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Readmissions NEWS

Reducing Preventable Readmissions: Chronic Medical Conditions

by Gerald Rupp, PhD; Jim Gera, MBA; Sue Caito, RN, CCM; Terri Morris, MSN, ANP-BC

Healthcare delivery models are developing new innovative care designs in alignment with the Triple Aim of improving patient care, population health, and reducing health care costs.[1] Traditionally, primary care physicians provided a more holistic model of care incorporating health, wellness, and illness care through a longitudinal relationship and coordinated patient interactions with the health care system. Based on global market driven needs and the Affordable Care Act (ACA) legislation there is a dedicated focus on implementing new alternative payment models. Specialists, such as orthopedic surgeons, are now transforming their care design models to a more person-centered, holistic approach.

Quality care is an integral component of the ACA-driven initiatives for Medicare beneficiaries with readmissions being a widely used metric for assessing the extent of quality care provided. Across initiatives that include the Bundled Payment for Care Improvement (BPCI) initiative, the Comprehensive Care for Joint Replacement (CJR) model, and the Hospital Readmission Reduction Program (HRRP), and more,[2,3] readmissions are often used as a quality metric for program performance. As such, the principle goal is to reduce overall readmission rates, targeting preventable readmissions first.

The BPCI and CJR initiatives are two similar but operationally different risk-based alternative payment programs that include orthopedic lower joint replacement surgeries.

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In This Issue

Telehealth, Clinical Expertise, and Patient Engagement Decreases Hospital Readmissions

by Donna DeBlois, RN, BSW, MSB, MBA, AHCA and Mia Millefoglie, MA

Throughout the home health industry, decreasing the rate of avoidable hospital readmissions and emergent care are core quality measures and key drivers for successful positioning in an evolving accountable care environment. With the recognition that reducing readmissions is complex work especially in home care where variables are not easily controlled, home health agencies are leveraging the tools of technology to extend scare clinical resources to their most at-risk populations.

MaineHealth Care at Home, an early adopter of telehealth, has amassed more than twelve years' experience with integrating these tools in the delivery of home health care. For MaineHealth Care At Home, the state's demographic profile served as the initial catalyst to incorporate telehealth as a method to expand access to care across a large and predominantly rural service area that encompasses over 5800 square miles and is comprised of 89,000 elders, the largest elderly population in any one region of Maine.

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Editor's Corner

Welcome to another edition of *Readmissions News*. We are very pleased with the quality of contributions in this issue and would like to thank everyone who took time to share their expertise with us and with you. Please feel free to contact me if you have any ideas of articles you would like to contribute. Thank you and enjoy.

Kind Regards,
Peter Grant
Editor, *Readmissions News*
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Reducing Preventable Readmissions...*continued from page 1*

Episode initiating providers, be they hospitals or physician group practices, are financially incentivized to streamline care by addressing overutilization of services and waste, coordinate with providers across the care continuum, and provide the most appropriate care for each patient (person-centered approach). To achieve such lofty goals, a major emphasis for providers is to reduce costly readmissions for both their impact on quality measures and the financial bottom line.

Potentially preventable readmission can often be dependent on the overall health and wellness of a patient and the severity of chronic illness.[4] Preoperative assessments can identify patients needing functional, psychosocial, or chronic disease management optimization. Evidence-based protocols serve as guidelines for managing specific conditions or care needs and can be implemented prior to surgery to ensure the patient is prepared physically and mentally for a procedure. Potential readmissions may be prevented through the use of such evidence-based protocols and result in significant monetary savings and provide better patient service and experience.

> *"Postoperative complications such as pneumonia can be predicted from identifying preoperative risk factors including a patient's advancing age, high BMI, current and previous smoking history, poor nutritional status, limited physical mobility, and an overall low quality of life."*

Chronic conditions, particularly those conditions that are not managed well, can impact readmission numbers. Chronic obstructive pulmonary disease (COPD) is one such example. COPD is a progressive disease that makes it hard to breathe and generally gets worse over time. Major causes of COPD include cigarette smoking, exposure to smoke, air pollution, or other air-borne irritants. Patients who are readmitted after a surgical procedure for COPD are unlikely to have developed COPD as a consequence of their procedure, but rather the surgery and care delivered postoperatively likely aggravated or disrupted proper management of the condition.

Smoking cessation and reduced tobacco use has been encouraged for a number of years as it is associated with COPD and an increased risk of lung cancer. However, it is a manageable chronic condition for surgical procedures. Research has shown smoking cessation, even for short periods, prior to surgery reduces the risk of postoperative complications.[5] As a result, smoking cessation protocols for orthopedic surgery may improve patient outcomes.

