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Thank you for joining today's webinar. We will begin promptly at 12:00 pm Central.

Introducing the Rural Community Paramedicine Toolkit



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Your *First* **STOP** for
Rural Health
INFORMATION



Introducing the Rural Community Paramedicine Toolkit

Housekeeping

- Q & A to follow – Submit questions using Q&A area
- Slides are available at www.ruralhealthinfo.org/webinars/community-paramedicine-toolkit
- Technical difficulties please visit the Zoom Help Center at support.zoom.us

Featured Speakers



Sarah Hodge, MPH, Principal Research Analyst, NORC Walsh Center for Rural Health Analysis



Matthew Walker, MHA, PharmD, Chief Executive Officer, William Bee Ririe Hospital



Jared Smith, MA, Program Manager, The Queen Anne's County Mobile Integrated Community Health (MICH) Program, The Queen Anne's County Department of Health



Dennis Russell, MEd, ATC, CSCS, NRP, United Training Center Dean, Education & Community Paramedicine Manager, United Ambulance Service/United Training Center



Daphne Russell, AAS, AE-C, EMT-P, Community Paramedicine Coordinator, United Ambulance Service

Rural Community Paramedicine Toolkit



September 24, 2020

Sarah Hodge, MPH
NORC Walsh Center for Rural Health Analysis

The Walsh Center for Rural Health Analysis 
NORC AT THE UNIVERSITY OF CHICAGO

Rural Health Outreach Tracking and Evaluation Program

- Funded by the Federal Office of Rural Health Policy (FORHP)
- NORC Walsh Center for Rural Health Analysis
 - Alana Knudson, PhD
 - Alycia Bayne, MPA
- Aims to establish a rural evidence base

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Rural Evidence-Based Toolkits

1. Identify

evidence-based and promising community health programs in rural communities



Rural Health Information Hub: <https://www.ruralhealthinfo.org/>

2. Study

experiences of these programs including facilitators of their success



3. Disseminate

lessons learned through Evidence-Based Toolkits



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Evidence-Based Toolkit on Community Paramedicine

Community paramedicine programs:

- Increase access to primary care for medically-underserved populations
- Reduce avoidable use of emergency care resources
- Enhance role of EMS as partners in public health and community healthcare delivery

The toolkit will:

- Disseminate promising practices/resources
- Help rural communities decide whether community paramedicine is the right fit for their needs

Rural Community Paramedicine Toolkit

Organization of the Toolkit

↓ **IN THIS TOOLKIT**
Modules

- 1: Introduction
- 2: Program Models
- 3: Program Clearinghouse
- 4: Implementation
- 5: Evaluation
- 6: Sustainability
- 7: Dissemination
- About This Toolkit



In this module:

- [Prevention and Health Education](#)
- [Improving Access to Primary Care](#)
- [Post-Discharge Follow-Up Care](#)
- [Reducing Use of Emergency Resources](#)
- [Referrals for Social Services](#)

Prevention and Health Education

- Through home visits, telehealth appointments, and telephone check-ins, community paramedics can identify medication errors, environmental risks, or problems with durable medical equipment.
- Types of models to deliver prevention and health education include:
 1. Medication Management
 2. Safety Assessments
 3. Medical Equipment
 4. Chronic Disease Management



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Improving Access to Primary Care

- Community paramedics can deliver basic primary care services in the patient's home without requiring them to travel to a clinic.



- Types of models for improving access to primary care include:
 1. Connecting with Primary Care
 2. Monitoring Vital Signs
 3. Other Primary Care Functions

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Post-Discharge Follow-up Care

- Hospital readmissions due to complications or adverse drug events can hamper patients' recovery and are costly to the healthcare system. Early follow-up is a key intervention.
- Community paramedics can fill the gap before the patient meets with a home health worker or if the patient is ineligible for home health.



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Reducing Use of Emergency Resources

- In rural communities with limited EMS and emergency department capacity, community paramedicine can be employed to conserve resources for emergent issues and provide more cost-effective, beneficial care to patients.
- Models for reducing use of emergency resources include:
 1. Supporting Frequent EMS Callers
 2. Hospice Care
 3. Alternative Destination



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Referrals for Social Services

- On home visits, community paramedics can identify issues that impact patients' health and well-being.
- Community paramedics can provide support to patients through care navigation and linkage to social services.



- Referrals to social services may include:
 1. Nutrition (ex. Meals on Wheels, food pantries)
 2. Substance use treatment or support groups
 3. Medical or non-medical transportation
 4. Legal services
 5. Healthcare coverage (ex. Medicaid)

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Considerations for Rural CP Programs

- Obtain buy-in from community stakeholders
 - Hospitals, home health, law enforcement
 - Limits duplication of services
- Support and retain community paramedics
 - Clearly define roles and responsibilities
 - Mitigate risk of burnout or compassion fatigue

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Contact Information

Alana Knudson, PhD

Director
Walsh Center for Rural Health Analysis
(301) 634-9326
Knudson-Alana@norc.org

Sarah Hodge, MPH

Principal Research Analyst
Walsh Center for Rural Health Analysis
(301) 634-9561
Hodge-Sarah@norc.org

