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In 1998, the Health Resources and Services Administration, Office of Rural Health Policy (ORHP), awarded Rural Health Outreach Grants to 13 projects in 10 States. These projects, scattered from Maine to Arkansas to Alaska, were designed to test and demonstrate innovative models for the delivery of primary medical care, prevention services, and health professions training and services. Each project funded in 1998 was required to develop a consortium of local and State agencies and organizations so that the fullest range of health care resources could be brought to the communities in which the programs were established.

Together, these projects addressed a broad range of health care delivery challenges. Some of these challenges, such as geographic isolation from services and a shortage of rural health care providers, have existed in rural communities for many years. Each of these projects was able to fashion creative and workable solutions to the unique health care needs of communities. More importantly, these consortia succeeded in their efforts to increase access to health care, reduce or eliminate barriers to care, and improve the lives of thousands of rural residents.

All of the consortia created as a result of ORHP’s 1998 Rural Health Outreach Grant cycle succeeded in their efforts. However, as the following descriptions show, the ingredients to their success varied from one project to another. In spite of the fact that these programs took dramatically different paths and implemented a diverse range of approaches to address local needs, thousands of rural residents whose health care needs had largely gone unmet are healthier and more productive today than they were prior to 1998. And their prospects for good health in the years to come are significantly brighter.

The diversity of the following programs—both in terms of the populations served and in the models implemented—cannot be overstated.

- The Alaska Marine Safety Education Association provided cold water safety and survival training to school-aged children and teenagers.
- The Healthy Connections program in Polk County, Arkansas provided case management, transportation, parenting education, and followup services to young parents and expectant mothers.
- The Fulton County Health Department in Illinois created a “Visiting School Nurse” program that targeted 6,000 children and adolescents in 8 school districts.
- The Southern Seven Health Department in Rockford, Illinois, supported a series of community-defined health projects across the State and involved 21 medical students in the delivery of community-based primary health care services.
PROGRAM OVERVIEW

- Hayes Medical Center in Kansas launched its “AgraSafe” program, which provided farm injury training to first responders, family members, and coworkers in 18 northwest Kansas counties.
- Hazard Perry County Community Ministries in Kentucky provided mental health, primary care, and other necessary services such as education, social services, housing, and job assistance to people with severe and persistent mental illness.
- Pikesville Methodist Hospital in Kentucky created the “Kid Power” program to address high rates of obesity among area children and families.
- Franklin Memorial Hospital in Maine offered “SCORE-5 for Heart Health,” a program to help prevent cardiovascular disease at worksites, physician offices, and other locations throughout the community using a mobile van.
- The Penobscot Bay Medical Center in Rockport, Maine, adapted the national “Nurturing Families” program, which emphasizes communication, negotiation, mediation, and conflict resolution to address high rates of juvenile crime, family violence, and substance abuse among families raising teenagers.
- The Harper County Parish Nurse Outreach Project in Laverne, Oklahoma, improved the coordination of community resources and assisted rural residents of all faiths in accessing the services available to them.
- The Nelson County Rural Health Outreach Program launched a school nursing program that placed registered nurses in each of Nelson County’s six public schools.
- The North Olympic Telehealth Network offered health provider education, mental health and substance abuse services, and primary health care services to residents in northwest Washington State and beyond.
- Summersville Memorial Hospital in West Virginia established a school-based wellness clinic, began planning for a free clinic to serve the working poor, and provided health promotion and disease prevention programs targeting older residents.

These models hold tremendous promise for the delivery of health care in rural areas. In fact, every rural community in every State can benefit from the experiences of these projects and gain new insight on how to address the unique needs of their population.

Each project description contained in this volume includes the name of an individual who was intimately involved with the implementation of the project. The reader is encouraged to contact the identified individual for more detailed information about the project. For more information about the Rural Health Outreach Grant Program or other rural-specific initiatives funded by ORHP, contact Ms. Eileen Holloran at 301-443-0835 or visit our Web site at www.ruralhealth.hrsa.gov.
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Community Characteristics

Alaska has more lakes, rivers, and waterways than any other State. Many of those who call Alaska home depend on the water for work, play, food gathering, and transportation. Sadly, Alaska’s waterways also serve as a serious public health hazard. Drowning is the second leading cause of death both in Alaska and nationwide. Between 1987 and 1999, Alaska’s drowning rate among recreational boaters exceeded the national average by 10 percent.

Alaska’s already overburdened and underresourced local health care systems have not been able to address the State’s alarmingly high drowning rate. This is especially true in rural areas throughout the State. Local health care systems are limited to basic services. In many villages, health aides who possess only 12 weeks of training in acute medical care are the only health care providers. They work long hours and serve large areas, making it virtually impossible for them to take on additional responsibility for educating residents in drowning prevention.

The Cold Water Safety in the Schools Program was established to deliver cold water safety and survival training to rural teachers, paraprofessionals, pool staff, and rural elementary, middle, and high school children throughout the State. Special emphasis was placed on reaching Alaska Native villages in northwest and western Alaska, many of which had alarmingly high drowning rates.

Services Offered

The central goal of the project was to build and support a network of teachers who were trained to provide cold water safety and survival training to school-aged children and teenagers. Project staff developed a curriculum that teachers could use either in community or school settings. The curriculum is a four-volume series that contains ready-to-use lesson plans, activity pages, teacher background information, overheads, and resources. Three volumes cover safety and survival skills for cold water, land, and small boats targeting third-grade through high school students. The fourth volume covers much of the same information, but targets younger children. Throughout the project, the curriculum was updated and revised based on teacher feedback. The final version of
the curriculum, *Surviving Outdoor Adventures*, will be sent to all workshop participants. Elements of the curriculum also are posted at www.amsea.org. The project also supported technical assistance for teachers so they could refine the curriculum based on the unique needs of their community.

**Innovative Solutions to Problems**

Given that rural schools in Alaska typically experience a high rate of teacher turnover, the project also provided training to paraprofessionals and pool staff who are more likely to remain in their communities for a longer period of time. Even though those trained may have different areas of expertise and be scattered across the State, they are able to access updated teaching materials through the AMSEA Web site and the project’s listserv.

**Results**

Since teacher reporting was voluntary, it is difficult to say precisely how many students received safety and survival training, or how many programs were established or strengthened as a result of the project. At least 21 new programs were established in rural schools, and many more programs that existed prior to the project have been enhanced. It is estimated that approximately half of Alaska’s school districts now have some kind of cold water safety and survival program in place.

The project provided training to 5 injury prevention specialists, 185 teachers from 56 communities, and nearly 14,000 school children. More than 8,200 of these children were aged 11 years and younger, while approximately 5,500 teenagers received safety and survival training.

**Potential for Replication**

A series of fatalities affecting the commercial fishing fleet has motivated officials in Maine to assess the State’s role in assuring a safer marine environment for its citizens. The Cold Water Safety in the Schools Program is being adapted to meet this need. A series of teacher workgroups are being scheduled to provide a nucleus for a teacher network. It is anticipated that 20 teachers will attend the first workshop and deliver training in at least 25 rural communities throughout the State.
Project staff, however, estimated that at least 33 States have a cold water environment and that the *Surviving Outdoor Adventures* curriculum would be applicable in most of these areas. The full curriculum will be available for purchase, and much of its contents is available at the AMSEA Web site. Teachers are not required to attend a workshop in order to use the curriculum.

The effort and expense associated with providing teacher workshops may be a barrier to adapting this project in other communities. The Cold Water Safety in the Schools Program used summer continuing education “academies” as a means to provide training to teachers needing credits to keep their certification. This approach ought to work in other areas as well. Since teachers are accustomed to paying for these credits, the program could be funded through tuition fees. Program planners also need to ensure that sufficient training equipment is available for teacher use.