Postoperative complications such as pneumonia can be predicted from identifying preoperative risk factors including a patient's advancing age, high BMI, current and previous smoking history, poor nutritional status, limited physical mobility, and an overall low quality of life.[6] Readmissions for pneumonia can be reduced through preoperative assessments that identify risk factors where pre-surgical interventions such as weight loss, smoking cessation, nutritional support, prehabilitation, and depression management can be implemented prior to surgery.[6]

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Reducing Preventable Readmissions: Chronic Medical Conditions...*continued from page 2*

Signature Medical Group (SMG), as an Awardee Convener in the Centers for Medicare and Medicaid Services (CMS) BPCI initiative, manages the largest orthopedic bundled payment program in the initiative (approximately 45,000 Medicare total joints annually). Our program uses case managers to implement evidence-based protocols throughout the care continuum, help patients manage their chronic conditions, reduce patients' risk for postoperative infections or chronic disease exacerbations, and prepare patients for a successful surgery. We encourage the use of preoperative assessments (including biopsychosocial, comorbidity, and readmission risk assessments) to identify patients with chronic health issues and possible complications prior to surgery and ensure both surgical and post-acute care minimizes any related readmissions.

"During the readmission reduction program, the 30- and 90-day readmission rate was reduced by 16.7% and 14.1%, respectively, compared to baseline."

In this article, we used Medicare claims data to compare readmissions following elective lower extremity joint replacement procedures during a baseline period (2009-2012) to a readmission reduction period (January-September, 2015). We assessed all readmissions within 30 and 90 days following surgical discharge for patients undergoing elective lower extremity joint replacement procedures, with and without complications and comorbidities (DRGs 469 and 470).

During the readmission reduction program, we encouraged a high-touch case management system. Through preoperative assessments, case managers identified chronic conditions that would need management during the episode and developed a postoperative care plan which included determining an appropriate discharge setting. Case managers also coordinated care amongst care providers, aided in disease management, and supported protocol implementation across the care continuum. During the readmission reduction program, the 30- and 90-day readmission rate was reduced by 16.7% and 14.1%, respectively, compared to baseline (see Table 1).

Table 1: 30- and 90-Day Readmission Rates

	30-day readmission rate	90-day readmission rate
Baseline Period (n=68,768)	5.4% (n=3,696)	9.9% (n=6,829)
Reduction Period (n=16,463)	4.5% (n=741)	8.5% (n=1,407)
Percent Reduction	16.7%	14.1%

Readmissions are categorized by CMS as "medical" or "surgical." Medical readmissions are associated with chronic conditions such as COPD, diabetes, heart disease, and depression, to name a few. Medical readmissions can also include conditions resulting from the care delivered before and after a surgical procedure such as pneumonia or infections. Medical readmissions can be more challenging to address since they often require a more holistic view of the patient and their health and wellness concerns. Surgical readmissions are directly related to the surgical procedure such as related to the device or surgical site injury.

The high-touch case management approach facilitates the goal to reduce readmissions, particularly those that are preventable and related to existing chronic conditions. There was a 19.0% and 18.4% reduction during the readmission reduction period for medical readmissions within 30- and 90-days of surgical discharge compared to the baseline period (see Table 2). In contrast, the surgical readmission rate was unchanged.

Table 2: Medical and Surgical-Related Readmissions

	MEDICAL 30-day readmission rate	MEDICAL 90-day readmission rate	SURGICAL 30-day readmission rate	SURGICAL 90-day readmission rate
Baseline Period (n=68,768)	4.2% (n=2,920)	7.6% (n=5,250)	1.1% (n=776)	2.3% (n=1,579)
Reduction Period (n=16,463)	3.4% (n=553)	6.2% (n=1,028)	1.1% (n=188)	2.3% (n=379)
Percent Reduction	19%	18.4%	0%	0%

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Reducing Preventable Readmissions: Chronic Medical Conditions...*continued from page 3*

We used COPD, a chronic health condition, as an example of a medical related readmission for which participating practices are commonly implementing evidence-based protocols to reduce related readmissions. Prior to orthopedic surgery, many practices have a smoking cessation protocol where smoking cessation is required for 2-6 weeks prior to surgery to minimize related complications.

We found a 65% reduction of COPD-related readmissions within 30-days of surgical discharge for the readmission reduction period compared to baseline and a 40% reduction within 90 days of surgical discharge (see Table 3).

Table 3: COPD- and Pneumonia-Related Readmissions

	COPD-related (DRG 190-192, 202, 203)		Pneumonia-related (DRG-193-195)	
	30-day readmission rate	**90-day readmission rate**	**30-day readmission rate**	**90-day readmission rate**
Baseline Period (n=68,768)	0.07% (n=48)	0.18% (n=125)	0.14% (n=97)	0.29% (n=197)
Reduction Period (n=16,463)	0.02% (n=4)	0.11% (n=18)	0.06% (n=10)	0.16% (n=27)
Percent reduction	65%	40%	57%	43%

"We found the pneumonia-related readmission rate was reduced by 57% and 43% during the readmission reduction program compared to baseline within 30- and 90-days of surgical discharge."

Another example of a medical readmission is pneumonia. Evidence-based protocols orthopedic practices may implement to reduce the risk of a pneumonia-related readmission include smoking cessation, prehabilitation, nutrition optimization, and obesity intervention. We found the pneumonia-related readmission rate was reduced by 57% and 43% during the readmission reduction program compared to baseline within 30- and 90-days of surgical discharge (see Table 3).

