Pharmacy Automation and Technology

Opportunities for Health System Pharmacies in Patient Care

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

It's been said that the best hospital stay is the one that doesn't occur. Certainly, *Hospital Pharmacy's* readers know that we are still working toward a completely safe health care delivery experience. In this installment, medication errors experienced during a hospital stay bring to light opportunities for health system pharmacies to create new points of engagement with their patients and increase patients' involvement in their care.

Have you heard that Bill had open-heart surgery between our last column and this one? He was scheduled for a minimally invasive replacement of a calcified, bicuspid, aortic valve on January 6. While in the hospital, he observed a mixed integration of the electronic health record (EHR) and paper record, experienced 2 medication administration errors, and experienced one ambulatory medication dispensing error. Remember the old adage, "There's no such thing as minor surgery when it happens to you"? Even though the medication errors caused him to stay 2 days longer in the hospital than planned, he returned home after 6 days on a Monday, taught Sunday school the next weekend, sang in the choir the following week, and has been doing regular chores and a carpentry project at a friend's farm for the last several weeks.

As is custom with our articles, our e-mail addresses are listed at the end of this article; you can contact us for more details on Bill's highly recommended procedure. The integration issues with the EHR included an EHR that was never accessed at the bedside, a 3-ring binder with all the usual paperwork found in the paper medical record, and a vital sign terminal collection device with wireless devices that scanned Bill's barcode wristband and then transmitted data to the in-room terminal.

The medication errors occurred after Bill's surgery. Amiodarone IV was hung to treat his post-op atrial fibrillation. Unfortunately, Bill experienced an infiltration of the drug at the infusion site, and the accompanying inflamed tissue reaction caused the IV to be moved to his other arm. When this occurred, saline was placed in the active ingredient slot of the

IV pump, and the amiodarone IV was placed in the slot used for flushing.

The ambulatory dispensing error occurred when a technician from the hospital's pharmacy came to Bill's room with a print out of his discharge medication list. The technician persuaded Bill that he could leave with all of the medications prescribed and not have to go through the extra step of stopping at a pharmacy on his way home. Unfortunately, Bill was in the shower in his hospital room when his home meds were delivered to his room. Of the 4 prescriptions he was supposed to take home, only 3 were delivered. Can you guess which one was omitted? If you said the oral amiodarone, you would be correct. During the discussion regarding his discharge medications, the technician explained that the pharmacy could have all of Bill's (and his family's) prescriptions delivered through the service offered by the hospital. Bill declined this service, but he received a follow-up call from the pharmacy weeks after he was home that offered to deliver his refills on the discharge prescriptions.

Even though the ambulatory prescription services that were offered by the hospital were declined, it was an interesting and very entrepreneurial move on the part of the health system to contact Bill about his refills. We have written for years that health systems should establish a lifelong relationship with every new patient. This particular health system attempts to establish this relationship by creating and running a branded patient portal that allows the maintenance of a personal health record. The health system populates information on the care provided to the patient on the portal and allows the patient to add data, including adherence, vital signs, symptom

*Professor Emeritus, Auburn University, Auburn, Alabama; †Associate Professor, Department of Health Outcomes Research and Policy, Harrison School of Pharmacy, Auburn University, Auburn, Alabama

recording, medication profile additions, and so on. We believe this is the direction in which health care is heading – engaging patients as active participants in their own care.

Upon reflecting on other opportunities for health systems to be involved in continuing patient care, we identified a strong trend toward affiliations between health systems and retail clinics. These retail clinics include the MinuteClinic operated by CVS in 27 states, the Healthcare Clinic operated by Walgreens in 20 states, and the Little Clinic, which is not owned by a pharmacy chain, that operates in 6 states. Even though the Little Clinic has only operated since 2003, they have recorded over 1 million patient visits by 2012 and have 700 employees. These retail clinics were initially viewed as a threat and not an opportunity by health systems, but they are now heavily affiliated with hospitals and are viewed as part of the continuum

of care delivery network. Physicians have found that these retail clinics help render an episode of care, and then will frequently coordinate patient visits back to their primary care physician. In many cases, retail clinics are able to integrate health information exchange from their own systems to those of both physicians and health systems.

With a shortage in primary care physicians, it is hoped that newly insured patients will be able to access retail clinics and then be guided to other appropriate care providers from the retail clinics. In this model, the retail clinics will become an access point in the community for triage. We are convinced that the “riches are in the niches” when it comes to innovation and entrepreneurial efforts in health care. We are interested in your reactions and questions. You can reach Bill at felkebg@auburn.edu and Brent at foxbren@auburn.edu. ■