay of patients transferred to a higher level of care is reviewed at least monthly. Our results for the period March-August 2014 were as follows: 1 spoke sites with 56 total consults, an average of nine per month. Phone only consults were 4 (7%) and the average consulting provider response time was 1.5 minutes. The door-to-needle time was an average of 94 minutes, and tPa was administered 6 times (21%) with 28 primary stroke diagnoses (50%) and 6 transfers (11%). Our average patient satisfaction score was 86 out of 100. Further reviews are underway to understand the appropriateness of transfers, transfers with duplicate studies, and costs associated with care prior to and following the initiation of telemedical services.

We had three major goals with our project. The first was to expand the CREST tele-ED emergency department based Telemedicine Consult service. We began by finalizing the clinical protocols for the new programs. We installed and maintained our technological platform for telemedical encounters, Vidyo, Inc. and officially launched our first Telestroke program in October of 2013. This experience provided us with an approach for the development of clinical, operational, administrative, and technical workflows that we will employ as new sites and services are added. We have already begun adapting this approach for Teletrauma, including a review of best practices and lessons learned in the field. We then implemented and supported Tele-ED Equipment and Hardware at Hub and End-User Sites. Along with implementing the video conferencing platform for our services, we went live with medical record documentation and image sharing processes through our electronic medical record and radiology department (Life Image, Inc.). We have expanded the availability of equipment on-site (our "Tech Lab") in order to test new technological features, as well as facilitated rapid installation as new sites are identified. Maintenance protocols and processes have been established for currently deployed equipment and software. We provided training on the use of the new technology to the sites and based on our experience with the Telestroke program, a detailed training plan has been outlined for subsequent site and service implementation, which will remain amendable given a site's specific needs. The training plan includes operational, technical, clinical, and administrative training and can be tailored to a specific audience (e.g., ED nurses with stroke experience versus ED nurses with no stroke experience). The next step was to launch the Tele-Ed services. Again, based on our experience with the Telestroke program, we have developed a thorough mock-run checklist that will be utilized for practice scenarios prior to "Go-Live." Elements of the mock-runs include: having some subset of our project team on-site for the training to witness successful operations firsthand; confirming that our clinical systems and clinical support systems function well with the new site, and no modifications to the workflow need to be made; and an overall assessment of readiness. Our plan was to expand the Tele-ED sites to six sites in phase one, eight sites in phase two and four sites in phase three. We have found it a longer process than anticipated to bring new sites on board, facing many hurdles, including credentialing and recruiting providers, but are confident in the processes that we have developed and in our forward moving momentum. The evaluation of the program has been a priority to us from the beginning of the project so that we can continually improve its quality. We have established preliminary data streams for the collection and management of data in the Telestroke program. We have worked diligently to ensure robust data capture and safe handling (transfer and storage) of protected health information.

The second of our projects was to strengthen rural emergency health care through provider education, skills training, quality improvement, and best practices/protocol sharing. We did this through the CREST Network (Center for Rural Emergency Services and Trauma) which links rural Emergency Departments in eastern Vermont and Western New Hampshire. The Emergency Departments (EDs) of small rural Critical Access Hospitals and Community Hospitals often do not have the time and resources to provide ongoing education and quality improvement for their staff and department. The CREST Network seeks to pool the collective knowledge of the hospitals and leverage the expertise of Dartmouth-Hitchcock to improve the quality of care received by residents of the two states. With limited time and resources, a "Virtual Library" on CREST's Website was considered an important tool in the dissemination of information. The CREST website has been updated, and receives, as needed, and at a minimum, quarterly reviews and updates, including a quarterly CREST online-newsletter introduced in 2015. The CREST "Virtual Library" was created, and advertised; however, we found this venue to have fewer than 10 users. After consulting with D-H's Center for Continuing Education in Health Science (CCEHS), the D-H Marketing department, and CREST members, CREST Leadership decided to use CCEHS as the central education site. This we believed would be less confusing, and provide users of CREST content more visibility to other learning opportunities available thru D-H.

In response to provider member requests, podcasts of the Symposium presentations are being created in collaboration with D-H videoconferencing services and CCEHS. The podcasts will be CME eligible, and will be accessible thru a link on the CREST website, and D-H's CCEHS. A participant survey thru CCEHS (results shared with CREST) is part of CME or CNE course/offerings, as well as an annual CREST survey to evaluate educational programs.

An affordable all day educational emergency services and trauma symposium that does not require a great deal of travel has also been a part of our program goals. The 7<sup>th</sup> annual Symposium was held on November 6<sup>th</sup>, 2014 with 129 participants in attendance. We have more than doubled attendance at this event since its inception in 2008. The overall average satisfaction rating was 86%, and the top five topics for the next event included critical care, trauma, airway management, cardiology/STEMI and psychiatry. Attendees reiterated the importance of offering hands-on activities. In response to this two hands-on activities are planned, an Airway Management Skills workshop the day before the Symposium, and a Nonviolent Crisis Intervention workshop will be offered the day following the Symposium to address the management of aggressive individuals in the ED setting. This will compliment presentations at the 2015 Symposium.

Because D-H is both a quaternary and a teaching hospital, there are many opportunities to review the care that is provided, and that includes case review conferences. Cases that originated at D-H and cases transferred from the rural hospitals are included, and CREST members are invited to participate via teleconferencing or webinar. The Emergency Medicine Education Series incorporates case reviews, trauma/acute and outreach rounds. Hospitals participation fluctuates, and requires ongoing attention. The content is valuable; however, it is not always convenient for ED clinicians to attend a webinar. Building stronger collaborative relationships between CREST leadership and members has helped to increase participation. In February 2015 the CREST program manager travelled to Weeks Medical Center to be on-site where two physicians co-presented cases remotely from Weeks, while the CREST Activity Medical Director co-presented from DHMC with the EM Residents. The Weeks physicians felt this was especially valuable to learn how to improve local care, and because it gave them a chance to educate the Residents about the limited resources and transfer barriers that rural hospitals face. Any technical, clinical or other issues that arise are followed up promptly by the core team. There are usually two case conferences each month that are offered to CREST members. We had included in our program Outreach Rounds lectures on demand, but over the course of the program found that these could be included in the Emergency Medicine Education Series. All of the programs are evaluated through attendee surveys and the results reviewed by the CREST Advisory Board for needed changes and future topics.

One program area that has consistently received high needs ratings (90%) is that of Skills Workshops. Skills workshop were offered in June of 2013 and 2014, on airway management and ultrasound, respectively. Both courses were filled to capacity, with attendees from nine member organizations. Over 150 CME credits were provided. High acuity, low use skills continue to be of concern to rural ED providers in small hospitals.

Another identified need was greater sharing of best practice and protocols in the region. Best Practices and protocols sharing topics are identified based on regional needs, quality improvement initiatives at D-H, and requests from individual member hospitals. They are shared via direct communication via telephone, site visits, and/or videoconferencing, as well as email and newsletter communications, and educational events. Recent topics include: sepsis, use of back-boards, management of aggressive individuals/patients in the ED setting, pediatric diabetic ketoacidosis, massive transfusions, legal documentation, and nicotine replacement orders. In October of 2013, we held the first Annual Telehealth Summit, which shared best practices and promising models of telemedicine nationally. For all of our educational offerings, evaluative surveys were collected. The data was analyzed, and trends over time were identified, and continue to be identified.

Our final goal was to broaden the rural emergency network (CREST) through expansion, linkages, sustainability and strategic planning. Our Program Co-Founders, Rodi and Pletcher have spearheaded efforts to build linkages. In 2013 and 2014, they gave over 40 formal presentations at the local, regional, national and international level, and participated in an additional 250 informal meetings or gatherings to discuss our progress and the road ahead. The Network expanded through the addition of two new sites in 2013 and 2014. We ensure that as new members are added to the CREST network, LOAs and Operating Guidelines are signed. An updated LOA, which institutes a new fee structure and reflected in the Operating Guidelines, were drafted and sent to all members in late 2013. Finally, we regularly update and maintain our contact database to ensure our communications reach all stakeholders. (Attachment 3) Especially important has been the quarterly sites visits carried out by the Program Manager. She is able to listen closely to the specific needs of each ED, and share information.

We have been discussing the sustainability of Telehealth and the CREST Network since the inception of this project. We are building operational models for telehealth that are sustainable with current and future reimbursement structures. The CREST Network submitted a strategic plan, which was discussed with the CREST membership, which incorporated the lessons we have

learning in this project. We instituted a dues structure, and have submitted a grant application in December of 2013 to secure additional funding for support of the continuation and expansion of network activities.

## B. Recognition

CREST has been recognized in various articles including, the NH Business Review, "Telemedicine Brings Specialists to Rural Hospitals, the NHPR, at Dartmouth, Sidelines Robot Could Be Key To Quickly Diagnosing Football Concussions. Dartmouth-Hitchcock intranet articles viewed by 18,500 employees, the Emergency Medical Services for Children National Resource Center website article, highlighted CREST and Dr. Scott Rodi and project : [http://www.emscnrc.org/Research/Targeted\\_Issue.aspx](http://www.emscnrc.org/Research/Targeted_Issue.aspx); the Rural Assistance Center website highlights CREST as one of eleven Rural Emergency Medical Services (EMS) and Trauma Organizations: <http://www.raconline.org/topics/emergency-medical-services/organizations>; and the National Organization of State Offices of Rural Health (NOSORH): Created for NOSORH's National Rural Health Day-2014, a "We Are CREST" Prezi presentation: Presented at the CREST 2014 Symposium for the over 130 attendees, and also submitted to the National Organization of State Offices of Rural Health (NOSORH) to use in their showcase of Rural America and highlight the efforts of NOSORH, SORHs and others in addressing the unique healthcare needs of rural communities.

## Part VI: Challenges & Innovative Solutions

Telehealth is a disruptive technology. It makes clear that procedures and approaches once successful are no longer as effective, which causes stress among providers. Telemedicine demands new roles, values, behaviors and approaches which is not easy, straight-forward work. We continue to bump up against providers who fall back on previous approaches (telephone), even though telemedicine offers a variety of new and helpful tools. We continue to seek the most helpful methods of introducing and support providers to become familiar and comfortable with the technology.

Because of the rural location of our network hospitals, we have struggled with the availability and quality of bandwidth at the rural hospitals. The states have made funding available for upgrades, and the hospitals have taken advantage of the funding. IT staff at the small rural hospitals is also very limited, and redundant systems are not in place, so when there is a problem, the system can be in failure for a good stretch of time.

The most requested service is that of Telepsych, and we have found it the most difficult to organize. There is a substantial lack of providers in this area, and so staffing a service is difficult. We also face the issue that there are so few psychiatric beds available in both New Hampshire and Vermont, so that even if a trained psychologist/psychiatrist was able to access the patient, there are often no available beds for transfer. A psychiatrist consult would be helpful though to prescribe any appropriate medication, and help manage psychiatric patients while they remain in the ED. ED staff reports that they cannot keep current with current prescribing guidelines, and therefore would benefit from ongoing consultations.

Another challenge has been to increase CREST member attendance at our educational webcasts, primarily related to the staffing and time availability to attend the noontime events. To address this, and make the presentations beneficial to both D-H, and CREST members, we have taken three actions: First, integrate CREST Case Reviews with the didactic training of D-H's EM Residents. This will promote more lively discussions, and provide Residents an opportunity to learn from rural providers, and gain a better understanding of rural emergency and trauma care. Second, we changed the scheduling of the webinars. The trauma/acute surgery and CREST case reviews webinars, had been offered on the first Wednesday, and second Thursday of the month. Both are now scheduled for Wednesdays at Noon, on the first and third Wednesday of the month, to provide consistency of the day, and spread out the events to every other week. Third, we improved the marketing of educational opportunities through a newsletter, the case review topic in the email reminder subject line.

## Part VII: Sustainability

### A. Structure

We anticipate that CREST's current members will continue to be a part of our network. The CREST network is comprised of 18 healthcare sites throughout Vermont and New Hampshire. The existing partners have signed Letters of Agreement and paid network fees, demonstrating their support of the value of the network. CREST's newest member, Southern Vermont Medical Center (SVMC) in Bennington, VT, recently joined after CTH Medical Director met with SVMC leadership, and anticipates that they will be requesting telehealth services. This new member is located in the southwest corner of Vermont in a rural area, and was invited, as other rural hospitals would be, because they face many of the same issues our CREST members face, and should benefit from Telehealth as well as CREST offerings. Likewise, we plan to continue expanding in our region, and potentially to small rural hospitals beyond northern New England.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The telemedicine offerings will continue, and additional offerings will continue to be developed. We are well aware that telehealth is, and will continue to be, an important part of achieving the Triple Aim (Improving the patient experience; Improving the health of populations; and Reducing the per capita cost of health care.) We are expecting four more sites to join the telestroke/neuro group, and additional sites by the end of the year. We are expecting additional telemedicine offerings, including Telepsych. The business structure that has been built for telemedicine is based on a reimbursement model that will support the offerings. We will continue to monitor state and federal legislative decisions regarding telemedicine reimbursement so that all sources of reimbursement allow for the use of telemedicine visits. We expect to continue to serve Vermont, New Hampshire, and are assessing the viability of expanding offerings to Maine. The Center for Telehealth will continue to outreach to all rural hospitals of the Vermont and New Hampshire to promote the use of telehealth and offer CREST educational services. Moving forward, we will continue to improve the clinical and educational resources. Ongoing discussions with D–H’s CCEHS will help to create valuable offerings, while not duplicating activities and content. In response to member requests, we will adjust case review scheduling and format with the goal of improving member participation and value to the network. We will expand our skills training from two to four sessions in FY2015, and will offer outreach rounds as requested in coordination with the emergency and trauma departments. We are committed to ongoing best practices/protocol sharing to the network; e.g., sepsis, hypothermia, intracranial hemorrhages, burn care. To maintain success towards our objectives, we will continue to perform needs assessments, plan, and execute all educational and/or training events defined, as well as CREST’s Annual Rural Emergency Services and Trauma Symposium.

Maintaining and refreshing clinical skills, especially those needed for high acuity clinical scenarios, but are required infrequently, will continue to be offered. We believe a largely team-based approach to teaching these skills will be a valuable, efficient and affordable option for rural community and critical access hospitals. Based on feedback from the members and CREST Advisory Committee, there is strong support for developing this program, and they view it as a valuable educational/training course their organizations would be willing to pay for.

The CREST network continues to move towards a self-sustaining model, that includes membership fees, and fees for activities such as skills workshops and the annual Symposium. We anticipate that the development and sharing of rural focused best practices and protocols, and innovative education will continue as a core benefit of network membership. We will be continuing the activities listed below, identified by the members as valuable to their organization and improving rural emergency care delivery:

- CREST activities that enhance education, skills training, and support for rural emergency and trauma providers: Annual Symposium; Emergency Medicine Education Series; Skills Workshops.
- CREST activities that support improvement of the transfer process, and identify opportunities and barriers for improved patient flow through our regional health care system: Outreach site visits; data-sharing; collaboration with D-H Transfer center, Trauma Department, DHART, and other departments.
- CREST activities that support identifying patient populations and clinical outcomes that would benefit from the development of shared evidenced-based protocols: Outreach site visits, needs assessments, best practices and protocol sharing.
- CREST activities that enhance communication and assure best efforts are used to appropriately share clinical information: Collaboration with the D-H marketing and CCEHS departments; support and promote regional access to CREST website & offerings, and provide technical support; manage member communication/meeting preferences; facilitate bi-directional sharing of best practices; facilitate the implementation of programs aligned with CREST mission, vision and goals; update CREST’s network database through active reporting of current, former and new members.

### C. Sustained Impact

In the rural communities that make up the majority of Vermont and New Hampshire, we believe that telemedicine, by increasing accessibility to healthcare services, will foster residents to be more proactive in participating in their healthcare plan and decisions. While our offerings are focused around emergency care, the Center for Telehealth also supports telemedicine for follow-up and specialty appointments, and we aim to reduce the stress patients feel when having to wait a long time for an appointment, take a day off from work to travel for one appointment, travel long difficult distances or be transferred to a distant facility. We also believe telemedicine, coupled with CREST's continuing education, will reduce unnecessary transfers, thus helping the rural hospitals retain patients they can treat, and for which they can be reimbursed. Now, through telemedicine consults, we hope to support the local providers so that the patients can stay closer to home, rural hospitals can fill their beds, and the beds at the quaternary center can be available for specialty high-risk patients.

The educational outreach made possible through CREST core activities has had an impact on the educational needs of rural medical providers. To promote greater understanding of rural emergency services and trauma, the Medical Residents along with CREST members attend the twice per month emergency medicine series. Not only does this benefit the Residents, making them more aware and sensitive to the needs of rural hospitals and populations, but also yields more robust, interactive webinars. Our Symposium consistently yields positive feedback, and has been consistent with results, such as these, from the 2014 Symposium: Regarding recommending the symposium to others, and attending in the future, the average ratings were 4.7 and 4.6, respectively. This is a unique forum meant to address the needs of the multidisciplinary team in rural ED's. Likewise, the skills workshops are well attended by providers from CREST hospitals. One physician mentioned that one of the most valuable parts of attending skills workshops is the opportunity to network with fellow rural colleagues. We have heard similar sentiment from attendees at the Symposium. One provider said it best, stating, "Without CREST we'd be out here alone."

## Part VIII: Implications for Other Communities

In relation to our work with the CREST network, we found that building a regional network strengthens the regional healthcare delivery on multiple levels. The most important strength is the collaborative and trusting relationships that develop between all of the partners. This lays the foundation for working together on a regional level toward common goals and initiatives, increasing the chances for success. Building a network also creates an infrastructure for value-add offerings, such as educational programs and best practices and protocol sharing to occur. In this rapidly changing healthcare landscape, with increased focus on population health and care coordination, regional communication and collaboration becomes increasingly important. The network impacts on both micro and macro levels, from the individual clinician, to the ED, the hospital, and, by strengthening the capabilities of the community or critical access hospital, the community.

As other communities engage in telehealth work, we recommend that adequate and ample time be given to the groundwork that must happen. It takes a substantial amount of time and energy to develop trust with the providers, and develop new workflows that include telehealth. It is essential that all of the staff who will be involved in the telehealth visits be included in the planning and early evaluation of the process. The other piece that will take longer than expected is that of credentialing. With no uniform law for the nation, each state process must be investigated, and hospitals often have lengthy internal procedures. Dedicating a person to become the credentialing expert will help focus the work. Finally, use the local media to spread success stories. Nothing drives more people to adopt a new technology than a positive story based on a person who is not an expert, but looks like someone they would meet in the grocery store.

# New Hampshire

## Mid-State Health Center

Part I: Organizational Information	
Grant Number	D04RH23600
Grantee Organization	Mid-State Health Center
Organization Type	Federally Qualified Health Center
Address	101 Boulder Point Drive, Plymouth, NH 03264
Grantee organization	<a href="http://www.midstatehealth.org">www.midstatehealth.org</a>
Outreach grant project title	Plymouth Area Transitions Team (PATT)
Project Director	Name: Sharon Beaty
	Title: Chief Executive Officer
	Phone number: 603-536-4000, ext. 1001
	Fax number: 603-536-4001
	Email address: <a href="mailto:sbeaty@midstatehealth.org">sbeaty@midstatehealth.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$135,645
	May 2013 to April 2014: \$147,202
	May 2014 to April 2015: \$148,857

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Mid-State Health Center	Plymouth/Grafton/NH	Federally Qualified Health Center
Speare Memorial Hospital	Plymouth/Grafton, NH	Critical Access Hospital
Pemi-Baker Community Health	Plymouth/Grafton/NH	Visiting Nurse Association
Newfound Area Nursing Association	Bristol/Grafton/NH	Visiting Nurse Association
CADY, Inc.	Plymouth/Grafton/NH	Youth Substance Use Prevention
Genesis Behavioral Health	Plymouth/Grafton/NH	Community Mental Health Center
Community Action Program-Belknap/Merrimack Counties	Plymouth/Grafton/NH	Social Service Organization

### Part III: Community Characteristics

#### A. Area

The Project's service area included towns in three counties: **Belknap County** – New Hampton; **Grafton County** - Alexandria, Ashland, Bridgewater, Bristol, Campton, Dorchester, Ellsworth, Grafton, Groton, Hebron, Holderness, Lincoln, Orange, Plymouth, Rumney, Thornton, Waterville Valley, Wentworth, Woodstock; **Merrimack County** - Danbury

#### B. Community description

Overall, New Hampshire is a relatively healthy state, and the CNHHP service area is similar to the State overall on many measures of health and well-being. However, some residents are disabled by chronic disease, some have limited or no access to routine health care through health insurance, some live in poverty, and some die prematurely from preventable conditions.

Income and employment influence the availability and affordability of health insurance. The rate of un-insurance is significantly higher in the region than for the state overall. About 11% of service area residents live in poverty with household incomes less than 100% of the federal poverty level (FPL), and nearly 30% of service area residents are considered low-income (< 200% of the FPL) compared with 20% of the state's residents overall.

The economy of our rural communities is increasingly dependent upon service and seasonal tourism industries (e.g. the ski industry). As a result, high seasonal unemployment is very common. Unemployment rates vary significantly throughout the year and many people in the service area move from minimum wage jobs with no health benefits to minimal unemployment benefits between seasons. A combination of seasonal employment fluctuations and a small employer base contributes to the high level of poverty, low-income, and lack of insurance.

The total population of the 21 towns comprising the CNHHP region has grown by nearly 15% in the past 10 years to over 35,000 people. This rate of growth is higher than the statewide population growth of 6.5% over the same time period. Most of the increase in population has occurred among residents who are 50 years of age and older. Many residents engage in unhealthy life-style behaviors that can be linked to chronic diseases, injury, and even death.

The region experiences socio-economic disparities more often than cultural disparities, with a population that is 98% White and English-speaking. The quality of housing spans a large range, as does access to community resources and connections. Access to services is often impacted by extreme weather conditions from November through April and a road system that must navigate several mountainous regions and wilderness areas.

### C. Need

The 2011 *Central New Hampshire Health Partnership (CNHHP) Community Health Needs Assessment* highlighted a number of important priorities for community health improvement. Among the priorities relevant to this proposed project are:

1. A growing and aging population;
2. High rates of chronic disease and preventable hospital admissions;
3. Access to care challenges resulting from:
  - Economic barriers to access
  - Health professional shortages
  - Limited transportation resources and geographical and weather-related challenges to accessing care

In the CNHHP service area, 7.1% of all hospital discharges are for ambulatory care sensitive chronic conditions – conditions that could be amenable to primary care such as diabetes and asthma. This rate is statistically different and higher than the overall state rate (6.4% of hospital discharges). Hospital discharges for residents from the CNHHP service area reflect a significantly higher burden of chronic disease and potentially preventable hospital admissions. The region experiences significantly higher rates of inpatient discharges and emergency department visits related to Complications of Medical and Surgical Care, Diabetes Inpatient Discharges, and proportionally elevated rates of Heart Disease Inpatient Discharges compared with overall New Hampshire rates.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Plymouth Area Transition Team (PATT) Project replicated core elements of several nationally-recognized, evidence-based models for improving care transitions with a focus on the hospital discharge and follow-up process. The three primary models that were the basis of the PATT Project are Project BOOST<sup>1</sup>, Care Transitions Intervention<sup>2</sup> and the Transitional Care Model<sup>3</sup>. These three models are similar, reference one another, and share common core elements. Among these core elements are:

- Dedicated Care Transitions Manager or Coach function;
- Standardized assessment at admission to identify complex, high-risk patients in need of enhanced support to achieve positive health outcomes post-discharge;
- Patient education and caregiver education beginning in the hospital and extending to the home or other discharge facility to empower and reinforce self-care messages including medication management;
- Multidisciplinary involvement with discharge planning, education, and medication reconciliation;
- More timely and complete information flow between care settings;
- Patient follow-up within 72 hours of discharge; and
- Focus on measurement of patient quality and outcomes of care including reduction of inpatient readmission rates.

Additional features incorporated into the PATT project include:

- Adaptation of the aforementioned evidence-based models and associated instruments to the Critical Access Hospital and rural health network setting
- Focused performance improvement activities within the hospital setting and in collaboration with community-based providers to develop strategies and resources for discharge preparation and patient education to mitigate specific risks, including care and support of patients at higher risk for frequent inpatient admissions
- Implementation of the PATT Team – a multi-disciplinary, inter-agency group tasked with identifying potential problems with transitions in care, conducting evaluations and measurements, and developing interventions to improve care transitions. The group evolved to incorporate additional entities necessary to achieve best outcomes for the patients in our community
- Active partnership with key home health agencies serving the region

## **B. Description**

The Plymouth Area Transitions Team (PATT) project is a collaborative effort of the CNHHP, a consortium of local health care agencies committed to collaborative, community-wide activities and initiatives, that attempts to assure and improve comprehensive and quality health and wellness services. The goal of the PATT project was to improve quality and contain costs for patients with complex care needs as they transition across health care delivery settings in the Greater Plymouth region of New Hampshire. The project addresses identified needs in our community resulting from a growing and aging population; relatively high rates of chronic disease and chronic disease-related hospital discharges; broader social determinants of health such as limited income, housing conditions, and lack of social supports that negatively impact overall health and function in the population; and lack of transportation resources contributing to poorer health outcomes resulting from missed follow-up care.

The grant project utilized a blend of evidence-based transition-care coordination models to positively impact the rate of hospital readmissions, and provide patient education and empowerment to prepare patients for transitions out of the hospital inpatient setting, including self-care and self-advocacy post-discharge. Specifically, a full-time, dedicated Transition Care Manager (TCM) based in the hospital functioned as a facilitator of the above-mentioned evidence-based elements to improve interdisciplinary collaboration and health outcomes across transitions of care. The TCM identified high-risk patients upon hospital inpatient admission using a standardized assessment tool. The TCM worked with the patient and family to identify and resolve challenges or discrepancies in their care plan, and to assure that the right care and supports were received at the right time. The TCM participated in the discharge planning process including connecting with the patient's primary care provider, a home visit follow-up within 24-72 hours post discharge if needed, and weekly telephone or home visit follow-up, as warranted, through 30 days post discharge to continue the patient and caregiver assessment, education and coaching process. The TCM developed an interactive relationship with the patient and family focused on the upcoming hospital discharge and what skills and information would be needed to effect a smooth and effective transition, thereby decreasing the likelihood of readmission and increasing the potential for positive patient outcomes. The Transition Care Manager developed and strengthened collaborative relationships with other health care agencies to coordinate the care transition.

In addition to the TCM role, grant funding supported the involvement of other regional health care and social service agencies (examples include home health/visiting nursing, long-term care, primary care, a local transportation resource agency, social services resource assistance agency) as members of the Plymouth Area Transition Team. Monthly meetings of the PATT assisted in identifying and addressing coordination gaps.

## **C. Role of Consortium Partners**

The Central New Hampshire Health Partnership has been in existence as a consortium since 2008. It has had numerous opportunities and successes in assessing and meeting specific health-and wellness-related needs of its population. The PATT, which had begun as a regional stakeholder activity to address community needs in coordination of care transitions, is made up of members from several of the consortium agencies, as well as members of other stakeholder groups. Since work around care transitions in the community had already been identified as a need and had commenced, the consortium request for ORHP funding to assist in this effort was an appropriate next-step in the development of an effective community care transitions system to meet an identified need by a mature and active consortium.

The CNHHP meets regularly and provided a framework for implementation, support, and administrative oversight for the project, with Mid-State Health Center serving as Fiscal Agent. Spere Memorial Hospital provided implementation staff in the form of a registered nurse in the role of TCM, dedicated staff for supervision of the TCM, discharge planning and data collection activities. Mid-State Health Center provided administrative support in the form of fiscal management and oversight of the full scope of the project, including reporting functions, both to the CNHHP and to the Grantor. Part-time responsibility was assigned to Mid-State Health Center's CEO, CFO, and Director of Quality for these activities. Mid-State Health Center, Pemi-Baker Community Health,

Newfound Area Nursing Association, Genesis Behavioral Health, and Belknap-Merrimack Counties Community Action Program staff participated as PATT team members and were a vital part of the collaboration activities among agencies involved in care transitions.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

As a result of the PATT project, profoundly effective relationships between agencies treating and following-up with patients and their families were built, strengthened, and maintained. Patient and provider feedback (by survey and other evaluative measures) indicated success in patient satisfaction with the program, the Transition Care Manager role, and with the coordination of care in the transition of care between agencies. Ultimately, we have found that the relationships that have been built and strengthened, and the simple methods of communication employed by staff from each partner organization to stay connected as part of a care transitions team process, has led us to a modified model that involves all members of the team, with shared responsibility and acknowledgement of the unique, but integrated, roles and activities needed by each member to assist patients in achieving positive outcomes and coordinated care transitions.

The measurable project goal of decreasing hospital readmissions has been met, and even exceeded, throughout the project, reaching a rate of 6% by the end of the project period, on average, from a baseline rate of 9%. Improvements were made in medication reconciliation and patient education regarding medications. In addition, the following outcomes were noted:

1. Patient satisfaction response to follow-up calls after discharge, as evidenced by anecdotal feedback from patients, has been overwhelmingly positive.
2. Identification of patients at high-risk for readmission by trained personnel using a standardized tool provided an evidence-based platform for intervention that resulted in the further identification of potential areas of clinical and social issues that might affect a patient's post-discharge outcomes, and allowed for targeted communications between agencies for care coordination pre- and post-discharge.
3. The project highlighted the need for strengthening the relationships between organizations that "touch" each patient and the need to maintain those strong care coordination pathways to improve patient outcomes and contain costs. It became evident throughout the project that continuous, regular, and proactive communications between agencies via identifiable "points-of-contact" was key in having a sustained impact, replacing sporadic and reactive-type communications. Based on project assessments and project partner experience, a major problem in care transitions is patients' medication understanding and adherence. The reconciliation of medication orders and adjustments across the transitions of care is vital to the transition process and to patients' health. As many levels of medication reconciliation exist across multiple agencies, from hospital to primary care to pharmacy, etc., the inter-agency relationships lending attention to medication education and adherence had a positive impact on patient outcomes following inpatient discharge of high-risk patients, as noted by the partner organizations.

### B. Recognition

As care transitions emerge as a significant focus in health care and as a means of achieving the Health Care Triple Aim in America, this area is increasingly included as an element in national recognitions and awards for excellence in health care delivery and outcomes improvement, both at the individual level and the level of population health. The activities funded by this grant contributed to the achievement of national recognitions in health care excellence for two of the consortium members. Spear Memorial Hospital was awarded the National Rural Health Resource Center Recognition for Quality. Mid-State Health Center was recognized by the National Committee for Quality Assurance as a Patient-Centered Medical Home at a Level 3 (the highest level achievable). Criteria for both of these awards/recognitions include demonstration of excellence in coordination of care transitions. Award notifications can be accessed online, are included in organizational Annual Reports and websites, and acknowledgements of the organizations and their achievements in quality care transitions and decreases in readmission rates have appeared in public media (newspaper articles).

## Part VI: Challenges & Innovative Solutions

The most significant challenge experienced in the implementation of the project plan was the recruitment, hiring, and retention of the Transition Care Manager. The role requires a special set of skills for evaluating risk, engaging patients and families in an effective way, interfacing with multiple agencies and stakeholders, and coordinating many factors related to health and wellness in a population with significant illness rates and social and emotional challenges. An initial hire in the first year proved to be a less-than-optimal fit for the position. This resulted in a shift in personnel after the initial hire's resignation, and required that a new TCM be recruited, hired, and

trained. A re-examination of the role and the requisite skills needed to accomplish the project goals and objectives resulted in a clearer picture of the type of individual best-suited to perform the TCM responsibilities and the hiring of a new TCM. This individual was quite successful in carrying out the activities to meet the identified need. However, this individual also resigned in Year 3 before the end of the project period, in order to pursue a career opportunity in another state. Thus, it was necessary to consult the proposed sustainability plan to weigh the benefits of attempting to hire yet another TCM so close to the end of the project period to maintain the project as originally proposed, versus executing a shift to a new plan to serve out the remainder of the project period. In order to continue the high-value activities that had developed over the course of the project period, shifts in personnel and re-assignment of elements of the TCM role were chosen as the optimal actions to take the project through to the end of the project period.

Other challenges included the need to increase awareness of the TCM's role and availability across the consortium and broader community, especially in primary care. The TCM made in-person connections among the various stakeholders to describe her role and give examples of activities and collaborations. Providers indicated that time spent explaining the Transition Care Manager's role was helpful in increasing awareness and improving collaborative relationships.

Differences in technologies used by the different organizations presented challenges in information-sharing and documentation standardization. Medication reconciliation posed a significant challenge across the care continuum, as medication changes often occur at multiple stages of care transitions, and changes may not be accessible to all entities at every stage. A new agreement between Speare Memorial Hospital and Mid-State Health Center gave the TCM remote access from her work station at the hospital to the patient records of Mid-State Health Center patients with whom she was working. This enabled her to facilitate collaborations with primary care and to assist in communications and medication reconciliations. She was also able to utilize the electronic health record internal messaging system to communicate with Mid-State Health Center staff (and vice versa) for more timely collaboration about Mid-State Health Center patients anticipating a care transition or who were in transition and part of the project follow-up program.

## Part VII: Sustainability

### A. Structure

The CNHHP will continue with all current members. The Plymouth Area Transition Team will continue, with some modifications to meeting structure and membership, which is expected to expand, as the work begun with this grant funding continues. Current partners will remain active at various levels of involvement, depending on the specific patients undergoing a care transition at any given time.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The following activities will be continued:

- Identification of high-risk patients at the time of admission to the hospital, as well as in the primary care environment as a method of proactively coordinating care to improve outcomes, improved efficiency of resources, engage patients in their care, and reduce costs
- Follow-up phone calls to patients after hospital discharge
- Regular interactions between agency staff, especially hospital, primary care, and visiting nursing staff, to maintain and continue to strengthen the care coordination relationships
- Medication reconciliation activities, at all care entry points and levels of care

### Potential New Program Activities

- Weekly case review meeting by telephone, including local primary care and local critical access hospital staff (and additional stakeholders, depending on the cases under review that week) to discuss issues and be proactive in high-risk patient identification, both after hospital admission, and, in some cases, before a patient has even been admitted.
- A hospital visiting nurse liaison role for regular daily review of inpatients by VNA staff in collaboration with hospital staff at Speare Memorial Hospital (local critical access hospital partner)
- Justification for adding these activities: Regular, scheduled meetings for case-specific assessment, intervention, and evaluation between partner agencies creates a structure for the maintenance of the sustained impact of stronger care

coordination relationships and activities. It provides for engagement and accountability to the ultimate project goals over time within the consortium.

### C. Sustained Impact

Language from the Grant proposal's Sustainability Approach section states that the PATT project has had important and sustainable impacts on the health care delivery system in our region. These impacts include improved processes for information sharing, patient education and support both within and between organizations. Through the lessons learned during the project period, this type of impact can be sustained by institutionalization within standard operating procedures.

The most significant sustained impact of the project exists in the relationship between the hospital and primary care in the region. Although there has always been a relationship and two-way communication regarding patient transitions, this project strengthened this relationship and brought new insights, developments, and processes to coordinate care as patients transitioned from inpatient hospital care to their primary care provider. The project created a dramatically expanded communications network between hospital, primary care, home care, long-term care, and social services. Systems that had been duplicative and fragmented became more coordinated, saving resources, time, and potentially costs. Readmissions have decreased in the identified high-risk inpatient group overall.

A more robust and comprehensive system of medication education and medication reconciliation across agencies is also a sustained impact of the project. The follow-up phone calls that identified any trouble spots for the patient following discharge provided the opportunity to intervene before a more significant problem evolved and resulted in the need for another hospital admission.

## Part VIII: Implications for Other Communities

Our experiences and outcomes have led us to conclude that, in our region, which enjoys the benefits of small-town proximity, shared history, and relationships among partners, using a collaborative care transition model that is more equally shared among existing partners and utilizing existing staff who can “own and share” aspects of the work functions better than a model that employs a single person in one partner organization to take a greater percentage of the responsibility for the work. With a more equal personnel platform, with each organization’s staff responsible for their phase of the transition, the focus becomes the development and strengthening of relationships among the partners at every phase of care transitions. Each partner shares an equal responsibility for the transition in their area of expertise, but with an understanding and appreciation for the role, responsibility, and unique contribution by each other partner organization to accomplish the optimal outcome for the patient and family.

For communities attempting to implement this type of program, the ability to share patient information between organizations via shared electronic record and/or formal agreements and contracts can greatly enhance the program’s effectiveness. Including all partners across a care transition continuum, from inpatient care to long-term care to primary care to home care and beyond will require significant committed resources to relationship-building and maintenance. Although initially we planned to follow models that incorporated the standardization of forms and shared documents between agencies, we discovered our community’s partners had unique and specific needs and requirements for the forms used for assessment, documentation, and communication. As a word to the wise, although the idea of documentation standardization is attractive and advocated by some care transition initiatives, it is exceedingly difficult to do when working across a continuum of care that includes multiple disparate organizations. We found that the very direct, personal phone call or in-person communication between staff working in different agencies on a single individual’s care transition was a more effective focus for our care transitions program, rather than relying on the use of standardized forms. We also found that the written or electronic communications between organizations in care transitions only tell a portion of any transition story, and that the relationships built between agency staff that facilitated their communicating more clearly and comprehensively the full fabric of a patient/family situation was instrumental in securing a positive post-discharge outcome. In addition, developing clear, meaningful, and measurable process and outcome goals with a regular system for monitoring and reporting goal attainment will facilitate on-going program development that is built on a data-driven foundation. Significant and thoughtful work is required to define and develop data points that relate to performance on the stated goals and can be easily accessed.

In conclusion, although our project focused on care transitions, we feel that, as a result of this project, we have moved from a transitions focus to one of continuous care coordination within the community. We feel that this will continue to work well within in our relatively small, rural community. The project helped us evolve from a system that employed a single staff person in a centralized care transitions role based in one organization to a comprehensive network of personnel, all working concurrently to effect a positive outcome in a de-centralized model. This care transitions network model is a better fit for our community.

# New Hampshire

## North Country Health Consortium

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23607
<b>Grantee Organization</b>	North Country Health Consortium
<b>Organization Type</b>	Public Health Organization/AHEC
<b>Address</b>	262 Cottage St. Suite 230 Littleton, NH 03561
<b>Grantee organization website</b>	<a href="http://www.nchcnh.org">www.nchcnh.org</a>
<b>Outreach grant project title</b>	Molar Express Expansion Project
<b>Project Director</b>	Name: Nancy Frank, MPH
	Title: Executive Director
	Phone number: 603-259-3700
	Fax number: 603-444-0945
	Email address: <a href="mailto:nfrank@nchcnh.org">nfrank@nchcnh.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Coos County Family Health Svc.	Berlin, NH	FQHC
*Ammonoosuc Community Health Services	Littleton, NH	FQHC
*Catholic Charities	Concord, NH	Social Services
*Northern Human Services	Berlin, NH	Social Services
*MidState Health Center	Plymouth, NH	FQHC
*Indian Stream Health Center	Colebrook, NH	FQHC
North Country Home Health and Hospice	Littleton, NH	Social Services
Cottage Hospital	Haverhill, NH	Hospital
Littleton Regional Healthcare	Littleton, NH	Hospital
Weeks Medical Center	Lancaster, NH	Hospital
Upper Connecticut Valley Hospital	Colebrook, NH	Hospital
Androscoggin Valley Hospital	Berlin, NH	Hospital
NH AHEC, Dartmouth Medical School	Lebanon, NH	Academic Institution
Grafton County Human Services	Haverhill, NH	Social Services
Tri-County Community Action Program	Littleton, NH (multiple locations)	Social Services
45 <sup>th</sup> Parallel EMS	Colebrook, NH	Emergency Services
Androscoggin Valley Home Care	Berlin, NH	Social Services
Morrison Nursing Home	Whitefield, NH	Elderly and Adult Services
American Cancer Society	Concord, NH	Non Profit
Plymouth State University Center for Rural Partnership	Plymouth, NH	Academic Institution
Grafton County Senior Citizens Council	Lebanon, NH (multiple locations)	Social Services

Granite United Way-Northern Region	Berlin, NH	Social Services
White Mountains Community College	Berlin, NH	Academic Institution
Speare Memorial Hospital	Plymouth, NH	Hospital
LRG Healthcare	Laconia, NH	Hospital
Servicelink	Lebanon, NH (multiple locations)	Social Services
Adaptive Sports Partners of the North Country	Franconia, NH	Social Services

### Part III: Community Characteristics

#### A. Area

The project served northern New Hampshire including Coos county and northern Grafton county.

#### B. Community description

Northern New Hampshire, often called the North Country, includes Coos and Northern Grafton Counties. The North Country suffers from relatively high poverty and population loss as the logging and paper industries decline. Like many rural areas, the North Country is underserved due to a shortage of dental and medical providers. Residents of rural areas face unique challenges in maintaining and improving health. These include physical distance between people and resources in our mountainous area, the need for health education and access to programs. Rural residents also must cope with reduced access to care arising from less insurance coverage.

#### C. Need

The state of New Hampshire requires “health care charitable trusts” which include hospitals, community health centers, and other health care providers to provide the New Hampshire Attorney General with yearly community benefits plans outlining the types of community services they will provide in exchange for their tax exempt status. To determine community needs these institutions conduct community needs assessments every three years.

In August 2009 a community needs assessment was conducted in the Northern Grafton county area for regional health care providers. Their survey tools included: Key Informant interviews – 13 personal interviews with NH legislators and area business leaders were conducted. Focus Groups – 59 area residents in six focus groups consisting of business leaders, civic leaders, physicians, school representatives, and other community organization representatives. Web Survey Respondents – 103 Northern Grafton county residents responded to a survey of health care issues available to them on the Web. Over 30% of respondents indicated that access to dental care (the fourth of the five top ranked issues) was an issue that must be addressed by the community. When asked to list the top five barriers to accessing health services, 52 percent indicated lack of dental insurance.

In March 2010 a community needs assessment was conducted in the northern Coos County area for the health care providers. The survey tools included: Key informant surveys – completed by 65 area health and social service agency staff. Community Needs Surveys – completed by 113 area residents. A community-wide Engagement Public Meeting – in which area health care, civic, religious, state and local government and other community leaders participated. Over 50 percent of community respondents reported that they did not have dental insurance. Less than 50 percent of respondents indicated that they saw a dentist regularly. These responses prompted the health care providers (all of whom are members of the North Country Health Consortium Board) agree that expansion of Molar Express dental services to uninsured and under-insured children should be a priority and thus instructed the North Country Health Consortium to seek funding to serve this population.

### Part IV: Program Services

#### A. Evidence-based and/or promising practice model(s)

A promising practice, caries risk assessment and care management program, has been piloted during the first project year, revised as needed, and the adapted program was fully implemented in year two and three. As described below, a caries management by risk assessment (CAMBRA) adapted for the target population has provided an easy-to-use organized format of disease indicators, risk and protective factors, clinical findings, and self-management goals that will help facilitate oral health education and increase the understanding of how individual behaviors affect oral health. The Smiles for Life curriculum, promising practice model of

delivering oral health education to primary care providers in our community has been implemented through presentations and distribution of materials to local health service organizations.

## B. Description

The North Country Health Consortium conducted a strategic planning process to implement utilization of a risk management tool for the management of children seen by Molar Express. A caries management by risk assessment (CAMBRA) process was adapted for the target population, including components such as evaluation of risk through a comprehensive mix of clinical and social factors and documentation in our electronic dental records through new CDT codes for risk. The electronic tracking of risk will also allow for easy access and evaluation of risk improvement over time. Prevention strategies according to their level of risk are continually being implemented and revised to accommodate the needs of the population.

The expansion of the Molar Express school-based service area into the central portion of Grafton County was achieved through the creation of a new relationship with the area public health dental hygienist. She covers a large area and, at times, has a difficult time coordinating restorative care to local dentists who may not accept Medicaid or uninsured children. The Outreach funds allowed us to provide care in a school that Molar Express was not previously involved with, and provided care to very high risk children.

One of the largest opportunities that the Outreach funding has allowed is the expansion of access to Molar Express in our current service area to include uninsured and underinsured children. Access to care for children in all our 23 schools in 11 school districts has increased due to coverage of children that are not eligible for NH Medicaid and do not have access to a dentist due to a variety of reasons (transportation, income, etc.).

Finally, enhanced disease management and expanded capacity came in the form of a certification. Our dental hygienist, due to fulfilling additional educational requirements and a change in the NH Board of Dental Examiner's legal documents, was one of only a few Certified Public Health Dental Hygienists in the last year of our grant. This additional level of certification allows her to provide dental x-rays and temporary restorations under general supervision.

Outreach funding has allowed the formation and implementation of an extensive sealant initiative that includes protocol to increase the proportion of children who have sealants on one or more permanent molars. This process took the application of sealants from occasionally applied at a hygiene visit to a coordinated effort of identification at time of exam by the dentist or hygienist, formation of a comprehensive list of sealant-ready teeth on registered children, and coordination of special "sealant days" where application of sealants is performed. This has allowed a great increase in sealant application due to efficiencies of performing only one task, and tracking the "aging" of the sealant for maximum reimbursement through the NH Medicaid system, when applicable. Funding has also allowed the hygienist to switch, by supporting training, from resin sealants to primarily glass ionomer sealant material, a superior product for young patients and fluoride releasing. A focus on sealant delivery has translated to reporting opportunities in our electronic health records, allowing for a formal performance improvement program focused on sealants and completed treatments.

The development and implementation of a social media campaign focused on informing and educating North Country families on good oral health practices has been supported by flyers and other school based take-home initiatives.

A successful implementation of an oral health continuing education program for primary care providers based on the Smiles For Life curriculum was coordinated with a consortium member, Ammonoosuc Community Health Services (ACHS). Smiles for Life presentations were provided by a local dentist to each of their five north country sites, including CME/CEUs, and were well received. ACHS not only provides referrals to Molar Express, they have just opened a dental clinic in their Federally Qualified Health Center, creating a need to share additional dental knowledge with primary care providers.

The process of surveying families and/or children who receive Molar Express services has been rewarding due to the creative use of technology and follow up, in addition to the positive results that the survey project has collected. We have been using iPad mini technology to collect pre and post surveys from children, a technology that was readily adopted by the population. "Homework for Parents" post card style surveys with an incentive has helped us match parental participation with the children's knowledge levels. Interviews with school personnel to assess results of implementation of school-based education on oral health has rounded out the evaluation of impact of Molar Express services.

The North Country Health Consortium and Molar Express program are part of a mature network, allowing for us to communicate sustainability plan results to NCHC Board of Directors and members.

Best practice models for long term viability of oral health services for children in the North Country have been identified in the sustainability plan and some aspects are in the implementation phase. Ongoing involvement in the NH Oral Health Coalition and other state-based groups continue to inform public policy to improve access to dental services for children in New Hampshire.

### C. Role of Consortium Partners

The North Country Health Consortium, and the Molar Express dental program, benefits from an established consortium and program structure. The consortium partners have all taken part in the oral health working group, a subgroup of the Board of Directors, contributing to the sustainability Planning and strategic Planning processes. Regular updates have also been, and will continue to be, provided to the consortium partners. Ammonoosuc Community Health Services, Catholic Charities, and MidState Health Center provide referrals to the Molar Express program. We have also, with guidance from the consortium partners, been able to leverage the Outreach funding to provide technical assistance to new FQHC dental clinics (within two of our consortium partners). NCHC along with these two FQHC dental programs, Ammonoosuc Community Health Services and MidState Health Center have partnered on a statewide oral health workforce development program, in which Molar Express provided technical assistance. Indian Stream Health Center has experienced a change in leadership that has opened doors to new opportunities for oral health clinics in our service area.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Over the past two years the Center for Program Design and Evaluation at Dartmouth (CPDE) has been conducting a mixed methods evaluation of NCHC's Molar Express program. The overall goal of the Molar Express Project is to "Improve oral health status of the uninsured and underinsured children of Coos and Grafton County through a collaborative program of preventative, diagnostic and restorative care based on evidence based practice methods."

The following report focuses on results obtained since May, 2013, primarily focusing on the 2013-14 school year. In that year (9/1/2013 to 6/30/2014) Molar Express saw 376 patients between ages of 1-20. A final evaluation report is currently being compiled by the Center for Program Design and Evaluation at Dartmouth. Results from the first through third grant years will be provided in the final grant report.

The overall evaluation design was a triangulation mixed methods design in which qualitative and quantitative data are collected within a similar time period and triangulated to compare results and obtain a comprehensive overview of the program. Three primary methods with three populations were used to obtain data:

1. A 7-item, iPad-based survey was developed to obtain input from students seen by the Molar Express program. Questions about self-assessed knowledge of oral health and oral health behaviors were asked prior to each visit. Feedback on the Molar Express experience was obtained immediately following their visit.
2. A 5-item, postage-paid postcard survey was sent home with students seen by Molar Express to give to parents. Questions focused on feedback on the Molar Express program, parent's assessment of their child's oral health practices and one knowledge question related to oral health.
3. Brief semi-structured telephone interviews were conducted in May and June 2014 with school nurses that are participating in the Molar Express project.

The iPad survey was completed by 281 of the 376 children seen (75%) and 64 of the children completing the survey (23%) completed it at two different visits. Of those that completed the survey, more than three-quarters (76%) were there for a hygiene visit with the remaining having an exam. When examining behaviors of the respondents (brushing and flossing teeth) the survey revealed that there is room for improvement in behaviors particularly around flossing teeth with almost a third not flossing their teeth at all. When assessing their knowledge a majority of respondents felt they knew "some" or "a lot" about taking care of their teeth and foods that are bad for their teeth (see Figure 2). In addition, a majority knew how long they should brush their teeth (2 minutes=58%; 3-5 minutes=24%) although 8% said they did not know. When asked to reflect on their Molar Express visit, most participants were "very happy" (60%) or "happy" (29%) about the experience. No one was "very unhappy," only 1% were "unhappy" and 8% were "in-between" about the experience. Similarly almost all participants (87%) said they learned something new about taking care of their teeth from the visit.

The postcard survey of parents was completed by 73 parents (26%). Almost all the respondents (92%) were very to extremely satisfied with the Molar Express program and 100% thought that the program was very to extremely convenient. When asked about the oral health behaviors of their child (brushing and flossing teeth) respondents had similar responses to children answering the iPad survey. However, more parents said that their children flossed 1-3 times per week compared to children's responses (42% compared to 32%) while 10% did not know how often their child flossed their teeth (see Figure 3). Lastly, similar to children's responses, a majority of parents knew how long children should brush their teeth (2 minutes=78%; 3-5 minutes=5%) and only 1% said they did not know.

Twenty-two nurses were identified for semi-structured interviews. Of these, 17 (77%) were reached for interviews. All the interview respondents understood the purpose of the program and all were generally positive about the program, particularly in terms of what the program does for children, the organization of the program and the flexibility of the program. Comments included:

- Awesome program.
- Runs very smoothly.
- Very easy to work with.
- I love them for what they do.
- The kids feel so comfortable with them.

Additional comments included how professional the team was and the ease of communication in terms of setting up times and answering other questions. In some cases nurses shared stories about particular children that the program helped. One such story was about a girl who had a chipped tooth repaired through the program. The nurse relayed that this made "100% difference in the way she felt about herself."

Concerns with the program were often not related to the program itself from the point of view of the nurses. One of the primary concerns was whether the program was reaching all those in need although respondents felt that the primary reason for this was lack of motivation to fill out forms by parents. "It seems like the people who need it the most don't fill it out." Some nurses described having to spend quite a bit of time to encourage services for children they knew would benefit from the program (e.g., multiple calls). Some nurses commented that the form for parents seemed simpler than in the past which they viewed as a positive change. In terms of ideas, nurses wondered if more outside advertising by the program might get the attention of parents such as newspaper ads or other messaging. Some nurses also expressed a desire to work more closely with Molar Express staff to get the word out and contact parents but did not have specific ideas for how that might work except to send materials earlier (such as at the end of the school year).

An additional concern was knowing more about how the program functioned outside of the visits, such as reminder phone calls and follow up with children needing more care. In general, respondents thought Molar Express was doing an excellent job in terms of scheduling, but they appreciated knowing as far ahead of time about the children that would be seen (e.g., the actual schedule for the day), and how complicated the cases were to plan better.

When asked about knowledge and support for the program from teachers and the principal, most respondents indicated that they were very supportive of the program but not necessarily aware of many details of the program or wanting to know much about the program. As one respondent replied, "they leave it up to me." Some respondents did say that some teachers would let them know about children they had concerns about, and this was helpful for identifying children in need.

An additional outcome that was not originally written into the evaluation plan, but measured in parallel, is the application of sealants through the sealant initiative made possible by Outreach grant funds. Molar Express was able to expand access to sealants by increasing the geographic area where sealants were provided, identifying and sealing primary molars in addition to permanent molars, and by incorporating innovative glass ionomer sealant material. These improvements led to the following outcomes:

- Year 1 of the grant allowed for 373 teeth sealed on 94 children
- Year 2 of the grant allowed for 572 teeth sealed on 135 children
- Year 3 of the grant allowed for 1065 teeth sealed on 142 children

Molar Express was able to increase sealants by 186% over the course of the grant period and a 51% increase in children seen for sealants.

In conclusion, the overall results of this evaluation suggest that the Molar Express Project is providing a valuable service and has been well received by all parties involved, including the children served, parents of the children and nurses in the schools. Future comparisons of children who have participated in the program over time will allow us to assess if and how knowledge and oral health behaviors change over time as a result of the program. Suggestions for changes generally included a few organizational aspects and questions about how to better engage parents and children to take advantage of the program. This may continue to be a primary challenge for the program as it continues to reach those in need.

## B. Recognition

We have received regular recognition and press in our local papers, sharing the success and opportunities of the Molar Express program. At the beginning of our grant period, a local reporter interviewed us and submitted an article titled "Molar Express continues to serve area dental needs" in the Littleton Courier. We received a significant amount of attention via photos and newspaper coverage around this media coverage which resulted in a local auto dealership hearing about our need for winter tires and donated four studded winter tires to our program.

Invitations to presentations at events such as the NH Legislative Breakfast series at the statehouse has allowed Molar Express to present our programming and funding strategies. Involvement in the NH Oral Health Coalition has resulted in the ability to share best practices and acknowledge the services we provide to the children of Northern NH. The Outreach grant allowed NCHC to leverage funding from a local foundation, the HNH foundation. The HNH foundation has featured the Molar Express on their website and produced a video about our program at <http://www.hnhfoundation.org/index.php/media-room-sp-894928184/videos>.

Our work with the Area Health Education Center's Health Career Summer Camps has provided recognition in the community as a source of oral health education, as we led students through "a day in the life of a dentist" simulation. Activities around health and wellness associated with proper oral hygiene were well received.

## Part VI: Challenges & Innovative Solutions

Our project had a number of challenges, including:

*Identifying eligible children for the expansion initiative* - For the past several years that Molar Express has provided school-based services, the target population has been children on Medicaid. With this new funding opportunity it was a challenge to inform the school nurses and parents about the expanded target population we are now able to serve. To address this, we changed the Molar Express registration/ application process to include an additional step to try to insure no eligible children are missed.

*Transitioning Molar Express from a mobile dental clinic to a portable dental clinic* - New state-of-the-art technology has enabled Molar Express to transition from a mobile clinic to a portable clinic. The Molar Express truck which transported all of the mobile equipment had been in great need of repair and was getting more and more difficult to drive in challenging weather. We were very fortunate to have a used mini-van donated to the program by one of our community partners. In addition, a local car dealership donated four new winter tires to the program. With support from this grant we were able to purchase portable restorative equipment as well as some hygiene equipment to supplement the equipment we already had. The challenge has been primarily in learning how to use the new equipment in the most effective and efficient manner. It has been a learning process for all of the Molar Express staff.

*Staff Turnover* - As noted above, the Molar Express team had a complete turnover of staff at the beginning of the grant period. It has been challenging to provide on-going services while under-staffed. As staff was hired, it was important to develop relationships with school personnel as well as to establish a consistent clinic schedule. It was also necessary to review and revise Molar Express protocols and policies to ensure the highest quality of service delivery. Although challenging to efficiently schedule clinic days for restorative care with a part-time dentist, our clinic days are full and we are serving many additional children.

*Healthcare Workforce Recruitment* - Recruitment of qualified dentists, hygienists, and dental assistants is difficult in this rural area of NH. The North Country area has been designated by HRSA as a low-income Dental Health Professions Shortage Area (DPSA), and an additional hurdle is finding staff that is willing to travel to different destinations each day, pack and unpack portable equipment in addition to the individual needs of our population. Providing competitive wages in public health dentistry is a complex problem involving minimal reimbursement rates and uninsured patient populations. NCHC is a partner in the Workforce Development Grant, funded by HRSA, and in cooperation with two area Federally Qualified Health Centers that have opened

dental clinics. We are looking to meet the challenge providing dental students with experiences in public health dentistry by including opportunities for them in our most recent Outreach grant application.

*Limited financial resources to provide additional services* - Molar Express continues to meet a critical community need serving as a dental home for many underserved children. Over the past year demand for services has increased. Some schools that Molar Express had not previously worked with have requested oral health services for their students. Limited financial resources impact our ability to increase the number of clinic days and services that can be provided.

## Part VII: Sustainability

### A. Structure

The North Country Health Consortium as a whole will continue its work after the Outreach grant ends, coordinating needs with available funding. The following partners will continue to be active in the ongoing Molar Express project:

- Coos County Family Health Services
- Ammonoosuc Community Health Services
- Catholic Charities
- Northern Human Services
- MidState Health Center
- Indian Stream Health Center

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Molar Express school-based service area has been expanded to Central Grafton County, with activities funded from the Outreach Grant. The expanded area school services will continue based on the availability of funds.

Molar Express has expanded access in the current service area to include uninsured and underinsured children during the grant period. Using creative funding strategies, we anticipate continuing to provide services to this demographic.

A risk assessment protocol with preventive strategies has been recently established and the appropriate to the level of risk is being measured and documented for each Molar Express patient. Molar Express will continue to use this protocol going forward as it has been integrated into the system of care.

The Outreach Grant has allowed Molar Express to create a formal performance improvement program focused on sealants and completed treatments. This new program's development now includes an expanded sealant initiative and has continued to increase the proportion of children who have sealants on one or more permanent molars. Molar Express will continue using the process and follow up.

The social media campaign made possible by the Outreach Grant focused on informing and educating North Country families on good oral health practices. Integration of oral health education will continue to be added to our social media outreach whenever possible.

Oral health continuing education program for primary care providers was well received. We will be available to explore additional programming should primary care providers request the service and provide funding to cover the cost.

An innovative survey for both families and children who receive Molar Express services has been created and implemented over the course of the Outreach Grant. Since this process is now integrated into our program, it will be continued in an edited format. Collection and evaluation of data will need to move from a consultant to our staff in-house, limited by the availability of time and resources.

The Outreach Grant has funded the implementation of a practice model for long term viability of oral health services for children in the North Country. Molar Express, as a program of The North Country Health Consortium, will continue to explore and work with the practice model.

Molar Express will continue to inform public policy to improve access to dental services for children in New Hampshire through our involvement in the NH Oral Health Coalition post Outreach Grant funding.

### **C. Sustained Impact**

The sustained impact of Molar Express is reflected in the improvement of oral health care access for children in our region. A major barrier to access to oral health services by the target population of uninsured and under-insured children is economic. These children are not eligible for Medicaid reimbursement for oral health care; and their families do not have the financial resources to pay for oral health care nor do they have access to private sector dental insurance. Moreover, few dentists in the area are willing to take Medicaid patients nor do they offer a sliding fee scale for patients lacking dental insurance or other income to pay for oral health care. As a result, this target population has no access to much needed oral health care. School health nurses have reported that many of these children have never seen a dentist. The Molar Express Expansion Project has helped alleviate these barriers by providing oral health care to the target population with Rural Health Care Services Outreach funding.

Molar Express has contributed to an increased regional approach to oral health care. Data reflects a regional population that suffers higher morbidity and mortality than the rest of New Hampshire and in some instances the rest of the country. The economic and geographic barriers alongside the lack of access to health care providers, poor roads, few public transportation options, and a higher incidence of unhealthy behavior (smoking, alcohol use, and low regard for preventive health/oral care) practiced by the area population all contribute to a need to address the culture and practices of our region in collaboration with other health care and educational organizations. A regional approach to improved care has been central to this project.

The Molar Express Expansion project, built on evidence-based oral health best practices has engaged local providers and consortium members to achieve superior results. The transference of best practices is inevitable as the program progresses in the next few years. We anticipate working with new providers as the Molar Express clinical staff finds it necessary to refer patients for more specialized care than can be provided in the Molar Express clinic. This outreach to other practitioners for specialized care will further communicate our evidence based practices and expand our field of influence.

## **Part VIII: Implications for Other Communities**

Molar Express benefits from being a program of an organization with a broad scope of public health initiatives, The North Country Health Consortium. Future grantees would benefit from utilizing current relationships and taking time to cultivate new and solid relationships with the organizations for which the grant targets. Funding, work plans, and planning are important for achieving meaningful outcomes, however, having the capacity to nurture relationships, follow up and follow through will maximize the efficacy and sustainability of the program.

