



HOSPITAL READMISSIONS AND EMERGENCY MEDICINE OVER-UTILIZATION

HOW COMMUNITY BASED
PROGRAMS CAN IMPROVE BOTH

Despite efforts to decrease hospital readmissions showing promise, the cost for these services continue to cost billions of dollars annually. Emergency medical systems are straining under record-breaking call volumes. With the convergence of these challenges, community level opportunities exist.

The CMS Perspective

The Hospital Readmission Reduction Program (HRRP) was implemented by the Centers for Medicare and Medicaid Services (CMS) in 2012. The program is structured to reduce the payment rate to hospitals with higher than industry readmission rates for specific conditions. The overall goal of the program is to positively impact the high cost of hospital readmissions, which was \$41.3 billion in 2011. Included in the \$41.3 billion was hospital readmission costs of \$4.3 billion for Medicare patients suffering the conditions of pneumonia, congestive heart failure, and septicemia.¹

The Hospital Perspective

Based on HRRP performance metrics, CMS leveraged over \$100 million more in penalties in 2015 than in 2014.² With more conditions being added to the HRRP program each year, it is not surprising that 80% of hospitals once again experienced rate reductions based on 2017 utilization data.³ While there have been improvements in readmission rates, hospitals continue to seek additional ways to prevent avoidable readmissions.

The Patient Perspective

In a study released by the *Journal of Hospital Medicine*, 479 patients who were readmitted were interviewed to determine the potential causes for the readmission. Some key findings were:

- 28% of patients reported feeling that they were not ready to go home when they were discharged.
- While 85% of the patients had a primary care physician, only 56% of patients called a physician before returning to the hospital.
- 65% of patients remembered reviewing discharge paperwork but over 22% could not identify critical information on the paperwork.

Table 2.
Comparing Characteristics of Patients Who Reported Feeling Ready for Discharge to Those Who Reported Feeling Not Ready for Discharge

	All Participants, n=230	Ready, n=164	Not Ready, n=65	P Value
Symptoms were resolved enough to leave the hospital, n=227	170 (74.9%)	149 (92.0%)	21 (32.3%)	<0.01
Felt pain was under control when left the hospital, n=229	190 (83.0%)	153 (93.3%)	37 (56.9%)	<0.01
Discharged to home following index admission, n=229	202 (88.2%)	146 (89.6%)	56 (86.2%)	0.62
If discharged home, had someone at home able to help, n=202	178 (88.1%)	132 (90.4%)	46 (82.1%)	0.17
If discharged home, had concerns about being able to take of themselves at home or not being strong enough to go home, n=202	67 (33.2%)	37 (25.3%)	30 (53.6%)	<0.01
Thought something could have been done to prevent them from coming back to the hospital, n=228	75 (32.9%)	35 (21.6%)	39 (60.0%)	<0.01

Characteristics of Discharge Readiness⁴

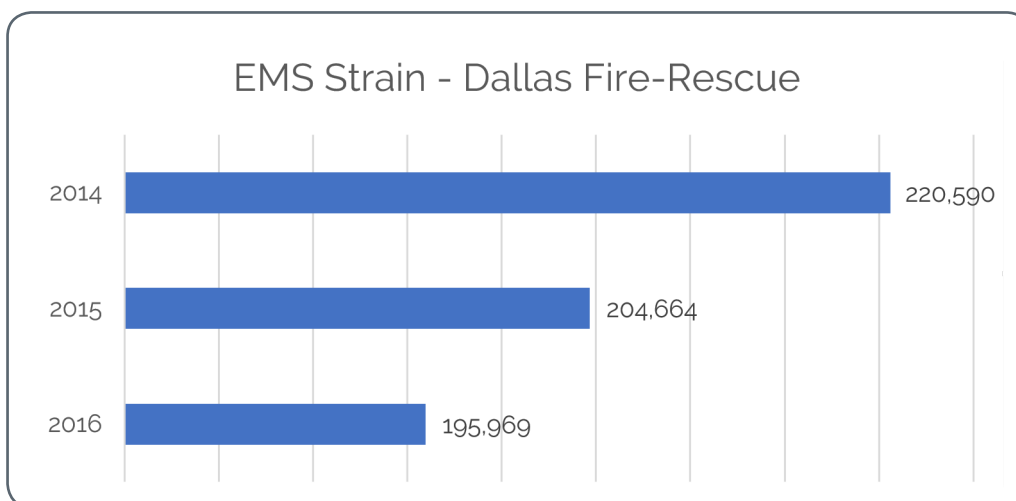
In interviewing the readmitted patients, certain characteristics were found to be potential predictors of readmission risk.⁴

The Emergency Medicine Perspective

As overall healthcare costs rise, and readmission prevention remains a focus, emergency medical service (EMS) systems across the country are experiencing call volume increases which are straining EMS resources. Like hospitals, EMS providers have “super-utilizers” who rely on EMS services for nonemergency medical needs, including post-discharge needs, nonemergent transportation, social support issues, and behavior health intervention. Many EMS “super-utilizers” are the same patients straining emergency rooms and being readmitted to hospitals for chronic conditions, care gaps, or lack of self-care knowledge. Like their hospital counterparts, EMS systems are looking for nontraditional ways to support their communities in improving health outcomes and controlling utilization costs.

