Rural Community Paramedicine Toolkit

Please see the Mobile Healthcare Toolkit for current examples and resources, including information on community paramedicine and mobile integrated healthcare.

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Rural Community Paramedicine Toolkit

Welcome to the Rural Community Paramedicine Toolkit. This toolkit compiles emerging practices and resources to support rural communities seeking to build community paramedicine and mobile integrated health programs across the United States.

This toolkit presents practical strategies that can help rural communities build successful community paramedicine programs. In particular, it focuses on existing programs that have successfully provided rural community paramedicine services. It also offers guidance for implementation, evaluation, dissemination, and sustainability.

The target audiences for the toolkit are rural organizations including healthcare providers, such as hospitals and clinics; independent and/or county-managed emergency services providers; local and county health officials; home health agencies; and other community-based organizations.

For more information about rural community health programs, including how to develop and implement a program, please visit the Rural Community Health Toolkit.

Module 1: Introduction
Overview of community paramedicine in the U.S. and unique challenges that rural communities face.

Module 2: Program Models
Models for community paramedicine programs.

Module 3: Program Clearinghouse
Examples of promising community paramedicine and mobile integrated health programs that have been implemented in rural communities.

Module 4: Implementation
Important issues to consider and address when implementing a rural community paramedicine program.

Module 5: Evaluation
Tools that can help with the evaluation of a community paramedicine program.

Module 6: Funding & Sustainability
Resources to help with planning for the sustainability of a community paramedicine program.

Module 7: Dissemination
Ideas and resources for disseminating findings from a community paramedicine program.

Module 1: Introduction to Community Paramedicine

Community paramedicine is a field of healthcare delivery in which paramedics and emergency medical technicians (EMTs) become certified to provide additional healthcare services to patients outside the scope of traditional emergency and first responder services. The goals of these programs are to increase access to primary care and to reduce avoidable use of emergency care resources.

This module provides an overview of community paramedicine programs and describes how the community paramedicine model of care functions and benefits rural communities. It also offers an introduction to some of the unique challenges that rural communities face when building community paramedicine programs.

For general information on what to consider when starting a rural community health program, see Creating a Program: Where to Begin in the Rural Community Health Toolkit.

In this module:

- Defining Community Paramedicine
- Benefits of Community Paramedicine for Rural Community Health
- People Who may Benefit from Community Paramedicine Programs
- Integrating Community Paramedicine into Rural Healthcare Systems
- Barriers to Establishing Community Paramedicine Programs in Rural Areas

Defining Community Paramedicine

According to the Association of State and Territorial Health Officials (ASTHO), in most traditional models, the primary responsibility of emergency medical services (EMS) providers is to stabilize patients in crisis and then transport them to emergency healthcare services for treatment. **Community paramedicine** is an emerging model that enhances the role of EMS providers so they are partners in public health and community healthcare delivery.

There are two primary types of EMS employees: paramedics and emergency medical technicians (EMTs). Traditionally, paramedics and EMTs respond to emergency situations, conduct lifesaving measures, and transfer patients to healthcare settings for more advanced care. Paramedics are trained to a higher level and have a larger scope of practice than EMTs. The level of training for each role varies state by state.

Community paramedicine programs build on the existing skills and community relationships of paramedics and EMTs and provide additional skills to work in the community, such as motivational interviewing. A community paramedic may perform health screenings, home inspections, suturing, and other services while in the field or in the client's home. In their role, community paramedics address one or both of two main goals:

- Increasing access to primary care
- Reducing use of emergency care resources

These programs can align with a broader, system-wide expansion toward mobile integrated healthcare, a model of care in which healthcare professionals work in an expanded capacity outside of the clinical setting.

The National Association of Emergency Medical Technicians (NAEMT) reported in 2018 that over 200 community paramedicine programs operate in the United States, and many of them are located in rural areas. Some community paramedicine programs are focused on providing or connecting patients with primary care services.

An individual may call 911 for help when it is not a medical emergency for reasons like a lack of access to other healthcare services or transportation. However, these calls can strain limited EMS resources and fill the emergency department (ED) with patients who could be better served by a different level of care. Nationally, it has been estimated that a significant portion of ED visits for non-emergency medical issues could be addressed at a health clinic or other non-emergent setting, potentially saving over $4 billion per year in healthcare costs.

In many cases, insurers will only provide reimbursement for emergency care and services to the EMS provider when a patient has been transported to a hospital. As a result, people who do not need to visit the hospital for higher-level or more comprehensive care — and could be treated

effectively by paramedics at their current location — may be transported to the ED unnecessarily so the cost of their treatment is billable to insurance. This adds both burden to the healthcare system and stress for patients and their families.

Emergency Medical Services in Communities

EMS providers are front-line healthcare workers who are the first responders when emergency medical care is needed. *Emergency Medical Services: At the Crossroads*, a book from the National Academies of Sciences, Engineering, and Medicine, explains how the EMS system developed quickly in the U.S. in the 1960s and 1970s following research into clinical advances like cardiopulmonary resuscitation (CPR). This research provided proof of the life-saving potential of rapid response medical care, which stabilizes patients long enough to transport them to a location like a hospital with more sophisticated or comprehensive resources.

The book also notes that in the 1980s, federal funding for EMS programs declined, and local jurisdictions needed to develop their own systems for providing emergency medical care. As a result, there are several types of EMS agencies that provide services in different parts of the country.

Fire departments. EMS programs are most often affiliated with a fire department. Approximately 40% of all registered fire departments in the U.S.-provide EMS response. This affiliation is common in rural areas because having a standalone EMS program may be too costly to maintain.

Standalone or third-party EMS. Some EMS programs are privately organized and not associated with a hospital. They may be run as nonprofit or for-profit entities.

Government. Some local jurisdictions, like counties, have an EMS service that is separate from the fire department but still managed by government organizations.

Hospitals. EMS programs affiliated with a hospital account for the smallest portion of all EMS programs in the United States.

Rural areas rely heavily on a volunteer workforce. In a 2013 survey from the National Highway Traffic Safety Administration, which represents the best available national data, 43.8% of calls to rural EMS systems were managed by volunteers.

Types of Community Paramedicine Services

Community paramedics can receive training and provide a variety of different services depending on community needs and gaps in existing services.

Generally, a community paramedicine encounter will involve the community paramedic driving to a patient's home in a fleet vehicle, not an ambulance, dressed in their EMS uniform. Their activities while in the home may vary based on the patient's needs and health status. Programs typically have a set of protocols to navigate the health issues they are targeting in their patients. After initial contact with the patient, community paramedics may continue to conduct in-home visits or may check in by phone or telehealth visit, depending on the program's protocols.

California's Office of Statewide Health Planning and Development piloted different community paramedicine programs through the California Emergency Medical Services Authority (EMSA) that demonstrate how these services could be offered to different patients. Services provided in these pilots included:

Post-discharge. Community paramedics visited patients with chronic conditions who were recently discharged from a hospital. These visits can provide an opportunity to introduce patients to techniques to manage their health conditions and reduce hospital readmission.

Frequent emergency medical services users. Individuals who frequently call 911 or use emergency services for non-emergent issues were provided case management to connect them with more appropriate services including primary care, behavioral health, housing, and social services.

Directly observed TB therapy. In an attempt to prevent the spread of tuberculosis (TB), patients with TB were given directly observed therapy (DOT) by community paramedics and local public health officials who provided patients with medication and monitored the patients to ensure they took their medication properly.

Hospice. Community paramedics provided services to hospice patients in their homes to decrease their need to call emergency services and avoid difficult or unwanted hospital stays.

Alternate destination – mental health. Community paramedics identified and evaluated patients who needed mental health services rather than emergency medical care and transported them directly to a mental health crisis center rather than to the hospital emergency room.

Alternate destination – sobering center. Community paramedics transported 911 callers with acute alcohol intoxication who did not need emergency medical or mental health services to a sobering center.

More information about different types of community paramedicine programs implemented in rural communities can be found in Module 2.

Mobile Integrated Healthcare

Mobile integrated healthcare (MIH) is a term that is often used to describe community paramedicine programs but also refers more broadly to the practice of providing patient-centered healthcare services outside of the hospital or traditional clinical environment. NAEMT explains that a variety of organizations and providers can participate in MIH and are administratively or clinically linked with local EMS services, while community paramedicine is a service provided by EMS agencies that are administratively and clinically linked with the broader healthcare system. This relationship can allow MIH providers to offer services like chronic disease management, referrals to other care providers, and telephone advice instead of immediate dispatch of EMS services to 911 callers. Some agencies may also prefer to use the term "mobile integrated healthcare" to describe their program, particularly if their providers have not been required to complete advanced community paramedic training.

Benefits of Community Paramedicine for Rural Community Health

Communities have started to examine the best ways to use their emergency medical services (EMS) resources efficiently. Community paramedicine programs are one innovation that can particularly benefit rural areas because many people in rural communities have limited access to other types of healthcare. These programs are designed to supplement existing primary care, the public health infrastructure, and fill existing service gaps.

Community paramedicine services can help their communities by:

Reducing the burden on other providers. By treating patients in their homes or other locations outside the clinic, community paramedics reduce the number of patients in hospital beds, nursing homes, or emergency rooms.

Reducing unnecessary transports. In some situations, community paramedics can provide the appropriate level of care to individuals who call for help with non-emergent issues. For example, a community paramedic could assess and treat a patient who had a minor fall in their home and determine whether or not additional care and transportation to the hospital are needed.

Increasing access to primary care. Through home visits, community paramedics can provide traditional primary care services to patients. These can include routine vaccinations; wound care; or checkups for patients with high blood pressure, diabetes, or other chronic conditions. Programs may also help fill the needs of uninsured or underinsured patients who are otherwise unable to access services from home health agencies.

Improving quality of life. Through increased access to care, community paramedics provide individuals with services like home modifications that will improve patient quality of life and potentially allow them to stay independent in their own home for longer.

Supporting mobile integrated healthcare. Because community paramedics have already established relationships with healthcare providers outside of EMS, their role can bridge gaps between existing services and bring those services out into the community.