Alycia Bayne, MPA

Principal Research Scientist
Walsh Center for Rural Health Analysis
(202) 999-0992
Bayne-Alycia@norc.org

Margaret Cherney from the NORC Walsh Center for Rural Health Analysis also contributed to the development of this toolkit.

walshcenter.norc.org  [@WalshCenter](https://twitter.com/WalshCenter)

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Community Paramedicine:

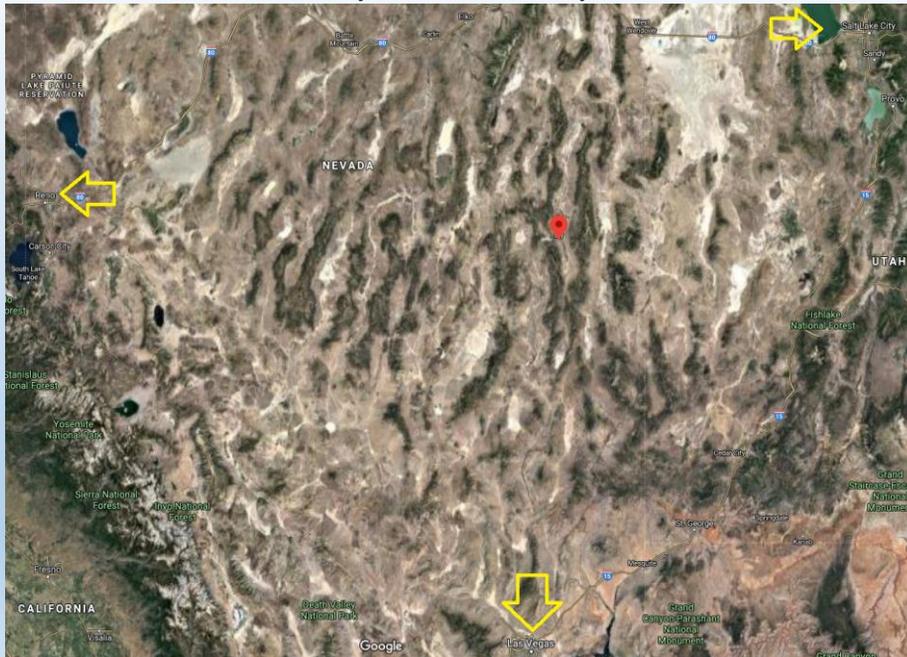
HRSA Rural Health Network Development
Award no. D06RH31058

William Bee Ririe Hospital

Matthew Walker CEO



Location, Location, Location



Local Challenges:

- Obviously being this rural creates challenges
 - Lack of services and Minimal resources
 - There is one local home health agency, but it does not take Medicaid, or a number of other insurances.
 - Home health is also becoming more limited in scope of services
 - No hospice or in home care agencies or services
 - No public transportation, No Uber or Lift...
 - High cost (time and money) to patients to leave for additional services



Other Challenges Everyone Faces:

- Unnecessary utilization of medical services
 - ER visits
 - Clinic visits
 - Ambulance calls
 - Hospital re-admissions (often due to non-compliance or lack of understanding)



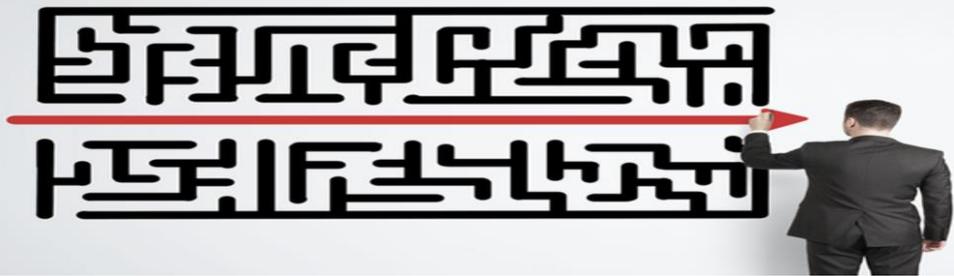
Target Population

- Frequent Flyers:
 - We really wanted to focus on those that utilized our healthcare system more than necessary.
 - Then focus on patients that our providers felt could use extra help
- Early on we got buy in from our providers
 - We talked with the providers as we were designing the program and let them know that we were creating a program that would send someone out to houses to check on patients
 - We let them know this program could bring education out to patients, it could report back to providers on anything that was of concern to them and it could help connect them with additional resources when and where available.
 - Providers immediately fell in love with the program as Home Health services were limited by insurance, or the patient didn't have a "covered need."



Program Set up: *(Keep It Simple)*

- Our program was incredibly basic
 - One EMT-A was hired from the county EMS
 - He was sent to training for his Community Paramedic endorsement
- Equipment:
 - Cell phone, Hospital Car
 - Charting Software (Health Call)
 - Blue Tooth Enabled equipment left at the patients house
 - Scale -O2 sensor -Fit-Bit -Blood pressure Cuff



DATA:

- Anecdotally I can tell you the Providers love the program, and the patients love it even more.
- It's important to note that the raw data I'm about to show you, although factual, needs some statistical analysis done to take out some of the inherent issues.



