Mobile health, or mHealth, has broken through as a game-changer in today’s healthcare sector. While still very much a market in early development, mHealth initiatives are driven by a number of significant industry developments:

• The Affordable Care Act (ACA) is shifting reimbursement systems from fee for service to pay for performance. Real outcomes matter.

• Digitized health records and clinical information systems create a platform to input, analyze and share data across the care continuum.

• Increased investments in disease management and a focus on preventative care make active intervention and interaction with patients outside of the hospital and physician’s office both doable and desirable.

• The struggle to manage the rising costs of healthcare continues, especially the financial burden of treating chronic diseases in an aging population.

• Communications technology — including tablets, smartphones, wearables, sensors, and powerful 4G LTE networks — provide the infrastructure to support virtually anytime, anywhere information exchange.

• The movement toward patient-centric care is demanding a focus on two-way information flows, with the patient assuming greater levels of responsibility for managing his or her own health.

Underlying all of these developments is the fact that mobile communications has become an integral part of people’s daily lives. For example, now that fitness-oriented wearables (bands, smartwatches, etc.) are available over the counter to provide a person with continuous biometric monitoring, it doesn’t take much of a leap for a patient to expect his or her physician to leverage mobile technologies as an integral part of medical care.

Despite the many factors driving the mobile health market forward, mHealth proponents continue to wrestle with very real challenges:

• High technology costs. Those remote patient monitoring devices aren’t cheap.

• Unreliable reimbursement systems. Just who is going to pay for “telemedicine?” While the Centers for Medicare and Medicaid Services (CMS) have introduced new codes for reimbursing telehealth services, these are only a beginning, and care must be taken to ensure the right behaviors and treatments are being properly incented.

• Regulatory uncertainty. The politicization of US healthcare policy — and even the technology that helps to enable this policy (think Net Neutrality, for example) — can inject a worrisome note of instability.

• Resistance from healthcare professionals. Physicians and other members of the patient care team can be easily turned off by difficult-to-use solutions that have no readily apparent value.

• A lack of integration. Today’s mHealth solutions tend to be deployed in silos, with little to no integration and connectivity among devices, apps and platforms.
These last two points are especially relevant. While mHealth makes inherent sense, skeptics point to a lack of hard proof points. The ability of mHealth apps to move the needle in improving health outcomes—i.e., generating sustainable health improvements and ROI on investments—remains unproven in many cases. And this lack of real discernible progress can often be attributed to the absence of seamless, integrated connectivity among applications, IT systems, and all involved players, including patients, physicians, institutions, and insurance companies.

Simply put, mHealth is evolving along a spectrum of connectivity, starting with technology, then standalone software applications, and culminating in integrated solutions. It is in everyone’s interest to drive the pace of this evolution since the sooner it begins providing more comprehensive, integrated solutions, the more valuable mHealth becomes.

At its most basic, mHealth is technology. Simple mobile communications can save time, engage patients and caregivers, and enable better and more rapid patient treatment. Text messaging is a popular example, with nurses, physicians and staff being able to quickly communicate with each other in any setting. Texting is also being used to provide patients with convenient reminders and incentives to take their medications. However, in the latter case, while sending a reminder to a patient to take their meds will likely have some positive impact, research shows that “forgetting” is a cause of only 10 to 15% of non-adherence. As a result, text messaging alone likely has little long-term payoff in changing non-adherent behavior and improving health outcomes.

Software applications offer even more powerful ways to provide value:

- Basic one-way informational apps for physicians, nurses and other clinicians are commonplace today, including smartphone- and tablet-based medical reference libraries, anatomy apps, medical dictionaries, and prescription guides.
Then there are the patient-specific informational applications that allow the user to access (and sometimes augment) an individual’s digital data. An example would be 2D and 3D imaging apps that view CT, MRI, X-ray, and PET displays on mobile devices. Software products that access and update a patient’s electronic health records (EHR) are another good example.

While providing real value, applications alone can come up short on having a significant impact on health outcomes. They address one element of what is needed to make a difference, but impact and sustainability are not optimized.

The real mHealth impact lies in the implementation of comprehensive solutions. Solutions integrate devices, software and systems to provide real-time data, analytics, and treatment. Today’s remote patient monitoring solutions are a step in this direction, using combinations of devices, sensors, software and networks to connect care teams with their remotely located patients. However, a more evolved solution will provide seamless, secure connectivity among multiple applications, information sources, and devices on the same platform. It will integrate into relevant IT and health information systems. And it will process and transform reams of data into actionable insights, analytics and guidance.

These solutions will leverage fast and powerful 4G LTE networks, along with cloud-based platforms. The cloud allows mHealth solutions to securely access an array of applications and systems, and then quickly share information across multiple parties. Ideally, the specific mHealth solutions can then help automate initial patient engagements and follow-up, and stimulate additional levels of engagement by healthcare providers as needed.

How are effective mHealth solutions developed and deployed? As with most impactful solutions that deliver cost-effective health outcomes, it involves a combination of technology, device, and human interaction. Leveraging the strengths of devices, cloud infrastructure, network capabilities, data analytics, and two-way information flows requires partnerships and development work involving some combination of clinicians, device manufacturers, application developers, communications service providers, and patient/consumer end users. Clinicians, patients, solution vendors, and communications service providers must collaborate, combine knowledge, and understand workflows to build impactful mHealth solutions.

As they continue to take hold in today’s healthcare sector, integrated mHealth solutions hold great promise in:

• Generating improved health outcomes;

• Doing so in a cost-effective fashion;

• Increasing access and engagement across the entire population; and

• Better managing chronic diseases through remote monitoring and patient participation.

More information is available at www.sprint.com/healthcare.

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