The results presented here highlight the impact of implementing evidence-based protocols addressing chronic health conditions on readmission rates. We expect over time these numbers will continually improve as the data presented reflects results from only three to nine months of care redesign. As more protocols are implemented and as providers become more consistent in implementing holistic care, readmissions will continue to drop, particularly for preventable readmissions. The results also highlight how case management with preoperative risk assessments can reduce medical readmissions but as expected does not affect surgical readmissions that are a result of facility, surgical technique, or protocols in the operating room. Surgical readmissions can however establish a baseline readmission rate to serve as a target for preventable readmissions.

For both primary care and physician specialists, embracing a more holistic health care approach will result in improved patient outcomes, improved patient wellness, while also minimizing costly preventable readmissions. For surgical procedures, preoperative assessments and evidence-based protocol implementation are key components to reducing preventable readmissions for chronic medical conditions.

"For both primary care and physician specialists, embracing a more holistic health care approach will result in improved patient outcomes, improved patient wellness, while also minimizing costly preventable readmissions."

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Telehealth, Clinical Expertise, and Patient Engagement Decreases Hospital Readmissions ...*continued from page 1*

According to the US Census, Maine has the oldest population in the country, with a median age of 43 compared to 37 for the U.S. as a whole. In 2012, 17% of Maine's population was 65 or older versus 13% for the U.S. Maine also has higher rates of chronic heart disease than the U.S. average. Maine ranks fourth nationwide for deaths caused by the chronic illnesses, costing about $1.5 billion per year in health care costs. A signficant portion of these costs result from frequent hospitalizations for exacerbations of chronic disease(Center for Disease Control). In 2013, Maine had the third highest rate among states for ER visits (599 vs. 423 nationally per 1,000 population (Dartmouth Health Atlas data cited on Kaiser State Health Facts). Maine is also amongst the poorest states in the country with a median household income in 2013 of $47,095, compared with $52,250 for the United States (Kaiser Family Foundation's State Health Facts).

"Maine ranks fourth nationwide for deaths caused by the chronic illnesses, costing about $1.5 billion per year in health care costs."

With these compelling demands and the associated challenges with delivering care, MHCAH launched southern Maine's first Telehealth demonstration project supported with a 2001 Rural Utilities Services -USDA grant. This project introduced interactive video monitoring units to at-risk patients with congestive heart failure in remote areas of Maine. Early results showed reductions in hospital readmissions and high patient satisfaction rates; however, "buy-in" from clinicians and physicians were significant barriers to referral and collaboration. Recognizing the need to secure engagement with healthcare providers, the Agency migrated to a web-based telemonitoring program. This system provided opportunities to utilize a greater number of nurses in the monitoring process, greater ease with home installation, enhanced patient educational modules, color touch monitors, and portals for the exchange of information among healthcare providers.

Direct care clinicians were trained to review the features of the system with their patients, enforce the educational modules, and use the integrated vital sign monitoring devices during home visits. As an additional effort to enhance coordination of care, telehealth monitoring nurses transferred vital sign histories and summary notes to the patient's electronic medical record. These efforts proved to improve communication and collaboration among healthcare providers. Concurrently, MHCAH launched an enhanced marketing campaign to promote the outcomes associated with augmenting Telehealth services within an episode of care.

"...re-hospitalization rates of patients enrolled in telehealth augmented with skilled home health services ranged each quarter from 7% - 10% when compared to rates of 18% - 20% for patients receiving only traditional home health care services."

From 2007 through 2013, MHCAH deployed telehealth to thousands of patients throughout its service area with a predominant focus on patients with advanced chronic disease. Telehealth patients experienced significantly lower rates of hospitalization when compared to patients who did not receive Telehealth. Patients enrolled with Telehealth services also demonstrated lower rates of emergent care, improved ability to manage medications and were more likely to remain independent at home following discharge from services. During this period, re-hospitalization rates of patients enrolled in telehealth augmented with skilled home health services ranged each quarter from 7% - 10% when compared to rates of 18% - 20% for patients receiving only traditional home health care services.

Clinical skill development, collaboration and coordination with other healthcare providers and community based programs became top priorities in the work advancing telehealth and chronic disease. One initiative included the creation of an on-site Integrated Chronic Care Management Program, led by the Vice President of Quality and Compliance, to train and certify nurses, physical therapists, speech language pathologists, occupational therapists and social workers as well care managers from affiliated physician practices. A second initiative involved MaineHealth, the regional integrated healthcare system that includes eight local hospital systems, a behavioral healthcare network, home health care providers, a laboratory, and over 1,400 physicians. Several clinical leaders served on the Heart Failure Task Group charged to develop strategies that would reduce avoidable hospitalizations for end-stage congestive heart patients. An outcome of this collaboration was the development and implementation of the Home Diuretic Protocol Project that aimed to demonstrate that interventions to avoid hospitalizations can be delivered safely and effectively in the home. Interventions included home-based nursing care augmented with telemonitoring services and IV diuretic protocols. Pilot findings resulted in hospital re-admission rates being lowered from 20.5% to 10%. The application of Telehealth technology was central to the success of this program. It allowed caregivers to assess evidence of volume overload and unstable vital signs at the earliest juncture. As a result, timely interventions and medication changes were made to reduce avoidable readmissions. Due to the success of this pilot project, the Home Diuretic Protocol was refined and expanded to other health providers within MaineHealth. Central to this protocol is the requirement for telehealth services to be monitored by nurses with clinical expertise in cardiac care.