# New Mexico

## Ben Archer Health Center

Part I: Organizational Information	
Grant Number	D04RH23559
Grantee Organization	Ben Archer Health Center
Organization Type	Federally Qualified Health Center
Address	P.O. Box 370, Hatch, NM 87937
Grantee organization website	<a href="http://www.bahcnm.org">www.bahcnm.org</a>
Outreach grant project title	Health without Borders
Project Director	Name: Kara Bower
	Title: Project Director
	Phone number: 575-373-3096
	Fax number: 575-544-8848
	Email address: <a href="mailto:kbower@bahcnm.org">kbower@bahcnm.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Southern New Mexico Diabetes Outreach	Las Cruces, Dona Ana County, NM	Coalition
Luna County Health Council	Deming, Luna County, NM	Health Council
Southern New Mexico Promotora Committee	Las Cruces, Dona Ana County, NM	Health Council
Andrew Sanchez Center	Columbus, Luna County, NM	Senior Center
Ben Archer Health Center (HwoB Program Director)	Luna County, NM	Federally Qualified Health Center
NM Office of Border Health	Las Cruces, Dona Ana County, NM	State Department of Health
NM Department of Health Region 5/Deming LPHO	Luna County, NM	State Department of Health
Luna County Healthy Start	Deming, Luna County, NM	County Government
Binational Health Council	United States and Chihuahua, Mexico	Health Council
Deming Senior Center	Deming, Luna County, NM	Senior Center

### Part III: Community Characteristics

#### A. Area

Ben Archer Health Center (BAHC), a non-profit 501 (C) 3 corporation has been providing primary care services since 1971. The organization has ten community health centers that provide primary health, dental care, behavioral health, social services and health education to local residents and Spanish-speaking migrant workers. The ten centers are distributed throughout Southwestern New Mexico in Dona Ana, Sierra, Otero and Luna Counties with facilities located in Hatch, Dona Ana, Truth or Consequences, Alamogordo, Las Cruces, Deming, Radium Springs and Columbus, New Mexico. The administrative services of the organization are located in Hatch, New Mexico. The mission of Ben Archer Health Center, Inc. is to significantly improve the

health status of its population through the prevention of illness, the promotion of health education, the provision of quality primary care, access to the underserved and a strong commitment to chronic disease and pain management. The Health without Borders project was implemented in the City of Deming and the Village of Columbus, within Luna County, New Mexico.

Deming and Columbus are the largest population centers in Luna County. Luna County is located along the Mexican border. Deming is located approximately 36 miles from the border. The bulk of the population for Luna County is located in Deming. Luna County has approximately 27,000 residents. Columbus is 33 miles to the south of Deming on the southern end of Luna County along the U.S./Mexico border. Its sister city, Puerto Palomas, Chihuahua, Mexico is only three miles south of Columbus (36 miles south of Deming) and has a larger population estimated at anywhere between 3,000 to 10,000 depending on whose estimates are used.

These two isolated communities depend very closely upon one another; with both relying heavily on agriculture as the dominant economic force in the region. Due to their relative isolation and lack of infrastructure, resources are scarce on both sides of the border. Program services were provided in Luna County, which lies in the south central region of New Mexico. It borders the Municipality Ascension, Chihuahua, Mexico, to the south; Sierra County to the northeast; Dona Ana County to the east; and Grant County and Hidalgo County to the west. It contains 2,965 square miles, and shares approximately 55 miles of border with Mexico. Columbus is about 33 miles to the south of Deming in extreme southern Luna County, just three miles north of the US-Mexico border. Its sister city, Puerto Palomas, Chihuahua, Mexico is only three miles south of Columbus (36 miles south of Deming). Luna is one of three counties located wholly within the codified US-Mexico Border Region (Public Law 300-104). The entire county is found within the Chihuahua Desert environment which is very rural, with the population distributed primarily in the two incorporated municipalities of the County Seat of Deming and the Village of Columbus, and the balance in smaller enclave communities and ranches throughout the County.

## **B. Community description**

Luna County has 25,095 residents (2010 US Census Quickfacts), with 14,855 residing in Deming and 1,980 residents in the Village of Columbus. The balance of the population lives in scattered smaller rural residential clusters and ranches throughout the county. Within Luna County, an estimated 61.5% of the population is of Hispanic and primarily Mexican origin. The 2010 US Census reported that nearly 19% of Luna County's population was foreign born (almost all first generation Mexican heritage), while 32% of the population is comprised of second and third generation Mexican heritage. As undocumented residents and migrants are not counted with any precision as part of census figures, there is an estimated 7-10% of the population—nearly all from Mexico—that is considered to increase the total population in the county by nearly 2,500 people.

Nearly half of the county's population speaks a language other than English at home (Spanish). Almost 22% of the population over five years old has limited English fluency, and 37.8 % of local youth say they speak a language other than English at home (New Mexico Youth Risk and Resiliency Survey, Report of State Results, 2009). Only about 67.1% of Luna County's population over the age of 25 were high school graduates, and only 11.1% earned a four-year college degree or higher. Luna County tops all 33 New Mexico counties for the percentage of its population under the age of 18 living in poverty, with 47.6% compared to NM which is 28.8%, and the US which is 20.0% (NM State Department of Health). The median household income for Luna County residents in 2009 was \$25,833, approximately 60% of the median for the State. The percent of Luna County persons with incomes below poverty in 2009 was 30.5%, while unemployment in 2010 was 18.7%, nearly 2.2 times that for the State. One-third of the border population is uninsured; but this reaches up to 75% and higher for adults in the 50+ *Colonia* communities found in the region.

The National Agricultural Workers Survey (NAWS) conducted the first ever national surveillance of mental health among farmworkers in 2009-10 in which 3,000 farmworkers were surveyed. The Center for Epidemiologic Studies of Depression Scale was adapted and farmworkers were asked survey questions on factors often associated with depression, including their general health, job insecurity and separation from family. The study found that farmworkers who were separated from their families and those working in the field for short and long periods of time were likely to self-identify with some form of depression.

## **C. Need**

The Health without Borders Project focused on the following health issues: diabetes prevention and control, behavioral health care, and immunization coverage. Project goals and outcomes included reducing the prevalence and onset of diabetes, reducing complications associated with diabetes, increasing access and usage of behavioral health services, increasing rates of immunization in adults and children, and increasing workforce capacity.

According to the New Mexico Department of Health, Luna County ranked last among 26 New Mexico counties reporting the percentage of adults over the age of 65 that were vaccinated against influenza during the period of 2005-2009 (NM Department of Health). In 2011, a community needs assessment survey was compiled and completed by the New Mexico Department of Health Office of Border Health to assess the perceived barriers to obtainment of adult immunizations. The findings indicated that the public is unaware that adult immunizations are needed, lack of understanding about safety of vaccines, and health care providers not recommending adult vaccinations to their patients.

In 2009, diabetes was the sixth leading cause of death in the State of New Mexico and the fifth in Luna County. At the time the application for the Rural Outreach Program was submitted, it was estimated that 10.6% of adults living in Luna County had diabetes. In the State of New Mexico adults with diabetes made up 7.1% of the population and 8% of the U.S. population. There are many complications that may accompany diabetes including premature death. From 2007 and 2009 in Luna County there were 42.6 deaths (per 100,000) due to diabetes. In New Mexico there were 32.6 deaths and nationally 21.8. From 2011-2013 in Luna County there were 22.6 deaths due to diabetes. For the past three years the staff of the Health without Borders project provided diabetes management and prevention classes and home visits as well as depression screenings with referrals for behavioral health services to improve outcomes for Luna County residents who are diagnosed with diabetes.

At the start of this grant, these statistics reflected the country of Mexico in general. Crime statistics in Palomas are not published and data on Columbus is not tracked by the FBI. However, through observation and qualitative analysis, the level of violence in and around Palomas was extremely high. Many community members have either directly or indirectly been exposed to violence. Since many families in the target area are of Mexican heritage, many people have experienced having a close family member murdered in the border violence. During the course of the grant, the level of violence along the border has been reported as decreasing. As a result of the Health without Border program, there is increased availability of specialized behavioral health services for the treatment of Post-Traumatic Stress Disorder (PTSD).

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

BAHC used both evidence-based models and promising practice models to address the identified community needs. Baseline measures that were tracked throughout the grant period demonstrated health status improvement including health indicators of Body Mass Indicator (BMI), blood pressure, Hemoglobin A1C, number of diabetic patients screened for diabetes, and rates of immunizations. In addition to the baseline measures, BAHC also tracked all related PIMS (Performance Improvement Measurement System) measures.

For Diabetes prevention and management, BAHC used the Centers for Disease Control and Prevention's (CDC) curriculum *Road to Health* in conjunction with the US Diabetes Conversational Maps. The Ciclovía model, which was recognized by the Pan American Health Organization and the CDC as being evidence-based, was used to engage the community in healthy living activities. In response to the exposure to violence on the US/Mexico border, BAHC trained 6 therapists in Eye Movement Desensitization and Reprocessing (EMDR). EMDR is considered an evidence-based psychotherapy for PTSD. To address low rates of immunizations in the vulnerable populations of senior adults and young children, BAHC employed a promising practice by utilizing a door-to-door vaccination strategy. All evidence-based and promising practices were adapted to meet the needs of the population that were served by this project to include language and cultural issues.

### B. Description

Project staff developed and implemented a multi-dimensional, comprehensive approach to diabetes management and prevention that included diabetes management classes for patients and families, prevention education activities within the community, development of a protocol to address diabetes related depression, and a community exercise campaign. The project included the recruitment and development of new promotoras both in Luna County and the Palomas Promotora Corps. The project implemented a culturally-appropriate promising practice immunization methodology utilizing door-to-door outreach campaigns. This project responded to the growing need for behavioral health services in the community of Columbus resulting from the violence along the US/Mexico border.

### C. Role of Consortium Partners-

Since April of 2007, all Consortium members have participated in the strategic planning process that resulted in development of the comprehensive binational strategic health plan. The Health without Borders Consortium accomplishments include the development of activities that promote and improve the health of the border community and the development of a comprehensive sustainability plan. The Consortium meets monthly and the meetings are conducted using semi-formal methods. Subcommittees meet on a more frequent basis until the necessitating task is completed.

**Ben Archer Health Center** was the consortium lead and participated in all components of the Health without Borders project.

**NM Office of Border Health** was actively involved. Representatives attended consortium meetings quarterly, assisted in promotora trainings monthly, and worked collaboratively with BAHC on healthy lifestyle events.

**NM DOH Region 5/Deming LPHO** assisted in the delivery of health services, promotion of the project through media events for immunization campaigns and health disparities awareness activities, and participation in outreach events. They actively attended consortium meetings monthly and assisted in planning the immunization and healthy lifestyle events.

**Deming Senior Center** assisted in the planning and implementation of the senior immunization campaigns.

**Binational Health Council** provided feedback, assisted in the development of media attention, promoted the project, and assisted in outreach events.

**Andrew Sanchez Center** assisted in the planning and implementation of the senior immunization campaigns.

**Southern New Mexico Promotora Committee** helped to promote the project, assisted in developing media attention, participated in outreach events, assisted in creation of Palomas Promotora Corps, and provided promotora trainings opportunities.

**Southern New Mexico Diabetes Outreach** assisted in the delivery of services and participated in outreach activities.

**Luna County Health Council** participated as members of the consortium, assisted in the delivery of services, helped develop media attention and participated in outreach events.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The overarching goal of the Health without Borders Project (HwoB) was to improve access to coordinated health care and improve health outcomes in the Luna County-Palomas, Chihuahua border sub-region. The Health without Borders staff worked with the consortium and project evaluator to create and implement a plan for accurate and relevant data collection. Evaluation strategies used include pre and post-project surveys, the collection of baseline data, regular consortium and committee meetings, on-going presentation of results to community members, and annual process and impact evaluation. Some of the program outcomes are discussed below.

A specific goal of the project was to increase the capacity and outreach of promotoras in Luna County and Palomas, Chihuahua, Mexico. The Health without Borders (HwoB) program provided ongoing training to promotoras in Luna County and Palomas, Chihuahua, Mexico. The HwoB program provided fifteen high-quality trainings to the Palomas, Mexico Promotora Corp, over the course of the grant. More than 36 trainings were provided to Luna County promotoras. Topics for trainings included CPR, basic first aid, diabetes and chronic disease management, motivational interviewing, and goal setting.

During the grant period, the Health without Borders program brought awareness to the community through the dissemination of appropriate outreach materials on health disparities, participated in more than ten health fairs, and provided six facilitated trainings with BAHC staff, volunteers and community members using the DVD, "Unnatural Causes".

The Health without Borders program educated patients diagnosed with diabetes and their families using an evidence-based curriculum. Staff also organized home health parties for community members who were at risk for developing diabetes to educate them on healthy living and held monthly community events to encourage physical activity.

Ben Archer Health Center has increased the number of patients diagnosed with diabetes screened for depression. All patients who screened positive were referred for behavioral health services.

The Health without Borders project with the help of its partners administered more than 1,500 immunizations to 1,394 adults and children over the past three years. There have been 1,262 adults who received flu and pneumonia vaccinations and 132 children received childhood and flu vaccines as a result of door-to-door immunization and community immunization events.

## B. Outcomes

Ben Archer Health Center's Health without Borders project was recognized in a published report for Border Binational Health Week in the 2012 and 2013 Data Summary Report for our impacts on the Senior Immunization Campaign.

## Part VI: Challenges & Innovative Solutions

Early on in the project challenges were encountered with implementing new clinical procedures that would require all patients diagnosed with diabetes to be screened for depression. It took time to align the electronic health records with the new procedure to assure that screenings could be monitored and tracked within the system. This was overcome by working closely with BAHC's technical support team to integrate the tool into the electronic health records. Additionally getting buy-in from all of the providers to complete the depression screenings had some challenges. Some of the providers were onboard from the beginning, but it took others some time to be comfortable with changing the way they were used to practicing. This was addressed by continuous monitoring and feedback to the providers as well as providing support to complete and enter results of the screening assessment.

## Part VII: Sustainability

### A. Structure

The Health without Borders consortium will continue past the completion of the program. Through communication with the existing consortium members about sustainability of the Health without Borders program, changes to consortium partners were suggested. BAHC has reached out to partners and they have agreed to work with the HwoB program for the upcoming years. New Mexico Department of Health will continue to partner with the HwoB program to provide access and outreach for immunizations and to decrease rates of diabetes through the provision of prevention and education. New Mexico Department of Workforce Solutions will work with the HwoB program to continue efforts towards workforce development with an emphasis on expanding opportunities for community health workers.

Several new partners who work with high-risk youth were suggested including a representative of the Juvenile Drug Court, Juvenile Justice Continuum Services, New Mexico Children Youth and Families Division (CYFD), and Court Appointed Special Advocates (CASA). These new partners are a natural fit for the continual expansion of behavioral health services. Many if not all of the youth involved with these agencies have suffered severe trauma and will benefit greatly from the resources that have been developed and obtained as a result of this grant. These partnerships will provide high-risk youth with access to high-quality treatment for Post-Traumatic Stress Disorder. Deming Public Schools will also join us as a partner. They will identify and refer children who have been exposed to violence. Border Area Mental Health Services has agreed to partner with the Health without Borders program to assist in the continuation of expanding and promoting behavioral health services. Finally, Desert Sun Apartments, the local migrant housing unit, has agreed to partner with us to assist in the provision of diabetes education activities and to promote other aspects of the grant with residents of the apartments.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Through regular communication with community members during the grant period, methods were developed and implemented to continue most elements of the program. The continued training of the Palomas Promotora Corps emerged as a priority for the Binational Health Council. They have now committed funding to bringing trainers from Mexico to train in Palomas as well as providing the promotoras with stipends to train people in the community. Another way that sustainability has been achieved is through data sharing. All data that were collected through the community mapping survey have been shared with collaborative members in order to leverage funding for additional projects. One of the elements of this project, the resource directory, was adopted by the Luna County Health Council and will be made available on their website and updated regularly by their staff. During the door-to-door immunization campaigns, there was a high level of partner involvement. Partners were able to see first-hand the usefulness of utilizing this innovative method to provide services. As a result, this method has been replicated by several outside agencies, both within Luna County and surrounding areas. After project completion, each Consortium member is expected to finance continuation of project-initiated systems, processes and activities as part of their recurrent budgets. The activities and

systems established during the project execution period will be continued after the completion of the project. The Health without Borders project grant is being used to develop and organize a series of coordinated care systems among Consortium members in the binational Luna County-Palomas service area. Once these systems are in place, they are proposed to be integrated into each Consortium member's operational plans and strategies.

The project is intended to establish a new system for coordinated care among all healthcare services providers in the binational Luna County-Palomas border sub-region. This system will include, among other elements increased capacity and outreach of promotoras, increased access/usage of behavioral health services, increased rates of immunizations, decreased prevalence of diabetes, and decreased complications of diabetes. Once these systems are in place, they are intended to be self-sustaining through the support of each and all Consortium members. Members of the Palomas Promotora Committee are volunteers from the community, and with their training completed and media and tools in hand, they should be able to sustain their activities with minimal funding. The New Mexico Office of Border Health is committed to supporting additional needs to sustain project-initiated activities after the end of the project execution period, as part of its recurring state budget. This includes immunization outreach events.

BAHC will sustain the program by pursuing funding from foundation, state and local sources and by including the staff salaries in the federal budget request. All behavioral health services that have been expanded will be sustained through insurance reimbursement. BAHC will continue working with the health council to assure the needs of the county are being met. BAHC will utilize the technical assistance made available to us to assist in generating the value of this project to be reported back to the community as a return on their investment. BAHC will continue systems changes of providing depression screenings and will be expanding to the other eight health centers. BAHC has and will continue to advocate for community health workers (CHW) services to be covered by Medicaid and other such funders as a billable service, creating true sustainability. Recently New Mexico passed a bill to certify community health workers; this is the first step in potential reimbursement for CHW services.

### **C. Sustained Impact**

Sustained impacts of the Health without Border program include knowledge obtained through promotora trainings; children and vulnerable adults have received disease preventing immunizations; collaborative relationships have been formed within the community; and additional resources for behavioral health services have been obtained.

BAHC has adopted new ways of serving patients through the change in practice standards. All Ben Archer Health Center patients with a diagnosis of diabetes are now screened for depression and given referrals for behavioral health services, as appropriate. This has heightened the level of integration of behavioral health services into the primary medical model and has improved patient care. New capacity has been created as a result of the Health without Borders program. Six BAHC therapists have been trained in Eye Movement Desensitization and Reprocessing (EMDR) which is an evidence-based approach to the treatment of post-traumatic stress disorder. Equipment to provide EMDR has been purchased and the use of all resources will be sustained after the completion of this grant.

## **Part VIII: Implications for Other Communities**

Aspects of the grant can be easily replicated and the results that were achieved through the methods used in this project. Results were achieved through non-traditional means and were tailored to meet the needs of the community. One example of a best practice method that this project used was the innovative door-to-door immunization campaign. This method provides the means to access portions of the population that otherwise would not or could not access services. Because of the success of this project, this method has been recognized by the New Mexico Immunization Coalition. This method has been replicated by BAHC in three other New Mexico counties and has also been adopted by the New Mexico Department of Health for use with the shut-in senior population.

# New Mexico

## Hidalgo Medical Services

Part I: Organizational Information	
Grant Number	D04RH23581
Grantee Organization	Hidalgo Medical Services
Organization Type	Federally Qualified Healthcare Center
Address	500 Demoss St., Lordsburg, NM 88045
Grantee organization website	<a href="http://www.hmsnm.org">www.hmsnm.org</a>
Outreach grant project title	
Project Director	Name: Carmen Maynes
	Title: Development and Organizational Director
	Phone number: 575-597-2737
	Fax number: 575-534-0594
	Email address: <a href="mailto:cmaynes@hmsnm.org">cmaynes@hmsnm.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Hidalgo Medical Services	Silver City, Grant County, NM	Federally Qualified Health Center
*La Frontera NM	Silver City, Grant County, NM	Outpatient mental health services
*Gila Regional Medical Center	Silver City, Grant County, NM	Hospital
Grant County Health Council – Senior Lifecycle	Silver City, Grant County, NM	Health council – Senior issues
Veteran’s Affairs Clinic	Silver City, Grant County, NM	Outpatient clinic
Life Quest	Silver City, Grant County, NM	Outpatient special needs services
Correcaminos	Silver City, Grant County, NM	Local public service transportation services
Silver City Gospel Mission	Silver City, Grant County, NM	Homeless shelter
NM Department of Health ~ Health Promotion	Silver City, Grant County, NM	Government
Silver City Chamber of Commerce	Silver City, Grant County, NM	Chamber of commerce
SACS (Marilyn Alcorn)	Silver City, Grant County, NM	Adult care services
HMS – Center for Health Innovations	Silver City, Grant County, NM	
Grant County Health Council – Partnerships for Success	Silver City, Grant County, NM	Health council – Youth issues
Salvation Army	Silver City, Grant County, NM	Charity organization
SW NM Council of Governments	Silver City, Grant County, NM	

## Part III: Community Characteristics

### A. Area

The communities served by this program were Grant and Hidalgo Counties in New Mexico.

### B. Community description

Grant and Hidalgo Counties, in the southwest corner of New Mexico, are frontier and rural communities where towns and population are, in some cases, very spread apart. As a result, access to healthcare services for those living in frontier communities is very limited since historically medical services in these two counties have been provided primarily in the County Seats. Our region is marked by higher poverty rates than state and national averages, lower median household incomes, recent declines in population due to lack of economic opportunity, a portion of our population with limited to no English proficiency, and lower educational attainment compared to state and national averages. About half of our population is of Hispanic origin, the rest is primarily of Caucasian descent and a very small minority composed of other racial/ethnic groups. Hispanics are known to experience a wide range of health disparities, within New Mexico and nationally. Adult obesity rate is higher among Hispanics when compared to whites. Our region's proportion of residents without health insurance or limited coverage is higher than the national average. Additionally, a larger percentage of local residents are publicly covered under Medicare or Medicaid. Both Counties experience high rates of chronic illness. Additionally, Grant County has reported higher rates of mental disorders compared to the state average. Suicide rates in both counties are also higher than the national and state rates. Grant and Hidalgo counties have a very limited public transportation system and many families do not have a personal vehicle. The Regional Transit System (RTS) serves the two county area, however, due to long distances between towns, this service is often far too expensive for low income clients seeking medical care and pick-up and return times are extremely limited, making it difficult to utilize the service for medical appointments and other health related matters. Transportation barriers lead to postponement of preventive and primary care, and as a result, there is a high rate of delayed care and the resulting health complications.

### C. Need

Grant and Hidalgo counties in NM have higher than state and national average rates for poverty, low education, very low income, chronic disease and mental issues. Part of the reason for these outcomes is their rural and frontier nature. At the beginning of this project, a very high number of individuals were uninsured and according to the regulations in place at the time, many of them were also uninsurable. Another very large target group was underinsured individuals. These two groups lack appropriate healthcare and the resources to access it. Common socio-economic barriers to access healthcare services among these groups of individuals include but are not limited to: access to safe and reliable transportation; issues with food security; lack of safe and permanent housing; unemployment or being unable to work due to disabilities; low education levels, lack of understanding about the healthcare system; and low or non-existent health education. Many of these individuals depend primarily on social programs to survive.

The Community Connections program was designed to assist these individuals to gain or re-gain their autonomy by providing them with the tools and education to improve their knowledge and skills related to chronic conditions management and prevention; understand the importance of establishing with a primary care provider and the appropriate use of ER, 24/7 Nurse Assistance Line and urgent care; as well as connecting them to community resources appropriate to their individual needs. Also by working to build patient self-efficacy around self-management tasks, these individuals gain and re-gain the confidence and skills to be able to care for their own health.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Hidalgo Medical Services care coordination model, known as Community Connections, takes the principles of the original the University of New Mexico (UNM)/Molina Health New Mexico (MHNM) model, which was implemented by Hidalgo Medical Services (HMS) in November of 2007. The essence of the MHNM model is to use trained Community Health Workers (CHWs) to provide interventions in the areas of system navigation, access, chronic disease management and health literacy. The model includes a multi-disciplinary team with staff from MHNM, UNM and HMS. The team was comprised of the MHNM medical director, health services director (a registered nurse), one UNM Coordinator and CHWs in three sites in New Mexico (Albuquerque, Las Cruces and Silver City). The statewide team provided technical assistance and training to the field-based CHWs, quality assurance oversight and insured that all necessary information was collected, documented and distributed as appropriate.

The Community Connections program builds upon the MHNM model to produce greater integration into the overall health delivery system and to achieve improved health outcomes specific to the target population of this project. The adaptations include:

- A Consortium approach composed of Hidalgo Medical Services, the Community Health Center serving the area; Border Area Mental Health Services, the regional mental health core service agency; and Gila Regional Medical Center, the sole provider hospital for the region
- A training curriculum that focuses on core competencies which combines nationally recognized CHW and care coordination roles and responsibilities. The curriculum also allows for career advancement within the scope of practice
- Incorporation of CHW care coordination practices into the Patient Center Medical Home model
- Tracking outcomes on an individual level, known as “pathways”. Pathways were developed or implemented based on established AHRQ Pathway programs, for the four chronic disease areas (diabetes, hypertension, anxiety and depression).

The Community Connections model consists of 5 components:

1. **Clinic Capacity:** The Community Connections care coordination model is designed to work within a community health center setting. The success of the model depends on an adequate infrastructure (e.g. tools, systems and resources) to allow services to be provided in an efficient manner and to collect necessary data. Infrastructure capacity includes:
  - **Senior Management Support:** At HMS the Family Support Services division is valued at the same level as the medical, dental and mental health services. The work of CHWs is valued and recognized as an important component to the overall health and wellness of the patient.
  - **Staffing:** HMS had the experience of the MHNM care coordination model to build upon. The CHW is provided guidance and supervision by a supervisor experienced and familiar with the core competency areas of care coordination.
  - **Medical Records/Registration:** HMS has an electronic health records (EHR) system in place that provides the data necessary to identify the target population and to produce reports for tracking process towards achieving health outcomes.
  - **Health Education:** Under the Community Connections model the care coordinators serve as generalists; they work with a variety of issues facing the target population rather than specializing in one specific chronic disease area. If a client is in need of health education, Community Connectors refer the client to the appropriate educators within HMS or to other community resources.
  - **Documentation/Record Keeping/Reports:** The MHNM care coordination project which began in 2009 has helped HMS to develop and implement various forms, procedures and databases, in addition to the electronic health records (EHR) system, which enables the collection and reporting of important information related specifically to care coordination interventions. These data systems have been used to track process and outcome measures related to this project.

Identifying target population, needs and pathways: HMS worked with the consortium partners to identify uninsured and underinsured clients that have a diagnosis of diabetes, hypertension, depression and/or anxiety. With the capacity to run reports from its HER, HMS can identify the target population. Both GRMC and La Frontera agreed to help identify patients who are uninsured or underinsured and in need of care coordination. Discharge planners at GRMC review the records of patients admitted in the hospital or to the emergency room to determine each patient's level of need. As appropriate, and with client consent, the discharge planners contact the HMS care coordinators to transition care from the hospital to primary care. The HMS care coordinators work jointly with the discharge planners to develop the plan of care or will contact the patient within 48 hours after discharge to set up a meeting with the patient to discuss their aftercare needs.

La Frontera has also agreed to identify clients within their system who may benefit from HMS care coordination. Since La Frontera is a community behavioral health organization that currently provides some care coordination services, referrals include La Frontera's clients who are uninsured/ underinsured, have one of the four targeted diagnosis and who do not have a medical home for their primary care needs.

2. **Training:** The initial training provided by UNM and MHNM was enhanced to incorporate core competencies identified in both the CHW and care coordination literature. The HMS care coordination training is designed to provide incremental skill and knowledge attainment addressing both generalist and more specialized functions within the scope of CHW practice.
3. **The Community Connections Consortium:** This project brings together the three major healthcare providers in the region who are committed to improving the delivery of health and social services to uninsured/ underinsured populations in Hidalgo and

Grant counties. The primary goal of the Consortium is to ensure the timely provision of appropriate, high-quality, cost-effective, evidence-based services that will have a meaningful impact on those served. The Consortium members have assisted with the identification of at-risk individuals and coordinate the care they receive, making sure that biological, psychological, and social needs are met. The Consortium serves to strengthen and support all health and social service providers in the region. The Consortium eliminates duplication and inefficiency and provides needed support services.

4. **Integrated Care/Primary Care Medical Home:** One of the core standards of the Primary Care Medical Home (PCMH) model is patient care coordination/management that is coordinated and/or integrated across all elements of the complex health care system and the patient's community. In our model CHW care coordinators are an essential part of the treatment team. More importantly, the CHW can provide the human element in facilitating coordination within the healthcare delivery system and bridging the gap between the healthcare system and community resources. Our model will provide the resources and structure to move the current delivery system from a focus on diagnosis and treatment to prevention and self-management.
5. **Quality Assurance:** Quality assurance centers on adherence to the components of the model. For example, HMS has developed a core competencies check list for the CHW care coordinator. The checklist will be completed by the supervisor and CHW within 90 days of hire. Quality assurance also includes proper documentation in patient records (e.g. patient registration, field notes, care plans, etc.) and fidelity to all of the Community Connection's Program Protocol by all staff members. Additionally, HMS has contracted with an evaluator to assist with data collection and analysis and measure the outcomes of the program.

## **B. Description**

The Community Connections program works with each individual to help them to gain or re-gain their autonomy by providing them with self-management tools to help them care for their own health. The first step after the referral is received is to conduct a needs assessment using a Health Risk Assessment instrument during a home or office initial visit. Following the identification of needs, the Community Connectors work with a team with other service providers such as physicians, therapists, agency representatives, etc. to establish communication among the team and be able to provide the individual with consistent health information. The Community Connectors also work to connect participants to socio-economic resources in the community and teach them how to locate services in the future. Another important aspect of the program is to ensure participant's success by providing health education, the importance of preventative care and how to navigate the healthcare system. If the individual was initially uninsured, the Community Connector provides information about enrollment for coverage under the Affordable Care Act and assists with facilitating appointment with a healthcare guide for enrollment. Monthly face to face visits with each participant, as well as continuous communication via telephone or email, is part of the program requirements to ensure that communication is flowing properly in both directions, and that issues are being addressed in a timely and appropriate manner.

## **C. Role of Consortium Partners**

Two organizations signed Memoranda of Understanding with HMS - the local hospital, Gila Regional Medical Center (GRMC) and Border Area Mental Health Services, a local outpatient behavioral health service that later on became La Frontera, NM. These Consortium members were poised to work together to develop the infrastructure and capacity to integrate and enhance primary care, hospital-based care, mental health and community support services efforts to improve the health of the uninsured in the community. Objectives included model development, information sharing, improved health outcomes, establishment of a medical home for participants, and reduction in unnecessary emergency room visits to achieve measurable outcomes for improved access to health care and health outcomes for adults ages 19-64 in Grant and Hidalgo counties. These practices were built on the already existent care coordination program offered at HMS.

HMS worked with the consortium partners to identify uninsured and underinsured clients that have a diagnosis of diabetes, hypertension, depression and/or anxiety. HMS, with the capacity to run reports from its Electronic Health Record (HER) can identify patients to target for the program. Both GRMC and La Frontera agreed to help identify patients who are uninsured or underinsured and in need of care coordination. Discharge planners at GRMC review the records of patients admitted in the hospital or to the emergency room to determine each patient's level of need. As appropriate, and with client consent, the discharge planners contact the HMS care coordinators to transition care from the hospital to primary care. The HMS care coordinators work jointly with the discharge planners to develop the plan of care or will contact the patient within 48 hours after discharge to set up a meeting with the patient to discuss their aftercare needs.

La Frontera also agreed to identify clients within their system who may benefit from HMS care coordination. Since La Frontera is a community behavioral health organization that currently provides some care coordination services, referrals include La Frontera's

clients who are uninsured/ underinsured, have one of the four targeted diagnosis, and who do not have a medical home for their primary care needs.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The preliminary results of the program to date show that the Community Connections model for care coordination and patient navigation has resulted in measureable changes in patient access to healthcare and social support services, patient health seeking behavior and selected patient health indicators. Below are some highlights from initial evaluation data, which are still being collected and analyzed.

A total of 180 people participated in the Community Connections program. They received health education, health care services, and disease management support. As a result of the efforts of the CHWs and the care coordination among the consortium partners, we have seen:

- improvement in access to health care and other services: 49 Mental Health referrals, 16 dental appointments scheduled for patients. Patient no-show rates decreased by 50% as a result of efforts by CHWs to ensure connections to care for the patient population.
- improvements in access to preventive services: Breast and Cervical Cancer screenings for females between the ages of 42-69 increased by 50%; Colorectal screenings for patients between the ages of 51-74 increased by 25%; and Pap smear screenings for patients between the ages of 24-64 increased by 20%.
- improvements in selected health indicators, including A1Cs decreased by 1/10 of a point for patients in the pilot program

## Part VI: Challenges & Innovative Solutions

Staff Vacancies: During FY2 and FY3 the Community Connections Program at HMS experienced difficulties in recruiting and retaining staff for the program. Much of this can be attributed to the very nature of the program. Home visiting and care plan development can be difficult for non-clinical community health workers. There were times during this period when for months at the time there were no staff other than the project manager. During these periods, the project manager assisted referred participants as much as possible while also managing other aspects of the program. These vacancies make it difficult to implement program initiatives/goals, and as a result, the number of enrolled participants in the program has not been as high as expected. HMS addressed the issue by hiring a licensed social worker. Currently we have 1.0 F.T.E. for Community Connector for care coordination since October 2014. We also have 1.0 F.T.E. for CHW-PCMH model and enrollment of ACA.

De-funding of Border Area Mental Health Services (BAMHS): The local behavioral health organization was de-funded in 2013, leaving community members with behavioral health disorders in complete disarray. As a consequence, many of our community members in need of these services have not had sufficient or adequate treatment due to the limited available resources during 2014 and many still remain with no treatment at all. La Frontera, NM has picked up many of the services previously provided by Border Area Mental Health Services (BAMHS), however, with the change, many ex-clients from BAMHS did not continue services, their programs changed, and as a result, very few referrals have been received by HMS from La Frontera for the Community Connections Program. The program has worked with individuals who have received behavioral treatments outside of Grant and Hidalgo Counties because local providers are often overbooked. These two counties also have a very limited amount of providers who can prescribe medication for mental health disorders. HMS has hired more mental health providers during the last year, and that has helped in alleviating the high amount of individuals who otherwise were unable to receive proper and timely treatment for their mental conditions. The Community Connections program receives also referrals from our in-house mental health providers, some of them who were previously receiving treatment at BAMHS.

Defunding of local hospital's indigent fund with the enactment of the Affordable Care Act: The passing and enacting of the Affordable Care Act brought the benefit of insurance coverage for many individuals that were previously uninsured. However, regional and local government funds for healthcare are scarce, and restructuring that came alongside the approval and enacting of ACA have meant new challenges for the local healthcare system. The hospital no longer has funding to cover unreimbursed costs of caring for the uninsured in our communities. In part due to the new regulations in place, some healthcare providers did not immediately have in place contracts with all Medicaid providers affecting their ability to provide funds to cover for medical expenses of uninsured and underinsured individuals. HMS addressed the issue by working on outreach and promotion activities that led to a higher number of individuals being enrolled on Medicaid and the Health Insurance Exchange (marketplace).

**A. Structure**

During the planning session for the sustainability plan that took place during the site visit from our Technical Assistance Provider from Georgia Health Policy Center in November 2014, the consortium partners agreed to continue working on the transportation initiative. They will meet monthly and the agenda and consortium work will continue to be structured by HMS.

The partners that agreed to continue working together are: HMS, La Frontera NM, Gila Regional Medical Center, Grant County Health Council – Senior Lifecycle, Correcaminos, Silver Adult Care Services, NM Department of Health ~ Health Promotion, Silver City Gospel Mission Shelter, Silver City Grant County Chamber of Commerce and HMS-Center for Health Innovations,

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

HMS will continue contracting care coordination services with New Mexico’s Managed Care Organization providers. These contracts will generate the necessary revenue to continue the program, including benefits for non-insured and underinsured individuals. Additionally, HMS has institutionalized some practices that incorporate care coordination with philosophies from the PCHM model that HMS has integrated into its practices as a result of HMS obtaining certification from NCQA as a PCHM provider. A pilot project blending these two models ran during the summer and fall of 2014 with positive results. This model is expected to be soon implemented throughout HMS practices where a CHW intervention is needed.

The transportation initiative started by the Community Connections Consortium will continue its course trying to find solutions to the current transportation problem in the communities of Grant and Hidalgo counties. The consortium has agreed to continue working to try to increase/improve the current transportation options in the region. They will meet monthly to continue this work and HMS will serve as the convener and facilitator of the work of the group.

**C. Sustained Impact**

The efforts funded through the Outreach grant will have sustained impacts at the community and organizational levels, as well as on the individuals served through the program. As a result of the coordinated approach to care and cross-agency communication that is central to this initiative, we anticipate real and sustained impacts on collaboration, including: Increased/improved access to transportation for the two-county area communities; the establishment of a referral system among participating agencies; and the establishment of contracts with New Mexico’s Managed Care Organizations (MCOs) for care coordination services that delivers revenue, which is part of the sustainability plan for this program.

The Community Connections Program has been part of a larger service improvement outcome for HMS to integrated Patient Centered Medical Home principles into care coordination practices. HMS gained NCQA-Patient Centered Medical Home recognition during 2014, and a model has been developed successfully combining PCMH principles with a care coordination program.

As a result of the efforts of the consortium, we have seen concrete ways that our local health care and social service systems have expanded their capacity. The transportation project that the consortium has been working on has impacted the region through opening the dialogue for increased/improved services in the two county area at the same time that has a positive impact on community member’s awareness of the available transportation services and how to use them. We have purchased screening equipment, like blood pressure monitors, that can be used with program participants moving forward.

We have seen changes in knowledge, attitudes, and behaviors of program participants as a result of this program. Patients report measureable improvements in areas such as: self-efficacy in disease management; healthcare system navigation and proper utilization of health services (e.g. ER, 24/7 Nurse Advice Line, urgent care.); awareness of social support and economic support services in the community; disease prevention and healthy lifestyle strategies; improved communication with healthcare providers; and the importance of following treatment recommendations.

The HMS CHW model has been studied and implemented by other community clinics. The CHW model that was adapted for the Community Connections program has also been the subject of inquiries from other community centers for feedback and advice for their programs. The model and protocol developed for this program have been shared with other community centers who are working on developing their own models of care coordination. During a peer learning seminar by the Georgia Health Policy Center in October 2013, the program manager and the organizational and development director presented the program to the seminar's participants who came from different rural sites in the country, and was the subject of a Peer Group Call for other ORHP grantees implementing CHW programs.

Some of the distinct aspects of the HMS Community Connections Program are:

- A Consortium approach composed of Hidalgo Medical Services, the Community Health Center serving the area, La Frontera NM a behavioral services organization, and Gila Regional Medical Center, the sole provider hospital for the region.
- A training curriculum that focuses on core competencies which combines nationally recognized CHW and care coordination roles and responsibilities. The curriculum also allows for career advancement within the scope of practice.
- Incorporation of CHW care coordination practices into the HMS Patient Center Medical Home model.
- Tracking of outcomes of each program participant as appropriate for their individual needs.

## Chautauqua County Health Network

Part I: Organizational Information	
Grant Number	D04RH23564
Grantee Organization	Chautauqua County Health Network
Organization Type	Rural Health Network
Address	200 Harrison St. Suite 200 Jamestown, NY 14701
Grantee organization website	<a href="http://www.cchn.net">www.cchn.net</a>
Outreach grant project title	Chautauqua Health Connects
Project Director	Name: Ann Abdella
	Title: Executive Director
	Phone number: 716-338-0010
	Fax number: 173-338-9740
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Chautauqua County Health Network	Chautauqua County, NY	Rural Health Network
Office for the Aging	Chautauqua County, NY	County department
Heritage Ministries	Chautauqua County, NY	Skilled Nursing Facility

### Part III: Community Characteristics

#### A. Area

The service area for the Chautauqua County Health Network (CCHN) includes two cities (Jamestown and Dunkirk), twenty-seven towns, and fifteen villages.

#### B. Community description

Chautauqua is consistently ranked as one of the State's poorest communities characterized by a shrinking and aging population, poverty, chronic disease, and difficulty accessing health care. The county encompasses 1,065 square miles and is geographically, and to some extent socially and economically, divided between "north" and "south." Part of the Eastern Continental Divide, known as the Chautauqua Ridge, runs through the county and is a significant dividing point in the county's geopolitics, with the "North County" being centered around Dunkirk and the "South County" centered around Jamestown, each having their own interests. The 2014 population was estimated at 132,000 which is a 2.1% decline since 2010 (US Census). Approximately 19.1% live below the poverty line (US Census 2013). Chautauqua County residents are less healthy and adopt lifestyle behaviors that place them at risk, such as being overweight/obese and smoking. There is a high incidence of chronic diseases such as diabetes, cardiovascular disease and depression, which is also projected to increase as the population ages.

#### C. Need

The needs of the aging population far surpass available financial and human resources. The number of individuals aged 65 and older in Chautauqua County is expected to grow from 17.7% of the county's population in 2013 to 19% in 2020 which is about 30% higher than the national average. There are insufficient numbers of physicians, nurses, and aides. Government and charitable

funding for services is shrinking, and there are growing numbers of seniors unable to continue to live independently due to physical or mental limitations. Addressing the growing long-term care needs in the county will continue to be a challenge.

The federal Office of Rural Health Policy (ORHP) 2012 Outreach Grant application emerged from a planning process completed by the Long Term Care Council which received an ORHP Network Planning Grant in 2010. Two priorities identified during that process became the basis of this grant project; 1.) Strengthening and enhancing case management and referral services; and 2.) Increasing awareness of the need for affordable home- and community-based services.

To address these priorities, the LTCC developed the *Chautauqua Model* which supports the coordination of services by integrating medical AND social needs using evidenced-based models such as Patient Centered Medical Home (PCMH) and the Aging and Disability Resource Center (ADRC)

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The following evidenced-based models were used to form The *Chautauqua Model* and support the coordination of services:

- Chronic Care Model (CCM)
- Patient Centered Medical Home (PCMH)
- Guided Care (GC)
- Aging Disability and Resource Center (ADRC)
- Health Information Exchange (HIE)
- Chronic Disease Self-Management Program (CDSMP)
- Care Transitions Intervention (CTI)

CCHN has used the CCM as the blueprint for system redesign and has adapted it to reflect the concept of the “medical neighborhood”. The focus has been on rebuilding independent primary care practices into an integrated network of Patient Centered Medical Homes (PCMH) that can be supported by its various “neighbors” to improve patient outcomes. Specific to the Chautauqua Model, Guided Care Nurses within the PCMH connect to their “neighbor,” the ADRC, using the HIE to send referrals for community-based services such as CTI and CDSMP.

### B. Description

The ***Chautauqua Health Connects (CHC)*** project responds to the need to strengthen cooperation among local providers by improving communications for care transitions and facilitating the integration of referrals to community based services/programs into the work flows of the PCMH. Chautauqua County Office for the Aging (OFA) served as the pilot Community-Based Organization (CBO); they operate NY Connects, a single point of entry for long-term care services in the county, and coordinate home- and community-based services for eligible seniors. OFA is seeking to establish itself as an ADRC.

Realization of the *Chautauqua Model* has been supported in two ways made possible with the ORHP Outreach grant:

1. Expansion of ***Chautauqua Health Connects (CHC)***, the local HIE, to include a secure messaging and referral application called ProviderLink© (PL). Participating facilities are connected to the HIE in various ways, including Admission, Discharge, and Transfer (ADT) feeds, clinical data exports, and secure messaging and referrals through PL, allowing care coordination to be achieved. Activities that supported the implementation of PL included:
  - Identification of key staff from partner agencies to participate in workgroup meetings
  - Development of a pilot to integrate the use of ProviderLink© into facility workflows to send information including patient history, ADTs, discharge instructions, healthcare proxies, and referrals and outcomes
  - Development of a referral feedback report to provide primary care practices information regarding the outcome of a referral
  - Training of facility staff and monitoring utilization of ProviderLink© during a pilot roll-out of the program
2. Adoption and implementation of the Guided Care (GC) Program where a Registered Nurse within each practice is trained to manage clinical and community-based care services for complex ill patients. Activities that supported the implementation of GC included:
  - Identification and recruitment of Registered Nurses to participate in the Guided Care training

- Development of protocols and processes to identify, enroll, assess, manage, and monitor complex, chronically ill patients
- Creation of a monthly Guided Care Nurse Learning Collaborative to share experiences and orient Guided Care Nurses to community resources and utilization of PL for referrals

### C. Role of Consortium Partners

#### **Consortium/Partnership**

CCHN, the Chautauqua County Office for the Aging, Heritage Ministries Management Company, Inc. and Lake Shore Nursing Facility were the grant's original consortium. Moving forward, the consortium will be led by the local Accountable Care Organization, the Chautauqua Region Associated Medical Partners (AMP), which includes 8 practices, 4 hospitals, and 2 SNFs (includes 1 of the original consortium members). AMP will: 1) encourage creative and lasting collaborative relationships among health providers in Chautauqua County; 2) Ensure that CCHN receives regular input for continued research and development of evidenced-based strategies; and 3) Ensure that future projects address the health needs of the medically complex residents of Chautauqua County to enable individuals to live independently.

#### **Chautauqua County Health Network (CCHN)**

As the lead agency, CCHN facilitated over 40 meetings for consortium and workgroup members, providing opportunities for continuous communication and feedback during the planning, design, implementation and evaluation phases of the project. Ongoing technical assistance was provided to partners regarding data flow, report design, ProviderLink® training and utilization, and work flow redesign. CCHN dedicated staff time to collect outcomes data and generate grant reports which were shared with consortium members. CCHN also lead sustainability planning for the Chautauqua Health Connects project with over 30 project stakeholders participating.

#### **Chautauqua County Office for the Aging (OFA)**

OFA participated in consortium and workgroup meetings and was actively involved during the design, planning, implementation and evaluation stages of the project. OFA participated in the pilot roll-out of the project, having trained staff to use ProviderLink® to accept referrals for community-based services from primary care offices. OFA collected client-specific reporting on a monthly basis and sent this information to CCHN for aggregation and evaluation. Staff also participated in sustainability planning for the Chautauqua Health Connects project.

**Heritage Ministries Management Company, Inc.** Heritage participated in consortium and workgroup meetings and was actively involved during the design, planning, implementation and evaluation stages of the project. Heritage participated in the pilot roll-out of the project, having trained staff to use ProviderLink® to send discharge instructions to primary care offices. Staff also participated in sustainability planning for the Chautauqua Health Connects project.

**Lakeshore Nursing Facility:** Early in the grant period, Lakeshore SNF was particularly hard hit by the financial struggles so many of our providers are facing. Its parent company, TLC Health Network, has been struggling to keep the SNF, a hospital, home care, and primary care office open for business. After narrowly avoiding bankruptcy, it is in the process of closing the SNF and downsizing in-patient beds. Staff also participated in sustainability planning for the Chautauqua Health Connects project.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Since receiving this grant, CCHN has seen great progress along with facing challenges. The establishment the Chautauqua Region Associated Medical Partners (AMP) further supported grant goals, encouraging investment in infrastructure and redesigned care processes and has allowed access to claims data to track some of the project measures more accurately.

Highlights of grant outcomes include:

- Connected 26 organizations to the HIE including 15 Hospitals, 7 PCPs, 2 SNFs, and 2 CBOs
- Increased utilization of ProviderLink® for secure messaging and referrals over one year resulting in approximately 17,000 transactions as of March 2015
- Produced a replicable electronic referral process that has been adopted by 6 practices
- Improved care transitions with 45% of patients following up with their primary care provider within 7-14 days of discharge and a 3% reduction in hospital readmissions

- Adoption of the Guided Care (GC) Program with 6 practices having at least 1 GC Nurse (GCN), 2 of which added an additional GCN using their own resources. Approximately 237 patients have been served by a GCN since 2012 and there has been a 4.5% decrease in 2014 Readmission Rate for GC patients compared to 2013.
- Improved connections between providers and CBO's with a 102% increase in referrals since 2012. It should also be noted that due to the increased number of referrals and demand for services, OFA and CCHN expanded capacity to respond to the need:
  - OFA successfully advocated for an additional \$250,000 for their annual budget to increase staff capacity and services.
  - CCHN created a new position – a Consumer Engagement Specialist to manage leader training, community-wide class scheduling, provider referrals, patient enrollment, tracking, and reporting.
- 30% of patients show improvement in their Patient Activation Measure score and 25% of patients show improvement in their RAND 36 Health Survey score.
- Increased partner commitment to continue to work together on the following initiatives:
  - CCHN has applied for the ORHP 2015 Outreach Grant on behalf of 4 hospitals and 5 SNFs to establish the INTERACT model to reduce acute care transfers
  - CCHN has applied for the ORHP Rural Health Care Coordination Network Partnership program on behalf of 4 hospitals, 6 practices, and Hospice to expand the network's care coordination framework across the continuum of care to manage moderate risk, complex ill, and terminally ill patients.

## B. Recognition

The electronic referral process that was developed as a part of this grant has been highlighted in several venues across New York State including:

- The New York State Department of Health/University of Albany School of Public Health Prevention Agenda Webinar Series
- The New York State Association of Rural Health Conference roundtable discussion
- New York State Health Foundation grantee meeting
- New York State Academy of Medicine conference
- Inclusion as an intervention for achieving goals of the New York State Prevention Agenda

## Part VI: Challenges & Innovative Solutions

### Consortium and Network Partners

Project partners continue to have their own challenges which have affected the implementation of this grant project. Timing constraints due to vacancies, budget cuts, facility closures, and internal technology projects continue to be an issue for our partners, the latter affecting one community hospital's participation in the South County workgroup. While hospital staff still participated in workgroup and one-on-one meetings with CCHN, it remained unclear how the new workflows being developed would align with the project goals. As a result, the pilot project for the South County workgroup was largely developed without them and attempts to reengage them in the project were unsuccessful.

Unfortunately, more serious challenges affected the North County workgroup. As mentioned above Lakeshore SNF and its parent company TLC Health Network had been particularly hard hit by the financial struggles many of our providers are facing. This was partially due to a failed merger with another community hospital in the county under Lake Erie Regional Health System of New York (LERHSNY). LERHSNY itself went through major administration changes due to financial constraints, letting go its CEO early in the 2<sup>nd</sup> year of the grant. As a result the work of staff and administration of all of the facilities involved had been significantly disrupted leading to turnover and services attrition. Without an anchor SNF and/or hospital, the North County workgroup was not able to get back on track for the grant period.

### Covisint Healthcare®

Covisint Healthcare®, the product selected by the network and the Integrated Delivery System (IDS) to serve as the Health Information Exchange, was never fully completed and functional during the course of the grant. As an integrated system, ideally all components should have been functional before the product was deployed to partners, but in order to accomplish grant goals, CCHN operationalized the secure messaging and referral communications application, ProviderLink® (PL) for the pilot roll-out.

In November 2014, Covisint announced they will be discontinuing their data aggregation and analytics services, although PL will continue to be offered. The local ACO negotiated early termination of their contract in order to pursue other options. The plan is to continue to use PL for another year, and then reassess if it is still needed for secure messaging purposes.

### Guided Care

While there have been notable accomplishments for the Guided Care (GC) program, adoption and implementation were challenges for the following reasons:

- Only RNs are eligible to participate in the GC Program and some of the smaller practices don't have an RN on staff.
- Financial constraints prohibit practices from hiring additional staff.
- Where RNs exist, a few are unsure of how the program benefits and are concerned about the time commitment involved with implementing the program.
- GC is competing with other projects the PCPs are focused on, including Meaningful Use.
- For some PCPs who have shown interest, it has been a challenge to find an RN interested in taking on the role of GCN due to training, meeting, and coverage requirements.

The practices that have adopted GC are just now starting to realize the value of the program and are making the necessary workflow adjustments to utilize the GCN to create efficiencies, improve health outcomes, and patient satisfaction. With the establishment of the CMS Chronic Care Management code in January 2015, CCHN is hopeful more practices will be open to adopting GC in their practice, since there is an established revenue source to sustain the service.

### Referral Process to NY Connects

Office for the Aging (OFA), which operates NY Connects, experienced growing pains over the course of the grant trying to meet the demand of increased referrals resulting from this project with their budget limitations. Practices that were referring patients to NY Connects encountered some issues that included the following concerns:

- Due to limited staffing capacity of NY Connects, staff did not have the opportunity to speak directly with operators, and response time was delayed. This was problematic for staff trying to arrange time-sensitive services during transitions of care.
- Many patients were placed on wait-lists due to limited capacity and funding to meet the increased demand and deliver services.
- Eligibility requirements for community services can be confusing, and PCPs are not always aware of these limitations when identifying a patient need.

OFA was able to take this feedback as well as data regarding increased referrals to the County to advocate successfully for increased funding. OFA has added additional staff and reduced wait times for services. Additionally, as NY Connects staff gains knowledge and experience about community services, eligibility issues can be addressed through the identification of alternative options for services.

### Hospital Readmission Data

It is speculated that changes in admission criteria are leading to increased observation stays of milder cases. This leaves the more difficult cases with a higher probability of being readmitted in the denominator, making it harder to keep the readmission rate down. A different measure may need to be considered in order to determine accurately if care coordination efforts are having a desired impact.

## Part VII: Sustainability

### A. Structure

Moving forward, the consortium will be led by Chautauqua Region Associated Medical Partners (AMP), with additional partners being brought into workgroups to carry out project activities. AMP Members include 8 practices, 4 hospitals, and 2 SNFs (includes 1 of the original consortium members). OFA will continue to be a community-based partner.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Clinical transformation is a complex undertaking, involving fundamental changes not only in how a facility operates as a unit, but also how it operates within a larger system. Partners have acknowledged the continued need to work together systematically and collectively on clinical integration, care coordination, and the implementation of evidenced-based practices to serve patients. Overall, partners agreed the work being done has a positive impact on individuals they are serving, but the needed support and capacity is somewhat lacking, and that can be stressful for facilities and their staff. While they all agree this is the kind of care they should be delivering, providers are reaching their limit on what they can do without the resources to support it. Practices are struggling with straddling the gap between the current fee-for-service environment and new value-based payment structures. Providers are increasingly required to show improved outcomes which are supported by providing services such as Care Transitions Intervention or Guided Care, but lack resources to perform the work. CMS has just recently begun reimbursing for these types of services with Care Transition (CT) codes going into effect in January 2013 and Chronic Care Management (CCM) codes following in January 2015. Overall, the consensus is that both GC and secure messaging should continue to be developed and expanded while taking into consideration what is working, what is not working, and opportunities for improvement. With partner feedback in mind, the Consortium will continue to improve care transitions and care coordination by facilitating the following activities:

- Expand the availability of GC services
- Expand connection among practices, skilled nursing facilities, home care agencies, and Hospice using ProviderLink®

Areas that were identified for further exploration and development include:

- Expand care coordination capacity with focus on behavioral health, cardiovascular disease, and orthopedic episodes of care.
- Fine-tune follow-up communication to practices regarding referral outcomes and community service utilization
- Implement INTERACT (Intervention to Reduce Acute Care Transfers) if the ORHP expansion grant application is funded
- Expand efforts to include additional Medicare Advantage programs as well as the Medicaid population

### C. Sustained Impact

The **Chautauqua Health Connects** project has served as a catalyst for bringing an array of health, social, and support services into a more cohesive service delivery system. As a result, new capacity has been created to serve older adults in new ways. Tangible results have been realized with a reduction in hospital readmissions, increased follow-up rates, and improvement in perceived health status. In addition, the work accomplished with this grant will leave a lasting impact for our providers and the patients they serve as outlined below.

#### **On-going Collaboration:**

Connections between different facility types were made for the first time as a result of the grant, including between primary care and skilled nursing facilities, and clinical sites with community-based agencies. These connections have resulted in increased information-sharing and improved collaboration and care coordination which has led to improved outcomes such as reduced readmissions and increased fall screenings. Based on feedback, consortium partners remain committed to improving care coordination and communication among their organizations.

#### **Improved Service Models:**

**Guided Care:** Practices have already begun to commit their own resources in order to expand the GC program and serve more patients. After the grant ends, GC nurses will continue to be employed by the practices and use their training to provide coordinated, patient-centered, cost-effective care. GC will be further supported by the Chronic Care Management Code that became available January 2015.

**Care Transitions:** As mentioned above, connection between primary care and skilled nursing facilities was really made for the first time as a result of this grant. Both sets of partners came to the table willing to make permanent workflow changes to allow for greater information-sharing resulting in better care for the patient especially at the most critical time - during transitions of care. More patients are seeing their PCP within 7-14 days of discharge, which decreases their likelihood of being readmitted. Transitional Care Management Codes also went into effect in January 2013, allowing PCPs to bill for care management services following discharge from a hospital or SNF.

**Community-based Referrals:** Providers have seen the value of community-based partnerships by integrating referrals to CBOs into the work flows of the PCMH. Through this partnership, follow-up reporting has also been established, updating the PCP regarding the result of the referral so further action can be taken with the patient if needed. The electronic referral process that has

been established is easily replicated and can continue to be expanded into additional practices and agencies after the grant ends. Because of its replicability, this model has also been highlighted in several venues across New York State as outlined in Part V. Section B.

**Increased Capacity:**

**HIT:** This grant built onto Chautauqua’s developing Health IT infrastructure and has enabled increased efficiency and effectiveness derived from interagency collaboration and secure messaging such as ADT alerts.

**Providers:** As a result of grant-funded redesign efforts, network providers are better positioned to operate successfully in a value-based/pay-for-performance environment.

**Patients:** This grant enabled a process to improve care coordination for patients and measure their engagement and satisfaction using the Patient Activation Measure and RAND 36 Health Survey.

## Part VIII: Implications for Other Communities

The electronic referral process that was developed as a part of this grant has been highlighted as a replicable model in several venues across New York State. Suggestions for other communities looking to implement a similar program:

- Engage the organizations you are looking to connect to discuss their needs - develop a project around a gap that has been identified
- Start small – start with 2 or 3 organizations to conduct a pilot of the project
- Conduct a technology audit – how are they currently communicating, what capabilities do they have to communicate electronically, especially between medical and non-medical organizations
- Develop protocols and processes as a group – this could include standardized referral forms and responses, outcome reports etc.
- Conduct staff training – break it down into 2 areas: 1) The overview of community resources to which they can refer; and 2) the technology that they will use to make the referral. Staff will struggle to retain information regarding both at the same time
- Monitor progress – is the process working as intended? If not, provide ongoing technical assistance to partners

Quantitative measures and indicators to consider may include the number of engaged organizations that have signed an MOA, number of people being served, and number of referrals made, and number of patients showing improved Patient Activation Measure scores.

# New York

## Chautauqua Opportunities, Inc.

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23565
<b>Grantee Organization</b>	Chautauqua Opportunities, Inc.
<b>Organization Type</b>	Corporate Entity, Federal Tax Exempt, NON-PROFIT
<b>Address</b>	17 W. Courtney Street, Dunkirk, New York 14048
<b>Grantee organization website</b>	<a href="http://www.chautopp.com">www.chautopp.com</a>
<b>Outreach grant project title</b>	Rural Health Care Services Outreach Grant Program
<b>Project Director</b>	Name: Diane Hewitt-Johnson Title: Health Services Division Director Phone number: 716-661-9430 Fax number: 716-661-9436 Email address: <a href="mailto:dhewitt-johnson@chautopp.org">dhewitt-johnson@chautopp.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000 May 2013 to April 2014: \$150,000 May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Lakeview Shock Incarceration Correctional Facility	Brocton/Chautauqua/New York	Correctional Facility
*Information Resources and Associates	Varysburg/Wyoming/New York	Consultant/Evaluator
Brocton Central School	Brocton/Chautauqua/ New York	School
Panama Central School	Panama/Chautauqua/ New York	School
Salamanca Youth Bureau	Salamanca/Cattaraugus/ New York	Youth Center
*The Resource Center	Jamestown/Chautauqua/New York	Social Service, Welfare, Behavioral and Mental Health Organization
*The Chautauqua Center	Dunkirk/Chautauqua/New York	Health
*Chautauqua Co. Health Department	Mayville/Chautauqua/New York	Health Department
*Brooks Memorial Hospital	Dunkirk/Chautauqua/New York	Hospital
Westfield Hospital	Westfield/Chautauqua/New York	Hospital
Ripley Central Schools	Ripley/Chautauqua/New York	School
Dunkirk Schools	Dunkirk/Chautauqua/New York	School
Cassadaga Schools	Sinclairville/Chautauqua/New York	School
Chautauqua County Health Network	Jamestown/Chautauqua/New York	Health Network
Clymer Central Schools	Clymer/Chautauqua/New York	School

## Part III: Community Characteristics

### A. Area

The Chautauqua Opportunities, Inc. Rural Health Care Services Outreach Grant Program provides services to two counties: Chautauqua County and Cattaraugus County.