People Who May Benefit from Community Paramedicine Programs

Community paramedicine programs can increase access to primary care services for people living in areas with provider shortages, people with limited mobility, and people who can benefit from increased care coordination. This section highlights specific groups that could benefit from this increased level of care, including:

People Living with Chronic Diseases

Chronic disease is a significant cause of disability and poor health in rural areas, where about 28% of residents had at least two chronic conditions in 2016. Many of these patients with chronic diseases are older adults (aged 65 and older). For people who have multiple chronic conditions or conditions that are difficult to manage, they may rely on emergency services when they are experiencing challenges that could be addressed through primary care services like medication management. Community paramedicine programs can provide mobile, non-emergency care to fill that gap.

Homebound Patients

Community paramedicine programs involve community paramedics traveling within their communities to provide care in a way that is convenient for patients. Trained paramedics are able to visit these homebound patients and provide them with medical care, without needing to immediately transport them to the emergency room for services that may be more intensive, costly, or complex than needed. Community paramedics can help patients with their medical equipment and if it is within their program's practice guidelines, community paramedics can also provide palliative or hospice care, when appropriate.

Frequent Users of 911 with Non-Emergent Needs

Community paramedics can help frequent 911 callers with non-emergent needs by connecting them with appropriate health or social services, which can lead to a decrease in the number of emergency calls. These may be people with complex medical or mental health conditions who would benefit from care coordination, behavioral health, or primary care services.

Frail or Older Adults

Older adults and individuals in frail physical condition may not be able to access proper healthcare and may live in homes that are not properly equipped to minimize fall or injury risk. A case study in Nebraska describes a community paramedicine program that provides assistance by performing home safety inspections, during which paramedics install smoke

alarms and support bars so residents can more easily navigate through their homes. Additionally, community paramedics can support medication compliance and help families identify patients who would be best served in a nursing home or assisted living environment.

Patients Recently Discharged from the Hospital

The Center for Healthcare Quality and Payment Reform reports that within 30 days of discharge, 15% to 25% of patients are readmitted to the hospital. Preventable readmissions add significant cost to the U.S. healthcare system. Some of these readmissions are due to a lack of understanding by the patient or clear instruction from the hospital about how to transition to appropriately caring for their condition on their own, which can be addressed with the help of a community paramedic. Community paramedics can visit the patient's home and schedule follow-up calls and visits to the patient while they are transitioning back to their life at home. The community paramedic can help with adherence to the discharge information, medication management, and scheduling follow-up appointments.

Tribal Patients

Tribal patients may live in remote areas and have limited access to healthcare. This distance can result in delays to accessing care or unmet needs for preventive and primary care services. Community paramedicine programs can provide mobile primary care services, as demonstrated by the Pueblo of Laguna, New Mexico. Services include medication management and wound care directly in patients' homes or other non-clinical locations, helping patients receive more timely care and avoiding the need to travel long distances to visit the hospital or clinic.

Resources to Learn More

Paramedicine Program Strengthens Rural Health Care System

Document

Describes a community paramedicine program implemented in rural Nebraska. The program, funded by the Community Hospital Health Foundation, provided free health services to recently hospitalized patients including safety assessments and help with activities of daily living.

Organization(s): Bryan Health, Community Hospital, Community Hospital Health Foundation, McCook Clinic PC, City of McCook Fire Department

Roles of Community Paramedicine in Rural Healthcare Systems

Community paramedicine programs are not designed to provide standalone healthcare services. Instead, they serve in expanded roles and fill gaps in access to healthcare in rural communities by working closely with other providers, services, and organizations in the community. These roles can include:

Coordinating with non-emergency healthcare facilities. Community paramedics are trained to provide some services in the location in which they meet the patient. However, in some cases, additional non-emergent care, like time under observation for drug or alcohol detox, may be needed. In communities where non-emergency healthcare services are available, community paramedics can coordinate with or provide transportation to health service facilities including primary care, urgent care, mental healthcare, and substance use disorder treatment. In this way, community paramedics can support access to care in locations other than an emergency department (ED).

Transporting patients directly to alternate locations. In some cases, individuals who are experiencing a mental health crisis and request emergency services would benefit most if they received care directly from a behavioral health facility. However, when these patients call emergency medical services (EMS), they are often transported to an emergency department and then transferred to a behavioral health center. This type of transportation adds to increased emergency department (ED) wait times and delays the patient from receiving the care they truly need. Transport to an ED can also cause additional disruption or anxiety for the person in crisis. In these cases, community paramedics can assess the patient and transport them directly to a behavioral health facility, if no emergency medical services are needed. In addition to transporting patients to alternate locations, community paramedicine programs may also work with the local authority that coordinates non-emergency medical transportation (NEMT) to ensure patients have reliable transportation to medical appointments.

Providing medication management. People living with multiple chronic conditions or other serious health issues may receive multiple prescriptions. These medications can be difficult to manage, but in order to achieve the best health outcomes, they must be taken as prescribed: on time, with or without food, and timed appropriately with other medicines. Community paramedicine programs can team up with local pharmacists to conduct home visits to review medication lists or monitor conditions like hypertension.

Barriers to Establishing Community Paramedicine Programs in Rural Areas

Rural emergency medical services (EMS) and community health programs may experience some challenges when trying to establish a community paramedicine program in their jurisdiction. For more information about identifying and addressing barriers to implementation, please see Module 4: Implementation Considerations.

Funding/reimbursement. As described by the American Academy of Home Care Medicine, payers do not typically reimburse costs related to EMS, including ambulance rides, unless the patient is transported to an emergency department. Because community paramedicine programs are designed to limit the number of unnecessary transports, this means that many of their services may not be reimbursed under traditional payment models.

Many programs are currently funded through in-kind or financial support from ambulance services, hospitals, or grants. Payers are beginning to recognize the savings that community paramedicine programs can provide. For example, Accountable Care Organizations (ACOs), which are coordinated healthcare teams that incentivize providing comprehensive care for Medicare patients through value-based payment models, are now promoting community paramedicine programs. Some private insurers are also starting to consider providing reimbursement for EMS care services, even when the patient is not transported during the encounter.

Electronic health records. Rural or resource-limited communities are less likely than urban health systems to maintain comprehensive electronic health records. These electronic modes of collecting patient data are helpful for communicating patient information with additional healthcare services and providers (also called interoperability) to support a coordinated care health services model. An integrated health records system can also help agencies track outcomes for their clients. This is valuable for demonstrating program effectiveness and identifying clients who may need additional assistance.

Statutory barriers. In some states, paramedics are only allowed to respond to emergency calls and provide medical services as a first responder. Because of this and other scope of practice regulations, state and local jurisdictions may experience difficulty establishing a community paramedicine program, according to the Association of State and Territorial Health Officials. Some states, like Minnesota and Wisconsin, have passed legislation that can support the establishment of community paramedicine programs.

Concerns about duplication of services. Some roles and responsibilities filled by community paramedicine programs may overlap with the activities of existing home health/home visiting services or community health worker programs. However, each jurisdiction can consider which types of community paramedicine services would be the most important to fill the existing gaps. Community paramedicine programs are not "one size fits all."

Module 2: Promising Practices for Establishing Community Paramedicine Programs

Rural organizations implement a variety of programs to improve their communities' health and well-being. Community paramedicine and mobile integrated health programs can help rural organizations achieve their goals of expanding access to primary care health services and reducing utilization of emergency resources.

This module describes models identified by rural organizations that have established community paramedicine programs. Some EMS providers have conducted evaluations or return on investment studies that indicate significant improvements in health status for patients and cost savings for the health system. However, there are few national guidelines or recommendations that cite broader evidence of their efficacy. As a result, these models are considered emerging and promising practices unless otherwise noted.

This toolkit identifies five types of models that characterize the activities of rural community paramedicine programs. No single practice is appropriate for every rural program. Rural organizations may combine different practices or implement more than one practice to meet their needs and the needs of their community.

A needs assessment or gap analysis can be a valuable tool to determine which community paramedicine model(s) are a good fit for the needs of a community. For more information on conducting needs assessments, please visit Module 4: Implementation Considerations.

To learn how to identify and adapt interventions for a rural community health program, please visit Developing a Rural Community Health Program in the Rural Community Health Toolkit.

In this module, promising and emerging models for implementing a community paramedicine program have been grouped into five categories:

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

Community Paramedicine Models for Prevention and Health Education

Prevention and health education represent one significant role for community paramedics in the healthcare system. Through home visits, telehealth appointments, and telephone check-ins, community paramedics can identify medication errors, environmental risks, or problems with durable medical equipment that are not often identified in a traditional clinical or healthcare setting.

Medication Management

People with complex chronic conditions often have many prescriptions, each with their own dosing schedules, warnings, and instructions. This complexity can make it challenging for patients to take their medication safely and correctly each day. In addition, because these prescriptions often come from multiple providers, patients may not have support managing their medication lists. There may be contraindications, errors in dosage, drug type, or patient usage, resulting in adverse drug events that can be harmful or even fatal.

One important role for community paramedics is to help patients manage medications. Community paramedics can help set up reminders, explain dosing instructions, identify medication management issues like improper storage, and uncover errors in their medication list. Medication reconciliation has three steps:

- **Verification:** Developing a comprehensive list of all current prescriptions
- **Clarification:** Confirming medications and dosage are appropriate
- **Reconciliation:** Making necessary adjustments to the list to ensure no errors, duplications, or omissions

Community paramedics can work with patients and other healthcare providers to conduct all three steps of this process. Using the Medication Management Strategy from the Agency for Healthcare Research and Quality (AHRQ) or another method, community paramedics can help patients develop a comprehensive list of their current prescriptions.

Once the list is correct, the community paramedic confirms its contents with the patient's providers, ensuring that all dosages are correct and all medications are still currently needed to manage their health. Then, either on their own or with support from a community pharmacist, the community paramedic conducts a medication reconciliation process, which will ensure there are no contraindications, drug-drug interactions, or drug-disease interactions that may cause harm.

A final responsibility of medication management is to provide patient education. The community paramedic can work with the patient and their family or caregiver to ensure they understand how and when to take each medication, along with any potential warning signs of adverse drug events that should be shared with their primary care provider.

Safety Assessments

Community paramedics conducting home visits are well-positioned to observe any issues in the patient's home that may pose safety risks. Particularly for elderly or frail patients, tripping hazards like throw rugs, broken stairs, ill-fitting slippers, or electrical cords may pose a risk for falls. Up to half of falls may be caused by these environmental risk factors. Home safety checks can help identify modifications that make it easier and safer for patients to age in place, including installing grab bars, adequate lighting, and non-slip surfaces.