Community Paramedicine appears to have a huge benefit!



24 months Prior to patient being admitted to Community Paramedicine Program	Patient after being admitted to Community Paramedicine Program (up to July 2020)
ER Visits #118	ER Visits #60
Hospital admissions #28	Hospital admissions #14

***Note:**

We had an outlier with one patient that had 24 visits to the ER in 1 year prior to CP program

½ of the patients only had 1 year of data following the program but the data pulled prior to the program was for 2 years prior

Getting to this point:

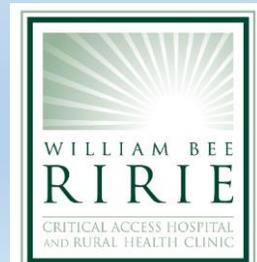
- May 2015: AB305 – NV is 2nd state to recognize community paramedicine (CP)
- October 2015: Medicaid State Plan Amendment (SPA) – Allows for reimbursement of CP services
- November 2016: Grant Application
- July 2017: RHND Award – Target Market = Medicaid Beneficiaries/Frequent flyers
- March 2018: Hired Community Paramedic, training done, began seeing patients June 2018

Lessons learned

- **Early buy in:**
 - Providers: explain the model and how it makes their job easier and allows them to check in with patients but doesn't take their patient from them
 - Home Health: explain that they can fill the gap for things they are asked to do but don't get reimbursed for
 - This led to referrals from them to us and from us to them
 - Community: We put out on social media what we were doing and why, once we started we had patients that were so grateful and excited about the program that they started posting positive feedback
 - State regulators: We got Nevada Medicaid on board very early to make sure there was a pay source as well as the EMT board to make sure that we could get the endorsement and the curriculum was recognized
 - Community Paramedic: Making sure the employee understands the program and the "why" helps them to really try and do whatever is needed to help out.
- **Find and connect with resources:**
 - We learned early on that we could get medication coupons and glucometers and other free resources connected with patients to help them be successful in their care.
 - Having a list of resources and contacts to help patients ie: meals on wheels, Medicaid eligibility, food stamps, substance abuse counseling, etc...
- **Financial Model is still not great:**
 - Unfortunately Medicare does not recognize this service and we found Medicare accounted for about 40% of our population served.
 - Cost of equipment and staffing and not getting reimbursed by Medicare decreased the financial viability of the program
 - That said: the reduction in re-admissions and with Quality being a focus this certainly made sense from a quality standpoint, just not a quantity standpoint...

Next Steps

- Unfortunately with COVID and health issues our EMT suffered in early August of 2020 we had to stop our program.
- On the bright side our County EMS has decided to start the program up once COVID lifts.
- I believe as Quality becomes a focus for payment this type of care will become a standard.



Mobile Integrated Community Health

Overview

A team approach to population health.

Jared Smith MA, BS, NRP

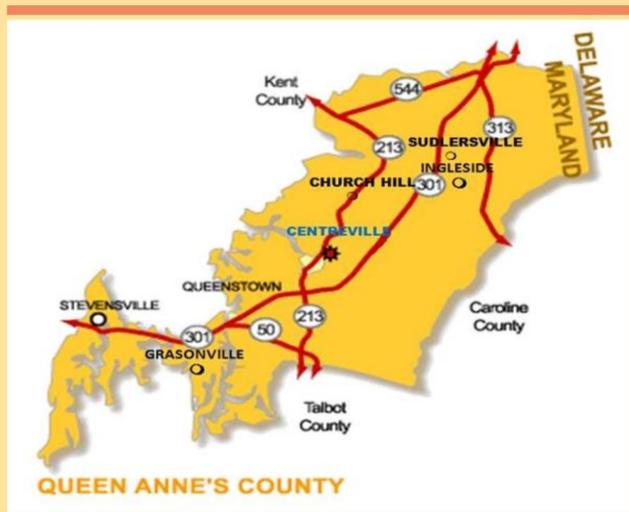
Mission Statement

To improve health outcomes among citizens of Queen Anne's County through integrated, multi-agency, and intervention-based healthcare.

Vision Statement

To provide mechanisms for citizens to have better access to healthcare and to enhance individual health outcomes.

Demographics



Statistics

Population:

50,381

Population 65+ years:

9,673 (19.2%)

Median age:

42.6

Population 65+ living alone:

2,420

Persons per square mile:

128.5

"Medical Desert"



Queen Anne's County is one of only two counties in Maryland without a hospital



One free-standing emergency department



The Queen Anne's Emergency Center in Queenstown

Target Population

-  **Medically vulnerable adults**
-  **Patients at risk or suspected of falling through the healthcare gaps caused by fragmented and disjointed care**
-  **High EMS, Emergency Department (ED), and inpatient services utilization.**
-  **Patients with high hospital readmission rates**

Challenge Addressed

The MICH program uses an innovative approach to improving health outcomes for the target population by:

- | | |
|--|---|
|  Coordinating care |  Reducing readmissions |
|  Reducing unnecessary healthcare costs |  Reducing avoidable utilization of EMS |
|  Reducing avoidable utilization of Emergency Departments |  Encouraging an increased use of preventative and primary care services |

Stakeholders

-  **QAC Dept. of Emergency Services**
-  **QAC Department of Health**
-  **MIEMSS**
-  **UMMS Shore Regional Health**
-  **QAC Commissioners**
-  **QAC Addictions and Prevention Services**
-  **QAC Dept. of Health and Mental Hygeine**
-  **QAC Area Agency on Aging**
-  **Anne Arundel Medical Center**

Funding

-  **UMMS Shore Regional Health**
-  **Anne Arundel Medical Center**
-  **Queen Anne's County Government**
-  **Queen Anne's County Dept. of Health**
-  **Various sources of grant funding**

MICH Criteria

Inclusion



Adults 18 years and older.