## B. Community description

Chautauqua and Cattaraugus counties are located in the southwest corner of New York. At the time of the 2010 U.S. Census Chautauqua County's population was 134,905, and Cattaraugus County had a population of 80,317. Access to quality health care is difficult, since both counties are designated as "Health Professional Shortage Areas" by the U.S. Health Resources and Services Administration. The problem is compounded by a very limited public transportation system, cultural and language barriers, and the fact that 19.1% of Chautauqua County and 17.2% of Cattaraugus County residents live below the federal poverty level (2008-2012 American Community Survey). Chautauqua County & Jamestown have a higher percentage of senior citizens than New York State and the country as a whole (United Way). As of the 2010 Census, 16.6% of Chautauqua County and 15.5% of Cattaraugus County residents were 65 years of age or older. The risk of diabetes increases with age and is most prevalent among adults between 65-74 years of age (20.3%) for the state. The local rate of diabetes deaths (approximately 27 out of 100,000) is very high compared to the average rate for other rural counties in upstate New York (16.3), many of the same indicators that make people at risk for diabetes makes them susceptible to heart disease and stroke as well. The Department of Health, County Health Assessment Indicators indicate that a large percentage of the population is considered overweight or obese, 61.6% in Chautauqua and 62.6% in Cattaraugus. With the elimination of after school programming for elementary aged children, there has been an increase in obesity and number of overweight children, 32.4% reported in Chautauqua and 36.5% in Cattaraugus. Transportation serves as a large barrier for at risk residents accessing health services in both counties and the most disadvantaged are the elderly, the low-income and the disabled.

## C. Need

Access to quality health care is difficult, since both counties are designated as "Health Professional Shortage Areas" by the United States Health Resources and Services Administration. The problem is compounded by a very limited public transportation system, cultural and language barriers, and the fact that 17.7% of Chautauqua County and 17.4% of Cattaraugus County residents live below the federal poverty level (2009 American Community Survey).

Our program focused on school and community-based obesity prevention, and diabetes prevention and management. The target population will include children in grades K-8 and their parents, and adults who are pre-diabetic or have a Type I, Type II, or gestational diabetes diagnosis. The Department of Health County Health Assessment Indicators illustrate that 61.6% of Chautauqua County residents and 62.6% of Cattaraugus County residents are considered overweight or obese, exceeding the upstate New York rate of 60.6% (2008-2009 data). Chautauqua and Cattaraugus Counties see a high number of deaths due to diabetes. A goal of Healthy People 2020 is to decrease the national level of diabetes deaths from 73.1 deaths to 65.8 deaths per 100,000 populations. The County Health Assessment Indicators for 2006-2008 indicate that for every 100,000 population, 27.6 persons in Chautauqua County and 25.8 persons in Cattaraugus County died as a result of diabetes. While local statistics are lower than the national average and the goal for 2020, the rates of diabetes deaths are high when compared to the average rate of 16.3 persons per 100,000 for other rural counties in upstate New York, many of the same indicators that make people at risk for diabetes, such as being overweight or obese, make them susceptible to heart disease and stroke as well. The Department of Health County Health Assessment Indicators for 2008-2009 show that Chautauqua and Cattaraugus Counties have higher rates of death from heart disease when compared to other rural New York counties. The statistics indicate that 279.7 per 100,000 people in Chautauqua County and 328.5 per 100,000 in Cattaraugus County died from cardiovascular disease, compared to 262.9 for upstate New York. The stroke mortality rate per 100,000 for the same time period was 37.2 for Chautauqua County which exceeds the upstate New York rate of 33 while Cattaraugus County was slightly below the New York rate at 31.7 per 100,000.

Poverty is not the only factor which contributes to the target populations' higher than average obesity and mortality rates. A lack of access to health insurance also plays a contributing role. The 2009 American Community Survey (ACS) indicated that 10.1% of Chautauqua and 12.1% of Cattaraugus County's population were uninsured. For both Chautauqua County and New York S 4.6% of the children under the age of 19 were uninsured. However, in Cattaraugus County this percentage doubled to 9.2% as of the 2009 American Community Survey. The Western New York Public Health Alliance Health Risk Assessment Update for 2004-2005 found that among adults with no health insurance in the 8-county Western New York area that includes Chautauqua and Cattaraugus Counties, 62% were employed.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

School-based obesity prevention activities will use the CATCH (Coordinated Approach to Child Health) Kids Club model, with supplemental parent materials from We Can! (Ways to Enhance Children's Activity & Nutrition). Needs Assessments conducted with School Health Advisory Councils for the purpose of identifying and implementing systemic change to health and wellness policies and practices will use the School Health Index from the Centers of Disease Control as a guide. The approach to education

for pre-diabetic clients will focus on weight loss with the intention of preventing diabetes, using the Group Lifestyle Balance approach that was adapted from the Diabetes Prevention Program developed at the University of Pittsburgh. Individualized self-management education for diagnosed diabetics will use the evidence-based Michigan Model of Diabetes Self-Management Education. A description of each of these models, including the evidence base for each, is described below.

**CATCH (Coordinated Approach to Children's Health) Kids Club (CKC)** is a physical activity and nutrition education program for elementary school-aged children (grades K–5) in after school or summer-care settings. CATCH (Coordinated Approach to Children's Health) uses a coordinated approach to help children adopt healthier dietary and physical activity behaviors by positively influencing the health environments of recreation programs, schools, and homes. CATCH Kids Club (CKC) is composed of nutrition education materials (including snack activities) and a physical activity component. The education component aims to equip children with the knowledge, skills, self-efficacy, and intentions to make healthy dietary and physical activity decisions. The curriculum uses a variety of education strategies, including large group discussions, educational games and activities, goal setting, and hands-on snack preparation and taste-testing.

**We Can! (Ways to Enhance Children's Activity and Nutrition)** provides activities and programs that encourage improved nutritional choices, increased physical activity, and reduced screen time in youth ages 8-13. It was developed by the National Heart, Lung, and Blood Institute, and promoted in collaboration with the National Institute of Diabetes and Digestive and Kidney Diseases, the National Institute of Child and Human Development, and the National Cancer Institute. We Can! was chosen as a supplement to the CKC because of its focus on activities for parents and families as a primary group for influencing youth.

**The School Health Index (SHI)** was to be used when working with School health Advisory Committees (SHAC's) to conduct a Needs Analysis of health and wellness policies and practices. In light of the loss of afterschool programming, needs analyses were not conducted and there is minimal contact with the SHAC's.

**The Group Lifestyle Balance (GLB) Program** is a comprehensive lifestyle behavior change group-based program that will be delivered to pre-diabetic clients under the proposed program. The GLB was adapted directly from the successful lifestyle intervention used in the Diabetes Prevention Program funded by the National Institutes of Health. The original DPP Lifestyle Balance intervention (copyright 1996; 2011) was developed and written at the University of Pittsburgh by the DPP Lifestyle Resource Core on behalf of the DPP Research Group. The instructional content of the DPP 16-session curriculum was fully consolidated into 12-sessions designed to be administered weekly. As in the DPP, the goals of the GLB intervention are to achieve and maintain a 7% weight loss, and to safely and progressively increase to 150 minutes per week of moderately intense physical activity similar to a brisk walk.

**Life with Diabetes, Michigan Model of Diabetes Self-Management Education, 4<sup>th</sup> edition: The Michigan Model** was one of the interventions used in a one-year study that included both group and individualized interventions. The study was conducted by the National Institute of Health with oversight by Richard M. Davis, M.D., and published by the American Diabetes Association in 2010. Participants recorded the results of self-monitored blood glucose, diet, and physical activity. Initially, self-monitoring was done daily, followed by decreased frequency based on progress toward intervention goals. Care consisted of one 20-min diabetes education session conducted individually. Patients had access to services at community health centers, including a diabetes collaborative, care managers available for education/goal setting, and a nurse practitioner to help patients with the highest GHb levels. Diabetes single and group sessions resulted in improvements in GHb that were greater in magnitude compared with a relatively more expensive individual home-based and other interventions. The curriculum can be delivered by credentialed and non-credentialed Diabetes Educators.

**Diabetes self-management education and prevention activities will follow Guiding Principles that were developed by the American Diabetes Association in its *Standards of Medical Care in Diabetes 2009*.** These guiding principles form the basis of the National Diabetes Education Program and are based on a high level of evidence. The principles are:

1. Identify undiagnosed people with diabetes and pre-diabetes
2. Manage pre-diabetes to prevent or delay the onset of Type 2 diabetes and its complications
3. Provide ongoing self-management education for people with diabetes
4. Provide comprehensive patient-centered care to prevent or delay the onset of complications and to treat diabetes and existing complications
5. Consider the needs of special populations
6. Provide regular assessments to monitor treatment effectiveness and to detect diabetes complications.

## B. Description

The current rural health outreach program at Chautauqua Opportunities, Incorporated (COI) focused on school and community-based obesity prevention, and diabetes prevention and management. The target population included school aged children their parents and other adult community members, and adults who are pre-diabetic or have a Type I, Type II, or gestational diabetes diagnosis. Awareness outreach and diabetic management services targeted the at-risk population in Chautauqua and Cattaraugus counties, and emphasized the provision of intensive services to diabetics that have one or more coexisting health conditions to help them manage their health care and delay disease progression.

The CATCH (Coordinated Approach to Children's Health) program, with the promotion of healthy lifestyle change opportunities with healthy eating educational instructions as well as the promotion of increased physical activity, has proven to be successful. Through the exposure and introduction to healthy alternatives in diet as well as increasing physical activity in the school aged participants from low impact to moderately vigorous activity patterns, the program has resulted in improved weight patterns in participants.

The diabetic program and diabetic prevention programs have participant acceptance and momentum within the community. These programs have proven to be successful with participant engagement and buy-in leading to demonstrated and documented positive results in weight reduction goals, and progressive improvements in blood glucose levels and HGAIC numbers. These positive changes have included families eating lighter with less carbohydrates and fat intake in a few participant homes. One partner- The Resource Center (TRC) primary care physician has been increasing referrals monthly as a result of improved medical test scores such as A1C reduction, lowered blood glucose levels and targeting a 7% weight reduction effort initially with diabetic customers. These outcomes have demonstrated program success and improved customer health numbers in addition to intended referral expectations. The pre-diabetic classes have some participants losing weight, changing their meal selections and actively controlling carbohydrate intake. The participants have also adopted individual and group accountability in the class, for nutritional results and weight reduction goals, allowing for individual and supported group success. Extensive outreach efforts and word of mouth referrals have led to an increase in presentations throughout the community on diabetes / pre-diabetes, nutrition, and physical activity. Listeners tended to be receptive and led the discussion with requests for healthy recipes, cooking lighter options, and reducing sugar and sodium in their diets. Positive feedback and buy in has led to more requests for presentations and an increased number of referrals for educational counseling.

The Community Gardens and the Gleaning projects as well as donations from community members, have provided a resource of fresh produce that has been distributed to and has been well received by COI customers, many of whom live within federally designated food deserts. COI also provided gleaned produce specific healthy recipes and samples as well. Program goals continue to include increasing community participation with the community gardens as well as providing hands on experience with a long lasting appreciation of gardening and food preservation knowledge

## C. Role of Consortium Partners

The consortium continues to be a work in progress while facing many challenges. Consortium partners, who were active in the first year, declined continuation due to the loss of after school funding and program activities, and with the possible mergers of school systems. Reorganization during the second year identified consortium members who were willing to support the program and support the mission. The reorganization has identified partners who are willing to continue program efforts by implementing new agreements of partnerships to grow and serve our community as well as to recruit new consortium partners. Representatives from the **County Health Department, Brooks Memorial Hospital, The Resource Center, and The Chautauqua Center** have been active referral sources for the program. Concerning the CATCH program and after school programs, **The Salamanca Youth Bureau, Lake Shore Family Center** and our newest member **Chautauqua Lake Child Center** have been currently engaged with our youth of the county. **Lakeview Shock Incarceration Facility** was instrumental in helping COI provide fresh vegetables and promote healthy nutrition. Dr. Laurel Tague, PhD., our Information Resources and Associates Member, has provided the program with program support and guidance throughout the grant. Her evaluation expertise has kept the Grant project and goals on track even with staffing changes.

The consortium responsibilities are as follows:

All partners in the consortium participate in consortium meetings at least four times a year, analyzing data, sharing information and strategizing about the project, proposing interventions as necessary (obesity, pre-diabetes, and diabetes reduction as well as improved nutrition and increased physical activity). **Chautauqua Opportunities, Inc.** (COI), is the lead agency and fiscal agent for the grant. Responsibilities include general supervision of project staff, provision of office space for project staff, referrals, participating in quarterly oversight and strategic planning meetings, outreach and customer engagement, data collection, data analysis and reporting. **Lakeview Shock Incarceration Correctional Facility** has been tremendous in providing fresh produce for

customers, through gleaning as well as starter plan for customer and community gardens. **Information Resources and Associates**, is subcontracted through the lead agency, COI to create and-maintain an electronic database for the purpose of this project (specifically for diabetes customers,) to create interview and survey items and forms, to enter data from surveys and interviews into the database, to perform extracts of data for the purposes of evaluating and reporting, to perform necessary statistical analysis of database measure, to provide technical assistance as needed to maintain quality, accuracy and validity of evaluation information for this project, and to develop a diabetes database for those customers diagnosed as pre-diabetic or diabetic. **Panama and Brocton Central Schools** were partner sites providing direct referrals (students, who participated in afterschool programs designed to increase knowledge of healthy eating practices and physical activity including the CATCH (Coordinated Approach to Child Health) curriculum, ran programs like gardening, walking, and weight management clubs.) Brocton, sustained CATCH (Coordinated Approach to Children's Health) activities after loss of afterschool programming with the assistance of volunteers and school leadership groups (Walking Club, School Garden, Weight loss club). **The Salamanca Youth Bureau** was a partner site providing direct referrals (students, who participated in afterschool programs designed to increase knowledge of healthy eating practices and physical activity including the CATCH (Coordinated Approach to Child Health) curriculum, ran programs like gardening while partnering with the Cattaraugus Farmers Market.)

New Members included: **The Resource Center** conducted on site pre-diabetic with the assistance of COI's Health and Nutrition Educator as well as provided direct referrals to the COI Health and Nutrition Educator for one-on-one DSME. **The Chautauqua Center** acts a source for referrals as well as networking around health insurance enrollment. **Chautauqua County Health Department** assisted with ensuring with program alignment with county trends, needs assessment and health improvement plan, conducted pre-diabetic classes at their facility with the assistance of COI's Health and Nutrition Educator, and assisted with community partnering around health initiatives. **Brooks Memorial Hospital** provided raised garden tables providing fresh produce for the hospital community as well as provides space for a local farmer to set up a weekly market for fresh produce.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

This project encompassed four goal areas. Goal 1 targeted health and fitness levels of school-age children (170+ in grades K-8) and adults (200+). Two public school partners participated until the NY State funding for after-school programming was deleted from the state budget, enabling 151 children in grades K-8 access to CATCH (Coordinated Approach to Children's Health) (Coordinated Approach to Children's Health) programming and activities. Both schools were partners during the previous cycle of this grant. The Year 1 end-of-year survey results (n=88) demonstrated overall improvement by end of year in food choices, activity levels, and basic knowledge about healthy habits and nutrition. Understanding *fiber* and its importance and role in diet needs more explication at all ages. There also seems to be some confusion related to the significance of "sometimes foods" – actual frequency of consumption vs. recommended frequency. Persistent presentation of these topics would promote improvement in food choices. More instruction related to alternative protein options (other than meat) is also needed.

Most children reported eating breakfast nearly every day. Water and low-fat milk are the most prevalent choice of beverage for most children, but juice is a moderately close contender followed by soda pop. More children reported eating three fruits each day than two vegetables. There also seems to be some confusion among many children about how many fruits and vegetables should be consumed each day. More instruction and encouragement is needed in reading food labels and in trying new foods. Since a majority of children eat school lunches at least 3-4 days a week, perhaps School Health Advisory Committees should partner with Food Service staff to create a weekly featured food tryout. Parents could be targeted in these efforts by sending recipes home and promoting each week's selection on the school calendar.

Salamanca Youth Bureau (SYB) was the other partner in implementation CATCH (Coordinated Approach to Children's Health). From summer 2012 through February 2015, a total of 83 youth participated in CATCH (Coordinated Approach to Children's Health) programming through the SYB. Youth dropped in on a daily basis at the SYB, although all youth are encouraged to participate every day the SYB is open (4 days per week). Provided that parental approvals were on file, height and weight were measured four times during this time period (January 2013, May 2013, October 2013, and December 2014), and blood pressure was measured monthly. CATCH (Coordinated Approach to Children's Health) was implemented according to a slightly modified protocol: 20 or more minutes of Moderate to Vigorous Physical Activity (MVPA; various activities) were organized and led by adult facilitator(s) every day of program, and lessons related to nutrition and healthy living habits were presented on average twice monthly. Program was implemented a total of 375 days from July 2013 through end of February 2015. During the first 26 months of program (275 days), 36 lessons were presented, at a rate of about one lesson every 7.6 program days (roughly every two weeks on average). During the last 5.5 months of program (100 days), only five lessons were presented, at a rate of about one lesson every 20 program days (roughly one lesson every 5 weeks on average). Seventy-five of the 83 youth had Body Mass Index

calculated at least one of these four windows. Far more youth either retained a normal Body Mass Index status or reduced to a healthier status level. By the middle of Year 2 of the program, no youth moved to a less healthy Body Mass Index status (i.e., significantly increased weight and Body Mass Index for age and height). Also, only one participant from this point in time forward remained either obese or overweight. Pre-post survey results are not included due to the small number of matching pre-post forms (missing data).

In terms of outreach to families and adults, instruction was delivered at 24 community events, four migrant health clinics, and two health & Nutrition Advisory Committee meetings. Topics included recommended physical activity levels and preparation and preservation of fresh food. In addition, fresh produce was grown in partnership with the local Lake View SHOCK Facility in growing seasons 2012, 2013, and 2014, providing approximately 5600 pounds of fresh produce to clients who may not otherwise have accessibility to fresh produce.

The third goal for the project was to help diabetic and pre-diabetic customers effectively manage or prevent diabetes. A customized records management database was developed at the beginning of the project and was used to maintain all records pertaining to interactions with and provision of services to this target population. A total of 232 clients were contacted through this goal. Not all of them received services (many declined). All together 207 clients were coached and counseled through this goal. One hundred twenty-eight individuals were categorized: 6 with no diagnosis, 13 gestational, 1 pre-diabetic, 7 Type 1, and 101 Type 2. Outcomes were mixed according to diagnosis. Gestational clients fared the best: 10 of 12 improved or managed their condition. Type 1 and pre-diabetic clients demonstrated about a 50% improvement rate. Similarly, a little over half of the Type 2 clients seem to have improved or managed their conditions. Monitoring BP began in earnest with Year 2. Where more than one record was available, progress is slightly better in Year 2 (20 of 28 normal or improved) than in Year 3 (27 of 44 normal or improved). Body Mass Index was calculated for 221 clients out of a total of 398 individual measures of height and/or weight (70 individuals had missing data). Obese clients outnumbered overweight individuals nearly 6 to 1. Comparing Body Mass Index at onset of program with a later Body Mass Index measure (n=67 with all needed data), slightly less than half (30 compared to 37) actually maintained normal Body Mass Index status or improved their Body Mass Indices, from a higher level (percentile) to a lower one. Since the majority of these clients are categorized as *obese*, the reader can imagine how very challenging it must be to reduce one's weight from the 95<sup>th</sup> percentile or above (obese) to overweight (85<sup>th</sup>-95<sup>th</sup>) or normal (below 85<sup>th</sup>). Nonetheless, 19 of those 67 clients did just that. The remaining 35 stayed overweight or obese: the challenge of losing weight and reducing their Body Mass Indices was too great for them within the three-year program.

Clinical lipid panels were also monitored for diabetic and pre-diabetic clients, whenever data were available, including triglycerides (TG), cholesterol (Chol), HDL, and LDL. Creatinine and microalbumin were also collected but were unavailable for so many clients; they are not included in this analysis. Clinical lipid data were collected for 181 individuals, but for 83 of these, only one measurement was available. Therefore, progress can only be gauged for the remaining 98 with at least two measurements. Only 25 of the 181 clients demonstrated normal or at least improved level(s) of TG, Chol, HDL, and/or LDL. Interestingly, 89 clients had elevated TG levels compared to only 46 with elevated Chol, or LDL, or low HDL – nearly a 2 to 1 ratio. Part of the DSME process requires clients to set relevant goals and monitor their progress. A total of 130 individuals set at least one goal, the number setting goals increased across the years. The most prevalent goals selected were: meal planning, weight status, physical activity, and blood glucose monitoring and A1c testing. Outcome data and level of effort ratings are still being collected and entered for the project. Preliminary tallies indicate that 80% demonstrated progress on goals sets by end of Year 1.

As mentioned previously, 232 clients were served with DSME and pre-diabetic coaching and education. Looking at the number of contacts, visits, and follow ups speaks to the underlying challenge of providing DSME education and support services to clients in an out-patient setting. Every year *at least a 100% increase* in client contact and interaction was demonstrated. The project staff engaged in this component waged an increasingly persistent campaign against wavering client motivation and commitment, self-discipline, denial, and resignation. The database enabled notations of attempted phone calls, emails, home visits, and mailed correspondence, that majority of which went unanswered. Of the 232 clients, during the three-year period a total of 151 were discharged for one reason or another. Sixty-eight of these (45%) were discharged because they refused to respond to all follow-up attempts. Over 30% (46) of these discharges simply declined further services and participation in the activities. Over half of the remainder (16) gave no reason for discharge, four were noncompliant, five left the area (moved), and a few miscellaneous reasons. All together the database tables hold 1,029 records documenting visits, follow-ups, and consultations.

## B. Recognition

The Salamanca Youth Bureau, one of our partners was highlighted for the work that they are conducting at the bureau. The use of the CATCH (Coordinated Approach to Children's Health) curriculum provided by us was specifically highlighted and noted for improved health outcomes for the youth that frequent the facility. (*Appeared in the January 8, 2015 edition of The Salamanca*

Press.)

A second article highlighting our community garden efforts came from *The Observer Today*, July 13<sup>th</sup>, 2014.

Lastly, we were also recognized by the Salamanca Youth Bureau as they participated in and were highlighted by the Robert Wood Johnson Foundation while producing a video on WNY health initiatives.

## Part VI: Challenges & Innovative Solutions

Several challenges impeded the success and sustained impact of the program. Our focus was on school-aged children in targeted afterschool programs as this was the most accessible population to engage. There was a loss of afterschool funding for CATCH (Coordinated Approach to Children's Health) partner schools in Brocton and Panama. This loss of funding meant the loss of continued participation in our program at these schools, which highly impacted our work plan and goals to be achieved. Brocton was able to continue with some CATCH (Coordinated Approach to Children's Health) activities; however the partnership was pretty much dissolved after the loss of funding. The 2 school districts were also in the midst of deciding if they should dissolve and merge with other districts, so this particular program lost focus and backing. Parents were not engaged as they felt CATCH (Coordinated Approach to Children's Health) impeding on the afterschool programming academic focus which also led to the dissolution of the partnership. This ultimately impacted program outcomes and program goal expectations for CATCH (Coordinated Approach to Children's Health). The program was able to find alternative sites with afterschool activities to promote CATCH (Coordinated Approach to Children's Health). At this time we strategized ways to find new opportunities that allowed us to continue and expand services. This led us to reach out to local schools and their physical education programs, child care providers, and alternative afterschool programs serving youth. Because the program worked with schools who had After School Funding it was charged to engage the School Health Advisory Committees (SHACs) which serve as the entities that monitor and implement strategies around physical health and nutrition within the schools. Many in the county operate separately from one another, creating county wide inconsistencies in engagement of the SHAC's (some rarely even meet) as well as inconsistencies in the nutritional and physical activity efforts within the schools.

Another challenge included competing organizations within the county. Although other organizations focused on policies and systems, while they were developing the policies and systems, there was no communication between the agencies, resulting in unintended competition. The program has since partnered such that the same group diabetes curriculum will be taught as well as a system is in place to track and monitor county wide referrals for diabetes classes, leading to consistency in referrals and education for pre-diabetic customers throughout the county. Additional program challenges included a lack of participation (for various reasons) from pre-diabetic and diabetic customers. In response, our health and nutrition educator now conducts home visits and group education classes to outlying areas

## Part VII: Sustainability

### A. Structure

After sustainability planning and much discussion it was decided that the consortium will continue to operate with the current members including: Lakeview Shock Incarceration Correctional Facility, Information Resources and Associates, Brocton Central School, Panama Central School, Salamanca Youth Bureau, The Resource Center, The Chautauqua Center, Chautauqua County Health Department, and Brooks Memorial Hospital.

The roles of individual consortium members need to be more clearly defined and an enhanced effort to work more collaboratively while leveraging resources, increasing capacity and maximizing service delivery and program outcomes needs to occur.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

CATCH (Coordinated Approach to Children's Health) Activities as well as one-on-one Diabetes Self-Management Educations (DSME) and group pre-diabetes education will continue to be sustained. Methods/strategies that will be used to sustain program activities include for:

**CATCH (Coordinated Approach to Children's Health) activities including:** leveraging funding with partners, allowing partners to absorb the cost of program implementation and operation, utilizing other curriculums that are more cost effective but evidence based.

**Diabetes Self Management Education and Pre-Diabetic Education activities:** may include implementing 3rd party reimbursement (Medicaid and private insurers) once the Health and Nutrition educator has obtained certification as well as program accreditation, incorporating the pre-diabetes education into a system that the Chautauqua County Health Network has implemented in order to streamline referrals for education as well as track those educated. This will provide consistency in education, less confusion for providers who may want to refer patients and a collaborative effort throughout the county to track and monitor trends occurring in diabetes.

**Other methods may include:** Collaborating with partners while leveraging resources, pushing for re-engagement of the Diabetes Task force in the county, accepting donations for materials from sales reps and or obtaining permissions to copy printed materials, utilizing agency supports life skills education), utilizing data and surveys to promote the quality of the program and demonstrate proven practices (leverage resources), collaborating with other programs targeting youth (Summer Feeding, 21 Century grants, Advantage After School grants), seeking out grants / funding for identified service delivery gaps (Northern Chautauqua County Foundation, Home Depot, Burpee Seeds, Wal-Mart, Farm To School programs, etc.), accepting in-kind donations (Lakeview Shock Incarceration Correctional Facility, area nurseries and farmers, programs with similar initiatives) and utilizing interns and volunteers to provide education and peer mentoring.

### C. Sustained Impact

The long term effect on the community as a result of our outreach program of course will be an increased awareness of ones nutritional status and state of health as well as changing behavioral patterns resulting in improved moderate to vigorous physical activities among individuals, and increased stamina to decrease incidence of disease related to obesity School districts would have implemented sustainable systemic changes in policies and practices to improve wellness, increase healthy nutrition options, and/or increase opportunities for physical activity for children and their families. Pre-diabetic and diabetic education, CATCH (Coordinated Approach to Children's Health), as well as gleaning and gardening will continue providing access to fresh produce, and continued shifts in eating habits and physical activity while promoting healthy lifestyle changes. These changes will inherently influence cultural shifts in attitudes towards healthy eating, while emphasizing active lifestyles as well as positive participation in individual health outcomes. Improved health outcomes and positive behavioral changes will ultimately lead to reduced costs to families and community health providers associated with acute and chronic disease management. The consortium partners will collaborate more, strengthening the collaboration, providing more streamlined service delivery, improvements in leveraged resources, thus increasing capacity throughout the community, and maximizing service delivery and program outcomes needs to occur.

## Part VIII: Implications for Other Communities

Implementation of the evidenced based models we used to conduct outreach and education in order to decrease the incidence of obesity, pre-diabetes and diabetes can occur in similar rural areas with success. We highly encourage a strong committed network of agencies to support any model utilized when taking on such a task, as it will provide support and the ability to leverage resources while strategizing along the way on what is working and what isn't, and allowing for interventions to be implemented.

Although we did not have to adapt the models, we did have to adapt to other changes that occurred in order to continue with the program. Working with programs within your own agency or by developing strategic relationships, allowed us to maintain programming while targeting a different market and providing seamless service delivery. Another thing that may benefit other agencies is if they work from an integrated and holistic approach to services. This forces you to network and partner with internal programs as well as external agencies.

Other program areas within our agency are enhancing their service delivery with our programming, allowing us as an agency to leverage funds, build capacity and provide integrated, holistic and seamless service delivery.

We have found that a successful outreach program is only as successful as your consortium. If your consortium is not engaged the likelihood that you will be successful is limited.

# North Carolina

## Partnership for Children of the Foothills

Part I: Organizational Information	
Grant Number	D04RH25707
Grantee Organization	Partnership for Children of the Foothills
Organization Type	Corporate Entity - Federal Tax Exempt
Address	338 Withrow Road, Suite B, Forest City, NC 28043
Grantee organization website	<a href="http://www.pfcfoothills.org">www.pfcfoothills.org</a>
Outreach grant project title	Healthy Smiles: Early Childhood Dental Outreach
Project Director	Name: Barry Gold
	Title: Executive Director
	Phone number: 828-245-8673
	Fax number: 828-245-8473
	Email address: <a href="mailto:barry@pfcfoothills.org">barry@pfcfoothills.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$148,378
	May 2013 to April 2014: \$148,910
	May 2014 to April 2015: \$149,471

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*NC Oral Health Section	Rutherford, Polk and McDowell Counties, NC	Public Oral Health Entity
*Rutherford County Schools	Rutherford County, NC	Public School System
*Rutherford/Polk/McDowell Health District	Rutherford, Polk and McDowell Counties, NC	Health District
*Polk County Schools	Polk County NC	Public School System
*Rutherford Regional Health Center	Rutherford County, NC	Hospital
*Collins Dental Center	Polk County NC	Non-Profit Dental Center
*Mission Children's Hospital	Asheville, NC	Hospital
McDowell YMCA	Marion, NC	YMCA
*Partnership for Children of the Foothills	Forest City, NC	Corporate Entity - Federal Tax Exempt

### Part III: Community Characteristics

#### A. Area

The Healthy Smiles Early Childhood Dental Outreach served preschool children in McDowell, Rutherford and Polk Counties in Western NC.

#### B. Community Description

In the service area of Rutherford, Polk and McDowell Counties, according to the most recent figures reported by the North Carolina Oral Health Section, almost 25% of children in these counties entered kindergarten with untreated tooth decay. The region has had a higher than average unemployment rate, low income rates and low adult education rates. Transportation is

often a barrier in accessing dental services for young children, because most providers are located outside the rural three-county region.

### **C. Need**

The purpose of the Healthy Smiles: Early Childhood Dental Project has been to decrease the number of children entering kindergarten with untreated tooth decay in the rural mountain counties of Rutherford, Polk, and McDowell in western North Carolina. The strategies used included: 1) Dental screenings for preschool children in child care centers and various community sites, 2) targeted outreach and education for young children (ages birth to five), their parents, child care providers and expectant moms, and 3) access to restorative dental services for children birth through kindergarten in need of follow-up care.

## **Part IV: Program Services**

### **A. Evidence-based and/or promising practice model(s)**

The project focused on the concept of identifying and establishing young children with dental homes as an oral health prevention strategy. The Dental Home model is supported by the American Academy of Pediatric Dentistry and the American Dental Association as a best practice. The model adapted and utilized by the Healthy Smiles Project includes components of the American Academy of Pediatric Dentistry (AAPD) Dental Home Model which supports the concept of a dental home for all infants, children, adolescents, and persons with special health care needs. Children who have a dental home are more likely to receive appropriate preventive and routine oral health care. The AAPD recognizes a dental home should provide: comprehensive oral health care including acute care and preventive services in accordance with AAPD periodicity schedules, assessment for oral diseases and conditions and anticipatory guidance about growth and development issues (i.e., teething, digit or pacifier habits). Dental homes should also provide parents with information about proper care of their child's teeth and gums. This would include the prevention, diagnosis, and treatment of disease of the supporting and surrounding tissues and the maintenance of health, function, and esthetics of those structures and tissues.

The Healthy Smiles Project utilized all of the above components of the AAPD Dental Home Model through screenings, exams, education and follow-up dental treatment. The AAPD advocates interaction with early intervention programs, schools, early childhood education and child care programs, members of the medical and dental communities, and other public and private community agencies to ensure awareness of age-specific oral health issues.

### **B. Description**

The project has focused on the concept of identifying and establishing young children with dental homes as an oral health prevention strategy. The Dental Home is supported by the American Academy of Pediatric Dentistry and the American Dental Association as a best practice.

The project has been based upon three evidence-based strategies for dental health, which include dental screenings and exams; information about proper care of the child's teeth and gums, and follow-up treatment when dental issues are found during screenings/exams. The project has targeted children enrolled in child care centers with limited oral exams and education. It also provides education and outreach to young children not enrolled in licensed child care programs and the Latino community through community dental screenings and education events. Dental Assistants have provided support for Medicaid enrollment prior to screening dates, case management for establishing a dental home, provision of gas vouchers if needed for transportation to dental appointments, and dental subsidies if no insurance is available and the child is deemed eligible.

The limited oral exam has included a dental plan that documents the need for further dental services. The Project Coordinator has been responsible for ensuring that the parents of each examined child receive his or her dental plan on the day of exam. Contact information is included for the Project Coordinator should the parents have any questions.

### **C. Role of Consortium Partners**

The Dental Consortium is comprised of 16 members representing nine agencies in the three-county service area. The Consortium serves as a source of support and a resource for the Healthy Smiles project staff and provides oversight regarding the services/programs of the Healthy Smiles Project.

The Partnership for Children's current role is grant management. The Partnership contracts with the health departments and the North Carolina Oral Health Section for contracted staff. Health Departments of Rutherford and Polk Counties offer dental assistants to provide coordination. Health departments house and supervise staff and offer in-kind support by allowing project staff

to use computers, phone systems, the internet and other supplies for the project. **The** North Carolina Oral Health Section provides a dental hygienist in McDowell and Rutherford on school-based settings. The dental hygienist also does sealant projects across the state, provides screenings at the health department, and assists with the dental puppet shows at school and community events. Mission Children's Dental Program provides a contracted dentist for screenings and oral surgery for all eligible children served by the project. The YMCA provides community space for screenings.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

At the beginning of the grant period it was projected that the percentage of Rutherford County children entering kindergarten with untreated tooth decay would decrease by 2% in all participating counties. The baseline data for this outcome indicated that in 2010-2011, 24% of Rutherford County children entered kindergarten with untreated tooth decay. In 2013-2014, according to the North Carolina Oral Health Section, 21% of Rutherford County children entered kindergarten with untreated decay, a 3% decrease since 2010-2011.

The baseline data for this outcome indicated that in 2010-2011, 20% of McDowell County children entered kindergarten with untreated tooth decay. In 2013-2014, according to the North Carolina Oral Health Section, 19% of McDowell County children entered kindergarten with untreated decay, a 1% decrease since 2010-2011.

The baseline data for this outcome indicated that in 2010-2011 22% of Polk County children entered kindergarten with untreated tooth decay. In 2013-2014, according to the North Carolina Oral Health Section, 19% of Polk County children entered kindergarten with untreated decay, a 3% decrease since 2010-2011.

### B. Recognition

Both the McDowell News (Marion, NC) and The Daily Courier (Forest City, NC) have published articles about the work of the Healthy Smiles Project. The Healthy Smiles Project has received numerous recognitions in local newspapers in the three-county service area. These recognitions have been in the form of articles describing the program and highlighting its successes and accomplishments.

## Part VI: Challenges & Innovative Solutions

The main challenge experienced during program implementation related to staffing issues. Our lead dental assistant experienced health issues which required her to take medical leave for a period of time. During her absence, the program was able to continue to meet its goals, outcomes and objectives mainly due to dental hygienists from the North Carolina Oral Health Section giving so freely of their time (in-kind) to assure that screenings continued in the three county area. In addition to the medical issues experienced by our lead dental assistant, another dental assistant also experienced several health concerns and eventually resigned and was replaced. At the end of the second program year, once again it was necessary for our lead dental assistant to take 12 weeks of leave due to a family tragedy. Along with our new dental assistant, the dental hygienists from the NC Oral Health Section stepped in to continue services during this time. Other than staffing issues, because of the strength of the staff and the cooperation between consortium agencies and members there were no other major challenges experienced.

## Part VII: Sustainability

### A. Structure

The Dental Consortium will continue to meet. All of the current partners have agreed to continue meeting and the Partnership for Children of the Foothills has agreed to continue to coordinate these meetings (schedule them, send reminders, complete agendas and secure meeting locations)

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Moving forward the Dental Consortium will continue the following grant activities:

Limited Oral Exams in Licensed Child Care Centers: Because the limited oral exams are the foundation of this program, they will continue in the three-county area by partnering with child care centers to conduct the exams in child care settings.

Limited Oral Exams at Community Events: Although not accomplished to the degree that exams are provided in licensed child care, the project will continue to provide limited oral exams at community events where possible.

Community Outreach and Dental Education: Another important foundational concept, providing dental education and outreach will continue as part of this project due to the importance of continued dental education to preschool children and their families.

Case Management for establishing a Dental Home: In order to assure that children are connected with a Dental Home for continued dental health, case management will remain a focus of this project.

Restorative Dental Services: Because connecting children with needed treatment after a screening is so important, this will remain a major focus of this project.

Dental preschool lending libraries will continue to be used by child care providers in preschool classrooms.

### **C. Sustained Impact**

Relationships between agencies working on Outreach grant activities with pediatric dentists continued to be strengthened. The program has purchased a dental puppet show, which will continued to be used in the Healthy Smiles grant and in the community by the NC Oral Health Section Dental Hygienists serving the three-county districts. The Kiwanis Club in Polk County has purchased a dental puppet show kit and volunteers were trained to present the show to young children. Dental preschool lending libraries have been updated and will continue to be used by child care providers in preschool classrooms. There are expanded relationships between the personnel working on the McDowell Preschool Dental grant and professionals in the target counties. Dental education has been provided to families, child care educators and the community at large.

## **Part VIII: Implications for Other Communities**

This project is easily replicable for other communities to implement. One primary reason is that it can be completed on a smaller scale and still have important impacts for the children who are screened. While this project screened thousands of preschoolers and assured that those with immediate dental care needs received treatment, any child that is screened will receive immediate benefits from the service.

In addition, while the Healthy Smiles project utilized approximately \$350,000 in three years, communities could utilize in-kind and volunteer support to reduce the cost of a similar program. As far as qualitative measures/indicators, we believe being able to track the number of children entering kindergarten with untreated dental decay is crucial to providing confirmation that a project such as this is successful or not.

## ProMedica Fostoria Community Hospital

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23573-03-00
<b>Grantee Organization</b>	ProMedica Fostoria Community Hospital
<b>Organization Type</b>	Hospital
<b>Address</b>	501 Van Buren Street, Fostoria, OH 44830
<b>Grantee organization website</b>	<a href="http://www.promedica.org">www.promedica.org</a>
<b>Outreach grant project title</b>	STEMI Expansion FY14-15 Yr3
<b>Project Director</b>	Name: Amy Preble
	Title: Director, Emergency Services
	Phone number: 419-436-6854
	Fax number: 419-436-6671
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$149,967
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
ProMedica Bixby Hospital	Adrian, Lenawee County, Michigan	Hospital
ProMedica Herrick Hospital	Tecumseh, Lenawee County, Michigan	Hospital
Madison Twp Fire/EMS	Lenawee County, Michigan	County
Lenawee Health Network	Lenawee County, Michigan	County
ProMedica Toledo Hospital Cath Lab	Toledo, Lucas County, Ohio	Tertiary Care Hospital
ProMedica Transportation Network (PTN)	Toledo, Lucas County, Ohio	Hospital
Northwest Ohio Cardiology Group	Toledo, Lucas County, OH	Physician Group
Fostoria Fire/EMS Department	Fostoria, Seneca County, OH	City
Seneca County EMS	Tiffin, Seneca County, OH	County
Emergency Physicians of Northwest Ohio	Toledo, Lucas County, OH	Physician Group

## Part III: Community Characteristics

### A. Area

The coverage area for the Outreach grant expanded across 2 states. This includes 2 Critical Access Hospital service areas in Southwest Michigan (Lenawee County) and Northwest Ohio (Seneca County). However, the majority of funding was allocated to the Lenawee County service area for program start up and minimal funding to Seneca County to complement a current program that was already implemented.

### B. Community description

Designated as a rural community, the Lenawee county population estimate is 99,878. 14.08% of residents live below the poverty level, 15.8% of adults are without health care coverage and 11.11% of adults over the age of 25 do not have a high school diploma or equivalent. Lenawee County has six census tracts designated as Medically Underserved Areas/Medically Underserved

Populations. According to the 2011 Lenawee County Health Assessment, Lenawee County adults diagnosed with high blood pressure were more likely to: have rated their health as fair or poor (75%), have been overweight or obese (67%) and be age 65 years or older (66%). Seventy five percent (75%) of Lenawee County adults have had their blood pressure taken by a doctor, nurse, or other health professional within the past six months, while 90% have had their blood pressure taken within the past year and 94% have had their blood pressure taken within the past two years. The 2011 assessment shows that heart attacks (6%) are two times more prevalent than strokes (3%). Diabetes mortality rates were above the state and national rates.

### C. Need

Prior to the Rural Health Care Outreach Services grant, there was not a uniform process for ST segment elevation myocardial infarction (STEMI) patients. Because there was not an established process, STEMI patients were falling out of the American Heart Association's door to balloon standards of 90 minutes. There was a lack of trust in the skills of the Emergency Medical Providers from the local emergency room physicians, as well as a lack of confidence in emergency room physicians on the part of the cardiologist.

Research showed that patients suffering from a heart attack who received treatment in rural hospitals were less likely than those treated in urban hospitals to receive the recommended treatments. These patients also have significantly higher adjusted 30-day post AMI death rates from all causes than those in urban hospitals. The American Heart Association's Get With the Guidelines (GWTG) program recommends that hospitals perform a Percutaneous Coronary Intervention (PCI) to restore blood flow to the heart within 90 minutes. Rural hospitals often cannot meet these types of requirements related to limited resources and/or distance from specialized services (cath lab). Through advanced technology, EMS squads can transmit 12-lead EKGs (heart tracing) directly to a physician and thus activate a chain of events that can expedite the necessary processes and resources to preserve cardiac function, limit infarct size and reduce morbidity and mortality of these patients.

The focus of the grant was to replicate a STEMI program in Lenawee County, Michigan similar to that already developed and implemented in Seneca County, Ohio. This included addressing the needs of:

- Using available technology--Early identification of a heart attack through the use of telehealth type equipment and software that links the first responders (city and county EMS squads) directly to the hospital emergency department. When a patient has chest pain and calls an ambulance, the ambulance can transmit a 12-lead EKG tracing of the patient's heart rhythm directly to the emergency department staff. The emergency department interprets the 12-lead EKG immediately to determine if the patient is having a Myocardial Infarction (heart attack) with special attention being paid to those patients suffering from a STEMI (ST segment elevated MI)—the most deadly type of heart attack. If a STEMI is noted, it is essential that the patient gets to the cardiac catheter lab within 90 minutes (door to balloon time, based on American Heart guidelines). The emergency department can activate the cath lab and an air ambulance.
- Distance from Tertiary Care Hospital--Being located a considerable distance from a tertiary care facility, a backup plan needed to be implemented for when air ambulances could not fly (weather, availability, etc.) and protocols to bypass the rural hospital by EMS directly to the tertiary hospital with a catheterization lab. Not only was there a concern for cardiac patients needing treatment at a cath lab, there was also concerns for other types of critically ill or injured patients (stroke, trauma) for which rapid transport to a tertiary hospital was essential to facilitate better outcomes.
- Community awareness--With half of all heart attack deaths occurring outside of the hospital within the first hour of symptoms, educating the community about the signs and symptoms of a heart attack and the actions that a person experiencing chest pain should do was also essential. The placement of Automated External Defibrillators (AED) in the community would also support the initiative.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The overall evidenced based model used/adapted was the American Heart Association "Get with the Guidelines" recommendations: Door to PCI time recommendations and Door to Door to PCI time recommendations for patients demonstrating elevated ST segment on 12 lead EKG.

This project was replicated from a previous Outreach Grant recipient program implemented at a Critical Access Hospital (ProMedica Fostoria Community Hospital) and Seneca County, Ohio. ProMedica Fostoria Community Hospital (PFCH) lead a consortium that was able to implement telehealth technology and develop protocols that successfully identified patients suffering from a heart attack and a seamless transfer to a tertiary care facility with a cardiac catheter lab to ensure timely interventions to improve overall health outcomes for this specific population of patients. By utilizing available technology, providing education, and collaborating with multiple specialties, this program was a model for other rural hospitals and emergency service providers. Along

with this collaborative effort to improve patient outcomes, there was also a focus on improving community knowledge through community education and the placement of AEDs (Automated External Defibrillators). These efforts helped improved community awareness of the signs and symptoms of a heart attack and the immediate actions they can take if they or someone around them is suffering from a heart attack or sudden cardiac arrest.

## B. Description

This program was developed to improve outcomes for people suffering from a heart attack, specifically the most deadly type of heart attack known as a ST Elevated Myocardial Infarction (STEMI). Improving the community's awareness about the signs and symptoms of stroke and heart attacks and the importance of dialing 911 and receiving prehospital care were also primary objectives.

Funding from the grant supported the purchasing of equipment, supplies, and additional staff so the following main activities could be implemented:

- 1) Our local consortium group, in Lenawee County, has met quarterly through the Rural Health Care Outreach grant process. The local consortium group is made up of all eighteen services area ambulance crews, STEMI Grant Director/Emergency Department Director for Herrick and Bixby Hospitals, STEMI Educator, STEMI Process Coordinator, Med Control Authority Director, Chest Pain Program Coordinator, and any of the Bixby and Herrick emergency room staff that wanted to be involved. Initially, the consortium group met to devise a STEMI process and develop protocols. The group now meets regularly to evaluate the effectiveness of these established processes through review of cases. These reviews identify successes, opportunities for improvement, and barriers to meeting objectives. As a result of these reviews, door to door to balloon times have improved by over 40 minutes for patients meeting STEMI criteria.
- 2) Cardiac monitors/equipment was upgraded and software installed that would transmit 12-lead EKGs from remote locations directly to the Emergency Departments in Lenawee County. County EMS squads who transport to ProMedica Bixby and ProMedica Herrick Hospitals received updates to their equipment. The Emergency Departments installed software and placed the necessary computer support to receive these remote transmissions.
- 3) Over 50 AEDs (automated external defibrillators) were placed throughout Lenawee County, Michigan and Seneca County, Ohio service areas. This included placement within local law enforcement vehicles, non-profit agencies, and community gathering areas such as churches.
- 4) Through community education programs, we have been able to reach over five thousand people throughout both counties. This community education was achieved through large community events such as Community Health Fairs and Red Dress Luncheons to small gathering education such as presentations to church groups and senior and youth groups.

## C. Role of Consortium Partners

The grant program consisted of an integrated consortium that was very active in meeting the identified needs throughout the three-year program. Working partnerships and relationships were developed initially but had to be redeveloped throughout the grant as key members left and were replaced.

- ProMedica Fostoria Community Hospital (PFCH) acted as the grantee and fiscal agent for the grant. They provided the Project Director and were a resource to the consortium members in Lenawee County as they replicated the STEMI program. Community education programs were continued in Seneca County by PFCH staff members to continue awareness within this service area. Several AEDs were also placed in this community to compliment previous efforts.
- ProMedica Bixby and ProMedica Herrick Hospitals, through their Emergency Department Director, ensured placement of STEMI software within the Emergency Departments. Emergency Department staff members received education about program and facilitated implementation of protocols. They also supported the position of the STEMI Process Coordinator who gathered necessary data for review and reporting.
- The STEMI Educator was placed in Lenawee County. He acted as the primary educator for the EMS and Community programs. The STEMI educator facilitated the purchase of software and necessary equipment for the EMS units within Lenawee County. He coordinated consortium meetings and communication. He also assisted in the development of protocols for STEMI patients in the county. AED placement was coordinated through this member along with the necessary education.
- Lenawee County EMS departments, led by the Med Control Authority Director, placed necessary software and equipment within the EMS units serving Bixby and Herrick Hospital service areas. These departments were educated on the established protocols and use of equipment. The Med Control Authority Director played a lead role in the development and implementation of protocols for all first responders in the county.
- Fostoria Fire/ EMS Department (FFD) provided leadership and coordination through their Fire Chief at the city level. They acted as a resource for implementation and ensured compliance with previously established program objectives in Seneca County, Ohio.

- Seneca County EMS (SCEMS) provided leadership and coordination to ensure continuation of program at the county level through the County EMS Director.
- Emergency Physician groups in both counties provided leadership through their designated facility Medical Director. They were active assisting with hospital and first responder protocols/processes. They were integral in communicating and facilitating coordination of patient care with the Cardiology physician group and the Cardiac Cath Lab at the tertiary care facility.
- ProMedica Transportation Network (PTN) leadership assisted with patient transfer protocols and participated in meetings when barriers were identified related to patient transfers from rural hospitals to the tertiary hospital. This group also included Access (the call center that connects sending facilities to the necessary resources at the receiving facility).
- ProMedica Toledo Hospital (PTH) was the primary tertiary care facility who received the identified patients needing urgent cardiac catheterization. Cardiologists, Cath Lab leadership, and a designated Chest Pain Program Coordinator helped in coordinating processes that minimized delays. Through the coordination of the Chest Pain Program Coordinator, STEMI cases were reviewed with feedback provided back to EMS First Responders and Emergency Department Staff/Physicians in an effort to identify success stories and opportunities for improvement

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Prior to this grant, the Door to Door to Balloon times for the hospitals in Lenawee County was 125 minutes. Throughout the grant period we have been able to decrease the average time to 111 minutes. This decrease in time can be attributed to several components. EMS transmitting 12 lead EKG to the hospital, the increase in staff education, and the better collaborative working relationship created between the North region Emergency Departments, physicians, Cardiac Cath lab staff, and the 24 hour cardiologists at ProMedica Toledo Hospital.

We have implemented a unified protocol with EMS providers to bypass the local hospitals with no PCI ability, when able, and transport directly to a tertiary care facility with PCI ability to greatly reducing the Event to Balloon (E2B) time.

Placing approximately 40 AEDs in senior centers, churches, community organizations, and outfitting approximately 20 AEDs in law enforcement and first responders will lead to a decrease in the EMS call to shock time for those patients who have a cardiac rhythms that indicates a need for defibrillation. We knew that through typical EMS services we would not be able to achieve the <5 minute defibrillation recommended by the American Heart Association unless we were able place these AEDs in areas with higher concentrations of people and law enforcement vehicles. Since we were able to do this with grant funding, we should be able to achieve this goal in our rural community.

We were able to provide community education to approximately 1000 individuals about the importance of early recognition of the signs and symptoms of a heart attack as well as the importance of early hands only CPR and seeking medical care immediately.

### B. Recognition

While we had no formal recognition in the media, we received acknowledgment from the organizations in which the AEDs were placed. EMS and Hospital personnel have received individual recognition from the Corporate STEMI program for achieving stellar times in the treatment of patients suffering from an ST-elevation MI.

## Part VI: Challenges & Innovative Solutions

The first challenge came when we lost our North Region Emergency Department Director. This person was the designated Project Director and Coordinator for our grant in this region. We were able to bring the newly hired replacement up to speed fairly quickly. The new Emergency Department Director was able to assume this role with minimal orientation related to her previous experience as a clinical nurse manager.

We experienced a loss in a public relations position in the North Region. This prevented us from marketing our program as we initially intended such as the design and distribution of informational mailers to local households. However, we were able to reallocate resource to increase the amount of informational handouts that could be distributed at community health fairs and education sessions.

Technology was also an obstacle for us. Specifically the EMS's ability to submit patient care run reports and transmit 12 lead EKGs in a timely manner. Funding was allocated to outfit the Ambulances with the technology to give them the capability to be "wifi hot spots".

One EMS agency did not have cardiac monitors that were compatible with the receiving stations at the hospitals; thus they could not send the 12 lead EKG directly to the Emergency Department. We were able to outfit those ambulances with the technology so that they could send a fax directly to the hospital Emergency Department and then notify them of the 12 lead via fax. This achieved the same goal as the receiving stations.

During the course of the grant we had one EMS agency upgrade their monitors to a different brand that did not allow for the transmissions of a 12 lead EKG. With the help of the receiving station vendor, we were able to allow them access to the current receiving station and thus allowing these previously non-compatible cardiac monitors to transmit the 12 lead EKGs directly to the Emergency Departments.

## Part VII: Sustainability

### A. Structure

We anticipate that ALL of our consortium members will continue to be actively involved in improving and maintaining our programs objectives in both the focused areas of Lenawee County, Michigan and in the supporting area of Seneca County, Ohio.

In order to sustain our current program, a program leader will be maintained in each region. These program leaders will continue to be the Emergency Department Directors. As the leaders within each region, they will continue to act as the liaison between all agencies. The Emergency Department Directors will ensure compliance with established protocols and American Heart Association guidelines. These directors will work closely with the STEMI program/Chest Pain Program Coordinator who is centrally located. All three of these leaders will work with the various hospitals, departments, first responders, and physicians in a coordinated effort to maintain and improve emergency cardiac patients in both regions.

The current consortium will continue with representation from the Emergency Department Director and Medical Director for both hospitals in Lenawee County, Bixby Hospital and Herrick Hospital. First responder representation will be maintained through a coordinated EMS Board. ProMedica Toledo Hospital, as the tertiary care facility, will continue to provide input via the system-wide STEMI/Chest Pain Coordinator. Through the STEMI/Chest Pain Coordinator, the cardiac catheterization lab team of nurses and physicians will maintain a voice in the program processes. ProMedica Transportation Network, who is the primary provider of Air Ambulance service in the area, will also continue to participate as a consortium member.

In addition to the direct patient care team representatives on the consortium, non-profit organizations who received AEDs through this program will continue to be a part of the consortium and provide input from the community perspective. These non-profits include numerous churches, schools, and service organizations: St. John's Lutheran Church, UAW Hall, Adrian City Police Department, Madison School, Clinton Police Department, Tecumseh Art Center, Siena Heights University, Springville United Methodist Church, Lenawee County Foundation, Family Counseling and Children Services, Habitat for Humanity, Goodwill Industries, Family Medical Center of Michigan, Housing Help of Lenawee, Lenawee Intermediate School District, Kiwanis Club of Onsted and Adrian Dominican Sisters.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The two positions funded by the grant will be absorbed into other individual roles and responsibilities. All other elements of the projects will be sustained.

### C. Sustained Impact

The most noteworthy impact that occurred during this grant cycle was the increase in trust that developed between the different levels of patient care givers. This trust was the result of improved relationships and better communication from Emergency Medical Service (EMS) Crews to Emergency Department Physicians to Cardiologists. Through education and technology, the EMS Crews and Emergency Department Physicians gained the autonomy to make the initial decisions in the care of STEMI patients, including the most important decisions to declare a STEMI was occurring and start the process without consulting the Cardiologist immediately.

The purchase and placement of emergency cardiac equipment/supplies/software will also have a lasting impact, as the placement of AEDs throughout the communities and the associated education will save lives. The availability of technology that allows for transmissions of 12 lead EKGs from remote locations directly to an Emergency Department physician or Cath Lab Cardiologist will continue to save lives.

Overall education for patient care providers will have a lasting impact as this resulted in an increased knowledge and skill levels for all caregivers. Community education that was provided will help ensure that community members know the signs and symptoms of a heart attack and what actions should be taken. Education completed during this grant cycle will directly impact the care of patients through faster reactions and by decreasing delays to specialized emergency care.

## Part VIII: Implications for Other Communities

What we have implemented during this grant program is definitely replicable. As this current grant funded program was replicated from a previous grant funded program implemented in a different rural community in 2009-2012, other communities can look at this model as a foundation to implement a STEMI system of care in their communities.

This model will assist/benefit other communities in developing a STEMI system of care that involves all patient care givers from the EMS to the Emergency Department to the Cardiac Cath Lab. This includes what equipment/technology is needed, protocols, and education foundations. Through implementation of a STEMI program, others can achieve a decrease in the time it takes for a patient having a STEMI heart attack to receive the necessary specialized care from a Cardiologist at a Cath Lab.

This model will help in achieving the American Heart Association initiative "Get with the Guidelines" (Door to Door to Balloon and Door to Balloon) and also has the potential to improve relationships at all levels of the patient's care as these groups work together to implement protocols/processes that allow for more autonomy and improved skills.

Community involvement can be replicated by ensuring a focus on educating the community about "Heart Attack Signs/ Symptoms and Actions to Take" at community events and by various marketing campaigns. Involvement by community members is further reinforced by the placement of AEDs in community gathering places as these places committed to necessary education and maintenance of this equipment.

## Trinity Hospital Twin City

Part I: Organizational Information	
Grant Number	D04RH23617
Grantee Organization	Trinity Hospital Twin City
Organization Type	Critical Access Hospital
Address	819 N. First Street, Dennison, Ohio 44621
Grantee organization website	<a href="http://www.trinitytwincity.org">www.trinitytwincity.org</a>
Outreach grant project title	THTC Fit for Life Replication Project for Expansion
Project Director	Name: Dr. Timothy McKnight, MD
	Title: Fit for Life Project Director
	Phone number: 740-922-7450, ext. 2198
	Fax number: 740-922-8038
	Email address: <a href="mailto:jdemuth@trinitytwincity.org">jdemuth@trinitytwincity.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$125,000
	May 2014 to April 2015: \$100,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Harrison Community Hospital first year only	Cadiz, Harrison County, Ohio	Critical Access Hospital
*Carroll County General Health District	Carrollton, Carroll County, Ohio	Health Department
*Holmes County General Health District	Millersburg, Holmes County, Ohio	Health Department
*Trinity Health System	Steubenville, Jefferson County, Ohio	Hospital

## Part III: Community Characteristics

### A. Area

The Trinity Hospital Twin City Fit for Life Replication Project for Expansion serves the following areas in Southern Ohio:

- Trinity Hospital Twin City serving Tuscarawas County and parts of Carroll & Harrison Counties
- Harrison Community Hospital serving eastern Harrison County
- Carroll County General Health District serving Carroll County
- Holmes County General Health District serving Holmes County
- Trinity Health System serving Jefferson County

### B. Community description

The population of the communities represented through our consortium consists mostly of the working poor, senior citizens and individuals with disabilities who are dependent on Medicare/Medicaid. Holmes County also has a significant Amish population which presents certain cultural challenges. Poverty and lack of access to care are prevalent in our region as all five of the counties served by this project are Appalachian Counties. Four of the five counties are also federally designated as Medically Underserved Areas (MUA) and Health Professional Shortage Areas. In Tuscarawas County (location of lead agency) alone, 13.6 % of the population is at or below the federal poverty line and more than 65,000 people live on less than 200 percent of the federal poverty

line. In 2010, per capita income was \$21,724 in Tuscarawas County, compared to \$25,857 in Ohio and the national average of \$28,051. (All data from US Census Bureau 2010.) Transportation is another significant barrier; there is no public transportation for adults less than 60 years of age in Tuscarawas County. Many families do not have reliable transportation for travel outside of their neighborhoods. Finally, in our targeted counties, heart disease is the number one cause of death, and there are high rates of diabetes and cancer (lung and breast cancers are most prevalent).

### **C. Need**

The goal of the Trinity Hospital Twin City Fit for Life Replication Project for Expansion is to provide an innovative multi-agency approach to reduce the number of overweight and obese adults through the provision of Fit for Life health and wellness programming. The services of the Trinity Hospital Twin City Fit for Life Program are directed specifically to the entire adult population of Carroll, Harrison, Holmes, Jefferson and Tuscarawas Counties, Ohio. In these counties, there are currently no facilities or programs that provide affordable, low cost and/or free diet and exercise programming for adults who are at or below 200% of the federal income poverty level. Furthermore, in Carroll, Holmes and Harrison Counties, there are no YMCA facilities or other large gyms that adults can access for exercise. Unfortunately, the number of adults with sedentary lifestyles and poor dietary habits (key factors leading to obesity) in our targeted Appalachian and rural counties is increasing every year. As a result, the number of and risk for contracting obesity-related illnesses and diseases such as heart disease, type 2 diabetes, high blood pressure, stroke, liver and gall bladder disease, sleep apnea and respiratory problems and osteoarthritis are increasing. Our Fit for Life program provides affordable nutrition and exercise programming, and health information that can be easily accessed.

Those in the target population desperately need the weight management and healthy lifestyle training that the Trinity Hospital Twin City Fit for Life Program provides. An Ohio Department of Health Study of Tuscarawas County in 2010 found that 32.4% of residents are obese. If Tuscarawas County were a state, it would be placed second only to Mississippi which ranked as the fattest US state with a 34.4% obesity rate in the July 2011 "F as in Fat" Report by Trust for America's Health and the Robert Wood Johnson Foundation. Furthermore, the other consortium member counties do not fare much better. According to County Health Rankings 2010, Carroll, Harrison, Holmes and Jefferson Counties all have an obesity rate of 30%.

## **Part IV: Program Services**

### **A. Evidence-based and/or promising practice model(s)**

Trinity Hospital Twin City's Fit for Life program (now at the end of its ninth year) is based on its own promising practice model from its first five years in operation. According to most academic publications, promising practices or emerging best practices are defined as programs proven to be successful, but for which there may not yet be enough evidence to prove it has resulted in a positive outcome.

Fit for Life has produced results consistent with being a promising practice due to the positive results of the reduced weight, blood pressure and cholesterol levels experienced by past Fit for Life participants. Thanks to funding from HRSA's Rural Health Outreach Program, Fit for Life programming was offered in the community setting between May 1, 2006 and April 30, 2009. Then, thanks to another HRSA Rural Health Outreach Program grant, beginning on May 1, 2009, Fit for Life programming was able to expand into actual worksites in an effort to reach more of the working poor citizens of Tuscarawas County. Community sessions also continued while the worksite sessions were in progress.

