



REINVENTING

the healthcare industry through mobility

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INTRODUCTION

America's healthcare system is undergoing a dramatic transformation. Healthcare spending continues to rise rapidly in the United States, and the healthcare industry is caught struggling to meet regulatory requirements while juggling patients, cutting costs, and increasing efficiencies to improve quality of care. The new mandates driven by the Affordable Care Act (ACA) will result in millions of new patients seeking healthcare, many of them without the means to travel to obtain services. As a result, healthcare providers will have to deliver services to patients wherever they are, instead of patients coming to them.

"Mobile technology is going to radically change the interaction between patients and providers in the coming years," says Pam Burnette MBA, BSN, RN, director of healthcare product, Kelly[®]. "Although it may seem like a daunting prospect, mobility is just another step in the evolution of healthcare. Many consumers already use home healthcare devices, such as glucose monitors, home blood pressure monitors, and even portable dialysis machines. So the concept of mobile healthcare is not hard to imagine."

Taking healthcare to patients can significantly enhance the relationship between providers and patients and ultimately improve healthcare outcomes. Research shows that most healthcare organizations have begun to design a strategy to help them embrace mobility in providing healthcare. The perspectives and needs of both patients and providers must be taken into account to create a successful mobile strategy. But there are challenges to be met, including a growing gap between the increasing need for healthcare and the availability of healthcare talent.

Taking healthcare on the road

The foundation of mobile healthcare is patient-centric, with processes built around data analytics and information services. These services can include:

- + Providing information to patients to empower them to make healthier lifestyle choices
- + Remotely monitoring patient data, such as vital statistics through mobile sensors or other devices
- + Employing mobile point-of-care technologies, such as notebook computers, tablets, and mobile clinical assistants
- + Delivering information or test results to providers at the point of care with a patient
- + Enabling remote access to patient histories and medical records to streamline collaboration between providers

The wealth of information underlying these services can be tapped into quickly. Patient data feeds into this network alongside databases of information relating to diseases, procedures, therapies, medical devices, and clinical trials. The network then powers mobile health applications that can help patients and providers manage medications, control chronic diseases, and improve overall health and wellness. Critical insights can be made that will streamline the prompt delivery of healthcare and lead to improved outcomes for patients.

"Mobile devices are at the heart of virtual healthcare because providers use them to access information quickly and easily," explains Burnette. "Studies have shown that more than half of all doctors in the United States use tablets for professional purposes, many of them at the point of care. And because mobile devices are convenient, easy to carry, and always on, doctors are more likely to enter information right away and they spend less time doing it."

In today's increasingly regulated healthcare environment, providers are working to achieve new levels of efficiency, and mobility plays a large part in achieving that goal. The coming influx of newly insured patients needing healthcare outside of traditional clinical locations, the demand for real-time information by clinicians, and the need to increase operational efficiency are driving the need for mobility and virtual healthcare solutions.



D2 Mobile healthcare keeps patients healthier

More than 125 million Americans live with one or more chronic diseases, such as heart problems, diabetes, arthritis, or lung disorders. In recent years these patients have grown increasingly adept at using technologies that give them a more active role in managing their health. Smartphone applications, monitors, sensors, Internet patient portals, and even social media outlets enable healthcare to reach patients wherever they are. Mobile health and wellness apps can help people alter lifestyle choices and better manage chronic conditions and related medications. Wireless devices can count calories burned, steps taken, miles walked, and heart rate variances, and then link to a website to analyze results and compare them to other patients. Data delivered to providers in real time from implantable and wearable sensors can improve drug and therapy adherence and potentially keep people out of the hospital by identifying problems in advance.

Many patients who are already adept with mobile technologies are tapping into the benefits of virtual healthcare, expecting or demanding mobile capabilities from providers. From simple automatic reminders of appointments and prescription refills to access to test results or email answers from physicians, mobility is impacting the way healthcare is delivered outside of the clinical setting.

In addition to simplifying the delivery of healthcare, mobile technologies can also improve safety for patients. The

potential for human error is always a concern in healthcare operations, but the U.S. Department of Health and Human Services believes that the frequency and severity of safety incidents can be reduced significantly by using computerized records on mobile devices and automated detection methods, such as handheld scanners.

For instance, when a phlebotomist in a hospital or clinic prints specimen labels for several patients ahead of time before making patient rounds, there is a risk of mixing up labels. The process is inefficient because the labels have to be carried from room to room and physically affixed to specimens. However, if a blood draw is ordered on a mobile handheld computer at a single patient location, the command is sent to a mobile printer to print labels for that patient at the point of care. Not only is mobile phlebotomy more efficient, it also reduces the possibility of specimens being misidentified.

The financial benefits of mobile healthcare are another advantage for patients. The ease of tracking health conditions with mobile devices can help prevent or lessen the cost of unexpected medical problems. And moving healthcare services out of overhead-burdened locations, such as doctors' offices and hospitals, into patients' locations helps lower healthcare costs to a sustainable level.

03 Mobile healthcare streamlines and improves access to provider services

The ACA and other new healthcare reform laws will bring about a complex series of changes in healthcare delivery in the coming years. Nursing will play a central role in meeting the challenges of providing wide access to essential health services while controlling costs and improving quality. In collaboration with nursing organizations, states are developing their own laws regarding licensure, regulation, and scope of practice for traveling nurses. The ACA has established requirements for federally qualified Nurse Managed Health Clinics (NMHC) that will be placed in schools, colleges, or nonprofit health or social services agencies to provide primary care or wellness services to vulnerable or underserved populations that cannot travel to obtain healthcare services.