**After the Grant**

The project received a no-cost extension for using grant funds through June 2002. The project coordinator will continue to promote the program, provide training at annual teacher continuing education academies, teach the workshops, and provide technical assistance to developing programs throughout Alaska and the Nation. The AMSEA board of directors and the State of Alaska are seeking ways to continue drowning prevention education and training programs throughout the State.
Community Characteristics

Polk County ranks among the poorest counties in Arkansas, with more than 60 percent of its ethnically diverse citizenry classified as “working poor.” Poverty is particularly extreme among households in the county headed by single females, of whom 92.5 percent live below the Federal poverty level.

Poor pregnant teenagers and young mothers face three formidable barriers to providing proper care for unborn and newborn babies. First, many women become pregnant in their early teens and immediately drop out of school. Second, since all medical and social service providers are located in the county seat, rural families must travel up to 50 miles to access services. This challenge is especially daunting for pregnant girls who do not yet have a driver’s license. Third, many service providers are reluctant or unwilling to accept Government insurance plans. Some women lack the assertiveness to get past gatekeepers and, as a result, they are unable to obtain services for themselves and their children.

Services Offered

Nine local organizations that offered different types of health and social services agreed to create a consortium to share responsibility for providing a range of services to young parents and expectant mothers. They also agreed to provide referrals to Healthy Connections, Inc. (HCI), the focal point of the network, for case management, transportation, parenting education, and followup. HCI outreach workers helped client families design a service plan customized to their needs. The plan ensured that pregnancy education and checkups were completed, that infant well-baby checks and immunizations were maintained, and that other family needs were addressed through the network. Outreach workers frequently made home visits to provide information and education on parenting, child development, sanitation, nutrition, alternative discipline methods, stress management, and parent-child interaction. In some cases, merely leaving educational material for families to read was not enough, as some clients were unable to read. Using grant funding provided by the State, HCI purchased a TV/VCR combination unit and 70 educational videotapes so that clients and families could hear and see the information, participate in a discussion after the video, and recognize the need for changes in their lifestyle or behaviors.
Innovative Solutions to Problems

As with most rural areas, transportation was not always readily available to clients, making it difficult for them to keep appointments. When the program started, HCI recruited volunteers to help clients get to and from services. But volunteers soon “burned out” from clients’ demands for transportation for shopping or family visits. The volunteer transportation program was subsequently eliminated, and outreach workers provided transportation to medical and social service appointments only.

Another major challenge has been the refusal of many local providers to serve new Medicaid patients. None of the area dentists was willing to accept either Medicaid or State Children’s Health Insurance Program patients. HCI staff often had to drive clients up to 150 miles, to receive care in major urban centers, which resulted in a full day absence and severely stretched limited financial resources. The consortium is in the process of developing a strategic plan to pressure area service providers to broaden the spectrum of families they will serve, which will enable clients to access care from local providers.

Results

The Healthy Connections program succeeded in achieving its objectives. More than 150 families enrolled in the project, and outreach workers conducted 3,826 home visits, spending nearly 5,000 hours doing one-on-one education with at-risk families. During the 3-year project, 100 percent of children served by the program received all recommended well-baby checks and immunizations. More than 90 percent of pregnant women received 13 prenatal visits and participated in at least 6 prenatal education classes. In all, 120 education classes were conducted, with nearly 1,300 participants attending the classes.

At the end of the 3-year grant cycle, several of the traditional infant health indicators showed significant improvement:

- Births to unwed mothers decreased by 32 percent in the last 2 years.
- First trimester prenatal care rates increased by 18 percent in the last 2 years and tripled from 7 years ago.
- Confirmed cases of child abuse declined dramatically.
- Child immunization rates exceeded the targets identified in Healthy People 2010.
Potential for Replication

The Healthy Connections model can address many of the challenges endemic to small, rural communities with a limited number of service providers and an underserved population. Many people in such communities, especially at-risk families, lack the knowledge, resources, or initiative to participate in community-based programs. However, a culturally competent in-home education program can provide information and resources when and where they are most needed.

One lesson learned by HCI staff was that the frequency of interventions can be adjusted to fit each family’s unique needs. Since family members are actively involved in developing their own strategic plan, they are more willing to accept the interventions that are available.

Another important lesson learned was that well-trained, empathetic paraprofessionals were easily accepted into the home and ultimately more effective than registered nurses, who are commonly used in similar types of programs. The project found that outreach workers were regarded as “sisters” and “coaches” rather than professionals sitting in judgment. This approach could be readily adapted to other rural areas. However, program planners should be aware that creating and implementing a consortium is often more difficult than anticipated at the program’s outset. Like infants, consortia need “care and feeding” in order to develop into a vibrant, positive network.

After the Grant

HCI will continue for at least one year thanks to available funding and resources. However, sustainability is difficult in rural areas where poverty is rampant and no major industry exists to provide a means of support.
Community Characteristics

In 1998, Fulton County, Illinois, had neither a managed care system nor an organized health promotion network for school-aged children. The county was plagued by high rates of child abuse, child death, illegal alcohol and other drug use by minors, school absenteeism, and AIDS. The county also had a low per capita income, and 2,400 students lacked health insurance.

Services Offered

The School Health Network was designed to increase access to health care for school-aged children, improve student health status, and decrease absenteeism. To address these challenges, the Fulton County Health Department hired 4 full-time registered nurses to coordinate a “Visiting School Nurse” program for 6,000 kindergarten through 12th grade students in 8 school districts throughout the county. A public health nurse was assigned to a school district 1 to 4 days per week, depending on the size of the student population. These public health nurses provided immunizations, health records compliance checks, CPR and first aid training, chronic disease management, infectious disease and injury control, workshops for parents and school staff, classroom health education, and head lice education—not just the typical first aid services. A full-time health educator also was assigned to all eight school districts to implement prevention activities. A sexually transmitted disease (STD) screening and treatment clinic was established at the Fulton County Health Department to provide youth and adults with followup and treatment services.

The project also launched a “Prevention Coalition” to address four key public health challenges in local schools: 1) alcohol and other drug use; 2) violence; 3) teen pregnancy; and 4) transmission of HIV and other STDs. Students, parents, school staff, and community agencies served as members of the coalition, and together, they assumed responsibility for coordinating resources and developing plans to address priority health issues affecting youth.
Innovative Solutions to Problems

Through their participation in the Prevention Coalition, school students became actively involved in, and eventually led, a variety of prevention activities. The creation of a “Student With Advocacy Training” (SWAT) program evolved to youth-led initiatives such as “School Prevention Days.” As youth gained leadership experience, they were empowered to organize the first annual “Road to Reality” event, which focused on underage drinking and driving. The success of the Prevention Coalition has attracted other grant funding for the project, including $34,000 per year from the Illinois Violence Prevention Authority and $31,000 per year from the Illinois Department of Human Services for teen pregnancy prevention.

Results

The Visiting School Nurse program was a resounding success. For example:

- Hepatitis B vaccinations were given to 2,454 students and 1,001 school staff.
- 1,412 students received case management for chronic illness and/or health care services.
- 770 students and 356 school staff received CPR and first aid training.
- 1,199 school personnel received cholesterol, blood pressure, or mammogram screenings.
- 39 school personnel and volunteers received head lice training.
- The project provided 15,344 head lice checks.
- 151 parents attended workshops on head lice, bullying, communications, and diabetes.
- 1,558 classroom presentations were conducted for 46,748 students and staff, covering topics ranging from bloodborne pathogens and abstinence education to conflict resolution, pregnancy prevention, and nutrition.
In April 2000, the program conducted a survey of parents to gain their input on what kinds of health and prevention services should be offered through the Visiting School Nurse program in the future. The vast majority of parents indicated that CPR and first aid training, school and athletic physical exams, immunizations, and drug prevention courses were services that were critically needed in the school system. Other desired services included treatment for minor illnesses, tutoring, mental health services, crisis intervention, a student exercise program, general health screenings, community service referrals, organized activities in the summer and on weekends, before and after school programs, job training and job fairs, and instruction on how to handle child discipline and family disagreements. Parents recommended that the Visiting School Nurse program should be continued, that physical exams should be provided in schools, and that schools should establish partnerships with community organizations to create a youth recreational center. Parents also recommended that area schools expand oral health and dental sealant programs, as well as health promotion and disease prevention programs.