Resident of Queen Anne's County

Exclusion



Refusal to participate in the program.

Referral Phases



First Phase - Frequent 911 Callers



Second Phase - EMS Referrals



Third Phase - ED Referrals and QA ER Referrals



Fourth Phase - Shore Regional Health Post D/C and AAMC Post D/C



Fifth Phase - Visiting Nurse Agencies/Home Health Referrals

MICH Team

Combination Field Team



Department of Health Nurse



Queen Anne's County Paramedic

Telehealth Component



Hospital Based Pharmacist

Addictions



Mental Health/Substance Abuse Counselor



Peer Recovery Specialist

Management



**Health Officer / EMS Medical Director
Joseph A Ciotola, Jr., M.D.**

MICH Home Visit

QAC DES Paramedic	QAC DOH RN
 <p>Program introductions and overview</p>	 <p>Program introductions and overview</p>
 <p>Physical examination assessment of physical health</p>	 <p>Assessment of health history, Rx inventory, review of systems and current status</p>
 <p>Health and home safety assessment</p>	 <p>Assessment of patient education and assessment of support system</p>
 <p>Discuss home safety issues with the patient and need to modify identified hazards</p>	 <p>Referrals to appropriate health and community services</p>

Telehealth



Mobile WiFi secured through oMG Mobile Gateway by Sierra Wireless.



Verizon Hotspot used as a back-up



Panasonic Toughbook



Very durable. Will stand up to most rigorous environments



VIA3 Unity



Provides several layers of end-to-end AES encryption



Willing to sign a BAA to satisfy HIPAA HITECH Act



Interoperability and provides 720p HD video and file sharing

Health and Home Safety



The EMS Provider utilizes four evidenced based scales to determine home and personal safety of each patient.



The four assessment scales that will be utilized are:



The Hendrich II Fall Risk Model



The Physical Environment Assessment Tool



Alcohol Use Disorder Identification Test



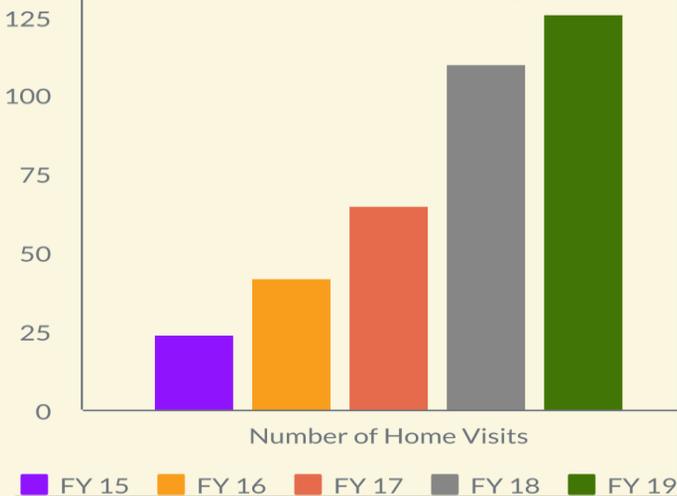
Drug Abuse Screening Test

QA/QI

- 🔍 **Quality Assurance (QA) and Quality Improvement (QI)**
- 🔍 **Home visits are reviewed and critiqued on a monthly basis by a multidisciplinary team resulting in recommendations for improved processes and clinical practice.**
- 🔍 **The QA/QI group consists of:**
 - 🔍 **Community Health Nurses**
 - 🔍 **AAMC Representatives**
 - 🔍 **Paramedics**
 - 🔍 **PharmD**
 - 🔍 **UMMS Shore Health Representatives**
 - 🔍 **Behavioral Health and Addictions**
 - 🔍 **Case Management**
 - 🔍 **Clinical Supervision**

Data and Demographics

Growth in Home Visits per FY

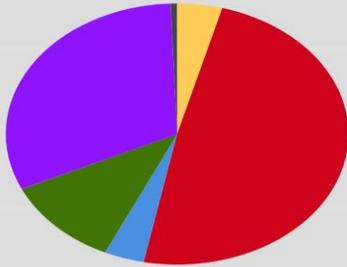


Growth Rate



Data and Demographics

Referral Sources



- 911 CAD Data (4.25%)
- QA ER (3.76%)
- Shore Health (31.31%)
- Home Health (0.61%)
- QA DES (48.91%)
- AAMC D/C (11.17%)

