Readmission

Automated Post-Discharge Care: An Essential Tool to Reduce Readmissions
The Challenge
Eliminating Systematic Failures That Begin in the Hospital and Continue in Fragmented Healthcare Settings
Immediate Causes
New Government Incentives
New Regulations
Affordable Care Act
New Initiatives
Shared Savings Program

Gaps In Care Transitions
Inadequate Preparation
Poor Educational Techniques
Poor Handovers

Best Practices
IHI’s Patient Centered Approach
Key Changes
Coleman Care Transitions Intervention
Naylor Transitional Model
Automation
Patient Education and Engagement
Connecting Providers With Each Other
Conclusion
The Challenge: Eliminating Systematic Failures That Begin in the Hospital and Continue in Fragmented Healthcare Settings.

Readmissions are a major problem in U.S. healthcare. Nearly one in five Medicare patients that are discharged from the hospital returns there within 30 days,¹ and between 50 percent and 75 percent of those readmissions are considered preventable.² Medicare pays about $17 billion annually for 2.5 million rehospitalizations of its beneficiaries, and other payers spend roughly the same amount every year for all readmissions of non-Medicare patients.³

Immediate Causes

The immediate cause of a readmission is usually a rapid deterioration in the patient’s condition, related to the patient’s primary diagnosis and/or comorbidities. But in a broader sense, it can be attributed to systemic failures that begin in the hospital and continue in the fragmented health care settings that patients move through after discharge.

In a typical scenario, patients receive inadequate preparation for discharge; the handover from the hospital to their outpatient providers is poorly handled; and patients and their family caregivers are left to cope on their own with medical issues that they don’t understand.⁴ In fact, only about half of discharged patients follow up with their primary-care physicians after they leave the hospital, and those who don’t are much more likely to be readmitted than those who do see a doctor.⁵

New Government Incentives

Until recently, some hospitals took the attitude that their responsibility for care ended when the patient walked (or was wheeled) out the door. Other facilities have used a variety of techniques to reduce readmissions, with mixed results. But new government incentives, plus a rising awareness of the need to improve patient safety, are forcing hospitals to place an increased emphasis on discharge planning and post-acute care.

New Regulations

Front and center are Centers for Medicare and Medicaid’s (CMS’) new regulations on preventable readmissions. Starting Oct 1, 2012, hospitals with “excessive” readmissions-rehospitalizations that are significantly higher than expected will lose a percentage of their Medicare reimbursement across the board. In FY 2013, the decrease can be up to one percent of reimbursement, rising to two percent in 2014 and three percent in 2015.6

In the first year of this program, CMS will examine 30-day readmission rates for patients with heart failure, acute myocardial infarction, and pneumonia—three of the leading conditions for which patients are readmitted. Beginning in FY 2015, CMS may also scrutinize chronic obstructive pulmonary disorder and several cardiac and vascular surgical procedures.

Affordable Care Act

CMS has also launched other programs that might contribute to lower readmission rates. To begin with, the agency plans to spend $500 million—or half of the $1 billion earmarked in the Affordable Care Act for improving patient safety—to help hospitals and their community partners decrease readmissions over a five-year period ending in 2016. Through the government-sponsored Partnership for Patients, CMS will pay these “community-based organizations” a set amount per discharge for managing Medicare beneficiaries at high risk for readmission.7

New Initiatives

Two other CMS initiatives authorized by the health reform law are worth considering: payment bundling and accountable care organizations. Under CMS’ recently announced plan for its bundling demonstration, providers may choose among four different options. One option includes all care provided from admission to the hospital to 30 or 90 days after discharge. Another would cover only post-acute care for up to 30 days.8

In both scenarios, providers would be paid on a fee-for-service basis, adjusted retrospectively for variance from a budgeted amount. While neither option penalizes providers for readmissions, both encourage improvements in the quality of post-acute care, which should reduce the number of rehospitalizations.

Shared Savings Program

Finally, in 2012, CMS will launch its shared-savings program for accountable care organizations (ACOs), which are groups of hospitals and doctors that are committed to raising the quality and lowering the cost of care. To receive financial rewards from CMS, these organizations will have to save money, which will give them a strong incentive to cut readmissions.9

Nevertheless, it will be difficult for health care organizations to decrease readmissions significantly in a fragmented, uncoordinated system. While most of the levers of improvement are known, reengineering inpatient processes and engaging patients and outpatient providers remains challenging.