In addition to the SWAT Program and the “Road to Reality” event, the Prevention Coalition developed the “Young People’s Yellow Pages,” a community service directory for students and parents, as well as a “Community Services Guide” for parents and schools. The coalition also implemented a teen/parent panel to speak with 7th through 9th graders on the consequences of being a teen parent.

Additional information on the Visiting School Nurse program is available online at www.fultoncountyhealth.com.

**Potential for Replication**

The success of this project is directly linked to the quality of communication and the diverse input of community agencies, school personnel, parents, and youth. Any program considering replicating this model should ensure that all of these groups are involved in planning, implementing, and evaluating the program. Frequent communication among these groups should also be established.
This model offers an effective and affordable solution for schools that cannot hire a full-time nurse. This approach reduces costs and increases access to basic treatment, health promotion, and disease prevention services.

**After the Grant**

The Visiting School Nurse program will continue through a contractual agreement between the Fulton County Health Department and five school districts. The health department will continue to search for supplemental funding to help schools cover the costs of providing school nursing services.

The full-time health educator is now funded through a State violence prevention grant, while two other State grants will help support the work of the Prevention Coalition. The health department is currently seeking funding to enhance alcohol and other drug prevention activities in the schools. Meanwhile, the STD clinics will continue to operate using local and project income funds.
Community Characteristics

The Merging Medical Education and Community Health project served 22 rural counties in Illinois. The majority of people in the service area are Caucasian, and many have incomes well below the national average. However, the project also served a small percentage of African American and Hispanic clients.

Services Offered

The project consortium consisted of representatives of the Rural Medical Education Program (RMEP) at the University of Illinois College of Medicine at Rockford, the Extension Service at the University of Illinois, six public health departments, and the Applied Social Research Unit of Illinois State University. The crux of the project was to support community-defined health projects across the State and to involve 21 medical students in the delivery of community-based primary health care services. Each mini-grant supported a range of services that were responsive to the unique needs of local residents.

Innovative Solutions to Problems

Prior to receiving the Rural Health Outreach Grant, local organizations throughout the service area had never before worked together to address the complex service needs of rural residents. Together, these organizations supported three primary initiatives:

- A mini-grant program funding local projects at no more than $3,000 each.
- Publication of *Beyond the Examination Room: A Guide to Community Health Project Planning*.
- Creating the Center for Rural Health Professions Education, Evaluation, and Research at the University of Illinois College of Medicine at Rockford.

Another challenge to the project was that some medical students were not motivated to serve in primary care settings. To address this challenge, the project decided it was necessary to expose students to community-oriented primary care settings earlier in their studies. The RMEP curriculum was revised so that students had the option to visit communities so they could find a community setting that matched their interests.
PROJECT 4—MERGING MEDICAL EDUCATION AND COMMUNITY HEALTH

Results

Each project funded by the consortium served an average of 100 rural residents at an average cost of just over $33 per person. The 21 Community-Oriented Primary Care Mini-Research Projects reached 2,100 rural residents. The 24 Community-Based Health Promotion and Education Projects reached 2,400 rural residents. Those who received care ranged from infants to people needing geriatric care, most of whom lived in households with lower than average incomes.

The program supported presentations at nine major meetings including the Illinois Rural Health Association, the National Rural Health Association, the Extension Service Priester Conference, the Conference Development Society, the Society of Teachers of Family Medicine, and the University of Illinois College of Medicine Research Day. One publication, Beyond the Examination Room: A Guide to Community Health Project Planning, is being reproduced and distributed to extension service and public health offices throughout the State, as well as to other organizations across the United States.

Potential for Replication

The fact that the Federal Office of Disease Prevention and Health Promotion released a Request for Proposal entitled “Merging Medical Education and Community Health: Healthy People 2010 Implementation Program” underscores the value of this model to communities with similar needs. Without question, the program could be easily replicated in other communities. However, communities may need to prioritize their goals in order to properly coordinate and support a mini-grant approach to providing community-based services.

After the Grant

Project activities will be continued through the Center for Rural Health Professions Education, Evaluation, and Research at the University of Illinois College of Medicine at Rockford. Five of the 12 representatives who regularly participated in the consortium are actively involved in the Center’s activities. The Center received State and private funding in its first year of development, which enabled it to establish an advisory board, identify its mission and
goals, and hire staff. The Center plans to work with area rural health providers to expand the network by developing an interdisciplinary consortium of professionals representing the fields of medicine, nursing, pharmacy, public health, and social work.
Community Characteristics

Farmers in northwestern Kansas are engaged in one of the most dangerous occupations in the United States. Farmers and ranchers work in remote geographic areas with heavy equipment and large animals that can cause serious injury, so preventing accidents represents a formidable challenge. When injury does occur, medical assistance must be quick and competent. But, because of the long distances between farmers and emergency medical care, response time to farm and ranch accidents is not always as rapid as desired. Because average educational levels and training are lower in rural areas than in cities, the medical training of first responders is not often as sophisticated as necessary.

Services Offered

While it may be impossible to alter the distances between farmers and first response services, AgraSafe recognized the value of offering quality training to first responders, family members, and coworkers. The project served 18 counties in northwest Kansas with a population of 101,825. The consortium consisted of the Hays Medical Center, Region I Emergency Medical Services, and the Research-Extension Northwest Area Office of Kansas State University.

The project had two primary goals:

- to sensitize farm and ranch families to the most common serious accidents associated with their occupation and to educate them about the most effective ways to avoid such accidents
- to provide first aid training for family members, coworkers, and first response teams, including emergency medical technicians, fire fighters, law enforcement officials, and others who may be the first individuals to respond to a call involving an accidental injury.

Innovative Solutions to Problems

Since family members and coworkers are often the first to respond to accidental farm injuries, AgraSafe elected to target family members and coworkers with a “First on the Scene” training program. The training explained how to deal with such accidents, what to do, and that how a person reacts can make the difference between life and death. The program was offered during evening
and weekend hours, which made it much easier for these busy rural residents to participate in the training. Eight Farmedic-trained instructors, which included medical and emergency personnel, delivered the training. Hays Medical Center provided all educational materials, facilitated the meetings, conducted assessments at each county program, and disseminated information about the training to health care professionals throughout the service area.

**Results**

Throughout the 3-year grant period, AgraSafe provided training to nearly 1,000 people. The “First on the Scene” program for family members and coworkers has been held in nearly all of the 18 counties included in the service area, while the “Rural Emergency Response Training” program has been held in a dozen counties. Local hospitals, Farm Bureaus, farm cooperatives, and 4-H groups proved to be strong advocates of the project and played a major role in generating local support. These organizations were able to draw farm and ranch families to the training program, and it is anticipated that these organizations will be valuable assets as AgraSafe continues to grow and expand.

**Potential for Replication**

The AgraSafe model could work well in other rural settings. Even though there is a tremendous need for education and increased awareness about accidental farm injuries, few programs are available to meet this need. However, these programs can only reach the appropriate audience if they are offered during the “off-times” associated with the agricultural industry. As a result, program planners must be cognizant of peak planting and harvest times, and sensitive to the hours during which these individuals and families work. Most importantly, it is critical to generate broad-based local support for such programs and to work in collaboration with communities and local agricultural organizations to plan and implement training programs.

