Pharmacy Automation and Technology

Was a Mobile Health Strategy One of Your New Year's Resolutions?

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

Culture change is hard in any organization. However, it can often lead to positive results. We believe that the culture of health care needs to focus on how mobile health tools can assist in care provision in hospitals and health systems. In this installment, we explore some of the steps necessary to help move mobile health into the mainstream of health care.

Both of us are car guys and, as you know by now, technology enthusiasts. One of us started driving before there were seat belts in cars, central controlling computers, and GPS that gives us turn-by-turn directions and even helps us navigate around traffic and road construction problems. These days, we get e-mails directly from our cars telling us the status of their systems and their eventual need for maintenance. As we drive, we receive alerts when tire pressure is low; we are told which tire needs air and how much to give it. We can use our smartphones to unlock a door from across the country when our spouses lock their keys in their vehicles. We are able to start the car engine in cold weather from the breakfast table before we grab our coats to begin our commutes. As we approach our vehicles, they adjust the seat, mirrors, and radio stations to our preferences. Our windshield wipers have rain sensing technology to control their speed. In the early days of driving, we got very little information from our vehicles to help us with the task of reaching our destination and monitoring our vehicles. We think this is a good analogy for how available mobile technology can be employed to reach our health care destinations and outcomes.

Whether we are in the role of provider or patient, we should all have health care destinations in mind. Don't you think that 2014 would be a good year to examine a mobile health strategy for your organization and make sure you are getting the information you need to reach your destinations? If you already have a mobile strategy in place, is it for your department only or does it include patients?

What about your personal situation? We all are patients at some time or another. Did any of your resolutions include losing a little weight, enrolling in the gym, or lowering your blood pressure a little bit more? Well, the good news is that we have the technology to assist you in any of these worthy destinations. You can attempt improvements on your own or engage your colleagues in the endeavor. Consider doing things for yourself that can serve as a model for an organizational strategy when you explain how these technologies can benefit your department.

Because we live in a connected world, we can now receive the information who need to reach our destinations in real-time (or near real-time). We can communicate within a multidisciplinary care team. We can receive health status information and graphically display trending data. Unfortunately, to achieve our mobile health solution, we will need a change in the culture in which health care is delivered in episodes of care separated by 4 to 6 months or, in some cases, a year. Before you begin panicking about drowning in a river of health care data, remember that data can be analyzed to prioritize interventions needed only to those patients who require it. So much of our episodic health care system spends valuable time looking at patients who are in good health and well-controlled by their treatments.

Imagine a health system where there are pre-emptive warnings when patients begin to experience problems that require an intervention sooner than their next scheduled appointment or before ambulances transport them to the emergency department.

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

One of our previous articles concerned the need for pharmacist involvement in reducing readmissions. A discharge consultation is the perfect scenario in which patients can be evaluated for preventable readmission, and a mobile health strategy can be included to address the kinds of problems that create preventable readmission.

Many patients already possess the technology to assist you in this intervention. We tend to keep our cellular technology on our person or within 3 feet of us 24/7. It is almost always on, and applications such as alarms, calendars, lifestyle apps, and disease-specific management apps can be incorporated into the daily lifestyle of each patient. The motivation for using these technologies is usually quite good following hospital admission. Family members who are technology savvy and who are going to be caregivers can be brought into the process as well. Other assistance can come from social networking resources that aid in the support and motivation of those discharged from a hospital.

In addition to health care applications on smartphones, there are many connected digital tools that use the smartphone as an information hub for monitoring health status. Digital scales, pedometers, blood pressure cuffs, blood glucose and peak flow meters, and electrocardiographs can use a Bluetooth or WiFi connection to collect, assess, and share health data. Wireless, implantable, and even wearable technolo-

gies are rapidly being introduced into the market to address every major disease and lifestyle issue.

As mentioned previously, we have received significant pushback from every discipline and specialty regarding these data. Some fear that they will be legally responsible when these data come from patients and are transmitted to their electronic health records. This fear has caused some to categorically refuse this information on patients. Many health care providers only receive reimbursement for episodic care and cannot comprehend adding the burden of just-in-time information requirements to their practice. Again, a mobile health strategy will require a change in culture and potentially a change in operations to provide more timely care provision.

We would encourage you to adopt a mobile health strategy if you have not already done so. You could begin with yourself as a sample of one and search for support in any area of need that you have identified. Since you are already reading a health care technology article, you probably would find it natural to use technology to make you more efficient and effective. Please feel free to share what has worked in the past or any new discovery that you make on this topic. If you have questions or comments about making this concept move from personal to professional, we would welcome the opportunity to discuss this further. You can reach Bill by e-mail at felkebg@auburn.edu and Brent at foxbren@auburn.edu. ■