By identifying these issues early, community paramedics can prevent accidents that may later result in a 911 call or emergency room visit.

Medical Equipment

Community paramedicine programs can also conduct safety checks of home durable medical equipment (DME) like nebulizers, wheelchairs, or continuous positive airway pressure (CPAP) machines. They can also help manage maintenance and distribution of DME for community lending closets that provide access to patients who are otherwise unable to obtain DME on their own.

Chronic Disease Management

People living in rural communities are more likely to have multiple chronic conditions, which has a significant impact on quality of life. With the right tools, including patient education, people can often manage their condition at home. This results in better long-term outcomes and saves both time and money for the patient and the health system.

Community paramedicine programs focus on a range of chronic conditions including diabetes, chronic obstructive pulmonary disease (COPD), congestive heart failure (CHF), and asthma, depending on the needs of their patients. Their activities include checking and counseling patients on blood glucose levels, conducting regular weigh-ins with patients living with CHF, checking blood oxygen levels, and discussing the patient's current disease management strategies so they can be modified as needed.

A community paramedic engages the patient in an iterative process to ensure they understand how best to manage their disease. This includes education about symptoms, lifestyle

modifications, warning signs for worsening health, and proper use of medication or equipment. The patient also works with the community paramedic to practice their self-monitoring and disease management techniques and teaches-back their medical plan to the paramedic.

Examples of Rural Prevention and Health Education Programs using Community Paramedics

- The Help for Seniors program in Livingston County, New York, works with older adults in the community to identify unmet health needs. It also educates emergency medical services (EMS) providers on geriatric health issues. The program includes in-home screening for falls risk, medication management needs, and depression. Of program participants, 91% had identified needs that were then referred to case managers for a follow-up home visit.
- ThedaCare and Gold Cross Ambulance in northeastern Wisconsin have partnered to develop a community paramedicine program that serves a variety of patients referred from hospital and primary care settings. Through funding from the Moore Foundation's Community Management of Medication Complexity Innovation Lab, the team was able to expand its program to focus on patients whose complex prescription regimens put them at increased risk of hospitalization. By developing a Medication Risk Score, community paramedics were better able to assess which patients needed extra support to improve their health.

Considerations for Implementation

Community paramedics may rely on the services of other health professionals to deliver prevention services or education messages to their patients. For example, a pharmacist may be needed to review medication lists to identify potential drug interactions or incorrect dosages. However, they may be unable to attend the home visit in person due to distance or competing priorities. Telehealth can be a valuable tool to facilitate participation in the visit.

If programs are using telehealth to deliver services, access to high-speed internet is often necessary. For patients without high-speed internet in their home or who live in places without high-quality cell phone service, this can be a key limitation. Some community paramedicine programs have installed hot spots in their vehicles or have provided signal boosters to patients in order to better facilitate communication with other healthcare providers. For more information about broadband access, see Module 4: Implementation Considerations.

Program Clearinghouse Examples

- Manatee County Department of Public Safety Community Paramedic Program
- Queen Anne's County Mobile Integrated Community Health (MICH) Program
- United Ambulance Service

Resources to Learn More

Newborn Home Safety Assessment

Document

Identifies potential risks to newborns and small children including outdoor hazards like pools or hot tubs and indoor hazards like appliance cords or unsecured furniture.

Author(s): Magen Hall

Organization(s): The South Carolina Community Paramedic Advisory Committee, Abbeville County EMS

Date: 3/2018

Community Paramedicine Models for Improving Access to Primary Care

Community paramedics play an important role on a patient's care team because they can deliver basic primary care services in the patient's home without requiring them to travel to a clinic. In rural communities where transportation may be difficult to obtain or distance is a barrier, community paramedicine services can ensure prompt care and identify health issues that need to be escalated to another provider. Community paramedics can also facilitate communication between the patient and their primary care provider.

Connecting with Primary Care

In rural communities, limited transportation may be a barrier to accessing primary care, especially for people who are elderly or homebound. Community paramedics help fill that gap by offering these services directly in the patient's home. In addition, if specified as part of the patient's care plan, community paramedics can help connect patients with a new primary care provider or medical home.

Monitoring Vital Signs

Community paramedics can conduct a variety of physical assessments during a home visit, including weight, blood pressure, heart rate, blood glucose, and oxygenation level. Routine monitoring of these data helps providers understand what is “normal” for a given patient and detect changes that indicate a potential problem. For example, weight gain in patients with congestive heart failure often indicates their condition is getting worse.

Vital signs readings can be shared with the patient's primary care provider or other specialists managing their care. Changes may signal to the provider that the patient's medications should be adjusted or other interventions should be explored.

In addition to vital signs checks during a home visit, some rural community paramedicine programs use in-home patient monitoring devices that send data remotely to the paramedic using Bluetooth or Wi-Fi connectivity. Providers can more closely manage their patient's vital signs without requiring a home visit, though one may be triggered if the patient's health status changes unexpectedly.

Other Primary Care Functions

Depending on scope of practice regulations in the state in which the program is operating, community paramedics can complete additional activities that often take place in primary care settings. This is particularly beneficial when patients are unable to obtain transportation to

their primary care provider or live in frontier and tribal communities where primary care services are limited.

Specimen collection. During a home visit, community paramedics can draw blood, collect urine, or obtain other materials that are needed for laboratory tests ordered by the patient's provider. These specimens are then transported to a laboratory for analysis. The patient's provider can discuss the results with the patient by phone, or the community paramedic can share them at a follow-up visit. Alternatively, some community paramedicine programs are exploring point of care testing, which is done by the paramedics while at the patient's home. In consultation with the provider, results of these tests can help the paramedic make decisions about whether a patient needs prompt care at a medical facility.

Vaccination. Working with the local health department, community paramedics can provide routine vaccinations to their patients, including seasonal influenza, childhood vaccines, and hepatitis A. This service can be particularly important for homebound older adults or people living with disabilities who are at increased risk for developing serious flu complications.

Wound care. Chronic wounds or wounds that do not heal properly can be due to poor circulation in the legs and feet, a complication of diabetes, or pressure ulcers resulting from poor mobility. Treatment is beneficial to speed healing and minimize the risk of infection. Depending on the patient's needs and program protocols, community paramedics may make a home visit or use telehealth to examine the wound for concerning changes that indicate an infection and clean and dress the wound as needed.

Examples of Rural Community Paramedicine Programs Improving Access to Primary Care

- The Laguna Community Paramedicine Program at the Laguna Fire and Rescue Department in western New Mexico was formed to serve members of the Pueblo of Laguna. Based on previously identified needs in the community, the program focused on chronic wound care for geographically isolated, elderly patients who were unable to travel long distances to Albuquerque for regular treatment. In the first two years of the program, community paramedics made 221 visits and saw improvement in patients' conditions.
- The Regional Emergency Medical Services Authority (REMSA) in Washoe County, Nevada, uses remote health monitoring devices to track patients' vital signs. The Bluetooth devices, which were purchased through a USDA grant, monitor blood pressure, blood oxygen, weight, and physical activity. This information is then transmitted back to the patient's medical record, where community paramedics can monitor their health and share data with the patient's primary care provider. REMSA

also offers in-home nebulizer treatments, intravenous rehydration, EKG testing, and point-of-care lab tests to provide immediate results to the patient's healthcare provider.

- Located in a rural resort community in Colorado, Eagle County Paramedic Services runs one of the longest-standing community paramedicine programs in the U.S. Its comprehensive services include a well-baby program, blood draws, wound checks, immunizations, and intravenous catheter changes.

Considerations for Implementation

If the program does not have available resources to increase the certification level for participating staff, one option may be to partner with a community nurse from the public health department who has an additional license and can provide primary care services that are out of the paramedic's or emergency medical technician's scope of practice. This model can increase the range of services provided by the program and help strengthen partnerships with local public health authorities.

One key to success is implementing data systems that share patient information across platforms with emergency medical services (EMS), the local hospital, primary care, and other healthcare providers. This kind of data sharing ensures all members of the patient's care team are aware of changes in health status, hospital admissions, and updated prescriptions. There are several EMS data platforms with built-in capability to interface with major electronic health record providers that capture the work of community paramedics, which are structured differently from traditional incident-based EMS systems. If technical incompatibility makes it challenging to share patient data, case conferencing with providers, EMS, and community organizations can accomplish many of the same goals while coordinating care plans and avoiding duplication.

Some pharmaceutical or medical equipment manufacturers provide patients with free glucose meters. Community paramedics can work with distributors to obtain the glucose meters and provide education to the patient on how to use and care for their new device. Newer glucose meters provide historical data to the patient's primary care provider about how often they are checking their blood sugar and what the readings have been. This information helps the provider understand how well the patient is managing their diabetes at home.

Program Clearinghouse Examples

- Flagler County Fire Rescue Community Paramedicine Program
- United Ambulance Service
- Nevada Rural Hospital Partners Community Paramedicine Program
- Queen Anne's County Mobile Integrated Community Health (MICH) Program

Community Paramedicine Models for Post-Discharge Follow-Up Care

The first few weeks after being discharged from the hospital can be difficult for many patients as they transition back home. 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 to reduce avoidable readmissions and help patients get comfortable with their new health routines. As a result, protocols generally call for an initial contact with the patient no more than 72 hours after their discharge.

Local home health agencies are often the traditional community providers for post-discharge follow-up. However, if they are not able to see a patient within their first few days at home, community paramedics can fill the gap by conducting early visits for patients who are waiting for a home health appointment or may be ineligible for home health services because of their insurance status.

A community paramedic's responsibilities during a post-discharge visit may include reviewing next steps and discharge instructions, discussing and planning for lifestyle changes, educating patients on how to manage new medications, and ensuring people have appropriate temporary or permanent physical accommodations and medical equipment to support their recovery.

Evaluation data suggest that community paramedicine programs have a significant impact on readmission rates. One pilot program in urban Oregon found a readmission rate of 6.3% for program participants, compared to 23.5% of patients who did not participate.