**After the Grant**

Several of the instructors involved in the program have expressed an interest in expanding the program to other areas of Kansas that have requested training. All AgraSafe supplies and materials are currently housed in an enclosed trailer, which allows
for easy transport of equipment and supplies to communities that desire training. Hays Medical Center is now in the early stages of developing a center that will provide education, research, consulting, testing, and outreach to any community in need.
Community Characteristics

Perry County is located in the mountainous coalfields of southeastern Kentucky. Thirty percent of the county population lives below 100 percent of the Federal poverty level, with the median family income being $23,768. Only 28 percent of adults aged 25 years and older have completed high school.

Several cultural, organizational, language, and access barriers inhibit the use of mental health services. Appalachian families have taken pride in their self-reliance for many generations, so many families do not know what services they need or how to access those services. Other major barriers include lack of transportation, a limited and frequently changing pool of service providers, and insufficient health insurance coverage. Prior to this project, many local service agencies did not communicate with one another, resulting in service duplication. Living with a mental illness makes it more difficult to navigate the web of health, mental health, and Government assistance programs in the community.

Services Offered

This project was designed to improve access to mental health, primary care, and other necessary services such as education, social services, housing, and job assistance for people with severe and persistent mental illness. Through a program of intensive client contact with specially trained paraprofessional staff, the program linked adults with chronic mental illness to a seamless network of multidisciplinary and multiagency providers. Many of the people served by the project have experienced psychiatric hospitalization, incarceration, homelessness, and social isolation.

The project network consisted of:

- Hazard Perry County Community Ministries, a nonprofit charitable agency providing a homeless shelter, transitional housing, crisis services, child care, adult day health care, and other support services for residents in need
- Kentucky River Community Care (KRCC), a comprehensive mental health and mental retardation program serving eight southeastern Kentucky counties
- The University of Kentucky Center for Rural Health (UKCRH), a multidisciplinary center providing both health professions education programs and a variety of community programs.
• Kentucky Homeplace, a program managed by UKCRH that uses local paraprofessionals to link individuals to health and social services in 18 Kentucky counties

• Hazard Appalachian Regional Psychiatric Center, a new inpatient facility for people with mental illness that coordinates its activities with three regional community mental health programs, including KRCC.

**Innovative Solutions to Problems**

This project had two innovative features. The first consisted of using paraprofessionals who were specially trained to help clients navigate and access resources in the community. These paraprofessionals are local residents, so they are able to relate to, and communicate with, residents in a way that “outsiders” cannot. The second innovative feature was the intensity of interagency collaboration. When the project first started, the network held a retreat for stakeholders and members of the community to identify goals, barriers, and resources. The stakeholders created several task forces that addressed key barriers such as housing, transportation, program evaluation, continuing education, and special challenges for people with both mental health and substance abuse issues. To further enhance communication among the agencies, a paraprofessional was placed within each network site.

The most significant challenges encountered during the project were:

• lack of residential detoxification and rehabilitation programs

• insufficient access to health care resources, especially for clients with substance abuse problems

• difficulties with operationalizing variables such as quality of life

• integrating paraprofessionals into established clinical settings

• lack of ongoing participation by some of the original stakeholders.
To overcome these challenges, the project secured funding to meet specific needs and expanded the original network to include more health care organizations and representatives of law enforcement and the courts. The task forces also played a major role in ensuring appropriate and effective utilization of health care resources.

Results

When the project was created, it identified three goals.

The first goal was to develop a seamless, nonduplicative, and comprehensive system of services for adults with mental illness in Perry County. The project’s greatest success toward achieving this goal was reducing the duplication of effort between the partners and increasing community among the agencies. Fragmented systems were coordinated into a cohesive network that shared a commitment to meeting the needs of the community.

The second goal was to improve the functioning and quality of life for people with chronic mental illness. Recognizing that “functioning” and “quality of life” are difficult to measure, the program emphasized collaboration and training so that clients had access to the full range of services. Once basic needs such as food, clothing, shelter, security, and stability were met, the program provided resources for self-improvement and relapse prevention.

The third goal was to reduce the cost and improve the outcomes of comprehensive mental health services. During the 3-year grant cycle, 236 clients with mental illness also received medication assistance, transportation, food, crisis intervention, and help applying for other services. Of these, 131 individuals received comprehensive services through coordinated case management. The project found that there was an average reduction in hospital bed days of approximately 5 days per year per client, representing a cost savings of $300,000 to $500,000.

Potential for Replication

This project could be replicated in other communities and yield more success in areas where more resources are available. However, many rural settings lack funding to develop the facilities and support services needed to provide a continuum of care for people with mental illness. The use of paraprofessionals is a cost-
effective way to enhance service delivery and to provide health education and promotion, especially in communities that lack primary health care, mental health, housing, transportation, and employment services.

**After the Grant**

The program has received new funding through HRSA’s Community Access Program to expand outreach services. This funding has enabled the project to serve more people and expand services for hypertension, diabetes, asthma, and heart disease. The program is now working with law enforcement personnel to help them better understand people with mental illness and how to better serve them.
Community Characteristics

Nearly 80 percent of children aged 7 to 13 years in Pike County are mildly or severely obese—far above the national average. One Pike County pediatrician estimated that 30 percent of the 5,000 children in her practice met the medical definition for obesity. Kentucky ranks ninth in the Nation in the total number of obese residents. Yet, only one in three Kentucky residents has any kind of leisure time physical activity, making it the most sedentary State in the Nation.

Services Offered

Prior to launching the Kid Power program, there had never been a medically supervised program for children in the region that did not include medications or artificial diet supplements. Kid Power targeted children ages 7 through 17 years. It also targeted their parents. Kid Power employed an interdisciplinary approach to weight management that emphasized positive reinforcement and support. Pikeville Methodist Hospital established a network of agencies to identify children who would benefit from such a program. The network included the Pike County Board of Education, the School of Osteopathic Medicine at Pikeville College, the Pikesville Area Family YMCA, the Pike County Health Department, Mountain Comprehensive Care Center, and Pikesville Independent Schools. The goal of the program was to enroll eligible children and educate their families about healthy nutrition, proper diet, exercise, and the importance of weight management in improving their overall health.

Local pediatricians and physicians were responsible for 92 percent of the referrals made to the Kid Power program. Recruitment, however, was not always easy. Some of the nurses at the health department reported that many caregivers felt their child did not need to be in a weight management program. Many students also expressed that they felt embarrassed to be in such a program. While program staff worked very hard to overcome these attitudes, they were not always successful.

Innovative Solutions to Problems

Keeping children interested in participating in the 10- to 12-week program proved to be a difficult challenge. The Kid Power program strove to balance classroom instruction with weekly exercise and recreational activities that kids would enjoy. Each
weekly meeting began with a “feel good pep rally,” during which participants shared something positive about themselves or something that happened during the previous week. Kids also were rewarded for achieving their unique goals toward losing weight. Each participant kept a weekly journal of what they ate, the calories they consumed, the exercises they performed, their goals, and specific measures for achieving those goals.

The project also used games such as “nutritional bingo” to teach students about the basic food groups, nutritional snacks, making healthy choices about their eating habits, and recognizing behaviors associated with overeating. Students participated in a scavenger hunt at a local grocery store while their parents learned how to interpret food labels.

In spite of their efforts to offer interesting and engaging activities for both children and parents, enrollment continued to be a persistent challenge. Program staff participated in brainstorming sessions to improve the program. They even experimented with changing the structure of the class, altering the length of the class, adding more activities, modifying incentives, making telephone calls to families to remind them about the class, and following up with students who missed a class. None of these changes significantly reduced dropout rates. Program staff ultimately concluded that each student and family must be committed to making a major lifestyle change and willing to apply what they have learned over an extended period of time. Unfortunately, many children and families are not willing or able to make such a commitment. In addition, culture, upbringing, and family preferences have a strong influence on the ability of children and families to adopt a healthier lifestyle.