Fortunately, new applications of health information technology now offer inexpensive ways to automate post-acute-care processes. These solutions, which are discussed later in this paper, can raise the effectiveness of care managers, improve the communications between inpatient and outpatient providers, and make it easier for patients and caregivers to absorb and apply the knowledge required for self-management of complex conditions.


Gaps In Care Transitions: The Five Main Contributors

The literature on transition problems shows there are five main areas that contribute to preventable readmissions:

- Poor preparation for discharge
- Patients’ low health literacy and comprehension
- Failure or inability of patients to see physicians for follow-up after discharge
- Lack of hospital follow-up
- Lack of communication between inpatient and outpatient providers

Inadequate Preparation

Readmissions occur, by definition, after a patient has left the hospital. Yet the foundation for post-acute care is laid during the hospital stay—and that preparation is often inadequate. “The hospital discharge process is characterized by fragmented, nonstandardized, and haphazard care,” note Brian Jack, an expert on hospital reengineering, and his colleagues.10

Nurses and first-year residents are often placed in charge of discharges. These staffers have many other duties and may relegate discharges to a lower priority. Making matters worse, there are no clear lines of authority. As a result, the system sets these individuals up to fail and creates a dangerous situation for patients.

A prime safety issue cited by many experts is missing or inadequate medication reconciliation at the time of discharge. The medications that patients received in the hospital are often discontinued at discharge, while the drugs they were taking before they were admitted may or may not be resumed. Dosages may also change.11
The Joint Commission has identified medication reconciliation as a key requirement for ensuring patient safety.12 The Institute for Healthcare Improvement also cites medication reconciliation as an opportunity to reduce readmissions. So this is clearly an area where hospitals could contribute to lower rehospitalization rates.

Providers are partly responsible for this lack of comprehension. Physicians or nurses may rush through their instructions and not encourage patients to ask questions. They may not use the proven “teach-back” method of having patients restate the instructions in their own words. And they may not realize that because of a patient’s cognitive issues, his or her family caregiver is the one who needs to receive the instructions.14
Another big—and underappreciated—problem is the low health literacy of the U.S. population. Roughly 90 million Americans—nearly half of the adult population—have low health literacy.15 “Such patients typically have difficulty reading and understanding medical instructions, medication labels, and appointment slips,” according to one study.16

What this means is that only oral but also written instructions must be couched in terms that somebody with fairly little formal education can understand. It also means that many patients require post-discharge communications to ensure that they are adhering to their medication regimens, following up with their outpatient physicians, and looking for danger signs in their own conditions.

Roughly 90 million Americans—nearly half of the adult population—have low functional literacy. “Such patients typically have difficulty reading and understanding medical instructions, medication labels, and appointment slips.”

**Poor Educational Techniques**

Another challenge is getting patients to understand what will be required of them after discharge. In one study, for example, 78 percent of patients discharged from the ER did not understand their diagnosis, their ER treatment, home care instructions, or warnings signs of when to return to the hospital.13

11. Ibid.
15. Kripalani, Jackson, op. cit.
16. Ibid.
Poor Handovers

Another glaring deficiency in post-acute transitions of care is the inadequate communications between inpatient and outpatient providers. Here are a few statistics that underline the chaotic state of these communications:

- Direct communication between hospital physicians and primary care physicians occurs in only three to 20 percent of cases.
- Only 12-34 percent of doctors have received hospital discharge summaries by the time patients make their first post-discharge visits. The range rises to only 51-77 percent after four weeks, affecting the quality of care in about a quarter of the follow-up visits. 17
- Approximately 40 percent of patients have pending test results at the time of discharge, and 10 percent of those require some action; yet, in the majority of cases, outpatient physicians are unaware of these results. 18

Other studies have found that discharge summaries often fail to provide basic information about hospital visits. Some summaries never even reach the primary care doctors who are caring for discharged patients. 19

While ambulatory-care physicians may be shooting in the dark when they see a recently discharged patient, at least they may know something about the patient’s history, and they can find out what medications they’re on. All of that works to the patient’s advantage. But many discharged patients don’t or can’t make an appointment to see a doctor within a week of discharge. If the patient is at high risk of complications and deterioration, they should be seen within 24 hours, but often this doesn’t happen.

Studies have found that discharge summaries often fail to provide basic information about hospital visits. Some summaries never even reach the primary care doctors who are caring for discharged patients.