"Pilot findings resulted in hospital re-admission rates being lowered from 20.5% to 10%. The application of Telehealth technology was central to the success of this program."

With a strategic goal to improve patient self-management and engagement, MHCAH conducted a new vendor search in 2015 and opted to migrate to technology through Health Recover Solutions that utilizes an android tablet with 4G internet, a software platform that is highly customizable to support patient education and self-management activities for a broad range of chronic diseases, palliative care, oncology and post-surgical care.

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This system includes wireless monitoring devices, medication compliance modules, physical activity trackers, disease specific video clips, and the ability for patients to use the tablet to connect via voice or video connection to Telehealth nurses. In addition, patients can permit family members to view their vital sign readings and compliance record. Another important function of this platform is the ability to remotely transmit patient health status information and vital signs to specialized disease management clinicians at MHCAH. Monitoring nurses stay on the alert for the early warning signs of illness and complications inherent with chronic disease and can quickly transmit information through text messaging or phone alerts. Healthcare providers across the continuum also have capability of reviewing data through secure portals. To further advance its work on provider coordination, MHCAH is finalizing HL7 integration with EPIC, MaineHealth's shared electronic record, to transmit demographics and biometrics.

In its work to improve patient engagement, MHCAH provides home-based support services that teach patients how to navigate the tablet with ease and confidence. Specially trained Telehealth Assistants, with experience as home health aides, have proven to be ideal candidates in helping patients move from acceptance to full engagement of this new technology.

Results: Reducing Hospital Readmissions and Improving Patient Engagement

In one year, MaineHealth Care At Home achieved a dramatic 75% reduction in overall 30-day hospital readmissions for chronic disease patients. Of the 474 patients placed on the HRS Patient Connect® Platform from April 2015 to April 2016, there was a 4.2% 30-day readmission rate which significantly exceeds the state average of 16.6% in Maine. Analysis of the most recent six-month period October 15, 2015 - April 15, 2016 showed additional improvements with 2.4% 30-day readmission rate of only 2.4% for total patient (n=286) enrolled in program. Primary diagnoses included Congestive Heart Failure, Chronic Obstructive Pulmonary Disease, Diabetes, and post surgical cardiac patients. In assessing patient engagement, the average patient spends 24.6 minutes a day watching educational videos, answering teach-back questions, reviewing their own biometric data, participating in video calls, and accessing their personalized care plan. Over the past year, the average daily adherence for patients taking each of their reminded vital signs through the HRS integrated wireless devices was 85%. Patient satisfaction measures cite scores of 3.5 – 3.8 out of 4 for responses related to questions on ease of use, willingness to recommend and that the tablet is helping me manage my disease.

"In one year, MaineHealth Care At Home achieved a dramatic 75% reduction in overall 30-day hospital readmissions for chronic disease patients."

Heather Lomax, Clinical Manager for Telehealth & Cardio-Pulmonary Services, stresses the importance of quickly getting clinical trends and data to providers, adjusting medications accordingly, and visual inspection through videoconferencing with patients to prevent hospital readmissions. She states that "with doing virtual visits for assessment purposes, it helps address the challenge of reporting back to cardiologist with their symptoms. Instead of saying the patient is short of breath or has swelling, he/she can be visually inspected for a more complete picture."

These results come at an opportune time as MHCAH plans expansion of its Telehealth Program throughout its newly expanded service area and will initiate pilot projects for pediatrics and post-surgical joint replacement patients.

Conclusion

The data clearly shows that the use of technology has reduced hospitalization rates, increased patient satisfaction rates, improved patient engagement scores, and enhanced self-management health activities. We have improved quality of care and quality of life by providing critically needed clinical resources and support to patients who are confined to the home or lack access to facility-based healthcare services. As we move forward, it is imperative that we find ways in which to assist patients across the entire healthcare system in order to improve outcomes as well as a patient's quality of life. Telehealth is the platform that will enable providers to reach patients and their families on a more engaged and advanced level. Through tools such as disease specific educational modules provided on the tablet, surveys questions that are diagnosis specific, to virtual visits that allow the provider to conduct a more thorough assessment, providers will be able to provide a more advanced level of care in the community. Finally, we believe patients want and deserve to be involved in their own healthcare decisions and it our responsibility as providers to provide the support, education and tools to build a trusting and more enhanced patient engagement process.

"...with doing virtual visits for assessment purposes, it helps address the challenge of reporting back to cardiologist with their symptoms. Instead of saying the patient is short of breath or has swelling, he/she can be visually inspected for a more complete picture."

Note: The experience and findings published in this article were related to HomeHealth Visiting Nurses of Southern Maine. On May 1, 2016 Health Visiting Nurses merged with Kno-Wal-Lin Home Care and Hospice, and Waldo County Home Care and Hospice to become MaineHealth Care at Home. This new entity is strongly positioned to strengthen services and expand technology throughout Maine's Cumberland, York, Lincoln, Waldo, Sagadahoc, Knox and southern Oxford counties.

Donna DeBlois, RN, BSW, MSB, MBA, AHCA, is the President and CEO of MainHealth Care at Home. Mia Millefoglie, MA is the Vice President of Development and Marketing.