Examples of Post-Discharge Follow-Up Care by Rural Community Paramedicine Programs

- Abbeville County's Community Paramedic Program served rural western South Carolina and was designed with a goal to reduce hospital readmissions. The program received referrals from providers whose patients are hospitalized and conducted home visits within 72 hours of discharge. At each visit, the paramedic also worked with the patient's family or other caregivers to discuss how best to manage their care. In a 2015 evaluation, the program had reduced 30-day readmission rates by 41.2%.
- In West Virginia, the Kanawha County Ambulance Community Paramedicine Program was developed to reduce costs from hospital readmissions and frequent emergency room visits. In its first year of operation, the program achieved a decrease in readmissions and an increase in Patient Activation Measure (PAM) scores, which indicate people who participated in the program are more confident in their ability to manage their health.

Considerations for Implementation

For communities just beginning to implement a community paramedicine program, post-discharge follow-up can be a good starting point. This model offers opportunities to build partnerships with local hospitals and home health agencies, which can later be expanded to accommodate new lines of work. People living in rural communities also often have a higher burden of chronic disease and may benefit from post-discharge follow-up, including for heart failure, chronic obstructive pulmonary disease (COPD), pneumonia, and diabetes.

A focus on reducing readmissions may be a particularly good fit for emergency medical services (EMS) operated by hospitals that could be financially penalized for higher-than-average readmission rates. The Hospital Readmissions Reduction Program is a Medicare value-based purchasing program that cuts reimbursement for some hospitals based on their rates of avoidable readmission for patients with six conditions including heart failure, coronary artery bypass graft surgery, and hip and knee replacements. Therefore, implementing a community paramedicine program may be a good investment for the hospital system. Critical Access Hospitals are exempt from these penalties but may be incentivized to reduce readmissions through the Medicare Beneficiary Quality Improvement Project.

Program Clearinghouse Examples

- Baxter Regional Medical Center Community Paramedic Mobile Healthcare
- Johnston County Emergency Medical Services Community Paramedic Program

Resources to Learn More

Community Paramedic Pilot Program: Congestive Heart Failure

Video/Multimedia

Presents an interview with a community paramedic from the Glendale Fire Department discussing the elements of its program, which targets post-discharge patients with congestive heart failure. Paramedics conduct vital signs screening and provide education on disease management. The program was a pilot project of the California Emergency Medical Services Authority.

Organization(s): Glendale Fire Department (California)

Date: 2/2016

Congestive Heart Failure Readmission Prevention Program

Document

Describes a readmission prevention program developed specifically to support patients with congestive heart failure. Discusses the enrollment process, core program components, coordinating the patient care with other providers, and results of the program evaluation.

Organization(s): MedStar Mobile Healthcare

Update of Evaluation of California's Community Paramedicine Pilot Program

Document

Summarizes the findings from the California Community Paramedicine Pilot Program with a focus on post-discharge, frequent users of emergency medical services, direct therapy, transportation to alternate destinations, and treating hospice patients. Includes information about how each intervention was structured, each site's readmission rates before and after the program, services provided by the paramedics, and the estimated potential savings to payers.

Author(s): Coffman, J., Blash, L., & Amah, G.

Organization(s): Healthforce Center, University of California, San Francisco

Date: 2/2019

Community Paramedicine Models for Reducing Use of Emergency Resources

Traditional models of emergency medical services (EMS) generally involve rapid response to the scene, life-saving or stabilizing measures, and then transportation to an emergency department (ED) or other facility that can provide higher-level care. However, this model is not always a good fit for every situation when a person may dial 911. Not only is ED care expensive, but the ED may be providing a level of care that is not aligned with the patient's needs. In rural communities with limited EMS and ED capacity, community paramedicine can be employed to achieve both goals: conserve resources for emergent issues and provide more cost-effective, beneficial care to patients.

Arizona has developed a model called the Treat and Refer Recognition Program, which provides urban and rural EMS agencies with greater flexibility to determine the appropriate destination for a 911 caller, including primary care or behavioral healthcare services. Once in the program, first responders are given enhanced responsibilities to assess the patient's condition and determine how best to proceed. First responders are still able to receive reimbursement even if the patient is not transported to the ED. EMS providers are advised to obtain community paramedicine training to strengthen their application to the program.

Frequent EMS Callers

A study by the Rural Policy Research Institute and Stratis Health reports that 5% of patients account for 25% of emergency department visits in the U.S. These patients, called “super-utilizers,” often have complex health issues that may be compounded by significant social, mental health, or physical resource needs that make it difficult to manage their conditions. As a result, they bounce between home, the emergency department, and the hospital, which is distressing, ineffective, and costly.

Often, super-utilizers resort to calling 911 because they need support for a range of medical and non-medical needs but do not have the ability or resources to seek out alternative solutions. This issue may be particularly challenging in rural areas, where there are fewer primary care providers and where services are more likely to be closed evenings and weekends. However, traditional EMS providers are not well-suited to provide care navigation and resource referrals, which can better suit super-utilizers and help stabilize their health.

Community paramedicine programs often target super-utilizers because of the disproportionate share of EMS and/or hospital resources that are used to respond to their 911 calls. Programs generally begin by defining super-utilizers in their community, based on data from their EMS call logs and knowledge of their patients.

Once eligible patients have been recruited, community paramedics use regular home visits to help the patient stabilize their health, including medication education, symptom management, lifestyle coaching, and linkage to primary care. The community paramedic will also conduct an assessment to determine the patient's social resource needs. Referral to social services can help the patient address some of the underlying issues that have led to their frequent use of the EMS system. More information about community and social services referrals is available in Referrals for Social Services.

One model that has been adopted by fire departments in a variety of settings is the Community Assistance Referral and Education Services (CARES) program, which targets super-utilizers by engaging with cross-agency partners who can better serve the patient's needs. Clients are assigned a "navigator" who helps manage their care. The goal of this program is to reduce 911 calls coming into the fire department's EMS unit.

Hospice Care

For many patients with terminal illness, hospice agencies offer palliative care. The goal is to relieve suffering rather than cure disease, and generally emergency life-saving measures are not taken to prevent or postpone death. However, caregivers may reflexively call 911 rather than their hospice nurse if the patient appears to be in distress. This can trigger an EMS visit and transportation to the ED, even if that is not aligned with the patient's stated wishes. It may also result in a disenrollment from hospice, which could make it more difficult for the patient to receive those services at a later time.

Community paramedics can work with home hospice agencies to better serve these patients and their families. Once patients are dually enrolled in hospice and the community paramedicine program, EMS will be made aware of the patient's wishes and can ensure they are carried out when responding to a 911 call. EMS can also notify the hospice agency and utilize the patient's comfort pack (which includes medications to relieve pain) as needed until the hospice nurse arrives.

Alternative Destination

Particularly in rural communities with limited alternatives, 911 may be called for people who need assistance other than emergency medical treatment. For example, a person experiencing a psychiatric crisis may need mental health services, or a person with a substance use disorder may need a safe place to detox. However, an ED is often not the best place to receive this help because these facilities are not appropriate and staff do not have the proper training. More immediate physical issues (like a heart attack) receive precedence for care. Other times, a

family may call 911 for healthcare because they do not have a primary care alternative and may be better served by an urgent care clinic than the ED.

Estimates of the total number of non-urgent ambulance transports vary but range from 11%-61% of trips to the ED. Community paramedicine programs can decrease demand on ED resources by triaging patients in the field to ensure there are no life-threatening medical issues, obtaining their consent for an alternative destination, and then bringing the patient to a sobering center, mental or behavioral health clinic, or urgent care.

Because emergency medical technicians and paramedics do not have the same training or facilities available to assess a patient's status compared to an ED, additional training (such as a community paramedic certification) and medical director supervision may be important components of an alternative destination program to ensure patients are accurately triaged.

One challenge with this model is reimbursement, as many EMS providers only receive payment when the patient is transported to the ED. Some rural programs have been able to work with private payers, Medicaid agencies, or state health departments to develop pilot programs or payment models that facilitate alternative destination services.

Examples of Rural Community Paramedicine Programs Reducing Use of Emergency Resources

- Bedford County Fire & Rescue in south central Virginia has implemented a pilot program to reduce the frequency of 911 calls. Community paramedics and a social worker conducted regular home visits with high utilizers and connected them with social services, including food pantries. Over the course of the project, call volume from the participants decreased by 60%. Based on this success, the county has created a dedicated Department of Social Services position to continue serving high utilizers moving forward.
- McDowell County EMS in North Carolina implemented a pilot Community Care Paramedic Program, funded by the Kate B. Reynolds Charitable Trust. The program includes alternate destination transportation to a behavioral health clinic for patients experiencing a mental health emergency. It was also designed to avert ED visits by high utilizers through home visits to identify problems (like broken medical equipment or medication issues) and address them with the patient's primary care provider. An evaluation calculated that 125 EMS transports and ED visits were avoided during the pilot program.

Considerations for Implementation

While reducing use of EDs and ambulance transports can lower overall costs to the healthcare system, some rural hospitals or EMS systems struggle with volume and rely on ED visits for needed revenue. Therefore, it is important to meet with all stakeholders and identify potential unintended consequences of a new program. Exploring alternative payment models may be one option to ensure all participating organizations benefit from the community paramedicine program.

Program Clearinghouse Examples

- Flagler County Fire Rescue Community Paramedicine Program
- Nevada Rural Hospital Partners Community Paramedicine Program
- Manatee County Department of Public Safety Community Paramedic Program

Resources to Learn More

ED Utilization – Right Care. Right Place. Right Time.

Document

Identifies the challenges with emergency department (ED) utilization in rural Missouri communities. Compares national and state trends in ED usage. Demonstrates strategies to improve utilization such as using community paramedics to provide managed care for patients with chronic conditions and to address the needs of patients identified as super-utilizers of the ED.

Author(s): Williams, A.

Organization(s): Missouri Hospital Association

Date: 12/2017

Hospice Partnership

Document

Describes the Hospice Partnership, a program developed by MedStar Mobile Healthcare to serve patients enrolled in hospice care. Discusses enrollment and program procedures and the results of the first demonstration project.

Organization(s): MedStar Mobile Healthcare

Community Paramedicine Models for Referrals for Social Services

In addition to performing critical primary care functions, community paramedics often provide support to patients through care navigation and linkage to the social services sector. Because community paramedics are in the patient's home, they can ask questions or identify issues that are otherwise not visible to a provider in a clinic but which may have an impact on the patient's health and well-being. Community paramedics can be the “eyes and ears” of the healthcare system within a patient's home. In addition, for homebound or socially isolated people, community paramedics can be an important connection to the outside world.