IHI’s Patient - Centered Approach

IHI, a Boston-based nonprofit organization that is leading two transitions-of-care initiatives, recommends that healthcare organizations create “cross-continuum” teams that involve all community stakeholders. It advises institutions to use a patient-centered approach that looks at post-discharge care through a patient’s eyes. By doing “deep dives” into several patient histories, IHI says, and finding out why the patients were readmitted, it’s possible to understand where the entire process falls short and begin to fix it.23

Specifically, IHI recommends:

- Focusing on the patient’s journey over time across care settings
- Making discharge preparations early
- Redesigning health education materials using health literacy principles
- Providing intensive care management services for high-risk patients
- Making sure that patients have follow-up appointments with physicians
- Improving communications between inpatient and outpatient providers

By doing “deep dives” into several patient histories, IHI says, and finding out why the patients were readmitted, it’s possible to understand where the entire process falls short and begin to fix it.
Recognizing that patients and their caregivers are key parts of the post-discharge care team, the transition coach visits the patient in the hospital and again at home and makes three follow-up phone calls.

**The key changes that hospitals need to make, says IHI, are:**

- Enhanced assessment of post-discharge needs
- Effective teaching and learning by patients and or caregivers
- Real-time handover communications
- Assurance of post-hospital follow-up.

**Coleman Care Transitions Intervention**

Eric Coleman, MD, a geriatrician at the University of Colorado Health Sciences Center, and his colleagues have created a Care Transitions Intervention (CTI) model that emphasizes the use of a transition coach. Recognizing that patients and their caregivers are key parts of the post-discharge care team, the transition coach visits the patient in the hospital and again at home and makes three follow-up phone calls. The coach teaches the patients/caregivers, helps them develop self-management skills, and assesses their learning. While some coaches are nurses, studies have shown that people with a wide variety of backgrounds can perform this function.

**Overall, the CTI supports patients in four areas:**

- Making sure patients and/or caregivers can manage their medication
- Giving patients personal health records to facilitate communications with providers and promote continuity of care
- Scheduling, preparing for, and completing follow-up visits with physicians
- Understanding danger signs for their conditions and knowing how to respond to them

Studies have shown that the CTI approach reduces the chances of rehospitalization by 40 to 50 percent. According to a California Healthcare Foundation report, more than 130 hospitals across the U.S. have adopted the CTI model.

**Naylor Transitional Care Model**

Mary Naylor, Ph.D., RN, and her colleagues at the University of Pennsylvania have developed another approach for decreasing readmissions. Their model involves care coordination by a transitional care nurse who generally has advanced practice training. Following evidence-based protocols, the nurse care manager visits the patient daily during his or her hospital stay; visits the patient at home during the first 24 hours after discharge and then weekly during the first month; telephones the patient weekly; implements a care plan that is continually reassessed in consultation with the patient, the caregiver, and the patient’s primary care physician; and continues calling the patient monthly after the initial two-month period.

Randomized controlled trials have shown that the Naylor model reduces all-cause readmission rates, increases patient satisfaction, function and quality of life; and decreases overall healthcare costs. In one study, the model reduced the number of readmissions at six months by 36 percent, and costs by 39 percent.

The literature on the efficacy of post-discharge phone calls has shown mixed results. But in one study, 19 percent of patients experienced medication-related issues that were resolved with post-discharge calls. In another study, 35 percent of patients who received calls needed significant referral and aftercare instructions. This evidence points to the need to reach out to the whole population of discharged patients, while stratifying patients in order to increase the efficacy of these phone calls and of care management in general.
New automation tools can greatly facilitate the range of best practices designed to improve post-discharge care and reduce readmissions.

**Automation**

The approaches outlined above have been shown to work with certain kinds of patients, and they can also be cost-effective with particular subpopulations. But, without the aid of automation, they cannot reach all patients who have been discharged from the hospital. Moreover, their approach to patient education is not as cost-effective as it could be, because it relies on one-to-one communications between patients or caregivers and coaches or nurses.

The existing models are also labor-intensive in other respects. The coaches and nurse case managers in the Coleman and Naylor models can handle only a limited number of patients. And, while human contact is essential in high-risk cases, automated approaches can perform many of the basic tasks required to support patients during the post-discharge transition.

