m-Health: Engaging Patients at Every Touchpoint

Today, patients expect fast, easy access to their personal health information, similar to what they experience when banking or shopping online. To meet these expectations, healthcare providers must deliver on the promise of a highly secure, self-service, patient-centric environment.

Executive Summary

In many ways, access to electronic health records (EHR) is about convenience. Patients can order repeat prescriptions online without leaving the comfort of their home, or have prescriptions sent electronically to a pharmacist near their workplace. Knowing how difficult it can be to obtain test results or receive healthcare reminders over the phone, most people would prefer having fast, easy access to this information when and where they like.

Hospitals and other healthcare institutions maintain comprehensive patient records, including lab reports, ongoing treatment processes, prescribed medications, and scheduling, etc. At the same time, this information is not easy for patients to retrieve, especially if they are on the go.

Giving them access to their electronic health records can alleviate this issue, and encourage proactive, preventive care. Individuals can rest assured that their prescriptions are up to date, and that they have the information they need for their next doctor’s or hospital appointment - planned or unexpected.

Slowly but surely, it will be routine for patients to access their personal health information and health care services online. In fact, some providers, payers, and intermediaries already offer these services.

This won’t alleviate the need to see doctors, nurses, and social workers face-to-face; however, it could kick-start a change in how people relate to doctors and other healthcare professionals. It’s about empowering patients to have more control, and take an active role in their health regime. Providing relevant information and services within a single interface is challenging; however, the goal is to create a robust, integrated, interoperable, and inclusive health system that serves the best interests of patients, physician practices, public health, and the population at large.

This white paper provides insights into the global m-Health market, as well as current trends, the challenges associated with implementing scalable
EHR technologies, and recommendations for overcoming these roadblocks. It also reveals how the evolution of digital patient engagement technology could radically improve communications among hospitals, physicians, and patients.

Patient Engagement: The Challenges
Over the last few years, healthcare entities have been drawn to the HITECH Meaningful Use (MU) EHR Incentive program. EHR adoption has grown significantly, and there are early signs of the benefits in terms of safety and quality. Nonetheless, there are issues among physicians and patients alike:

- **Physicians**: Given the high acceptance rate of the EHR program, many physicians have expressed concerns that the use of electronic health records could lead to unintended clinical consequences, including less time for patient-physician interactions; new and time-consuming data entry tasks for front-line clinicians; and longer workdays. Also, enabling interoperability among different EHR systems is not easy, despite significant efforts to overcome the problem. This has frustrated physicians, and led many to voice dissatisfaction with current EHR offerings.

- **Patients**: Despite rapidly evolving digital technologies and the growing popularity of mobile devices and gadgets, patients still have very limited access to their healthcare records. In the current environment, notwithstanding the various data streams in the healthcare ecosystem, they have very minimal – or no – connections.

An Approach to Longitudinal Analysis
EHRs are a critical part of today’s healthcare environments. As these technologies mature, patients will be empowered to take control of their health through initiatives such as m-Health (mobile apps, etc.).

For EHRs to live up to their promise, they must:

- **Enhance physicians’ ability to provide high-quality patient care.** During face-to-face interactions with patients, physicians spend considerably more time capturing a patient’s medical information than discussing the patient’s health and treatment options. This is largely due to the inadequate design of EHR applications (unnecessary pop-up reminders, cumbersome menus, and poor user interfaces), which can make them far more time-consuming than paper charts.

- **Support team-based care.** Existing EHR technology often requires physicians to enter data or perform tasks that their support staff should be able to complete. EHR systems should be designed to maximize each person’s productivity in accordance with state licensure laws, and allow physicians to delegate tasks as appropriate.

- **Promote care coordination.** Transitioning patient care can be a challenge without full EHR interoperability and robust tracking. EHR systems need to automatically track referrals, consultations, pharmacists, and diagnostic orders so physicians can seamlessly follow the patient’s progression throughout their care.

