Pharmacy Automation and Technology

Take-Home HIT: The New Discharge Education?

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

The technology supporting health care is as dynamic as it has been in decades. Internal and external forces are causing a search for alternative methods to existing practices, with the goal of improving patient outcomes and decreasing costs. In this article, we suggest the addition of a new technology component to the existing health system discharge process.

Pharmacists and pharmacy technicians are often involved in both the patient intake and discharge processes, while primarily performing medication-related activities. Medication reconciliation is one such intake/discharge activity that is performed with the support of pharmacy staff in today's hospitals and health systems. Medication reconciliation has become quite common and is an increasingly important component of ensuring appropriate medication therapy.

Looking at the discharge process, patients are the recipients of substantial and important activities. Depending on the patients' condition and postdischarge treatment plans, they may receive instructions on numerous self-care topics, new medications or changes to existing medications, scheduling of follow-up appointments, appropriate and non-appropriate diet and exercise behaviors, and other issues designed to safely transition their care from inpatient to routine ambulatory setting. It is difficult to identify a single component of the discharge process that is the most important or deserves the most attention. It is clear, however, that safe and effective care (especially at points of transition) is critical, challenging, and requisite to improved patient outcomes.

In the context of the focus of the Centers for Medicare and Medicaid Services on 30-day readmissions, we have suggested that health information technology (HIT) can provide a supportive role to prevent readmissions. Although many patients are unable or unwilling candidates for self-care management, we believe there is a subset of patients whose acuity, capabilities, resources, and motivation create the opportunity to use HIT as a powerful tool

to engage them in their homes. These patients could receive education, document important health measures including medication adherence, and initiate nonurgent communication with providers via HIT tools. Some patients could also use HIT to allow adult caregivers (ie, family members) to remotely monitor their loved one's status. Obviously these tools and uses are not perfect for everyone, but we believe this type of engagement holds considerable promise for those who are drawn to it and can be leveraged for uses outside the realm of readmissions.

Is this type of engagement with patients *really* that important? The Workgroup for Electronic Data Interchange (WEDI) thinks so. Formed by the Secretary of Health and Human Services in 1991, WEDI is an advisory group composed of a wide representation from the health care industry. WEDI focuses on the use of electronic data interchange to address inefficiencies in the use of information in health care, essentially moving from paper to electronic. In late 2012, the WEDI Foundation commissioned the 2013 WEDI report as an update of their 1993 report, which led to the administrative simplification provisions of the Health Insurance Portability and Accountability Act.

The 2013 WEDI report focuses on short-term steps that can lead to long-term solutions to the challenge of getting the right information to the right place at the right time – in an electronic format. The report includes 4 key areas: (1) patient engagement, (2) payment models, (3) data harmonization and exchange, and (4) innovative encounter models. We will focus on the first area, which WEDI defines as dialogue between patients and other stakeholders (providers, health plans, etc).¹

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

WEDI notes that the dramatic momentum currently surrounding HIT in the United States represents a significant opportunity. Much of this momentum is focused on providers and health systems; yet, there is considerable innovation in consumer electronics to develop tools to support healthy lifestyles, disease management, and care coordination. You only have to visit your smartphone's marketplace to discover the thousands of apps for health-related uses. There is also a broad array of wireless devices for disease monitoring, recording, and sharing important health measures. The challenge is in consumer HIT education and training. Whereas pharmacists routinely use computers and automation on a daily basis, consumers struggle with transitioning from texting to using tools that are designed to address behavior change. Additionally, the patients' understanding of why information should be collected and shared is just as important as their appropriate use of the tool.

This brings us back to the discharge process. We believe it's time to proactively assist patients in the identification and use of HIT tools (take-home HIT) for use in their homes after discharge. Just as patients are sent home with education on new medication regimens, they should receive education on HIT appropriate to their situation. So, how would this look? At a minimum, all patients would learn about authoritative, Internet-based resources specific to their condition(s). Patients who do not have Internet access should be given information on the closest free Internet access, such as a public library. They should also be informed about the hospital's patient portal, including scheduling, prescription management, and lab result retrieval functions. Of note, satisfaction with a hospital's public Web site has been found to be significantly and positively related to patients' overall satisfaction with the facility.²

As the patients' desires and conditions dictate, take-home HIT training and education can focus on specific tools (eg, wireless blood pressure and glucose monitors, targeted apps) to meet their unique circumstances. We know that medication usage post

discharge is common across the vast majority of patients. We believe there is an opportunity for pharmacy staff to incorporate HIT training into the existing medication-focused discharge steps. As the medication experts, it makes sense for pharmacy staff to deliver training and education on HIT tools that focus on medications. Pharmacy students on clerkships and rotations are ideal candidates to fill this role.

Although there is considerable interest in finding innovative ways to reduce overall health care costs, the cost of take-home HIT and associated training is the most obvious challenge to the widespread use of HIT as a routine component of the discharge process. The entry-level tools we identified (existing Web sites and the hospital's patient portal) should already be in place, so it's reasonable to expect that most patients can receive some level of foundational training.

However, will patients pay out-of-pocket for a tool that could improve their health? Some may, but many probably will not. The good news is that the default apps such as timers and alarms can be utilized and cost nothing but the time to program them. Would insurers pay for take-home HIT? They will want to see data demonstrating effectiveness. Self-insured employers are another group with a vested interest in decreasing health care costs. They will also want effectiveness data. It seems probable that we will need to see effectiveness data before we see broad adoption. Until then, we would like to hear your ideas on the barriers and challenges to take-home HIT (Brent at foxbren@auburn.edu and Bill at feklebg@auburn.edu; or post a comment at www.pharmacy-informatics.com).

REFERENCES

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