Community paramedics can build relationships with other human and social services organizations in the community and develop detailed lists of contacts, referral options, and resources. Because of their deep understanding of the local social services landscape, community paramedics may be able to leverage their relationships with these organizations to help their clients secure services. They may also be able to provide support navigating eligibility requirements or applications for services, which can be particularly difficult for people with poor internet connectivity or low literacy skills.

Depending on patient need and the availability of community services, community paramedics may be able to offer a variety of referrals to services, including:

- Nutrition – Meals on Wheels, food pantries, Supplemental Nutrition Assistance Program (SNAP) applications
- Phone/internet assistance
- Substance use treatment or support groups
- Medical or non-medical transportation
- Older adult services – Area Agency on Aging, Alzheimer's support groups, senior centers
- Legal services
- Housing assistance
- Healthcare coverage, such as applications for Medicaid

For more information about addressing social determinants of health in rural communities, please visit the Social Determinants of Health in Rural Communities Toolkit.

Examples of Referrals for Social Services from Rural Community Paramedicine Programs

- Tri-County Health Care EMS in Wadena, Minnesota, provides home visits to patients at high risk of readmissions and works with clients who are frequent emergency medical service users. The program also receives referrals from providers who have identified patients needing additional support obtaining health resources. Every two weeks, program clients receive a visit from a multi-disciplinary team that includes a social worker, who is able to further tailor their care plan or make additional referrals as needed.
- The Flagler County Fire Rescue Community Paramedicine Program works with Access Flagler First, a community coordinating entity, to develop and update detailed lists of available resources in their community. These directories can be used to provide referrals to clients with human or social services needs. Partnerships with these organizations are strengthened through regular, quarterly meetings to share experiences, update one another on new programs or resources, and case-conference about shared clients.

Considerations for Implementation

Compared to urban areas, rural communities have a limited human or social services sector, though need is still often present for supports that help people live healthier and more productive lives. Community paramedics can be important advocates for their clients to access limited resources, making strong relationships with human and social services organizations very beneficial.

If possible, EMS agencies should participate in or convene meetings of key local stakeholders. Case conferencing and regular partner meetings can be particularly useful for linking individual patients to needed resources and identifying gaps in care.

In rural areas, faith-based organizations are often important stakeholders and provide many social and community services. Community paramedicine programs can partner with other non-traditional organizations that may facilitate access to resources for their patients.

Program Clearinghouse Examples

- Johnston County Emergency Medical Services Community Paramedic Program
- Flagler County Fire Rescue Community Paramedicine Program

Resources to Learn More

Patient Health and Wellbeing Questionnaire

Document

An initial intake form listing a variety of social services needs related to mental health, social isolation, substance use, and ability to accomplish activities of daily living. Patients can select areas for which they need assistance and community paramedics can use the form for developing a case management plan. Form can be modified to reflect available services in the target community.

Organization(s): Cranberry Township EMS (CTEMS)

Module 3: Program Clearinghouse

Organizations around the country are implementing community paramedicine and mobile integrated health programs tailored to address the needs of their rural community.

Examples of organizations that have developed promising programs designed to implement community paramedicine in rural areas are provided below. Evidence-based and promising service models for implementing community paramedicine programs are available in Module 2.

- Baxter Regional Medical Center Community Paramedic Mobile Healthcare
  Synopsis: This program, operated by a community hospital's ambulance service, connects patients who are high emergency service utilizers or experience chronic health issues with community paramedics who help them navigate the health system and adhere to a care plan.
- Flagler County Fire Rescue Community Paramedicine Program
  Synopsis: Supported by Flagler County Fire Rescue, this program currently connects over 200 patients with necessary local medical and transportation services. Their services are offered to patients based on medical transport history.
- Johnston County Emergency Medical Services Community Paramedic Program
  Synopsis: In a recent evaluation, Johnston County's Community Paramedic Program reduced readmission rates by 90% within 30 days of discharge for patients who experience chronic heart failure, chronic obstructive pulmonary disease (COPD), and diabetes. The program receives funding support from the local hospital.
- Manatee County Department of Public Safety Community Paramedic Program
  Synopsis: This program provides uninsured or underinsured patients who are frequent emergency services utilizers or experience diabetes, frequent falls, respiratory conditions, or substance use disorder with in-home services to manage their health and prevent hospital readmissions.

- Queen Anne's County Mobile Integrated Community Health (MICH) Program
  Synopsis: Queen Anne's County Department of Health and Department of Emergency Services have partnered to deliver a mobile integrated health program in which community nurses and paramedics conduct home safety checks and physical and social needs assessments to improve patients' health.
- United Ambulance Service
  Synopsis: United Ambulance Service provides its patients with a host of in-home health services, like home safety and well-being checks, medication reconciliation, vaccinations, health screenings, chronic disease management education, and wound care services. This program serves patients who lack access to resources, like home health care, and aims to connect each patient with a primary care provider.
- Nevada Rural Hospital Partners Community Paramedicine Program
  Synopsis: With specially trained Advanced EMTs, the Nevada Rural Hospital Partners Community Paramedicine Program utilizes in-home visits and remote monitoring devices to care for patients with chronic conditions.

Baxter Regional Medical Center Community Paramedic Mobile Healthcare

- **Program Representative Interviewed:** Gerald Cantrell, RN/Paramedic
- **Location:** Mountain Home, Arkansas
- **Program Overview:** The Baxter Regional Medical Center Community Paramedic Mobile Healthcare program's goal is to reduce 30-day hospital readmissions. Community paramedics are trained through a training program developed in conjunction with the University Arkansas. Patients are referred to the program by emergency department, hospital, and emergency medical services staff, or their primary care provider. Their community paramedics perform in-home visits and provide resource management and medication assessments to patients discharged from the hospital who experience chronic heart failure, chronic obstructive pulmonary disease (COPD), pneumonia, hip and joint issues, and coronary artery bypass surgery. The paramedics communicate with patients' primary care provider to develop a 30-day care plan intended to reduce the rate of hospital readmissions. The program primarily serves the Medicare population, typically serves 600-700 patients a year, and has a 96% success rate in helping patients manage their health and graduating them from the program after 30 days.

Models represented by this program:

- Prevention and Health Education
- Post-Discharge Follow-Up Care
- Reducing Use of Emergency Resources

Flagler County Fire Rescue Community Paramedicine Program

- **Program Representative Interviewed:** Caryn Prather, Community Paramedic
- **Location:** Flagler County, Florida
- **Program Overview:** The Flagler County Fire Rescue Community Paramedicine Program was first developed to address the needs of 10 patients who were frequent emergency service utilizers (people who had called 911 more than twice in the past four months) and now has enrolled over 200 patients. The program identifies new patients for the program by monitoring the Flagler County Fire Rescue reporting system and receiving referrals from paramedics who have visited a patient's home multiple times in the past week. Patients typically includes individuals who experience chronic heart failure, chronic obstructive pulmonary disease (COPD), emphysema, diabetes, and falls. Program staff perform home safety inspections, hospital discharge education, blood sugar education for patients with diabetes, and vital sign checks for patients with chronic heart failure and COPD. Some program staff are also certified to administer vaccinations to patients. The program receives supplemental help from paramedics on light duty and program volunteers with a clinical background.

Models represented by this program:

- Prevention and Health Education
- Post-Discharge Follow-Up Care
- Reducing Use of Emergency Resources
- Referrals for Social Services

Johnston County Emergency Medical Services Community Paramedic Program

- **Program Representative Interviewed:** Ashley Nelson, Community Paramedic Coordinator
- **Location:** Johnston County, North Carolina
- **Program Overview:** Johnston County Emergency Medical Services Community Paramedic Program's goal is to reduce hospital readmission rates. The program has access to the hospital's electronic health records and reviews discharge and readmission data to identify potential clients. The program provides a variety of case management services including medication reconciliation, home safety assessments, vital sign checks, doctor appointment scheduling, and connecting patients with support services like Meals on Wheels. The program assesses patients through its health confidence score, which asks patients to rate how confident they are in managing their health on a scale of 1 to 10. Patients rate their health confidence at the beginning and end of the program and must achieve a score of eight or greater to graduate from the program. Most patients are enrolled in the program for an average of 30 days. Johnston County's program has a 90% success rate in preventing readmissions for high-risk patients. Initially, the program was supported by a Duke Endowment Grant. Since the grant funding has expired, the county and the local hospital system provide funding to support the program.

Models represented by this program:

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

Manatee County Department of Public Safety Community Paramedic Program

- **Program Representative Interviewed:** James Crutchfield, EMS Chief
- **Location:** Manatee County, Florida
- **Program Overview:** Manatee County Department of Public Safety Community Health Program (formerly the Community Paramedicine program) reviewed its community health assessment to determine its program's target audience. Funded by local tax dollars, the program serves frequent emergency service utilizers and patients who have diabetes, respiratory conditions, and substance use disorder, as well as people experiencing frequent falls. Initially only serving patients with diabetes, the program added new patients to its program every 60 days, taking a year to roll out its full capacity and reach. Patients are referred to the program through a variety of methods: paramedics use their 911 call database to identify eligible patients; paramedics refer patients through their documentation platform; and primary care providers, hospital staff members, churches, and social groups may refer patients to the program. Patients may remain in the program for a maximum of 90 days. On average, patients spend 65-68 days in the program. To graduate from the program, patients must meet the health goals set by the community paramedics, be aligned with a primary care provider, and have not used the pre-hospital system or had an unplanned hospital visit in the last 30 days. If necessary, the program provides patients with medical supplies, like walkers and wheelchairs, from its medical supply lending closet. The program uses an electronic healthcare coordination platform developed for EMS providers, which allows the community paramedics to document their interactions with each patient and review documentation from pharmacists, social workers, and other providers. Program leadership meet quarterly with emergency medical service groups and state leadership to share ideas, success stories, and challenges in treating their patients.