Avg. time spent per home visit

71.5 minutes



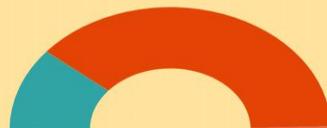
Data and Demographics

Age



- 18-64 (21.04%)
- 65+ (78.96%)

Race



- Black or African American (22.84%)
- White (77.16%)
- Hispanic or Latino (0.84%)

Gender



- Female (54.02%)
- Male (45.98%)

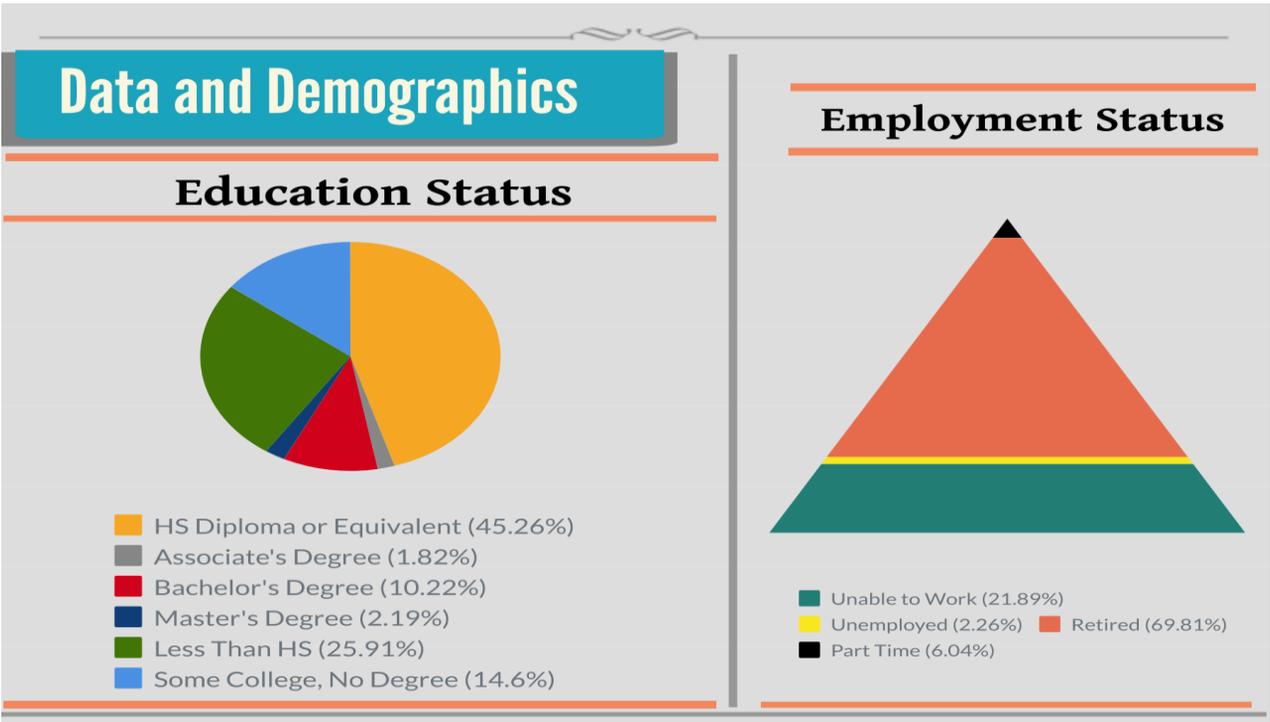
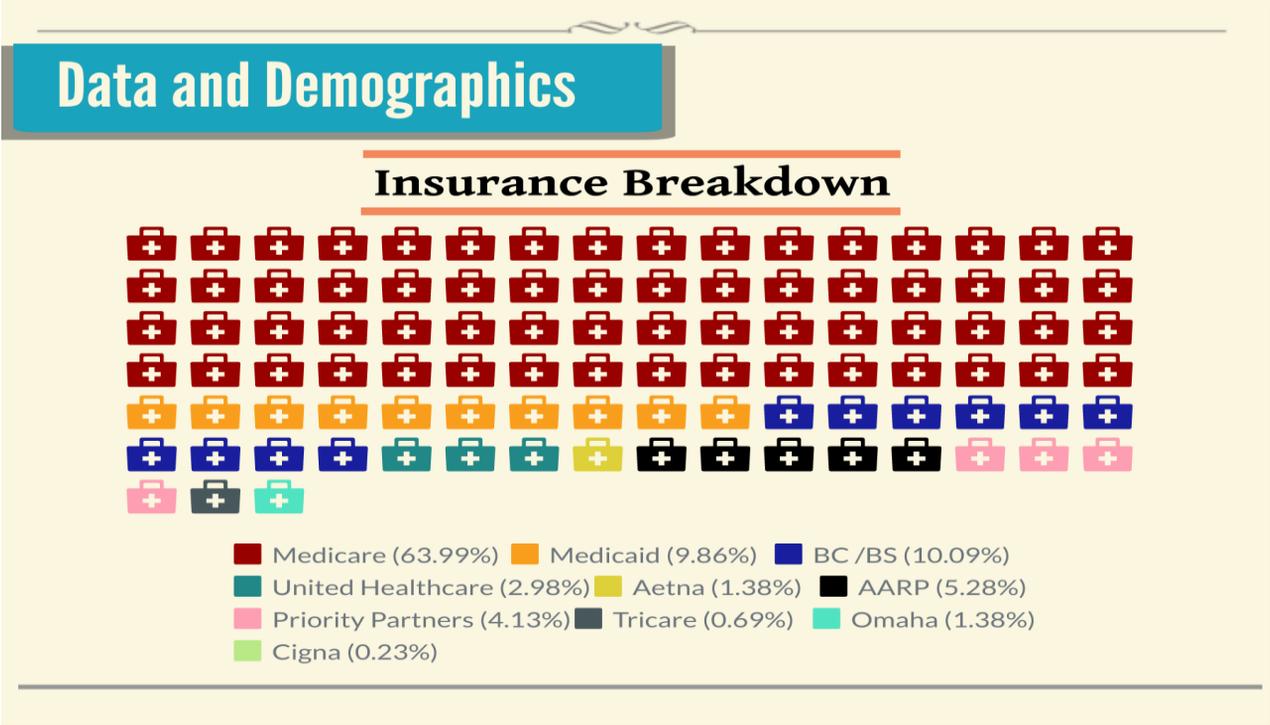
Age Statistics

