Pharmacy Automation and Technology

Revisiting Hospital Readmissions

Brent I. Fox, PharmD, PhD,* and Bill G. Felkey, MS†

Is your hospital addressing the readmission rate? Maybe efforts are underway, but pharmacy is not directly involved. Although many believe the readmission reduction program needs changes to better reflect quality care, the program is in place and likely impacts your institution. We provide a broad overview of the program and try to sensitize you to the technologies that can support medication-related efforts.

In the March 2013 column, we discussed the possibilities of using smartphone apps as tools to reduce the number of preventable hospital readmissions. We categorized the necessary app functions into 4 broad domains: (1) communication tool, (2) education gateway, (3) medication adherence tool, and (4) tool to support measurement of indicators of the patient's condition or health-related behaviors. We also provided a brief introduction to the drivers behind the Centers for Medicare and Medicaid Services' (CMS) focus on reducing preventable readmissions, which currently targets 30-day readmissions for patients who are discharged with diagnoses for acute myocardial infarction, heart failure, or pneumonia. We have since spoken with many pharmacists who are not familiar with CMS' readmission reduction program. Therefore, we are devoting this month's column to providing a broad description of the program.

The legislation that created the focus on reducing readmissions is the Hospital Readmission Reduction Program (HRRP), which was added to the Social Security Act by the Patient Protection and Affordable Care Act. The ultimate goal of HRRP is to reduce Medicare costs in an approach that resembles pay-for-performance (P4P) programs. There is an important distinction between traditional P4P programs and the HRRP: HRRP penalizes hospitals instead of providing rewards that are customarily found in P4P. The HRRP's approach to incentives resembles the penalties for e-prescribing, which began in 2012.

Reimbursement for the 3 diagnoses mentioned previously is being reduced for hospitals with readmission rates above the comparable national averages (with risk adjustment for demographics, comorbidities, and

patient frailty). HRRP is already in operation. Fiscal year 2013 penalties began on October 1, 2012, and are based on readmission data from July 1, 2008, through June 30, 2011. Beginning in fiscal year 2013, hospitals can lose up to 1% of total Medicare reimbursement for the year. The penalty is up to 2% in fiscal year 2014, which began October 1, 2013, and 3% in fiscal year 2015. The formulas to calculate readmission penalties can be found at: <http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/AcuteInpatientPPS/Readmissions-Reduction-Program.html>. Hospital-specific data are found at: <http://capsules.kaiserhealthnews.org/wp-content/uploads/2013/08/readmissions-year-2-data.pdf>.

So, how does pharmacy fit in? Research has found that medication-related problems are pervasive in the inpatient and community settings. Of course, you already knew that. But did you know that¹⁻³:

- 54% of patients experience an unintended medication discrepancy at admission,
- 20% of patients discharged home have an adverse event during the transition,
- nearly 70% of adverse events occurring during the transition home are medication-related, and
- 27% of adverse drug events (ADEs) after discharge are preventable, with an additional 33% being amenable.

Collectively, medication errors are a leading factor associated with hospital readmissions. Readmissions are a very complex problem. Medications play an important role, but patient-specific factors and geographic, state, and even hospital-level factors impact readmissions. Even more upstream, a readmission cannot

*Associate Professor, Department of Pharmacy Care Systems, Harrison School of Pharmacy, Auburn University, Auburn, Alabama; †Professor Emeritus, Auburn University, Auburn, Alabama

exist without an index admission to the hospital. Ultimately, pharmacists focus on improving the safety and efficacy of medication use, therefore pharmacists should work to address the readmission problem by improving medication usage.

One way that we can improve medication-related outcomes is medication reconciliation. Not too many years ago, just mentioning “med rec” was enough to send a wave of panic across even the most seasoned pharmacist’s face. Today, med rec is being embraced as an approach to improve care. In fact, medication reconciliation is a frequently employed intervention in pharmacist-directed readmission reduction programs. Much of the focus on readmissions is directed at the end of the patient’s hospital stay (ie, discharge), but medication reconciliation efforts focus on the entire stay. Medication-related problems can occur at any time during a patient’s stay, so medication reconciliation makes sense as a way to prevent readmissions.

Other readmission reduction efforts address the coordination of a patient’s discharge from the hospital to ensure that other providers who care for the patient are “in the loop” on the patient’s condition and plan for their posthospital care. This can take the form of communicating new diagnoses, medications, behaviors, and so on to those individuals who will be responsible for the patients’ care in the community, including family members.

Another way to reduce readmissions is a follow-up phone call or in-person visit to check on the patient’s transition. These activities can occur at any time subsequent to hospital discharge and are generally directed at assessing the patient’s status, conducting a medication review, and making sure the necessary follow-up appointments are scheduled and that the patient will attend these appointments. Other issues

that the patient identifies are, of course, addressed to the extent possible.

Isn’t this a technology column? Yes, it is. We see clear opportunities for technology to support the pharmacist’s role in the activities mentioned above, as well as novel methods that may be developed to reduce readmissions. We have discussed the ability of smartphone apps to support readmission reduction efforts. Technology solutions such as prescription claims and lists, surveillance software, and electronic health records can also be used to identify patients at risk for readmission. Home-based monitoring tools can support the collection and exchange of patients’ medication adherence and disease-specific clinical measurement data. Additional tools allow caregivers to monitor patients remotely. Ultimately, the best tool depends on the patients, their preferences, and their condition(s). Regardless of the tool that is used, we believe the pharmacist should be actively involved in addressing medication-related factors that can positively or negatively impact readmissions. We welcome your comments, especially your successful and unsuccessful efforts to reduce readmissions (Brent at foxbren@auburn.edu, Bill at felkebg@auburn.edu).

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