Models represented by this program:

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

Queen Anne's County Mobile Integrated Community Health (MICH) Program

- **Program Representative Interviewed:** Jared Smith, Program Manager
- **Location:** Queen Anne's County, Maryland
- **Program Overview:** Queen Anne's County Mobile Integrated Community Health (MICH) Program sends paramedics and community nurses on home visits. The nurse performs comprehensive health and social needs screenings while the paramedic conducts physical assessments and home safety checks. This arrangement has made it possible to deliver the program without requiring additional training for their paramedics. The program conducts home safety checks; medication inventories; and assessments of physical health, health literacy, medical history, financial status, and social networks. The first in-home visit also includes a televisit with a pharmacist at a local hospital to discuss the patient's medications. Patients may have an additional telehealth appointment if the community paramedic and nurse identify medication changes during a follow up visit. Based on the results of the health and safety assessments, the community nurse connects patients with medical resources, including a medical home and insurance services. After the initial visit, the program follows up with patients in three-month intervals, alternating between phone calls and home visits. The program graduates 75% of patients out of the program after one year.

Models represented by this program:

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

United Ambulance Service

- **Program Representative Interviewed:** Dennis Russell, Community Paramedicine Manager
- **Location:** Lewiston, Auburn, and Bridgton, Maine
- **Program Overview:** United Ambulance Service provides in-home inspections, safety checks, medication reconciliation, well-being checks, vaccinations, health screenings, chronic disease management education, and wound care services to participants in its community paramedicine program. Community paramedics also connect patients in the program with a primary care provider if they do not already have one. The patients includes individuals who have limited resources and limited access to home health care, often because they lack comprehensive insurance coverage. The program has partnered with other types of organizations, including mental health and substance use services and Meals on Wheels, to connect patients to the resources they need. United Ambulance Service requires that all their community paramedics are CPC or CPT trained and currently employs 1.5 full-time employees.

Models represented by this program:

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

Nevada Rural Hospital Partners Community Paramedicine Program

- **Grant Period:** Rural Health Network Development Program (2017-2020)
- **Program Representative Interviewed:** Matt Walker, CEO William Bee Ririe Hospital
- **Location:** Ely, Nevada
- **Program Overview:** The Nevada Rural Hospital Partners Community Paramedicine Program targets patients with chronic conditions who are frequent utilizers of emergency department services. Patients are enrolled in the program under a specialized care plan determined by their primary care provider with the goal of reducing their ED visits and hospital readmissions. The program provides patients with biometric health screening devices that record blood pressure, blood oxygen, weight, and activity remotely through a Bluetooth system. The system records these data points in the patient's health record, allowing the patient's providers to monitor their health and follow up if the data indicate a change in status. The program serves patients of all payer types but primarily receives reimbursement from Nevada Medicaid.

Models represented by this program:

- Prevention and Health Education
- Post-Discharge Follow-Up Care
- Reducing Use of Emergency Resources
- Referrals for Social Services

Module 4: Implementation Considerations for Establishing a Rural Community Paramedicine Program

This module presents cross-cutting implementation considerations to guide rural organizations as they plan for a community paramedicine or mobile integrated health program.

For an overview of possible implementation challenges, see Module 1: Barriers to Establishing Community Paramedicine Programs in Rural Areas.

For an overview of rural program implementation, see Implementing a Rural Community Health Program in the Rural Community Health Toolkit.

In this module:

- Organizational Buy-In/Partnerships
- Community Health Assessment
- Training
- Population Considerations
- Broadband Access
- Patient Referrals
- Program Staff

Organizational Buy-In and Partnerships for Community Paramedicine Programs

Community readiness is an important factor for creating a successful program. When implementing a new program, it is important to gain community buy-in from local leaders and organizations. Obtaining buy-in early in the process of developing the program can be useful to gauge overall readiness and to identify potential areas of concern so they can be addressed early.

Programs should research stakeholder organizations in their area that serve the intended patients and invite stakeholders to discuss the creation of a community paramedicine program.

Stakeholders may include:

- Hospitals
- Family medicine/primary care providers
- Local public health agencies
- Home health agencies
- Community health workers
- Local emergency medical service providers
- Law enforcement

Identifying and meeting with stakeholders can help the community understand the purpose of and need for a community paramedicine program and gain support for establishing and maintaining it. This engagement will also provide insight into how community stakeholders think the program can benefit patients and start discussions about how programs can support one another. Such conversations can help stakeholders feel engaged in creating a program that will benefit their organization as well — instead of feeling surprised when the program launches. These positive working relationships can also facilitate program participant enrollment once the program launches.

For example, a program may receive referrals from the local home health agency and vice versa, depending on the patient's level of independence. In particular, home health agencies and other organizations that offer home-visiting services may have concerns that a new program will duplicate their efforts or take away current or eligible clients. It is key to engage with local home healthcare agencies prior to launching a program to explain that the program intends to complement their services, not replace them. For example, some programs may only serve patients who are uninsured or underinsured and therefore without access to home healthcare. In that case, clients of the community paramedicine program would not overlap with the home healthcare patient population. Additionally, if it applies to the goals of the

community paramedicine program, the team can communicate that they intend to help community members access a wider array of services compared to traditional home health models.

Using Community Health Assessment to Determine Needs

Community paramedicine programs can be most effective after dedicating time to understand the unique needs of the patient population, the gaps that exist in the local health system, and the ways a program can address these concerns.

Programs often target specific patients, such as patients with chronic conditions, and can benefit from performing or referencing a community health assessment, also known as a gap assessment. Not-for-profit hospitals must perform a community health needs assessment (CHNA) every three years and accredited local health departments must perform a community health assessment and develop a Community Health Improvement Plan (CHIP) every five years. Programs can reference these resources to determine the conditions that disproportionately impact people in their community. Once a program understands the characteristics of the intended patient population, they can develop care plans and protocols tailored to meet those needs.

Local organizations or agencies that serve the community may also be able to provide insight into gaps in the care continuum that the program may be suited to address. These local organizations can inform the program about the services already being offered to the target audience, which can reduce duplication of efforts.

Community needs may change and require different services as the program progresses. Program leaders should keep this in mind, periodically assess the gaps in care for their patients, and adjust their services to meet new or changing needs.

Training for Community Paramedicine Programs

Training requirements to practice as a community paramedic or community emergency medical technician (EMT) vary depending on state scope-of-practice regulations; there are no uniform community paramedicine regulations across states. Many local jurisdictions or emergency medical service (EMS) agencies also have their own existing training standards. If that is the case, program administrators and staff may be able to adopt existing curricula to fit the needs of their program.

Depending on state and local regulations, some community paramedicine programs may require their staff to become Certified Community Paramedics. The International Board of Specialty Certification administers this designation and provides information and guidance specific to the community paramedic exam (CP-P), including a handbook with a content outline and sample questions to prepare for the certification exam.

EMS programs may require that their community paramedics be CP-P certified; however, this process can be too costly or require too much time for rural programs. Often, rural EMS agencies employ EMTs, who would need to be trained to the paramedic level and then to the community paramedic level. As an alternative, EMTs may be trained as community EMTs (C-EMTs), or what is nationally known as a primary care technician. Another option is for mobile integrated health programs to send a community nurse or primary care provider on home visits to conduct health screenings while the paramedic conducts home safety checks. This type of program does not expand a paramedic's scope of practice and does not require additional training.

Programs may also benefit from seeking feedback from students who have participated in their training and are currently working in the field. These employees will be able to provide insight into how a program's training should be altered and updated to meet the unique needs of the local rural community.

A number of training resources already exist and are widely used across the country, including curricula from Hennepin Technical College. Several of the resources described below have been adopted or adapted by rural community paramedicine programs.

Resources to Learn More

Community Paramedic Program Handbook

Website

Provides information about developing and evaluating a community paramedicine program. Includes insights regarding program feasibility, state regulations, partner commitment, training, policies and procedures, and evaluation. Resource is free to accredited institutions.

Organization(s): North Central EMS Institute, Western Eagle County Health Services District, Paramedic Foundation

Population Considerations for Community Paramedicine Programs

Community paramedicine programs are frequently developed to serve specific types of patients; some of the most common are described below. In order to best invest available local resources, programs can be tailored depending on the needs of the specific community. These needs can be established using a community health assessment.

Frequent emergency medical service (EMS) utilizers. Programs work with frequent EMS utilizers to identify and address the root cause for their 911 calls. Information about call frequency can usually be found in a 911 call database or through the electronic health record system at the local hospital.

Some people who call EMS frequently do not always have an emergent medical issue. Instead, they may be without access to a primary care provider or have underlying conditions that cause distress, including social isolation. Often these needs can be better addressed by other community organizations. As part of the patient's care plan, the paramedic may connect them with non-emergency services, like mental health services, for more targeted support that addresses the patient's needs.

Post-discharge patients. Patients recently discharged from a hospital stay may need additional help understanding their post-discharge care plan and managing their health. Community paramedics can review the patient's discharge instructions and any new medications. They will also periodically check in with the patient. The goal is to identify challenges the patient is having with the transition back home so they can be addressed early, before the patient ends up back in the hospital. This type of program provides the patient with the resources to manage their health at home and mitigate the risk of hospital readmission.

For EMS agencies partnering with hospitals to implement their community paramedicine program, these patients may be particularly important. Hospitals can in some cases receive a financial penalty if a patient is readmitted to the hospital within 30 days of discharge.

Patients with chronic conditions. Community paramedicine programs often serve patients with chronic conditions. Program leaders may use data from hospitals, EMS, or health departments to identify the subset of conditions that are most likely to affect patients in their service area. People frequently enrolled in community paramedicine programs include patients who experience:

- Congestive heart failure (CHF)
- Chronic obstructive pulmonary disease (COPD)
- Diabetes

- Fall risk/hip and joint issues
- Pneumonia

Some community paramedicine programs have developed or adapted home visiting care protocols to meet the needs of people with specific chronic conditions. These protocols frequently include education, vital signs screenings, and medication management. Programs can also provide patients with supplies or other durable medical equipment to help them better manage their health. For example, pharmaceutical companies may provide free glucose monitors, which the community paramedic can deliver to people with diabetes while offering information about how to properly use and care for the monitor.

By helping patients better manage their chronic conditions, community paramedics can ultimately reduce the need for hospitalizations.

Broadband Access Limitations

Some community paramedicine programs use telehealth to connect patients with local providers and pharmacists during the community paramedic's in-home visit. Telehealth services often require access to broadband internet.

Unfortunately, rural areas may have limited or unreliable access to broadband internet services, making it difficult or impossible for program participants to participate in telehealth consultations or remote monitoring.

