Best Practices for Reducing Hospital Readmissions: The Secret Sauce of Automation

By Karen Handmaker, MPP

A great deal of research has been done on the best methods for reducing readmissions. For purposes of this article we will just highlight three – the Institute for Healthcare Improvement’s (IHI’s) recommendations, the Coleman Care Transitions Intervention, and the Naylor Transitional Care Model. Other resources for healthcare organizations include the BOOST program of the Society of Hospital Medicine;20 the Care Transitions Performance Measurement Set of the Physician Consortium for Performance Improvement;21 and the Transitions of Care Consensus Policy Statement of the American College of Physicians and five other specialty societies.22

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

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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.24

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.25 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.

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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.29

Naylor Transitional Care Model.

Mary Naylor, PhD, 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.30 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.31

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.32 In another study, 35 percent of patients who received calls needed significant referral and aftercare instructions.33

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.

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.34 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.35

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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.

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.

Connecting Providers to Each Other.

As the statistics cited earlier show, the communication between hospital physicians and ambulatory-care doctors is generally subpar. There 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.
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