On May 1, 2012, the hospital received another (the one this report is based upon) HRSA Rural Health Outreach Program grant that enabled the formalization of the Fit for Life curriculum so the program could be expanded and replicated in the communities of grant partner organizations (listed in the consortium section of this report) in four neighboring counties. Data compiled and analyzed by independent evaluation experts at the Ohio University Voinovich School of Leadership (who conducted a rigorous evaluation process) from the first two years has proven that the results achieved by participants at the original Fit for Life site (Trinity Hospital Twin City) are consistent with the results achieved by participants at the partner locations. Achieving similar results across different locations provides evidence to establish Fit for Life as a best practice model, and the experts from the Ohio University Voinovich School of Leadership and Trinity Hospital Twin City are beginning the work necessary to publish the Fit for Life data in an academic journal.

The Fit for Life curriculum was developed by Project Director, Dr. Timothy McKnight, who is a Board Certified Family Practitioner who also possesses a Masters Degree in Nutrition. Dr. McKnight utilized data from the following sources when developing the

curriculum: National Heart, Lung and Blood Institute; Centers for Disease Control; American Diabetes Association; American Heart Association; National Weight Loss Control Registry and more.

Fit for Life focuses on changing lifestyle behaviors to promote weight loss. Fit for Life also is a behaviorally-based program designed for adults of all ages. Fit for Life emphasizes a modified DASH eating plan with moderate caloric restriction to promote a 2-4 pound per week weight loss and 150 minutes of moderate physical activity per week. Fit for Life consists of 12 weekly sessions.

Dr. McKnight's Fit for Life program promising practice model has been very effective in fulfilling the needs of the community and has made a tremendous impact by improving health status. With a population of a little over 90,000 people in Tuscarawas County, more than 1,800 have completed Fit for Life and most with positive, life-changing results.

## **B. Description**

Trinity Hospital Twin City's Fit for Life (FFL) Program provides health education and promotion through Fit for Life wellness and disease prevention classes designed specifically for adult men and women who want to learn how to lead healthy lifestyles. These adults receive a 12 week session of classes that meet once weekly for 90 minutes on such lecture topics as stress management, nutrition, healthy eating, reading food labels, fitness, disease prevention, healthy aging and more. In the FFL Program, individual instruction is provided by the Program Director, who is a Medical Doctor and Board Certified Family Practitioner. Additional FFL professional presenters often include a chiropractor, renowned coach, fitness instructor, and wellness educator.

The ultimate goal of the FFL classes is not necessarily weight loss; the ultimate goal is to improve overall health, with weight loss being a natural outcome. FFL project success is evaluated through participant satisfaction surveys and knowledge tests and the results of specific health measurements including weight, waist circumference, body mass index (BMI), body fat percentage, cholesterol and blood pressure.

In this particular grant project, FFL classes were held in the lead agency's Tuscarawas County location and in neighboring counties. The Trinity Hospital Twin City FFL staff provided training for staff at the partner agencies in order to replicate the FFL classes in their own communities. The replication proved successful as similar results have been achieved by participants in the partner agency counties.

## **C. Role of Consortium Partners**

All Consortium Members are regularly involved in meetings of the Consortium Board for the Fit for Life Program. Although, due to the distance between the partners, much planning and business was conducted via phone calls and e-mail messages. Two in-person meetings were held in year one of the project; two in year two; and one in-person meeting in year three. Project status information was made readily available to all Consortium Members at meetings and via e-mail. Project status information was also available to Consortium Members at any time upon their request. All members were provided the chance to submit comments and input on all major reports, and all members were given copies of the reports for their review.

Specifically, consortium member roles are as follows: Trinity Hospital Twin City, serves as lead agency to direct all FFL activities and staff; Project Director Dr. McKnight administers the project; and Carroll County General Health District (year one only), Harrison Community Hospital (year one only), Holmes County General Health District, and Trinity Health System (years two and three only) provided staff to learn how to conduct Fit for Life classes and conducted such classes at their locations. The partner organizations were also responsible for distributing, collecting and inputting all evaluation data, which was then given to the contracted evaluators for data cleansing and analysis.

# **Part V: Outcomes**

## **A. Outcomes and Evaluation Findings**

As of March 30, 2015, more than 1,800 adults have completed Fit for Life programming, and the average session attendance rate for Fit for Life is 81%.

Thanks to a rigorous evaluation plan developed and executed by contracted evaluators from the Ohio University Voinovich School of Leadership, the results from the first two years of the FFL grant project were as follows (year three data has not been completely compiled, cleansed and analyzed yet):

- 71% of participants had an improved response from beginning to the end of the 12 week program on the question of how many days per week they engaged in at least 30 minutes of exercise;
- 69% had an improved response on how many servings of fruit and vegetables they eat daily;
- 85% experienced a weight loss (average of 6.7 pounds per participant); and
- the average participant experienced an 8.3 point decrease in total cholesterol, an 8.3 point decrease in LDL (bad) cholesterol, and a 20.5 point decrease in triglycerides.

## B. Recognition

As a result of grant funding, Trinity Hospital Twin City's Fit for Life program has gained much recognition. Here is a list of the highlights:

- Participants have shared positive comments about the project with such enthusiasm that recruiting class participants is easy, and we often have a waiting list of adults wanting to get into the program.
- Our evaluation results thus far have built an even stronger case for Fit for Life to be recognized as a best practice, and work is already being done to prepare and publish a research article about the program for a peer-reviewed academic journal.
- We are already being widely recognized as a promising practice. Two organizations have approached us to learn about our program so that they might do something similar in their communities, and many private physician practices have expressed an interest in hosting a program in their communities.
- Dr. McKnight has been a featured guest on six local radio shows to discuss the program and tips for living a healthy lifestyle.
- Dr. McKnight has been presenting information about the program at about two Continuing Medical Education Conferences for physicians each year.
- We now have a standardized curriculum workbook for all participants.
- We now have a standardized guide for conducting a Fit for Life program.
- A feature story about a local family who benefitted from Fit for Life was published in a local newspaper in February 2015.
- Our Fit for Life staff have provided presentations at the Ohio Department of Health's State Rural Health Conference for the past three years.
- Our Grant Coordinator was asked to provide a presentation for a Leadership Tusc training in January 2015.

## Part VI: Challenges & Innovative Solutions

In replicating our grant project across neighboring counties, many challenges arose. Thankfully, with help from our technical assistance provider and project officer, we have worked through most of the challenges. 1. We have not served a significant number of low-income adults. Thus, we have been in negotiations with a local church to help us sponsor a class at a very nominal cost to participants. Also, a church member will operate a church transportation van to help participants get to the Fit for Life sessions. 2. Two grant partners withdrew from the project at the end of August 2013. Thankfully, we were able to officially sign on Trinity Medical Center of Steubenville, Jefferson County, Ohio as a new partner. 3. Because the new partner started on the project almost halfway through year two of the grant, it was challenging to get their staff trained in time. We trained them week by week, and some mistakes were made by the new partner as a result of rushing through the process. Thus, we provided a more thorough training session for them in early January 2014. 4. As the Fit for Life curriculum was being standardized, our partners had their own ideas about what should and should not be in the curriculum. Thus, Dr. McKnight did his best to incorporate many of their suggestions, and he now marks certain aspects of the curriculum as optional versus mandatory. This enables presenters to customize the curriculum to his/her own community audience.

In the first year, one of our earliest challenges was coordinating communication between all of our consortium members; however, we worked hard to maintain regular communication channels via e-mail with follow-up phone calls as needed to ensure that everyone was receiving important information and announcements. We adapted our plan of having regular in-person meetings to having just two in-person meetings a year and conducting the rest of our business via phone and e-mail messages.

**A. Structure**

Because this grant project has made it possible for Fit for Life to be substantiated as a best practice, there is no longer a need to continue as a formal consortium in the future. Our grant partners in the neighboring counties made it possible for us to prove that Fit for Life could be successfully replicated. Therefore, moving forward, Trinity Hospital Twin City will continue to provide its own FFL classes twice a year. The consortium partners at the Holmes County General Health District and at Trinity Health System will both continue their Fit for Life projects if and when funding and resources allow. Trinity Hospital Twin City will continue to serve as an ongoing resource for the consortium members should they decide to continue offering Fit for Life after grant money ceases. In fact, Trinity Health System in Steubenville has already determined that they will start another class in May 2015, and we are already providing some supporting information and help to them as they continue to offer Fit for Life past the point of grant funding.

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Trinity Hospital Twin City plans to continue offering Fit for Life health and wellness classes for the community two times a year. The decision to continue FFL classes was justified through the following criteria:

- FFL has had a positive impact on the health status of participants;
- FFL has had a positive impact on the lifestyle habits and behaviors of participants;
- The benefits of the program justify the cost of holding the classes;
- There is broad support for continuing the FFL classes.

Our current consortium members hope to continue Fit for Life classes in their counties as well, but they will take on sustaining those activities on their own by seeking grants, donations and fees for services.

Trinity Hospital Twin City plans to sustain the Fit for Life (FFL) Health and Wellness classes by pursuing funding from the following:

- Senior Administration at Trinity Hospital Twin City to ascertain if all or part of the FFL program expenses can be funded as part of the hospital’s Community Benefit Program, a program all non-profit hospitals are mandated to provide by the IRS,
- A wellness program grant from Catholic Health Initiatives (CHI). CHI offers grants for up to \$100,000 for projects similar to FFL,
- Additional HRSA ORHP grant funding when available,
- Fees collected from FFL participants to cover the cost of the workbooks and handouts,
- Fees collected through the sale of the FFL curriculum to other health entities,
- Sponsorships from local businesses,
- Reimbursement from health insurance companies for those participants who have insurance that covers disease prevention and health promotion activities like FFL,
- And the provision of workplace FFL wellness to companies who are able to pay for the services.

**C. Sustained Impact**

The Trinity Hospital Twin City Fit for Life (FFL) project has multiple sustained impacts. First, thanks to the successful replication of the project into neighboring counties, FFL has adequate evidence to become an official best practice program that can be replicated at other agencies throughout the United States. Second, the FFL curriculum has been standardized and formalized and is available for others to use in order to implement FFL in their communities. Third, staff in five counties (Tuscarawas, Carroll, Harrison, Holmes and Jefferson Counties, Ohio) received training regarding how to conduct an FFL program and have increased

knowledge and experience as a result of having conducted classes in their own communities. Fourth, thanks to the success of the FFL program, more people have an increased awareness of their own health and the impact that making healthy or unhealthy choices have on their bodies. Fifth, the FFL program led to the development of a county-wide health and wellness initiative in Tuscarawas County called Healthy Tusc. The Healthy Tusc collaborative meets monthly to help influence improvements in health policies within Tuscarawas County's many schools, businesses and government agencies. Finally, and probably most importantly, there are many success stories from those who have completed FFL classes. They are living healthier lifestyles comprised of positive behavior changes, improved health status and family management.

## Part VIII: Implications for Other Communities

Our experience through this project proved that the Fit for Life program could be successfully replicated in other communities. Additionally, thanks to our rigorous evaluation process, we were able to utilize input from Fit for Life participants and from staff at our partner organizations to create a standardized Fit for Life participant workbook and a standardized Guide to Conducting a Fit for Life Program. Now that these valuable resources have been created, we can make them available for sale to other organizations and physicians who wish to conduct a Fit for Life program in their communities. Because our data strongly supports our case for becoming a best practice model, other organizations can confidently utilize our curriculum and know that the curriculum has been proven to work in five Appalachian counties. Most importantly, by offering the Fit for Life program in other communities, more Americans will achieve positive health improvements that will potentially save their lives and/or prevent the development of chronic diseases.

Regarding evaluative measures, our program staff learned the importance of measuring more than just baseline health measures (weight, BMI, body fat percentage, LDL, HDL, Triglycerides, blood pressure, etc) to prove success. We also learned the importance of measuring positive behavior changes (frequency of exercise, number of healthy foods consumed, etc.). Sometimes participants in the class do not experience substantial improvement of their health indicators, but if they have taken steps toward more positive healthy behaviors, we know we have made an impact that will eventually lead to those participants becoming healthier. Finally, we learned a lot about the importance of providing our holistic approach to training. It wasn't enough to just focus on teaching participants what to eat, when to eat, and how to exercise. We also had to influence their thinking through journaling exercises, positive reinforcement, and the sharing of motivational testimonials, visuals, poems, and etc. Healthy thinking can and does lead to healthy behavior.

# Oregon

## La Clínica del Cariño, DBA One Community Health

Part I: Organizational Information	
Grant Number	D04RH23587
Grantee Organization	La Clínica del Cariño, DBA One Community Health
Organization Type	Migrant/Community Health Center
Address	849 Pacific Avenue, Hood River, Oregon 97031
Grantee organization website	<a href="http://www.onecommunityhealth.org">www.onecommunityhealth.org</a>
Outreach grant project title	Promoting Steps to Health/Promoviendo los Pasos a Salud
Project Director	Name: Paul Moyer, PA-c, MPH.
	Title: Health Promotion Manager
	Phone number: 541-386-6380, ext.1325
	Fax number: 541-386-1078
	Email address: <a href="mailto:pmoyer@onecommunityhealth.org">pmoyer@onecommunityhealth.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*The Next Door, Inc. - Nuestra Comunidad Sana	The Dalles, Wasco Co., Oregon Hood River, Hood River Co., OR.	Community Health Services Agency
*Providence Hood River Memorial Hospital	Hood River, Hood River County, Oregon	Hospital and Outpatient Clinic Services
*Klickitat County Health Department	White Salmon, Klickitat County, Washington	Washington State County Health Department
*La Clínica del Cariño, dba. One Community Health	The Dalles, Wasco County, Oregon Hood River, Hood River Co. OR.	Migrant/Community Health Center

### Part III: Community Characteristics

#### A. Area

The area covered by the Pasos Outreach grant program includes parts of four counties, in two states known as the Mid-Columbia River Gorge; Hood River and Wasco Counties in Oregon, and Klickitat and Skamania Counties in Washington. The communities served in Oregon State were Odell, Parkdale, and Hood River in Hood River County and The Dalles in Wasco County. The communities served in Washington State were White Salmon, Husum, and less so Trout Lake and Goldendale in Klickitat County, and Underwood in Skamania County.

#### B. Community Description

With an official 2010 U.S. Census population of 78,942, the majority population of the region served by this Outreach grant program considers itself Caucasian. In 2011, people identifying with Hispanic ethnicity and living in Klickitat, Wasco and Hood River Counties constituted 10.7%, 14.8% and 29% of the populous, respectively. Heart and cerebrovascular diseases account for greater mortality than state-wide averages in Hood River, Wasco, and Klickitat counties. In 2011, 46% of a Consortium member's survey responders in Hood River county self-reported having chronic diseases, including diabetes, cancer, heart disease or high blood pressure. Almost two-thirds of Oregonians are either overweight or obese, and Hispanics were 1.1 times more likely to be obese than non-Hispanics. In one Oregon study, 58% of Hispanics were considered overweight as compared to 39% of

Caucasians living in the state. Hood River and Wasco Counties are designated as Medically Underserved Areas and have also been described as a Health Profession Shortage Area for low-income residents needing mental health and dental care.

As well, Klickitat and both Oregon Counties are considered “Critical Access Areas” with Portland, Oregon being the nearest metropolitan area, 1.5 hours away by Interstate Highway 84. The local economy is based on a declining lumber and trade industry, agriculture and seasonal tourism. Famous for its orchards and fruit production, the Mid-Columbia Gorge’s ag-industry is dependent on a large seasonal and migrant farmworker and fruit packing workforce constituted primarily by people of Hispanic ancestry. In Klickitat, Hood River and Wasco counties, the percent of those living below 200% of the Poverty Line is 37.8%, 37.7% and 33.5%, respectively. Oregon and Washington state numbers reflecting the same level of poverty were 29.6% and 25.9%. In 2011, SNAP recipient rates were 15.7% in all three counties, compared to Oregon’s 11.6% and Washington’s 8.8%. In Hood River School District, 58% of students qualify for free or reduced-price school lunches and 79% of students at Mid-Valley Elementary School are similarly qualified. About 20% of Klickitat County residents worry about securing their next meal, and food insecurity was considered the Social Determinant of Health category afflicting the highest percentage of Mid-Columbia Gorge population in a 2014 local survey of 17 health services agencies.

### C. Need

The “Promoting Steps to Wellness / Promoviendo los Pasos a Salud” program was designed to meet individual and community needs, which were drawn from local and regional sources. We reviewed county, regional and state health indicators along with a 2011 draft of “Providence Hood River Memorial Hospital’s 2010 Community Assets and Needs Assessment”, as well as the 2011 release of “Data and Findings of The Klickitat County Community Health Needs Assessment”. The key findings from these reports provided the basis for expansion of our scope beyond our previous focus on diabetes in our community wellness course curriculum and patient care coordination and self-management. We learned that heart disease in Hood River and Wasco Counties exceeded Oregon State’s average and was the second leading cause of death in the state of Oregon. Also, the Klickitat County survey respondents reported a higher than Washington State prevalence of high blood pressure and elevated cholesterol levels. Death rates due to stroke in Oregon were 20% above the national average, and almost two thirds of adults were either overweight or obese. In Oregon, 58% of Hispanics were overweight in comparison to 39% of non-Hispanic whites.

Hood River County is the second highest ethnically diverse county in Oregon with 29.5% of the population being of Hispanic origin compared to 11% for the State. The Hispanic population in Klickitat County grew by over 40% between 2000 and 2012, and 12.3% of Wasco County people identify themselves as Hispanic. Prior to this three-year grant period, the Oregon Health Authority reported that nearly twice as many Hispanics, compared with the general population were medically uninsured and/or could not afford a visit to a doctor’s office for medical care.

## Part IV: Program Services

### A. Evidence-Based and/or Promising Practice Model(s)

The creation and development by One Community Health’s “Pasos a Salud / Steps to Wellness” course curriculum for group health education classes was supported by our first ORHP- Outreach grant, 2006-2009. Utilization of this curriculum in group wellness classes, conducted within the methodology of Popular Education during that cycle and the subsequent Outreach period, 2009-2012, has contributed to regional recognition of the Pasos Wellness Course Curriculum as a Promising Practice Model.

“Pasos a Salud” was originally composed and formulated in recommendations by organizations and institutional publications, e.g., the Office of Minority Health which stated in the, “Strategic Framework for Improving Racial/Ethnic Minority Health and Eliminating Racial/Ethnic Health Disparities” (2011), that “Approaches that address individual-level factors include efforts to increase knowledge, promote positive attitudes, and improve skills that affect decisions about health-related behavior. A broad range of informational/educational methods and materials, dissemination channels and venues may be used.” The strategies and activities in the Pasos series of projects have successfully used these recommended practices and adapted them to migrant and seasonal farm workers in the rural Northwest. The teaching plans are detailed and easy to follow (see the Pasos teaching plans, or “tehdos” and class outlines at [www.onecommunityhealth.org/healthy-resources/healthy-living](http://www.onecommunityhealth.org/healthy-resources/healthy-living)).

Throughout both rounds of previous ORHP- Outreach funding, the strategies and procedures were scrutinized and revamped to ensure that the services were delivered to patients in a culturally relevant and appropriate manner without sacrificing positive health outcomes. In the second round of ORHP- Outreach grant support the successful components of the courses were replicated and conducted in two counties and interestingly, the curriculum was found to work just as well with English speaking, non-Hispanic class participants. Prior to the Outreach grant awards, two grants received in 2004 by La Clínica del Cariño, dba.

One Community Health and several local partners (including The Next Door) focused on a six-month obesity course and a four class, small group pilot diabetes course, both targeting the Hispanic community in Hood River County.

The staff of LCDC/OCH, including new Community Health Workers (CHW) trained and taking part in the obesity program played a key role in developing “Pasos a Salud / Steps to Wellness”. “Pasos/Steps to Wellness” involved designing a group intervention to encourage healthy behaviors regarding nutrition, physical activity and stress management. This pioneering work occurred largely because of the difficulty LCDC/OCH had in finding a curriculum to meet the specific needs of the local Hispanic population, which makes up a large component of the patients and community members it serves. The staff of LCDC/OCH therefore designed and implemented a unique, original curriculum based on Popular Education during the first year of their original grant. With each new round of course implementation, the classes were refined and carefully tailored to be positively motivational, fun, simple and based on lifelong changes in nutrition, physical activity, and coping with life’s stressors in a healthful way. The classes were enthusiastically received by the communities in which they were taught, and participants routinely referred their friends, family members and neighbors to attend.

Although the “Pasos/Steps to Wellness” course series has never been enrolled in a Random-Controlled-Trial, nor any validated study has yet been developed or performed by professional researchers, the nine years of participant’s pre- and post-class bio-measures and questionnaire responses have consistently indicated positive “knowledge gained and behaviors changed” toward healthier lives among those fully attending the Pasos Wellness Courses.

The diabetes case management program, referred to as “Salud” at LCDC/OCH’s larger clinic in Hood River, first piloted using a Registered Nurse supervisor and clinical-Community Health Worker (CHW) in 1997. The bilingual/bicultural CHWs were recruited and trained in case management by their supervising RN/Certified Diabetes Educator (CDE). These CHW/RN teams have continued to play a significant part in bridging medical care and patient self-management to low-income, mostly non-medically insured diabetic patients of LCDC/OCH’s medical providers. (See, “Clinical CHW: Linchpin of the Medical Home”, a descriptive study of LCDC/OCH’s “Salud and Perinatal CHW/RN teams”, by K. Volkmann and T. Castanares and published in peer-reviewed Journal of Ambulatory Care Management, Vol. 34, No. 3, pg. 221-233, Aug. 2011). The Center for Disease Control and Prevention’s website recommended the incorporation of CHWs to improve patient education and follow-up care for the prevention and control of chronic diseases, stating the evidence for this is continuing to grow.

In documents accessed in October, 2011 during the writing of this Outreach grant’s application and included in the write-up’s “Project Narrative”, the following statements were used in describing OCH’s “promising practice” for utilizing CHW/RN teams in clinical patient care. A sample of these statements without references due to space constraints are repeated here; “integrating CHWs into multidisciplinary health teams has emerged as an effective strategy for improving the control of hypertension among high-risk populations”, “a recent review examined the effectiveness of CHWs in providing care for hypertension and noted improvements in keeping appointments, compliance with prescribed regimens, risk reduction, blood pressure control, and relative mortality”, “in reviewing 18 studies where CHWs were involved in the care of patients with diabetes, Norris and colleagues found improved knowledge, lifestyle and self-management behaviors among participants”, “after 2 years, African American patients with diabetes who had been randomized to an integrated care group consisting of a CHW and nurse care manager had greater declines in A1C values, cholesterol, triglycerides, and diastolic blood pressure than did a routine-care group or those led solely by CHWs or nurse care managers”. In a summary of their evidence supporting the role of CHWs, the CDC described a 2010 published report recommending that the Centers for Disease Control and Prevention’s Division for Heart Disease and Stroke Prevention work with state partners to bring about policy and systems changes that will result in trained CHWs being deployed in high-risk communities to help support healthy living strategies that include a focus on hypertension.”

## **B. Description**

### Pasos/Steps to Wellness community health education classes-

The Pasos wellness course team, taught by Community Health Workers (CHW), is a series health education classes, each consisting of one, two hour class per week, for 12 consecutive weeks. The Pasos community wellness series have been conducted in three counties, reaching participants living in our four county service area. With supervisory support by the Program Director, these courses are team-coordinated and instructed by CHWs employed through The Next Door (TND) and One Community Health (ONC). The CHWs gain knowledge and expertise from the Registered Nurse staff at OCH, as well as other health professionals from Providence Hood River Memorial Hospital (PHRMH), TND, and OCH who contribute classrooms, guest lecturers, and staff training. The 12 week health education series remains a key component of our ORHP Outreach grant program. The Pasos wellness courses are the only accessible and culturally competent health education classes consistently offered in the region to low-income, Spanish speaking residents. Classes focus on nutrition, physical exercise and activities, personal stress reduction and promotion of realistic healthy choices and self-directed action steps for daily application. The

wellness series promotes healthy choices targeting the prevention and control of diabetes, hypertension, hypercholesterolemia and obesity. Due to increased demand in the area from our prior Outreach grant support (2009-2012), the Pasos wellness series have continued to be offered in The Dalles of Wasco County and were extended geographically to new communities in southern Hood River and western Klickitat Counties.

#### Salud/Health and Chronic Disease CHW/RN care coordination/case management team-

Throughout this grant period, OCH employed a CHW and RN clinical-care team to expand upon its previous Outreach grant-supported diabetic case management program in The Dalles clinic. Patients of OCH are now offered care coordination, education on nutrition, exercise and stress management, along with self-management support to better control and prevent hypertension, hypercholesterolemia, obesity and diabetes. The Salud CHW/RN team's chronic disease case management program conducts 30-60 minute patient appointments with patients referred to them by OCH's Primary Care Providers (PCP). All Salud team patient appointments and telephone contacts are documented in the patient's Electronic Medical Record (EMR). While appointing with new OCH patients to the Salud team throughout this funding period, the CHW and RN staff also have continued fostering clinical relationships with diabetic patients cultivated during the prior ORHP supported Outreach grant cycle, 2009-2012. The Salud RN is also authorized to make diabetes medication adjustments by OCH's medical procedural protocol for patient's diagnosed with diabetes. Under the direction of OCH PCPs, the Salud CHW/RN team offers chronic disease patient education, care coordination between the patient and Patient Centered Primary Care Medical-home teams (PCPCMH-t) and continuous support emphasizing patient-directed behavioral choices to better control or prevent these chronic diseases. With its particular emphasis on patient self-management, the CHW/RN team serves to augment PCP's patient care and plays an important role on OCH's PCPCMH-teams.

Outreach Education- OCH and TND continue to work together in sending Outreach informational, educational and screening teams of health professionals to seasonal/migrant farmworker camps, as well as coordinating and implementing a seasonal "food drive" for arriving migrant farm laborers and their families. Educational presentations are taught in Spanish and focus on healthy nutritional choices. Blood pressure and serum glucose screenings are offered to adult attendees. Participants with abnormal results are appropriately counseled in-field by licensed nursing and/or medical professionals and referred in a timely manner to their PCPs or to OCH's Hood River or The Dalles clinics for appointments with a PCP. Intermittently during the three year Outreach grant cycle. CHW-directed "health education talks" were broadcast by a local Spanish speaking community radio station, Radio Tierra. With the assistance of several Radio Tierra programmers, CHWs created and aired discussions, or Public Service Announcements on healthy lifestyle choices based on lessons within the Pasos/Steps to Wellness 12-week course curriculum. With an estimated broadcasting audience of 7,000-9,000 listeners, Radio Tierra provides a local source of music and news, with occasional educational forums for Spanish language listeners residing in a portion of the Mid-Columbia River Gorge.

Since January 2014, weekly Zumba-exercise classes have been coordinated and taught, on a quarterly basis by volunteer, Spanish speaking CHW instructors in northern Hood River County. A total of 79 registered, lower-income and active enthusiasts have taken advantage of this "free" group-exercise offering.

### **C. Role of Consortium Partners**

Each of the following Consortium Partner's Roles and Responsibilities contributed appreciably toward planning and implementation of the grant-funded program.

La Clínica del Cariño, dba One Community Health (OCH) provided:

- The project's Project Director, who worked in collaboration with Consortium partners to meet all program goals,
- The Program Director for overall administration and management of the project, including collection of measurement data for reporting and budgeting,
- Community Health Workers (CHW) as lead educators for the Pasos 12 week group wellness series, four class series per year, as well as professional RN-CDE for guest presentations on chronic diseases to these class series,
- Coordinated the expansion of Salud's diabetes case management procedures and protocols to include CHW/RN patient care management for control and prevention of diagnosed hypertension, hyperlipidemia and obesity in OCH's satellite clinic, located in The Dalles, Wasco County, Oregon,
- 60 hours of CHW staff hours each year of the project as in-kind,
- Coordination of outreach activities, including education and blood glucose and blood pressure screenings to Migrant/Seasonal Farmworker's camps during various orchard harvest seasons,
- Coordinated initial and on-going program evaluation processes with evaluator,
- Ensured required reports were submitted to grantor,
- Organized and conducted eighteen Consortium meetings where program "progress to date" updates were presented, as well as strategic and sustainability plans were created with fellow Consortium members.

The Next Door, Inc./Nuestra Comunidad Sana (TND) provided:

- Staffing CHW, along with a TND site-coordinator for facilitation and education of twelve Pasos 12 week-long wellness class series,
- Monthly invoices to OCH to include; CHW/site-coordinator staff hours worked, payroll expended, rent, utilities, insurance, telephone, overhead calculated per budget, as well as travel expenses, and other expenses for supplies not in the contract budget but related to the project for reimbursement by OCH subject to the Program Director's approval; All expense receipts and mileage accounting accompanied each of the monthly invoices.
- Participated in quarterly (at minimum) Consortium meetings.

Providence Hood River Memorial Hospital (PHRMH) provided:

- Facilitation for the establishment of classroom space at Mid-Valley Elementary School for three Pasos 12 week group wellness courses in a southern Hood River County community,
- Guest professional facilitators for twelve 12 week Pasos wellness courses, including a Registered Dietitian for nutrition education and Mental Health specialist for stress management and CHW staff-training on these subjects, 2-4 hours per year
- Participation in quarterly (at minimum) Consortium meetings.

Klickitat County Health Department (KCHD) provided:

- Support in coordinating community outreach for and set-up in the delivery of five 12-week Pasos community wellness courses,
- Referral of potential Pasos class participants from the Health Department,
- In-kind Pasos class-room meeting space, storage and necessary site-coordination of each evening class,
- Participated in quarterly (at minimum) Consortium meetings.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Salud Chronic Disease Care-Coordination/Case Management: Since the onset of this grant period, 74 new patients have appointed with the Salud CHW/RN chronic disease team. They were then placed in a tracking program, and their visits were monitored in OCH's Electronic Medical Record. They had a total of 296 Salud patient appointments, averaging 4 Salud visits per patient in a 6-12 month period. Patient care parameters were tracked with the following results: 69 of 74 (93%) had received intake assessments; 70 of 74 (95%) had a self-management care plan initiated; 44 of 74 (59%) had one or more improved bio-measurements; 26 of 74 (35%) indicated improved levels of physical activity and 42 of 74 (57%) described improved nutritional behaviors.

Pasos/Steps to Wellness Community Health Educational class series: Measured outcomes of 162 adult participants having completed 10 Pasos wellness course series (as of this writing) are as follows: 93/162 (57%) reported increased vegetable consumption; 120/162 (73%) reported drinking fewer sweetened beverages; 124/162 (77%) described increased physical activity/exercise; 126/155 (81%) lost one pound of weight or more; and 115/155 (74%) had a decreased waist circumference of one inch or more by the end of the series. 22 Pasos class participants having elevated blood pressure or lab results were referred to their PCP, or for those without a PCP, timely appointments were arranged with PCPs at OCH's clinics in The Dalles or Hood River.

Outreach Health Education and screening: Harvest orchard camp presentations and screenings in 2012, 2013 and 2014 accounted for the following outcomes: a total of 26 camp presentations were given to a total of 1,372 attendees; a total of 560 adults received blood pressure checks; 549 adults had blood glucose screenings of which 39 had abnormal findings and were referred to their PCPs, or appointments were made with OCH PCPs at The Dalles or Hood River clinics.

### B. Recognition

Our Promoting Steps to Health/Promoviendo los Pasos a Salud program has received the following recognitions:

- During the fall of 2012 and spring of 2013 an Oregon Health Sciences University doctoral candidate observed and interviewed OCH's RN/CHW Salud and Perinatal staff. The information gained from these exchanges contributed appreciably to nursing dissertation

- In 2013, along with three other clinical practices in the U.S., OCH was selected to take part in a qualitative research study by students and staff from the University of North Carolina-Chapel Hill. Financially supported by the American Academy of Family Physicians and UNC-Chapel Hill, the “pilot” qualitative study was conducted to initiate the development of a manual describing the integration of CHWs into the Primary Care Medical Home-team model.
- In the fall of 2013, OCH’s Salud and Perinatal RN/CHW staff were selected to be interviewed by the Oregon CHW Association utilized in creating a state-wide spotlighting our Salud and Perinatal CHW/RN/MD case management staff and CHW Pasos course educators for an introductory video.
- OCH was asked by the National Committee of Farmworker’s Health to write an essay for their Migrant Health NEWSLINE describing the Promoting Steps to Wellness / Promoviendo los Pasos a Salud program’s focus on nutrition. This piece, along with others on the subject appeared in first Issue of 2014.
- In January 2015, an article was written and published for a local newspaper by OCH staff highlighting the Pasos wellness classes and Salud department’s contribution to patient’s and community member’s health. It appeared, along with others from the community in the Health section of the Hood River News.

## Part VI: Challenges & Innovative Solutions

**Bilingual CHW-** Early in the grant period we experienced staffing changes and realized that experienced CHWs who were sufficiently bilingual, i.e., to the level needed for Pasos Community Wellness Courses taught in English were unavailable. This resulted in shifting to Spanish-language-only class offerings through the remainder of the grant period. Emphasis on recruiting, hiring and training of sufficiently bilingual CHW for future wellness course offerings is in practice.

**New EMR system-** By the onset of grant period necessitating appreciable IT assistance to develop “patient tracking” reporting system for the Salud Chronic Disease CHW/RN care coordination and education program’s evaluation purposes. With considerable time and effort IT person’s efforts were successful.

## Part VII: Sustainability

### A. Structure

One Community Health, The Next Door, Providence Hood River Memorial Hospital, and Klickitat County Health Department will continue as a review and directive board for our Pasos “core” Community Wellness Course offerings into the future. We are scheduled to conduct our next two 12-week Pasos courses in the fall of 2015, maintaining our current “semester” course offerings for a total of four class series per year.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained, i.e., as yet undetermined Radio Tierra programming

None of the elements of the program will be sustained

All three Pasos program activities will continue beyond the end of this grant cycle, two of which are being fully supported through absorption by members of the community’s Pasos Consortium, OCH and TND.

OCH’s “Salud” chronic disease care coordination CHW/RN staff, The Dalles clinic-site, Oregon:

OCH received a HRSA Expanded Services grant award in 2014. This award supports on-going, sustained funding for a chronic disease patient care coordinating team of one full time Community Health Worker and one full time Registered Nurse.

Community Outreach/Education will continue through the following activities:

- TND will continue with community radio Public Service Announcements, conducting seasonal outreach to Migrant-Seasonal Farmworker’s (MSFW) camps with access to health services information and coordination of annual food drive for new migrant arrivals to camps at onset of local cherry harvest.
- OCH outreach education, based on Pasos wellness course curriculum and screenings for hypertension and elevated blood glucose, will be offered seasonally to MSFW by CHWs, Family Medicine Residents, and other OCH professional staff during harvest season and health fairs. OCH will continue to develop/implement pre-recorded and/or live broadcasts

of Pasos course material on nutrition and chronic disease prevention with community “Radio Tierra” station programmers (the area’s non-profit, bilingual community radio station).

- CHWs within the community will continue coordinating and conducting free, or “donations for space rental” supported Zumba-exercise classes.

Pasos/Steps to Wellness course series: The Pasos Consortium will be primarily responsible for continuing the Pasos “core” wellness course offerings to the Mid-Columbia River Gorge communities. Four classes will be taught per year, two in Spanish and two in English, rotating between classroom sites located in three counties and two states. We are targeting completion rates of 20 participants per class.

### C. Sustained Impact

Value of Community Health Workers and CHW/RN teams- The prominent sustained impact that has evolved during this grant period is the solidifying value of CHW within the Columbia River Gorge and the state of Oregon. Essential to and building upon community-wide acceptance and utilization of CHW is the increasing number of CHW positions on various health care teams in our region. This denotes an attitudinal progression among the standard health care workforce of the Columbia River Gorge and Oregon, including medical providers, nurses and health care administrators. Examples of the increase value being placed on CHWs are:

- In 2014 PHRMH created a new clinical-CHW position within its palliative care department.
- OCH’s chronic disease case managing CHW/RN teams are now operationally budgeted into both clinics where they will continue integrating into the respective clinic’s Primary Care Medical Home teams. This increased CHW staffing will support the continuation of the Pasos community wellness courses.
- Oregon State’s establishment of an ongoing CHW Certification Training Program in Hood River County by TND in association with the Multnomah County Health Department in 2014 illustrates a regional example of the importance being placed on CHWs. This 90-hour course provides access to professional CHW training and subsequent professional Oregon State registration. Twenty-five local CHWs completed the training in 2014. Four CHWs from TND and three from OCH will take part in instructing the Certification course in February, 2015.
- As a state-wide example, Oregon CHW Association representatives visited OCH in 2013 for video-graphic interviews spotlighting our Salud and Perinatal CHW/RN/MD case management staff and CHW Pasos course educators for an introductory video sub-titled, “CHW, Who We Are and What We Do” <http://www.youtube.com/watch?v=JtIY7CQf-EU> . This document of Oregon’s developing CHW workforce is for students, businesses, health care employees and administrators, and public service entities.
- On an academic level, a doctoral candidate from the Oregon Health Sciences University researched her nursing degree dissertation with several employees among various institutions throughout the region, including OCH. Her dissertation’s findings, entitled “CHW in Rural Primary Care: Implementation Issues” were presented at an Oregon Public Health Association annual meeting in October, 2013.

Strengthening health service’s community partnerships- New partnerships have developed to address health issues in our community as the result of our Outreach grant as illustrated by the following:

- A new working relationship among health service partners is evidenced by the Oregon Community Care Organization, “Columbia Gorge Health Council” that supports the development and implementation of a “Community Health Team”. The Community Health Team, consisting of CHWs, an RN, and a Social Worker, assists residents in the area that have special health needs and receive Medicaid financed services.
- A breast health program’s grant-supported CHW transitioned from a joint Mid-Columbia Medical Center and OCH program to a PHRMH and TND women’s health project.
- An Oregon State Health Department subsidiary accepted facilitation of our local Oregon CCO, “Columbia Gorge Health Council” and other institutions including TND, PHRMH and OCH to work on a project proposal in 2013-14. The proposal, described by Governor Kitzhaber is “to create a connecting structure that coordinates existing CHW with each other and with primary care, and with social services in the Hood River and Wasco county area, The concept proposed has the potential to strengthen the connection among non-profit, private and public sectors in your community and may create a model which can be replicated in other parts of the state”. The outcome of this facilitation process is directed toward developing a CHW-driven “Pathways Model” for a health service navigation system assisting low-income residents.

New ways of serving- The role of Community Health Workers has expanded as follows:

- An increasing ratio of CHWs performing similar health education and systems navigational roles to somewhat fewer numbers of standard health care professionals performing similarly in the region.
- CHWs have developed new skills and scopes of practice in the four county area, such as that found in the Komen grant-supported breast health program offered through PHRMH and TND, as well as the Oregon State Health Authority/CCO administered health systems navigator.
- A new CHW position recently advertised for an established public housing assistance project in Wasco County.

Developing capacity, community education and CHW/RN care coordination- The Pasos community wellness course curriculum and Salud CHW/RN care coordination scope of practice has expanded to include control and prevention of four chronic diseases; diabetes, hypercholesterolemia, hypertension and obesity. OCH's CHW/RN chronic disease and perinatal case managing models were described in a 2011 Journal of Ambulatory Care Management article. In 2013 this article, in-part resulted in OCH's invitation with three other clinic systems nation-wide to take part in a qualitative research study by University of North Carolina-Chapel Hill. The intent of this pilot qualitative study, supported by the American Academy of Family Physicians is the development of a manual describing the integration of CHWs into the Primary Care Medical Home-team model. As of this writing, the pilot study's manuscript has been accepted for publication in an upcoming issue of the Journal of Ambulatory Care Management.

Advancing community-wide individual and family attitudes and behaviors for improved health- Throughout Hood River and Klickitat Counties there has been a noticeable increased visibility of people in seen walking for exercise, working in community gardens, and participating in Zumba classes.

## Part VIII: Implications for Other Communities

The Pasos community wellness courses conducted during this Outreach grant cycle were known and “in-demand” from community members having experienced previous Pasos group health courses, or from those learning from others about the class series. The “take-home” here for initiating a similar community health education course is to first learn from your community their perceived needs for a similar education program, i.e., conducting a community needs assessment survey utilizing an instrument including group health education options.

Of course, the same goes for a CHW/RN chronic disease patient-care team considered for clinical addition to existing clinic's Primary Care Medical Home-team offerings, i.e., survey existing patients and staff for this option

# Oregon

## Samaritan North Lincoln Hospital

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23613
<b>Grantee Organization</b>	Samaritan North Lincoln Hospital
<b>Organization Type</b>	Hospital
<b>Address</b>	3043 NE 28 <sup>th</sup> Street, Lincoln City, OR 97367-4518
<b>Grantee organization website</b>	<a href="http://www.samhealth.org">www.samhealth.org</a>
<b>Outreach grant project title</b>	Rural Health Care Services Outreach Grant Program
<b>Project Director</b>	Name: JoAnn Miller
	Title: Director – Community Health Promotion
	Phone number: 541-768-7330
	Fax number:
	Email address: <a href="mailto:jomiller@samhealth.org">jomiller@samhealth.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$149,165
	May 2013 to April 2014: \$149,387
	May 2014 to April 2015: \$149,782

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Benton County Health Department	Corvallis, Benton County, Oregon	Health Department
*Samaritan Pacific Communities Hospital	Newport, Lincoln County, Oregon	Hospital
*Oregon State University	Corvallis, Benton County, Oregon	University
*Oregon Council of Governments	Albany, Linn County, Oregon	Non-profit
*Samaritan Lebanon Hospital	Lebanon, Linn County, Oregon	Hospital
*Lincoln County Health Department	Newport, Lincoln County, Oregon	Health Department
*East Linn/Benton County FQHC	Corvallis, Benton County, Oregon	FQHC
*Samaritan Health Services	Corvallis, Benton County, Oregon	Hospital
*Lebanon School District	Lebanon, Linn County, Oregon	Public School
*InterCommunity Health Network	Corvallis, Benton County, Oregon	Coordinated Care Organization
*Community Services Consortium	Albany, Linn County, Oregon	Non-profit
*Samaritan Health Services	Corvallis, Benton County, Oregon	Health Care System
*Work Force Development	Corvallis, Benton County, Oregon	Non-profit
*Linn County Health Department	Albany, Linn County, Oregon	Health Department
*COMP NW Medical School	Lebanon, Linn County, Oregon	University
*Samaritan No. Lincoln Hospital	Lincoln City, Lincoln County, Oregon	Hospital
*Good Samaritan Regional Medical Center	Lebanon, Linn County, Oregon	Hospital
*Private Resident – Dentist	Corvallis, Benton County, Oregon	Dentist
*Sweet Home School District	Sweet Home, Linn County, Oregon	Public School
*Contractor/Evaluator	Corvallis, Benton County, Oregon	Evaluator
*Confederated Tribes of Siletz Indians	Siletz, Lincoln County, Oregon	Tribal council
*Oregon Office of Rural Health	Portland, Multnomah County, Oregon	Rural Health

*Samaritan Albany General Hospital	Albany, Linn County, Oregon	Hospital
*Community Outreach Incorporated	Corvallis, Benton County, Oregon	Non-profit
*Samaritan Health Services	Corvallis, Benton County, Oregon	Medical Clinic

### Part III: Community Characteristics

#### A. Area

The outreach grant program served Lincoln County and East Linn County, with a focus on rural population. All of Lincoln County is designated as rural, and in Linn County this qualification specified a focus on the east county communities of Lebanon, Scio and Sweet Home.

#### B. Community description

Lincoln and east Linn counties are designated rural counties, health professional shortage areas, and medically underserved areas. The total population is 172,706, of which 40,151 are under the age of 18 (US Census Bureau, 2010). Economic recovery from the recent recession has been slow, and while unemployment figures have fallen below pre-recession rates, the median income level of Lincoln County (\$42,365) and Linn County (\$46,939) are far below Oregon state (\$50,229) and national median earnings (\$53,046) (US Census Bureau: State and County Quick Facts, 2013). One measure of economic hardship in the area is the amount of children that qualify for free and reduced lunch: 66% in Lincoln County School District (Lincoln County 2014 Community Health Assessment), and 52.3% in Linn County (Linn County 2012 Community Health Assessment). The percent of uninsured children in Lincoln County has declined from 22% in 2009 to 8% in 2011, and in Linn County it was 10.8% in 2010 (Source: Lincoln Co CHA 2014, Linn Co CHA 2012). The 2015 County Health Rankings report released by the Robert Wood Johnson Foundation and the University of Wisconsin ranked Lincoln County 25th and Linn County 17th out of 33 counties in Oregon for overall health outcomes. Rural areas, such as the central Oregon coast and the mid-Willamette Valley, tend to have fewer health, community and financial resources available to commit to obesity prevention and control efforts than do high-density urban areas. Additionally, access to proven methods of preventing and controlling obesity – physical activity, healthy food choices, and access to health services – are limited in our rural communities.

#### C. Need

The CATCH program was adopted to address an obesity epidemic in the communities served. In 2011, nearly 27% of children were obese in Linn County and 25.54% of Lincoln County children were obese or overweight, according to data from Samaritan Health Services electronic health records BMI data (SHS Andres Analysis, 2011). In Linn County, less than a quarter of youth consumed at least five servings of fruit and vegetables per day and over one third drank at least seven sodas per week. Twenty-one percent of children participating in local WIC nutrition programs were considered overweight by program guidelines (Linn County CHA, 2012).

### Part IV: Program Services

#### A. Evidence-based and/or promising practice model(s)

The Coordinated Approach To Child Health (hereafter referred to as CATCH) is an evidence-based program designed to promote physical activity and healthy food choices among children and families. The CATCH model is designed to be integrated in current classroom curricula and afterschool programs by providing physical activity and nutrition education which eliminated the need to modify or adapt the program. By teaching children that eating healthy foods and being physically active is fun, CATCH aims to establish lifelong healthy habits. CATCH is effective because healthy behaviors are reinforced through a comprehensive, coordinated curriculum. The program consists of three formats: CATCH for Schools, CATCH Kids Club, and CATCH Early Childhood, each specifically designed to target the environmental setting with a focus on healthy eating choices and physical activity. CATCH for Schools focuses on coordinating activities in the classroom, physical education classes, the cafeteria and the home. The CATCH Kids Club is very similar to the in-school program, and provides nutrition manuals to include scripted teaching lessons for both professional and non-professional instructors and also includes games, songs, nutritional facts, recipes, handouts, and letters home in both English and Spanish. The CATCH Early Childhood takes these concepts and makes them age appropriate through fun, hands-on activities, such as classroom-based gardening and lively dance/music activities that engage 3-5 year olds in the development of a healthy lifestyle.

The Consortium selected the CATCH program for a number of reasons, first of which was the strong evidence-base demonstrating that it worked in all three areas as previously outlined. The first study of CATCH for Schools (grades three through five) took place from 1991 to 1994 at four regional sites and was conducted by researchers at Tulane University, University of California, University

of Minnesota, and University of Texas. Not only was meaningful behavior change achieved (decreased consumption of fat and increased physical activity), but those behaviors were still present three years after participation in the CATCH program (*Archives of Pediatrics and Adolescent Medicine*, 1999; 153(7), 695-704.)

A University of Texas study conducted in 2003 evaluated the impact of CATCH Kids Club on physical activity levels and nutrition among students in 16 after-school programs in two Texas communities (*Public Health Nutrition* 2005; 8(2), 133-140). Along with its finding of increased moderate to vigorous physical activity (MVPA), and reduced sedentary time, Consortium members valued the direct correlation of staff commitment and training to program impact. Accordingly, Consortium leaders helped to identify and engage after-school programs in their communities, especially those expressing strong interest in implementing the CATCH curriculum, and encouraged full training of all staff.

Although research on the effectiveness of nutrition and physical activity programs among preschool populations was limited, preliminary evidence pertaining to CATCH Early Childhood was promising. A pilot test conducted on the CATCH Early Childhood program among low-income children in two Head Start centers found that the program increased fruit and vegetable consumption and increased general physical activity and, importantly, moderate-to-vigorous physical activity (*American Journal of Health Education*, 2011; 42(1), 12-23).

In addition to evidence of the effectiveness of the CATCH curricula described above, a four-year study conducted in 97 schools in Texas found that CATCH is significantly more effective at reducing overweight and obesity in children when implemented in the context of a community-wide obesity prevention program (*Obesity*, 2010; 18, S36–S44). This finding further supported the consortium's decision to select CATCH, as both Lincoln and Linn counties were already actively engaged in community-wide obesity prevention activities coordinated through the Consortium.

Finally, CATCH was designed and proven retain effectiveness with incremental implementation of its various components, based on a site's resources and capacity (*Archives of Pediatric and Adolescent Medicine*, 1999;153(7), 695-704). Further, CATCH components could be integrated with existing curriculum and/or programs already in place. This flexibility was seen as a strength by Consortium members because schools in the region had already implemented healthy eating and living initiatives.

## **B. Description**

A robust administrative infrastructure was established immediately after funding was awarded and was maintained throughout the three-year grant. Administrative hierarchical support consisted of Project Director, Program Director, and two Regional Program Coordinators. A CATCH committee was established in each region (county) and staffed by their Regional Program Coordinator. These committees provided guidance for CATCH implementation at local sites. They monitored program implementation, reviewed evaluation data, and made "real-time" recommendations about modifications to program implementation in order to ensure success. At each CATCH site, a designated "Site Champion" distributed CATCH materials, served as a resource for other staff implementing CATCH, and functioned as the local contact for the CATCH committee. All those serving in leadership positions were trained in the CATCH curricula and program.

The CATCH program was evaluated by a professional independent evaluator. CATCH components were implemented with careful attention to fidelity. This was one of the priority areas for the evaluation. Accordingly, no modifications were made to the national CATCH curricula or program framework and both the after-school and early childhood programs implemented all components of the CATCH Kids Club or CATCH Early Childhood program. Due to local school district capacity, only two of the four CATCH for Schools components – nutrition education, and physical activity – were implemented in the schools.

As was intended and specified in the original proposal, a sequential rollout of the program took place over the course of the three-year grant period. In Year 1, CATCH for Schools was launched in the Lebanon Communities School District; CATCH Kids Club was implemented at Neighbors for Kids and the Yachats Youth and Families Activities Program; and CATCH Early Childhood was implemented at the early childhood program at Samaritan Early Learning Center. In Year 2, CATCH for Schools expanded to include the Sweet Home School District, Scio School District and Lincoln County School District (Sam Case Elementary); CATCH Kids Club was implemented at the Scio Youth Club, the Greater Santiam Boys and Girls Club in Lebanon and Sweet Home, and the Yachats Youth and Families Activities Program; CATCH Early childhood was implemented at the Siletz Tenas Illahee Child Care Center. In Year 3, CATCH for Schools expanded to Taft Elementary School in the Lincoln County School District and CATCH Kids Club was implemented at The Greater Santiam Boys and Girls Club in Lebanon and four 21<sup>st</sup> Century Community Learning Center after school sites - Sam Case, Taft Elementary, Toledo Elementary, and Crestview Heights Elementary. The evaluation

documented CATCH activities at each of these sites, including “kick off” and other community-based events that were held annually to communicate CATCH messages to the community.

Coordinated with the CATCH nutrition education curricula at all sites were local initiatives to increase the consumption of fruits and vegetables among children. A central component to these activities was a monthly tasting table held at each site. The tasting table featured a prepared sample of the fruit or vegetable predetermined by that month’s Pick of the Month. In addition to bridging the experience gap for many of the student population, the Pick of the Month was a tool used to communicate nutritional information to the parents by means of a printed flyer each month. Pick of the Month tasting tables were used across all age ranges, pre-school through fifth grade. Healthy food and snacks were also promoted and implemented in each of the sites existing annual events (e.g. health fairs, family nights, etc.).

The physical activity component of the CATCH program was implemented with the objective to improve health, fitness and quality of life through increased physical activity. Central to the physical education curricula were the spiral bound curriculum and the physical activity index card box of instructions for fun physical activities. CATCH physical activity materials were used by all sites to guide student participation in at least 150 minutes physical activity each week. In the first two years of the program, the evaluation included observations of physical activity in all sites and found statistically significant increases in the amount of time that children spend in moderate to vigorous physical activity. The early childhood sites reached 100% participation in movement activities designed to acquire new skills for fun physical activities that extended beyond the classroom.

Table events or presentations were made at established outreach events at which the CATCH program was showcased. These included annual grantee meetings held in Washington D.C. (year one and two), school fairs, school family events, community events (including county fairs), the annual Childhood Obesity Summit, and other such venues. Program Coordinators were responsible for ensuring that CATCH was featured at these events. Professional presentations were made at the annual regional health conferences hosted by Oregon Public Health Conference, Oregon Rural Health Conference, and the Northwest Regional Rural Health Conference. The Project Director and Program Director were responsible for ensuring CATCH was represented to the broader community in this capacity.

### **C. Role of Consortium Partners**

Consortium members provided input on the planning and design of the CATCH Project and were integrally involved in its implementation. The Consortium was created specifically to conduct a community-wide obesity prevention program through implementation of a wide array of coordinated strategies and community activities. Through ongoing Consortium efforts, the community environment to support CATCH implementation has been optimal. The Consortium continues to thrive, creating a coordinated network for addressing a range of regional health problems.

To address childhood obesity at the community level, local Childhood Obesity Partnerships (COP) - subgroups of the Consortium - were formed in Lincoln and Linn counties. Each county-level Childhood Obesity Partnership had a strong membership, including representatives from health, education, nonprofit organizations, local governments, the faith-based community, ethnic and racial groups, and community members. Each was staffed by the local Community Health Improvement Partnership (CHIP) Coordinator in their respective county, who provided guidance and facilitated communication between members.

To share information within the Consortium, the Project Director, in conjunction with the Program Director and Evaluator, provided quarterly updates to the Consortium. The Project Director also serves as the CCCWN Consortium Director, and is available for email and telephone communication as necessary. The Project Director will continue to be responsible for meeting all reporting requirements and for bringing issues requiring resolution to the Consortium. Input from Consortium members was and will continue to be solicited through requests for agenda items prior to regular meetings. Consortium membership has remained relatively stable and most, if not all, members are committed to continued involvement.

Given the nature and structure of the Consortium, the members were effective in providing resources to support opportunities for collaborations and partnerships to address childhood obesity efforts in our region. Sharing information about the program activities at the state and national levels via professional conferences and meetings was a priority for the Consortium. The Consortium also served as a comprehensive framework for other rural communities, particularly those in the Pacific Northwest, who may have faced similar barriers and challenges in their attempts to combat childhood obesity.

### A. Outcomes and Evaluation Findings

Annual evaluation reports have been provided by the independent evaluator and verbal presentations were made quarterly to the Consortium throughout the grant period. To summarize evaluation findings here - activities and accomplishments of the outreach grant fall under three major categories: Consortium functioning and CATCH program, local culture of health, and increased physical activity.

The CATCH program has been the Consortium's most significant outreach activity over the past three years. Consortium involvement and support of CATCH was instrumental in the success of the program. Consistent with the project work plan, the number of CATCH sites increased over the course of the grant. During the first two years of the grant, CATCH was implemented in 11 elementary schools in east Linn County, and one elementary school in Lincoln County. During that same time period, CATCH was delivered in 5 before and after-school programs in Lincoln and east Linn Counties. CATCH was also implemented in 3 preschools in Lincoln County. With the addition of Kids Club in Lebanon, Siletz Tribal Head Start, and Taft Elementary School along with four 21<sup>st</sup> Century Community Learning Center afterschool sites in Lincoln County during the third year of the grant, 27 CATCH programs were operating in Lincoln and east Linn counties. More than 5,250 children have been reached by the end of the grant cycle. Throughout the roll-out of the program, Consortium members identified additional opportunities for expansion and helped solve implementation hiccups.

The evaluation report provides strong evidence that the CATCH program has had significant and continuing influence beyond implementing sites, influencing food and activity choices of families, and changing community knowledge and activities around healthy eating and active living. Perhaps one of the greatest accomplishments has been the degree to which CATCH has been embraced by local communities and has shaped local health-oriented cultures. CATCH has become a recognized program across the participating communities. Teachers report that parents now ask about CATCH activities and seek guidance about what to send in school lunches. School cultures have evolved to embrace healthy eating and living. Although most schools are not able to readily change their lunch offerings because of restrictions set by contracted food vendors, preschool and afterschool programs have made major changes in the foods that are served. The final evaluation report shines a spotlight on culture change that has occurred over the three year period, citing data collected via observation, interviews and surveys.

Annual evaluation reports from years one and two documented statistically significant increases in the intensity of children's physical activity. Pre and post observations of physical activity were conducted using the System for Observing Fitness Instruction Time (SOFIT) protocol. A total of 473 Kindergarten through fifth grade students were observed over the course of 67 education lessons. Although there was no significant difference in physical education class length observed (schools did not modify their physical education schedules), there was a significant difference in the percentage of class time spent standing, walking, in vigorous activity, or in MVPA from baseline to end of the school year (post). The physical activity aspect of the CATCH program was studied particularly intensively as the evaluation assistant expanded observation and analysis activities in order to use the data for his Master's Thesis, which was successfully completed in 2014. This thesis is available upon request.

### B. Recognition

From local rural newspaper to regional circulations to a national e-newsletter, the CATCH project has been featured as a success story of community collaborative in childhood obesity prevention. The following are examples of such recognition: Newspaper articles: News-Times Newport (Sept 2012, Sept 2013, Jan 2014); The Brownsville Times (May 2012) and Lincoln City News Guard (June 2012, Sept 2013). E-Newsletters: Well Informed (a Samaritan Health Services publication) e-newsletter feature (June 2012, June 2014); Community Health Systems Development newsletter highlight (January 2013); Heart to Heart article (winter/spring 2013, spring/summer 2015); Annual Regional Childhood Obesity Summit featured program (2013, 2014, 2015); Samaritan Health Services Community Health Impact Report featured article (2013, 2014); CATCH national e-newsletter feature (June 2014); and Linn County CHIP e-newsletter highlight (March 2015).

## Part VI: Challenges & Innovative Solutions

Within the project infrastructure, the CATCH Program Director resigned due to a death in the family and one regional program coordinator resigned to accept a full-time teaching position. The superintendent of a local school district retired and two school principals relocated to other communities. We also had a program director resign from one of our childcare facilities. All of the aforementioned staff had been involved in the planning of the project and/or the implementation of the Program in their facilities.

To ensure that proper staff coverage occurred when the CATCH Program Director resigned, the local Coordinators and Project Director worked together to provide technical assistance and support to schools and organizations. To address the turnover in the schools and childcare facility, the Project Director, Program Director and local coordinators met with the new leadership and staff to discuss the CATCH Program. The new leadership and staff were provided training and support by the Program Director and local Coordinator.

The CATCH program was intentionally brought to rural and geographically isolated sites in order to reach the population target. Local control is particularly important for geographically isolated communities. Each county developed its own Childhood Obesity Partnership (COP) for regionally informed input, and was also assigned a County Coordinator who served as a liaison between project management, the Consortium, the COP and individual sites.

Travel distance to meetings was challenging for some, particularly during winter months. Regular meetings for the Consortium as well as stakeholders required flexibility and coordination. To help mitigate travel issues, meeting locations for the Consortium as well as “All Staff CATCH Meetings” were rotated between communities, minimizing the travel time and distance for any one group. Regular communication through the email listserv and the webpage also helped to minimize the sense of distance between network partners. Effective use of these tools was critical to maintaining cohesiveness within the network and stakeholders.

The project was initially implemented with a partnership with Moda Health to provide the training as well as ongoing booster training. About halfway through the grant period Moda Health encountered an internal change within their priorities, forcing them to withdraw from that partnership. With training still a need as new implementation sites came on, and other sites required booster training, a solution was implemented through two new partnerships. Oregon State University Extension Services had recently adopted the CATCH Nutrition curriculum, trained many of their staff as Train the Trainers, and offered to collaborate with our training needs. With support from the national CATCH office, a customized training program was developed utilizing the OSU Extension trainer as well as one of our County Coordinators with extensive experience with the program. For those sites that could not attend an in-person training, another partnership was established with Coordinated Health Institute, an online training solution. These online courses were also offered to round out what could not be provided through our in person training courses.

Within Lincoln County School District there has been a steady decline of dedicated Physical Education classes offered within the schools. For the final school year of the grant period, two schools from this county joined the cohort with PE classes only offered once to three times a week, and with a dedicated physical education teacher on staff for only half of the school year. Similar challenges were experienced in Linn County, where physical space limits the number of times that students can participate in PE classes each week.

Through coordination with the national CATCH office it was determined that the physical activity component of the program can be implemented with fidelity with a cumulative 150 minutes of physical activity in a given school week. This total could be attained through many small segments, or even if only offered three times a week. Arrangements were made with the schools to achieve the overall goal of 150 minutes of physical activity through a variety of techniques that included guided recess times, ten minute in-class physical activity breaks, classroom-teacher-led physical activity classes, in combination with what PE courses were available.

## Part VII: Sustainability

### A. Structure

The current structure of the Consortium will be maintained in the same manner beyond the current project. The 25 members that comprise the Consortium serve at the executive level in their respective organization and all partners have agreed to continue with the Consortium.