Communication, Primary Care and Reducing Preventable Readmissions During Care Transitions

In the effort to reduce preventable readmissions hospitals shouldn't simply rely on themselves. It is oftentimes helpful for hospitals to partner with primary care physicians and organizations to improve patient care. The evidence shows that patients' interactions with their primary care doctors can positively impact hospital readmissions rates and emergency department (ED) use. Patients who visit the same primary care provider on a regular basis are less likely to need treatment at the ED – or be hospitalized repeatedly in the same year.

Preventable hospital admissions are a major patient safety and quality concern. An important cause of avoidable readmissions is poorly executed communication and coordination of care, this is especially true during care transitions. Transitions between care settings are risky periods for all patients, but especially older adults and those with multiple comorbidities. Transitions include admissions and discharges within and between acute-care hospitals, skilled nursing facilities, long-term care facilities, long-term acute-care hospitals, assisted living facilities, and home.

"Poor coordination between the acute setting and primary care provider results in poor longitudinal care planning. Less than half of all patients see their primary care providers within two weeks of hospital discharge."

Poor coordination between the acute setting and primary care provider results in poor longitudinal care planning. Less than half of all patients see their primary care providers within two weeks of hospital discharge. Comprehensive programs to improve care during transitions between settings have been shown to reduce not only 30-day hospital readmissions but also readmissions for the entire year after the initial hospitalization.

Even if a patient does visit primary care after hospitalization, there are many areas where mistakes can occur. After a patient is discharged, primary care physicians are charged with learning what took place in the hospital. This can be difficult to accomplish in a 15- or 20-minute office visit, especially without a universal electronic health record. More often than not, primary care physicians are not the clinicians taking care of patients through the hospital stay. Anytime there is a handoff to another provider, it adds to the complexity and is a potential area where errors can occur.

All too often, barriers are in place that make it hard for primary care physicians to help manage the handoff from the inpatient to outpatient setting. On certain occasions, the patient doesn't identify a primary care provider upon arrival at the emergency department or the hospital fails to give timely discharge information to that physician. In other cases, the patient hasn't established a rapport with a primary care physician.

Many primary care physicians no longer follow their patients in the hospital, where hospitalists and specialists now oversee much of the care being delivered. In many situations, they have very little influence, interaction, or engagement with the inpatient team taking care of that patient. Lack of sharing of information is one of the challenges that needs to be overcome to reduce avoidable readmissions. Under older payment models, primary care teams have often struggled without any additional reimbursement for post-hospital discharge coaching to help patients cope with complex chronic and life-threatening illnesses.

It cannot be overstated how much proper communication between hospitalists and primary care physicians at the time of discharge is important to patient safety and to the reduction of risk. Discharge summaries are an important tool used to communicate important and relevant facts and to transfer responsibility from the inpatient physician to the outpatient physician. The discharge summary ought to inform the PCP about the patient's hospitalization and ideally should contain the diagnosis, reconciled discharge medications, results of procedures, follow-up needs, and pending test results. It is vital that discharge summaries should be clearly-formatted and easy to read, with subheadings, and highlighting of crucial information. Also, for the discharge summary to be useful, the information conveyed must be timely (ideally within 24 to 48 hours) and should be received before the patient's first visit with his or her PCP.

When PCP's are unaware that a patient has been discharged with pending or abnormal test results that require follow-up there is a serious risk to patient safety. The hospitalists who order tests are the ones who are responsible for follow-up of those test results. In order to make sure that situations like this don't occur, systems need be built that notify the hospitalist of test results after the patient has been discharged.

"Direct physician-to-physician communication when a patient is discharged from the inpatient setting is by far the best means of reducing the likelihood of errors that will lead to readmission."

Direct physician-to-physician communication when a patient is discharged from the inpatient setting is by far the best means of reducing the likelihood of errors that will lead to readmission. Despite this, time constraints for all parties involved makes this system not always possible. Other means of communication can include telephone follow-ups, phone or text message, or electronic delivery through a Health Information Exchange (HIE) of the complete and accurate discharge summary. Regardless which system is utilized for communicating patient information between physicians, it should be constantly searched and checked over for by all those involved to limit the risk of liability and improve patient safety.

Thought Leaders' Corner

Q. What part does Medication Reconciliation have to play in reducing preventable readmissions?

Each month, *Readmissions News* asks a panel of industry experts to discuss a topic of interest to the hospital community. To suggest a topic, write to Editor@ReadmissionsNews.com.

"Effective medication reconciliation and patient education strategies are vital ways for hospitals to reduce readmission rates. Poor health literacy among American adults is responsible for far too many unnecessary rehospitalizations in the United States. This is particularly true as it relates to medication, where adverse drug events can lead to readmissions and worse. Implementing strategies that work to effectively educate patients as well as deal with medication reconciliation are important means through which a health care organization can reduce the potential for significant monetary penalties associated with readmission rates. Success in these two areas will result in higher quality and improved patient safety. These efforts are a meaningful step in the right direction toward enhanced care delivery, empowerment of patients in their care, and a reduction in the costs associated with preventable readmissions."