**Results**

The project had hoped to recruit 20 students per quarter, but it actually averaged about 10 students per quarter. Of these, about 45 percent lost between 4 and 20 pounds while enrolled. A physical therapist worked with each student to increase the number of hours spent in physical activity each week. Between 35 and 40 percent of students engaged in the recommended physical activity. Enrolled students also completed a questionnaire to assess their level of self-esteem. After completing the program, between 70 and 80 percent...
of students were more interactive, less withdrawn, more secure in their conversation skills, and better behaved in group settings. Between 55 and 60 percent of caregivers reported improved behavior at home and school.

The most active members of the network played a major role in making the project self-sustainable. As Kid Power became more streamlined and self-sufficient, network staff did not have to be as actively involved as they were at the beginning of the program, and they became more confident in their respective roles.

**Potential for Replication**

This program can be implemented in any setting that has a strong financial base and dedicated staff who can deal with the lack of commitment from students and families. Overcoming cultural barriers and negative attitudes about weight management is a slow, step-by-step process that cannot be achieved overnight. As a result, such programs need to establish an infrastructure for referrals and identify staff who are dedicated to keeping the program going. Network partners also must collaborate with the educational systems, parent groups, clinics, pediatricians, local hospitals, and others in the community who share the project’s goals and can help motivate children and families to stay committed to achieving an appropriate and healthy weight.

**After the Grant**

Since the core professional staff involved in the project are employed by Pikesville Methodist Hospital, the Kid Power program will continue beyond the grant period. While the hospital faces budget restraints, the hospital administration is committed to sustaining the program as a service of the pediatric department. The program also is considering charging a small fee to help cover some student expenses.
Community Characteristics

Cardiovascular disease (CVD) is the leading cause of death in Maine, just as it is in the United States. Rural residents in Maine exhibit a high prevalence of the major cardiovascular risk factors—high blood pressure, high cholesterol, smoking, physical inactivity, and poor diet and obesity. These same risk factors also are associated with seven of the other leading causes of death in Maine. While there is a great deal of information on how to manage these risk factors properly to help prevent CVD, many rural physicians have a limited amount of time to spend with their patients. Furthermore, geographic isolation, lack of education, and poverty make it difficult for many rural residents to access health promotion and disease prevention services.

Services Offered

The SCORE-5 for Heart Health program targeted all adults in Franklin Memorial Hospital’s service area. The vast majority of residents are White, but there also is a large Franco American population. Residents are scattered over an area of 1,800 square miles reaching as far as the Canadian border. A population density of 17.1 persons per square mile classifies this community as a “very rural” community.

The consortium included six formal partners who implemented, revised, and sustained the project. These partners included Franklin Memorial Hospital, Pine Tree Medical Associates, the HealthReach Network, International Paper Company, the University of Maine at Farmington, the Healthy Community Coalition, and Western Maine Community Action. These partners represented two large, multisite networks of medical providers, three of the area’s largest employers, and community organizations that provide outreach to the socially isolated, economically disadvantaged, and medically underserved.

CVD health promotion services for adults in Franklin County were provided in physician offices, work sites, and other locations throughout the community using a mobile van. Services included health assessments, behavioral counseling, or responses to a patient’s unique needs. A complete initial assessment included the SCORE-5 “A’s”: Asking about family history, diet, exercise, tobacco use, depression, stress, and medication compliance; Assessing blood pressure, total cholesterol, HDL cholesterol,
weight, height, body mass index, and waist circumference; Advising by giving health promotion messages to patients; Assisting patients in achieving lifestyle changes through support, education, and promoting simple and sustainable behavioral changes; and Arranging followup among a wide array of medical providers.

Innovative Solutions to Problems

The biggest challenge the consortium faced was finding a reimbursement method in each setting that would help sustain the program without making cost a barrier for employees. The program also needed to be worthwhile for employers and physician practices so they would continue to participate. Local residents paid anywhere from $2 to $20 for services, though no one was ever turned away because they could not afford it. Franklin Memorial Hospital also offered a 15 percent discount for anyone with a Franklin Community Health Network card. Medicaid soon began covering the service, as did Cigna Healthcare.

In the workplace, the challenge was selling the long-term value of prevention and convincing employers that supporting these services could help them lower health care expenditures and reduce missed work days. When employers were informed of the statistics associated with the impact of CVD in Franklin County and throughout Maine, most of them elected to participate. To ensure that the project was worthwhile for physicians, the key was to find a way to make service revenue-neutral or revenue-generating. Program staff worked with physicians to develop a fee system based on the level of physician involvement but did not exceed their expected reimbursement.

Results

By the end of the grant period, SCORE-5 for Heart Health had provided services at 13 work sites reaching 39 percent of individuals employed in the service area. Some employers paid the program to come onsite and see as many people as were willing. Other employers simply provided for time away from work so that employees could access services, with employees bearing the cost burden. Some employers split the cost with employees. The intensity of services also varied with each employer. Some provided for annual screenings and routine followup care for those with identified risk factors, while others invited the program to come onsite each week.
Physician practices also proved to be a powerful way to reach rural residents and to help facilitate important behavior changes such as taking medications properly, increasing physical activity, eating healthier, quitting tobacco use, optimizing weight, reducing cholesterol levels, and lowering blood pressure. By the end of the grant cycle, the program had an active presence in the offices of 21 area providers, which represents 60 percent of physician practices in the service area.

While it will be several years before the project knows to what degree it reduced the incidence of CVD, it already has demonstrated substantial improvements in physical activity, healthy eating, tobacco usage, blood pressure control, and cholesterol control. Each client living a healthier lifestyle represents a potential for reducing CVD morbidity and mortality, as well as subsequent health care costs.

The results of the project have been published in *The Journal of Preventive Medicine*.

**Potential for Replication**

Although each community’s characteristics are unique, this prevention model can be widely applied in a variety of communities serving diverse populations. Its greatest advantage is simplicity, in that it can be easily replicated using health educators, nurses, or medical assistants. The most crucial step is to obtain buy-in from health leaders and organizations within the community.

**After the Grant**

Since the conclusion of the grant, Franklin Memorial Hospital has absorbed the SCORE-5 for Heart Health program as a department, expecting it to be a revenue-generating program in the near future. The project received a grant from the State of Maine, and project staff are actively looking for additional funding sources. Much of the project’s future success and long-term sustainability will depend on increased use of existing clinics, launching additional sites, and marketing the project’s services.
Community Characteristics

Knox County, Maine, is located about halfway between the New Hampshire and Canadian borders of the Maine seacoast and 2 hours from Portland and Bangor, Maine’s two largest cities. There are 16 towns in Knox County, including a half dozen island and peninsula communities. Rockland, the county’s only city, has a population of 8,000, while the county’s overall population is nearly 40,000 people.

Knox County families experience numerous barriers that jeopardize their well-being. These barriers include:

- the isolation of living in a rural environment with no neighborhood identity, no community attachments, and a shortage of family-oriented support systems
- seasonal depression brought on by Maine’s long winters and seasonal employment patterns
- the “normalization” of unhealthy behaviors such as substance abuse, poor nutritional habits, and family dysfunction—many of which are passed from one generation to the next
- a lack of transportation to essential health promotion, disease prevention, and treatment services
- inappropriate packaging of prevention information that is “over the heads” of those in the community who need this information the most.