Oldest Patient: 100

Mean Age: 73.1

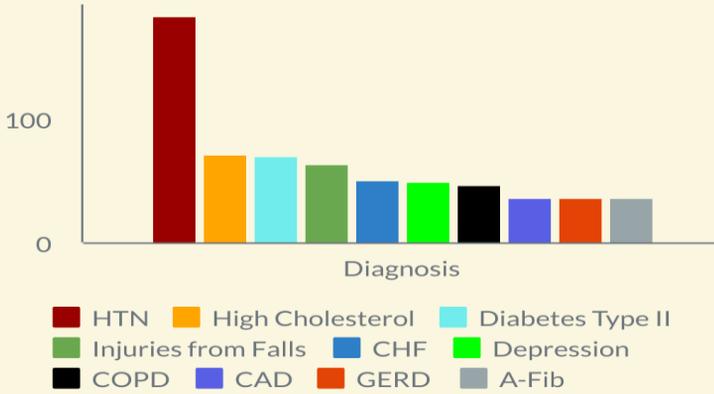
Median Age: 76

Youngest Patient: 24



Data and Demographics

Top 10 Existing Diagnosis



Avg. Number of Diagnoses/Patient

4.94

Data and Demographics

Results From Rx Inventories



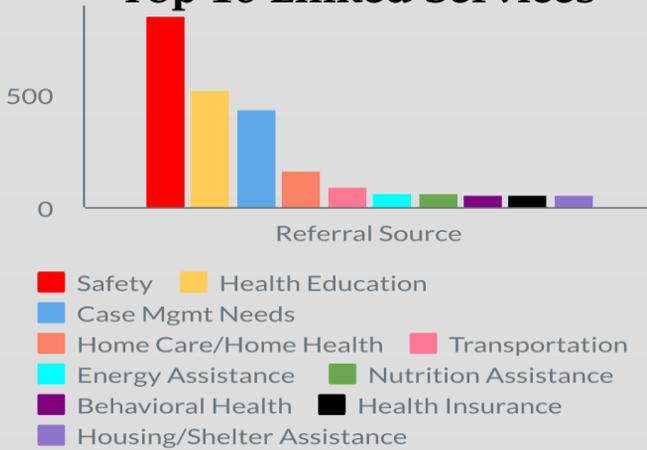
No Problems Identified (51%)
Problems Identified (49%)