Adam Abate, PhD
Associate Professor, Department of Bioengineering and Therapeutic Sciences
University of California, San Francisco, School of Pharmacy

"Medication reconciliation entails understanding and explaining differences between the medicines a patient was taking before admission to the hospital and the medicines prescribed for the patient after hospital discharge. Compiling a correct and comprehensive list of medications that a patient was using prior to hospitalization is a difficult task that frequently requires care coordinators to contact family members, primary care physicians and community pharmacists for information. Without an accurate list of medications the patient was taking prior to hospitalization, it is impossible to accurately document all of the regimen changes as a result of the hospitalization. This can leave the patient unclear about which prescriptions he or she should take and potentially lead to discrepancies in the medication regimen and even adverse drug events."

Alicia Carter, PhD
Associate Professor
The University of Kansas, School of Pharmacy

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Industry News

Yale

Efforts to Lower Hospital Admission Rates May Also Reduce Readmissions

Public health programs and initiatives that aim to lower hospital admission rates may also reduce readmissions, despite the fact that the patients in communities that have adopted these programs tend to be sicker when hospitalized, says a Yale-led study. The research was published in the July issue of *Health Affairs*.

The federal Centers for Medicare and Medicaid Services has created programs and health improvement strategies to help reduce hospital admissions and readmissions. However, hospital groups and policymakers raised concerns about whether these strategies would primarily lower admissions among healthier individuals, resulting in a sicker hospitalized population with worse outcomes, including higher hospital readmission rates. Hospitals with high readmission rates face federal penalties. To examine this question, the research team used Medicare data for 2010 and 2013. They focused their analyses on communities with hospitals that are major referral centers. For each of these communities, they calculated changes in hospital admission rates and rates of readmission within 30 days after discharge.

The researchers found that a reduction in hospital admissions was strongly associated with a reduction in 30-day readmissions. That finding held true despite the fact that the patients ultimately hospitalized in the communities with large reductions in hospital admission rates were sicker on arrival. While the study results may only pertain to older patient populations, they strongly suggest that efforts to improve community health and reduce hospital readmissions can go hand in hand, without negatively impacting health outcomes, said the researchers.

CONE HEALTH
Moses Cone Hospital

Moses Cone Hospital Has Lowest Heart Attack Readmission Rate in the Nation

For people treated at The Moses H. Cone Memorial Hospital in Greensboro, North Carolina, the chances of readmission within 30 days are less likely than at any other hospital in the nation. Moses Cone Hospital has the lowest readmission rate for heart attack patients in the U.S. This is according to data from more than 4,000 hospitals published on the U.S. government's Hospital Compare website.

Moses Cone Hospital...*continued*

Hospital Compare provides the most current data on readmission rates for heart attack patients across the country. Moses Cone Hospital has the nation's lowest at 13.3 percent. The national average is 17 percent. Heart care at Moses Cone Hospital is provided at The Cone Health Heart and Vascular Center. Hochrein adds that the real secret is consistency. Rehabilitation begins the day of or the day after the heart attack. Patients work with therapists, nutritionists, nurses and doctors. They hear the same messages about heart health. "We keep it simple and everyone sings from the same hymnal," adds Hochrein. Care continues through an ongoing partnership once patients are discharged.

Moses Cone Hospital is one of Healthgrades America's 100 Best Hospitals for Cardiac Care™ in 2016. CareChex®–a division of Comparion®–ranks Cone Health among the nation's top 100 hospitals for medical excellence in cardiac care, heart attack treatment and major cardiac surgery in 2016. It also recognizes Cone Health as a leader in patient safety. Learn more at conehealth.com/heart. Cone Health is committed to being a national leader in quality, service and cost. The integrated health care network consists of Alamance Regional Medical Center, Annie Penn Hospital, Cone Health Behavioral Health Hospital, The Moses H. Cone Memorial Hospital, Wesley Long Hospital, Women's Hospital, Cone Health Medical Group, MedCenter High Point, MedCenter Kernersville, MedCenter Mebane, Triad HealthCare Network and various outpatient clinics and programs. More than 11,000 exceptional people provide exceptional care to the people of Guilford, Alamance, Rockingham, Forsyth, Caswell and Randolph counties.

CVSHealth™

CVS Health Research Institute Study Shows that Medication Reconciliation Programs Can Reduce Hospital Readmissions

A new study from the CVS Health Research Institute found that medication reconciliation programs, in which pharmacists review patients' medication regimens and provide adherence counseling during the patient's transition from hospital to home, reduced risk of hospital readmission by 50 percent and helped avoid unnecessary health care costs. The research, published today in the July issue of *Health Affairs*, is the first to evaluate the impact of an insurer-supported medication reconciliation program on clinical outcomes and health care spending.

The study analyzed hospital readmissions of more than 260 members of a national health plan who were hospitalized over a five-month period.

Industry News

CVS Health Research Institute Study...*continued*

Researchers compared readmission rates for patients enrolled in a medication reconciliation program upon hospital discharge to a control group of members who received no additional support following their initial hospital stay.