Services Offered

The structure for this program was adapted from the nationally recognized initiative known as Nurturing Families, which consists of learning and improving families’ communication, negotiation, mediation, and conflict resolution skills. The grant project was designed to address the high incidence of juvenile crime, family violence, and substance abuse among families raising teenagers. Specifically, project staff hoped to increase knowledge of positive parenting practices and improve family functioning among at least 36 families with teens in Knox County through the Nurturing Teens program. It also was established to reduce the isolation of island residents by conducting outreach, using local residents to serve as community health leaders, and enhancing positive parenting practices and family functioning of 24 island families.
Classes sponsored by the program were held in a community-based setting one night per week for 8 to 11 weeks. These classes involved educating families, giving them an opportunity to discuss issues of mutual importance, training facilitators to help families learn skills, using a curriculum that could be adapted to each family’s unique needs, and giving families an opportunity to practice their new skills through interactive games and discussions.

**Innovative Solutions to Problems**

The biggest challenge faced by the Nurturing Families program was the amount of time required to inform and engage remote families, and to establish a trusting relationship with them so they could become familiar with a group-parenting program like Nurturing Families. While the project had originally planned to serve the island of Vinalhaven, the program’s outreach efforts found that families living on the neighboring island of North Haven were more ready to receive parenting education. The programmatic shift early on in the project taught project staff about the importance of being sensitive to the needs and receptiveness of each community.

**Results**

The project provided services to 25 mainland families with teenagers and 28 North Haven families. The project evaluation revealed that 90 percent of families served by the project demonstrated increased knowledge of appropriate methods in child discipline and improved communication skills 6 months after the program. This finding held true for families that had varying levels of knowledge and skills when they first became involved in the program. Families report and demonstrate better communication skills, decreased isolation, and increased ability to take a proactive role in their own well-being.

**Potential for Replication**

The most important objective for a project like Nurturing Families must be to earn the trust of local families and to have the cooperation and support of the community. Establishing trust takes time, as does developing relationships with community providers.
Without trust, it is impossible to talk openly with parents about how to improve their knowledge and communication skills.

A program like Nurturing Families likely will encounter several challenges. First, it is difficult to conduct an accurate assessment of the community’s needs. Second, it is difficult to determine what kind of intervention the community is ready to receive. Third, it is essential to develop a clear strategy for how to engage the community. And fourth, a project such as this may find that transportation is a serious challenge, as is identifying volunteers, changing schedules due to the weather, and getting families involved in the program. As such challenges arise, it is critical that project staff remain flexible and sensitive to the attitudes and beliefs of local residents.

After the Grant

The project currently is focusing its efforts on reaching parents of children aged 0 to 6 years. This new initiative has been well received. The project hopes to continue serving both mainland and offshore families, but also plans to establish new programs, including alumni groups and a Nurturing Fathers program. Since Penobscot Bay Medical Center is undergoing a reorganization, the amount of in-kind support the program will receive from the hospital remains uncertain.
Community Characteristics

Harper County, Oklahoma, is a frontier, rural community in which agriculture is the major industry. More than 20 percent of the county’s population is aged 65 years or older. In recent years, the county has witnessed a decrease in population.

Health resources are severely limited in Harper County. There is a 25-bed hospital, and 2 physicians work at a clinic in the town of Buffalo, the county seat. While a Rural Health Clinic is located in Laverne, there is no county health department nor any school health programs in Harper County.

Services Offered

The Harper County Parish Nurse Outreach Project was developed to address the limited health care resources available in the community, to assess individual and community needs, and to assist members of the community in accessing local resources. The project also planned to fill service gaps that were not readily available in the community.

Three organizations participated in the project—the United Methodist Church of Laverne, Harper County Community Hospital, and the Area Health Education Center’s Rural Health Project. The project’s principal activities consisted of conducting individual and community health assessments, and providing health education, screenings, and counseling to individuals and groups. The Parish Nurse, hired by the United Methodist Church of Laverne, served as a community health advocate.

Since the church is widely considered the most viable institution in Harper County, area churches were the crux of the project’s outreach efforts. The project stressed that physical, mental, and spiritual health were critical to the health of the whole person. A program such as this had never been offered in Harper County.

Innovative Solutions to Problems

While parish nursing has been a common practice in the United States since the mid-1980s, this concept was new to rural Oklahoma. A great deal of time was required to educate the public about the role of the parish nurse in community health promotion and disease prevention—and the limitations of this practice. Many people developed a better understanding of the function of the
parish nurse and the overall project once they became involved in the program.

The United Methodist Church of Laverne felt strongly about its mission to serve others outside its own church walls. While a parish nurse usually works in a single church and perhaps the surrounding neighborhood, the United Methodist Church of Laverne expanded on this concept, making its services available to everyone in the community regardless of age, gender, race, or faith.

Results

The project recorded nearly 7,000 contacts during the 3-year grant. Health education accounted for 53 percent of all contacts, while health screenings accounted for 33 percent of all contacts. Six percent of the contacts consisted of health counseling.

The age distribution of those served was fairly even. While the gender breakdown of those served was relatively similar, the project found that women were more likely to attend a health education program than were males. However, males were more than willing to receive health screenings, blood pressure and blood sugar checks, and flu vaccines. The project served a particularly large percentage of males aged 12 to 19 years, largely because local schools sponsored several programs focusing on smoking prevention, drinking and driving prevention, and date violence prevention. The project also offered an immunization program in schools, which resulted in 1,200 immunizations being given during the first grant year.

Potential for Replication

The Harper County Parish Nurse Outreach Project could be easily adapted to other rural areas. What made this program successful in Harper County was the team spirit of the consortium members and other community organizations. The ministerial alliance and area schools, churches, businesses, and local government have a history of working together for the welfare of the community. This project worked with all of these organizations during the grant period, and they played an important role in the success of the project.


After the Grant

The United Methodist Church of Laverne will continue to offer services to Harper County residents. The project has increased awareness of the need for health promotion services and activities, and a task force has developed a plan for a county health department. In fact, county commissioners have allocated a portion of the 2002 through 2007 tax budgets for establishing a health department, which will now assume responsibility for immunizations, health promotion, and services that cannot be delivered by a parish nurse.
Community Characteristics

Nelson County, located in rural central Virginia, is a 475-square-mile Health Professions Shortage Area nestled between the Blue Ridge Mountains and the James River. In 1991, the Blue Ridge Medical Center established the Rural Health Outreach Program (RHOP) to provide services to people who were not receiving needed care. A nurse practitioner and a small support staff provided outreach services to address health disparities in the county. In 1994, RHOP began offering clinics at the local high school and learned that students were engaging in a variety of risky behaviors. It also learned that area young people were not adequately served by a half-time nurse whose responsibilities included caring for students in six schools scattered across the county. A Youth Risk Behavior Survey administered in May 1996 confirmed that area youth had high rates of substance abuse, sexual activity, depression, and poor nutrition.

Services Offered

The Nelson County Rural Health Outreach Program launched a school nursing program that placed registered nurses in each of the six Nelson County public schools. It also created a supplementary health education program provided by a registered nurse who traveled to each site.

The project consortium consisted of six organizations. Blue Ridge Medical Center provided project oversight and medical supervision of school-based clinical staff. The Rural Health Outreach Program provided nursing services, limited primary care services for students, and health education services. Nelson County Public School provided clinical space, office equipment, and direction by the School Health Advisory Board and the School Board. The Nelson County Health Department provided special immunization clinics at school sites, dental services, and offsite reproductive health care. Region Ten Community Services Board provided individual and group substance abuse and mental health services. The County of Nelson provided funding for school nursing outside of the regular school budget.

The services provided to students in Nelson County Public Schools included nursing assessments, screenings, immunizations, referrals, physical exams, consultations with parents, health education, medical administration, counseling, dental screenings,
preventive care, treatment, and service plans for students with special needs. The project also provided health education in local private schools. Staff at the Nelson County Public Schools also received occasional nursing services, education on how to care for students with special needs, and assistance in emergency services planning and school safety assessments.