On a practical note, since members of the Consortium consist of high-level executives and directors, they are occasionally unable to attend meetings. In the future, partners will set dates well in advance to improve attendance and continue to offer conference calling capabilities. A steering committee has now been established (consisting of a smaller number of members who are able to commit to bi-monthly meetings) will meet on a regular basis to ensure information is distributed and shared to the Consortium and actions that require the full Consortium input will be communicated via email or other electronic services. Also planned, given the larger size of the Consortium, is formation of special sub-committees to specifically address particular Outreach projects. Project-specific sub-committees will provide expanded support for projects and increased access for insight, collaboration, and strategic planning.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Consortium will also continue to sustain and expand the current CATCH program in local communities. The main components of CATCH, as it has been implemented here, are physical activity and nutrition education. Other successful components of CATCH that the Consortium will continue to promote include the monthly Tasting Table and corresponding Pick of the Month, an annual outreach event and/or activity hosted by each partnering site, and community collaboration and partnerships around nutrition and activity.

Consortium members strongly favor continuing to support these activities for four key reasons: First, the evaluation of CATCH has provided evidence of effectiveness and success in reaching the program's objectives and goals. Second, Consortium members have seen firsthand that CATCH is having a positive effect on their communities. Third, analysis of the cost per student on an annual basis proves a very cost effective program. And finally, Consortium members believe that CATCH is having a positive impact on the health of the participants. The Consortium will be successful in sustaining CATCH because of the buy-in by implementation sites.

## C. Sustained Impact

Sustained impact is anticipated through both the Consortium itself as well as its current and anticipated outreach programs. Related to the Consortium, new and stronger bonds have developed between Consortium partners, and their quarterly meetings will continue with the goal to identify and collaboratively address community health priorities. Strong collaborative relationships will continue, as already seen in several instances. For example, the Consortium was instrumental in the formation of the Interprofessional Education (IPE) program at the neighboring College of Osteopathic Medicine of the Pacific-Northwest when the college Dean collaborated with Consortium members to organize and implement the multi-disciplinary approach to include disciplines such as pharmacy and community involvement into their IPE program. An asthma prevention program is another community health service project that continues to be strengthened by the Consortium. Through partnerships with organizations such as Linn County Health Department, Community Services Consortium, and Samaritan Health Services emergency room records, the program is able to specifically target high need recipients that otherwise would not be possible without such collaboration. The Consortium benefits from a deepening connection with Oregon State University Extension Services that will strengthen local initiatives related to healthy eating. Our evaluation provides evidence that the Consortium structure and program management process used to support local activities was successful and will continue to provide guidance at the local level.

Sustained impacts related to the CATCH outreach program are already indicating lasting effects on the community. At a minimum, these include:

- A trained CATCH champion within each local site ensures the continuation of the program and institutionalizes an internal advocate for nutrition education, physical activity, and healthy living.
- Teachers and administrators will take what they have learned from this program and be able to apply it where ever they may be employed.
- Children have grown accustomed to physical activity levels and often request CATCH activities during "free days" when the choice of activity is theirs to make.
- CATCH nutrition education lessons and the concepts of Go, Slow, Whoa have given teachers, children and their families a new lens through which to view healthy food choices.
- Tasting Tables have become a standard occurrence across all the sites to the degree that they are now a model for other sites, higher grade levels within the schools, and community organizations.
- Local partnerships around healthy eating and active living are being established or strengthened.
- CATCH sites are working together with other community organizations to promote nutrition around community gardens where children and families can learn about fresh fruits and vegetables.

## Part VIII: Implications for Other Communities

The overall structure, strategic plan and success of the CATCH program will serve as a model to other communities interested in implementing a similar program. The adaptability of CATCH itself is reflected in how our program implementation process can be modified to fit the needs of many organization types. Because of our breadth of experience working with schools and children's programs of various types, sizes, and locations, other schools and community programs will have much to gain from our experience.

Most notably, the benefits to share with others are ease of implementation, community collaboration, low cost and high sustainability of the program. From a single to multi-site school district, implementation is achieved through leadership buy-in, supplying equipment, and providing training. The program was truly an example of community collaboration with high participation from multiple organizations involved at the Consortium level, within each county's Childhood Obesity Partnership, and within and across sites. The annual cost per child to implement the program is tremendously low – our average was \$24 per child. Once implemented, the program is highly sustainable only requiring some equipment maintenance, and staff can share knowledge with any new staff.

Since the program exists largely as a knowledge base that must be transferred to incoming staff, measures must be taken to ensure this transfer. After identifying this need, we found success training as many staff as possible, both in the school and after school settings. Having a large majority of the staff trained also helps with changing the culture within a school or community organization. Once a few key leaders bought in, and several staff steadily implemented the program the culture can change within that site. By this example, it will help with the last barrier of a general resistance of school administrators to add another program. The success of one school to adapt and customize the program has shown to encourage other schools to join.

# Pennsylvania

## Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc.

Part I: Organizational Information	
Grant Number	D04RH23557
Grantee Organization	Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc.
Organization Type	Drug & Alcohol Commission, Single County Authority
Address	10829 US Route 422, P.O. Box 238, Shelocta, PA 15774
Grantee organization website	<a href="http://www.aidac.org">www.aidac.org</a>
Outreach grant project title	Nurse Navigator and Recovery Specialist Outreach Program
Project Director	Name: Kami Anderson
	Title: Executive Director
	Phone number: 724-354-2746, ext. 302
	Fax number: 724-354-3132
	Email address: <a href="mailto:kanderson@aidac.org">kanderson@aidac.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*ARC Manor	Kittanning and Clarion/Armstrong and Clarion Counties/Pennsylvania	Drug and alcohol treatment provider
*Armstrong County Memorial Hospital	Kittanning/Armstrong/Pennsylvania	Hospital
*The Open Door	Indiana/Indiana/Pennsylvania	Drug and alcohol treatment provider
*Indiana Regional Medical Center	Indiana/Indiana/Pennsylvania	Hospital
*Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc.	Shelocta, Kittanning, Indiana, Clarion/Armstrong, Indiana, Clarion/Pennsylvania	Drug & Alcohol Commission, Single County Authority
PA Department of Health	Kittanning, Indiana, Clarion/Armstrong, Indiana, Clarion/Pennsylvania	Public Health, government agency
Clarion Hospital	Clarion/Clarion/Pennsylvania	Hospital
Community Guidance Center	Indiana/Indiana/Pennsylvania	Mental Health treatment provider
Family Counseling	Kittanning/Armstrong/Pennsylvania	Mental Health treatment provider
SAM, Inc.	Clarion/Clarion/Pennsylvania	Mental Health treatment provider

### Part III: Community Characteristics

#### A. Area

The Armstrong-Indiana-Clarion Drug and Alcohol Commission, Inc.'s program, Nurse Navigator and Recovery Specialist Outreach Program, provides services to three rural counties in Western Pennsylvania: Armstrong, Clarion, and Indiana.

#### B. Community description

Armstrong, Clarion, and Indiana Counties have not historically seen the prosperity of other counties within Pennsylvania and the United States due to declines in the mining, manufacturing, and logging industries in the area. Recent national economic declines have compounded the challenges of economic development within these counties. Coal mining and manufacturing were the

largest employers among the three counties prior to the late 1990's. Since that time, declines in both industries led to skyrocketing unemployment rates, under-employment, and a relocation of the work force. During this same time period, requests for drug and alcohol treatment services at the local providers increased dramatically. Western Pennsylvania has experienced an epidemic of heroin and opiate abuse in the past 8-10 years. Pennsylvania now has the 7<sup>th</sup> highest drug overdose mortality rate in the United States, with over 3,000 deaths being heroin-related overdoses. Drug overdose deaths in Pennsylvania have now exceeded the number of deaths from automobile accidents. The heroin epidemic has spread to rural and suburban communities previously unharmed by such widespread heroin abuse, and instead of this upward trend flat-lining or decreasing, abuse and overdose continue to escalate, resulting in the loss of life across every age group and demographic. Locally, Armstrong County Memorial Hospital treated 77 overdose patients in 2013. Indiana Regional Medical Center (IRMC) treated 109 overdose patients in 2013, more than has ever been reported at IRMC in the past. In November 2014, Citizen's Ambulance Company of Indiana County reported that they have responded to an average of 90 overdoses in the past 90 days.

### C. Need

Substance abuse and addiction constitute the nation's number one public health problem contributing to 70 health conditions and to the 5 leading causes of death. The provision of substance use care has been shown to reduce the severity of major chronic diseases such as diabetes and heart disease. Chronic illnesses consume \$0.75 on every dollar spent on healthcare. Reducing this fraction by only 5% would reap an economic return of approximately \$115 billion. Randomized controlled studies have shown that 69% of patients who received concurrent treatment of their medical care and addiction were abstinent 6 months following treatment. 2010 data shows that psychotherapeutics (prescription medications that are purposefully misused) have become the nation's second largest substance of abuse. Each day nationally 20,000 individuals are seen in emergency departments for alcohol related injuries and 60% of patients seen in trauma centers are under the influence of alcohol and/or drugs at the time of admission.

The Armstrong County Memorial Hospital reports similar emergency department trends, noting that approximately two thirds of their emergency department visits involve individuals that have used alcohol or other substances of abuse. Primary substances of concern at ACMH include alcohol, opioids, and psychotherapeutics. In fiscal year 2010 – 2011, ARC Manor saw 1131 clients who were seeking intervention and treatment services for a substance related issue. Of those clients, 92% (1041) met diagnostic criteria for substance abuse or dependence. Of the 1041 who met criteria for an abuse or dependence diagnosis, 30 % (312) had a self-reported mental health concern such as Bi-Polar disorder, Major Depressive Disorder, Mood disorder, Post-Traumatic Stress Disorder, or Attention Deficit Disorder. Of these same 1041 individuals, 37% (385) had a self-reported chronic medical concern such as diabetes, cardiovascular issues, gastrointestinal issues, chronic pain, asthma, and infectious disease. Finally, of the 1041 who met criteria for a substance abuse or dependence diagnosis, 11% (115) had self-reports of concurrent mental health and chronic medical concerns. Of the clients that ARC Manor treated in fiscal year 2010 – 2011, 47% met eligibility requirements for public medical assistance and 38% met low income criteria for funding through Pennsylvania's Bureau of Drug and Alcohol Program's treatment funds. As the economic downturn continues, ARC Manor has seen a rise in individuals eligible for and willing to pursue public funding to secure treatment services.

The target population for the Nurse Navigator and Recovery Specialist Outreach program is adults and adolescents who have an Axis I diagnosis related to substance abuse or dependence as well as co-occurring physical health and/or mental health concerns. The adults referred to this service will be actively involved in any level of care of substance abuse treatment at ARC Manor including, but not limited to: Non-Hospital Short Term Medically Monitored Residential; Partial Hospitalization; Intensive Outpatient; and Outpatient.

Characteristics of the target population to be served include, but are not limited to the following:

- a. Male or female age 18 or older who is actively involved in treatment at ARC Manor.
- b. Have been assessed as having an Axis I diagnosis related to substance abuse or dependence and also having a co-occurring mental health or physical health diagnosis
- c. Wish to coordinate all aspects of his or her overall health
- d. Wish to make changes in his or her unhealthy life-style habits
- e. Display the need for education regarding life skills that encompass the integration of both physical health and behavioral health issues.

The Nurse Navigator and Recovery Specialist Outreach program started as a collaboration between the Armstrong-Indiana Drug and Alcohol Commission, Inc. (AIDAC), the Armstrong County Council on Alcohol and Other Drugs, Inc. (d/b/a: ARC Manor), and the Armstrong County Memorial Hospital (ACMH) and was intended to enhance rural physical and behavioral health care service delivery for individuals located in Armstrong, Clarion, and Indiana Counties in Western Pennsylvania. The Consortium expanded to include the major hospitals and behavioral health providers in each County. The program utilized the components of the Care Coordinator/Manager Model which was identified as a promising practice and is noted in the Rural Assistance Center Community Health Workers Toolkit as a program model. This model suggests the use of case management services for those with chronic

health conditions to better navigate the complex health care systems. As suggested within the Community Health Workers toolkit, the Nurse Navigator and Recovery Specialist Outreach program followed the Care Coordinator/Manager Model to pair the case management services of a peer Recovery Specialist with the expertise of a Registered Nurse who can better understand the health care system and the resources that are needed and available within the rural communities.

The Nurse Navigator and Recovery Specialist Outreach program encompassed all aspects of the Health Home concept in a drug and alcohol treatment setting including client education, provider education, and coordination between a client's physical health and behavioral health providers inclusive of Primary Care Physicians, Drug and Alcohol Treatment Providers, Mental Health Treatment Providers, and Emergency Services. This service assists clients and treatment providers in bridging the gap between the provision of physical and behavioral health care.

The goals of the Nurse Navigator and Recovery Specialist Outreach program in relation to the client are to: improve client perception of his/her overall health and wellness; improve client coping strategies and symptom management; improve client communication with his/her physicians and treatment providers; and reduce the number of emergent physician visits and hospitalizations. Secondary goals for this program include improving overall client awareness of health and wellness issues and improving communication between behavioral health and primary care providers. Outcomes will be measured following PIMS measures as well as pre and post-test data collection based on a tool similar to the SF-12 that will include questions specifically targeted to the drug and alcohol needs of the population.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

A promising practice is defined as a program, activity or strategy that has worked within one organization and shows promise during its early stages for becoming a best practice with long term sustainable impact. A promising practice must have some objective basis for claiming effectiveness and must have the potential for replication among other organizations (US Department of Health & Human Services). The Rural Assistance Center has identified several program models under the Community Health Workers program that have been shown to be best practice models for implementation in rural communities. The Nurse Navigator & Recovery Specialist Outreach program specifically mirrors the Care Coordinator/Manager Model identified as a best practice by the Rural Assistance Center. The only modification from the Care Coordinator/Manager Model is the specific emphasis on the addiction population.

According to the Rural Assistance Center (<http://www.raconline.org>) the Care Coordinator/Manager Model promotes the use of Community Health Workers to assist individuals with complex health conditions to navigate the health care system. The Care Coordinator/Manager may liaise between the target population and various health, human, and social service organizations. They may also support individuals by providing information on health and community resources, coordinating transportation, and making and reminding clients of appointments.

With this model, the Community Health Worker may also work with the patients to develop a care management plan and utilize tools to track progress over time. The Rural Assistance Center has recommended with this model that programs pair Community Health Workers with a medical professional who may have a better understanding of the health care system and the resources available.

### B. Description

The activities conducted through the Nurse Navigator and Recovery Specialist Outreach program include the following:

- Established a system of referral to identify clients who have concurrent substance abuse and chronic health care needs (developed policies and procedures, educated clinicians on criteria for referral, educated physical and behavioral health providers on the outreach and referral systems)
- Improved client coping strategies and symptom management (identified client's physical health, behavioral health and wellness needs at admission, developed a Recovery and Wellness Plan for the client, and with consent, shared the Recovery and Wellness Plan with all of the clients behavioral and physical health providers, implemented Hepatitis C trainings and support groups for clients)
- Improved client perception of overall health and wellness (collect pre-and post-test assessment data, collect satisfaction survey data at the conclusion of services, and collected 1 month and 6 month follow up data on the client's perception of level that health and wellness has improved)

- Improved client communication with physicians and treatment providers (Nurse Navigator coached client on questions to ask and information to share with providers)
- Reduced the number of emergency physician visits, hospitalizations, and residential treatment admissions (asked client to self-report an urgent care or emergency department visits that have occurred since last visit, collected external information regarding a client's inpatient or emergency treatment).
- Improved clients' overall awareness of health and wellness issues (created a curriculum based on SAMHSA's 8 dimensions of wellness that was offered in all treatment levels of care).
- Improved communications between behavioral health and physical health providers (held monthly Consortium meetings to review the progress of the program, on a quarterly basis, reviewed program data collection and outcomes measurement to identify successes and needs for future development, expanded the Consortium to include members of the other 2 County hospitals and behavioral health providers, held trainings that would benefit both behavioral health and physical health providers, such as Hepatitis C trainings).

### C. Role of Consortium Partners

The original three members of the Consortium were the Armstrong-Indiana Drug and Alcohol Commission, ARC Manor, and the Armstrong County Memorial Hospital. The Consortium grew over the three year period to include the Indiana Regional Medical Center, Clarion Hospital, The Open Door, the local PA Department of Health nurses, and the major mental health agencies in the three Counties: Family Counseling, Community Guidance Center, and SAM Inc.

The Armstrong-Indiana Drug and Alcohol Commission (AIDAC) was the applicant for the grant program and serves as the Single County Authority for the three rural counties of Armstrong, Indiana, and Clarion in Western Pennsylvania. AIDAC's role in the planning and implementation of the grant program included co-authoring and submission of the grant, coordinating Consortium meetings, recording meeting minutes, all grant reporting and data collection, fiscal management, and the employment/supervision of the Certified Recovery Specialists funded through the grant for outreach and recovery support services.

ARC Manor's role in the planning and implementation of the grant program included co-authoring the grant application, data collection, evaluation and outcome reporting, development of the Nurse Navigator policies and procedures, and employment/supervision of the Nurse Navigator position at ARC Manor's treatment agencies in Armstrong and Clarion Counties. The Nurse Navigator's role was to provide whole health and resiliency education to clients in active addiction, directly coordinate physical and behavioral health planning for clients who are referred to the program, and training of ARC Manor staff on primary health culture and needs issues. The Nurse Navigator also facilitated Hepatitis C support groups.

Armstrong County Memorial Hospital's role in the planning and implementation of the grant program included hosting the monthly Consortium meetings, providing data, providing emergency health services, coordination of physical health services across Armstrong County, information and referral to the Nurse Navigator program, and communication between all entities and intervention as needed to reduce and remove barriers between physical health and behavioral health care services. Dr. Rod Groomes, ACMH's Emergency Department Director, was very active in providing trainings on Hepatitis C for the Hepatitis C support groups at each agency. As the grant program grew and expanded to the other two Counties, Indiana Regional Medical Center and Clarion Hospital also became members of the Consortium providing similar services for their respective Counties.

In year 2, the grant program expanded to include a second Nurse Navigator position at The Open Door, the drug and alcohol treatment provider for Indiana County. The Open Door's role was similar to ARC Manor's role in employing and supervising the Nurse Navigator position. As the program continues to expand, the Open Door has also expanded the duties of their Nurse Navigator to include tobacco cessation classes, as well as health education classes at other locations, to include the County Jail and other provider locations.

The Consortium was fortunate to have the PA Department of Health's County offices involved in providing health consultation and health care service delivery for clients when applicable. The major mental health treatment providers in each County also started attending the Consortium meetings in Year 3 to provide insight and consultation services for clients that have co-occurring substance abuse and mental health disorders.

### A. Outcomes and Evaluation Findings

The first measure of success was the establishment of the HealthCare Consortium made up of area hospitals, substance abuse treatment providers, the single county authority, PA Department of Health nurses, and the major mental health providers in the counties. The collaboration efforts of the Consortium has allowed our program to expand our Nurse Navigator to all three counties and expand clientele seen to a total 343 patients with a total of 2,570 encounters with a Nurse Navigator.

Clients with opioid dependence make up the majority of the clients and more than 60% have a co-occurring mental health diagnosis. Between 19-29% of the clients have hypertension, and the number of clients with diabetes has reduced over the term of the program from 24% of the population to 5%.

One of the best outcomes from this program is the reduction of clients with 1 or more hospital emergency department visits each year (from 91% to 64%). The number of clients with 1 or more hospital admissions has also decreased over the length of the program (from 50% to 26%). Also, more clients with a mental health diagnosis have been accessing care, with an increase from 35% to 54% to 49%.

Testing for Hepatitis C was increased dramatically among the drug and alcohol clients in this program. The Nurse Navigator and Certified Recovery Specialists conduct Hep C Support groups in each county and our Consortium physician, Dr. Rod Groomes attends the Support groups to provide information on the disease and the latest treatments. As a result of this grant, The Open Door in Indiana County applied for a PA Department of Health grant to be a Hep C testing center in Pennsylvania and was awarded the grant. A total of 659 individuals attended the Hep C and/or other physical health/behavioral health informational and support groups offered through this program.

Clients' perceptions of their health has increased to 88% in year 3, along with a 94-98% satisfaction rate with the Nurse Navigator program. The Consortium also met its goal of increasing membership in Years 2 and 3 of the program.

Because of this program and the success of the Healthcare Consortium, the team is now developing another new program to place an Addiction Recovery Mobile Outreach Team in each of three hospitals that will provide a mobile case manager that can do level of care assessments and place into substance abuse treatment all willing overdose patients and patients in the hospitals that have indicated an issue with addiction. A mobile Certified Recovery Specialist will also be part of the Outreach team and is a peer available to talk with patients and/or family members contemplating treatment and needing advice or recovery support services. Another goal of this program will be to educate hospital personnel about the addiction process and reduce the stigma associated with substance use disorders.

One of the greatest successes of the Nurse Navigator program is that clients no longer think of the treatment providers as just a drug and alcohol treatment center, but now they refer to the providers as a "health clinic" where they can access assistance navigating the physical/behavioral health treatment field.

### B. Recognition

The Nurse Navigator program has been of interest to many other drug and alcohol providers. I have been asked to make presentations about the program to the Pennsylvania Drug and Alcohol Advisory Board, the PA Department of Drug and Alcohol Programs, the PA Association of County Drug and Alcohol Administrators, the Recovery Conference sponsored by the Community Care Behavioral Health managed care organization, and the Clarion County Drug Free Coalition. The program is the only one like it in Pennsylvania and has generated a lot of interest and positive feedback.

## Part VI: Challenges & Innovative Solutions

The challenges experienced during the Outreach program's development and how they were addressed include the following:

The structure of the health care delivery system in the Counties to be served has been a barrier to successful coordination of physical and behavioral health care services. Each county's physical health services are anchored by a local hospital: Armstrong County Memorial Hospital; Clarion Hospital; and Indiana Regional Medical Center. However, the day to day provision of physical health care services is left to a multitude of primary care physicians and specialists, many of which whom have an affiliation with one of more of these larger hospital organizations. Individuals seeking services may visit a primary care physician for one ailment, a specialist for a secondary ailment, and utilize emergency room services for any acute issue that occurs. This challenge was

addressed through the use of the Nurse Navigator as a catalyst for communication between the patient and the physical and behavioral health providers. The Nurse Navigator identified client's physical health, behavioral health and wellness needs at admission, developed a Recovery and Wellness Plan for the client, and with consent, shared the Recovery and Wellness Plan with all of the client's behavioral and physical health providers.

A second barrier or challenge currently is the lack of any unified record keeping or data system between physicians or treatment providers. When a patient utilizes multiple physicians for services, there is no clear way to distinguish the medication history for that patient other than self-reporting and individual record requests. When a person seeks emergency services, there is very little way for a physician to quickly access a client's overall medical record and many emergent care issues are left to resolution without an accurate snapshot of the client's overall health and wellness. Again, this challenge was addressed by the Recovery and Wellness plan developed by the client and the Nurse Navigator, and was shared with consent with all of the client's behavioral and physical health providers.

The stigma of behavioral health issues, and specifically substance abuse and dependence issues, has been a barrier to coordination of physical and behavioral health services. Even if an individual recognizes their addiction and is in active treatment for the addiction, the stigma that surrounds the addiction reduces the likelihood that the person will communicate the issue to their primary care physician or emergent care provider. Finally, the understanding of confidentiality regulations for substance use treatment in the state of Pennsylvania has been a challenge to communication. Federal confidentiality regulations provide a baseline for the protection of an individual's addiction treatment records. However, Pennsylvania's confidentiality regulations offer additional protective guidelines and are known to be some of the most restrictive guidelines nationally in regard to the sharing of client records. Although these regulations were initially put in place to protect the client and encourage the individual to pursue treatment for an addiction, an unintended consequence has been the lack of overall communication between treatment providers.

Unfortunately, we continue to deal with the stigma around behavioral health issues. The addition of the Nurse Navigator and Outreach Recovery Specialists have helped to reduce some of that stigma. The Nurse Navigator coaches her clients on how to talk with Physical Health providers about their substance use disorders and the Outreach Recovery Specialists offer to accompany clients to their physical health appointments as a support mechanism for the client.

Confidentiality is also another area that we continue to have as a challenge in Pennsylvania. The Consortium is planning to conduct confidentiality trainings with experts in drug and alcohol confidentiality, mental health confidentiality, and physical health confidentiality. We hope that by having the trainers conduct one training together, that questions and roadblocks can be identified and solutions to concerns can be resolved together.

Another challenge that we faced was the recruitment of clients to participate in the Nurse Navigator service. We addressed that issue with continued staff education and reminders about the program. Also, it was sometimes difficult to convince the client that they needed to change their philosophy regarding wellness issues. Although their main concern was to treat their substance use disorder, clients have to be educated about their wellness and how other chronic health issues can influence their addiction. The Nurse Navigator and Recovery Outreach Specialists marketed the program to clients involved in group counseling and Medication Assisted Treatment.

## Part VII: Sustainability

### A. Structure

The Consortium will definitely continue to operate. The partners that will continue to be part of the consortium will be the same as listed in Part II. We expect the Nurse Navigator project to continue and we plan to add a new program called the Addiction Recovery Mobile Outreach Team that will provide Case Management and Recovery Support Services to hospital patients that are identified to have substance abuse disorders.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Outreach activities that the Consortium will continue from the Outreach grant and the justifications are as follows:

- 1) The Consortium will continue to meet on a monthly basis to continue communication and collaboration on services and methods of improving service delivery. Data on the program's activities will continue to be collected and reviewed on a quarterly basis. Consortium members will continue to identify needed areas of training and combine their efforts to provide those trainings. The Consortium has also applied for a second HRSA grant for an Addiction Recovery Mobile Outreach Team in each hospital and will continue to develop this program.
- 2) Continue to identify and refer clients who have concurrent substance abuse and chronic health care needs to the Nurse Navigator and the Certified Recovery Specialist at all substance abuse treatment agencies in the three Counties. The program has been very successful and has served many clients with concurrent substance abuse and physical health conditions. The program has shown improvement in client perception of overall health and wellness, client coping strategies and symptom management, and reduced the number of emergency physician visits, hospitalizations, and residential treatment admissions. The program has shown a marked improvement in client communication with physicians and treatment providers.
- 3) The Nurse Navigators at each substance abuse agency will continue to provide presentations and group activities on health and wellness, medication management, Hepatitis C education and support, tobacco education and cessation classes, weight management, calculating client BMI, and coordination services with physicians and other behavioral health providers.
- 4) The Certified Recovery Specialists will continue to assist referred clients to complete their Recovery and Wellness plans and provide recovery support and physical health support with all of their identified physical and behavioral health providers.

### C. Sustained Impact

The main long-term effect of this grant program on our Community is that the local drug and alcohol treatment agencies are now seen more as a "health care clinic" than just an addiction treatment agency. Clients are becoming educated on health and wellness issues and how their addictions and/or medications can influence their overall health. Clients with chronic health care needs are assisted by the Nurse Navigator with managing their illnesses better and communicating with their other health care providers. The program has been successful in reducing Emergency Department visits, increased the awareness of Hepatitis C, and provided assistance for clients to access the PA Medicaid system and the Affordable Care Act.

The accomplishments to date of the program include:

- Established a system of referral to identify clients who have concurrent substance abuse and chronic health care needs  
Developed policies and procedures for appropriate referrals; educated treatment agency staff on criteria for referral and on how to make a referral; educated physical and behavioral health providers on the availability of Outreach services
- Improved client coping strategies and symptom management: Identified clients PH, BH, and wellness needs at admission to the Outreach service; developed a Recovery and Wellness Plan for the client that offers a "roadmap" to coordination of services; with client's consent, shared Recovery and Wellness plan with all of client's identified PH and BH providers.
- Improved clients perception of overall health and wellness: Collected pre-test assessment data for all clients referred; collected assessment data at each Recovery and Wellness Plan update and at the conclusion of services; collected satisfaction survey data at the conclusion of services; collected one and six month follow up data on clients perception of level of health and wellness; conducted Hepatitis C testing, education, and support group meetings; One provider won a PA Department of Health grant award to be a Hepatitis C testing site for clients
- Improved client communication with physicians and treatment providers: Nurse Navigator worked with clients in individual sessions to coach client on questions that they may need to ask other providers and what may be beneficial to share; Recovery Specialists assisted clients in coordinating appointments with providers.
- Reduced the number of emergency physician visits, hospitalizations, and residential treatment admissions: clients were asked to self-report any urgent care or emergency room visits that have occurred since the last visit; documented information received from other third parties regarding a client's inpatient or emergency treatment.
- Improved client's overall awareness of health and wellness: created group curriculum on SAMHSA's 8 dimensions of wellness and offered to all clients in all levels of care in the substance abuse treatment agency
- Improved communication between PH and BH providers: held monthly consortium meetings to review the progress of the program; expanded the Consortium to include the other hospitals and providers; provided trainings on Hepatitis C and confidentiality to BH and PH providers.
- Expanded program to include Affordable Care Act information and assistance with enrollment into the Federal Marketplace programs. Also became COMPASS enrollment partners for the Pennsylvania Medicaid program.

The sustained impacts of the Outreach grant include the following:

- The likelihood of abstinence at follow up for clients who received coordinated care for medical and addiction needs.
- Improved communication between addiction treatment and physical health care providers
- A reduction in the prescription of psychotherapeutics that have a tendency for abuse
- Improved communication between the client and their physical health care provider with coaching from their Certified Recovery Specialist
- The reduction of the overall number of emergent care services in inpatient treatment experiences.
- Adjustments of policies and procedures to encourage communication and referrals between physical health and behavioral health providers and the recognition of addiction as a chronic disease that requires a continuum of care and support options to support recovery of the long run.
- Measurable differences in the lives of the clients who are served by the program and in the overall community. Pre and post-test assessment data has indicated that the client's overall perception of their health and wellness status has improved since their participation in the Nurse Navigator and Outreach Recovery program.

## Part VIII: Implications for Other Communities

Other communities interested in implementing a similar program can benefit by many of the experiences of the Consortium. First of all, the Consortium can offer the materials that were developed through the program to include: job descriptions, wellness and recovery plans, program curriculum, policies and procedures, outreach materials, and pre-and post-test surveys conducted with the clients. The Consortium highly recommends developing strong relationships with the area hospitals to assist with coordination of the program. The success of the program model that partnered the Nurse Navigator with the Certified Recovery Specialist is also an area that would provide benefits to other communities considering this program.

One example of a success story is John Doe. The Nurse Navigator met weekly for six weeks with Mr. Doe, who was diabetic and had a substance use disorder with alcohol being the drug of choice. At the first session, Mr. Doe reported a blood glucose level that morning of 400. Normal glucose should be between 70-120. He was agreeable to the Nurse Navigator's suggestion to record his glucose readings daily and was given a glucose log to record his readings. He was on insulin and was unsure when his next Medical Doctor appointment would be. The Nurse Navigator contacted Mr. Doe's Medical Doctor to schedule his next appointment for the client. The Nurse Navigator spent the next few weeks educating Mr. Doe on the hazards of alcohol use with diabetes and instructed the client on the proper nutrition, reading food labels, diabetic sick days, foot and skin care, signs and symptoms of hyper- and hypoglycemia and what to do in each case. The client was educated on the importance of keeping his Medical Doctor appointments and maintaining general good health. Mr. Doe was able to decrease his blood glucose to less than half of what it was when he started the program. The client was able to maintain his sobriety throughout his sessions.

# Pennsylvania

## Community Guidance Center (formerly the Clearfield-Jefferson Community Mental Health Clinic)

Part I: Organizational Information	
<b>Grant Number</b>	D04RH26834
<b>Grantee Organization</b>	Community Guidance Center (formerly the Clearfield-Jefferson Community Mental Health Clinic)
<b>Organization Type</b>	Non-Profit Outpatient Mental Health Provider
<b>Address</b>	793 Old Route 119 Highway North, Indiana, PA 15701
<b>Grantee organization website</b>	<a href="http://www.thecgc.com">www.thecgc.com</a>
<b>Outreach grant project title</b>	Physical and Behavioral Health Integrated Care Project
<b>Project Director</b>	Name: Christina Martz
	Title: Director
	Phone number: 814-371-1100, ext. 296
	Fax number: 814-371-3671
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Community Guidance Center	Dubois/Clearfield/Pennsylvania	Non-Profit Outpatient Mental Health Provider
*Dubois Regional Medical Center	Dubois/Clearfield/Pennsylvania	Hospital
*Genoa Pharmacy	Dubois/Clearfield/Pennsylvania	Pharmacy

### Part III: Community Characteristics

#### A. Area

The Community Guidance Center's program, Physical and Behavioral Health Integrated Care Project, provides services to two rural counties in North Central Pennsylvania: Clearfield and Jefferson counties.

#### B. Community description

The Physical and Behavioral Health Integrated Care Project is located in the medically underserved, rural communities of Clearfield and Jefferson counties, which are located in rural North Central Pennsylvania.

The total population of Clearfield and Jefferson counties is 126,842 individuals, occupying 1,803 square miles of valley and mountain terrain. In 2013, the average per capita personal income was \$32,570 with 14.45% living below the poverty level. In comparison, the per capita personal income in Pennsylvania was \$42,491, with 12.6% living below the poverty level, and the United States documented a \$53,042 per capita personal income and 14.3% living below the poverty level. Statistically, the poverty level status of the area is on par with the nation; however, personal income lags the state and the nation by \$9,921 and \$20,472 respectively. Therefore, residents in the service area have less buying power when compared to Pennsylvania and the United States as a whole.

The goal of the Physical and Behavioral Health Integrated Care Project is directly tied to the leading cause of death in Clearfield County and therefore this project has been greatly needed. In 2013, the leading cause of death among Clearfield County residents age 25-44 was suicide. Suicide was the third leading cause of death among Jefferson County residents of the same age group. Finally, most healthcare providers in the community do not accept medical assistance patients, nor do they provide behavioral health services.

### C. Need

The purpose of the Physical and Behavioral Health Integrated Care Project is to provide a unified and seamless access to primary physical care to adult consumers diagnosed with Serious and Persistent Mental Illness (SPMI). Prior to Integrated Care Program implementation, there was not another Integrated Care Program in either Clearfield or Jefferson counties. Within the total population of 126,842 residents, statistics indicate individuals experience approximately 3.2 unhealthy mental health days per month. The poor mental health days measure is a comparison measure to the poor physical health days reported in the County Health Rankings. The County Health Rankings show us that where we live matters to our health. Therefore the greatest need to be addressed has been to provide a “one-stop shop” of healthcare services for the SPMI population so that behavioral health consumers are able to easily access physical health and pharmacy services, thereby prolonging their lifespan.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The project utilized the Four Quadrants Clinical Integration Model as its evidence-based model. In two of the four quadrants in the Four Quadrants Model, the Primary Care Physician is located in the Behavioral Health facility. This model is based on meeting the needs of the collaboration and the consumers that we serve.

The four quadrants are as follows: I – Low behavioral health and low physical healthcare needs; II – High behavioral health and low physical healthcare needs; III – Low behavioral health and high physical healthcare needs; IV – High behavioral health and high physical healthcare needs.

An advantage to our project has been that mental and physical health clinicians are able to focus on health behaviors in a joint setting, as access to medical information and the consumer’s medical profile has increased communication and reinforced emphasis on diet, exercise, abstinence from negative substances and stress reduction. The health care team consists of the consumer, the PA-C, and the mental health therapist. All partners keep a solid focus on illness management and recovery strategies that enhance health, as well as treat illness.

As the majority of our consumers have a Serious and Persistent Mental Illness (SPMI) diagnosis, it is imperative that we provide a level of care that is easy to navigate and is understandable. Locating the primary care physician and pharmacy in the behavioral health clinic has added stability to a process that is already difficult for some individuals to manage. As the consumers are introduced to the Integrated Care Program, the clinician (mental or physical health) can accompany the individual to the proceeding appointment. The familiarity of the clinician can assist in alleviating the consumer’s fears.

We chose the Four Quadrants Clinical Integration Model because it enables flexibility within the program to treat each population subset and subsequently each individual with the proper care plans. Consumers benefit from a myriad of health services chosen to create their individualized care plan. The clinicians are able to easily move the consumer from one subset to another as their mental and physical conditions improve or worsen.

In relation to a Promising Practice, our research brought to light the Horizon House in Philadelphia, Pennsylvania, an outpatient behavioral health organization incorporated in 1952. Horizon House implemented an integrated care program in 2010 with the assistance of SAMHSA (Substance Abuse Mental Health Services Administration). Their project is designed to address the difficulty in accessing primary care and the increased morbidity and mortality of Serious and Persistent Mental Illness (SPMI) population.

Horizon House, considered a “learning center for other organizations”, located the primary care physician in the behavioral health clinic, improving access to physical health care for their consumers. Each participant has averaged five visits with the medical doctor. The collaborative care process of reverse co-location implemented by Horizon House is working. Our project utilizes the same type of reverse co-location model with one important modification: our area is rural.

### B. Description

The Physical and Behavioral Health Integrated Care Project conducted the following activities:

- Establish a primary care physician office within the behavioral health office. This included renovating the existing behavioral health office to create a physical space for DRMC, creating internal signage, and equipping the exam rooms and office space.
- Establish on-site pharmacy services. This also included creating a physical space within the existing behavioral health office and placing appropriate signage within the space.
- Use of the Physician Assistants to provide mental and physical health treatment and appropriately coordinating services.
- Mutually referring consumers to partners within the Integrated Care Program to address the “whole health” of consumers.
- Conduct Medication Management Sessions. Genoa Pharmacy employs a Client Care Coordinator who meets with Integrated Care consumers to provide medication counseling with the goal of consumers increasing medication adherence.
- Conduct Joint Treatment Planning meetings daily. These meetings are attended by all front line staff, who review current consumers’ progress toward treatment planning goals, physical health needs, medications, and any changes.
- Affordable Care Act enrollment initiatives. The Community Guidance Center was awarded two ACA Supplemental grants to provide ACA Outreach and Education services to uninsured individuals within the communities. Members of our staff became Certified Application Counselors and consequently provided ACA education and enrollment to individuals within Clearfield, Indiana and Jefferson counties.

### C. Role of Consortium Partners

#### Community Guidance Center Roles and Responsibilities:

- Fiscal and grant management
- Grant reporting
- Facility and equipment provision and maintenance
- Behavioral Health Staff
  - Psychiatrist
  - Psychologist
  - Physician Assistants
  - Project Director – Coordinating the day-to-day operations of the program, including marketing
- Coordination of program Steering Committee meetings
- Coordination of Joint Treatment Planning meetings

#### DuBois Regional Medical Center Roles and Responsibilities:

- Implementation of the primary care component of the program
  - Primary Care Physician
  - Secretary
- Technical experience of operating primary care offices
- Financial experience of operating primary care office

#### Genoa Pharmacy Roles and Responsibilities:

- Provide pharmacy services to consumers of the Community Guidance Center and Integrated Care Program, including prescription counseling and Medication Therapy Management services
- Fill all medications for consumers
- Assist with Patient Assistance Program paperwork (free medications)
- Assist with prior authorizations

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

As we are currently in Year 3 of the program, the following outcomes are from the Year 2 Evaluation Report. During Years 1 and 2, we served 152 consumers in Integrated Care Program services.

The primary measure of mental health is the Daily Living Activities (DLA-20) assessment, which assesses what daily living areas are affected by mental illness or disability. This measure was completed by consumers at the time of intake and every three months thereafter. The program saw an overall average increase in scores of 2.59 points, which indicates that consumers who were enrolled in the program for 6 months are reporting less impairment in daily living activities.

While several separate measures were used to evaluate an improvement in physical health outcomes, consortium partners acknowledge that the most significant accomplishments related to physical health are as follows:

- A reduction in Emergency Room visits by 10%
- Increased adherence to following physical/behavioral health prescribed medication regimen to 88% of all consumers
- Increase in the consumer's knowledge of medications by 80%
- An increase in the proportion of consumers who report having a PCP from 40% to 88%
- 100% of consumers would recommend the program to others

In addition to the findings within our evaluation report, partners agree that the Integrated Care Program has increased awareness within the community. Through public service announcements, newspaper and radio advertisements, mass mailings, educational events and community presentations, residents have been educated on services available and the correlation between physical and behavioral health.

The partners also agree that the Integrated Care Program has achieved the following internally:

- DRMC and Genoa staff has become more informed and educated on mental health issues, treatment and services available to consumers
- Overall, CGC has adopted the integrated care philosophy agency-wide.

Finally, partners recognize the enormity of having a 0% consumer mortality rate amongst SPMI individuals, who commonly die 25 years earlier than someone not suffering from a mental illness.

## B. Recognition

- In 2012, the Integrated Care Program was awarded the Rural Health Program of the Year award from the Pennsylvania Office of Rural Health.
- In 2013, Dr. Ralph May received the Rural Health Hero of the Year award from the Pennsylvania Office of Rural Health. He was nominated by Integrated Care Program Project Director Christina Martz.
- In 2013, the Integrated Care Program held an Open House that was featured in local newspapers and attended by local government officials.
- In 2014, the Integrated Care Program held an Anniversary celebration that was featured in local newspapers. In addition Sunny 106.5, the local radio station, promoted the event by holding a 2 hour live broadcast and featuring 8 live interviews from partner staff.
- Sunny 106.5 recently featured the Integrated Care Program in a 1 hour interview to promote services and raise awareness within the community.
- Sunny 106.5 also featured the Integrated Care Program in a live, 25-minute "Ask the Expert" interview that aired three times in May 2014, in conjunction with "May is Mental Health Month".

## Part VI: Challenges & Innovative Solutions

During the planning phase of the grant, all partners anticipated having access to the physical health provider's Electronic Medical Record (EMR). After receipt of the grant, DRMC administration determined that it was best not to share the EMR. The Community Guidance Center set up a shared drive that allows partners to share documents related to mutual consumers. Unfortunately, only the consumers' most recent document would remain on the shared drive, which led to additional tracking through spreadsheets, etc. Staff found this method to be cumbersome and ineffective. DRMC ultimately granted the Project Director access to their EMR. In the future, partners will consider a fully integrated EMR for use by all partners.

Discussion of shared consumers initially occurred bi-weekly. However, because the program was intended to be a "one-stop shop", consumers could be scheduled for behavioral and physical health appointments in the same day. Therefore, it became important to increase the frequency and formality of these discussions. The Joint Treatment Planning Team was formed and began meeting daily. Front line staff from each partnering agency review all mutual consumers for that day and any changes in level of care, medications, or attendance.

Initially marketing the Integrated Care Program was difficult. Residents and agencies within our communities were familiar with each separate agency but were largely uneducated on the correlation between physical and behavioral health. The CGC Marketing Director and Steering Committee members were tasked with creating and marketing a "brand" specific to the services offered by the Integrated

Care Program. More importantly, marketing efforts focused on educating the community on the importance of treating “whole health”. In conjunction with traditional marketing efforts, such as newspaper and radio advertisements, educational presentations were held frequently at the county Base Service Units, social service organizations, and other local referral sources to ensure that referring agencies were knowledgeable about the program when speaking with residents within the community.

## Part VII: Sustainability

### A. Structure

All services offered by the Integrated Care Program will continue with the Community Guidance Center and Genoa Pharmacy. Effective April 30, 2015, DRMC will no longer act as the physical health provider. We are actively seeking a new physical health provider.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Each of the three providers will be responsible for sustaining current program activities and duties. This includes day-to-day operations, building maintenance, all related consumer care and coordination of and participation in Joint Treatment Planning meetings and Steering Committee meetings. Individual services provided by each partner are listed below.

#### Behavioral Health:

It is imperative that we continue all activities within the behavioral health component of the Integrated Care Program. The goal of the program is to impact the lives of the SPMI population and therefore, it is essential that the Community Guidance Center, who has been successfully treating and advocating for this population for more than 55 years, continue to provide services to the Integrated Care Program consumers.

Treatment begins with appropriate assessment of consumers’ mental health needs through administration of the M3 assessment tool and DLA-20. Once a consumer has been assessed, they are treated based on their mental health diagnoses. Consumers may be referred to Outpatient Individual or Group Therapy, Psychiatric Rehabilitation, Adult Case Management or other programs at the Community Guidance Center. Integrated Care consumers may also be treated and prescribed medication from a Licensed Psychiatrist via telepsychiatry. All consumers establish treatment goals and work closely with the behavioral health staff, who ensures that consumers are meeting their goals.

#### Pharmacy Services:

Genoa Pharmacy will continue to provide on-site pharmacy services to consumers enrolled in the Integrated Care Program, including prescription counseling, medication disbursement, and Medication Therapy Management services. The Client Care Coordinator attends Joint Treatment Planning meetings to maintain current knowledge of consumers’ treatment and diagnoses. She is then able to provide the necessary feedback to staff and consumers regarding current medication interactions. The Client Care Coordinator meets with consumers to review medications and answer questions, as necessary.

The above pharmacy services will continue, as Genoa Pharmacy has been instrumental in helping consumers recognize the importance of taking their medications as directed and working with the physical and behavioral health staff to ensure that consumers are being prescribed and adhering to the appropriate medications.

#### Physical Health Care Services:

The current partnership is seeking a physical health provider to replace DRMC. That provider will provide either a physician or physician assistant to treat all Integrated Care Program consumers. They will also attend Joint Treatment Planning and Steering Committee meetings. Additional duties and capabilities will be modified, once a provider has been established.

The physical health provider is essential in the Integrated Care Program, as we are specifically focusing on bringing physical health services to the SPMI population. The physical health provider has the knowledge and ability to recognize and treat physical health conditions, order appropriate testing or lab work and prescribe physical health medications.

By providing physical and behavioral health treatment and pharmacy services, we are increasing the lifespan of individuals, the SPMI population, who typically die 25 years sooner than those who aren't suffering from mental illness. Therefore commitment from each of the three providers is necessary to the program.

### C. Sustained Impact

It has been our goal to provide appropriate treatment to the SPMI population, educate the community and consumers and help to remove the stigma associated with mental health.

The community as a whole has been educated on the importance of proper mental health treatment and the correlation between behavioral and physical health. This was especially noted in shared consumers who have begun to take ownership of their health and are seeking treatment from the appropriate provider. Because the program offers a "one-stop shop" of healthcare services and we have taken steps to properly educate the community and consumers, we are confident that this program raises awareness for mental health and offers a treatment option for consumers to address their whole health, mind and body. In doing so, we feel that we are doing our part to eliminate negative stigmas.

The physical health provider staff has become more informed and educated on mental health issues, treatment, and services available to consumers. Although DRMC will not remain with the project, their staff has gained knowledge about mental health that they will utilize with future patients.

As noted above, the Community Guidance Center has adopted an integrated care philosophy agency-wide, to include seeking integrated care partnerships or initiatives in all locations in the future. In addition to our relocation in Punxsutawney, the Community Guidance Center has adopted wellness coaching by employing a Registered Nurse. The Registered Nurse works with several programs, including Integrated Care, Case Management, Psychiatric Rehabilitation, and Outpatient programs in Dubois, Punxsutawney, and Clearfield, PA. The Registered Nurse meets with mental health consumers to prepare wellness goals, including smoking cessation, weight loss and medication management and then provides follow-up to the consumers as they are working toward achieving their goals.

## Part VIII: Implications for Other Communities

Although our project is specific to Clearfield and Jefferson counties in rural Pennsylvania, the program could be replicated in any rural area. To be efficient and provide needed services, the community must have access to a behavioral health organization and a primary care physician interested in treating behavioral health consumers. Once those two facets are in place the remainder of program components evolves around physical space, electronic health records and trained support staff.

Specific components of our program that are replicable are:

- Creation of a "one-stop shop" medical clinic
- Efficient use of physical space
- Efficient use of physical and behavioral healthcare staff, as it is difficult to recruit healthcare staff in rural areas.
- Benefit to the consumer as consumers have less travel to multiple appointments. Multiple appointments may also be scheduled on the same day.

Once the basic structure of our program was in place, we found that communication at all levels was essential for maintaining and sustaining the program. For example, we have found daily Joint Treatment Planning Team meetings to be imperative for maintaining communication amongst front line staff and quarterly Steering Committee meetings to be necessary for maintaining communication amongst administration. Joint Treatment Planning Team meetings provide a forum for front-line staff to review consumer charts and other important information. Steering Committee meetings allow decision makers to sit together to review short and long-term goals, address issues and plan for sustainability.

Another important element in maintaining communication is a shared electronic medical record (EMR). Other communities should build an EMR into the planning phase of their integrated care program, rather than implementing past Year 1.

Of important note is the education provided to Integrated Care Program consumers and the community as a whole through media campaigns and support from local community leaders and government officials. Consumers and our local communities gained an understanding of "whole health" and the correlation between physical and behavioral health. In providing the community with this education, we believe that we are making an impact in lowering the overall stigma associated with mental health. Therefore, it is important for other communities to garner this same type of support and provide a similar education.

In regards to qualitative measures that may be beneficial to other areas, we recommend the following measures:

- Behavioral Health Screening
  - Increase DLA-20 scores by 5 points for consumers enrolled in the program for a minimum of six months
  - Reduce the consumer's M-3 Checklist scores by 10% for those enrolled in the program a minimum of six months.
- Physical Health
  - Improve physical health factors by 10% for those who have been enrolled in the program a minimum of 6 months
    - "Health factors" will be defined by each specific program
- Pharmacy
  - Increase adherence to following physical/behavioral health prescribed medication regimen to 75% of all consumers
- Other
  - Reduce visits to Emergency Room by 10%
  - Decrease appointment cancellation and no-show rates to 20% weekly

# South Carolina

## Newberry County Hospital Foundation

Part I: Organizational Information	
Grant Number	D04RH23606
Grantee Organization	Newberry County Hospital Foundation
Organization Type	Hospital
Address	2669 Kinard Street, Newberry, SC 29108-6969
Grantee organization website	<a href="http://www.newberryhospital.org">www.newberryhospital.org</a>
Outreach grant project title	Promoting Patient Self-Management with Telehealth (PPSMT)
Project Director	Name: Debbie Roberts
	Title: VP of Patient Care
	Phone number: 803-405-7161
	Fax number:
Project Period	Email address: <a href="mailto:Debra.Roberts@NewberryHospital.net">Debra.Roberts@NewberryHospital.net</a>
	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$190,577.64
	May 2013 to April 2014: \$ 90,155.44
	May 2014 to April 2015: \$ 0

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Newberry County Memorial Hospital	Newberry, SC	Hospital
Amedisys Home Health Services	Newberry, SC	Home Health Agency
Springfield Place and J.F. Hawkins Continuing Care and Retirement Community	Newberry, SC	Skilled Nursing/Continuing Care Facility

### Part III: Community Characteristics

#### A. Area

The Promoting Patient Self-Management with Telehealth project served residents of Newberry County, SC, and others from surrounding areas who utilized the medical/health facilities in the county.

#### B. Community Description

Newberry County, with a population of 37,783, is an aging county. The projected growth is in the 65 to 74-age range, which is expected to increase by 22% between 2009 and 2014. Aging baby boomers have created a senior community growing from two directions; the in-migration of retirees moving to the state and the indigenous aging population. Newberry Hospital is the sole provider of acute care for Newberry County and sees an inordinate number of elderly Medicare/Medicaid patients. Newberry County is a poor and racially mixed county. Between 2008 and 2012, 14.9% of people across the US lived at or below the poverty level in the United States, while 16.7% in Newberry County lived in poverty.

#### C. Need

According to the South Carolina Rural Health Research Center, in 2005, two of the leading causes of death among South Carolinians were heart disease and diabetes. In June 2010, Quorum Health Resources provided NCMH with a Physician Needs Analysis for Newberry County, which highlighted a serious shortage of internal medicine providers, including cardiologists and endocrinologists, who are needed to treat patients with Congestive Heart Failure and Diabetes. Hospital leadership then sought input from the consortium partners (Newberry County Memorial Hospital (NCMH), Amedisys Home Health Care and Springfield

Place Skilled Nursing Facility) and doctors and nurses at the Newberry Free Medical Clinic and identified multiple issues for addressing the needs of elderly patients with Congestive Heart Failure or Diabetes.

- From July 2010 until September 2011, Newberry Hospital's Emergency Department made a diagnosis of Congestive Heart Failure and diabetes in a total of 781 individual patients. Meanwhile, from January 1, 2011 until June 30, 2011, 49 clients served by Amedisys had a primary or secondary diagnoses of CHF and 11 with a diagnosis of diabetes. An inordinate number of these patients are indigent and elderly and are uninsured or low-reimbursement Medicare/Medicaid beneficiaries.
- The shortage of providers requires older patients to travel longer distances for regular appointments and to seek emergent care for acute symptoms of chronic diseases. Elderly patients often have poor access to private transportation, and there is no public transportation in Newberry County. In addition, long waits to see a provider prompts patients to seek quicker non-emergency care in the hospital's Emergency Department (ED). This in turn adds a greater stress to the ED.
- Elderly patients miss needed care because of difficulty in communication with physicians and their office staff. Many patients do not understand their physician's instructions and do not re-contact the physician when instructions are not clear. Also, for various reasons, elderly patients often do not seek healthcare until problems become so severe that they require more expensive and intensive healthcare interventions.
- An additional problem emerged when South Carolina opted out of the Medicaid expansion under the Affordable Care Act. This created a group of patients that did not qualify for benefits and fell below poverty level with no means of healthcare coverage.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The promising practice model adapted for the Promoting Patient Self-Management with Telehealth project (PPSMT) is "Staying Well at Home" (SWAH). This model was used in Nebraska by the St. Francis Medical Center Foundation and was one of 27 HRSA Outreach grantees (2007-2010) across 18 states. The SWAH project service area included several counties and multiple regional and critical access hospital and all elderly in the target area regardless of health status. It used telehealth monitors in the home to "help an elderly citizen live independently, avoid re-hospitalization and maintain the best quality of life over an extended period of time." The SWAH plan responded to typical needs of a rural elderly population, namely:

- Frequent hospitalizations for chronic conditions that could be better managed by the patient, patient's provider, home health nurse or telehealth monitoring.
- Distance and travel difficulties that patients encounter when they must seek emergent healthcare.
- Shortage of healthcare providers, technology and other resources in rural areas.
- The progressive and detrimental effect of poorly managed chronic disease on an individual's health and quality of life.
- Difficulty of clear communication between elderly patients and their healthcare providers.
- The qualitative impact that independent living has on health of an elderly resident.

Newberry County Hospital Foundation's project was modified with the following changes:

The size and scope of the project was limited to one hospital in one county and focused only on elderly patients with congestive heart failure and diabetes. Rather than focusing only on 30-day re-admission rates, the PPSMT tracked all hospitalizations and also monitored trips to the NCMH ED. This system provided a more complete picture of how well the telehealth monitoring program helps patients manage their chronic health problems and reduce ED-related costs to the healthcare system. PPSMT took an additional step in their program by creating the "Lunch and Learn" for CHF patients and patients dealing with uncontrolled diabetes.

### B. Description

The Promoting Patient Self-Management with Telehealth (PPSMT) program was begun with a two-year grant from ORHP, since the Consortium felt that two years rather than three would be sufficient for launching the project with sustainable outcomes. The program serves elderly and chronically ill county residents who have congestive heart failure (CHF) and/or diabetes. The purpose of the program was to establish a coordinated and cost-effective home-health electronic monitoring system to enable elderly people with chronic diseases to maintain their independence and quality of life, while better managing their health status and reducing rates of re-hospitalization and Emergency Department (ED) visits. The first year of the grant focused on patients with a diagnosis of congestive Heart Failure. The second year added patients with a diagnosis of uncontrolled diabetes.

The project utilizes an interdisciplinary team of healthcare professionals with clinical and hospital management expertise. The hospital staff developed a marketing PowerPoint presentation with which to describe the PPSMT program to local providers and community groups. Designated hospital staff members communicate with patients and their families to ready the patient for dismissal. They encourage patients to ask questions of the nurses and physicians in order to understand the next stage of care. Staff also assist with referrals and serve as a patient educators for the telehealth project. For those patients who are dismissed to their homes or assisted living facility, Amedisys provides the equipment and nursing staff for the at-home monitoring. The patients are then monitored and evaluated from remote vital sign monitors located in their homes. Nurses assess the biometric alerts and intervene accordingly, with telephonic support to patients and caregivers, including health education relating to health care topics and illnesses, medication teaching, and teaching about signs/ symptoms they should report to Amedisys and/or their physician. Nurses consult with Telehealth Specialists for medically complex patients and obtain and record all relevant information in order to refer patient health status to the appropriate individual(s) for follow up or further investigation. They also communicate pertinent patient information to the appropriate agency staff, other members of the health care team, and/or patient's physician as required.

A "Lunch and Learn" class was created in order to increase awareness and provide education for the patients, caregivers, and the community at large. Patients diagnosed with Congestive Heart Failure or uncontrolled diabetes are invited to attend classes offered once a month for three consecutive months (separate series of classes for each disease). Each month the classes focus on one of three topics including diet, medication, and disease management. Nurse educators, a pharmacist, a dietician, and a translator conduct the classes. The pharmacist educates patients about their medications. The dietician provides not only information on healthy choices and serving sizes but also on how to adapt less expensive, unhealthy food choices into healthier ones. A translator was added to accommodate the high Hispanic population in Newberry County. Transportation to the classes is provided when needed in order to encourage attendance, and a healthy lunch is provided to encourage participation and demonstrate healthy food choices.

### C. Role of Consortium Partners

**Newberry County Memorial Hospital (NCMH)** provided overall fiscal management for the grant program. The VP of Patient Care and the Assistant Director of the ICU/CCU served as Co-project Directors for the project. The Respiratory Therapist (RT) assisted with referrals and served as a patient educator for the telehealth project. The Director of Information Technology served as Evaluator for the project. The Director of the NCMH Foundation managed the completion of funding, start-up, and follow-up processes of the grant and reviewed all documents for accuracy and completeness. Newberry Hospital made staff and facilities available as needed, including the meeting space and food for the "Lunch and Learn" classes.

**Amedisys Home Health Services** participated in the project development, implementation, oversight and evaluation of PPSMT. Amedisys provided the equipment and nursing staff for the at-home monitoring of patients. The Director of Operations and the Telehealth Clinicians (RN) were responsible for monitoring and evaluating electronic data received in the Telehealth Software Application from remote biometric monitors located in the patient's home.

**Springfield Place & J.F. Hawkins Continuing Care and Retirement Community**, Newberry's only licensed continuing care facility, participated in project development, implementation, oversight and evaluation at their location.

**Newberry Free Medical Clinic** was added as a new consortium member, providing medical homes for patients with no healthcare coverage or means of payment.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

During the period from 5/1/2013 to 4/30/2014, thirty-two (32) patients were provided telehealth services through Amedisys. For the telehealth subset of CHF patients, three (3) patients were readmitted within 30 days, which is a 9.4% rate, representing a decrease. During the same period, Amedisys had an increase of 10.3% more patients being referred to telehealth monitoring. A large number of these patients were referred due to the education provided to our referring physicians and the patients themselves, decreasing the need to refer patients to Long-Term facilities.

Through education outreach efforts and the Lunch and Learn classes, we have been able to further inform our patients and the community about the opportunities for health improvement and chronic disease self-management, including telehealth monitoring, follow-up visits, and compliance with physician recommendations. The Lunch and Learn classes are very well-attended and empower patients with the knowledge and tools to allow them to manage their conditions.

The PPSMT program not only provided the telehealth services to our CHF patients, but it also opened other networking opportunities for patient care. Physicians are increasingly aware of the value of telemonitoring and are making referrals for their patients, both for telemonitoring services and for the Lunch and Learn classes. The Newberry Free Clinic joined the consortium in order to provide medical homes for those CHF and diabetic patients unable to pay for health services. They also participated in referring their patients to the Lunch and Learn classes. In addition, a more open line of communications resulted between the hospital and the assisted living/skilled nursing facility, Springfield Place.

## B. Recognition

South Carolina as a State is improving hospital readmission rates through a statewide effort to reduce the number of patients returning to hospitals within 30 days by 15%. This PPSMT program established by the Newberry Consortium was already in place when South Carolina provided additional funding to support rural hospitals in finding ways to decrease hospital readmissions. The ORHP funds provided the seed money for implementation and the state's additional funding is allowing Newberry Hospital to continue and to grow the PPSMT program.

## Part VI: Challenges & Innovative Solutions

The most significant problem encountered while implementing the PPSMT program came in the second year of the grant with the implementation of patients with uncontrolled diabetes. As part of the program, patients were asked to monitor their blood sugar levels several times per day in order to indicate where problems might be arising. Patients were unable to qualify for the monitors that Amedisys uses. Newberry Hospital contacted the hospital's attorney to seek guidance on how to provide patients with the monitors and strips needed. The Office of Inspector General (OIG) was asked for an opinion. The OIG approved providing the monitors and strips to indigent patients in the program, but not to Medicaid patients. This response came in April 2014, too late to institute the process of diabetic telehealth monitoring before the end of the grant period.

## Part VII: Sustainability

### A. Structure

The Consortium members include Newberry County Memorial Hospital (NCMH), Amedisys Home Health Services, Springfield Place & J.F. Hawkins Continuing Care and Retirement Community, and the Newberry County Free Medical Clinic. Each organization has one staff member who serves as primary liaison for program management and operations, and when potential issues arise, members of the consortium discuss at monthly meetings and determine solutions. Multiple staff members at each facility will continue their day-to-day interaction for providing care for the CHF and diabetic patients.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Most of the PPSMT current project components will be sustained. We will continue to refer eligible CHF patients to the telehealth program. We will continue educating our physicians and community. We will continue the Lunch and Learn classes for both the CHF patients and the patients with uncontrolled diabetes.

