Pharmacy Automation and Technology

Technology Is Becoming Integral to the Success of Patient Engagement

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Health systems can adopt the most advanced information systems and employ a facility full of progressive providers, but many of their efforts may fail if patients are not engaged. Blending the outputs of electronic health records in every transition, sharing and exchanging health information, and populating personal health records are among the technologies that are increasingly being used to bring patients inside the process and participating in the circle of care.

Several interesting and related topics recently passed across our computer screens. In our presentations to professional groups, we often talk about convergence from a technical perspective. For example, today's smartphone is really a converged device combining a mobile phone, computer, music player, still camera, and video camera. Bill's new phone measures his pulse oxygen and heart rate and is a pedometer. Similarly, we see evidence of convergence in events or news that occur in the health information technology (HIT) space. This convergence is not necessarily at the device or physical level, but instead represents trends and behaviors observed among the constituencies involved in the use of HIT.

Health care providers and other professionals (ie, IT staff) comprise what is probably the most obvious HIT user group. They certainly have different uses of HIT, but when it comes to routine, hands-on experience with HIT, these individuals are "frequent flyers." Just as their purposes or reasons for use vary, the extent of their usage is influenced by the hospital or health system environment in which they work. Users in hospitals that are aggressively pushing forward on the Meaningful Use program are likely living a different experience than hospitals that are dragging their feet on electronic health record (EHR) adoption and implementation.

One organization that is probably not as well known to the average HIT user but is very important is the Workgroup for Electronic Data Interchange (WEDI). WEDI focuses on electronic data

interchange to support improved care and efficiency and to reduce health care costs. The organization was formed in the early 1990s and is an advisor to the US Department of Health and Human Services. We bring WEDI into this discussion on convergence because of a report they recently published. The report (<http://www.wedi.org/docs/resources/2013-wedi-report.pdf>) explores the nation's progress on health information exchange (HIE). It includes 10 recommendations in 4 key areas that are critical to moving the country forward toward HIE to support getting "the right information to the right place at the right time."

Patient engagement is one of the key areas, with the expectation that patients are valuable sources of information and can potentially play an important role in information exchange as well as information management resulting in improved self-care management. The report recommends implementing HIT education and literacy programs for consumers. Mobile health (mHealth) devices such as smartphones, phones, apps, and Cloud storage make it possible for patients to take an active role in their care; the WEDI report suggests that this represents a relatively untapped opportunity in health care. WEDI believes that formal training can enable patients to be active participants in information exchange that is more accurate and efficient than is currently experienced.

A related WEDI report indicates that an important patient engagement tool is not as well known as it likely should be. We have previously written about

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the Blue Button [see *Hospital Pharmacy* 2012;47(4): 310–311] initiative. The Blue Button is an electronic tool that allows patients to download their medical records in machine and human readable format. It was developed in the Veterans Administration (VA), and its use has been extended outside of the VA in recent years. The WEDI report found a decrease in the number of health industry stakeholders who were familiar with the Blue Button, comparing 2013 to 2014 respondents. Awareness increased among behavioral and allied health professionals, but the aggregate decrease in awareness is believed to be due to inclusion of a larger number of respondents who are not eligible for Meaningful Use incentives.

Although the report's findings specific to awareness of the Blue Button are concerning, other findings in the report are encouraging. The incorporation of medical device data into EHRs that populate personal health records (PHRs) increased for governmental and nongovernmental respondents. Additionally, 80% of respondents reported offering PHRs to all members instead of a subset of members. A 10% increase was found in the number of respondents who allowed patients to request amendments to their EHR through the PHR. Collectively, these responses signal a continued trend in the use of HIT to engage patients. There appears to be a potential shift in Blue Button awareness, but the findings probably reflect the role the Meaningful Use program has played in driving practice change. It is becoming evident that those who are not subject to Meaningful Use criteria are less aware of priorities found within the program.

So, where does this leave the *Hospital Pharmacy* reader? We recommend looking at the information that is available to patients in the PHR. The WEDI report found that the information most frequently found in PHRs is medications (79% of respondents, which is actually a decrease from 2013). Looking specifically at discharge medications, a 14% increase was found in the number of respondents making those data available via the PHR. Adverse reactions were also reported by 40% of respondents. Although there are interesting decreases in many of the categories of information available in the PHR, the findings related to the availability of PHRs in general indicate that health systems, health plans, technology companies, and payers are collectively pushing forward on patient engagement strategies, and these strategies involve information directly applicable to pharmacy.

Are you on a committee (or less formal group) within your organization that has direct responsibility over patient-facing tools? Does your institution have such a committee? If your institution is pursuing Meaningful Use incentives, these patient engagement tools are likely being discussed. If not, they definitely need to be. Moving care outside of the hospital (when appropriate) and bringing patients into the care circle will remain major priorities and challenges for our health care system for the foreseeable future. Once again, as medications are a primary component of these patient engagement efforts, pharmacy must be actively involved. We want to hear about your successes and challenges in this domain (Brent at fox-bren@auburn.edu and Bill at felkebg@auburn.edu). ■