

# Exploring the use of paramedics to aid in reducing hospital readmissions

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Hospitals are searching for ways to reduce unnecessary readmissions. According to CMS, the top three hospital readmission diagnoses are acute myocardial infarctions (AMI), heart failure (HF/CHF), and pneumonia. Regional West Medical Center (RWMC) data reflects that these are also the top three diagnoses for readmission to RWMC. CMS has instituted a Hospital

Readmissions Reduction Program (Centers for Medicare and Medicaid Services (CMS), 2012). A complex calculation that is utilized by CMS to calculate penalties for hospitals with excessive readmission rates as compared to the national average began for discharges after Oct. 1, 2012, with the calculation being modified each successive year. The Medicare Payment Advisory Commission (MedPAC), which reports to Congress, has estimated that 12 percent of Medicare patients may be readmitted for potentially avoidable reasons. Averting one out of every 10 of those returns could save Medicare \$1 billion, MedPAC says. (Hagland, 2013) Nationally, the average fine decreased from 0.42 percent in the first year of the program to 0.38 percent. Other payers are also looking to partner with hospitals that have been successful at reducing costs of care, including readmission reductions.

While RWMC has not been penalized for high readmission rates, an

interest exists in finding ways to prevent unnecessary emergency department visits and hospital admissions. The rural area in the panhandle of Nebraska presents unique challenges in recruiting and retaining adequate numbers of medical providers and nurses. In a rural setting, creativity and looking beyond traditional models is necessary.

Discussions led to an idea for trialing the use of paramedics to do home visits to patients post discharge. The concept was that a paramedic could do the visits between ambulance runs. Further discussion led to determining what exactly the team believed would help these patients stay well and in their own home. This led to a review of the scope of practice of the paramedic in comparison with the scope of practice of the RN. The determination made was that the visits needed to focus on health maintenance and teaching, not complex nursing care visits. The patient population would focus on those with a diagnosis of heart failure or pneumonia.

On Feb. 14, 2013, Valley Ambulance and RWMC partnered together in a pilot project aimed at just that. The pilot project was coordinated by Randy Meininger, NRP, ASM, owner of Valley Ambulance; Diana Rohrick, RN, BSN, home health director, RWMC; Shirley Knodel, RN, MS, CNO/VP RWMC; and medical director for the project, Jeffrey Holloway, MD.

The program was narrowed in scope to patients discharged from the RWMC medical floor who live within the corporate boundaries of Scottsbluff and

Gering with the diagnosis of heart failure or pneumonia. The discharge staff on the medical floor explained the program to the eligible patients and sought consent for participation. The patients were then randomly assigned to receive visits from a paramedic or a homecare RN. The outcomes were measured to determine the effectiveness of the health maintenance and teaching model based on readmissions. The readmission outcomes were also compared between those patients receiving visits by a home health RN versus a paramedic.

Eligible patients were offered the option of receiving a visit within 24 hours of discharge and one a week thereafter for a total of four visits. The protocols, teaching tools, and documentation were standardized and used by both the paramedics and the RNs. The discharge staff on the medical floor explained the program to the eligible patients and sought consent for participation. The patients were then randomly assigned to be visited by a paramedic or a homecare RN.

Examples of lessons learned were that medication confusion was the most common problem for patients of both diagnoses in the beginning of the project, but through joint problem solving, this became less of an issue as the project progressed. Simple things like owning a scale to monitor weight were barriers to overcome. Follow-up appointments with primary care providers did not always occur within the first week of discharge; more calls were made to providers on these patients to prevent

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readmissions. Compliance with follow-up visits to the primary care provider was highest when the patient left the hospital with the appointment already made. Weekend discharges where the appointments were not made had the lowest compliance with prompt follow-up with the primary care provider. The discharge instructions would often say to call the primary care provider for a weight gain of two pounds in 24 hours, however when the patient called their provider they often reached an answering service or an office nurse who told them to go to the emergency department. Discharge instructions were sometimes taken home by a family member who did not live with the patient. The patient then did not have a copy to refer to. Typed instructions were easier for patients to read versus templates where blanks were filled in with hand-written instructions. Some patients stated they could not afford their medications despite having been screened for this before discharge. When a patient would call on Monday after a weekend admission to seek an appointment, the primary provider was not aware of the patient's hospitalization as the hospitalists would make those calls on Monday during office hours. These lessons learned have been shared with hospital leadership as well as providers, and they are driving changes within the system of care.