The State of South Carolina provided additional funding in 2014 to rural hospitals to help them find ways to decrease hospital readmissions. With these funds we have been able to continue and to grow the PPSMT project. We will continue to work with the CHF and uncontrolled diabetic population and also include other diseases that cause readmissions. We have hired a Case Manager to work in our Emergency Department. The Case Manager helps patients without coverage navigate through the healthcare system; locating potential funding sources, suggesting programs such as the Lunch and Learn class and finding medical homes for them. We are working closely with the Free Medical Clinic in an effort to help our patients better manage their healthcare.

### C. Sustained Impact

The processes for caring for patients with Congestive Heart Failure and/or uncontrolled diabetes have improved through in-home telemonitoring. Interaction and cooperation among the healthcare providers in Newberry County have increased. Patients with serious chronic disease have increased opportunity for learning the skills and procedures for managing their conditions. Based on the success of the PPSMT model, the program has the potential to be spread throughout South Carolina, using the network of Amedisys agencies across the state. Already conversations are taking place among other offices, hospitals, and healthcare facilities about expanding the use of telehealth monitoring. The “way we do business” in Newberry County has changed and will continue to adjust to the demands and opportunities in healthcare provision.

## Part VIII: Implications for Other Communities

We consider our program a best practice model because it provided positive results that other methods had not provided. The program can be duplicated and changed to meet the needs of other organizations. However, to be successful with the PPSMT project, other rural areas must have access to telehealth agencies in their area. The “Lunch and Learn” classes could easily be duplicated, even without the telehealth monitoring.

The main roadblock other communities would face is the same one we encountered with the inability to provide the diabetic telehealth monitoring and the diabetic strips to Medicaid patients.

# South Dakota

## Delta Dental Plan of South Dakota

Part I: Organizational Information	
Grant Number	DO4RH23570
Grantee Organization	Delta Dental Plan of South Dakota
Organization Type	Non-Profit
Address	720 N. Euclid Ave., Pierre, SD 57501
Grantee organization website	<a href="http://www.deltadentalsd.com">www.deltadentalsd.com</a>
Outreach grant project title	SD Frontier Oral Health Delivery Project
Project Director	Name: Connie Halverson
	Title: VP, Public Benefit
	Phone number: 605-494-2547
	Fax number: 605-224-0909
	Email address: <a href="mailto:connie.halverson@deltadentalsd.com">connie.halverson@deltadentalsd.com</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Prairie Community Health, Inc.	Isabel/Dewey/South Dakota	Community Health Center
*Rural Health Care, Inc.	Ft. Pierre/Stanley/South Dakota	Community Health Center

## Part III: Community Characteristics

### A. Area

Counties Include:

Corson, Dewey, Hyde, Lyman, Perkins, Potter, Stanley, Ziebach, and the northeast quadrant (Census Tract 201) of Meade County.

### B. Community description

The project service area encompasses a vast nine county area in northwest and central South Dakota. The area is best described by its people, many of whom are hardworking farmers, ranchers, ranch hands and service/retail industry employees whose income is significantly lower than both state and national average and who must travel long distances to access any form of dental services.

### C. Need

At the time of application, there were no practicing dentists within five of the service area counties. In Meade County, the closest practicing dentist to the target population was over 100 miles away. While other counties had a dentist, the uninsured population had difficulties in paying for care. Medicaid data also provides a clear example of the need in the area. In the combined service area, only 28.8 percent of children received dental care in FY 2011, compared to a statewide rate of 43.7% and a commercial insurance rate of 63.2% that received care.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The project's evidence-based model was the Tioga Mobile Dental Service. Our project adapted this model in several ways which primarily involved expanding from a local delivery model to a more widespread regional delivery model. Our project also incorporated teledentistry into the model.

### B. Description

The Frontier Oral Health Delivery Project provides its target audience of low income, rural residents direct access to dental services through a mobile dental project, as well as preventive health and education services using a roving dental hygienist who provides care to the area during the times the mobile unit is not in the area. The project incorporated teledentistry with the goal of increasing the number of people that could be served by the mobile units and to reduce travel times for patients.

### C. Role of Consortium Partners

While Delta Dental is the lead partner for the project, our project partners worked with us to identify the most appropriate service locations and to identify patients in need of care. The executive directors of both the health center organizations understand the need for oral health services in their region and were willing to explore a new model to bring care to their patients. The health center staffs were also willing participants in the program and several participated in oral health training sessions conducted by Delta Dental staff. The boards of directors for the health center staffs also received presentations on the project and provided valuable input.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Overall, we were able to care for 1,653 patients over the three year period. 1,555 patients received preventive care. While we cannot yet show actual impact for those preventive efforts, we know that both dental sealants and fluoride varnish are evidence-based practices that prevent dental disease. In addition, 1,882 people heard an oral health education message via community and/ or school education sessions.

### B. Recognition

This grant focused on a very rural part of South Dakota, far from the media centers, so other than a couple of local press stories about the mobile trucks being in the community, we did not receive any media coverage.

## Part VI: Challenges & Innovative Solutions

The trouble of teledentistry did not evolve as we had hoped. There were several technological issues, including internet connectivity, which initially had to be overcome. There was a fairly steep learning curve for our dental hygienist and dentist in simply using the technology. Those issues, however, were generally solved. A bigger hurdle, however, was acceptance that teledentistry was a viable method of "seeing" patients, not only with our own staff dentist, but also by the State Board of Dentistry, neither of which were supportive of the concept. To mitigate this, we held webinars and teleconferences with experts who are using teledentistry, but the education process takes time. We continue to work on this as we continue to believe this is a viable method of providing care to rural populations.

Another aspect of our project that affected our outcome was the fact that we saw many adults during the project, many of whom needed extensive care. Because adults typically take more time to treat than do children, overall we saw fewer patients than we had anticipated. Many of the patients referred to us by the health centers were elderly and nearly beyond the care that could be provided by a mobile program. Because most of those patients have no other options and are often literally desperate for care, we did agree to see them. This significantly lessened the number of children we were able to see. We did meet with our consortium partners to discuss the issue and decided that for future efforts we would work to target a younger population that has a chance to maintain their oral health, rather than patients who were candidates for dentures.

## Part VII: Sustainability

### A. Structure

We are pleased to report that our consortium, with the current partners, will continue collaborating to provide oral health services to the region. Further, a new community will be added to the service area. We are incorporating what we have learned with this project, and with another project, regarding having a hygienist cover a region and building what we've learned into our program. We are looking to expand our program to include a statewide sealant program targeting low income children. This will allow us to provide prevention services statewide while using our mobile program to continue to provide restorative care. Once this new aspect of our program is fully operational, we hope to incorporate teledentistry where appropriate.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

As mentioned above, we will not only continue our program, but we will significantly expand our prevention efforts. We will continue to work with our consortium partners in their target regions, but we will also expand our services to other rural communities across South Dakota. Delta Dental will absorb the majority of the funding for this effort, but we will continue to solicit partners and funders to help sustain our efforts. We will also need to more closely evaluate the number and type of adults we see as that factors into sustainability issues as well.

### C. Sustained Impact

We believe that the sustained impact of our efforts lie in the prevention and education that we were able to provide for the children seen by the project. While we do not have a formal evaluation to prove this, we do know that in communities where our mobile program has been visiting for several years and where we've seen many of the same children from year to year, that the dental treatment needs have been reduced. It is our expectation that, using the evidenced-based preventive services provided by this project, we will be able to further reduce dental disease in the communities we are serving.

In addition, while we did not get as far with the teledentistry model that we had hoped, the concept has been introduced and we will continue to explore it as a model to better serve patients in rural areas.

## Part VIII: Implications for Other Communities

Because it is simply not feasible for a private practice dentist to locate in a remote rural area, some type of mobile program is a proven strategy for providing care to rural communities. While a mobile truck that provides restorative care is perhaps the next best thing to a dentist located in a fixed clinic, another option is to at least provide preventive care in the community. Because distance to care is such an issue for many rural residents, traveling distances for preventive care can be difficult to justify for people who have to leave their jobs for a full day of travel. A hygienist covering a region can provide that preventive care in schools and other community-based settings using portable equipment and refer those who need restorative care. Ultimately, using teledentistry could provide another tool for improve access to care for rural residents.

# South Dakota

## Avera Sacred Heart Hospital

Part I: Organizational Information	
Grant Number	D04RH23612
Grantee Organization	Avera Sacred Heart Hospital
Organization Type	Non-profit hospital
Address	21111 W. 11 <sup>th</sup> Street, Yankton, SD 57078
Grantee organization website	<a href="http://www.avera.org/sacred-heart">http://www.avera.org/sacred-heart</a>
Outreach grant project title	SD eResidential Facilities Healthcare Services Access Project
Project Director	Name: Anthony Erickson
	Title: Senior Services Executive Director
	Phone number: 605- 668-8920
	Email address: <a href="mailto:aerickson@avera.org">aerickson@avera.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Evangelical Lutheran Good Samaritan Society	Sioux Falls/Minnehaha/SD	Long Term Care Corporation
*Avera Sacred Heart Hospital	Yankton/Yankton/SD	Non-profit Regional Hospital
*Avera Health	Sioux Falls/Lincoln/SD	Corporate Headquarters for Avera Health Systems
*Avera Queen of Peace Hospital	Mitchell/Davison/SD	Non-profit Regional Hospital
*Avera Marshall Regional Medical Services	Marshall/Lyon/MN	Non-profit Regional Hospital
*Avera St. Luke's Hospital	Aberdeen/Brown/SD	Non-profit Regional Hospital
Golden Living Corporation	Plano/Collin/TX	Long Term Care Corporation

### Part III: Community Characteristics

#### A. Area

The eResidential Facilities Healthcare Services Access Project served communities in four states:

**South Dakota:** Aberdeen in Brown County, Arlington in Brookings and Kingsbury Counties, Brookings in Brookings County, DeSmet in Kingsbury County, Groton in Brown County, Howard in Miner County, Irene in Clay, Turner, and Yankton Counties, Madison in Lake County, Milbank in Grant County, Mitchell in Davison County, Mobridge in Walworth County, Wakonda in Clay County, and 2 locations in Yankton in Yankton County.

**Iowa:** Estherville in Emmet County and Sioux Center in Sioux County.

**Minnesota:** Marshall in Lyon County and Pipestone and Edgerton in Pipestone County.

**Nebraska:** Atkinson in Holt County.

#### B. Community description

On average, for the twenty sites that are served by the HRSA grant, the communities have fewer than 10,000 people. Frail elders in long term care, assisted living, and rehabilitation facilities in these communities comprise the target population for the project. The residents are predominantly White and over age 65, or they have disabling conditions which prevent them from living independently. Counties in the project service area have a high percentage of "working poor," with county median household

incomes which range from \$39, 784 to \$45,841 and are lower than the median income for the nation and lower than median household incomes for their respective states. The elderly residents in the service area facilities have higher than state or national rates of mortality associated with chronic diseases, including diabetes, heart disease, and Alzheimer's Disease. These counties also have a higher percentage of residents over age 65 than the average for their respective states or the nation. Due to the scarcity of physicians with training in geriatric medicine, particularly in small isolated communities, residents of these long-term care facilities have limited access to specialty providers who are able to meet their complex and unique health needs.

### C. Need

Rural residential facilities and their staff members face multiple challenges in meeting the needs of their residents, who are most likely to be grandparents, old teachers, a friend's family members, or others that they have known for many years. Due to distance, weather, or lack of provider availability, these facilities are often unable to access provider-directed care necessary to treat a resident with an urgent or complex health issue, since the providers at times have to travel from clinic to clinic in an effort to meet the need in the community. A resident and family member or facility staff may spend several hours in a private vehicle or facility van to travel to a distant hospital, clinic, or specialty care facility for an evaluation that lasts an hour. If ambulance transport is needed, the local volunteer-driven ambulance service may be certified in basic life support skills but not certified in advanced life support. Depending on a provider's availability, residents may have to wait one or more days for a clinic appointment, or they may have to forego that care. We know that once the resident begins to deteriorate, time is of the essence in obtaining the appropriate treatment. However, when telemedicine can be provided to the rural facilities, the resident can receive the necessary treatment, care, and access to a specialty provider without extensive wait time or travel.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The *SD eResidential Facilities Healthcare Services Access Project* was developed using promising practice models supported by evidence. The American Telemedicine Association (ATA) has endorsed the use of telemedicine services as a method to provide quality urgent care services to residents of residential long term care, assisted living, and rehabilitation facilities. In a study by Weiner et al. (2004), telemedicine was implemented in a nursing home in a county managed facility. The program used a portable system to connect the facility to seven on-call physicians between the hours of 5:00 pm and 1:00 am. The study showed an improvement in quality of care, physician satisfaction, and residential facility staff satisfaction through the use of telehealth. Another study conducted by Laflamme et al., determined that wound care services provided in nursing homes via telehealth or videoconferencing was superior to traditional methods which included transferring patients to clinics or hospitals, delaying treatment, or providing no treatment at all. Finally, the Center for Information Technology Leadership published a study, "The Value of Provider-to-Provider Telehealth Technologies", which projected \$806 million a year in savings if telehealth is properly utilized in nursing homes.

Based on the evidence-based practice models listed above, we decided our program could provide our rural facilities and their residents access to a provider for 24 hours, 7 days a week, 365 days per year via two-way video along with some peripheral equipment. This video equipment not only allows the resident to see and talk to a provider in the comfort of their room at the facility in real time, but it also allows family and the nurse to be a part of the care and conversation. It is not limited to only eLong Term Care (eLTC), but is also available in various Specialty Clinics to provide necessary treatment and care without the resident having to travel the distance. In addition to two-way video, there is a stethoscope that allows both the nurse in the facility and the provider at eLTC to listen to lungs, heart, and abdominal sounds at the same time. It also has a handy cam that allows a closer view of skin concerns or wounds and has been used to view the back of the mouth with a flashlight if needed.

By providing these services, we can keep residents in their own facility with the caregivers that know them best and provide the care they need. We also can decrease health care cost by avoiding the unnecessary Emergency Room visits or hospital re-admissions while avoiding further resident illness or decline.

### B. Description

The intent of this program, now called eLongTermCare or eLTC, was to assist rural long term care facilities with better access around the clock to healthcare, urgent care support, staff training and education, and other geriatric services as warranted. Facilities were identified to participate in this program based on criteria including rural status, healthcare access needs, urgent care needs, and nursing support needs.

Implementation of the eLongTermCare (eLTC) program over the three years of the grant was gradual and systematic in order to assure quality services. Planning included multiple processes including:

- Hiring of dedicated staff for the program: Director of eLTC, Service Line Manager, Advanced Practice Providers, and Registered Nurses
- Staffing our telehealth “Hub” with Advanced Practice Providers and RN’s.
- Establishing IT requirements for the Long Term Care facilities to ensure that the facility was technologically ready for the service. For those sites that were not “wireless” ready, we completed the necessary upgrades at the facility.
- Establishing strong communication channels with our Consortium Partners through regular quarterly meetings so the leadership could provide feedback and share best practices
- Creating and publishing a 25-step Implementation Plan with our internal and external stakeholders
- Leveraging INTERACT (Interventions to Reduce Acute Care Transfers) for clinical support and communication tools such as the SBAR (Situation Background, Assessment, and Recommendation) form.
- Developing education modules for our internal and site caregivers. An example is the MRSA training that one of our APP’s (Advanced Practice Providers) facilitated.
- Establishing billing procedures for on-camera video encounters.

Once the facility is identified as a site for eLTC, there are several phone calls between eCARE and the facility staff in preparation of bringing eLTC into the facility. Training the facility staff is discussed with the Administrator, Director of Nursing Services, Maintenance, Charge Nurse or Assistant to the Director of Nursing. Items that are discussed during the phone calls include:

- How long training will take – generally an hour to an hour and a half.
- Who needs to be involved – All licensed nursing staff including leadership (Administrator, Director of Nursing, Assistant to the Director of Nursing).
- What training entails – Appropriate use of eLTC troubleshooting of the equipment, and equipment use.
- Data needed from the facilities.

Each site has access to all components of eLTC including:

- Access to specialty services through eConsult such as Infectious Disease, Wound Care, Cardiology, Nephrology, and many more.
- Resources available for ventilator, bi-pap assistance through recommendations by the Intensivist working in eICU (eIntensive Care Unit). For example, we can provide support and recommendations to the nurse who is in the facility having difficulty with equipment she is using in the care of a resident.
- If a facility nurse is not familiar with the administration, side effects, drug interactions, of a drug, they are able to call eLTC and we can provide the necessary information by utilizing ePharmacy.
- Emergency assistance if needed through eER (eEmergency Room). There are board certified Emergency Room physicians available to assist or provide additional resource to eLTC providers if needed.
- Regularly scheduled monthly phone calls may involve the Director of Nursing Services, Charge Nurse, Assistant to Director of Nursing, or Administrator) to discuss utilization of services, program updates, and resident/family/staff testimonials of use.

### C. Role of Consortium Partners

The major organizational partners of this program are the Avera Health System, Evangelical Lutheran Good Samaritan Society, and Golden Living Corporation. The eLTC program was implemented in 20 long term care facilities administered by these partners. The partners’ primary role was providing assistance in identifying the Long Term Care facilities that would benefit most from this grant. Each of our partners assigned a “project champion” who provided guidance and support. The partners also helped ensure that facilities within their system which needed technology upgrades received them as a priority for this grant. They also provided feedback and guidance on program sustainability.

Each partner identifies those facilities they feel have a need and would best benefit from the service and provides a liaison who participates in the meetings and training of the appropriate individuals both on the phone and at the facility. Training for the facility staff is discussed with the Partner liaison, the facility Administrator, Director of Nursing Services, Maintenance, Charge Nurse, or Assistant to the Director of Nursing. Facility leaders are involved in monthly phone calls to discuss progress, any necessary adjustments, and upcoming trainings. They are also responsible for assuring buy-in by all staff members and assist in facilitating the Medical staff discussion regarding the program with eLTC.

### A. Outcomes and Evaluation Findings

During the grant period, eLTC was involved in 639 two-way video encounters that resulted in 362 provider-determined avoidable transfers. eLTC was also involved in 757 other encounters which consisted of providers seeking consults via phone or video calls without having the patient on camera. The numbers were only made possible due to the incredible growth in facility participation and utilization over the 3-year grant period. During grant year 1 (May 1, 2012 – April 30, 2013), eLTC was involved in 64 resident video encounters. This number increased to 177 resident video encounters in grant year 2 and 398 in grant year 3.

Not only did utilization drastically improve over the course of the grant period but avoided transfers as a percent of video encounters did as well. During grant year 1, 33% percent of resident video encounters resulted in a provider-determined avoidable transfer. This figure increased to 50% in grant year 2 and 63% in grant year 3. This increase in utilization as well as avoided transfers was a direct result of continuous training, education, and monthly follow-up meetings with partnering facilities.

eLTC services supported the local long term care facilities with a variety of resident complications and complaints. The top five encounter complaints consisted of: skin complaint (15%), shortness of breath (13%), upper respiratory infection (9%), neurological/syncope (8%), and fever (7%).

There was significant impact for the eLTC sites in the areas of

**Training** – We were able to go to each location and provide hands-on training to utilize the equipment. Also, training was provided on urgent care scenarios (i.e. – dehydration, UTI's) to the local staff to empower them to be more proactive in the care of their residents versus being reactive, possibly leading to poorer quality outcomes.

**Facility Culture** – We were able to give local facility staff access to urgent care 24/7, along with nurse-to-nurse consults available all the time. This helped to increase staff satisfaction as they could utilize options for further support from healthcare professionals.

**Resident Satisfaction** – We were able to help residents stay in their homes in more situations than in the typical long term care facility due to the availability of eLTC provider via eLTC versus treatment based on the constraints of a local provider's availability.

### B. Recognition

In April of 2014, Shari Davis along with Jacci Nickel of the Good Samaritan Society presented at the National Rural Health Association, Annual Conference, Las Vegas, NV: *Telemedicine Reduces Unnecessary Transfers for Rural Nursing Home Residents*. In September, 2014, Shari Davis, presented on the same topic for an AMD Global Telemedicine Webinar.

We have also been involved in several facility family nights, resident and family Christmas programs, and facility re-grand openings after significant facility improvements and construction work. When involved in these programs, the equipment and services are demonstrated to any resident, investor of the facility, or family member that wants to see how eLTC is utilized and the clarity of the interaction. It is presented to the families and community as a unique service provided to the facility for the benefit of the residents.

## Part VI: Challenges & Innovative Solutions

There were numerous challenges as this program began in the long term care facilities. The main challenge to the eLTC program was facility utilization. Some facilities have residents with very active and available primary care providers. Other facilities have Physician Assistants who would regularly round on residents at the facility. However, provider support for the eLTC program in all facilities was critical in order to increase utilization and reach program goals. In order to obtain provider support for the services, eLTC leadership regularly reached out to involved providers to educate them on the program's innovative scope of services. We also assured them that we were not trying to take their place as primary provider; instead we were looking to be a virtual partner in assisting in the resident's care where needed. The leadership and staff of the eLTC program also addressed the low utilization challenge by attending family nights to inform residents and their families about the services that eLTC can provide and answering any questions they may have regarding the service. Monthly calls and frequent training sessions were held with partnering facility staff to address any concerns or questions regarding the new technology.

A second challenge was the distance of some sites from the eLTC Hub when it came to training and support services. Due to the distance of some of the facilities, education and demonstration of the equipment and services was at times a challenge. When we could not be present to educate the staff or demonstrate the equipment, we coordinated the demonstration/education via the telehealth equipment in order to present the needed information. We demonstrated various scenarios for using eLTC to keep the staff engaged and motivated to utilize eLTC, not only for Urgent Care for the residents but also as a resource for the nursing staff. Demonstrating the

equipment is a strong component of the program, since it is difficult at times for individuals to “wrap their head” around how it truly works. By utilizing these resources we are able to help offset-the challenges at the sites that are further away from us.

Another challenge included credentialing by-laws at several facilities. In order for our providers to see their residents, credentialing needed to take place at several sites, and this challenge could have held up roll-out dates and go-lives for those facilities. However, we were able to utilize our eEmergency physicians to help cover in those sites while we worked out the by-law challenges. We addressed those changes by traveling to hospitals and meeting with leadership to discuss our program and show the importance of adjusting their credentialing by-laws to allow our providers access.

A final challenge we noted was the difference in having a mounted video system in the facility versus a mobile cart system. The mounted system did not allow flexibility for the site staff to take the cart to the resident. This challenge was addressed by switching all sites to mobile units that ran off wireless equipment so that the cart could be moved to the resident, and care could be provided on the spot by our eLTC team.

## Part VII: Sustainability

### A. Structure

The services of the eLTC program will continue beyond this grant. Due to the success that the HRSA grant brought to the eLTC service line, we will be able to continue services through other funding sources. We will also be able to expand the scope and the number of sites being served. The service model is being more fully developed, and we are growing beyond providing urgent care assistance to the existing sites and others added to the program. Funding through a CMS (Center for Medicare and Medicaid) Innovation award that will continue for three years is allowing us to:

- Facilitate INTERACT training and skill-building workshops leading to improved work process through INTERACT standardized tools, such as Stop and Watch, SBAR, and Care Paths. These tools assist staff in thinking through the care process of a situation before phoning a provider, thus being able to provide the information the provider needs to develop a care plan and treatment for the resident.
- Provide high-quality Advanced Care planning resources and training.
- Provide weekly, monthly, annual multidisciplinary management support to risk stratified residents identified by eLTC providers.
- Continue to provide and assist in facilitating eConsults for specialty services.
- Implement standardized processes and tools for admissions and discharges to and from the long term care facility through medication review and resident co-management with the Primary Care Provider.

Not only does this new funding help eLTC to sustain past the HRSA grant period it provides the additional services mentioned above. It also allows eLTC to increase educational outreach, implement the new staffing model, improve connectivity, and add a software specific to this service line. Our emphasis on planning for sustainability from the very beginning allowed this to all be possible.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Avera Health was awarded an \$8.8M grant from CMS to implement a 3-year program aimed at reducing hospitalization by 16% and ED visits by 28% for 7,100 Long term Care (LTC) residents in 30 LTC facilities across South Dakota, Minnesota, Iowa, and Nebraska, resulting in an estimated 8.25% reduction in total cost of care. This will be accomplished by expanding eLTC services to wrap a virtual, multidisciplinary team of experts around the existing resources of the long term care facility. The eLTC will improve continuity of care and ensure a more comprehensive, patient-centered approach to health management for long term care facility residents.

This aim will be accomplished with 3 primary drivers: The first driver is building the assessment capability and toolkits of the long term care team through INTERACT and advance care planning training and support. The second driver is providing long term care residents with routine and early access to appropriate goal-directed care through urgent video encounters as well as

multidisciplinary management support and telemedicine services. The third driver is improving management of care transitions through enhanced communication and collaboration with hospitals, long term care facilities, and primary care providers.

### C. Sustained Impact

The primary sustained impact of eLTC is solidifying the case for urgent care telemedicine services in rural long term care facilities across the upper Midwest by improving resident access to high-quality care in a convenient, timely, and low-cost manner. The implementation of eLTC has resulted in significant culture change in partnering long term care facilities that will provide momentum moving forward with the expanded scope of eLTC services.

eLTC has enhanced resources available to the long term care staff and has created access to care that may otherwise be unavailable due to scheduling or weather problems. This improved service model has reduced costly and exhausting transport to and from emergency department and hospital settings, allowing residents to be cared for in a comfortable and familiar environment. Families of residents have peace of mind knowing their loved ones have timely access to high quality care.

## Part VIII: Implications for Other Communities

Over the past three years, we have learned that effective communication is essential. Physician buy-in, along with facility leadership buy in, is necessary before the nursing staff will fully utilize the services. At each facility, the leadership must provide full support of the program so that they can lay the ground work for how eLTC services will be utilized and what the process will be for their facility.

Training of all individuals involved needs to be all inclusive and consistent. They must understand the program and the processes as well as how it affects the providers, facility, residents, and their families.

In each facility, wireless capability must be able to support the equipment. Mounted units provide limited access to the residents for a variety of reasons. They are located in a room on one side of the facility or the other, and at times, may be in a room that is used by other treatments, such as Occupational Therapy, Rehab, or a beauty shop. A unit is mounted in such a way that the resident may not be able to see the provider due to the height of the screen; or it may be that the resident does not want to be transported down the hallway due to the nature of the health concern. In some instances, it is better not to move the resident from their current location because of the risk of aggravating the situation. When the cart is mobile, it can be brought to the resident no matter where they are, so that an assessment can be performed, and appropriate treatment or recommendations can be initiated.

# South Dakota

## University of South Dakota

Part I: Organizational Information	
Grant Number	D04RH23619-01-00
Grantee Organization	University of South Dakota
Organization Type	University
Address	414 E. Clark St., Vermillion, SD 57069
Grantee organization website	<a href="http://www.usd.edu/dh">http://www.usd.edu/dh</a>
Outreach grant project title	
Project Director	Name: Ann L Brunick
	Title: Department Chairperson
	Phone number: 605-677-5580
	Fax number: 605-677-5638
	Email address: <a href="mailto:Ann.Brunick@usd.edu">Ann.Brunick@usd.edu</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$144,825
	May 2013 to April 2014: \$145,264
	May 2014 to April 2015: \$145,563

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Scotland School District	Scotland, Bon Homme, South Dakota	School District
Beresford School District	Beresford, Union, South Dakota	School District
Dakota Valley School District	North Sioux City, Union, South Dakota	School District
Centerville School District	Centerville, Turner, South Dakota	School District
Elk Point-Jefferson School District	Elk Point, Union, South Dakota	School District
Alcester-Hudson School District	Alcester, Union, South Dakota	School District
Viborg-Hurley School District	Viborg, Turner, South Dakota	School District
Vermillion School District	Vermillion, Clay, South Dakota	School District

### Part III: Community Characteristics

#### A. Area

According to the South Dakota Oral Health Plan, South Dakota has 754,844 residents living within 75,955 square miles. This makes South Dakota one of the least densely populated states in the nation. There is an average of 9.9 people per square mile and over half of the state's counties are designated as frontier. Twenty-nine of the state's counties are considered rural, and only 3 counties are considered urban. Over 33% of South Dakota residents live within 200% of the federal poverty level compared to 29.6% nationwide.

The targeted service area for the University of South Dakota Department of Dental Hygiene School-based Preventive Dental Program (USD DH SBPDP) included 16 towns located in southeastern South Dakota. This service area is classified as rural, economically depressed with high rates of uninsured residents, and a severe lack of access to dental providers.

## B. Community description

The Preventive Dentistry Program served 16 rural communities in southeast South Dakota. Most of these communities are economically depressed, lack access to dental providers, and possess high rates of uninsured residents. An average of 35.4% of service area residents live within 200% of the Federal Poverty Level and an average of 14.3% of residents are uninsured. Averages of 34.5% of the children in the targeted populations are enrolled in free/reduced school lunches. Ten of the 16 communities do not have a dentist, while two of those communities are served by a dentist on a part-time basis. In addition, area dentists see a limited number of Medicaid patients. According to the 2010 SD Oral Health Survey, over 55% of South Dakota children do not have dental sealants, and 62% of children were experiencing dental decay. The SD Department of Health stated that “dental decay is a significant public health problem for South Dakota’s Children.”

## C. Need

The South Dakota Department of Health conducted an oral health survey of third grade students throughout South Dakota during the 2013-2014 school years. Data from the survey identifies many disparities in meeting the oral needs of children in South Dakota. For example; 1) “over half of South Dakota’s third-grade children (56%) had a history of decay,” 2) “almost one-of-four third grade children in South Dakota (22%) had untreated tooth decay,” and 3) slightly over half (57%) had a sealant on at least one of their permanent molars. The report reinforced the notion that poverty plays a role in lack of access to dental services as 65% of the third graders enrolled in the free and reduced lunch program had decay experience. Also, 25% of the third graders identified in the free and reduced lunch program had untreated decay. Thus, the target population for the USD SBPDP supports the South Dakota Oral Health Survey’s profile for children most in need of dental services.

The primary objectives of the Preventive Dentistry Program was to: 1) provide dental and dental hygiene services to children within the targeted populations who have limited or no access to dental care; 2) through a referral process, increase the number of low-income and uninsured children who have a dental home; and 3) strengthen the South Dakota rural dental workforce by increasing rural dental hygienist training experiences and opportunities.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The Community Outreach Program is based on several evidence-based practice models such as those recommended by the Agency for Healthcare Research & Quality (AHRQ), Rural Assistance Center (RAC), The Community Guide (CG), and National Association of County, City Health Officials (NACCHO), the Association of State and Territorial Dental Directors (ASTDD), and the Centers for Disease and Control (CDC).

USD DH SBPDP is modeled after the 4 evidence-based practice models below. Customized variations of these models were developed to accommodate both the dental hygiene students providing care and the communities to be served by this outreach. This newly developed evidence-based practice model provides dental care to school-aged children utilizing various levels of dental professionals (dentists, dental hygienists, and dental hygiene students) to provide preventive dental services such as oral health screenings, fluoride varnish, dental sealants, oral health education and referrals to dentists within the confines of a school setting. School-based preventive dental programs often target high-risk students – those who are low-income, uninsured, Medicaid-eligible and without a dental home. The 4 evidence-based models that guided the objectives of the USD DH SBPDP also align with many of the Healthy People 2020 oral health objectives.

The evidence-based models emulated are as follows:

1) **RACs School-based Model** that delivers preventative services such as fluoride varnish, dental sealants, and oral health education to school-aged children in a school setting. <http://www.raconline.org/communityhealth/oral-health/2/school-based-model>

2) **School-based Dental Sealant Program** outlined by ASTDD, states, “dental sealant programs based on strong evidence of effectiveness in preventing carries in children,” and “school-based sealant programs can also reduce racial, ethnic and economic disparities in the prevalence of dental sealants.” <http://www.astdd.org/school-based-dental-sealant-programs/> ,

3) **Preventing Dental Caries: School-Based Dental Sealant Delivery Program** outlined by CG promotes dental sealants by stating “school-based sealant delivery programs based on strong evidence of effectiveness in preventing dental carries (tooth decay) among children,” and “school-based sealant delivery programs can increase the identification of caries in children who do

not regularly visit a dentist and improve access to dental health services by referring children who need dental interventions, and may lead to increases in self-esteem.” <http://www.thecommunityguide.org/oral/supportingmaterials/RRschoolsealant.html>

**4) Comprehensive School-Based Program innovation model**, provides “services for low-income children by providing oral health education, dental screening and referrals, fluoride varnish applications, dental sealants, examinations, x-rays, cleanings, and restoration,” and the success of the program was established when a comparison of the school district participating in the school-based program was compared to other schools with similar income level, immigrations, and race, ethnicity did not participate. What they found, was that other 3<sup>rd</sup> grades (that didn’t participate in the school-based program) had more decay, pain, and infection compared to the school who participated in the school-based program. <https://innovations.ahrq.gov/profiles/comprehensive-school-based-program-enhances-access-oral-health-education-prevention-and>

In 2013 an article written by Pew Charitable Trusts, *Falling Short on Dental Sealants: South Dakota* (January, 2013), reported on how poorly South Dakota’s dental community is doing on protecting kids from tooth decay with dental sealants. On a grading scale of A-F, South Dakota fell very short with a D. (<http://www.pewtrusts.org/en/research-and-analysis/factsheets/2013/01/08/falling-short-on-dental-sealants-south-dakota> )

Studies have found that dental sealants reduce the risk for dental cavities by 60% and that school-based dental sealant programs are particularly effective for reducing dental decay in high-risk children due to the fact that they are less likely to receive private dental care. The CDC Task Force on Community Preventive Services found that “School-based and school-linked sealant delivery programs are strongly recommended on the basis of strong evidence of effectiveness in reducing caries on occlusal surfaces of posterior teeth among children” (“Recommendations on Selected Interventions to Prevent Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries,” Task Force on Community Preventive Services, *American Journal of Preventive Medicine* 2002(23:1S), p.17).

In addition to school-based dental sealant programs, school-based preventive dental programs have also been supported as an evidenced-based best practice. In ASTDD’s latest version of its *Best Practices Approach* guide ranked school-based preventive dental programs as a “Proven Best Practice Approach” stating that it had a “strong theoretical rationale... supported by strong research, extensive expert opinion from multiple authoritative sources, and solid field lessons evaluating effectiveness” (“Best Practice Approach Improving Children’s Oral Health through Coordinated School Health Programs,” ASTDD, 2011, p.1 &19). Evidence-based best practice school-based preventive dental program models include the components of 1) students receive preventive dental services including dental sealants and fluoride varnish, 2) support establishing a dental home for students through a referral process, and 3) provide students with oral health education (*Ibid.* p.21).

## **B. Description**

Dental preventative services such as prophylaxes, radiographs, sealants, oral health education, and fluoride treatments were provided to school-aged children in 11 school districts throughout southeastern South Dakota. Thirty-two dental hygiene students rotated through the school-based program on a weekly basis. Four students under the supervision of a clinical faculty member set-up portable dental offices in unoccupied rooms located within schools. Clinic was held during school hours every Tuesday, Wednesday, and Thursdays. Each school district was scheduled for an average of 1-2 weeks, depending on needs. Services were provided to school-aged children with active permission from their parents/guardians. After the appointment, children were given paperwork explaining both the treatment completed and the recommendations for further treatment in addition to a follow-up phone call to each parent. School liaisons were utilized to translate screening results to parent/guardian when there were language barriers.

## **C. Role of Consortium Partners**

Consortium partners were instrumental in developing both the strategic plan and the sustainability plan. Through face-to-face meetings and conference calls, consortium partners were encouraged to actively participate and play a continuous role in program development. Their responsibilities as consortium partners was responding to emails in a timely manner, attending yearly meetings, participating in quarterly conference calls, and reviewing monthly program updates.

Not only were consortium partners actively involved in program development, they were also involved in programmatic issues such as clinic space and permission slip distribution/collection. Each school superintendent was a link to the community and assisted parents and community partners to “buy-in” to the value of this program.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Over a three-year period, the value of services provided by USD DH SBPDP exceeded \$315,000. This was due, in part, to placing over 3,500 dental sealants and providing 2,210 fluoride treatments. The number of children participating in this outreach significantly grew from 2012-2015. In Year 1, 468 children participated; in Year 2, 916 children participated, and in Year 3, approximately 1,200 children received dental preventive treatment. Thirty percent of children screened, were identified with untreated decay and referred to local dentist. Approximately 5,000 school-aged children received oral health education through classroom presentation and chairside instruction.

### B. Recognition

Individuals from the Marketing Department at the University of South Dakota issued press releases announcing the grant award in 2012. News of the award and its intended purpose was also featured on the local TV station. Information about the program has occasionally been featured on participating school websites. A feature article is being written that will be presented in "SD Health", which is a USD publication that is sponsored by the USD School of Health Sciences. This issue will be distributed to USD alumni and other interested parties in the fall of 2015.

## Part VI: Challenges & Innovative Solutions

In development of the USD DH SBPDP a few challenges were apparent. Some challenges were easily overcome, while others will remain long-term. The first challenge was achieving community buy-in. As with any new program, its credibility takes time. To build credibility, it was important to provide high quality evidence-based preventive services (sealants, fluoride varnish, and screenings) for free. Phone calls to parents after a child's dental appointment, was an effective way to gain parental buy-in. By utilizing these methods, gaining community buy-in was evident when yearly participation increased significantly.

Next, the program faced scrutiny from area dentists in communities where outreach services were provided. Uncertain of our motives, they viewed our program as "taking business away." In most cases, this view point was dismissed over time. Children identified with unmet needs being referred to their local dentist; therefore, establishing a dental home. Utilization of local dentist as a referral base eliminates scrutiny long-term in most cases. In addition, in some cases, children who were Medicaid-eligible were not seen as desirable patients for private offices.

Sustainability has proven to be the most difficult challenge thus far. Balancing free, reduced, and billable fees-for-services is difficult. To maximize outreach efforts, USD DH SBPDP provides free dental sealants, fluoride treatments, and dental screenings. While this increased participation significantly, it decreased the billable services. The only fees collected are for prophylaxis and radiographs, at a reduced fee. During year 2, it became apparent that additional funding was needed to sustain the program long-term. Currently, the only solution is seeking grant funds from federal, state, and local organizations.

## Part VII: Sustainability

### A. Structure

The school superintendents in the targeted areas are active consortium partners positioned to assist in the efforts of addressing the dental disparities of children in their school district by supporting USD DH SBPDP activities. As consortium members at the outset of the grant, they agreed to provide both administrative resources and clinical space for the Outreach program to provide evidence-based dental preventative services. These services include prophylaxes, classroom and chairside oral health education, dental screenings, sealants, x-rays, and fluoride varnish treatments. By providing this Outreach during school hours, the barrier of accessibility was overcome for children and their parents/guardians.

This partnership between the area superintendents and the USD DH SBPDP has been a positive endeavor. Children have been referred to local dentists for untreated dental decay and comprehensive care, which led to the establishment of a dental home. Preventative services and oral health education provided by the outreach program are valuable in addressing the unmet needs of children as well.

Many consortium members have changed; due to various reasons, since its inception. Those that remain have pledged to continue partnering with USD DH SBPDP. The consortium will consist of eight school superintendents, Program Coordinator, and Program Director. Monthly newsletters, quarterly conferences calls, and yearly program evaluation meeting will continue. Consortium members agree to expand outreach efforts into additional school districts. It will be mandatory that each additional school will provide a representative to be part of the consortium.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained as long as funding continues.

None of the elements of the program will be sustained

All activities will remain the same after the outreach grant funding expires, providing funds are available. Consortium partners understand how valuable this outreach program is. They view all aspects of the program as necessary for the overall health and academic performance of a child.

Services that will remain are prophylaxis, radiographs, dental screenings, fluoride treatment, oral health education, and sealants. All services are critically important to reduce the prevalence of dental disease in school-aged children. Therefore, it is important to continue providing these valuable services to make a long-term positive impact.

The intent of both the consortium partners and the school-based coordinator is to expand into additional rural schools. This expansion will allow other children to receive preventative services as well. It is anticipated that expansion will also increase revenue assisting in sustainability.

Consortium partners understand the value of this outreach. During a face-to-face meeting in December of 2015, they expressed their willingness to approach local organizations to garner additional funding. Not only does this speak highly of their understanding for children to have good oral health, it also demonstrates their buy-in toward the positive impact this outreach program has made in three years.

## C. Sustained Impact

The USD School-based Preventative Dental Program has made a positive impact on both the communities served and the dental hygiene students providing services. While school-aged children benefit from preventative dental services, future dental hygiene students gained knowledge of public health. This experience brings oral health awareness to school aged children, parents, school district staff/administration, and dental hygiene students.

School-aged children received oral health education in both classroom settings and chairside during their treatment. Awareness of oral health and the negative consequences associated with poor oral hygiene have been very impactful.

- 1) Dental sealants are the number one evidence-based preventive treatment for combating tooth decay. Because of this outreach program, over 3,500 permanent molars have been sealed.
- 2) Fluoride varnishes are instrumental in reducing tooth decay. Since the inception of this outreach in 2012, over 2,210 fluoride applications have been provided.
- 3) There were 96 dental hygiene students who participated in this outreach program. These 96 students have witnessed the oral health disparities amongst school-aged children, creating a better understanding of children suffering from oral infections. This outreach experience also enhanced their clinical skills, which could not be achieved without it. The 96 dental hygienists, who have graduated from The USD Dental Hygiene Department over the past 3 years, have obtained extensive knowledge on implementing outreach programs within their communities. Upcoming students are excited to participate in this rotation.
- 4) School administrations are given a report of the oral health screenings after their schools' rotation is complete. This has proven to be an effective means of identifying the dental needs of children in their school district. Becoming aware of the oral health disparities of children within their school district was very impactful.

## Part VIII: Implications for Other Communities

The largest impact for improving oral health is to offer free sealants, fluoride, and dental screenings. The USD School-based Preventive Dental Program provided sealants, fluoride treatments, x-rays, and prophylaxes for nominal fees during Year 1. The participation during that year was subpar; therefore, it was necessary to re-evaluate the program structure.

Necessary changes were made to the fee schedule and Year 2 participation proved to be more successful. By offering free fluoride treatments, sealants and screenings, the program participation soared. However, there was concern regarding program sustainability. Therefore, it was necessary to charge a small fee for both prophylaxes and x-rays. Both participation and fees-for-services increased, thus, bringing validation to program changes.

Year 3 participation was significantly higher than Year 2. This increase is likely attributed to increased community buy-in and positive feedback from parents. By informing school administrators of the oral health disparities within their school districts, it raised awareness and invoked a sense of priority. When both community members and school administration understood the dental disparities suffered by children in their district, it created advocacy for participation.

Effective data collection tools for evaluating oral health disparities were in-depth health/dental questionnaires and comprehensive dental assessment during the child's appointment. The health/dental history questionnaire asked: 1) patient's health history, 2) last dental appointment, 3) qualification for government program, and 4) status of private insurance. Dental assessment included: 1) all erupted teeth, 2) teeth that were sealed, 3) teeth that are decayed, 4) teeth with fillings, 5) oral inspection assessments, 6) debris index scores, and 7) caries risk assessment results.

The success of this program was largely due to the involvement of the consortium, participation from parents, and a dedicated workforce of USD Dental Hygiene students and faculty.

# Tennessee

## Buffalo Valley, Inc.

Part I: Organizational Information	
Grant Number	DO4RH23561
Grantee Organization	Buffalo Valley, Inc.
Organization Type	Addiction Treatment Center
Address	501 S. Park Ave., Hohenwald, TN 38462
Grantee organization website	<a href="http://www.buffalovalley.org">www.buffalovalley.org</a>
Outreach grant project title	Buffalo Valley, Inc.'s Rural Health Care Service Outreach Program
Project Director	Name: Deborah A Hillin
	Title: Senior Vice President
	Phone number: 615-975-0196
	Fax number: 931-796-5124
	Email address: <a href="mailto:debbiehillin@buffalovalley.org">debbiehillin@buffalovalley.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Buffalo Valley, Inc.	Hohenwald/Lewis/TN and Lewisburg/Marshall/TN	Addiction Treatment Center
Hall Medical Center	Waynesboro/Wayne/TN	Medical Center
Tri-County Dental	Lewisburg/Marshall/TN	Dental
High Forest Medical Group	Hohenwald/Lewis/TN	Medical Clinic

### Part III: Community Characteristics

#### A. Area

The target area for Buffalo Valley, Inc.'s Rural Health Care Service Outreach Program has been in two counties in rural middle Tennessee. Hohenwald (Lewis County) is where the main Buffalo Valley, Inc. (BVI) campus is located, and Lewisburg (Marshall County) where the BVI women's treatment center is located. While this is where direct services have been provided, many other communities have benefited as many of those served came from other nearby communities in order to access substance abuse treatment.

#### B. Community description

The Buffalo Valley, Inc.'s Rural Health Care Service Outreach Program integrates substance abuse treatment, primary care services and dental care. At the time the grant was written, Lewis County had a population of 10,741 and Marshall had 25,658 for a total population of 36,399. The population was 51% female for a total of 18,564. The Tennessee Department of Health reported that 21% or 1,151 of the women in Lewis lived below the poverty line and 18.1% or 2,360 women are below the poverty line in Marshall County for a total of 3,511 low income women in the service region. The data showed that the targeted population, low-income and homeless women seeking substance abuse treatment at Buffalo Valley, Inc. had a high incidence of chronic diseases and oral health care needs. The contributing factor was their socio-economic status indicated by 100% without insurance coverage due to being homeless and/or low-income and not

eligible criteria for TennCare (Tennessee's Medicaid program). The social determinants of health and health disparities for the targeted are demonstrated by high rates of employment and poverty among substance abuse individuals. The unemployment rate according to the Tennessee Department of Labor for Marshall County in August 2011 was 13.8 and 12.4 for Lewis County.

### C. Need

Buffalo Valley, Inc.'s Rural Health Care Service Outreach program addressed the health needs of low-income and homeless women by providing innovative integrated primary health care and dental services to those women seeking substance abuse treatment and who were not eligible for health care coverage by any other means. Addressing this need for integrated substance abuse in the rural area has been critical to improving the health, safety and quality of life for those living with addiction but who have let their health needs go unmet. Providers were seeing them separately but believed together these unmet needs could be more efficiently addressed through an integrated and coordinated approach. The expected impact based on the identified need was to improve the overall health and well-being while decreasing health care cost in the long term due to the timely intervention of needed services.

With poverty rates near 20% in both counties this indicates that the population of low income women targeted in this grant have had little if any health care in the past two year. When these women come in for substance abuse treatment they are experiencing severe poverty and unemployment and data from the Lewisburg intake and assessment records show that over 90% of the women have not seen a doctor or dentist in the past two years. The Tennessee County Health Rankings from the Tennessee Department of Health 2010 show Lewis County ranks 82<sup>nd</sup> out of 95 counties and Marshall County ranks 73<sup>rd</sup> in terms of "Social and Economic Factors". Several years ago, TennCare reduced enrollment. As a result women were accessing health and oral services through the emergency department. Their health issues were masked by their chemical use and now that they are living without drugs, physical and dental issues have surfaced and interfered with their course of treatment. These unmet needs clearly indicated the need for integrated primary health and dental services with substance abuse treatment.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The evidence based practice model adopted for this project is the "Integration of Mental Health/Substance Abuse and Primary Care" prepared by Minnesota Evidence-based Practice Center and prepared for Agency for Healthcare Research and Quality. This served as the model for this project, along with the "Evolving Models of Behavioral Health Integration in Primary Care". The Cherokee Health Systems in rural eastern Tennessee is described in both of these evidence based models and serves as an example for the services provided in this project. Cherokee Health Systems is a FQHC that provides integrated behavioral health and primary care services including case management and substance abuse services. The evidence-based model combines substance abuse treatment with case management and primary care services. This is the service matrix that meets the recognized needs of the target population in the proposed project and has been proven effective in improving the health status of the participants at the Cherokee Health Systems in rural eastern Tennessee.

"Integration of Mental Health/Substance Abuse and Primary Care" backed up with the research of "Evolving Models of Behavioral Health Integration in Primary Care" provide a rural model from the state of Tennessee that has been proven effective in meeting the needs and improving the health status of the target population. This provides results that will have long-lasting health impacts for program participants. This model brings together substance abuse treatment integrated with primary care services in a rural underserved population. This model is closely correlated to the existing services at the Lewisburg Buffalo Valley out-patient treatment clinic and can be easily modeled to integrate primary health care services into the substance abuse treatment and case management at the Lewisburg clinic.

The only modification needed for this project was the addition of dental services with primary health care services that are integrated with substance abuse treatment. This can be highly effective since dental care is a recognized unmet need for substance abuse users.

### B. Description

Through Buffalo Valley, Inc.'s Rural Health Care Service Outreach program, women who were admitted to Buffalo Valley, Inc. for substance abuse treatment were then screened for eligibility of services. Buffalo Valley, Inc. provided evidence-based clinical services while integrating physical health services. Once determined eligible, the women were then referred to Hall Medical and High Forest Medical Group for further evaluation, disease management and promotion. As

part of this screening, those in need or those who were diagnosed with oral restorative needs were referred for dental evaluation and brief services. As women were addressing their addiction, a continuum of services were wrapped around them addressing physical care, dental care, job training, case management, relapse, life skills, budgeting, etc. It is our belief that without addressing the “whole” person, we will continue to see a revolving door. This grant allowed us to “stop” and look at the “whole” person’s needs and to link them to additional resources.

### **C. Role of Consortium Partners**

Buffalo Valley, Inc. has been serving as the lead for this consortium. Hall Medical and Tri-County Dental from the planning through the implementation of this program have worked with Buffalo Valley, Inc. to provide integrated services to the targeted population. It was agreed early on that the authority will flow from Buffalo Valley, Inc. to their respective services and that all funds will be directed through Buffalo Valley, Inc as the lead for the consortium. The three have worked to make referrals across all needed services using grant funds and in-kind contributions. Each in their own right have the ability and experience to deliver the services and have contributed to the consortium and in meeting the overall goals and objectives of this program.

As a non-profit agency since 1979, Buffalo Valley, Inc. has a long history of existence, long-term relationships within the community, a positive reputation, a constant stream of funding, expertise in providing substance abuse co-occurring treatment services, and a heart and passion for serving the less fortunate. Since 1979, they have been demonstrating their ability to serve those with addiction and co-occurring disorders. They have been serving as lead agency for HUD’s Continuum of Care where they served the homeless population through case management and housing services for 19 rural counties in middle Tennessee. Buffalo Valley, Inc. is known for their innovative approaches and “thinking outside the box”. They not only have service capacity to deliver substance and behavioral health services but the fiscal capacity to administer state and federal grants.

Since 2001, Dr. Hall through Hall Medical provided primary health services that include exams, disease management, health screenings, health education, immunizations, etc. to those in need of clinical health services. Dr. Hall is a licensed nurse practitioner and anesthetist. Dr. Hall, through High Forest Medical Group, expanded the clinical health services offered to the target population.

Tri-County Dental provided dental services in the community. Dr. Thomas is a highly trained dentist who not only diagnoses and treats dental issues but also provides prevention services of gum, teeth, and jaw diseases. As a local resident of the community, he brings years of positive relationships with those he serves as well he is a strong member of the community.

## **Part V: Outcomes**

### **A. Outcomes and Evaluation Findings**

Through December 2014, over 707 uninsured females had received integrated behavioral and physical health services. This grant allowed them the opportunity to improve their health, their safety, and their quality of life. The impact has not only been good for them but has impacted their families because now they have a fresh start free of addiction with many of their physical and oral health issues resolved. There has been a reduction in the over-utilized expenses at the local emergency room for health care services.

Physical health screenings include diagnoses such as hypertension, urinary tract infections, hepatitis C, diabetes, seizures, back pain, anxiety, and depression. Dental services included oral evaluation, x-rays, tooth extractions, root canals, tooth abscesses, broken teeth, prophylaxis, etc.

### **B. Recognition**

May 2010, Buffalo Valley, Inc. opened the first integrated treatment center in Tennessee. The services integrate addiction/co-occurring treatment services with primary care. Assistant Commission Rod Bragg from the Tennessee Department of Mental Health and Substance Abuse Services attended as did the Tennessee Department of Health Coordinator both who commented on the first of its kind. The clinic is physically located in one of Buffalo Valley’s 48 bed treatment facility. While it is located in one facility all of Buffalo Valley’s facilities have access to the integrated behavior health and primary care services.

## Part VI: Challenges & Innovative Solutions

The initial barriers and/or challenges anticipated was the lack of insurance for the targeted population and the lack of resources to secure substance abuse treatment, primary health care and dental services. Other issues that factored into these challenges were transportation challenges to get to and from services in rural middle Tennessee, high unemployment rates and lack of employment opportunities. Staff assisted clients with applying for mainstream resources including TennCare (Medicaid) but with very specific criteria for TennCare, most of the women seeking addiction/co-occurring treatment were not eligible for coverage. With the last open enrollment, Buffalo Valley's educators were instrumental in educating them about insurance options, the open enrollment period of the Affordable Care Act (ACA), coverage options, etc.

This grant allowed staff to assist in the transportation needs of getting the targeted population to and from services. Through other programs offered at Buffalo Valley, Inc., the women participated in a job training program making them more employable. The job training trained clients to complete a resume, participate in a mock interview and fill out job applications.

The one major challenge that remains is the lack of Medicaid expansion in the State of Tennessee. Despite efforts of Tennessee's Governor, the General Assembly in a Special Session failed to allow the vote for "Insure Tennessee" to go to the House or Senate floor for a vote. Without this expansion, this population as well as many males in the same situation will continue to be without insurance for health care and will rely on the most expensive system of care, the emergency departments. Even with the ACA, these individuals were unable to secure health insurance due to the lack of resources to pay premiums.

There was one other challenge - the unexpected level of services clinical services needed for women presented with multiple diagnoses, requiring multiple visits to get their needs met. This was also true for dental services. For many of these women with extensive physical or dental health issues, we had to prioritize the services and then made referrals to a FQHC and/or a teaching hospital for long-term services.

## Part VII: Sustainability

### A. Structure

The consortium will continue on some level. Due to the lack of Medicaid expansion in Tennessee, partners have had to consider alternative sustainability strategies. Their original assumption was the Governor of Tennessee would be able to convince his party into expanding Medicaid through a product called "Insure Tennessee" and that would be leverage for the program to continue as originally funded. The Governor called a "special session" but the plan for "Insure Tennessee" failed in committee. The Governor is still optimistic that he can get it done this year. If he succeeds, the program will continue at in original scope and capacity. However, if he does not, then the program will scale back to 50% effort and will be supported with other resources and grant opportunities.

The full level of services provided by other partners will be limited but partners too are committed to providing integrated services. As part of an on-going strategy for outreach, Buffalo Valley will include reaching out to existing and new FQHCs and teaching hospitals/universities for physical and oral health services. Dental partners will provide services only in emergency cases.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

We will continue to provide integrated behavioral and primary care health services. Buffalo Valley, Inc. concurs with the Health People 2010 that by not only addressing substance abuse issues but by addressing physical health needs, we can impact the health-related consequences of addiction while improving the health, safety and quality of life for those impacted. These consequences drive up the healthcare cost and can be more efficiently and effectively addressed in a less and more appropriate level of care than in the emergency departments.

If Tennessee does not expand Medicaid with the new Insure Tennessee, then Buffalo Valley, Inc. will continue to fund its services at 50% of what was covered with this grant. The High Forest Medical Group have committed to do the same. However, with so few funds Buffalo Valley, Inc. will continue to try and partner with FQHCs for much of the remaining primary care and oral health services. If the Governor is successful with the passage of Insure Tennessee, then services will be continued at the same scope.

### C. Sustained Impact

The long-term effects on the community as a result of the Outreach grant has been (1) lower usage rate of emergency resources and expensive trips to local emergency rooms for problems that could and should have been addressed as part of standard medical and dental care, (2) trained women receiving services in the value of continuing medical and dental visits so that their dental and medical conditions do not deteriorate to the point they require emergency services and (3) brought together providers in an integrated system of care so that local providers can access services and understand the necessity of integrated service provision and have an established network with linkages in place to make referrals with staff who are trained and understand the need to provide a continuum of services. This new service model has been a revelation to local providers who in the past worked solely as sole providers and now understand the needs of their patients to integrate their services with a consortium of other providers to address the broader needs of their clients. The new skills acquired in this process include a broad understanding of how other providers in the area can work together plus a deeper appreciation for the need to integrate primary care with mental health care and substance abuse treatment.

## Part VIII: Implications for Other Communities

Our experiences in this project have already benefited from the example of other providers here in Tennessee who were models for this program and now this program can serve as a model for other providers. BVI is well-positioned as a model in the state of Tennessee and in rural communities all over the nation. BVI is represented at a state level on the statewide TADAS organization and examples of integrated services are being shared with other rural and metropolitan providers all over the state. This project is a model for the importance of and cost savings realized by providing integrated services. The qualitative measures that other agencies have seen as beneficial are the example of how mental health and substance abuse providers can improve their outcomes by integrating their services with dental and primary care providers in a collaborative approach.

## Madison County

Part I: Organizational Information	
<b>Grant Number</b>	D04RH23593
<b>Grantee Organization</b>	Madison County
<b>Organization Type</b>	County government
<b>Address</b>	101 W Main St., Madisonville, TX 77864-1901
<b>Grantee organization website</b>	N/A
<b>Outreach grant project title</b>	Expanding Mental Health and Substance Abuse Services to Rural Communities through Telehealth and Outreach
<b>Project Director</b>	Name: Jennifer Long
	Title: Executive Director, Madison Health Resource Center
	Phone number: 936-349-0714
	Fax number:
	Email address: <a href="mailto:JenniferL@st-joseph.org">JenniferL@st-joseph.org</a>
<b>Project Period</b>	2012 – 2015
<b>Funding level for each budget period</b>	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
The Center for Community Health Development at the Texas A&M Health Science Center School of Public Health	College Station, TX	Academic Health Science Center
The Counseling Psychology Program at Texas A&M University	College Station, TX	University
Brazos Valley Council on Alcohol and Substance Abuse	Bryan, TX	Regional Non-profit
Madison County Health Resource Commission	Madison County, TX	County planning commission
Madison St. Joseph Health Center	Madisonville, TX	Critical Access Hospital

### Part III: Community Characteristics

#### A. Area

Madison County, Texas.

#### B. Community description

Madison County is located in East Central Texas bisected by north/south Interstate 45 approximately 100 miles north of Houston. Traditionally, Madison County has been considered a part of the seven-county region known as the Brazos Valley which includes the small urban hub of Brazos County that is surrounded by six rural counties. Madison County is both a mental health and primary care Health Professional Shortage Area (HPSA) with many health care and social services located in the regional hub.

Consistent with the profiles of other rural counties in Texas, Madison County's population has a growing Latino community, a significant group of seniors, less education, a lower socioeconomic status, higher rates of chronic disease and mortality, less

insurance coverage, less access to health care services, and poorer overall health status. As noted in the 2010 Brazos Valley Health Assessment, just 35.7 percent of Madison County survey respondents were determined to be at a normal weight for their height. The majority of respondents were overweight or obese with 42.8 percent being overweight, 8.8 percent obese, and 12.5 percent were morbidly obese. Madison County residents have a higher rate of diabetes (Type 2), elevated cholesterol, hypertension, emphysema/COPD, and congestive heart failure than the national average. One in ten Madison County survey respondents have been diagnosed with depression or anxiety. The 2010 assessment also found that Madison County residents ranked illegal drug use as the second highest community issue with alcohol abuse as the fourth leading issue.

### C. Need

Like many rural communities, Madison County residents have experienced access to care issues due to the lack of services provided within their community. Madison County is designated as both a mental health and primary care HPSA and has been for several years. Compounding this issue is that many ancillary health and social services are not available locally and residents must travel 40 miles to the small urban regional hub of Bryan-College Station to access such services. Furthermore, public transportation is limited and the primary route to the regional hub consists of a two-lane state highway winding through sparsely populated farm and ranch land along the way.

In Madison County, the economic downturn in 2010 not only impacted the major employers, small business owners, and sole proprietors in the in the leading local industries, it also negatively affected the availability of health care and supportive services organizations as they were required to “tighten their belts” by limiting or eliminating services offered in Madison County. This made longstanding mental health and substance abuse service needs more pronounced. At the same time, Madison County’s fastest growing population was older adults and undocumented residents. Both older adults and the undocumented Hispanic community had a harder time accessing services in general, and mental health/substance abuse services specifically. As acknowledged in the 2010 Brazos Valley Health Assessment over a quarter of Madison County residents surveyed had experienced at least one poor mental health day in the past month, and one in five had been diagnosed either with depression or anxiety. Thirty-five percent (35%) of residents surveyed who needed mental health services reported that they could not get them. In addition, substance abuse was listed as one of the top community issues, second only to transportation.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Two assets for the MOST Network critical to its success was the recent pilot-testing of an evidence-based service delivery model in a neighboring county and the expertise of a Network partner in community health worker models for outreach to Hispanic communities.