Avg. Number of Medications/Patient

9.14

Data and Demographics

Top 10 Linked Services



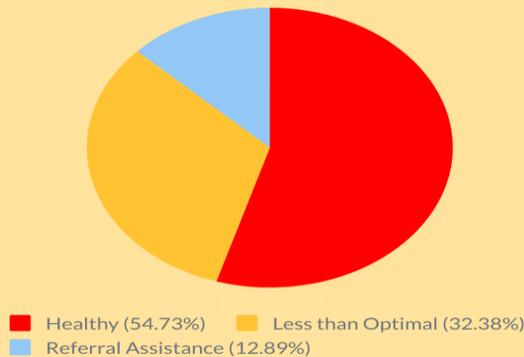
Avg. # Linked Services per Patient



Average # Linked Services Annually: 652.5

Data and Demographics

PEAT Score Results



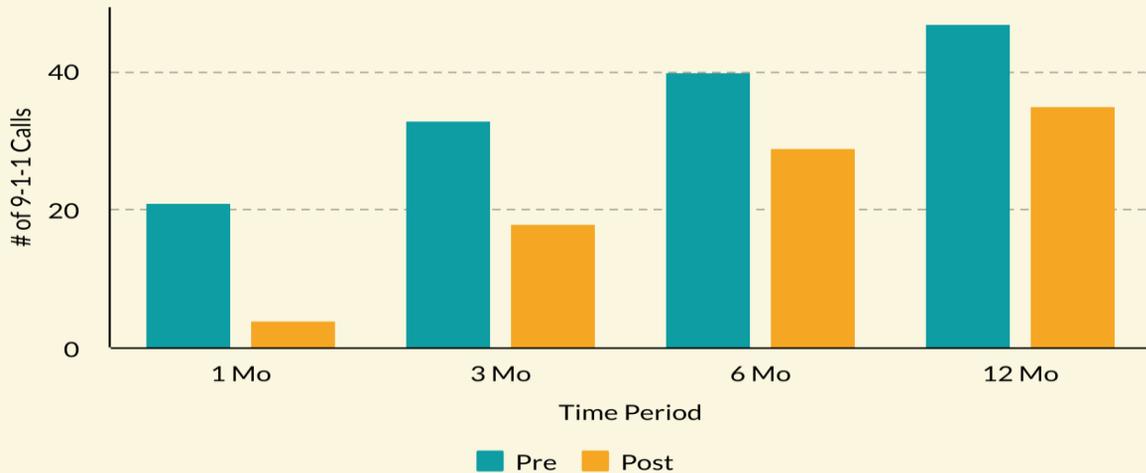
% of Patients Living Alone: 32.8%

Safety Hazards

- Unmarked prescription pill bottles
- Space heaters next to curtains
- Complete lack of smoke detectors
- A light plugged into an outlet and dangling over the bath tub
- Soft floors and sagging ceilings
- Multiple layers of throw rugs
- Extension cords running across rooms from wall to wall

Data and Demographics

9-1-1 Reduction Analysis (MICH patients)



Data and Demographics

This table shows the average reduction in Emergency Department (ED) visits and Inpatient (IP) visits in MICH patients at 1, 3, 6 and 12 months pre-MICH enrollment vs post-MICH enrollment. Data from FY 15 - FY 20 was utilized to determine the average percent change.*

Time Period	Average Percent Change ED Visits	Average Percent Change IP Visits
1 Mo	-58.46%	-66.83%
3 Mo	-35.46%	-54.16%
6 Mo	-27.50%	-38.71%
12 Mo	-19.89%	-25.16%

***Negative percent values indicate a reduction in number of visits post-MICH enrollment compared with pre-MICH enrollment. Data received from CRISP Reporting Services.**

Data and Demographics

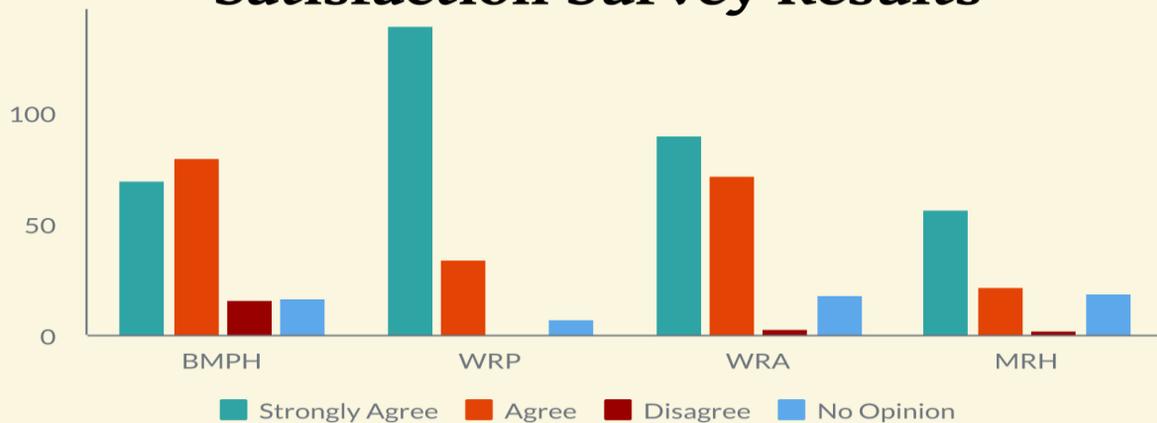
This table shows the average reduction in Emergency Department (ED) costs and Inpatient (IP) costs in MICH patients at 1, 3, 6 and 12 months pre-MICH enrollment vs post-MICH enrollment. Data from FY 15 - FY 19 was utilized to determine the average percent change.*

Time Period	Average Percent Change ED Cost	Average Percent Change IP Cost
1 Mo	-64.49%	-66.13%
3 Mo	-41.14%	-38.91%
6 Mo	-24.74%	-25.69%
12 Mo	-8.94%	-6.10%

*Negative percent values indicate a reduction in costs post-MICH enrollment compared with pre-MICH enrollment. Data received from CRISP Reporting Services.

Data and Demographics

Satisfaction Survey Results



BMPH - Better able to manage your personal health

WRP - Would Recommend Program to Others

WRA - Were referrals appropriate/useful

MRH - Medication review was helpful

Challenges Faced

-  **Communicating findings to providers**
-  **Declinations**
-  **Social Isolation and Mental Health**
-  **Financial Sustainability**
-  **Medically Complex Patients**

Advice for New Programs



Stakeholder engagement
Engage early and often.



Building your team
Choose only team members that reflect the core values of the program.