The pilot project concluded Feb. 14, 2014. The results in the following table indicate that health monitoring and teaching post-hospital discharge is beneficial due to the complexity of the

<b>Paramedic Readmission Prevention Project</b>			
February 2013 - December 2013			
	<b>Total Patients</b>	<b>Total Readmissions</b>	<b>Readmission Rate</b>
<b>Total Patient Population *</b>	159	34	21.4%
<b>Study Participants - Sample Group</b>	63	9	14.3%
<b>Non-Participants - Comparison Group</b>	96	25	26.0%
<b>Study Participants - Sample Group</b>	63	9	14.3%
Heart Failure Diagnosis	26	1	3.8%
Pneumonia Diagnosis	32	6	18.8%
Other Diagnoses **	5	4	80.0%
<b>Study Participants - Sample Group</b>	63	9	14.3%
Paramedic Home Visit	37	4	10.8%
Home Health RN Home Visit	26	5	19.2%
<p>* "Total Patient Population" includes all patients discharged from the RWMC Medical/Oncology unit with a diagnosis of PN or CHF, whose primary residence was within the Scottsbluff/Gering corporate limits. Non-participants include both those patients who met the population definition but chose not to participate in the study, as well as those who fit the population definition but were not given the opportunity to participate in the study.</p> <p>** "Other Diagnoses" includes study participants who were identified by the discharge nurse as having CHF or Pneumonia but did not have CHF or Pneumonia on final coding.</p>			

heart failure and pneumonia patients. This can be safely provided by paramedics when the right support is available. Examples are a medical director as well as support from primary care providers, nursing leadership, and pharmacy leadership. This group can provide oversight and development of protocols, teaching, and monitoring tools. This partnership is essential as lessons learned can be addressed real time to improve outcomes. There were

instances when the paramedic determined that the patient was in need of more complex care and contacted the provider. Some of these instances did result in the providers ordering home health care for the patient.

The sample size for this pilot project is small due to a variety of reasons. Despite the sample size, the hospital administration, providers, and Valley Ambulance leadership all see this as a

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step in the right direction and believe that the work needs to continue. New concepts are already being discussed such as a primary provider clinic case manager to communicate with the paramedics regarding needs as well as to conduct phone calls to the patients identified at risk after the home visits are concluded. Carrying this concept out to rural communities is also being discussed. Traditional models of care are not adequate for patients with complex needs. In rural areas where provider shortages exist and patients often travel 30 miles or up to two hours to see their primary provider, creative solutions need to be explored.

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## Gage County EMS is calling 911... the challenges facing rural EMS *(continued)*

travel outside their community for jobs. The requirements for training also add a burden as citizens try to find a balance of time.

### What does the future hold for EMS?

As previously stated, funding from Gage County will discontinue for 2014, and there are no future plans for receiving federal grant funding for Gage County EMS. There are committed volunteers currently involved in this issue, but their future involvement may be tenuous if the population sees no value in EMS. The federal health care

changes largely ignore funding for EMS and are instead focusing on individual coverage for health care.

There is a state statute that delegates a responsibility to have fire protection available. Your home owner's insurance is affected by such quality, but there is no such thing for medical protection. Maybe new legislation is needed.

It is the intent of this article to bring awareness to this issue. We want to continue to provide EMS in Gage County into the future. We do make a difference and are proud of our results. We, along with other EMS squads across the state, need the continued

support from our local communities, counties, and the State of Nebraska for a reliable source of stable funding. The State of Nebraska has heard the concerns and the idea of a county-wide department for such services is an idea that was brought forth. There is no such change in the works, however. We realize, of course, that Gage County is not the only county experiencing these issues. This is a statewide, if not nationwide, issue and solutions need to be brought forth and implemented for the good of all Nebraskans.