The ACA also gives states the option to establish "health homes" staffed by healthcare professionals, where Medicaid recipients with chronic conditions can receive services without having to go to a hospital or doctor's office. These sites must provide timely and comprehensive services, including care coordination, health management, transitional care from inpatient to other settings, referral to social support services, patient and family support, and the use of information technology to link healthcare services.

"The complexity of managing healthcare has steadily increased due to an explosion of chronic diseases fueled by unhealthy lifestyles, an aging population, and higher standards of living," says Burnette. "Healthcare professionals continue to face increasingly stringent regulations and pressure to provide easily accessible care that also ensures patient privacy. The industry is already working to achieve new levels of effectiveness and efficiency while meeting HIPAA requirements for privacy and FDA mandates for recordkeeping. Although the ACA will help improve patient access to providers, the regulations will add more challenges to the list of issues the industry is already working on. But mobile technologies are helping providers meet those challenges head on."



O4 Managing healthcare virtually

Virtual healthcare links technology with healthcare services so providers can coordinate patient care when a patient is unable to travel to the provider's location. Telemedicine, which began years ago as basic radio or telephone communication between patients and medical providers, has grown into a sophisticated healthcare solution for patients who live in remote areas. Today's high-tech telemedicine solutions enable interactive contact between patients and providers via email, texting, Skype® calls, and online data sharing. The Department of Health and Human Services Office of Health Information Technology says that telemedicine has been proven to be an invaluable help for homebound patients who are battling chronic conditions. Virtual healthcare technology is also a beneficial option in low-income or underserved areas where brick-and-mortar clinics are few and far between.

Nine states require providers to be specifically licensed to practice telemedicine, and 13 other states are considering

enacting some kind of telemedicine legislation. Some health systems have created pilot programs using special computers that allow providers in remote locations to have real-time conversations and consults with patients, take vital signs, and have specialists see patients promptly over long distances. The efficiency of telemedicine translates to less waiting, fewer medical tests, and a faster, more accurate diagnosis resulting in treatment being started more quickly.

"We have the technology now to reach out to patients and let them be more involved in their care," says Burnette. "There are radical applications coming along all the time, especially in rural areas where finding a specialist is difficult and patients have to wait a long time for an appointment. But if a patient can be diagnosed and treated without having to make an office visit, managing their healthcare is faster and more efficient."

05 Mobility helps mitigate talent shortages

The ACA supports the hiring of more than 16,000 more primary care providers—including doctors, nurses, case managers, physician assistants, and nurse managers—to accommodate the influx of newly insured patients. According to the U.S. Bureau of Labor Statistics, employment in the healthcare industry is projected to grow by 14.3 percent by 2020, resulting in more than 20 million new jobs. As the population ages and the healthcare industry grows, one-third of the fastest growing occupations will be in healthcare, particularly registered nurses, home health aides, and personal care aides.

"With the ACA mandating insurance coverage for millions of new patients, the surge in healthcare job openings is expected to expand in the coming years," says Burnette. "But because there is already a shortage of doctors and nurses, the talent demands brought on by the ACA will make the situation more challenging. The government recommends that a region have 60 to 80 primary care physicians for every 100,000 residents. If a region can't find enough doctors to fulfill those recommendations, then primary care physicians must prepare to take on more patients in a healthcare system that's already overburdened. To help deal with the talent shortage in healthcare, mobile and virtual healthcare services will make it easier for existing providers to treat more patients quickly, effectively, and efficiently."

According to the Association of American Medical Colleges®, the shortage of doctors in the United States will reach 63,000 by 2015. Employment needs in healthcare are also rising as new jobs emerge as a result of the Health Information Technology for Economic and Clinical Health (HITECH) Act, particularly as hospitals begin to address the pending

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deadlines for International Statistical Classification of Diseases and Related Health Problems (ICD-10) and Meaningful Use.

The influx of millions of new patients, continuing economic uncertainties, and the growing talent shortage may have an adverse effect on the ability of healthcare organizations to give patients excellent care. Healthcare organizations should start developing a mobile strategy as part of an overall approach to meeting staffing challenges. By making healthcare mobile and increasing access to virtual healthcare technologies, providers can take proactive steps toward maintaining quality of care even when top new talent is in short supply. Providing mobile and virtual healthcare services to lessen the impact of talent shortages saves time and resources, but successful mobility in healthcare requires a plan. In the past, providers introduced various apps and devices that were used sporadically and not always connected to each other. The objective of mobility is to enable quick, seamless, accurate communication, so technologies must be tied together within a single platform. Staff should be trained in wireless mobile technology, and new systems and technologies should be integrated into existing workflows to encourage their use by providers and patients.



CONCLUSION

With federal stimulus money in place to help hospitals and medical facilities design mobile healthcare strategies, the healthcare industry is better prepared to take advantage of solutions that will help them meet the challenges presented by the Affordable Care Act. The majority of consumers are already using mobile technologies to manage their health, and studies have shown that patients are ready and eager to accept mobile healthcare services. Forward-thinking healthcare systems can stay ahead of the curve by designing a mobility strategy for providers that will support the needs of healthcare in the future.

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