To address these issues, some programs have equipped vehicles with Wi-Fi capabilities to ensure patients will be able to participate in telehealth during their community paramedicine in-home visit. Other programs have installed Wi-Fi hotspots in patients' homes to allow health screening technology, such as blood pressure and pulse oxygen monitors, digital scales, and activity trackers, to send necessary data. This technology allows community paramedics and primary care providers to remotely monitor their patients' health status through regular data updates.

Patient Referrals for Community Paramedicine Programs

Patients can be referred to programs through multiple mechanisms. Depending on the target patient population identified during program development, referral process may look different. For example, programs targeting frequent emergency medical service (EMS) utilizers often enroll their initial set of patients by identifying high utilizers in their 911 call database. "Frequent" is defined differently by each program but is a metric of the number of 911 calls an individual makes within a certain time frame: for example, five or more calls in a six-month period or three or more calls in a one-month period. To reach additional patients, programs can partner with local hospitals and use their electronic health record (EHR) systems to identify frequent emergency room utilizers who may not call 911 and therefore could be missed in the call database.

A partnership with a hospital also facilitates referrals from hospital staff and can be beneficial for programs interested in serving post-discharge patients.

Primary care providers can refer patients to the program or include community paramedicine services as part of their care plan. To mitigate the chance of program participation refusal, primary care providers should communicate with the patient and explain the benefits of the program before the community paramedic contacts the patient.

Partnering with home healthcare agencies can facilitate program referrals for patients who do not need the level of service home health provides but would benefit from periodic check-ins by a community paramedic. Some potential patients may also be uninsured or otherwise not eligible for home health services.

Program Staff Needs for Community Paramedicine Programs

The roles and responsibilities of community paramedics are different from those of a paramedic responding to emergency 911 calls. Many people who work as emergency medical technicians (EMTs) or paramedics are drawn to work in high-intensity, adrenaline-producing situations. Conversely, community paramedics are engaged in providing primary care services and helping patients live their everyday lives. When recruiting staff, programs should ensure that candidates recognize the difference and are committed to this new type of position.

Community paramedics can also be set up for success through clearly defined roles and responsibilities, both in direct work with patients and knowing when to connect patients with local services or organizations. These responsibilities will also include managing reporting requirements needed to track patients and program activities. Reporting may be done digitally through an electronic health record (EHR) system or through specific emergency medical service (EMS) platforms.

Most community paramedics are deeply dedicated to their patients and their work. However, as with any position that involves direct patient care, burnout can be a concern. Programs may consider including annual compassion fatigue training for their community paramedics to mitigate the chance of employee turnover.

In communities without the resources to dedicate one or more staff to full-time work as a community paramedic, some programs have switched their existing paramedics to part-time duty responding to emergency calls in order to free up time for home visiting. However, for full-volunteer agencies or EMS programs currently experiencing high turnover rates in their emergency response staff, a community paramedicine program may result in additional strain on scarce resources dedicated to emergency medical response. These programs should consider strengthening their staffing before adding a community paramedicine function.

Seasonal volunteers and paramedics on light duty can help supplement program operations for busy community paramedics. Additionally, having someone on staff who is responsible for coordinating community paramedics' schedules and available to answer calls from patients will promote a successful program since community paramedics are typically busy day to day with patient visits, follow-up, and documentation. Programs using volunteers for these roles should ensure all team members have received Health Insurance Portability and Accountability Act (HIPAA) training on patient privacy. They should also establish policies and protocols about patient assistance practices and personal safety.

Module 5: Evaluation Considerations for Community Paramedicine Programs

Evaluation is an important activity for rural community paramedicine programs. This module provides evaluation considerations for rural organizations considering implementing a community paramedicine program.

For an overview of program evaluation, see Evaluating Rural Programs in the Rural Community Health Toolkit.

In this module:

- Evaluation Questions
- Evaluation Measures
- Collecting Data for Evaluation

Evaluation Questions for Community Paramedicine Programs

Rural community paramedicine program planners should consider what type of information they would like to learn from the evaluation. **Process evaluation questions** examine how the program was implemented and what facilitated its successes as well as its challenges. **Outcomes evaluation questions** focus on the short-term and intermediate effects of the program and whether the program met its intended goals.

When developing evaluation questions, program planners should consider what is measurable in the program, based on the available data and other resources, such as funding and staff time. They should also think carefully about the program's activities and its overall goals. Stakeholders like hospitals, social services providers, home health agencies, and state and local public health departments can also help develop questions that are meaningful and assess program outcomes. One key area to consider is how to demonstrate value. Determining return on investment or building the "business case" is important information to help the program advocate for support or new methods of reimbursement.

This section provides examples of common evaluation questions used by rural community paramedicine programs to understand the impact and benefits of their program in the community.

For additional information about evaluation, please see Evaluation Design in the Rural Community Health Toolkit.

Questions for a Process Evaluation

- What did the organization accomplish during the reporting period?
  - How many people were served?
  - How many sessions were completed?
  - What services were delivered (vaccinations, medication reconciliation, connections to primary care, or other services)?
  - What percentage of patients are receiving referrals to other programs or social services?
- How did community members or patients perceive the program?
- How did staff members perceive the program?
- How well did documentation systems capture program and patient data?
- How did the referral process to the program work from hospitals/providers/emergency medical services (EMS)? To partner agencies?

- What were the barriers and challenges that affected program implementation?
- Who facilitated the implementation of the program?
- What program activities were not completed and why? If activities changed, why did they change?
- What are key lessons learned?

Questions for an Outcome Evaluation

- What were the outcomes of the program?
  - Did the program reduce the frequency of 911 calls?
  - Did the program reduce the number of emergency room visits?
  - Did the program reduce 30-day hospital readmission rates?
  - Did the program reduce medication errors or adverse drug events?
  - Did the program reduce home safety hazards, like fall risks?
  - Did the program connect patients with a primary care provider/medical home?
  - Did the program effectively teach patients how to manage their chronic health conditions?
  - Did the program connect patients with other beneficial local services (Meals on Wheels, physical therapy, and others)?
  - Did the program improve patient quality of life?
- Did the program result in cost savings to the healthcare system?
  - What aspects of the program were most cost-effective or least cost-effective?
- Which outcomes are important to the community?

Evaluation Measures for Community Paramedicine Programs

Once key evaluation questions have been established, program planners should determine the measures or indicators they will use to answer those questions. For example, if a project goal is to reduce the frequency of 911 calls, the evaluator would need to look at the number of 911 calls overall in the emergency medical service (EMS) agency's service area, the number of 911 calls from program patients, and the number of completed referrals to social services.

A group of researchers and programs have developed the Mobile Integrated Healthcare – Community Paramedicine (MIH-CP) Outcome Measures Project to develop standardized measures that can be used across mobile integrated health and community paramedicine programs. The goal of these efforts is to build the evidence base for community paramedicine and better identify programs that can be successfully replicated. Rural organizations do not need to adopt their measurement approach in full, but they can select the measures that are most applicable to their community paramedicine program and can be answered with the available data.

Additional information on identifying strategies and measures for gathering appropriate data and evidence can be found in the Rural Community Health Toolkit.

Process measures focus on how community paramedicine services are provided. Examples of process measures related to community paramedicine programs include:

- Number of patients enrolled in the program
- Number of patients graduated from the program
- Number of referrals to the program from the hospital/primary care
- Number of patients receiving referrals to primary care/social services
- Number/percent of patients contacted within 48 hours of hospital discharge
- Number of medication reconciliation encounters completed
- Number of stakeholder meetings held

Outcome measures focus on health outcomes and the overall results of the program. Measures recommended by the MIH-CP Outcome Measures Project include:

- Number/percent of 911 calls diverted from the emergency department
- Percent of patients reporting improved quality of life
- Number/percent of patients who establish a relationship with behavioral health services/case management
- Number/percent of patients with a documented care plan

- Number/percent of patients readmitted to the hospital within 30 days of discharge
- Number/percent of medication issues documented and patients referred to a primary care provider

Resources to Learn More

Mobile Integrated Healthcare Program: Measurement Strategy Overview
Document
Offers a variety of measures that can be used by community paramedicine programs developing a tailored evaluation strategy, including process and outcomes measures for quality of care, cost, and utilization. Developed by a consortium of agencies interested in standardizing mobile integrated health measures across programs.
Organization(s): Mobile Integrated Healthcare – Community Paramedicine (MIH-CP) Outcome Measures Project
Date: 4/2016

Collecting Data for Evaluation for Community Paramedicine Programs

Emergency medical service (EMS) providers collect data about their activities to facilitate billing processes and ensure accurate patient information is shared with the emergency department during a transport. As a result, the data systems used by many EMS agencies are designed to capture information about stand-alone incidents. However, community paramedics aid in the management of health conditions and may conduct multiple visits resulting in multiple contacts with the same patient.

Programs may need to work with their existing data systems vendor or identify an off-the-shelf solution that can help capture their activities and outcomes most accurately. If possible, the system should have the capability to interface with the electronic health record (EHR) systems used by other provider organizations in the community, so all members of a patient's care team have access to their care plan and treatment records.

To determine their success in achieving project outcomes, EMS providers are likely most interested in patient care records or documentation from the scene of an EMS encounter (also called a "run report"); state EMS agencies may also be interested in broader information about the workforce, capacity, and available services, which can be obtained through personnel and service licensure data. Other potential data sources include behavioral health providers, hospitals, fire or police departments, and human services agencies.

Resources to Learn More

Community Paramedicine Business Case Assessment Tool

Document

Forecasts costs and savings for community paramedicine programs under different development scenarios. Designed specifically to assess the Acute Community Care paramedicine program at Commonwealth Care Alliance, but can be edited and modified to fit the needs of individual programs.

Organization(s): Mathematica Policy Research, Center for Health Care Strategies

Date: 12/2016

Module 6: Funding and Sustainability Strategies for Community Paramedicine Programs

Earlier sections of this toolkit describe strategies that can help rural programs prepare for and establish community paramedicine programs. This module focuses on strategies for sustaining community paramedicine programs.

For an overview of how to plan for the sustainability of your program, as well as strategies that would apply to any type of program, see Planning for Funding and Sustainability in the Rural Community Health Toolkit.