**Innovative Solutions to Problems**

During the first year of the project, program staff received numerous requests from school administrators and faculty for nurse encounter notes and intervention details from student health charts. The program had determined that all information on the services provided to students remain confidential. In fact, the project used “Clinical Fusion” software to record nursing encounters and student data rather than the school system’s data module in order to safeguard confidentiality. Program staff had to be diplomatic in how they handled these requests and educate school officials on the confidential nature of medical charts. The project established specific policies and procedures to ensure that student health records always remained confidential.

**Results**

During the 3-year grant cycle, the project recorded 36,428 nursing encounters with ill students. The project also provided 3,273 health screenings, 2,723 immunization compliance checks, and 947 primary care visits with a nurse practitioner. Some 84 students received mental health and substance abuse services, and the project held 114 group sessions focusing on mental health and substance abuse issues. Nearly 150 students were given daily medications at school, while nearly 100 students were given short-term medications at school. The project provided health education to 2,723 students through 192 classroom presentations, 36 lunchroom presentations, 4 assemblies, and 3 special small group programs. Three health fairs were held during the grant period, which reached 1,200 individuals, including 564 students who received sports physicals. The program also created a fluoride rinsing program in two elementary schools. While most of those served by the program were children and adolescents aged 0 to 19 years, the project also served a small number of adult school staff.
Project staff made a concerted effort to provide information on local health resources to families with incomes at or below 200 percent of the Federal poverty level. Specifically, the project hoped to increase awareness of Virginia’s children’s health insurance program and the Wellness Passport, a health benefits program offered by RHOP. During the last 3 years, enrollment in the commonwealth’s health insurance program has tripled.

**Potential for Replication**

Students in any rural community can benefit from school-based health services—whether they are offered in individual or group settings. It is critical, however, that programs establish policies and procedures for managing medical records and safeguarding confidentiality while ensuring the safety of faculty, administrators, and other students. These policies should be developed at program inception and refined as necessary. It also is critical to work in partnership with area health care providers to coordinate student health care and to discuss how best to serve chronically ill or special needs children.

Another important step is to establish a data management system that safeguards confidentiality and captures the information necessary to track outcomes. Program planners must be flexible enough to make adjustments as necessary and to request technical assistance when they need it.

**After the Grant**

The Nelson County Board of Supervisors is likely to continue providing funding for nursing services offered through the School-Based Health Care Program, while Blue Ridge Medical Center will do its best to cover costs associated with program management, the services of the nurse practitioner, and health education services. However, grant support, community donations, and billing for primary care services will be needed to continue the program at its current level.
Community Characteristics

The Olympic Peninsula, located in northwest Washington State, is a rugged land mass surrounded by water on three sides and a roadless national park on the fourth. The region’s economy consists of timber harvesting and processing, Government, health care, education, light manufacturing, fishing, and tourism. The population is ethnically diverse, including five American Indian tribes and a growing Hispanic population.

Given the rough terrain and isolation experienced by rural residents, access to health services is extremely limited. To address this challenge, a telemedicine linkage already had been established between a small rural community hospital and a major medical center located in a rural area. The purpose of the North Olympic Telehealth Network was to strengthen this existing network so that isolated residents had improved access to behavioral and specialty health care providers.

Services Offered

The project served providers and residents in two rural counties on the Olympic Peninsula. The network consisted of 11 sites representing community mental health centers, health care providers, and other health, education, and social services agencies. Each consortium member agency supported the delivery of behavior health and other health care services.

Telehealth services focused on health provider education, mental health and substance abuse services, and primary health care services. Health provider education ranged from weekly scheduled grant rounds from Virginia Mason Medical Center in Seattle to special topic presentations that were downlinked from satellite transmissions and then distributed via the videoconferencing network. In addition, sites with particular staff expertise provided occasional training on topics ranging from psychopharmacology to dealing effectively with resistant clients.

Mental health and substance abuse services included psychiatric and psychological evaluations, medication monitoring, substance abuse assessments, and individual counseling and therapy. The project also organized clinical and administrative meetings among mental health providers who were members of the network. Primary and specialty health care included patient
consultations, and specialty assessment and treatment for physical and speech therapy.

**Innovative Solutions to Problems**

The project used live, interactive videoconferencing to provide mental and physical health services. The network design enabled network sites to communicate with one another and any other site in the world that had similar or compatible equipment. This represented a significant project innovation. Some of the most exciting moments in the program occurred when the project reached far beyond its service area. For example, relatives of a foster child in Forks, Washington, were able to join a team meeting from a site near their home in Orlando, Florida.

Any time a project infuses new technology into its operations, it can expect challenges to arise. In some geographic areas, the telecommunications infrastructure, or the capacity to send and receive signals at the required bandwidth, were either not in place or were just being developed. To address this challenge, telephone carriers were invited to become members of the network and to help develop videoconferencing applications. Frequent testing of the applications and training of area health care providers on how to use the applications were necessary to overcome resistance by some providers to use the network and to alleviate skepticism of the network’s practicality. The project discovered the benefits of using superior equipment, including reducing the ongoing support costs and maximizing user-friendliness.

**Results**

The telehealth network succeeded in expanding access to mental health services for rural residents in the project service area. The network connected rural communities to services that would otherwise not be available in a convenient and timely manner. It successfully increased the coordination of care and communication between mental health service providers and other stakeholders. The project also succeeded in recruiting and retaining providers by creating opportunities for them to interact with their peers and to access educational programs.

In terms of network utilization, the telehealth network was used approximately 20 hours a week, which met the project’s utilization goals. Clients and providers gave the network high scores on
consumer satisfaction surveys. The project also created an ongoing business plan to sustain the network via cost avoidance and usage rates for non-network members.

**Potential for Replication**

Telehealth networks offer many advantages. These include:
- increased access and availability of specialty care providers who otherwise may be unavailable or unaffordable
- improved coordination of care and collaboration among multiple service providers, consumers, families, and other stakeholders
- improved linkages between health care providers
- enhanced development of advocacy groups, peer groups, and support groups across sparsely populated geographic areas
- improved access to continuing education resources for health care professionals and other staff
- improved recruitment and retention of health care staff
- a reduced burden and expense for consumers, clients, and patients
- improved access to Government resources
- overall reduced costs associated with all of the above advantages.

The biggest barrier to creating a telehealth network is the availability and cost associated with acquiring the necessary telecommunications services—not just in the grantee organization but in all partner facilities. Another major challenge is finding a way to secure reimbursements from insurers or Government programs for services rendered.

**After the Grant**

The network plans to continue all of the services currently offered and to seek out new opportunities for future growth.
Community Characteristics

Nicholas County is a rural, mountainous, medically underserved county that spans 649 square miles. More than half of its 26,000 residents live below the Federal poverty level. They experience high rates of diabetes, obesity, and diseases of the heart and lungs; yet, many have inadequate health insurance and are unable to access health promotion, disease prevention, and treatment that can reduce illness and premature death, and extend quality and length of life.

Services Offered

The Nicholas County Rural Health Outreach Grant Program provided health care services to medically underserved populations. The project also offered health education and prevention programs for the population at large, as well as continuing assessment, screening, and followup services. The target population included the working poor, local school students, and senior citizens.

The project developed an extensive network of local government agencies, schools, a hospital, and nonprofit organizations. It included Summersville Memorial Hospital, the Rural Health Clinic, Nicholas County High School, the Friends-R-Fun Child Development Center and Family Learning Center, and the Nicholas County Health Department.

The project used the Outreach Grant funds to launch three major initiatives:

- a wellness clinic for 1,300 students, faculty, and family members during school hours.
- planning a free clinic to serve the working poor and those without medical cards or insurance
- coordination of the health education and prevention program with the public health department targeting senior citizens.

Innovative Solutions to Problems

The network collaborated and coordinated with other major partners in the area, some of which are not traditionally involved in health-oriented networks. These partners included government organizations, private sector health provider organizations, community planners, the local Board of Education, and faith community organizations. The project also collaborated with local...
radio stations and newspapers to educate the public about the new services available in the community and how to access them.