#### Telehealth for Mental Health Counseling

The use of telehealth—service provision mediated by technology— was expanding by 2011, particularly in rural areas. Much research had been done regarding the effectiveness of providing mental health services through such technology. Telephone counseling was also an attractive alternative to traditional face-to-face counseling because it is less expensive compared to face-to-face counseling, it allows anonymity, it gives a sense of control, and it is convenient. Televideo counseling offers similar advantages, but also allows the counselor to observe the client during treatment sessions and obtain additional visual cues from the client. Multiple studies have found telehealth-based mental health counseling to be as effective, or in some cases more effective, than traditional face-to-face service delivery. These strengths make counseling possible for some who would not otherwise seek or receive counseling services.

Telehealth-based counseling is an attractive option for individuals who cannot afford traditional counseling. Evidence indicates that increased psychological distress is related to low income. However, people of low socioeconomic status and rural residents have been underserved in the mental health system. Telehealth-based counseling can circumvent obstacles to counseling such as client physical disability and associated mobility impairments, social anxiety, geographical isolation, and time constraints. Telehealth-based counseling has been used in treating depression, anxiety, addictive behaviors, therapeutic adherence issues, and chronic disease management.

To complement the evidence base, two scientific publications from the evaluation of the pilot project in neighboring Leon County highlight the successfulness of this model in a similar community only 40 miles away both in terms of clinical mental health

outcomes and local sustainability. One article discusses the ways in which the development and implementation of the telehealth-based mental health program strengthened community capacity to address local health issues while dealing with a local priority. In addition, client outcomes were analyzed, indicating that clients in treatment significantly decreased depressive symptoms and significantly increased their Mental Health Composite Scores. The other focused specifically on the process of developing and sustaining the services locally, particularly for those interested in replicating the model.

#### Telehealth for Substance Abuse Screening and Treatment

The application of telehealth technology to address mental health counseling far exceeds what has been done to date in substance abuse treatment, but there is a growing body of literature that supports telehealth-based treatment as effective for substance abuse. The research indicates that certain therapeutic approaches lend well to delivery through this modality, such as motivational interviewing. The evidence-base for telehealth-based substance abuse echoes the advantages of those for mental health services, including improved access for rural, underserved, and lower socioeconomic status residents and an increased level of anonymity in obtaining such services locally.

#### Community Health Worker Model for Outreach to Hispanic Community

Community health worker (CHW) models have been used for decades with much success. Known by a variety of names, these individuals are defined in the 2007 Community Health Worker National Workforce Study as “lay members of communities who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve.” Through a wide array of skill sets, CHWs can increase access to care for the underserved and consequently improve health status through serving as a link between residents and needed health and social services. Several studies have demonstrated the effectiveness of CHWs among Hispanic populations in helping their target populations achieve positive health outcomes through case management, service coordination, and referrals. Specifically, CHWs are effective in these roles due to their cultural similarity and understanding of the population they serve and the subsequent trust that residents have in them—largely because CHWs traditionally reside in the communities they serve.

### **B. Description**

The Madison Outreach and Services through Telehealth (MOST) Network proposed to improve access to effective mental health and substance abuse services in Madison County for rural and underserved residents by extending services via telehealth and promoting the availability of services through the use of community health workers. (Insert work plan objectives & activities?)

### **C. Role of Consortium Partners**

Madison County – The county served as the administrative agent for the program with the county contracting with Madison St. Joseph Health Center, another consortium member, for project management. The county treasurer would manage all financial reporting, the submission of invoices, and the management of subcontracts.

Madison County Health Resource Commission - MCHRC provided support for the proposed program by helping to promote its services within Madison County. The Commission also served as a community advisory board for the project in addition to appointing one of its commission members to serve on the MOST Network Executive Committee.

Madison St. Joseph Health Center - Madison St. Joseph provided additional office space in their professional building where the community-supported Madison Health Resource Center is located to support the implementation of the telehealth equipment and services. Madison St. Joseph will also refer its patients to telehealth services when necessary and will help to promote the community health worker program. Additionally, Madison St. Joseph will provide meeting space for all consortium meetings. An administrator with Madison St. Joseph will serve on the MOST Network Executive Committee.

Center for Community Health Development – CCHD has served as evaluator for the project. Additionally, CCHD was to provide technical assistance in the development of the consortium and the implementation of proposed project activities, provide Community Health Worker Training, and conduct the process and outcome evaluation of the activities implemented.

Texas A&M University Counseling Psychology Program - The Counseling Psychology program provided telehealth counseling services through one doctoral student at least two days per week for counseling Madison County residents.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

The MOST project evaluation examined three primary questions: 1) Does the use of telehealth-based mental health services improve mental health status of Madison County residents? 2) Does the use of telehealth-based substance abuse treatment services reduce substance use among Madison County residents? And 3) Is a CHW model effective in Madison County for increasing access to and utilization of services for Hispanic residents? Results pertaining to each evaluation question are listed below.

#### **1) Does the use of telehealth-based mental health services improve mental health status of Madison County residents?**

Telehealth-based mental health services were implemented at the Madison Health Resource Center (MHRC) in Madison County in April 2013. Services were delivered by doctoral-level psychology students with supervision at the Telehealth Counseling Clinic (TCC) at Texas A&M University. These services were sustained throughout the following 24 months (April 2013-April 2015) of the grant and are on track to continue as an ongoing services offered at the MHRC in collaboration with the TCC.

Over the 24 months of services, 43 unique clients were seen by the TCC via telehealth. Clients received an average of 8 (SD=8.35) mental health counseling sessions. Clients were White (65.1%), African American (23.3%), Hispanic (9.3%), and Bi-racial (2.3%). Almost three-fourths (72.1%) of clients were female with males making up one-fourth (27.9%) of participants.

Client outcomes were assessed using the Patient Health Questionnaire-9 (PHQ-9) and the Clinical Outcomes in Routine Evaluation-Short Form B (CORE-B). See the full evaluation report for a detailed description for these measures. An independent-sample t-test was conducted to compare PHQ-9 and CORE-B scores before and after treatment. The results of the PHQ-9 assessment showed that client symptoms improved, as there was a statistically significant difference in pre-test scores (M=14.22, SD=7.84) and post-test scores (M=10.95, SD=7.76) conditions;  $t(40)= 11.62, p<.001$ . The CORE-B measure also revealed a statistically significant reduction in client outcomes according to before counseling and after counseling assessment. Pre-test scores (M=2.05, SD=.93) were lower than post-test scores (M=1.59, SD=.81) conditions;  $t(41)= 14.26, p<.001$ .

These results show that the telehealth based mental health services delivered by the TCC did improve mental health among clients at the MHRC in Madison County.

#### **2) Does the use of telehealth-based substance abuse treatment services reduce substance use among Madison County residents?**

Telehealth-based counseling for substance abuse was implemented at the MRHC in April 2013. Certified counselors from the Brazos Valley Counsel on Alcohol and Substance Abuse (BVCASA) delivered services through group classes that were delivered monthly at the MHRC for Madison County residents. The classes were delivered separately for adults and adolescents, with 27 adults attending and 19 adolescents attending. A maximum of six participants are allowed per class to ensure a small group setting.

All participants took pre and post surveys to judge the change in knowledge resulting from classes. Adult attendees saw an average 27 point increase in scores. The knowledge increase in scores were statistically significant for pre-tests M=46.84, SD=15.47) and post-test (M=74.21, SD=17.89) conditions:  $t(18)=-2.93, p<.001$ . Adolescent clients saw an average increase in scores of 7 points, but these results were not statistically significant ( $p=.154$ ).

Overall, the telehealth-based substance abuse services increased participant knowledge related to substance abuse among both adults and adolescents. However, results were not statistically significant in adolescent clients.

#### **3) Is a CHW model effective in Madison County for increasing access to and utilization of services for Hispanic residents?**

In year one (2012) of the grant, the MOST Project Director identified three potential individuals to train as CHWs. One of the individuals ultimately decided not to be trained as a CHW. The other two individuals enrolled and completed a 160 hour CHW

training certification from the National CHW Training Center, which is a Texas Department of State Health Services approved training center. They participated in training from February through July 2013, then received their official state CHW certification.

After receiving their training, the two CHWs worked at the MHRC on various outreach tasks related to the MOST project. They helped transport residents to and from counseling services at the MRHC, conducted outreach classes to educate Madison County Hispanic residents on services at the MHRC and promoted the MOST services among the Hispanic community.

In January 2014, the CHWs started doing client visits within the Hispanic community of Madison County. Over the next twelve months, they met with 24 Hispanic individuals. CHW clients were an average of 42 years old (SD=12.01) and mostly female (70.8%). CHWs were able to refer their clients to various services within Madison County and the majority of clients were referred to the MHRC (75%) and/or substance abuse services (25%).

At the end of 2014, one of the CHWs moved away from Madison County, so she no longer worked at the MHRC on the MOST project. The other CHW voiced difficulties in seeing clients because she obtained a different job. As a result, the CHW outreach stopped in January 2015. Therefore, two CHWs were recruited and trained in Madison County, but the CHW model has not been sustained. While the two CHWs were actively involved on MOST project activities, they had success in conducting outreach to the Hispanic Community. However, in order for the CHW outreach model to work in Madison County modifications need to be made to consider how to recruit and train individuals who will stay within the community long term and determine a better way to engage CHWs in outreach, rather than providing a onetime stipend.

## B. Recognition

Consortium partners have presented results and lessons learned from the MOST project at several state and national conferences. The Center for Community Health Development (CCHD) presented results from the community health worker component and information related to the partnership model at the American Public Health Association's (APHA) annual meeting in November 2014. CCHD also presented on the policy implications and strategies of using Telehealth in rural areas at the National Rural Health Association's annual conference in April 2014. CCHD's Research and Evaluation Associate, Dr. Whitney Garney, won first prize for the Best Doctoral Student Abstract at APHA's annual meeting for her presentation on the community health worker activities conducted in MOST.

Dr. Carly McCord at the TCC also presented findings, with her doctoral students, related to the mental health counseling services delivered through Telehealth. Presentations were made at the Association for Community Health Improvement in Dallas, Texas and at the APHA conference in New Orleans, LA. She also has a presentation accepted at the American Psychological Association in Toronto, Canada for August 2015.

Dr. McCord has also authored three peer-reviewed manuscript about the Telehealth services. One article has been accepted for publication in the International Journal of Telemedicine and Applications and two others are under review. See below for the citations for all presentations and publications related to the MOST project.

### Presentations:

- Garney, W.R., Nimmons, K., Castle, B.F., Roach, A., Allen, B., St. John, J., Alaniz, A. & Wendel, M.L. (Presented on November 17- 19, 2014). *Using Community Health Workers to Increase Awareness about the Affordable Care Act in a Rural Community*. Oral presentation presented at the American Public Health Association (APHA) 142<sup>nd</sup> Annual Meeting. New Orleans, Louisiana.
- Alaniz, A., Garney, W.R., Young, A., Castle, B.F., Wendel, M.L., Elliott, T., & McCord, C. (Presented on November 17-19, 2014). *MOST: A partnership approach for expanding mental health care*. Poster presented at the American Public Health Association (APHA) 142<sup>nd</sup> Annual Meeting. New Orleans, Louisiana.
- Garney, W.R., McCord, C., Wendel, M., Elliott, T., Alaniz, A., McLeroy, M. & Castle, B (April 22-25, 2014). *Policy Implications and Strategies: Telehealth in Rural Areas*. Poster presented at the National Rural Health Association's 37<sup>th</sup> Annual Conference. Las Vegas, Nevada.
- McCord, C.E., Caver, K., Lee, G., Foster, E., Sequeira, A., & Saenz, J. (2015, August). *Equipping the next generation of psychologists for the future of telebehaviorial health*. Symposium accepted for the annual meeting of the American Psychological Association, Toronto, Canada.

- Frazier, C., McCord, C.E., Elliott, T. E. (2015, March). *Using community and clinic-level data to improve mental health in the Brazos Valley*. Poster presented at the Association for Community Health Improvement. Dallas, Texas.
- Sequiera, A., McCord, C. E., Elliott, T. E. (2015, March). *Town and gown partnership for mental health: Texas A&M University and the Brazos Valley*. Poster presented at the Association for Community Health Improvement. Dallas, Texas.
- Rendon-Santiago, T., McCord, C., & Elliott, T. (2014, November). *Telesalud: Providing Telehealth Counseling Services to Latinos/as in Rural Texas*. Poster presented at the American Public Health Association (APHA) 142<sup>nd</sup> Annual Meeting. New Orleans, Louisiana.

#### **Peer-Reviewed Publications:**

- Tarlow, K. R., McCord, C. E., Elliott, T. R., & Brossart, D. F. (2014). Health-related quality of life of rural clients seeking telepsychology services. *International Journal of Telemedicine and Applications*, Volume 2014, Article ID 168158, 7 pages. doi: 10.1155/2014/168158
- McCord, C.E., Saenz, J., Armstrong, T., & Elliott, T. R. (2015). A telepsychology training model for the next generation of psychologists. Manuscript under review with *Counseling Psychology Quarterly*.
- Chang, J., Sequeira, A., & McCord, C. E. & Garney, W.R. (2015). Piloting a telehealth grief group in rural Texas: Preliminary findings and lessons learned. Manuscript under review with *The Journal for Specialists in Group Work*.

## Part VI: Challenges & Innovative Solutions

One of the most significant challenges over the past three years has been the turnover of MOST Network project directors and long-time Madison County government officials supporting the project. Madison County Judge Art Henson's term ended December 31, 2014 with a new county judge now in place. The current project director has provided an overview of the MOST Network project and he is supportive of continuing the county's commitments. Also retiring in 2014 was the long time county treasurer who assisted in managing the financial component of the ORHP grant. Prior to leaving, the former treasurer and the current project director trained the incoming treasurer to ensure continuity in financial management. However, the biggest challenge has been the turnover of project directors, which is not unique given that this project is being conducted in a rural area. This position has served as a career "stepping stone" for the two previous directors, who have both left to accept positions in larger communities. The current project director, who assumed the role in late 2014 has done well in ensuring the continuity of services but has been frustrated with the lack of training received related to the management of the consortium and funder requirements when she took over. Within the last few weeks, consortium partner, CCHD, has assumed some of the project management duties in an effort to help Madison County meet their obligations. In retrospect, Madison County would have contracted with CCHD to provide project management and consortium facilitation while utilizing the Madison Health Resource Center Executive Director to oversee the implementation of services and outreach.

## Part VII: Sustainability

### **A. Structure**

The MOST Network will maintain its six original organizational members which include Madison County, the Madison County Health Resource Commission, the Madison St. Joseph Health Center, the Brazos Valley Council on Alcohol and Substance Abuse, the Texas A&M University Counseling Psychology Program, and the Center for Community Health Development. In 2013, the Telehealth Counseling Clinic at the Texas A&M Health Science Center has joined the consortium since TCC is now the infrastructure providing the mental health counseling via telehealth.

As the MOST Network continues to evolve, new consortium partners that may be recruited include the Mental Health Mental Retardation Authority of Brazos Valley, the HMH Madisonville Clinic, the Madison Consolidated Independent School District's Hispanic PTO, local law enforcement, and St. Elizabeth Ann Seton Catholic Church of Madisonville. Each of these organizations have been informal partners throughout the last three years. Although the MOST Network has achieved moderate success to date in meeting its objectives, each potential member named would have a unique role in the MOST Network's ongoing planning and implementation of activities as listed below.

Mental Health Mental Retardation Authority of Brazos Valley - This state and locally funded regional organization has served the region for over 30 years. However, due to funding limitations, MHRABV is only able to provide direct mental health care to

income-eligible individuals with intellectual and developmental disabilities and residents diagnosed with major depression, bipolar disorder, and schizophrenia. MHMRABV has already collaborated with the MOST Network informally, but they will have a greater impact the coordination of care and outreach as a formal MOST Network member.

HMH Madisonville Clinic – As previously mentioned, the HMH Madisonville Clinic opened after the initial MOST Network planning and activities had begun. As a MOST Network member, the clinic will be integral to the next phase of MOST Network planning and implementation of referral, care coordination, and outreach activities.

Madison Consolidated Independent School District – Hispanic PTO – This group provided project directs informal guidance on crafting outreach strategies targeting the Hispanic community. As the MOST Network refocuses its outreach strategies, it will be critical to have a member from the MCISD’s Hispanic PTO to play a more formal role in the planning and execution of these strategies.

Madison County/City of Madisonville Law Enforcement – When an individual goes into a mental health crises, especially in rural communities, it is most often law enforcement that is contacted address the issue rather than health care providers. As a result, the MOST Network has identified the Madison County Sheriff’s Office and the City of Madisonville’s Police Department as critical partners in both care coordination and outreach.

St. Elizabeth Ann Seton Catholic Church – This church hosted the MOST Network’s 2011 focus group with the Hispanic community in Madisonville. This focus group heavily influenced the design, goals and objectives of the MOST Network. With a vibrant Hispanic ministry and a community oriented clergy, St. Elizabeth can offer a great deal of insight into developing more effective outreach strategies, some which may include the church’s involvement, aimed at the Hispanic population.

## **B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The MOST Network proposal was developed with sustainability in mind. Therefore, many of the costs to maintain the network and related activities will be supported through local government budget allocations and through support of Madison St. Joseph Health Center. Specifically, it is anticipated that these allocations will go to supporting the MHRC executive director, the office manager, telephone expenses, supplies, equipment upgrades, connectivity costs, and travel. All of these costs are ultimately justified as extending the Madison County Health Resource Commission’s mission to develop and maintain access to affordable, quality, care in Madison County.

The only change in infrastructure likely to occur is the mode of connectivity for the telehealth network due to the high cost of T-1 lines that the county must absorb. Currently, the IT staff at the Texas A&M Health Science Center is exploring other connectivity options that will be more affordable yet meet all security requirements. This alternative connection method will be piloted in summer of 2015.

Program expenses will be absorbed by each of the entities providing services through telehealth. The Telehealth Counseling Clinic will incorporate the Madison County site as part of its 1115 waiver efforts to provide support for the doctoral students who conduct the counseling. Additionally, the TCC will partner with Sam Houston State University’s counseling psychology program to utilize their doctoral students in need of counseling hours for the purposes of meeting practicum requirements. TCC will also budget in the cost of equipment replacement in its other funding sources.

BVCASA has already committed to providing full support for its dedicated personnel through existing state, grant, and federal resources. The organization will cross train all of its counselors and prevention team to provide treatment and education through telehealth. The provision of services via telehealth will become a required part of each person’s position description, allowing BVCASA to use multiple funding to support their telehealth efforts.

In the immediate future, the MOST Network will solely be required to develop a plan for funding the one full-time or two part-time Community Health Workers employed by the MHRC. The Madison County Health Resource Commission will take the lead on local fundraising efforts and/or obtaining grants or contracts to secure the support required for the CHWs.

Outreach, particularly to the local Latino population, will continue to be a priority for the consortium. The introduction and use of Community Health Workers (CHWs) to provide outreach and educational activities was a new concept for the community and there were challenges in utilizing the CHWs to their full potential in the most appropriate venues. However, the MOST Network intends to refocus its efforts on developing a core group of local CHWs that will be more supportive. MOST Network members will engage additional local stakeholders to embark upon a planning process to create a stronger culture and support for Community Health Workers. Through this planning effort, it is anticipated that the MOST Network will expand upon its current outreach activities to the Hispanic population in Madison County.

To accomplish expanded outreach activities, the MOST Network will more formally engage local stakeholders who have to date served as informal advisors for the current telehealth and outreach initiative. These additional stakeholders include the Madison Consolidated Independent School District's Hispanic PTO and the St. Elizabeth Ann Seton Catholic Church, both of whom have provided a forum for outreach over the past three years. As MOST Network members, the PTO and the church will provide valuable insight and direction in crafting the outreach strategies which is intended to encourage more local ownership in how outreach and education are conducted.

As the MOST Network further develops its next phase in expanding outreach and educational activities, the consortium's goal will be to work with additional community partners to educate both providers and community members on the role and benefits of CHWs. The network's objectives will include:

- 1.) Increasing providers' utilization of CHWs to promote the availability of services in Madison County.
- 2.) Increasing the Hispanic population's understanding of the role of the CHW which includes sharing accurate information about available care; navigating residents toward appropriate care; and advocating for the provision of culturally competent care.
- 3.) Identifying a funding mechanism to support one full-time or two part-time CHW employees to support the MOST Network's outreach efforts.
- 4.) Identifying potential volunteer CHWs through whom MOST Network volunteers can coordinate neighborhood level outreach and expedite the dissemination of information amongst the Hispanic community.

### C. Sustained Impact

The MOST Network has and will continue to impact individuals, organizations, community, and policy through their efforts. As evidenced by project evaluation activities to date, a majority of individuals served through MOST have improved health outcomes through counseling provided, increased knowledge of the impact of substance abuse, and a better understanding of the availability of services that can positively impact health. Through the network's collaborative efforts, MOST Network providers have developed a strong referral and care coordination system to ensure that their patients/clients are not "lost" in service delivery system "gaps". These providers have worked together to expand the coordination of care amongst local health care and social services providers through a documented referral process. With regard to community impact, the MOST Network's use of telehealth as a means of offering multiple services has served as a trial basis for replicating multi-organizational use of a telehealth system. Due to the expense of the connectivity, (a point to point dedicated T-1 line), the MOST Network will be piloting an alternative, more affordable infrastructure to support multi-organizational systems by the summer of 2015. The affordability of this alternative connectivity may allow for the addition of other providers who will offer services via telehealth.

## Part VIII: Implications for Other Communities

### Utilization of Telehealth to Extend Services to Rural Communities

As mentioned earlier in this report, the use of telehealth to extend services to rural communities was becoming more prevalent by the time this project was proposed. In fact, Texas A&M had previously piloted the provision of mental health counseling to a neighboring rural community with positive results. Replicating this effort in Madison County also proved to be successful, (see "Outcomes" section above) and Texas A&M has since tailored this model to extend services in three additional communities. However, challenges still had to be resolved both in the development of the infrastructure and throughout the provision of services. Connectivity between rural communities and the urban area where the services originate continue to be a challenge.

In the state of Texas, rural communities can “lease” T-1 lines through the state’s Department of Information Resources which then works with service providers to establish the appropriate network connections. This can be a lengthy process and it is compounded by the fact that the rural community in this case is connecting into a state university/academic health science center network which has even tighter restrictions on external incoming connections. This whole process can take 3-6 months, although the time frame has improved as Texas A&M has since replicated this effort in other rural communities. The other issue to consider is the cost of point to point, encrypted connectivity that will be compliant with not only HIPAA but also the state’s own restrictions related to personal health information. For a rural county, the cost of the T-1 connection can exceed \$6,000 a year. To address this issue, Texas A&M is currently seeking alternative connectivity options which will be pilot tested this summer. Connectivity will most likely rely upon DSL connections as fiber is not currently available in the rural communities and where it is available, the cost is prohibitive as an option for connectivity in most rural counties. The other issue related to connectivity would be the occasional dropping of a video feed due to a network outage. When, and if this happened, telehealth sessions were continued via phone.

#### Utilization of Community Health Workers to Provide Outreach and Education in Rural Communities

The use of Community Health Workers to provide outreach, education, and referral services in Madison County was somewhat successful. As previously documented in this report, the deployment of Community Health Workers throughout Madison County was based upon a very successful South Texas promotora/CHW model which didn’t translate well in Madison County. For other communities considering the use of CHWs for outreach and education in a rural community where CHWs are a new concept, there must be an educational process regarding the role and scope of the CHWs to inform providers and community members how to work with CHWs and take advantage of their knowledge and skill set.

Additionally, in this instance, the CHWs were volunteers who were paid stipends but their responsibilities and the related expectations were more in line with a paid position. The CHWs reported to the project director and given detailed responsibilities in formal settings than originally planned. Initially, the CHWs were going to focus on informal communication and outreach within their neighborhoods which would have been perceived as more of a volunteer position.

Despite the challenges, the MOST Network consortium is committed to revamping the CHW program in Madison County as described earlier in this report. The work that was conducted by the CHWs was successful enough to build upon in an effort to establish a CHW culture and support system.

# Vermont

## Behavioral Health Network of Vermont

Part I: Organizational Information	
Grant Number	D04RH23558
Grantee Organization	Behavioral Health Network of Vermont dba Vermont Care Network
Organization Type	Provider Network and Membership Organization
Address	137 Elm Street, Montpelier, VT 05602
Grantee organization website	<a href="http://www.vermontcarepartners.org">www.vermontcarepartners.org</a>
Outreach grant project title	Open Any Door: Realizing Bi-Directional Care
Project Director	Name: Simone Rueschemeyer
	Title: Executive Director
	Phone number: 802-262-6124
	Fax number:
	Email address: <a href="mailto:simone@vermontcarepartners.org">simone@vermontcarepartners.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$145,968
	May 2013 to April 2014: \$148,435
	May 2014 to April 2015: \$149,912

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Bi-State Primary Care Association (Bi-State)	Montpelier/ Washington/ Vermont	Primary Care Association
*Clara Martin Center (CMC)	Bradford/ Orange/ Vermont	Community Mental Health Center (CMHC)
*Little Rivers Health Care	Bradford/ Orange/ Vermont	Federally Qualified Health Center (FQHC)
*Northwestern Counseling and Support Services (NCSS)	St Albans/ Franklin/ Vermont	Community Mental Health Center (CMHC)
*Northern Tier Centers for Health (NOTCH)	St Albans/ Franklin/ Vermont	Federally Qualified Health Center (FQHC)
*Behavioral Health Network of Vermont dba Vermont Care Network (VCN)	Montpelier/ Washington/ Vermont	Provider Network for mental health, development disability, and substance use providers

### Part III: Community Characteristics

#### A. Area

The Behavioral Health Network of Vermont dba Vermont Care Network's program, Open Any Door: Realizing Bi-Directional Care, provides services to two rural counties in Vermont: Orange and Franklin Counties.

#### B. Community Description

The primary factors that influence life, and in particular health outcomes and access to care, are relatively similar in the two communities in which Open Any Door was implemented. While one area has a much smaller population size, other factors remain the same. Both communities are primarily Caucasian but have unique cultural characteristics which influence health behaviors as well as access and utilization of health care services. Self-reliance and independence are strongly valued cultural traits among native Vermonters. These admirable qualities can become liabilities that hinder many residents from pursuing or accepting

financial assistance, counseling or other care. Some will stubbornly refuse care until they are in an emergency situation. This fierce independence can also contribute to the social isolation already inherent in a rural community due to geography. Access to health care is significantly affected by: lack of affordability beyond insurance status; significant levels of poverty; lack of education (in Orange County 17-20 % of the residents have no high school education or the GED); affordable housing; unemployment; lack of transportation; geographic barriers; and a difference in culture between primary care providers and those providing mental health services. Income level and access to care affect health habits and overall health. Lower income Vermonters report rates of depression and chronic conditions more than twice that of higher income Vermonters (15% vs. 7% according to *The Health Disparities of Vermonters 2010*). Low income Vermonters are also less likely to engage in regular physical activity (39% vs. 47%) and are more likely to be obese (28% vs. 21%), and at an earlier age, than people with higher incomes.

### C. Need

An opportunity existed in Vermont to improve care and reduce costs through overcoming numerous obstacles by integrating care in a bi-directional manner. The first obstacle to overcome was the overall problems of the poor physical health of people with chronic and persistent mental illness. The life expectancy for this group of individuals is 25 years less than the general population. The National Institute of Mental Health reports that 6% of adults have a severe mental impairment (SMI). SAMHSA reports that 9% of adults have substance abuse or dependence issues. The SMI population is at an increased risk of mortality associated with higher rates of physical conditions including obesity, hypertension, diabetes and cardiovascular disease. The literature provides information that people with SMI are 3.4 times more likely to die from heart disease, 6.6 times more likely to die from pneumonia and influenza, and 5 times more likely to die from other respiratory diseases.

Mental illness is the second leading cause of premature death in the U.S. There is also an immense burden of disability associated with mental illness. In the United States, mental disorders collectively account for more than 15% of the overall burden of disease from all causes and slightly more than all forms of cancer. The best estimate is that around 93,000 Vermonters 18 and older might be affected by some level of mental disorder in any given year. According to the VTDOH, the public system currently serves 7,300 of them in adult outpatient (AO) services. Some illustrative facts about the individuals currently served in AO programs include: 70 % have annual incomes of less than \$20,000 (and nearly half report having dependents in their household relying on that income for support); 45 % have marital and family problems—such as living in abusive situations, or having children in state custody or in trouble with the law; Less than 40 % say they have either full-time or part-time jobs; 61 % of AO clients are women; AO clients are at least five times more likely to be arrested than the general population (the rate is even higher for women who are clients). According to AHRQ, general hospitalizations in Vermont are more likely than in the nation as a whole to be accompanied by a diagnosis of mood disorder (13.8 percent vs. 10.4 percent), substance related disorder (7.6 percent vs. 7.1 percent), and anxiety disorder (5.8 percent vs. 3.6 percent).

In addition, the stigma of seeking care continues to exist in American society. Changing this stigma begins with changing the culture between primary care and behavioral healthcare and recognizing the need for both to treat the whole patient. The cultural barrier between primary care offices and CMHCs remains. Care may be accessible to people with high behavioral health needs, but due to stigma and fear on behalf of the primary care providers, care becomes inaccessible. Access can also be barred by the patients themselves either through their lack of desire or ability to access care or by the fact that many CMHC clients have an inability to be treated in a “15 minute visit”. To truly meet the physical and behavioral needs of the clients, there needs to be much more coordination and education about the different cultures and about the care provision itself and access needs to be available no matter which “health care door” a person enters.

Only 32% of the nation’s community mental health providers are able to afford the resources to provide on-site treatment for medical conditions. Barriers to providing general medical care include reimbursement, workforce limitations, physical plant constraints, lack of community referral options. Failure to address medical and psychiatric co-morbidities significantly increases the costs of both medical and psychiatric care and the outcomes in health of our communities.

The implementation of the Open Any Door care delivery model began with a pilot in Bradford, Vermont – an extremely isolated area with high needs and geographic, economic and cultural barriers. The target population for the pilot was adults with high behavioral health needs. The expected impact on the target population was more coordinated and timely community based care and increased behavioral and physical health outcomes. Identifying and overcoming barriers to care and providing increased access to services enabled people with high behavioral health needs to begin to have a person centered health care home no matter which door they enter.

**A. Evidence-based and/or promising practice model(s)**

A combination of the National Council of Behavioral Health's Four Quadrant Model and a parallel of the IMPACT model and the Vermont Blueprint for Health is what the Open Any Door consortium identified as a base for collaboration and a framework for model design. The consortium decided that a partnership model for integration was best suited for the community and the individual agencies at the point of time when the HRSA application was submitted. The evidence-based model worked well in both pilot communities having only to adjust slightly for the different partnerships.

The National Council describes a partnership model based on a thirty-year body of research that focuses on depression in primary care settings. The research demonstrates that guidelines alone will not impact outcomes. It states that patient tracking with a care manager significantly improves outcomes and that use of a specialist in a consulting role or integrated in the treatment has the largest impact. The Open Any Door consortium based their program on the National Council's partnership model for bi-directional integration of primary care and behavioral health care. This is in concert with, and expands, the Blueprint model of integrating behavioral health into a primary care setting. The National Council describes the elements of a partnership model for integration between a health care home (in this case a FQHC) and a behavioral health organization (in this case a CMHC) as follows. The Open Door Consortium added three elements to support the goals of the program and to meet the unique needs of their community.

1. Regular screening and registry tracking/outcome measurement at the time of psychiatric visits
2. Medical nurse practitioners/ primary care physicians located in behavioral Health
3. Primary care supervising physician
4. Embedded nurse care manager
5. Evidence-based practices to improve the health status of the population with serious mental illnesses
6. Wellness programs
7. Structured Referral Process Based on the Four Quadrant Model\*
8. Brief Intervention/Consultation via Telemedicine\*
9. Education of Providers, Clinicians and Patients\*

\*Added by the Open Door Consortium

**B. Description of Program Activities:**

The Open Any Door model for care delivery was created within the context of many exciting activities and opportunities within the state of Vermont. The intent of this strategic partnership was to design, implement and measure a bi-directional model of care delivery that increases access to, and improves coordination between behavioral health and primary care resulting in increased health outcomes for communities statewide.

The Open Any Door Consortium and its expanded site partners worked to support a three year process of design, implementation and evaluation for a bi-directional model of care that we hope will result in a sustainable program that has long lasting health outcomes for some of Vermont's most rural communities. Open Any Door provides integrated care to communities through: expanded access to primary care (including primary care in the CMHC and home visits); an enhanced and formally structured referral system based on the Four Quadrant Model; brief intervention/consultation via telemedicine; and educational opportunities for patients, staff, clinicians and providers. Support from the HRSA Rural Health Care Services Outreach grant enabled this model to be implemented in some of Vermont's most rural communities by: leveraging the competencies that exist within the consortium, providing new options for care, using outcome measures, collecting and sharing data, coordinating the effort to reduce redundancy with other quality based programs such as the Blueprint and providing educational opportunities.

The Open Any Door project goals and their associated objectives were implemented by the consortium members in year one through three. During this time members worked with key stakeholders statewide to advance bi-directional care as it fits into the framework of the Blueprint and health care reform at large. The program activities are many, with one of the most essential being the provision of primary care services available to clients with severe and persistent mental illness at the CMHC. This was made possible by the FQHCs forming satellite practices at the CMHCs. A primary care provider from the FQHCs saw clients at the CMHCs who would otherwise not go to a medical office for their care or who felt more comfortable accessing health care services at the CMHC. Open Any Door provides the opportunity for early detection and treatment of new conditions for clients without primary care services, management of chronic conditions, collaboration with the psychiatrist on medications, and support of the

“medical home” quality initiatives through the Blueprint. Patients are seen one half day per month at CMC and one day per week at NCSS. CMHC nurses have been trained to use the FQHC electronic record and diagnoses, medications and allergies are entered in the CMHC chart. Nutritional status, BMI and physical activity are documented routinely. Additional activities include: the development of an enhanced referral system that is used with all area primary care practices; routine care coordination meetings held to assure services are made available and not duplicated; enhanced access to psychiatry services for the FQHC; routine screening for all patients over the age of 18 for depression at the FQHC; and use of the 340B Pharmacy Program enabling shared patients access to lower priced medications.

At the initial site, the psychiatrist from the CMHC met monthly with providers of the FQHC to respond to questions regarding care or medications for patients being managed by primary care. The psychiatrist has also provided statewide videoconferences on key mental health topics with participation from primary care practices, CMHCs, nursing students, and other interested residents. In addition, the telehealth equipment has been used for statewide integrated distance learning opportunities. The second site has also begun to pilot telemedicine medicine checks. Consent to share clinical information across organizations is obtained and processes are in place to share medical updates. A process has been defined to identify the primary care provider in the CMHC chart and assist those who do not have one in obtaining care.

Workflow analysis is ongoing. Visits are coordinated with mental health visits when possible to decrease the need for transportation support resulting in fewer “no shows”. Patients receive nursing support for general medical issues when the provider is not on-site and nurses are able to draw blood at the CMHC. The FQHC provides 24-hour medical coverage for clients seen as part of the model. Healthcare screenings occur at the CMHCs and the CMHCs were a site for flu vaccines. General healthcare educational material is now available at the CMHC sites and information on mental health at the FQHC sites. Information sharing is essential and routine reporting is compared to baseline measures to define areas for improvement. The practices participate in the Blueprint providing additional quality support and community initiatives for the patients.

In addition to actual visits and one on one assistance, outreach is conducted at the sites. Nursing staff attend meetings to discuss Open Any Door with therapists, mobile outreach, and CRT case workers. Additionally, CRT case workers, therapists, psychiatric teams and mobile outreach discuss the benefits of the program with their clients. Brochures are handed out, placed in the lobby and provided during the flu clinics. Nursing staff at NCSS also promote the program to clients who have appointments for medication pick-up and injections. Providers and staff meet to identify those clients that would benefit from the program and at one site, an integrated appointment card has been developed. Newsletters as well as individually targeted letters have gone out into the community to promote the program.

### **C. Role of Consortium Partners**

When the opportunity to apply for the Rural Health Care Services Outreach Grant Program came to fruition, the road to the model and the creation of the consortium was clear. This grant program came on the heels of a lot of planning and work toward understanding the need for bi-directional integration at the local level in Bradford as well as statewide. All consortium members have worked closely together in many ways toward the end goal of bi-directional care. In addition, all have worked with HRSA and understand the federal expectations. LRHC and NOTCH are members of Bi-State and CMC and NCSS are members of VCN. Prior to the grant, both FQHC and CMHC partners had been working closely together on planning and care coordination. VCN and Bi-State have supported each other in numerous ways strengthening partnerships between mental health and primary care statewide. Open Any Door took the efforts of the individual and joint consortium members to the ultimate level of implementing a care delivery model based on need and evidence. Each member had a designated role in the implementation as was laid out in the application.

VCN was the lead agency and was ultimately responsible for program design and oversight including measurement development, data collection, outcome analysis and reporting and expansion of the model to additional FQHC and CMHC sites. As the grant manager, VCN was the contact for the Office of Rural Health Policy responding to its requests in a timely manner and worked with the technical assistant from the Georgia Health Policy Center. VCN took the lead on integrating the model with other outcome based projects including work with the Vermont Blueprint for Health and Vermont Council for Developmental and Mental Health Services. VCN provided ongoing support and consultation to the participating FQHC and CMHC sites.

Bi-State assisted with support, including establishment of processes to collect data and data collection. Bi-State also participated in many of the monthly implementation meetings and worked with VCN on the integrated training opportunities. Bi-State worked with VCN to identify and implement the program at the second site and promoted the model of bi-directional care statewide.

CMC and NCSS collected data (baseline and on-going); educated staff, providers and clients; designed and implemented a physical plant change (addition of a medical exam space); conducted work-flow redesign to include clinical data gathering and the design and implementation of a referral system; assessed and changed staffing plans; conducted client and provider surveys; conducted real-time day-to-day operations review; participated in scheduled consortium communications and in program re-design.

LRHC and NOTCH provided the primary care provider onsite at the CMHC; collected data (baseline and on-going); educated staff, providers and patients; increased number of sites of services; increased home visits; conducted work-flow redesign to include clinical data gathering and the design and implementation of a referral system as well as retraining of staff; assessed and changed staffing plans; conducted client and provider surveys; conducted real-time day-to-day operations review; participated in scheduled consortium communications and in program re-design.

The key members of the consortium worked extremely well together. The Open Any Door consortium met numerous times to develop the program and to decide on work plan activities, measurements and evaluation strategies, among other items. They continued to work closely throughout the duration of the grant period. Key staff for the project from LRHC, CMC and VCN met weekly during the first year to assure proper planning and implementation. Some of the consortium meetings took place via the telemedicine equipment for efficiency purposes. The meetings focused on program design, implementation, trouble shooting and evaluation.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Open Any Door was designed to increase access to medical services for clients/patients with high behavioral health care needs. The goals included the attributes of the Institute of Medicine's Six Aims for Healthcare Improvement (STEEEP): safe, timely, effective, efficient, equitable and patient-centered.

The results of the project are exciting. 100% of clients at the community mental health centers now have identified primary care providers. Clients who hadn't seen a primary care provider in ten years have started to be seen. Clients who had been discontinued due to lack of payment or challenging personalities at primary care offices are now receiving care. The primary care providers are more comfortable working with a team to treat some of the clients and understand how much more comfortable some people are being seen at their health home – the place they go to most often to receive care. Access to primary care has been expanded to people with serious and persistent mental illness. Over the course of the grant, two FQHCs established additional federally designated primary care sites located within community mental health centers. Strong partnerships were developed and most importantly, 95 unduplicated clients with serious and persistent mental illness are now being seen by a primary care provider. Not only are they being seen, but their care is being managed by a team of multi-disciplinary providers, they have access to lower cost pharmaceuticals through the FQHC 340b Pharmacy program and the partnerships have opened up additional opportunities. In St. Albans for example, the NOTCH has expanded the NCSS social work contracts to all of the FQHC sites, MHFA training has expanded to other primary care sites, NCSS and the NOTCH are sharing medical records and that process of record exchange has been expanded to all primary care providers in the area, NCSS is working with the hospital's emergency department to focus on high utilizers and more. In addition, two other community mental health centers in the state have adopted the model and are partnering with primary care providers to offer services within the community mental health centers. An integrated training platform has been developed and will continue into the future enabling staff and providers of FQHCS and CMHCs to be trained together. The Consortium, with the on-site care teams, continuously reviewed and analyzed process and outcome measure findings throughout the three-year grant period to determine components that were performing optimally and should be expanded and/or replicated to other care sites. The focus of improvement efforts at each care site was to achieve the goals and objectives defined in the original application and subsequently updated through the strategic planning process. An outside evaluator was hired by VCN to conduct the yearly evaluations. The evaluations of the Open Any Door pilot program included information from chart audits used to review work plan as well as PIMS data requirements, staff surveys, client survey and review of the LOGIC model, all with attention efforts toward engagement and sustainability. This report is being written prior to the final data collection at the end of year three.

In general, the results related to implementing the program are favorable for both sites. Both pilot sites were able to establish primary care services at the CMHC in partnership with the FQHCs. Workflows were developed that met the unique needs of each

agency. The number of clients receiving care at the CMC site is below expectation. This is in part due to a smaller population base and in part due to the delay in gaining FQHC site designation and reoccurring staffing issues for both the provider and nurse. It should be noted that the second site was able to serve twenty-five unique patients within the first year and has continued to expand services rapidly. From monthly reporting, both organizations will have seen additional unique clients and increased the number of visits and referrals to care.

Authorization to share behavioral health information with the primary care provider has increased for both sites. CMC is reporting this measure for all adult patients, not just those identified with severe mental illness. If one were to break out the population of clients with SMI from the total, the CMHCs meet the goal of 100%. The collection of medical information in the CMHC chart has improved over time and exceeds the goal. It should be noted that this requires “double entry” by the staff at CMC as the electronic records of the organizations are still unable to directly share the information.

The number of health screenings held increased during the grant period with more planned for the future. The ability to provide direct services beyond consultation via telemedicine is underway through a psychiatric medicine check pilot between the NOTCH and NCSS.

Information on primary care and chronic disease is now available in the CMHC sites with information on services provided by the CMHC available in regional primary care offices. In addition, the NCSS/NOTCH site has developed and distributed in all clinical offices a pamphlet specific to the work of this grant.

## B. Recognition

The Open Any Door program was recognized by Senator Leahy as he spoke about it in a video presentation at a statewide conference in Vermont. In addition, numerous members of the program – from VCN’s Executive Director – to key staff at all partnering agencies – have presented at statewide and regionally conferences and committees. The Open Any Door evaluator will be presenting the program and findings at the upcoming fall conference of the Medical Group Management Association. The program is being touted as an innovative program that should be utilized in Vermont as accountable care organizations determine their care management systems and protocols.

## Part VI: Challenges & Innovative Solutions

The challenges identified during implementation were many and varied. The consortium members spent a considerable amount of time discussing barriers and challenges at regular consortium meetings as well as during the evaluation and strategic planning processes.

**Physical Space:** Physical space for the provision of primary care services within both CMHCs posed a larger barrier than initially anticipated. The construction of physical space was not identified in the original HRSA OAD budget. CMC took responsibility for the entire cost of retrofitting the space for the provision of primary care services. The initial exam space was determined to be a barrier to efficient operations and after the initial few months of service provision, it was determined that the office should be moved within the building. The primary care office is now set up with easy access to reception.

At NCSS, finding adequate medical exam space within the facility that was available and that could be identified for this purpose was a challenge as well. NCSS was able to remodel space that strikes a balance between availability and efficiency. Equipment was ordered and has been received for the NCSS exam rooms. NOTCH and NCSS staff spent time working together to decide how best to arrange the equipment as well as identify expected workflows to utilize the existing infrastructure. Here too, a significant challenge was the unanticipated costs of construction. In addition, due to the fact that the space was only to be used once a week, NCSS identified loss of revenue with space that can no longer be used for mental health services. The space barrier did provide the opportunity to reevaluate client flow and in doing so enabled the staff to answer a number of questions about workflow that they had not previously identified.

**Staff Turnover:** Recruitment and retention in the Bradford area is very challenging. There were multiple turnovers of the primary care provider seeing clients at the CMC as well as turnover in the Open Any Door nursing staff. This continues to be a barrier given the under-resourced agencies and the rural nature of the area. At this point in time, the latest nurse has just left and the care manager has taken over the OAD duties as an interim solution. In addition, the FQHC is down a primary care provider. This has not been a problem at the St. Albans site.

**Demands on Nursing Staff:** The demands on the nursing staff exceeded the hours of the part-time position. Additional time was needed for client education, home visits, care coordination with the client and coordination of activities with the FQHC in order to best meet client needs.

**Receipt of Medical Records:** A major barrier was the delay in receiving medical records requested from previous medical providers. Having previous medical records is a requirement for initiating care by the FQHC. The implementation teams spent a lot of time discussing this issue and have created workflows to address it.

**Change in Scope Approval:** As with LRHC, the process for Change in Scope approval took longer than usual for the NOTCH. The Consortium attempted to overcome this barrier by starting the process earlier, with little success. Once the Change of Scope was official, NOTCH began the deeming process for FTCA malpractice coverage and began credentialing the providers with payers. The target dates for beginning provision of primary care services at the CMHCs was delayed at both sites due to federal processes. In the interim, the CMHCs took the opportunity of time to meet with their clients to discuss the new service and to identify those who would like to receive primary care services.

**Information Technology:** A significant barrier that impacts efficiency, effectiveness, cost, quality, and integration, was, and continues to be, the lack of interface between the electronic medical records of both FQHCs and CMHCs. That stated, it continues to be more of an issue between CMC and LRHC. Information must first be copied and sent or faxed to each organization; data must then be manually entered from one chart to the other to enable both organizations to have up-to-date medical records for the individual. This redundancy in task has taken additional staff time and, as reported by the Institute of Medicine, is a potential source of poor quality and human error.

In the absence of the EMR's being able to communicate with each other, the NOTCH and NCSS entered into a cooperative agreement to share records between the organizations on common patients. This has required a commitment by both organizations to have staff fax necessary medical records to maximize coordination of care for the patients served. The NOTCH EMR is capable of maintaining a real time medication list and will be the medication list of record for primary care services. Though work is underway to more seamlessly integrate a current medication list in the NCSS EMR they have started by scanning a visit summary document with all pertinent clinical information, including a current medication list into the NCSS EMR.

While issues around health information exchange are being dealt with at the pilot sites, it is critical that all FQHCs and CMHCs are integrated into the state's health information exchange. The FQHCs are well on their way as they received federal funding to do so a number of years ago. The CMHCs, through VCN, recently secured two grants (one through the State Innovation Model and one through HRSA's Office of Rural Health Policy Advanced Network Development) to support this work with the CMHCs. In addition, Ms. Rueschemeyer, OAD's Project Manager, was named as the Co-Chair for the HIE Workgroup under Vermont's Health Care Innovation Project. In that role and in her role as Director of VCN, Ms. Rueschemeyer is working with the ACOs and with Vermont Information Technology Leaders (VITL) as well as with the Agency of Human Services and the Green Mountain Care Board to integrate CMHCs and other full spectrum providers into the statewide HIE. This work is hindered by the need to exchange data that must be 42 CFR Part 2 compliant. Ms. Rueschemeyer is working with VITL, state IT leaders, as well as with national leaders to identify ways to overcome this barrier.

**Workflow Design:** Workflow and process design took longer than anticipated and continues at both sites as the program matures. It was hoped that the workflow designs developed at CMC would be easily transferable to NCSS but the reality was that the same amount of time necessary for workflow design at each pilot site. The reasoning for this was due to the fact that the relationships between the CMHCs and the FQHCs were very different and the infrastructures already in place were at different stages of development. A peer learning session between both FQHCs and CMHCs as well as with staff at Bi-State and VCN took place to share processes and efficiencies and to provide an opportunity to discuss barriers and strategies to overcome such barriers.

**Telehealth:** The barriers to reaching the full potential for telehealth services included bandwidth, interest and the amount of time it took for agency compliance officers to develop and feel comfortable with the policies and procedures. The telehealth equipment is being utilized for distance learning, psychiatric consultations between providers and just recently to provide one time psychiatric consultations and medication monitoring of shared patients to the more remote NOTCH practices. This will result in travel costs savings to the Medicaid program. We will continue to monitor the program into FY16.

**Competing Priorities in Health Care Reform:** Competing priorities in health care reform continue to exist and have only expanded due to the State of Vermont's Health Care Innovation Project and the state's focus on accountable care organizations and payment reform. Each organization is small and faces competing priorities for staff and administration time and effort. Consortium meetings are held regularly and attended by all members and provide a forum to discuss these issues and assure we are maximizing the benefits of the collaboration. In addition, funding for mental health and physical health are vastly different. Current concerns over funding including those impacted by the state's health care and payment reform efforts are discussed in consortium meetings. These meetings provide a safe environment to discuss "what if" scenarios.

**Knowledge of services:** A considerable effort was made to inform the staff and providers at LRHC and CMC of the services offered at the other agency. Despite these efforts, there continues to be confusion. An education plan was anticipated and planned for but the ongoing turnover at both sites was under estimated. This is not the case between NCSS and the NOTCH.

## Part VII: Sustainability

### A. Structure

The Consortium will not continue in its current formal form. The partnerships between the FQHCs and the CMHCs will continue as they work to sustain Open Any Door as well as implement other initiatives that have come about as a result of the Consortium's work and the work of the partners. In addition, VCN will continue to work on bi-directional opportunities throughout the state and will continue to work with the State on a more flexible funding process. VCN will also continue to work with Bi-State on the continuation of Learning Locally, the integrated distance learning program established over the past three years as well as on bi-directional integration through Bi-State's Community Health Accountable Care organization. Both Bi-State and Vermont Care Network are provider associations and/or networks that work on behalf of their members so together will be supporting the efforts of the FQHCs and CMHCs involved in sustaining Open Any Door.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

Both sites would like to continue to offer primary care services on site and ideally expand patient care and nursing hours. Both CMHCs now have dedicated primary care space within their locations with the equipment and necessary supplies. Referral protocols and team communication workflows are in place. The NOTCH has plans to relocate their primary care practice on the grounds of the NCSS in the coming year further providing access for clients and ease in coordination of services. Care coordination, expedited referrals, education of staff, integrated trainings and team meetings will continue. Education will expand to include how to work with difficult clients, medical terminology, and common illnesses and their treatment. Regular reporting will continue through work with the Blueprint.

The telehealth pilot enabling a NCSS psychiatrist to conduct medication checks and evaluations to the most remote NOTCH location will continue and will be assessed for sustainability in FY 16. This option has significant potential in saving public Medicaid transportation costs as well as NCSS staff costs when it is necessary for providers to transport clients.

Both the CMHCs and FQHCs have observed many instances of how the bi-directional service option has benefitted clients who otherwise may not even meet with a primary care provider. Many of these individuals experience severe and persistent mental illness which place them at increased risk of mortality. This initiative has also created opportunities to develop more collaborative practices between FQHC medical providers and CMHC Community Rehabilitation and Treatment (CRT), psychiatry, crisis, and outpatient services.

The HRSA supported integrated training platform, co-sponsored by the State Office of Rural Health and Primary Care for the first two years of the grant will continue and has been expanded to be used by the two accountable care organizations in the state to educate practices on care management functions and clinical protocols.

The bi-directional program in St. Albans has the potential to expand and offer more substantive services which could reduce overall healthcare costs and improve health outcomes. They are exploring the option of shifting the roles of the NCSS nurses to focus more on care coordination and wellness self-management by having a NOTCH nurse on site during clinic hours. There is also the potential of developing integrated treatment protocols for specific co-existing conditions (Diabetes & Bipolar Disorder) that can be disseminated to other primary care providers.

In Bradford, LRHC will look into the possibility of a community health coach provided by the Blueprint to be located within the CMHC to free some of the nursing time for other duties. It is the hope that wellness and self-management programs targeted to the mental health population will be initiated with support of the Blueprint. The risk is competing needs for the limited amount of Blueprint time for the region. The scope of the OAD program in Bradford will possibly be expanded to address the needs of more at risk clients including clients with co-occurring substance abuse issues and transitional aged youth. This was discussed as a possible new population to target with this model as it is a population that often falls through the cracks and does not receive the preventative and wellness related care it should. The largest barrier to involving this population is that they are not as embedded in the care delivery system. In addition, the amount of nursing as well as provider time will need to be increased. Funding for the nursing position at the CMC is challenging due to the fact that CMHCs cannot bill medical codes in Vermont. In addition, turnover in that position as well as recruitment and retention issues at the FQHC remain risks for sustainability.

Data sharing, sharing of best practice and outcomes reported will be expanded through the development of a statewide data repository and analytic platform being initiated by VCN. VCN will also continue to work with the Department of Vermont Health Access (DCHA) and Vermont Information Technology Leaders (VITL) to develop a process to enable 42CFR Part 2 data to be shared in a federally compliant manner, thus enhancing the care coordination between primary care and mental health.

Updates of medications and other medical information will continue to be shared and that process will be pursued statewide. It is the hope that as we continue to get CMHCs connected to the Vermont Health Information Exchange and work past Part 2 barriers, medications and other information will be shared electronically with proper consent. Once this system is fully operational, all CMHC's and primary care offices in the state will be able to access up to date clinical information. Electronic sharing of information would improve efficiencies and remove the cumbersome process of double entry now being conducted by the OAD nurses.

### **C. Sustained Impact**

OAD has resulted in a number of sustained impacts. The sustained impact most important to consortium members is that many complex clients now have established primary care and are seeking preventive and acute services for their medical needs. Case managers generally provide the support for a client's transportation resulting in few "no shows".

The result of established care has been improved clinical outcomes for this population. Improved referral processes and care coordination activities have expanded access and options for care bi-directionally. Additionally screening for physical and mental health conditions is ongoing at all sites. Over time, the number of patients seen within the CMHCs has increased and baseline measures regarding documentation of medications, blood pressure, BMI, nutrition and physical activity has increased. Care management services include assistance in making appointments and arranging for transportation. Improved clinical outcomes have encouraged the organizations to evaluate the opportunity to expand beyond clients with SMI. Communication across the organizations has significantly increased and the medical records of the organizations are more complete thereby improving care. Surveys of staff and providers of the organizations prove an increased awareness of the program, improved communication, and improved access to education. Surveys of clients show more interest in seeking care at the CMHC site and an appreciation for having a nurse available. Increased patient engagement and improved clinical outcomes demonstrate the success of this model.

Frequent communication as well as integrated trainings between organizations has led to a better understanding of the cultural differences in physical and mental health care. As a result of the stronger partnerships as well as the statewide efforts toward care collaboration, the CMHCs have developed relationships with local hospitals, the community health teams, and other practices. OAD Consortium members have presented numerous times around the state resulting in the development of similar models in two counties – Rutland and Washington County. Due to the integrated care, clients as well as providers are becoming more knowledgeable about the co-morbidities of mental health and physical health conditions.

The Vermont Department of Mental Health has embraced the model of integrated care as evidenced by recent presentations by the Medical Director on the future role of mental health in care integration. The State Office of Primary Care, The Vermont Department of Health, and Senatorial offices have also acknowledged the success of model.

In the long term, the Consortium aims to sustain the OAD activities as well as expansion to new populations, expansion of days, additional coordination with hospital discharge, electronic data sharing and overall statewide expansion of the model. The overall long term funding strategy is three-fold: increased volume, CMHC billing for nursing codes and/or CMHC per member per month payments to health homes at CMHCs, and overall payment reform for CMHCs.

As leaders in the health care delivery system, VCN and its 16 member agencies, are working to redesign the system to include value-based payment methodologies. The goal of VCN in reforming its payment methodology, is to improve the quality of care being provided, achieve enhanced outcomes for clients and truly provide for cost effective mental health, developmental disability, and substance use disorder services. This will occur through a combination of: blending current funding streams; utilization of innovative pay-for-performance payment methodologies; further development and enhancement of our quality assurance and improvement processes; and maintaining our partnerships in the provision of truly integrated and holistic care.

VCN members want to provide comprehensive services to Vermonters impacted by mental health conditions, substance use disorders and developmental disabilities, based on need, rather than on funding streams. These comprehensive services address the social determinants of health on a continuum of prevention, early intervention, treatment and long term services and supports. This type of flexible funding would enable costs to be shifted to support the OAD nurse and other care coordination efforts.

There are many opportunities for reforming our payment methodology as we move to a value based payment approach. A pay-for-performance methodology with clear outcome measures will increase accountability and reduce administrative resources used for billing and reporting. Valued based payments with well-defined care standards will improve quality of care. Flexible funding will enable services to be determined by individual needs in a holistic approach without restrictions based on funding source. Agencies will be able to use staff efficiently to focus the clinical expertise of clinicians and supplement non-clinical services with other direct care workers. An increased focus on care management will improve collaborative service planning with health care and community partners to improve continuity of care. Streamlined documentation, reporting and billing will reduce administrative expenses.

VCN will be working with the State to apply for the SAMHSA/CMS opportunity to become a Federally Qualified Behavioral Health Center pilot state which is focused almost entirely on bi-directional care. The potential for a partnership with the State of Vermont and the federal government in this opportunity would take HRSA's investment in OAD to a statewide level of care integration and improvement. Becoming a pilot state would enable State and federal dollars to support the expansion of the OAD model in each pilot region as well as statewide.

## Part VIII: Implications for Other Communities

The experience and outcomes of Open Any Door are numerous and knowledge of them would definitely benefit other communities considering a bi-directional partnership approach to integration. Based on the experience of the two pilot sites, there are two other communities that are in the process of implementing a bi-directional approach to care delivery. Solid partner relationships and an ability to work through barriers together is an essential component of implementation. Educating clients, patients and providers prior to implementation will create a much smoother implementation process. It is essential that any community contemplating implementation of this model, conduct an analysis to determine if there are enough people in the community to warrant this type of approach. While the facts are clear about the impact of mental health on physical health as well as of physical health on mental health, the design of a bi-directional model must be tailored to meet the unique needs of a community. In the Open Any Door model, funding and sustainability was contingent on the FQHC being able to bill for enough visits to cover their costs of having a primary care provider off-site at the FQHC and on-site at the CMHC. This is a real challenge for small rural communities as it was determined that at least 9-11 clients must be seen on the clinic day. Another piece of education is the difference in nature of the visit. Most of the clients seen for primary care services at the CMHC needed more than a 15 minute visit. They also benefited from team meetings at the beginning of the day where case managers and others could inform the primary care provider of issues that may come into play during a visit. Given the complex nature of the clients, it is essential to also account for no-shows. That being said, though not formally measured, it appears that there are fewer no-shows when clients are seen at the CMHCs where they are most comfortable. Providers from the FQHC also stated throughout the implementation that they are more comfortable seeing some of these clients at the CMHC where they are supported by staff and providers who are very knowledgeable of the client's illnesses and past experiences and who have experience in de-escalation.

Workflow development should be done well ahead of time with consistent check-ins and the utilization of PDSA cycles to move toward the highest quality provision of services. It is essential that FQHCs continue to conduct mental health and substance abuse screenings on all of their clients and that they can provide some basic level of mental health and substance use treatment. It is also critical that a structured referral process is used to determine when and to whom a patient should be referred. Mental health screening and brief intervention is heavily subsidized by both federal and state resources. What is not as well supported (if at all) is a similar approach at CMHCs. CMHCs should be able to at the very least screen their clients for physical health conditions. They should also be able to have providers on-site to take care of the more acute needs of the client and educate clients on prevention and wellness. The ideal is that they can also partner with a primary care provider to enable additional access to primary care for their most complex clients. Neither screening nor provision of primary care services is supported by the federal or state government for CMHCs in Vermont.

# Vermont

## Bi-State Primary Care Association

Part I: Organizational Information	
Grant Number	D04RH23560
Grantee Organization	Bi-State Primary Care Association
Organization Type	Primary Care Association
Address	61 Elm St, Montpelier, VT 05602
Grantee organization website	<a href="http://www.bistatepca.org">www.bistatepca.org</a>
Outreach grant project title	Bridges to Health
Project Director	Name: Kate Simmons, MBA, MPH
	Title: Director of Operations
	Phone number: 802-229-0002, ext. 217
	Fax number: 802-223-2336
Project Period	Email address: <a href="mailto:ksimmons@bistatepca.org">ksimmons@bistatepca.org</a>
	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,999
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$149,999

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Bi-State Primary Care Association	Montpelier/Washington/VT	Primary Care Association
University of Vermont Extension	Berlin/Washington/VT	University Extension Program
Open Door Clinic	Middlebury/Addison/VT	Free Clinic

## Part III: Community Characteristics

### A. Area

The counties covered by our Outreach grant program include: Addison, Franklin, Grand Isle, Orleans, Caledonia, Essex, and Washington. We also provided services in Lamoille County.

### B. Community description

Vermont is a rural, mountainous state located in Northern New England, with 12 of the 14 counties classified as rural. It is mostly homogenous, with 95% of the population being white. Vermont is largely agricultural, with 21% of its farmland being used for dairy. The farms in Vermont are largely found to be within the 100 mile range of Canada. The rural counties of Vermont have higher rates of poverty illness and poverty, with access to transportation systems being limited. According to The Health Disparities of Vermonters 2010 document, when the chronic conditions of Vermont adults were examined by higher and lower incomes, the rates consistently showed individuals with a higher poverty level having a higher rate of disease, including diabetes at 8 percent compared to 4 percent in higher income populations, heart disease at 11 percent compared to a rate of 5 percent, obesity at 28 percent compared to 21 percent, and depression at 34 percent compared to 16 percent in the higher income populations. Low income Vermonters are also more likely to smoke, with those in the lowest income bracket at a high of 37 percent, decreasing to 9 percent for those 3.5 times above the poverty level.