Boston EMS said it has seen a 26 percent rise in calls over the past decade, from about 95,500 in 2005 to about 120,000 in 2014. The agency said that the increase has driven a rise in response times.⁵

“My people are saying they're exhausted,” Private Keonigseker said. “We are running in just an incredibly high volume of runs.”⁶



Source: Dallas Fire-Rescue⁷

Community Based Programs

Community-based programs started to emerge over the past decade. Varied in structure and focus, the core concept behind all community-based programs is identifying at-risk patients and caring for them in their home or other nontraditional settings. Avoidance of preventable hospital readmissions and over-utilization of emergency transportation services are common goals of community-based programs.

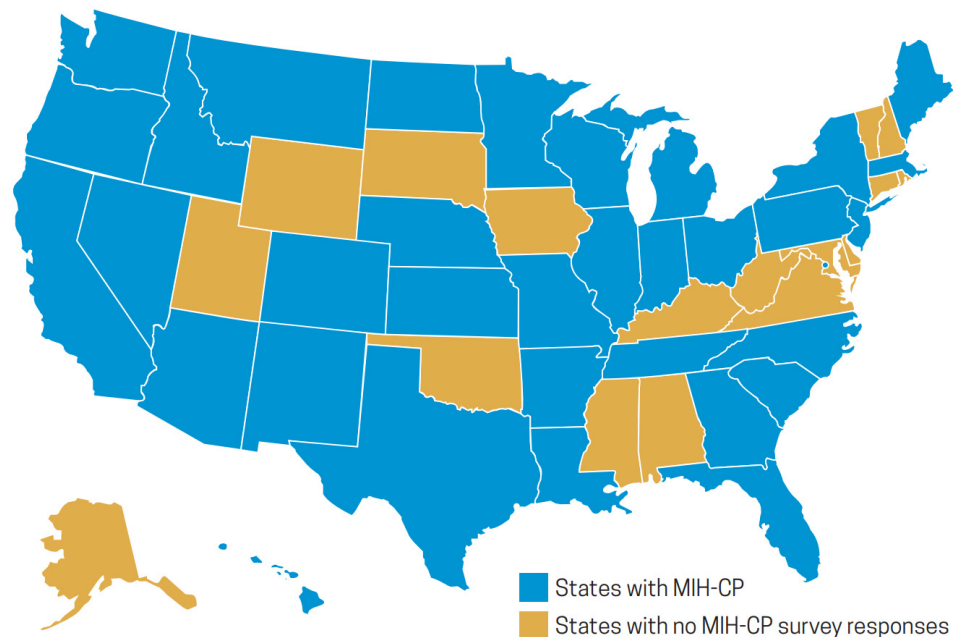
These programs are divided into two categories: paramedicine programs and mobile integrated health programs. According to a 2017 survey conducted by National Association of Emergency Medical Technicians (NAEMT), 70% of responding emergency service agencies classified their community programs as community paramedicine, while 30% classified themselves as a mobile integrated healthcare program.⁸

While both carry out some common functions, paramedicine programs are generally provided exclusively by specially trained paramedics from local emergency management agencies. Mobile integrated health programs are often associated with a specific hospital and consist of several different types of healthcare providers including doctors, registered nurses, social workers, respiratory therapists, and physician assistants.

Regardless of the program classification, the activities of both types of programs often include telephone triage, in-home care, post-discharge in home follow-up, and chronic disease monitoring and education. In addition, most programs, regardless of classification, are designed to support a specific condition or set of conditions with congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), and myocardial infarctions (MI) being the most prevalent, condition-specific programs across the country.

One example of a community health paramedicine program was launched by the Regional Emergency Medical Services Authority (REMSA) in Reno, Nevada in 2015. The program is funded by a \$9.8 million grant from CMS. This program utilizes a three-pronged approach including ambulance transport alternatives, a 24-hour nurse health line, and a paramedicine program aimed at reducing 911 calls and hospital readmissions.