- **Offer product customization and configurability.** Few EHR systems are built to accommodate physicians’ practice patterns and workflows, which vary depending on size, specialty and setting. Customized EHR systems would allow physicians to configure their health IT environment to best suit their workflows and patient population.

- **Facilitate digital patient engagement.** Most EHR systems are not designed to support digital patient engagement. Affording interoperability among EHR systems, patients’ mobile technologies and tele-Health technologies would be beneficial for effectively managing chronic illnesses and promoting the health and wellness of the patient community.

- **Assure data security.** Safeguarding date has always been a top concern for the healthcare industry due to compliance requirements set by the Health Insurance Portability and Accountability Act (HIPPA). The security of personal electronic health records also requires proper regulation to ensure that Protected Health Information (PHI) is handled correctly.

EHRs need to support medical decision making with concise, contextual, real-time data. This requires IT developers to create sophisticated tools for reporting, analyzing data, and supporting decisions. These tools should be customized for each practice.

Serving Healthcare Consumers Online & On-the-Go
Advances in consumer technologies, such as the smartphone, tablets, wearable tech devices and fitness apps, have ushered in a new era of healthcare consumerism. (See our white paper, “The Rise of the Empowered Consumer”). Patients now have high-tech tools at their fingertips -
allowing them to take a more proactive role in their care.

These consumers are heavy users of mobile technology. A Pew Research Centre survey found that 63% of adult smartphone owners used their phones to go online, and 34% of smartphone Internet users went online mostly using their phones, rather than a desktop or laptop computer.

We have become a digital society, at home and on the go. (For more, read: “The Digital Mandate for Health Plans”).

As shown in Figure 1 above, this will give patients the ability to:

- **Order repeat prescriptions online:** More than a quarter of all GP practices in the U.S. already allow patients to order repeat prescriptions online. There is no need to call the office or make an appointment.

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**Quick Take**

**An EHR Primer**

Nearly two decades ago, e-banking was introduced in the U.S. The idea of accessing your own finances whenever you wanted was new at the time but is now taken for granted.

Online access to healthcare services and EHR is fast becoming a reality. Some people can already view and use their medical records online; some can even create their personal health records to exist alongside their medical records.

A transparent online solution that automates hospital-doctor-patient interactions using mobile technology can lead to better informed patients and increase their involvement in their personal care. (For more, read: "Turning the Vision of Connected Health into Reality").
• **Book appointments online:** Patients of approximately a third of general practitioner (GP) practices in the U.S. can book and cancel appointments online. No more hitting the phones at 8.30 a.m. - and fewer people tend to miss their appointments.

• **Assess doctors’ performance online:** Patients can choose a doctor after reviewing feedback and experiences shared by other patients on platforms such as an m-Health portal. This information offers insights on the doctor’s bedside manner, wait time and overall performance.

• **Obtain test results online:** By 2018, patients will be able to access their test results and check notes of discussions they had with their doctor – all in a secure online environment.1

• **Access medical records online:** The ability to view one’s medical records is not new; patients already have that right. Nor is it new to electronically store patient records. Most general practitioners and health organizations keep medical records in secure systems. Letters and other paperwork are coded or scanned then converted to electronic formats. This assures that patients’ healthcare data is protected, accurate, easy to access and highly organized.

Enabling patients to have online access to their personal health records is the big change. In some cases, patients will be able to have secure e-mail conversations with their doctors.

**Online Portal/App: A New Approach to Accessing Patient Records**

EHR and m-Health technologies have enormous potential to reduce the cost of health-related interactions along the patient pathway – offering a 360-degree approach to patient engagement, unprecedented ease of use, and optimum touchpoints across the care continuum. (See Figure 2, above).

**Digital & m-Health Opportunities**

Digital and m-Health applications span the spectrum – from chronic care management to complex population health analysis (see Figure 3, page 5). As the healthcare industry transitions to a patient-centric, outcome-based delivery model, m-Health can potentially play a key role in healthcare transformation.