## C. Need

Our target population is dairy workers who have migrated to work in Vermont, mostly from southern Mexico and Guatemala, in their late twenties. This population is a recent immigration population to Vermont. While still mostly male, there are a growing number of migrant women and young children in Vermont in need of prenatal and preventive health services. Top health issues reported by farmworkers include dental, respiratory illnesses, and occupational risks from working close to seventy hour weeks, milking and caring for dairy cows. Signs of anxiety and depression are also common, often as a result of isolation and fear, and tend to manifest themselves as stomach aches, headaches, and general uneasiness.

Through formative research, the University of Vermont and the Open Door Clinic found that Vermont's migrant workers who fall ill face extreme barriers to care, including cultural and linguistic isolation, lack of transportation, lack of knowledge of where to go for care, documentation status, and lack of health insurance.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

Bridges to Health used the Lay Health Promoter/Community Health Worker model to provide outreach, health promotion, and case management for the migrant dairy worker population. Due to there being a lack of established individuals from the community for us to hire and train, we modified the model for Vermont by hiring linguistically appropriate bicultural individuals who had a rapport with the population. They were already employed by the University of Vermont Migrant Education Program (UVM) and the Open Door Clinic (ODC), and could naturally adapt to providing outreach on health care services.

### B. Description

We provided outreach to 80 farms in 6 counties, handing out information about local health care services and meeting directly with farmworkers and farmers to educate them about local health care services. For those who needed health or dental care, we facilitated getting them in for care by helping to make the appointment, coordinating transportation and language services, and providing follow up services. Bridges to Health also offered Federally Qualified Health Centers (FQHCs), hospitals, health departments, and other service agencies support to improve accessibility for farmworkers. This work included presentations, on-site troubleshooting, or testing out language lines. We employed an 'accessibility assessment', containing over 20 health care access questions, with several FQHCs to help them identify areas for improvement. Through UVM funding, our Migrant Health Coordinator worked with UVM's medical, nursing, and family nurse practitioner programs to implement a number of initiatives for and with farmworkers. Students developed health education materials, practitioner education, worked with FQHCs on health care access, and provided direct health care services as well as case management.

### C. Role of Consortium Partners

Bi-State Primary Care Association provided leadership on the application development, and the structure for the reporting on the grant to ORHP. We hired a staff person who had expertise from working for an FQHC Migrant Health Voucher Program in North Carolina. She provided the concept for the application, with input and guidance from ODC and UVM. Once funded, a substantial amount of the total funding was sub-contracted to UVM and ODC for them to hire staff to complete the activities of the project. UVM and ODC submit quarterly reports to Bi-State on their progress. Bi-State met with UVM and ODC separately and together on a monthly basis in the first year, and in the second year moved to bi-monthly in person meetings, and time on the phone when needed. Bi-State spoke with FQHC Medical Directors and CEOs to provide updates on the project, and barriers to care that she was seeing.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Our evaluation of the impact of our program was focused on three main areas: increasing capacity of organizations to provide health outreach to farmworkers; improving quality of care provided by health service agencies for farmworkers; and increasing meaningful access to health care.

*Increasing organizational capacity:* We successfully increased capacity at UVM and ODC to provide outreach to 80 farms. As part of this effort, we developed and distributed bilingual health care access guides in three regions in order to increase awareness among farmers and farmworkers about our services as well as their local health resources. These included information about where to go for care, how to make appointments, etc. As a result of these outreach efforts, in year two over 50% of farmers reported knowing where to go for primary care for the farmworker population, and in the ODC service area the rate was 100%. We created a list of all health centers and hospitals, and reached out to many of them to set up initial meetings. We also conducted

outreach to two universities and engaged several programs within to provide augmented services and programming for the population. As a result, students from disciplines including dental, Spanish language, nursing, nutrition, public health, family nurse practitioner, and medical provided new health education materials, conducted outreach and health education, made cultural competency improvements, and provided medical and dental services.

*Increasing access to and quality of care:* We measured increased access through the number of patients referred who successfully accessed care. For this measure we found 98% rate of success of patients who accessed care. This is due in large part to the incredible high touch care coordination we were able to provide. Through care coordination we addressed language access, transportation barriers, the high cost of services, and working with farmworkers to overcome the fear of leaving the farms and move about in the region.

We also sought to test if we were increasing knowledge and capacity among our health care providers, farmworkers, and farmers. We did see an increase, particularly among farmworkers. To measure increased accessibility, we have documented successes and barriers experienced and observed by the care coordinator. This case study approach has been an effective way to identify barriers to care, document the issues, and provide feedback to allow the health center to develop a process improvement strategy. In the first year, 49% of program clients reported continued access barriers, such as transportation, language, cost, time off, and fear of border patrol. By the second year, this had decreased to 13%. This is no doubt due to the care coordination provided. Surveys with farmworkers from the first two years of the program shows that all clients reported being treated well or excellent by health center staff each year.

Our evaluation also uncovered the continuing need for this program. In the first year, 0% reported they would call the doctor's office directly if they were sick, and only 8% said they would in year two. This shows that, while we can reduce barriers and provide high quality health care, farmworkers are still not comfortable to seek out health care services on their own. We know this is mostly due to the fear of calling and not being understood, or feeling unsure about how they would get in to care if they needed to figure it out on their own. As explained earlier, farmers are starting to bring workers in, and workers are starting to help each other, so the community effort is growing.

## B. Recognition

Each of the consortium members received recognition or acknowledgement from, either local, state or national outlets (e.g. television, radio, newspaper article, community recognition) as a result of this grant funding. Both Julia Doucet of the Open Door Clinic and Erin Shea of UVM Extension provided a webinar and participated in a panel discussion for the Farm Health Task Force's Agrimedecine Course on Migrant Farmworkers.

Bridges to Health through UVM Extension was recognized a number of times throughout the grant period. The program was one of a handful of programs and projects highlighted in the 2012 annual report published by the Vermont Agricultural Experiment Station at the University of Vermont College of Agriculture and Life Sciences and UVM Extension. A reception was held at the Vermont State House to release the report and Bridges to Health staff were present. In 2014, Eric Holt Gimenez, Executive Director of Food First/Institute for Food and Development Policy, participated in a farm tour coordinated and attended by Bridges to Health's Migrant Health Coordinator. Holt Gimenez subsequently wrote a blog published in the Huffington Post that mentioned Bridges to Health's work with farmworkers in the state. Bridges to Health served as a community partner with Schweitzer fellows in each of the three years of the program. This work was recognized at medical student presentations at Family Medicine Conferences as well as in a medical student blog. In the spring of 2015, the Migrant Health Coordinator was invited to participate in a Fair Food panel that explored labor and social justice within Vermont's local food system.

The Open Door Clinic participated in a presentation called "Health and Love" by a Middlebury College student named Jessica Leung. This was aired on the Middlebury radio station. ODC also participated in a documentary made by Middlebury High School students named, "Helping Hands: Vermont's Migrant Labor Population" that was shown at the high school and is hosted on YouTube (<http://youtu.be/lot2Gg3jL4>).

Bi-State Primary Care Association was approached by the National Opinion Research Center (NORC) to discuss our project's approach to care coordination. NORC conducted an interview about our project and asked for accompanying tools that we use for care coordination. Upon sharing these, they asked if they could highlight our project on the Rural Assistance Center website. We also participated in a national presentation to rollout the care coordination toolkit that they have developed on February 13, 2014. The presentation will allow other care coordination programs nationally to adopt protocols and ideas from Bridges to Health.

## Part VI: Challenges & Innovative Solutions

We faced a number of challenges, including federal and state policies on immigration, health center and farmer buy-in, staffing, and fear within the target population.

Working with a population that is not able to get legal documentation to work in the dairy industry proves to be enormously challenging and contributes to a climate of fear that leads to issues with seeking out and receiving healthcare. Vermont is a relatively racially/ethnically homogeneous state and much of our region is located close to the border with Canada, which means that there is a heavy presence of border patrol in the area. Many farmworkers are fearful of leaving the farms and drawing attention to themselves. This fear is not unfounded - in one region of our coverage area community members have been targeted when driving to and from health appointments. The fear also leads to workers having what appear to be phantom symptoms and illnesses, with stomach aches and headaches that have no root cause.

We also saw trouble getting buy-in, with employers unwilling to participate or assist in transportation and follow up. We also saw a significant number of farmworkers not participating in their care. Conversely we struggled with employers willing to drive their workers, but the patients were unwilling to involve their employers in their health issues. Often times, female farmworkers are uncomfortable being alone in the car with a man. This presents a challenge when there is not a public transportation system and the farmer is a man. UVM Extension and ODC made great strides on some of these issues by building rapport with workers and farmers. They built up community relationships, provided opportunities for workers to congregate, and continued to serve as a trusted ally for workers. UVM also met with Border Patrol to discuss the program and how it was benefiting the community.

We also ran into challenges providing culturally and linguistically appropriate services for workers. Our primary clientele are uninsured migrant farmworkers. Our target population is small, but large enough to necessitate some level of accessible and culturally appropriate services. Vermont is transitioning through health care reform, and we would find that health care facilities may not see the population as a priority as they shift to value-based payments for the insured in health care reform. We also struggled with health entities putting into practices protocols that would increase access to and improve the quality of health care for farmworkers. Program staff would provide presentations and training and help clinics changes practices like using a language line for interpretation but we would encounter challenges in ensuring new protocols were followed. There would be staff turnover, or only one room where the language line could be used. We were able to raise awareness, but this did not always translate into practice. We tried to overcome this by continued training, offering support, advocacy, and encouragement to use the system by empowering the farmworkers and outreach workers to keep trying.

Other challenges we faced with the program had to do with staff turnover. Finding the right individuals to fill the temporary/Part-Time positions was always a challenge. Fortunately we had a lead at ODC and at UVM who was there for the duration of the project, so outreach was able to continue. We needed to ensure systematic dissemination of information, for which the Migrant Health Coordinator developed a strong training. UVM and ODC also made sure the farms were all mapped out, so that the institutional knowledge did not go away with one individual.

## Part VII: Sustainability

### A. Structure

Bi-State Primary Care Association, Open Door Clinic, and University of VT Extension will continue to meet and coordinate efforts, though less often. If we do not receive future funding, we will continue to meet on a quarterly basis for the first year to implement the sustainability plan. This would include the same three entities with a scaled down version of participants, to include Bi-State's Project Manager, the VT Migrant Education Program Director and the Open Door Clinic's Outreach Nurse. Neither the UVM Extension Migrant Health Coordinator nor Open Door Clinic Director would be able to participate due to lack of funding streams.

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The Consortium has built a winning model for outreach that taps into existing resources. We are building capacity of local staff to enhance their knowledge and ability to inform farmworkers and farmers of local health care services when they are already on the farms. We applied for 2015-2018 Outreach funding to take this model statewide. If we receive the funding, outreach services will expand from six to 14 counties (statewide), with a target on 11 of the counties where there are the most farmworkers. The justification is that farmworkers need continued care coordination in order to successfully access health care.

In the event of not receiving funding to continue to build and expand this program, we will modify our program approach significantly. Within a period of two years, UVM has noted that there is at least a 50% turnover rate of workers on farms. Therefore, consistent and continued outreach is needed in order for farmworkers to know where to go for care. ODC has stated that they would maintain their front desk and Outreach nurse staff for 2015, and would need to seek out funding or drastically cut back by 2016. ODC would start to integrate patients into the new FQHC that has opened in their community. However, this clinic is not as ready to serve the farmworkers as ODC is (e.g., as culturally and linguistically accessible), and the services would cost more for the patient (because ODC is a free clinic and designed for the uninsured population).

UVM would continue to provide local health resource information via the VT Migrant Education Program (MEP) as a standard practice. They would also continue to coordinate emergent health care needs for any families/individuals enrolled in the MEP, and complete WIC and Medicaid applications and distribute the corresponding information for all MEP enrolled kids and families where/when eligible and applicable. They would still try to offer health education (on keeping a healthy home, sanitation and germ prevention, STDs, family planning, pest management, etc.) as part of their weekly education visits via the MEP but these classes are only attended by students enrolled in the MEP. A large number of VT farmworkers are above the age of 21, and therefore not eligible for MEP services. Clinics will be better prepared as result of the work that has been performed to ensure that their services are culturally and linguistically appropriate, but farmworkers need close support to ensure a successful visit. We have seen that extensive outreach and care management are what makes a farmworker able to successfully access health care services. UVM would not be able to provide direct transport or interpretation services for anyone in the MEP, nor arrange appointments, complete paperwork or follow up for farmworkers not enrolled on the MEP. Consortium members would continue to be on their local farmworker coalitions, and help to coordinate health clinics twice a year around consulate visits.

Bi-State PCA would be able to provide a small amount of coverage for program development in-kind, through their administrative grant from their Primary Care Association grant from HRSA to focus on special populations. This funding would go toward speaking with FQHC CEOs and Medical Directors regarding farmworker needs to ensure linguistic access, and brainstorming local and regional transportation solutions. We would also approach the State Office of Rural Health for dollars to support action steps to develop and implement a plan to work with the VT Blueprint for Health, VT 211, and the health centers to increase their capacity to provide case management, language services, and transportation options. Their office has provided funding for our work in the past. Included in this funding would be a plan to develop a project strategy to include data analysis for how we could cover farmworkers through an in-state funded medical and care coordination model.

### **C. Sustained Impact**

Over the past three years, the Bridges to Health consortium has contributed to policy changes at health centers and hospitals, built a very effective service model for outreach in Vermont, increased the capacity of the UVM Migrant Education staff and the ODC to serve farmworkers, and increased awareness at health centers and hospitals about Vermont's farmworker population. We have increased knowledge and awareness of the farmworker population about the local health care entities in each of the local communities where we have worked. Health care providers have a much better understanding where the farms are in their communities that hire migrant workers and the barriers that they have to care. Some providers went on outreach visits with UVM and ODC to the farms. There is a sustained impact on providers and on farmworkers when there is a health care interaction – whether positive or negative – and next time you have a little more ability to provide culturally competent care. One encounter can make a lifelong change.

We have surveyed and found that there is increased awareness and knowledge for employers and employees regarding local health resources available, with a reduction in barriers, perceived and real, when compared to three years ago. More employers are initiating care, and employees are feeling more comfortable to access care on their own. Before the program, employers were not taking their employees to the doctor for broken bones because they were afraid to be caught. As a result of outreach with farmers and farmworkers, we know of many cases where farmers have taken their employee in for primary care to the local FQHC. In one case, a farmer brought his employee to the ER, and then the farmworker and his coworker navigated the system for surgery and follow-up. We have also seen an impact on female migrant women who are having babies. UVM and ODC expressed that the new moms who have had access to prenatal services and well- baby visits (and were put on Medicaid/Dr Dynasaur for their children) will seek that level of care for their future children and will also speak to friends about the importance of prenatal care.

ODC has also seen success in their county regarding patients' level of comfort leaving the farm and accessing care. For example, in 2008, they provided 31 rides, and in 2014, they provided 667.

ODC and UVM also expressed that with the increased access to high touch coordination and health needs successfully being met, mobility has decreased out of Vermont, and even within the state to get health care needs addressed. They are no longer being forced to take the risky journey to their home countries to treat health needs; UVM and ODC have expressed that families are sometimes moving within the state to be in the service area of our program to have babies where they feel more supported. There are also more women in Vermont now, and they are working on the farms alongside their husbands. The result of a decrease in migration is a higher quality, most sustainable workforce for Vermont employers.

## Part VIII: Implications for Other Communities

It is always beneficial to partner with organizations who have the capacity and expertise to carry forward the work immediately, and for us, in a culturally appropriate way. The Open Door Clinic has been steadily increasing their capacity to serve patients, and they were able to expand and grow their services significantly over the last three years. They are a free clinic, and do not even take insurance. This is the ideal setting for farmworkers because 95% of the migrant dairy population in Vermont is uninsured. Utilizing and building upon The Vermont Migrant Education Program structure has been mutually beneficial, and the experience has been invaluable for farmworkers and educators alike. This structure exists in most states across the country. The educators have always been in the fields, and farmworkers often confided in them about health issues. They just needed the increased capacity, and were able to leverage their solid base funding for this special initiative that is helping them further their goal. In other states, Migrant Education and Migrant Health do not blend as well together because they can, at times, serve different populations. This is actually due to different definitions of 'migrant' at the federal level. The high touch care coordination to provide services for the migrant population in Vermont has felt a bit unique, due to our geographic proximity to Canada and very homogenous population. The experiences that we have had reducing barriers to care might benefit other communities that are in extremely northern, remote areas with border issues. Our model might be particularly relevant for states with a similar makeup of the dairy population, like Northern New York or Wisconsin.

Developing relationships with universities to provide health care outreach is definitely a replicable model and can provide sustainable impact beyond the state where the project is. Students have presented at Primary Care conferences, have developed health curriculum education resources that have been disseminated, and have gone on to develop an interest and seek further opportunities in farmworker health care. For example, there was a student who worked with our Migrant Health Coordinator last summer. The coordinator recently received an email from that student who took a nutrition job working with Latino families in Colorado, and they said her experience working in Vermont was what made her the top pick for the job.

An important lesson that has implications for replicability and long term sustainability is to partner with existing entry points that can carry the work forward. For example, partnering with local clinics and asking what policy changes they can make, like increasing their transportation fund for farmworkers or implementing a language line, can result in increased access and quality of care; or asking farmers to become more involved in their workers' health care needs will have a long standing benefit in the community. We have found, year after year, that working with existing programs within universities and institutions provides the structure and longevity to carry efforts forward. Often students add to projects started in years past. At ODC each year, Spanish language majors provide all the translations services in the clinics. Finally, partnering with UVM Extension has been an interesting relationship, because they have connections with both farmers and farmworkers and have enabled the program to make significant progress with both population. UVM Extension and the Migrant Education Program have a strong desire to keep workers healthy in Vermont, and have been very strong supporters of our initiative to build a sustainable care coordination model.

## Giles Free Clinic

Part I: Organizational Information	
Grant Number	D04RH23577
Grantee Organization	Giles Free Clinic
Organization Type	Free Clinic
Address	219 Buchanan Street, Pearisburg, VA 24134
Grantee organization website	<a href="http://www.chcnrv.org">www.chcnrv.org</a>
Outreach grant project title	Giles REACH Program: Rural Equity in Access for Community Health
Project Director	Name: Michelle Brauns
	Title: CEO
	Phone number: 540-381-0820
	Fax number: 540-382-3391
	Email address: <a href="mailto:mbrauns@chcnrv.org">mbrauns@chcnrv.org</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$150,000
	May 2014 to April 2015: \$150,000

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Giles Free Clinic	Pearisburg, VA	Community Health Center
*Giles Health and Family Services	Pearisburg, VA	Adult Day Care Center, Transportation Provider
*New River Valley Agency on Aging	Pulaski, VA	Agency on Aging, provides transportation to seniors throughout the region
*Family Dental Clinic of the New River Valley	Christiansburg, VA	Charity Dental Clinic (was subsumed under the new Community Health Center of the New River Valley in 2014)

## Part III: Community Characteristics

### A. Area

The Giles REACH project (G-REACH) serves Giles County, in rural Southwest Virginia.

### B. Community description

Giles County is a picturesque region of Appalachian America, with rolling hills, cliffs, rivers and streams. This rural area is, unfortunately, quite poor and topographically isolated. It is also culturally insulated due to the predominant Appalachian culture which presents multiple barriers to health care consumption.

### C. Need

The member organizations of our rural health network developed this program in response to data that demonstrated that transportation was a leading barrier to the receipt of health care services by our target population: low-income, uninsured and underinsured persons. Both oral health care and behavioral health care are prominent needs of the community, and addressing

the transportation barrier would immediately improve access to both. The resultant transportation program, named *Giles REACH: Rural Equity in Access for Community Health*, was designed by and for health care consumers, is culturally appropriate, solves logistical problems for local health care organizations, and greatly expands access to primary health care services.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

This program is modeled after the promising practice of Non-Emergency Community Medical Transportation. This model has been shown to be effective in addressing gaps and needs in a community setting and improving the health status of the residents of the community. In particular, the St. Mary's Medical Assistance Transportation Program was used as a model. St. Mary County medical transportation program was named a Model for Practice with regard to access to primary care in rural areas and received the Outstanding Rural Health Program Award at the Maryland Rural Health Summit in 2007.

Our model has been tailored to meet the specific needs of Giles County, to take advantage of available resources, and to be responsive to the prevalent Appalachian culture. Specifically, our local Medicaid transportation provider was used as the transportation provider for G-REACH, in order to realize the efficiencies of using an existing service. Also, fees were established in response to Advisory Group input that anything more than \$5-10 would pose a significant barrier.

Unique and important features of our model include the following:

- Ability to transport long distances when needed.
- Curb-to-Curb service, even on mountainous unpaved roads.
- Personalized service (e.g., ability to wait for a patient when the visit will be very short, ability to provide same-day service when necessary).
- A large and diverse Advisory Council, which assisted the Consortium in designing the operation, including the fee schedule.
- Partnerships with area behavioral health and dental providers, so that the impact of G-REACH would be broad across health disciplines.
- Emphasis on community awareness and ease of access. A multi-faceted public awareness campaign featured local faces and our memorable logo.

### B. Description

G-REACH is a non-emergency medical transportation program for low-income uninsured and underinsured persons, serving medically underserved Giles County in rural Appalachian Southwest Virginia. Riders must be under 200% of the Federal Poverty Guidelines and have no insurance for medical transportation. Fees have been charged to passengers from the beginning of the project, since imposing them later would have been more difficult. Our fee schedule has remained the same, and is as follows:

- Within Giles County: \$5 per round trip.
- Counties contiguous to Giles County: \$10 per round trip (includes Bland, Craig, Pulaski, and Montgomery Counties, VA and Monroe County, WV).
- Long-distance trips outside of Giles and contiguous counties: \$0.25 per mile, round trip mileage point to point, regardless of number of passengers.

### C. Role of Consortium Partners

Giles Free Clinic: Grantee of Record, administers the HRSA Outreach Grant, executes MOAs with partner Consortium members, organizes/attends Consortium meetings and keeps Minutes, collaborates to provide Giles County target population with primary health care and behavioral health care, and to maximize their patients' awareness of the G-REACH program.

Giles Health and Family Services: Provides G-REACH transportation services (owns and maintains vehicles, employs driver and dispatchers, maintains all transportation insurances), screens callers for G-REACH eligibility, maintains trip logs of all G-REACH trips, collects rider fees, administers rider satisfaction surveys, compiles monthly G-REACH reports of rides, riders, and fees collected, collaborates regarding sustainability planning and execution, attends all Consortium meetings.

New River Valley Agency on Aging: Collaborates to determine appropriate transportation option for seniors, collaborates regarding sustainability planning and execution, and attends all Consortium meetings.

Family Dental Clinic of the New River Valley: Collaborates to provide oral health care to Giles County residents who can utilize G-REACH transportation to access the Christiansburg dental clinic, collaborates regarding sustainability planning and execution, and attends all Consortium meetings.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

In terms of process evaluation, we have completed all objectives and reached all of our goals for the project period. We continue to be thrilled with the efficient design of the system, and the ease at which community members may access it. All Consortium member organizations have been thoroughly engaged in the project, and are pleased to be providing this critical service for the underserved in Giles County.

In terms of output, ridership has increased gradually, albeit somewhat irregularly over three years. Most recently, ridership reached 169 per month. To date, the number of unduplicated riders is approximately 1,180 (across 22 months). This represents 6.8 percent of our County's total population. A large majority (over 80 percent) of rides are for medical purposes (not behavioral health or dental). Five percent are "long distance" trips, for specialty medical care outside of the region (some many hours away, such as to Duke Medical Center, or the University of Virginia Medical Center).

Because we charge riders a small fee (\$5 within County, \$10 to/from contiguous counties; \$0.25 per mile outside of region), we assume that we are the transportation solution of last resort—after family and friends have been exhausted, and missing an appointment is not an option. Therefore, we assume that all trips result in a primary care encounter that would not have occurred without G-REACH.

Rider satisfaction surveys, conducted throughout the first 12 months of program delivery, indicated exceptionally high satisfaction with the friendliness of the driver, the safety and comfort of the ride, the ease of scheduling a trip, and the timeliness of the service. One-hundred percent of the riders stated that they would use the service again, although 24 percent felt that the service cost too much.

Another noteworthy accomplishment was our sponsorship of the hugely successful Appalachian Cultural Competency workshops each year. The last one (October 2014) was attended by 45 individuals, who rated it exceptional on all dimensions. This is a unique and valuable experience for the Giles healthcare community.

### B. Recognition

Although we plan to present this model at upcoming rural health and health network conferences, G-REACH has yet to receive recognition other than limited local media coverage.

## Part VI: Challenges & Innovative Solutions

In the first year of the project, the Consortium, with input from the Advisory Group, worked through many of the initial challenges, most of which concerned how to make access to the transportation service as easy as possible for the patients. It was determined that all processing of trip requests would be performed by the transportation provider (rather than after pre-authorization by a separate G-REACH Transportation Coordinator housed in a different location). We achieved consensus on all policies and procedures, including eligibility, fees, trip distances, reporting, extra stops and passengers, driver wait times, no-shows, and reporting requirements. Our MOA with Giles Health and Family Services includes an Addendum that contains all G-REACH Policies and Procedures, including passenger fees and contractor payments.

Our ongoing challenge is around volume. We have been increasing in volume over time, slowly creeping to our monthly capacity of 170 rides (this capacity is based on available vehicles, drives, and funds). The increase has been irregular. The highs and lows are not seasonal. Rather, the current high may be the outcome of a community awareness campaign that we conducted in the fall of 2014. Also, demand varies greatly based on the number of patients who are using the service who need frequent trips, such as those receiving dialysis.

**A. Structure**

Our Consortium will continue. Our G-REACH Consortium partners will remain the same as they are now. They are presented below. No new partners are anticipated.

Chris Blankenship, G-NET Network Director  
Giles Free Clinic

Helen Gillespie, Executive Director  
Giles Health and Family Services

Tina King, Executive Director  
New River Valley Agency on Aging

Michelle Brauns, CEO  
Family Dental Clinic (now subsumed under the Community Health Center of the New River Valley)

Giles Health and Family Services recently experienced a change in leadership with the retirement of their long-time Executive Director. The newly hired Executive Director, Helen Gillespie, is on-board and very active thus far in Consortium meetings and G-REACH execution and reporting. Our new G-NET Network Director, who works for the Giles Free Clinic, is also fully on-board and is leading our new Rural Health Network Development project: G-SMILE (a community-based oral health initiative).

**B. On-going Projects and Activities/Services To Be Provided**

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The primary impact of the G-REACH Program has been increased access to health care services for the people of Giles County, via accessible transportation. This transportation is what we must strive to sustain through various means.

The Outreach activity that will continue is the core of the program: the non-emergency medical transportation service. This will continue to be provided by our Consortium partner, Giles Health and Family Services. Post-grant, we will sustain the service by narrowing the population eligible for G-REACH to those patients who are being transported to or from the Giles Free Clinic. This is the population of low-income, uninsured individuals who are most often in need of transportation. Seniors needing medical transportation will use the transport vans of the New River Valley Agency on Aging, instead of G-REACH. Persons needing transport home from the local Critical Access Hospital will use taxi vouchers provided by the Hospital Auxiliary.

Our Consortium decided not to raise rider fees as a sustainability strategy. No level of rider fees would suffice as a stand-alone funding strategy. In our extremely low-income target area, fees have the potential to pose a barrier.

**C. Sustained Impact**

Long-term effects include the ongoing positive effect of collaboration through the development and maturity of our Outreach Consortium (i.e., moving beyond turfism, avoidance of duplication, maximizing limited resources), an improved and integrated transportation model (the G-REACH model), and a change in knowledge and attitudes through our Appalachian Cultural Competency Trainings.

## Part VIII: Implications for Other Communities

In those states that have implemented Medicaid expansion, access to medical transportation is likely less of a barrier (if their Medicaid Plans include transportation, which most do). Thus, G-REACH is most applicable to communities in states that have opted not to expand Medicaid eligibility.

Rural communities that have FQHCs might best benefit from our experience, as FQHCs are required to provide transportation services for their patients (either directly provide or provide under a contract or agreement). Our success in crafting the program to our Appalachian population could be replicated to address access disparities for any particular group(s).

As for measures, we recommend ongoing collection of data from riders indicating if they would have had other means of getting to/from an appointment (in other words, is this service enabling a medical encounter that would not have happened otherwise). Collection of type of visit would also be useful, to understand what types of medical encounters are being facilitated.

# West Virginia

## Future Generations

Part I: Organizational Information	
Grant Number	D04RH23575
Grantee Organization	Future Generations
Organization Type	Community-Based Organization
Address	390 Road Less Traveled, Franklin, WV 26807
Grantee organization website	<a href="http://www.Future.org">www.Future.org</a> , <a href="http://www.FutureRuralAmerica.org">www.FutureRuralAmerica.org</a>
Outreach grant project title	West Virginia Community Health Workers Network, A Breakthrough in Peer-to-Peer Support for Rural Health
Project Director	Name: Nicky Fadley
	Title: Director of the Rural America Program, Project Director
	Phone number: 304-358-2000
	Fax number: 304-358-7384
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$150,000
	May 2013 to April 2014: \$148,105
	May 2014 to April 2015: \$145,731

Part II: Consortium Partners		
* Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
Big Creek People in Action*	Town of Caretta, McDowell County, West Virginia	Community-Based Organization
Child Protect of Mercer County*	City of Princeton, Mercer County, West Virginia	Community-Based Organization
Community Connections	City of Princeton, Mercer County, West Virginia	Community-Based Organization
LEAD Community Organization*	City of Logan, Logan County, West Virginia	Community-Based Organization
REACHH Family Resource Center*	City of Hinton, Summers County, West Virginia	Community-Based Organization
West Virginia Warrior Virtue Society*	City of Madison, Boone County, West Virginia	Community-Based Organization

## Part III: Community Characteristics

### A. Area

The West Virginia Community Health Workers Network served six counties in Southern West Virginia: Boone County, Logan County, McDowell County, Mercer County, Summers County, and Wyoming County, WV

### B. Community description

Southern West Virginia is rural and economically distressed. Median household income ranges from \$22,522 in McDowell County to \$42,156 in Boone County compared with \$41,043 statewide and \$53,046 nationwide. Poverty rates range from 36.3% in McDowell County to 20.7% in Boone County compared with 17.9% statewide and 15.4% nationwide. High school graduation rates range from 63.1% in McDowell County to 75.5% in Boone County compared with 83.9% statewide and 86.0% nationwide.<sup>1</sup>

<sup>1</sup> U.S. Census Bureau. State and County Quickfacts. Available at: <http://quickfacts.census.gov/qfd/states/54000.html>. Accessed March 23, 2015

Unemployment ranges from 13.6% in McDowell County to 7.6% in Mercer County compared with 7.0% statewide and 5.8% nationwide.<sup>2</sup> Southern West Virginia also suffers from disproportionately high rates of preventable chronic diseases and risk factors. The incidence of adult diabetes ranges from 15.3% in McDowell County to 12.5% in Summers County compared with 12.1% statewide. Between 40.3% of adults in Mercer County and 34.7% of adults in Logan County have high blood pressure compared with 35.8% statewide. Obesity rates range from 39.2% of adults in Logan County to 33.1% of adults in Mercer County compared with 32.5% statewide. Hypertension affects between 63.54% of Medicare beneficiaries in Logan County and 56.61% of Medicare beneficiaries in Summers County compared with 58.36% statewide and 55.49% nationwide.<sup>3</sup> Although the rate of uninsurance decreased dramatically as a result of the Affordable Care Act, access to health care services remains a challenge due to provider shortages with four counties designated as Medically Underserved Areas and the fifth county having a Medically Underserved Population. Individuals who are newly insured also face challenges learning how to navigate the health care system.

### C. Need

This project addresses barriers people face to getting involved in health education activities, including transportation, lack of time, and culture. Although health education programs exist, several factors prevent people from participating. Southern West Virginia is very mountainous with winding secondary roads between communities and no public transportation system. Transportation costs can be insurmountable for lower-income families and those who lack access to private transportation. Additionally, jobs and family commitments create constraints on time. Appalachian culture also presents challenges to participant engagement. West Virginians are self-sufficient and proud—necessary characteristics of people living in geographically isolated and economically underserved areas. However, these characteristics also prevent adults from seeking help with health issues prior to medical emergencies and participating in activities that let others know they might have a health problem or concern. Since primary care clinics and hospitals operate many of the health education programs, those who do not access medical care due to cost, lack of insurance, time, or distrust of the health system often do not learn about or receive referrals to these programs.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The project was based on the evidence-based community health worker (CHW) model that has been shown to improve health status and quality of life in rural communities.<sup>4</sup> CHWs are “lay members of communities who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status, and life experiences with the community members they serve.”<sup>5</sup> CHWs develop trusting relationships with community members, groups and organizations and are especially effective in rural communities that are highly connected such as those in southern West Virginia.

The project provided technical assistance and training to staff at rural, community-based organizations to enable them to serve as CHWs. Technical assistance and support focused on functions that have been shown to be core competencies of CHWs:

1. Providing culturally appropriate health education and informal counseling on topics related to health promotion, disease prevention, disease management, and mental health support;
2. Providing information regarding eligibility requirements of government programs and assisting community members with enrollment;
3. Creating more effective linkages between community groups, organizations and members and the health care and social services systems; and
4. Building community capacity to address health issues and advocate for resources.

---

<sup>2</sup> Bureau of Labor Statistics. Local Area Unemployment Statistics Map (January 2015). Available at: <http://data.bls.gov/map/MapToolServlet?survey=la>. Accessed March 23, 2015.

<sup>3</sup> National Center for Health Statistics. Health Indicators Warehouse. Available at: <http://www.healthindicators.gov/>. Accessed March 23, 2015.

<sup>4</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration. Community Health Workers Evidence-Based Models Toolbox. 2011.

<sup>5</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration. Community Health Workers National Workforce Study. 2007.

## B. Description

This project provided CHWs and their organizations technical assistance with developing sustainable community health education and promotion programs. Assistance was primarily provided via monthly phone calls, emails, and site visits. During these encounters, project staff assisted CHWs with:

- Developing and engaging community advisory councils;
- Reviewing existing health needs data;
- Conducting community health needs assessments;
- Planning new health education and promotion programs;
- Troubleshooting challenges with implementation;
- Identifying and reaching out to new partners;
- Developing evaluation plans and tools;
- Developing marketing materials;
- Preparing mini-grant applications; and
- Planning for sustainability.

Additionally, the project organized in-person group meetings every two or three months to provide CHWs trainings and presentations, as well as opportunities to share with one another lessons learned and provide one another feedback. Trainings and presentations were provided on topics such as:

- Basic public health practice;
- CHW roles, best practices, and toolkits;
- Statewide health promotion initiatives;
- Providing peer education on nutrition, physical activity, and chronic disease self-management;
- Assisting peers to enroll in Medicaid and the Marketplace;
- Developing program vision and mission statements;
- Establishing and engaging community advisory councils;
- Conducting community health needs assessments and finding county-level health data;
- Developing work plans with SMART objectives and measurable outcomes;
- Developing monitoring and evaluation plans;
- Communicating achievements and marketing programs to funders, partners, and the media;
- Policy initiatives and advocacy; and
- Funding opportunities.

The project provided CHWs scholarships to attend outside trainings and conferences. CHWs attended policy workshops, leadership development workshops, program management trainings, grant writing workshops, rural health conferences, project management trainings, computer skills trainings, health education facilitator trainings, recovery coach trainings, and networking opportunities.

Finally, in order to build CHWs capacity to sustain their activities, technical assistance and training also was provided in project planning, developing advisory councils, developing partnerships, conducting assessments, evaluation, marketing, and fundraising. By the end of the project term, partners developed sustainability plans and marketing materials they could use with funders describing their outcomes and capacity.

## C. Role of Consortium Partners

Consortium partners were the rural, community-based organizations that received assistance with developing health education and promotion programs based on the CHW model. These organizations provided feedback on project activities and strategies during in-person meetings and through evaluation surveys. In particular, project staff facilitated planning sessions each year of the project following the review of evaluation data. Project staff adjusted the activities, work plan, and budget based on this feedback. One example of a significant change made to the project plan in year two was a shift of time and resources from group activities to one-on-one technical assistance. This was based on feedback that partners were having difficulty implementing trainings and needed more help with overcoming their particular challenges.

## Part V: Outcomes

### A. Outcomes and Evaluation Findings

Over the three-year term, the project partnered with nine rural community-based organizations and helped them establish new health education and promotion programs. Only two of the organizations had previously engaged in similar health education and promotion activities. Three of the partners left the program in year two due to challenges in dedicating the necessary time to the project. The other six partners are expected to sustain most of their health education and promotion activities. These activities represent new health education and promotion resources in their communities that were previously not available, including:

- Health insurance enrollment events;
- An annual nutrition education workshop;
- An annual diabetes self-management workshop;
- A walking club;
- Three mental health peer support groups;
- Annual health fairs, senior health fairs, and community baby showers;
- Martial arts education in an afterschool program and a senior center;
- Prescription drug take-back events;
- Drug overdose community meetings;
- A breast cancer education and awareness program;
- A youth hiking and adventure club;
- Two workplace wellness programs; and
- A downtown walking path and revitalization project.

As a result of these new activities, partners helped to increase participation and health knowledge among community members and referrals to health service providers.

### B. Recognition

Officials with the West Virginia Department of Health and Human Resources, West Virginia University, and Marshall University have interviewed project staff about its CHW model, preliminary evaluation results, and lessons learned. Additionally, several partners have been recognized locally in newspaper articles and radio about their efforts to expand access to health education and promotion resources.

## Part VI: Challenges & Innovative Solutions

The project initially focused on developing a Network of rural fire departments and rescue squads engaged in community health education and promotion. They were targeted based on meetings and focus groups with a number of fire departments and rescue squads indicating that they desired to expand their services to include health education and promotion. Year one partners included two fire departments and a combined fire and rescue department. Unfortunately, all of them dropped out of the project in year two. The key reasons were that staff could not commit the minimum 12 hours per week to their health education and promotion programs and leadership did not prioritize the programs. To replace these partners, a request for applications was disseminated to recruit new partners interested in the technical assistance, training, and support available through this project. Four community-based organizations were selected to join the project all of which proposed to develop new health education and promotion programs for their existing constituencies.

Additionally, collecting accurate data from some partners was a challenge. Several partners had low literacy and computer literacy. In year two, the project replaced written reports with interview questions conducted during the monthly phone calls. The interview format was significantly more effective at collecting qualitative data on partners' successes, challenges, and lessons learned.

## Part VII: Sustainability

### A. Structure

The six partners described above will continue to participate in the consortium. Future Generations will continue to serve as the consortium coordinator.

## B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The focus of the West Virginia CHW Network moving forward will be to:

- Provide members information about new resources, trainings, events, and funding opportunities;
- Connect members with other initiatives and foster partnerships; and
- Educate policy makers and funders about the work members are doing and their successes.

Future Generations will absorb these activities. Additionally, Future Generations is actively seeking grant funding to support continued Network development. In particular, funding is being sought to support Network members with the growth of their programs. Funding also is being sought to recruit new partners and provide them technical assistance with developing CHW health education and promotion programs.

## C. Sustained Impact

The Network's sustained impacts include new ways of serving community members and new capacity created. All partners are sustaining their health education and promotion programs, including the majority of their activities. These activities represent new services available to community members. Almost all of these services are provided in partnership with organizations they had not worked with before. Additionally, their staff has increased their capacity to plan, implement, evaluate, market, and fund health education and promotion programs. This should strengthen their sustainability and the likelihood these new services will remain in the community.

## Part VIII: Implications for Other Communities

This project had significantly more success partnering with community services nonprofit organizations, even if they had not previously engaged in health education and promotion activities. Additionally, CHWs with some experience in program management, even in a non-health-related field, developed more robust and sustainable programs than CHWs without experience with program management. Finally, CHWs benefited much more from one-on-one technical assistance than group trainings, making implementation of this project labor-intensive.

Project evaluation focused on the capacity development of the CHWs. Key indicators included:

- Improvements in project planning based on needs data and evaluation results,
- Participant retention and engagement over time,
- Partnership development and engagement over time,
- In-kind and cash partners raised, and
- Expected sustainability of partners' programs.

## ABC for Rural Health

Part I: Organizational Information	
Grant Number	D04RH23555
Grantee Organization	ABC for Rural Health
Organization Type	Health Benefits Counseling Service
Address	100 Polk County Plaza, Suite 180, Balsam Lake, WI 54810
Grantee organization website	
Outreach grant project title	Mental Health Access Audit and Benefits Counseling Project
Project Director	Name: Michael Rust
	Title: Chief Operating Officer
	Phone number: 715-485-8525
	Fax number: 715-485-8501
	Email address: <a href="mailto:miker@co.polk.wi.us">miker@co.polk.wi.us</a>
Project Period	2012 – 2015
Funding level for each budget period	May 2012 to April 2013: \$149,583
	May 2013 to April 2014: \$149,586
	May 2014 to April 2015: \$149,893

Part II: Consortium Partners		
*Indicates consortium partners who signed a Memorandum of Understanding/Agreement		
Partner Organization	Location (town/county/state)	Organizational Type
*Polk County Health Department	Balsam Lake/Polk County/Wisconsin	Local Government
*Counseling & Psychological Services Department, St. Croix Regional Medical Center	St. Croix Falls/Wisconsin	Critical Access Hospital w/ Clinic
*Peace Tree Counseling	Osceola/Wisconsin	Private, For-profit Clinic
*Behavioral Health Unit, Polk County Human Services Department	Balsam Lake/Polk County/Wisconsin	Local Government
*ABC for Rural Health	Balsam Lake/Polk/Wisconsin	Health Benefits Counseling Service

### Part III: Community Characteristics

#### A. Area

The ABC for Rural Health's program, Mental Health Access Audit and Benefits Counseling Project, provides services to four rural counties in Northwestern Wisconsin: Polk, Burnett, Barron, and St. Croix Counties.

#### B. Community description

Polk County is located in scenic northwestern Wisconsin, about 50 miles northeast of St. Paul, Minnesota. Polk is considerably more rural than the state as a whole, with 93% of Polk residents living in a rural area, compared to 32% of the overall state population. Polk County is bordered to the West – and separated from Minnesota - by the St. Croix River; a National Scenic Riverway which is considered one of the nation's last "wild rivers". Polk County is characterized by plentiful forest and water resources. This is an outdoor activity destination county, with boating in the summer and snowmobiling in the winter – both activities that are impacted by the county's rate of emergency department visits for injuries sustained in boating or off-road vehicle accidents; which is roughly twice the rate for the state (104.1/100K to 59.02/100K). Polk county residents are more likely to have a high school degree (40%) compared to the state (35%) and the nation (30%), but less likely to have a college degree (58%) than the state as a whole (63%). The ethnic make-up of Polk County is 97.2% white, and the percentage of adults 65 and older is somewhat higher in Polk County than it is statewide. Polk County has challenges with the health behaviors of adult obesity and

excessive drinking. The prevalence of excessive drinking in Polk County (23%) far exceeds the national goal of 8%. On the community health survey, approximately 30% of respondents reported binge drinking in the past month. Our motor vehicle crash rate is much higher than the state rate, and alcohol is involved in three times as many fatal car crashes in Polk County than in the state overall. In addition, we continue to struggle with the socioeconomic issues of high unemployment and single parent households. The county's suicide rate is nearly double the state rate (23 vs 13 per 100,000). Historically, the county has been undersupplied by mental health professionals and is a Mental Health Shortage Area. There are, however, signs that the county's mental health and substance abuse treatment provider population is growing in number.

### C. Need

Since the turn of the century, suicide rates in Polk County had taken a sharp upswing. By 2008, the Polk County rate of suicide had tripled from the 2006 rate and was double the statewide and regional rates. It is not surprising that alcohol consumption had risen during that same time frame as borne out by Polk County's increase in mortality associated with liver disease and cirrhosis registering at twice the regional rates and nearly twice the state rates. Further, according to the National Survey on Drug Use and Health (NSDUH), Wisconsin is at the national average for Serious Psychological Distress and has a higher rate of major depressive episodes than the national average. Wisconsin reports in the highest quintile among states for youth age 12 to 17 that had at Least One Major Depressive Episode in Past Year.

While these trends would suggest an increase in the need for mental health and substance abuse treatment services, it remains axiomatic that a large percentage of individuals who need treatment do not receive it. Applying the NSDUH percentages of those who do not receive needed treatment yields a Wisconsin estimate of 270,000 untreated adults with Serious Psychological Distress (SPD) and another 102,279 untreated adults with Major Depressive (MDE). Wisconsin, however, may fare even worse than that. Statistics from Center for Mental Health Services' Uniform Reporting System covering community based and state hospital services funded by Community Services Block Grants show a national penetration rate for these mental health services is 20.69 individuals per 1,000 population; while Wisconsin's penetration rate is just 16.42 per 1,000 population. The same system reports data on perceptions of access and quality. 85% of adult consumers surveyed nationally reported they were "positive about access to treatment," though in Wisconsin, just 73% of Adult Consumers reported the same. The survey of Child/Family Consumers showed just 64% of this Wisconsin population was positive about access to treatment, compared to 85% nationally, giving Wisconsin cause for extra concern about children's access.

The 2009 NSDUH revealed that circumstances were not showing dramatic improvement despite mental health parity laws. Over 60% of adults with a diagnosable disorder and 70% of children in need of treatment do not receive mental health services. Nearly 90% of people over age 12 with a substance use or dependence disorder did not receive specialty treatment. This NSDUH conveyed consumer reports about why millions of adults with a reported need did not receive treatment in the past year. While several stigma-related indicators figured prominently on the list, fully 45.7% did not receive treatment because they could not afford the cost (up from 41.5% in 2006). Another 11.7% reported that their health insurance does not cover any mental health treatment or does not cover enough mental health treatment.

Based on ABC for Health's experience with tens of thousands of clients who have been denied eligibility, coverage, or benefits, it is extremely likely that many of the individuals whose "health insurance did not cover enough treatment" were incorrectly denied benefits or coverage for specific treatments and that many of those who "could not afford cost" had similarly been incorrectly denied benefits or had been incorrectly denied eligibility or benefits from Medicaid, BadgerCare Plus, or other public coverage. Yet, despite ABC's statewide reach, few behavioral health patients seek legal advocacy to challenge denied claims, benefits, or eligibility. Parents did contact ABC regarding treatment access for their children, but not for themselves.

These factors prompted ABC for Rural Health to ask for partners at the Mental Health Task Force of Polk County to join us in an effort to increase the likelihood of access to mental health and substance abuse treatment services by examining current and prospective patients' access to coverage programs and benefits. This effort would include review of the local impact of Mental Health Parity laws and the access to care provisions of the Patient Protection and Affordable Care Act that would roll out during the first year of the project.

## Part IV: Program Services

### A. Evidence-based and/or promising practice model(s)

The central services proposed for this project closely resemble the RealBenefits program used by the Boston Public Health Commission and identified by the National Association of County & City Health Officials (NACCHO) as a Model Practice. The associations between the two programs are apparent from the NACCHO description of RealBenefits: RealBenefits, a web-based

information service and tool set, was developed to provide human service, and other private and public sector organizations, with the capacity to perform sophisticated benefit eligibility screening, counseling and advocacy for eligible low income families, easily and at low cost. RealBenefits allows users to 1) maximize benefits designed to promote self-sufficiency and stability for low-income families and their communities; 2) create capacity in public and private health and human service agencies that increases services offered to low-income families and maximizes revenues; and 3) promote change in public benefit application systems.

This Polk County Mental Health Access Audit and Benefits Counseling Project deployed Health Benefits Counseling services in tandem with its efforts to introduce *My Coverage Plan (MCP)*, an accessible, web based, word-intuitive electronic health benefits screening tool. MCP targets the reduction in primarily three avoidable health disparities: 1) the increased rate of un-insurance (economic); 2) the reduced access to care and coverage for underserved; and 3) the lack of patient-communicated information to providers (knowledge). This personal electronic health care coverage “plan” for each patient will document the individual’s optimized current and future, public and private healthcare coverage choices. MCP will use a relational database with a learning interface linked to an accumulated data source to *identify* appropriate health coverage options and *generate* an electronic document.

Deployment of Health Benefits Counseling by ABC for Rural Health for this project was tailored to just the three consortium providers through a dedicated referral system (either paper or electronic) and employed a more extensive version of Benefits Counseling that includes targeted legal services from a non-profit, public interest law firm in Madison – ABC for Health. Indeed, ABC for Health has been delivering Health Benefits Counseling Services in Wisconsin since 1988, beginning from Polk County, where a mid-1980’s summer legal internship studying families with medical debt turned into a Maternal and Child Health Bureau Special Project of Regional and National Significance project (SPRANS).

ABC’s version of Health Benefits Counseling relies heavily on extensive case investigations with the support of Public Interest Lawyers and expressed through a mature administrative structure that designates specific levels of benefits counseling service practitioners:

- Health Benefits Advocate Assistant (entry level)
- Health Benefits Advocate (ca 2 – 3 years of experience and appropriate knowledge & training)
- Health Benefits Counselor (ca 5 years of experience and appropriate knowledge & training)

## B. Description

The project’s primary activity was to develop health benefits counseling referrals from Consortium providers and then deliver high-quality benefits counseling services buttressed by targeted legal support. The project also sought to improve Consortium intake procedures through:

- Review of current practices and consideration of additional/alternate systems and approaches;
- Training of Consortium partners’ intake and other client-related staff;
- Deployment of a Beta version of the *My Coverage Plan* patient screener.

## C. Role of Consortium Partners

ABC for Rural Health attended several 2009 and 2010 meetings of the Mental Health Task Force of Polk County to discuss issues related to access to care for mental health and substance use treatment seekers. The three current Consortium partners volunteered to join in this effort and all provided ABC for Rural Health with descriptions of their clinic experiences vis-a-vis access to coverage and benefits.

During the project the consortium clinic partners agreed to participate in training as appropriate, participate in on-site interviews for establishment of baselines on patient and work flow regarding intake and billing, participate in meetings of the consortium and individual meetings, test *My Coverage Plan* products as those might become available, and – chiefly – provide referrals of patients experiencing health care financing challenges to ABC for Rural Health, to the Polk County Health Benefits Counselor, or to in-house advocates (if appropriate).

ABC for Rural health is responsible for initiating any trainings, creating the documentation and protocols for referrals, consortium communication, and the reporting and other administrative functions that accompany HRSA grant management.

### A. Outcomes and Evaluation Findings

The Polk County Behavioral Health Access Audit Project developed and implemented a mental health benefits model in three different clinical environments: a hospital, a county, and a community clinic. The health benefits model introduced both education for clinic staff as well as a referral process to external community resources as a means of increasing patient access to health coverage programs and, ultimately, access to behavioral health care. Evaluation was designed to assess project impact on:

- Clinic staff knowledge, awareness, and practices around patient access to coverage programs, and
- Patient access to behavioral health care and coverage benefit programs.

To measure these components, evaluation uses a variety of data and instruments:

- Clinic staff benefits competency survey (pre, mid-term, and post)
- Clinic staff interviews (pre, mid-term, and post)
- ABC for Rural Health referral data on patient demographics, reason for referral, and new payment source(s) identified
- Clinic administrative data on patient demographics, diagnoses, provider type, and payment source

Staff education and training was not implemented as fully as planned though results from the clinic staff survey and interviews indicate that other activities including introducing the project, holding project meetings with clinic liaisons, providing clinics with individual case assistance, and ABC for Rural Health being a resource have had some influence on staff awareness of coverage opportunities. Full analysis of clinic staff change in benefits knowledge is still in process and will be shared in the final evaluation report. Sharing of referrals for patient benefits assistance from the clinics to ABC was slow to start, primarily due to clinic staff lack of understanding of both the project and the variety of coverage programs that may be available. As staff awareness changed, so did staff practice and the referral case load sent to ABC grew.

A mid-point survey conducted by the Wisconsin Population Health Institute revealed that the growth of awareness and knowledge about access to coverage and care had grown most dramatically at the community mental health clinic – the smallest of the three Consortium clinic partners but that clinic staff interest in telling clients about benefits and about available assistance and likelihood to refer clients had increased dramatically.

While the number of patients being referred to ABC has increased – the greatest number only recently - the types of issues presented by these cases have been more complex than expected. Rather than simple instances of patients being uninsured but eligible for benefit programs, cases reveal unique household make-up or financial situations, unintended gaps in coverage policy, as well as policy rules that are not been enacted. As a result, case resolution has been slow, requiring more extensive research and wider involvement. Further, an unexpected finding has been the reluctance on the part of patients and clients to follow-through with recommendations or requests in order to apply for benefits. This is new terrain to be investigated more deeply in the future, but interviews with clinic staff suggest patients themselves may not fully understand the purpose of benefits counseling, the potential outcomes, and what their role may be in achieving those outcomes. Complete analysis of referral cases and resolutions, as well as the impact on overall clinic patient make-up and payer sources will be discussed in the final evaluation report.

### B. Recognition

ABC for Rural Health's Mike Rust, Project Director, has been named to the Behavioral Health Advisory Panel for Wisconsin's State Innovation Models Initiative – the State Health Innovation Plan. Wisconsin received a Model Design award as part of the Centers for Medicare and Medicaid Services Innovation Center's (CMMI) State Innovation Models (SIM) initiative. Wisconsin recently received a \$2.49 million Model Design award as part of the Centers for Medicare and Medicaid Services Innovation Center's (CMMI) State Innovation Models (SIM) initiative. The award allows the state to engage a diverse group of industry leaders—providers, payers, purchasers, consumers—to develop a State Health Innovation Plan by January 2016. The goal is to outline innovative payment and healthcare delivery models with a broad mission to improve health, improve the quality of care, and decrease costs.

The primary challenge experienced by this project was the difficulty in securing and maintaining full engagement of consortium partner clinics across the range of intake, administrative, and direct client service staff. One partner liaison's lack of full engagement was actually identified for us by our Technical Advisor from the Georgia Health Policy Institute, and an exchange between that partner and our Evaluation Team from the Wisconsin Population Health Institute engineered eventually triggered the clinic's change of staff focus to

a liaison and department that was more responsive to the project's needs and expectations. We have also adopted a new policy of assuring that any programmatic elements that are new or changed must be shared with all personnel at each partner site and that this must be done in a manner that uses more than one method of communication.

Turnover of key staff at the county-based provider partner also presented a significant challenge. Over the course of the project, the key referral staff person at the county behavioral health unit left the agency and was replaced 4 times. Our response to this was simply to hold meetings with the clinic liaison and the new staff person each time.

Income reductions for parents in Wisconsin's BadgerCare Plus (aka Medicaid) from 200% of the Federal Poverty Level to 100% FPL in conjunction with the roll out of the Affordable Care Act's Marketplace shortly after the project began accepting case referrals also dramatically reduced the numbers of patients that we would be able to help. However, in response to the anticipated confusion of the Marketplace inauguration along with BadgerCare cutbacks, ABC for Rural Health elected to seek a HRSA ORHP ACA Outreach, Education, and Enrollment Supplemental Grant that enable ABC to not only assist project patients more expertly but also assume leadership for the Great Rivers Consortium region of the state.

## Part VII: Sustainability

### A. Structure

While we do not have a formal agreement about the continuation of the consortium, we are confident that the consortium partners will continue their cooperation and involvement with this effort on behalf of their patients and their clinics. It is more likely than not that the consortium structure will change to include more participants and will be merged into the operations of another umbrella group, The Mental health Task Force of Polk County.

The partners that will continue include:

- The Polk County Mental Health and Chemical Dependency Services Unit, Balsam Lake, WI
- The Counseling and Psychology Department at the St. Croix Regional Medical Center, St. Croix Falls, WI
- Peace Tree Counseling , Osceola, WI

### B. On-going Projects and Activities/Services To Be Provided

All elements of the program will be sustained

Some parts of the program will be sustained

None of the elements of the program will be sustained

The fundamental strategy for sustaining project activities is the absorption of this ongoing effort into the regular activities of the Mental Health Task Force of Polk County. The Task Force is a grassroots, non-profit organization of area mental health providers, social service agencies, government and law enforcement representatives, health care facilities, and community members.

Goals of the Task Force include:

- Reduce stigma associated with mental health issues
- Improve access to mental health care
- Increase awareness of mental health issues via educational programming
- Identify and address mental health issues that face our community

Over the past few months, clinic members of this HRSA project consortium all approached the leadership of the Mental Health Task Force and suggested that the Task Force consider including ABC for Rural Health as a regular, monthly agenda item. The Mental Health Task Force Board of Directors adopted the suggestion and directed the Executive Director, Tom Brock, to meet with ABC for Rural Health to work out the details. The Task Force has also asked ABC for Rural Health to serve as an advisor to the Healthy Beginnings Project that is inaugurating some specific school-based services that have as yet been unable to qualify for third party reimbursement. All of the clinical partners to this Rural Health Outreach Project are regular members and attendees at the monthly meetings of the Mental Health Task Force.

Beginning on Thursday, May 21, ABC for Rural Health will provide updates on health care access issues in Medicaid and other public policy, to offer tips and suggestions about particular items that have been disclosed through case work, to receive and investigate questions brought by providers and other members, to accept and facilitate the sharing and referral of new clients and cases as appropriate, and to share [ABC's training site access](#) with the whole membership for video case tip use by members that will be tracked by ABC's MediaSite software.

Health Benefits Counseling directed at mental health and substance use treatment seekers will continue. ABC will enable use of the outreach brochures and case referral forms created for this project and will adopt a password-protected pdf approach to electronic case referrals by providers. Referral resources will include ABC for Rural Health, the Polk County Health Department's Health Benefits Counselor, and in-house advocates as identified, and the new Safetyweb Network.

In addition, Health Benefits Counseling services dedicated to cases involving mental health and substance use treatment services will be enhanced and sustained at ABC for Rural Health with the addition of new funding from the Otto Bremer Foundation of St. Paul, Minnesota. These funds have enabled ABC for Rural Health to hire a new Health Benefits Advocate who started this new position on Monday, April 6. This support totals \$100,000 over a two-year period – most of which will support this position.

Training will continue as ABC for Rural Health presents at each monthly meeting of the Task Force and as the training site links are shared generally and by specific intra-Task Force emails.

The several larger public health reimbursement policy issues identified by this project will also continue to receive attention from a larger audience that can assist in identifying additional clients and weighing in on community approaches to seeking policy change. These policy issues of continued interest include:

- Apparent violations of Mental Health Parity and of the ACA's Provider non-discrimination policies inherent in discrimination by private health insurance plans and by certain of Wisconsin Medicaid Managed Care Program's HMO's in their refusal to credential or reimburse providers for the services of Qualified Treatment Trainees; graduate therapists with Training Licenses approved by Wisconsin. These QTT providers are important to access to care in a rural area.
- Provider-initiated concerns about the Wisconsin Medicaid Program's approach to mental health and substance use treatment Prior Authorizations.
- State delays to restore autism services for children from its current waiver status to a fully available card service.
- State Medicaid policies that utilize a process for payment for Residential Treatment Care for children under age 21 that sees the state recoup all Medicaid-covered service costs and retain them while local county tax levies cover the actual cost for these services and while parents are still charged for "room and board" expenses. The inquiry revolves around whether the connection of the Children's Health Insurance Program (CHIP) funding to Wisconsin's BadgerCare and Medicaid Program renders this approach to be a violation of the Mental Health Parity and Addictions Equity Act based on the fact that the same systems do not require such personal payments for room and board from individuals in need of medical surgical-related residential levels of care.

### **C. Sustained Impact**

We believe that the continuation of this effort by absorption into the Mental Health Task Force of Polk County will have dramatic long-term impacts on access to mental health and substance use treatment services in Polk County. Over the upcoming long term we will implement across all providers the case identification and referral protocols and forms that were the result of a series of attempts under the Outreach Project. Working through and with providers in this manner will increase the likelihood that patients become aware of this and other advocacy resources for increased access to coverage. Additionally, it is more likely that we will be able to identify clients who may be well-suited to legal actions to press their claims.

This on-going effort will assure that mental health service providers are better able to provide regular supportive services for their patients who may not want to be referred. This would include such things as simple awareness of Special Enrollment Periods for the ACA when individuals lose their job-related coverage or BadgerCare coverage; changes in coverage and eligibility under the BadgerCare Program.

The long term effect of this would see providers able to secure reimbursements at improved rates and it would see patients less likely to delay entry into treatment once they decide to make an initial contact with one of these health care providers.

## Part VIII: Implications for Other Communities

Because of the changes in Wisconsin's BadgerCare income eligibility rules, we did not identify as many immediate "low-hanging fruit" cases as we anticipated. However, we did discover that many of these clients faced ACA and Marketplace problems that could be fixed relatively easily once the provider correctly identifies that there is a problem and connects the patient to appropriate advocacy and support resources.

We noted that of the three clinic partners, the small, free-standing, private mental health clinic was the most able to be responsive to change and appeared to benefit the most in terms of making greater numbers of referrals and quickly adopting the referral protocol. Changes in provider perceptions about coverage programs were also more dramatic at this clinic.

It is essential to assure at the beginning that the clinic partners share the vision of the effort and that any appointed liaison demonstrate sufficient commitment to be considered a program "champion".