The paramedicine arm of this



MIH-CP Program Responses⁸

program specifically targets congestive heart failure, chronic obstructive pulmonary disease, and myocardial infarctions. Upon a referral by the discharging facility, REMSA team members visit the patient in the hospital prior to discharge to set up follow-up appointments in the home, explain discharge instructions, and provide the patient with nonemergent contact information. Once home, the patient is visited multiple times by REMSA paramedics over the next thirty days with each visit consisting of a physical assessment, an ECG, and vital signs check, as well as education. The program enrolled 444 patients within the first year with the REMSA team members making more than 2,000 home visits. To date, the paramedicine program has saved an estimated \$1.6 million in readmission medical costs alone.⁹

Another program, California's Community Paramedicine Pilot Program, began in 2014 at the request of the California Emergency Medical Services Authority. This pilot project is based on evaluating the effectiveness of community paramedicine programs along seven concepts, including:

- **Post-Discharge, Short-term Follow-Up:** Provide short-term, home-based follow-up care to people recently discharged from a hospital due to a chronic condition (e.g., heart failure) to reduce their risk of readmission and improve their ability to manage their condition.
- **Frequent EMS Users:** Provide case management services to people who are frequent 911 callers and frequent visitors to emergency departments (EDs) to identify needs that could be met more effectively outside of an ED and assist patients in accessing primary care and obtaining services to address nonmedical needs, such as food, housing, and substance use disorder treatment.
- **Directly Observed Therapy for Tuberculosis:** In collaboration with a public health agency, provide directly observed therapy (DOT) to people with tuberculosis (i.e., dispense medications and observe patients taking them) to assure effective treatment of tuberculosis and prevent its spread.
- **Hospice:** In response to 911 calls made by or on behalf of hospice patients, collaborate with hospice agency nurses, patients, and family members to treat patients in their homes according to their wishes instead of transporting them to an ED.
- **Alternate Destination – Mental Health:** In response to 911 calls, offer people who have mental health needs, but no acute medical needs, transport directly to a mental health crisis center instead of to an ED with subsequent transfer to a mental health facility.
- **Alternate Destination – Urgent Care:** In response to 911 calls, offer people with low-acuity medical conditions, transport to an urgent care center for evaluation by a physician, instead of to an ED.
- **Alternate Destination – Sobering Center:** In response to 911 calls, offer people who are acutely intoxicated but do not have an acute medical or mental health needs, transport directly to a Sobering Center for monitoring instead of to an ED.¹⁰

The Philip R. Lee Institute for Health Policy Studies and Healthforce Center at the University of

California, San Francisco, conducted an independent evaluation of the California program from inception through September 30, 2017. With over 2,500 patients enrolled, the findings of the evaluation are very positive, citing not only direct cost savings along six of the seven concepts but also an improvement in coordination, a reduction in preventable ambulance transports, a decrease in emergency room visits, and a decrease in hospital readmissions¹¹

Insurers are increasingly considering adding paramedicine services to their benefits packages to contain healthcare costs and avoid hospital readmissions. One such program started in 2016 in Albuquerque, New Mexico. Relying on patient lists provided by insurance companies, the Albuquerque Ambulance Service (AAS) paramedicine program utilizes four full-time and one half-time paramedic to carry out home visits. Targeting both high utilizers of emergency services and post hospital discharges, community paramedics visit discharged patients and focus on condition monitoring and education. The success in reducing readmissions led to AAS contracting with three major insurers and is in negotiations with a fourth.¹²

Community-based healthcare organizations, such as Commonwealth Care Alliance (CCA), are also incorporating mobile integrated health programs in order to offer care models that meet the specific needs of their patients. CCA's mobile program started as a pilot but has proven successful with a reported 84% reduction in emergency room visits by patients receiving the in-home services. Additionally, 100% of the patients reportedly would use the service again.¹³

Program Funding

Many community-based programs are currently self-funded or funded as pilot programs. As programs have become more structured and have begun reporting positive results, funding options are becoming more readily available. For example, Florida Hospital recently announced a \$1.5 million grant to support five projects focusing on care navigation and coordination outside the walls of the hospital. As part of the grant, an existing paramedicine program will add an additional community paramedic to carry out home visits and calls to at-risk patients discharged from Florida Hospital Altamonte.¹⁴

Many state Medicaid programs have authorized the use of Medicaid funds for community paramedicine services. While traditional Medicare does not cover paramedicine services, many Medicare Advantage plan contractors have added the benefit for their Medicare members. Finally, commercial payers are also increasingly offering paramedicine services as a covered benefit to allow members to receive care in their home versus an urgent care center or emergency department.

Summary

Chronic conditions such as CHF, COPD, and MI account for a large proportion of high-cost hospital readmissions. EMS systems across the country are strained by frequent emergency transport utilizers who are often among the chronically ill population. Community-based programs hold an inherently unique position to positively impact both social challenges while improving the patient experience.

About the Author

Deborah Keller, RN, BSN, CMCN is a registered nurse with a clinical background in trauma and surgery. Upon transitioning to managed care, Deborah has served in leadership roles in small to very large managed care organizations across the United States. Presently, she serves as Chief Operating Officer for TCS Healthcare Technologies, a company which develops managed care software. She resides in Auburn, CA with her husband and two French bulldogs.

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11641 Blocker Drive, Suite 200

Auburn, CA 95603

530.886.1700

info@tcshealthcare.com

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