Those enrolled in the program received an initial in-home or telephonic consultation based on their readmission risk and were also offered ongoing telephonic support for the first 30 days following discharge. During the initial consultations, pharmacists compared members' pre- and post-hospitalization medication regimens; identified discrepancies, redundancies and safety concerns; and provided education and support regarding medication use and adherence. The researchers found that risk of hospital readmission at 30 days was reduced by 50 percent, reducing overall risk of hospital readmission from 22 percent to 11 percent for those in the medication reconciliation program.

Additionally, the health plan saved $2 for every $1 spent on the program, resulting in a total savings of more than $1300 per member. An estimated one in seven patients discharged from a hospital is readmitted within 30 days, and readmissions are associated with more than $41 billion in additional health care costs per year. In addition, evidence suggests that approximately 66 percent of hospital readmissions are the result of adverse health events related to medication non-adherence.

Historically, health insurers have had little control over direct efforts to reduce hospital readmission rates for their members. When available, these kinds of programs are largely run by hospitals and outpatient providers and their impact has not been broadly evaluated.

The CVS Health Research Institute is focused on contributing to the body of scientific knowledge related to pharmacy and health care through research collaborations with external academic institutions, participation in federally-funded research, analysis and sharing of CVS Health data sources and coordination of pilot programs and initiatives. CVS Health Research Institute findings support a continuous quality improvement environment, which encourages product innovation and development to benefit CVS Health patients, clients and their members.

caresync

CareSync Partners with Phyzit to Deliver Transitional Care Management Services and Solutions to Provider Groups

CareSync, the leading provider of software and services for chronic disease management, partnered with Transitional Care Management (TCM) provider, Phyzit, to provide its customers with transitional care services, enabling providers to improve patient care and complete the requirements for Medicare's TCM reimbursement.

Philips and Medical University of SC...*continued*

Expanding existing patient care coordination services, CareSync will now offer services to track patients throughout the care cycle, including during critical care transitions following an acute care stay. More effective care coordination empowers providers to deliver more efficient care after discharge and between patient visits, translating into a speedier recovery process and reduced readmission rates, which supports value-based care goals and enhances patient satisfaction.

Phyzit, founded in 2013, is a Little Rock-based company and leader in Transitional Care Management focused on enabling healthcare providers to offer better health outcomes through reduced hospital readmissions by applying TCM. Phyzit tracks the metrics of TCM so providers can concentrate on their patients.

CareSync is the leading provider of software and services for chronic disease management, combining technology with 24/7 nursing services to facilitate care coordination among patients, family and caregivers and all providers. CareSync allows any healthcare organization to easily provide and be reimbursed for care between patient visits, which supports value-based care goals and enhances patient satisfaction. Patients can also use CareSync to easily access all of their health information, goals and care plans, placing them at the center of their healthcare experience and driving more productive medical appointments and better health outcomes.

JAMA Surgery
Formerly *Archives of Surgery*

High Rate of Patient Factors Linked to Hospital Readmissions Following General Surgery

An analysis of risk factors for hospital readmission following general surgery finds that a large number of readmissions were not caused by suboptimal medical care or deterioration of medical conditions but by issues related to mental health, substance abuse, or homelessness, according to a study published online by *JAMA Surgery*.

Previous studies investigating patients at risk for hospital readmissions focus on medical services and have found chronic conditions as contributors. Little is known, however, of the characteristics of patients readmitted from surgical services.

Lisa K. McIntyre, M.D., of the University of Washington Medical Center, Seattle, and colleagues conducted a study that included 173 general surgical patients (91 men) who were identified as being unplanned readmissions within 30 days among 2,100 discharges (8 percent) at a Level I trauma center and safety-net hospital. Medical records of the patients were reviewed to characterize index and readmission data.

Industry News

High Rate of Patient Factors...*continued*

The researchers found that the most common reason for readmission included 29 patients who were initially admitted with soft tissue infections from injection drug use requiring operative drainage and who were then readmitted with new soft tissue infections at other sites (17 percent of readmitted patients). Twenty-five readmitted patients (14.5 percent) were found to have lack of adequate social support leading to issues surrounding the discharge and follow-up process (e.g., lack of home for postdischarge telephone calls, follow-up appointments not scheduled or not attended, postdischarge care needs underestimated). Together, these 2 groups made up almost a third of the readmissions (n = 54, 31 percent).

Other reasons for readmission included 23 patients with infections not detectable during index admission (13 percent), and 16 with illness related to their injury or condition (9 percent). Sixteen patients were identified as having a likely preventable complication of care (9 percent), and 2 were readmitted owing to deterioration of medical conditions (1 percent). Female sex, presence of diabetes, sepsis on admission, or intensive care unit stay during index admission, as well as discharge to respite care and payer status (Medicaid/Medicare compared with commercial) were identified as risk factors for readmission.

JAMA Surgery
Formerly *Archives of Surgery*

Loss of Independence After Surgery for Older Patients Associated with Increased Risk of Hospital Readmission

In a study published online by *JAMA Surgery*, Julia R. Berian, M.D., of the American College of Surgeons, Chicago, and colleagues examined loss of independence (LOI; defined as a decline in function or mobility, increased care needs at home, or discharge to a nonhome destination) among older patients after surgical procedures and the association of LOI with readmission and death after discharge. Currently, quality metrics prioritized by hospitals and medical professionals focus on discrete outcomes, such as readmission or mortality.