New automation tools can greatly facilitate the range of best practices designed to improve post-discharge care and reduce readmissions. Among the areas where automation can pay off in higher quality and lower costs are:

- Risk stratification of patients
- Post-discharge communications with patients
- Patient education and engagement
- Closing provider communication loops

**Assessing Patient Risk**

Some patients who are at high risk for readmission can be identified in the hospital. Certain conditions, such as congestive heart failure, make readmission likely; but, in many cases, comorbidities are responsible for rehospitalization. So some patients who are not obvious candidates for readmission may slip through the cracks. Other factors, such as adverse drug events because of poor or no medication reconciliation, can also lead to unexpected ER visits or readmissions.

Ideally, hospitals should use predictive modeling to identify high-risk patients who are likely to be readmitted if they don’t receive appropriate care after discharge. Utilized widely by managed care plans, predictive modeling software analyzes hospital data, claims data on utilization and comorbidities, and patient surveys to stratify patients by risk level.

19% of patients experienced medication related issues were resolved with post-discharge calls.

---

34. Nielsen and Bradke presentation, op. cit.
35. Kripalani and Jackson, op. cit.
During the critical 24 to 72 hours after discharge, an automated phone survey can be used to measure the satisfaction of discharged patients with their care while gathering data on their risk factors. This information allows a computer program to calculate a risk score. Based on that and on answers to condition-specific questions, alerts about high-risk patients can be transmitted to hospital care managers or triage nurses.

In addition, if patients don’t understand discharge instructions or would like to be contacted by the hospital for additional follow-up, they can be transferred automatically to a hospital nurse help line or a call center.

If a patient has been identified in the hospital as high-risk, a nurse or transition coach should follow up with that patient at home or in the next care setting.

Home telemonitoring may also be indicated, particularly for patients with heart failure. Signals from monitoring equipment alert care managers when the patient’s condition deteriorates.

But for low- or medium-risk patients, the automated survey approach can establish whether the patient needs further professional assistance.

Moreover, the system can tell the hospital staff whether or not the patient has a follow-up appointment with a physician. And if it is connected with an outpatient registry, it can supplement hospital data with medical histories from integrated primary care systems.

**Patient education and engagement**

Automation can also provide better, more consistent patient education that overcomes health literacy problems and ensures that patients understand the information they’re receiving. This is an enormous opportunity to help patients increase their confidence and their ability to do self-management while reducing the amount of time and labor required to boost patients to that level.

Web-based, audiovisual educational materials are available, and some of them even provide links back to providers so that they can see whether patients have viewed the materials. But these programs lack the ability to test the patients on what they’ve learned and make sure they’re applying that knowledge to their own care. Digital coaching tools can fill this gap and help patients manage their conditions as much as they can on their own.

During the critical 24 to 72 hours after discharge, an automated phone survey can be used to measure the satisfaction of discharged patients with their care while gathering data on their risk factors.

---

Connecting providers to each other

As the statistics cited earlier show, the communication between hospital physicians and ambulatory-care doctors is generally subpar. There are a number of reasons for this, including a shortage of time, the difficulty of reaching outpatient providers, and the inherent problems of phone and fax communications.

The patient outreach system described earlier can help close the communication loop in one significant respect: If ambulatory care providers are using the same system to contact patients with preventive and chronic care needs, that service can also be used to notify primary care physicians and outpatient care managers when patients in their panels are admitted to the hospital and after they are discharged. This alone would fill a significant communication void.

The Physician Consortium for Performance Improvement and an article in the Journal of Hospital Medicine both recommend providing a transition summary to primary care doctors within 24 hours, rather than waiting for discharge summaries to be prepared and transmitted. Such a summary, which could be communicated by phone, fax or e-mail, would include discharge diagnosis, medications, results of procedures, pending test results, follow-up arrangements, and suggested next steps.

The use of EHRs could speed the delivery of these summaries; but, as one observer notes, hospitals and ambulatory-care practices frequently use different systems that are incompatible. In the future, health information exchanges will probably overcome this barrier. Meanwhile, healthcare systems could investigate the use of the Direct Project protocol to “push” information from one EHR to another.

Conclusion

By preventing readmissions, healthcare organizations could improve patient health and safety while responding to new government incentives and penalties. A patient-centered, automated approach is the most efficient and cost-effective way to make sure that all patients who have been discharged are properly taken care of. But such a model must be judiciously combined with high-touch care management to address the needs of high-risk patients appropriately.

A patient-centered, automated approach is the most efficient and cost-effective way to make sure that all patients who have been discharged are properly taken care of.

38. PCPI, “Care Transitions Performance Measurement Set.”
39. Kripalani and Jackson, op. cit.
40. PCPI, “Care Transitions Performance Measurement Set.”