**Results**
The Summersville Wellness Center opened in September 2000 and closed for the summer in June 2001. During that time, it recorded more than 3,400 visits. The center offers health screenings, hepatitis education, hepatitis B immunizations, hunting safety education, health fairs, sports physicals, allergy injections, lab test results, and many other services. The project also established a Web site at www.summersvillememorial.org. According to the State School-Based Health Assembly, the Summersville Wellness Center has been the most successful of any new program established in West Virginia.

A great deal of work has gone into planning the new free clinic, which is scheduled to open in the near future. Tentative plans are to begin offering limited primary health care services and a medical assistance program using physicians and staff who agree to volunteer one evening a week. It is hoped that an afternoon may be scheduled to offer medication assistance to eligible older persons who cannot afford to purchase medications.

In terms of the health education and prevention program, a total of 15 health education topics were covered in classes that drew 628 participants. Topics included a blood pressure clinic for senior citizens, a diabetic clinic, healthy and nutritious cooking, an exercise and weight management class, a cooking school for men, and a youth drug prevention program.

**Potential for Replication**
Two of the three components implemented by this program were modeled on similar projects developed in other rural areas, so it is likely that these models will work in other rural communities as well. It may be difficult for other communities to implement all three of the projects launched through the Nicholas County Rural Health Outreach Grant Project, so program planners may want to replicate each of these components one at a time. Or, they can leverage all of their resources toward implementing a single project and dedicate their efforts to ensuring its success.
After the Grant

The project expects to experience continued programmatic growth, which may ultimately provide a source of future revenue that will help sustain the program. Summersville Memorial Hospital has agreed to help cover some of the Wellness Center’s expenses. An important aspect of sustainability for the free clinic will be to join the West Virginia Free Clinic Association. This step will aid in the setup of the clinic and help staff learn more about health service strategies that have worked well for other free clinics. As new physicians set up practice in the Summersville area, they will be asked to donate some of their free time to serving patients at the free clinic. The project also is making a concerted effort to identify and enroll children who are eligible for Medicaid coverage or enrollment in the State Children’s Health Insurance Program.
## Continuing Education for Health Professionals

<table>
<thead>
<tr>
<th>Emergency medical services personnel</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency medical technicians</td>
<td>5</td>
</tr>
<tr>
<td>Firefighters</td>
<td>5</td>
</tr>
<tr>
<td>Emergency room personnel</td>
<td></td>
</tr>
<tr>
<td>Nurse practitioners</td>
<td>11</td>
</tr>
<tr>
<td>Nurses</td>
<td>2, 3, 7, 8, 10, 11</td>
</tr>
<tr>
<td>Physicians</td>
<td>7, 8</td>
</tr>
<tr>
<td>Subject</td>
<td></td>
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<tr>
<td>Survival</td>
<td>1</td>
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</tbody>
</table>

## Health Promotion/Education

<table>
<thead>
<tr>
<th>Health promotion/disease prevention (general)</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3, 4, 8, 9, 10, 13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health promotion/disease prevention (specific)</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child abuse</td>
<td>2, 3</td>
</tr>
<tr>
<td>CPR</td>
<td>3</td>
</tr>
<tr>
<td>Depression</td>
<td>8, 9, 11</td>
</tr>
<tr>
<td>Diabetes</td>
<td>3, 6, 13</td>
</tr>
<tr>
<td>Drug use</td>
<td>3</td>
</tr>
<tr>
<td>First aid</td>
<td>3, 5</td>
</tr>
<tr>
<td>Mental health</td>
<td>3, 6, 11, 12</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2, 3, 7, 9, 11</td>
</tr>
<tr>
<td>Self-esteem</td>
<td>7</td>
</tr>
<tr>
<td>Sexual activity</td>
<td>11</td>
</tr>
<tr>
<td>Smoking</td>
<td>8, 10</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>6, 9, 11, 12</td>
</tr>
<tr>
<td>Tobacco</td>
<td>8</td>
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<tr>
<td>Peer groups</td>
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</table>

## Population Group

<table>
<thead>
<tr>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adolescents</td>
</tr>
<tr>
<td>Children</td>
</tr>
<tr>
<td>Infants</td>
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</tbody>
</table>
### Population Group (continued)

<table>
<thead>
<tr>
<th>Minorities</th>
<th>Project Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>4</td>
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<tr>
<td>Hispanic</td>
<td>4, 12</td>
</tr>
<tr>
<td>Alaska Native</td>
<td>1</td>
</tr>
<tr>
<td>Pregnant women and teens</td>
<td>2</td>
</tr>
<tr>
<td>Women</td>
<td>2, 10</td>
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### Services

<table>
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<tr>
<th>Service</th>
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<tbody>
<tr>
<td>Advocacy</td>
<td>3, 12</td>
</tr>
<tr>
<td>Case management</td>
<td>2, 3, 6</td>
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<tr>
<td>Counseling</td>
<td>8, 10, 11, 12</td>
</tr>
<tr>
<td>Dental</td>
<td>3, 11</td>
</tr>
<tr>
<td>Emergency medical</td>
<td>5, 11</td>
</tr>
<tr>
<td>Health fairs</td>
<td>11, 13</td>
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<tr>
<td>Immunizations</td>
<td>2, 3, 10, 11, 13</td>
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<tr>
<td>Medicaid</td>
<td>2, 8, 13</td>
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<tr>
<td>Mental health services</td>
<td>3, 6, 11, 12</td>
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<tr>
<td>Preventive care</td>
<td>11</td>
</tr>
<tr>
<td>Primary care</td>
<td>4, 6, 11</td>
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<tr>
<td>Public health</td>
<td>1, 3, 4</td>
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<tr>
<td>Referrals</td>
<td>2, 3, 7, 11</td>
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<tr>
<td>Rural health outreach</td>
<td>4, 11, 13</td>
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<tr>
<td>Screenings (general)</td>
<td>3, 8, 10, 11, 13</td>
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<tr>
<td>Screenings (specific)</td>
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</tr>
<tr>
<td>Dental</td>
<td>11</td>
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<tr>
<td>Mammogram</td>
<td>3</td>
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<tr>
<td>Sexually transmitted diseases</td>
<td>3</td>
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<tr>
<td>Support groups</td>
<td>12</td>
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<tr>
<td>Telemedicine</td>
<td>12</td>
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<tr>
<td>Weight management</td>
<td>7, 13</td>
</tr>
<tr>
<td>Project Title, Location</td>
<td>Project Number</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>----------------</td>
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<tr>
<td>AgraSafe, Hays, Kansas</td>
<td>5</td>
</tr>
<tr>
<td>Callam County Hospital District #1, Forks, Washington</td>
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</tr>
<tr>
<td>Cold Water Safety in the Schools Program, Sitka, Alaska</td>
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<tr>
<td>Enhancements to Healthy Families Nurturing Families, Rockport, Maine</td>
<td>9</td>
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<tr>
<td>Kid Power, Pikesville, Kentucky</td>
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<tr>
<td>Merging Medical Education and Community Health, Rockford, Illinois</td>
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<tr>
<td>Nelson County Rural Health Outreach Program, Arrington, Virginia</td>
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<tr>
<td>Nicholas County Rural Health Outreach Grant Program, Summersville, West Virginia</td>
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<tr>
<td>Parish Nurse Outreach Project, Laverne, Oklahoma</td>
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<tr>
<td>Rural Health Outreach Program for Children, Polk County, Arkansas</td>
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<tr>
<td>Rural Health Outreach Project, Hazard, Kentucky</td>
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<tr>
<td>School Health Network, Canton, Illinois</td>
<td>3</td>
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<tr>
<td>SCORE-5 for Heart Health, Farmington, Maine</td>
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</tbody>
</table>