Allow your program to be fluid in its development and operations

As lessons are learned and new obstacles faced, your program should be set up to easily pivot and adapt to meet the needs of the community.

What Does the Future Hold?



Broadening referral sources



Closing the loop with PCPs



Search for financial sustainability



Continue to investigate uses for telehealth

UNITED AMBULANCE SERVICE COMMUNITY PARAMEDICINE PROGRAM

DENNIS RUSSELL, M.ED., ATC, CP, NRP

DAPHNE RUSSELL, AAS, CP, EMT-P



THE CHALLENGE



TARGET POPULATION

- Underserved population
- ED High Utilizers
- Medication Assisted Treatment (MAT Program)
- Asthma

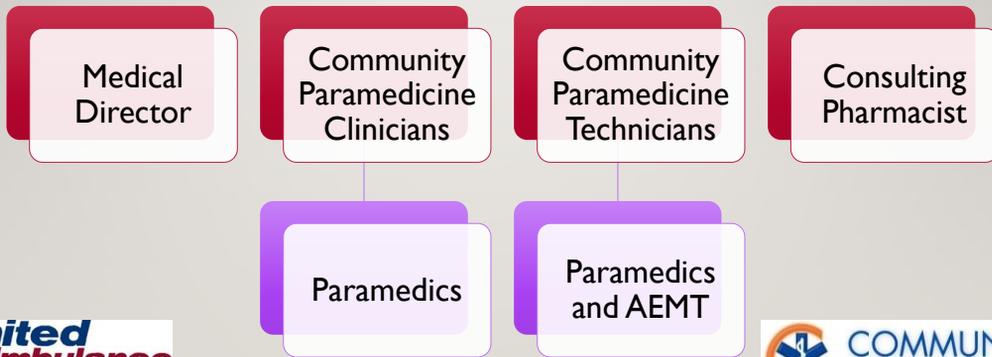




THE CHALLENGES WE ADDRESS

- Social Determinates of Health
- Healthcare disparities
 - Connecting to healthcare
- Transportation

PROGRAM COMPONENTS



SERVICES OFFERED

- Home Inspection Safety Checks
- Review of Local Resources & Services
- Falls Risk Assessments
- Review of Medical Conditions, Medications & Allergies
- Well-Being Checks
- Influenza Vaccinations
- Wound Care
- Health Screenings
 - Mental status
 - Heart Rate & Respirations
 - Blood Pressure
 - Blood Glucose
 - Weight
 - Temperature



PROGRESS, KEY OUTCOMES, RESULTS & SUCCESSES

- Asthma
- ED Utilizers
- MAT Treatment Support



SPECIAL CONSIDERATIONS FOR RURAL

- Transportation
- Access to healthcare services
- Access to community resources
- Education



CHALLENGES WITH IMPLEMENTATION AND PROVIDING SERVICES

- State / Government
- Resources
- Funding



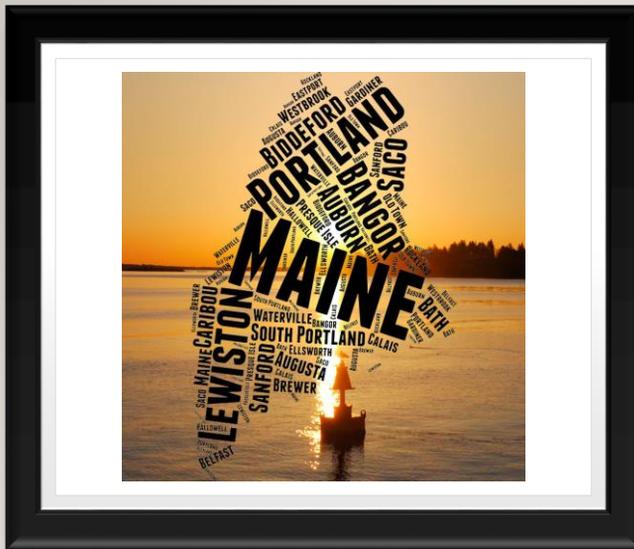
FACILITATORS OF SUCCESS

- Personnel
- Grant
- Hospital Support
- Eudcation



STRENGTHS

- All inclusive for patients
- Access to healthcare information
- Education



NEXT STEPS

- State Wide Data Collection
- Funding
- State / Government

Photo
<https://wearemainestrong.com/>

Questions?

A screenshot of the RHIhub website homepage. The logo for RHIhub (Rural Health Information Hub) is at the top left, with the URL ruralhealthinfo.org at the top right. The main heading reads "Your First STOP for Rural Health INFORMATION". Below this is a map of the United States filled with various rural health-related images. At the bottom, a dark banner contains the text "Examining Rural Cancer Prevention and Control Efforts from the National Advisory Committee on Rural Health and Human Services". A red arrow points to the "Main Board" icon in the bottom navigation bar.

A screenshot of a "Question and Answer" window. It features a "Welcome" message and the text "Feel free to ask the host and panelists questions". At the bottom, there is a text input field with the placeholder "Type your question here..." and a red arrow pointing to it.

Thank you!

- Contact us at ruralhealthinfo.org with any questions
- Please complete webinar survey
- Recording and transcript will be available on RHIhub website