The study included 9,972 patients 65 years and older with known baseline function, mobility, and living situation undergoing inpatient operations from January 2014 to December 2014 at 26 hospitals. The final analysis included 5,077 patients. For this group, LOI increased with age; LOI occurred in 50 percent of patients age 65 to 74 years, 67 percent of patients 75 to 84 years of age, and 84 percent of patients 85 years and older. Hospital readmission occurred in 517 patients (10.2 percent). After serious postoperative complication, LOI was the second most important factor associated with readmission, increasing the risk by 70 percent. Serious postoperative complications were most significantly associated with readmission, increasing the risk by 6.7-fold.

Loss of Independence After Surgery...*continued*

Complications may presumably be directly associated with the indication for readmission. However, the significant association of readmission with LOI and preoperative support in the home may suggest the critical role of environment and patient resources in prompting readmission. Death after discharge occurred in 69 patients (1.4 percent). When examining death after discharge, LOI was associated with a 6.7-fold increased risk. Additional significant factors included surrogate-signed consent and emergency operations, as well as advancing age. Postoperative complications were not significantly associated with death after discharge.

Patient-centered outcomes such as LOI can, and should, be collected in multi-institutional data registries. Loss of independence is a potential target for intervention, and future work should move beyond its use as a factor for prognostication. To best serve the aging population, clinical initiatives must focus on efforts to minimize LOI and better understand its association with discrete outcomes like readmission and death after discharge."

Journal of the American College of Surgeons

Readmissions After Complex Cancer Operations Vary with Institution Type and Patient Cohort

Readmission rates after complex cancer operations tend to be higher in hospitals that are considered to be vulnerable because they serve as safety nets in their communities or have a high number of Medicaid patients. Reasons for higher readmission rates are highly complex and involve socioeconomic and hospital institutional characteristics.

Payment programs that penalize hospitals for high readmission rates without understanding these issues could stress already financially threatened institutions, according to authors of a new study published online in the *Journal of the American College of Surgeons* in advance of print publication. The Medicare Hospital Readmissions Reduction Program (HRRP) in the Affordable Care Act currently penalizes hospitals that have higher than expected readmission rates. While the ACS has publicly recognized that high readmission rates may reflect lower quality care and lead to unnecessary spending, ACS has emphasized that readmissions may be related to many factors, including the complexity of the medical condition as well as patients' socioeconomic status and compliance. In the present study, researchers found that patient factors were primary drivers of higher readmission rates to vulnerable hospitals after cancer operations. These results further support the need for incorporating socioeconomic variables into the determination of HRRP payments especially for hospitals that already serve a disproportionate number of disadvantaged patients.

Catching Up With …

Joseph de Veyra, MSN, RN, PHN, PCCN, CNL

Clinical Nurse Leader, Department of Veterans Affairs

Readmissions News: When did you first become aware of readmissions as a serious issue?

Joseph de Veyra: I first became aware of readmissions as a serious issue as a Clinical Nurse Leader for Veterans Affairs Long Beach Healthcare System. Aside from the financial cost of a rehospitalization, I saw first-hand the emotional burden to the patient and family brought upon by the constant movement from one facility to another. Furthermore, poorly executed care transitions lead to clinical deterioration due to increased risk of medication errors and adverse events in the hospital.

Readmissions News: How can community collaboration help to reduce readmissions?

Joseph de Veyra: Community collaboration can reduce readmissions by improving care coordination between hospitals and post-acute care providers (such as skilled nursing facilities, home health agencies, etc.). In addition, it is imperative for healthcare organizations to put down their competitive swords to work together toward improving patient outcomes. For it is only through a cohesive collaborative effort that we can start to address communication gaps and building bridges between care settings.

Readmissions News: What can nurses in particular do to help reduce readmissions?

Joseph de Veyra: Nurses can play a vital role in reducing readmissions because they are present in every step of the hospitalization, from admission to discharge. They can help by promoting patients' self-management of their disease. For example, nurses can help a newly-diagnosed diabetic patient become competent in administering insulin subcutaneous injections by encouraging him or her to perform the procedure independently after a demonstration. In addition, nurses must ensure that the patient has achieved the required level of competence required before discharge.

More importantly, nurses must be at the forefront of care coordination before discharge. For example, nurses must also ensure that patients who go home have a scheduled appointment with their primary care provider (PCP). Furthermore, they can also assess patients if they have skilled nursing needs upon discharge (such as wound care) and initiate a home health referral (if appropriate). They can also work with other disciplines, such as pharmacy and social work, to ensure that the patient has access to medicine, housing, food, etc. In the end, the nursing profession can become the catalyst for readmission reduction.

Readmissions News: Lastly, tell us something about yourself that few would know.

Joseph de Veyra: I climbed the ladder of nursing, starting as a caregiver in 2007. I also have diverse healthcare leadership experience in home health, hospice, cardiology, and managed care. My experience includes serving as a geropsychiatric unit clinical nurse leader for the Veterans Affairs Long Beach Healthcare System where my project on multisensory stimulation therapy was recently recognized as a National Best Practice by the VA Central Office. Lastly, I am currently a Doctor of Nursing Practice candidate at California State University, Fullerton.