In this module:

- Defining Sustainability in this Context
- Importance of Sustainability Planning
- Strategies for Sustaining Community Paramedicine Programs

Defining Sustainability in the Context of Community Paramedicine

Sustainability has long been a challenge for rural emergency medical service (EMS) providers. Low call volumes, long distances, and staff shortages have historically made it difficult to maintain profitable operations that offer lifesaving access to healthcare services, particularly when EMS is the sole safety net provider in rural communities. While community paramedicine may offer an alternative funding stream from standard EMS reimbursement mechanisms, it cannot replace the role and function of emergency medical treatment. To be sustainable, rural EMS providers interested in expanding their activities to include community paramedicine must have the capacity or flexibility to serve patients with regularly scheduled appointments, while continuing to address life-threatening emergencies that can arise at any time.

To achieve sustainability, rural community paramedicine programs will need to consider how to maintain their resources, staff, and partnerships. Sustainability can best be done by demonstrating value to potential funders, which might be partner organizations, government agencies, healthcare payers, and even residents who use the services. Evaluation will provide meaningful data that demonstrate the program's value and impact on the community.

Value can be defined differently depending on the needs of the community. What is most valuable — reducing 911 calls, lowering hospital readmissions, or improving access to primary care services, for example — depends on where there are pain points within the healthcare system. For example, if a community hospital sees a lot of uninsured emergency department patients who would be better served by primary care and social services, a community paramedicine program may be able to reduce the hospital's costs while ensuring that patients receive more appropriate care. Tailoring community paramedicine programs to high-value needs can help bring stakeholders into the sustainability planning process.

Importance of Sustainability Planning for Community Paramedicine

A sustainability plan outlines strategies and practices that will continue a community paramedicine program after the initial grant period or implementation phase ends. A sustainability plan should identify the key elements of the program — including staffing, technology resources, services, and partnerships — and outline strategies to maintain each component. In addition, it should describe how early results and findings will be shared with stakeholders and policymakers to obtain their buy-in and support.

The Program Sustainability Assessment Tool, developed by the Center for Public Health Systems Science, is an online self-assessment questionnaire. It provides a score for eight program processes and structures, including organizational capacity, strategic planning, and partnerships. Program staff can use this tool to guide their sustainability planning activities and engage with stakeholders about gaps or challenges.

Some community paramedicine programs have found it challenging to transition from a grant to alternative funding sources. Without advance planning, communities may be unprepared to support program services that were being provided under the grant at no direct cost. As a result, emergency medical services (EMS) providers should begin sustainability planning early in the life of the grant to build relationships with potential funders and to collect data that demonstrate the program's value.

Other key steps to take include:

- Identify and grow program champions who can build support for the program with funders and policymakers
- Establish and maintain strong partnerships within the healthcare system and the community
- Create a funding source, such as a partnership with an accountable care organization or a local mill levy, to cover program costs
- Develop a process to train and support future community paramedics
- Plan for future challenges and developing strategies to approach them

For more information, see RHIhub resources on grant writing and capital funding for rural communities.

Strategies for Sustaining Community Paramedicine Programs

Rural organizations can use different strategies for sustaining community paramedicine programs. When deciding which strategies to pursue, programs should consider their patients' needs, program activities, and funding mechanisms in their local health system and state Medicaid agencies. The Rural Community Health Toolkit provides information about general Sustainability Strategies.

Reimbursement

As community paramedicine programs expand the scope of EMS providers, new opportunities for reimbursement may be possible from traditional healthcare payers. Payers are interested in reducing costs, improving care quality, and improving health outcomes. As a result, there has been increased interest in recent years from private and public payers in community paramedicine models that can achieve these goals. Accountable care organizations (ACOs) and other value-based payment models are one way that providers can share in cost savings that result from successful community paramedicine programs.

According to the National Association of State EMS Officials, state Medicaid agencies in Arizona, Georgia, Minnesota, Nevada, and Wyoming have begun reimbursement for community paramedicine services. Fourteen states provide some reimbursement for treatment without transport. In addition, commercial insurers have launched pilot projects in 17 states to explore payment models for community paramedicine programs.

As more payers begin reimbursing for community paramedicine services, programs will be able to build a sustainable revenue base that supports their work with a variety of patients.

Cost-Sharing with Partners

Because community paramedicine programs by design reduce overall costs to the healthcare system, some local organizations benefiting from the lower costs may be willing to invest in continuing the program. Building these relationships can help community paramedicine programs share scarce resources with rural hospitals, rural health clinics (RHCs), Federally Qualified Health Centers (FQHCs), and other healthcare providers serving rural communities.

To find the right partner, think about the specific services the community paramedicine program is providing and how they might reduce costs or improve outcomes. For example, assisted living facilities may be responsible for costs associated with bringing their residents to and from the hospital. If the community paramedic provides services to residents without requiring a hospital visit, those savings could be used to fund the community paramedicine

program while keeping residents more comfortable at home. Similarly, community paramedicine services may reduce hospital readmissions, helping the hospital avoid penalties. Those savings could be invested in continuing the service. Not-for-profit healthcare organizations are also required to have community benefit programs, which might also provide a potential partnership opportunity.

Nonprofits and Foundations

Many community paramedicine programs seek start-up or maintenance funding support from nonprofits, foundations, and other grant-giving organizations. Depending on the scope of the grant, funds may be used for infrastructure costs like purchasing new vehicles or equipment, for personnel training, or for general operational support. Foundations funding rural community paramedicine/mobile integrated health research and programs include:

- Duke Endowment (regional)
- Vitalyst Health Foundation (state)
- California Health Care Foundation (state)

For more information about building relationships with rural philanthropic organizations, see A Guide to Working with Rural Philanthropy.

Government Grants

In addition to private grant making organizations, community paramedicine programs can seek support from federal and state grants. Federal agencies that have offered grants to fund community paramedicine programs in the past include:

- Centers for Disease Prevention and Control (CDC), National Center for Injury Prevention and Control
- National Highway Traffic Safety Administration, Office of Emergency Medical Services
- Health Resources & Services Administration (HRSA), Federal Office of Rural Health Policy

State EMS or public health agencies may also offer routine or special grant opportunities that can be used to fund community paramedicine services.

Other Strategies

Some community paramedicine programs sustained services using other strategies. Rural community paramedicine programs can be funded by local tax dollars or by residents who are themselves interested in receiving the services. For example, residents could join a “concierge medicine program.” The fees would pay for the necessary additional EMS training and

participants would then have a community paramedic to provide primary care or urgent care services (like suturing) in their home, without having to travel long distances to the hospital.

Resources to Learn More

Top 10 MIH or Community Paramedicine Program Funding Sources

Document

Provides examples of innovative or novel funding streams for community paramedicine and mobile integrated health services. Also identifies partners who may be willing to work with EMS providers to develop or sustain programming.

Author(s): Zavadsky, M.

Organization(s): EMS1.com

Date: 11/2017

Module 7: Dissemination Strategies for Rural Community Paramedicine Programs

Community-wide dissemination efforts are essential to ensure the success of community paramedicine programs. Through dissemination, rural communities can learn from the experiences of others and incorporate promising strategies into their programs.

For more on how to share your program's results, see Disseminating Best Practices in the Rural Community Health Toolkit.

In this module:

- Dissemination Audiences
- Dissemination Methods

Dissemination Audiences for Community Paramedicine Programs

A variety of audiences may benefit from learning about the successes and challenges experienced by rural community paramedicine programs.

Sharing information with local stakeholders can promote patient referrals to the program. It is also important to inform the broader public health and policy sectors about the program's efforts. Sharing project outcomes with health departments, policymakers, and healthcare systems may lead to organizational and community buy-in, which is key for project success and sustainability. Finding a program champion who can speak to your successes — such as a community paramedic, primary care provider, or former patient — can be a compelling way to share information.

Key audiences for disseminating information about community paramedicine programs include:

- Healthcare systems and staff
- Public health
- Primary care providers
- First responders:
  - Emergency medical service agencies
  - Police, sheriff, and public safety offices
  - Fire departments
- Insurers
- Home health agencies
- Hospice
- Social services providers
  - Social work agencies
  - Local councils on aging
  - Local faith-based communities
- Senior centers
- Community and faith-based organizations
- Prospective patients and their families
- Community members and the general public
- Local, state, and federal policymakers
- Foundations
- State Offices of Rural Health

For a general list of key audiences for dissemination, see Methods of Dissemination in the Rural Community Health Toolkit.

Dissemination Methods for Community Paramedicine Programs

It is important for rural community paramedicine programs to share their program work and results with stakeholders. Educating decision-makers and promoting community engagement can improve the chances of success and long-term sustainability.

Programs may need to tailor their dissemination methods based on the audiences they are trying to reach. For example, some rural residents lack high-speed internet access, so electronic communication methods are not ideal. For such patients, informational pamphlets and referrals from trusted healthcare providers would be more effective for communicating the benefits of the program.

Oral presentations at a local, state, or national conference, blog posts, and social media may be more effective ways to share program success stories and lessons learned with a broader audience.

Dissemination methods for rural community paramedicine programs include:

- Print materials (pamphlets, brochures)
- Presentations at provider or hospital staff meetings
- Referrals from trusted healthcare settings and community organizations
    - Hospital staff
    - Primary care providers
    - Home health agencies
    - Local health department
    - Social services
    - First responders
    - Faith-based communities
- Social media
- Personal contact and word of mouth
- Community health fairs
- Posters or oral presentations at national, state, and local conferences
- Presentations to local and state policymakers

About the Rural Community Paramedicine Toolkit

Toolkit Development

The *Rural Community Paramedicine Toolkit* was first published on 7/16/2020.

Toolkits are developed based on a review of FORHP grantees' applications, foundation-funded projects, and an extensive literature review, to identify evidence-based and promising models. Programs featured in the toolkit were interviewed to provide insights about their work and guidance for other rural communities interested in undertaking a similar project.

Credits

This toolkit was produced by the NORC Walsh Center for Rural Health Analysis in collaboration with the Rural Health Information Hub (RHIhub).

NORC Walsh Center for Rural Health Analysis contributors:

- Sarah Hodge (lead author)
- Alycia Bayne
- Margaret Cherney
- Alana Knudson

Contact

For questions or comments about the toolkit, or for further assistance with using the toolkit, please contact:

- RHIhub at 1-800-230-1898 or email info@ruralhealthinfo.org

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