**The Benefits**

**Improved Financial Performance**

Patient-centric care can decrease litigation and malpractice claims, and result in lower costs per case due to fewer complications and shorter length of hospital stay.2-4 It can also improve new-
Quick Take

Fast Facts

Patients use their medical records in numerous ways - from checking test results to reminding themselves about what was discussed during an appointment. This trend is gaining ground, as the facts reveal.

In 2014, 77% of patients would like to book/cancel appointments electronically.¹⁹

In 2015, More than 3Bn m-Health apps were downloaded from major app stores.¹⁰

In 2014, 3 out of 4 (76%) hospitals had adopted at least a Basic EHR system. This represents an increase of 27% from 2013 and an eight-fold increase since 2008.¹²

The m-Health Opportunity

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<th>COMPLEX</th>
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<td>SINGLE USE</td>
<td>SOCIAL</td>
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<tr>
<td>Focuses on single purpose for a single user, typically consumer-initiated.</td>
<td>Draws upon the support and encouragement provided through social networks.</td>
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<tr>
<td>• Smartphone apps and wearable tech devices that support user to record data and transmit to others.</td>
<td>• Gamification and competition based-apps that encourage users to participate in the health activity.</td>
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<td>• Consumer-driven focus on wellness, diet and exercise.</td>
<td>• Consumer likely to pursue activity independently.</td>
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Figure 3
Enhanced Hospital Market Share & Competitiveness

Establishing a brand identity around patient engagement can augment the competitive edge and market share of hospitals. Griffin Hospital in Connecticut saw growth in both inpatient and outpatient volume by incorporating patient-centered care into its business model. These initiatives are bolstered by findings from a survey of more than 2,000 patients, of which 41% indicated they would be willing to switch hospitals for a better experience.

Improved CAHPS Hospital Survey Scores & Patient Experiences

CAHPS Hospital Survey measures reflect key elements of patient and family engagement—particularly those related to patient-provider communications, pain management, medications, and discharge information. In 2012, Medicare instituted the national hospital value-based purchasing program. Under the program, achievement and improvement in patient experience care scores (based on the CAHPS Hospital Survey) are used to calculate value-based incentive payments for hospitals.

Better Patient Outcomes

Engaging patients and families through better communication and other best practices has a positive effect on patient outcomes; specifically, emotional health, symptom resolution, functioning, pain control, and physiologic measures such as blood pressure and blood sugar levels. In addition, strategies that promote patient and family engagement can help hospitals reduce their rate of preventable readmissions.

Better Response to Joint Commission Standards

Patient and family engagement helps hospitals respond to Joint Commission standards that recognize the need for patients and families to be “active and informed decision makers” throughout the course of care.

Following are key Joint Commission standards that relate to patient and family engagement:

- The hospital effectively connects with patients when providing care, treatment, and services.
- The hospital provides patient education and training based on each patient’s needs and abilities.
- Before the hospital discharges or transfers a patient, it informs and educates the patient about their follow-up care, treatment, and services.
- The hospital respects the patient’s right to participate in decisions about their care, treatment, and services.

The m-Health Service Continuum

Figure 4

<table>
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<tr>
<th>“System” Cost/Benefit</th>
<th>Number of Patients</th>
<th>Number of Visits (Per Patient)</th>
<th>Number of Activities (Per Activity)</th>
<th>Cost of Activity</th>
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<td>Improve treatment compliance for patients with a particular disease, therefore reducing the chances of emergency admissions.</td>
<td>Provide preventive advice, which can avoid many trips to doctors’ offices or hospitals.</td>
<td>Allow remote monitoring of patients with a particular disease—eventually reducing the number of outpatient appointments.</td>
<td>Allow in-patients to be discharged earlier from hospitals, thanks to a portable device connected to the patient’s mobile phone.</td>
<td>Providers automatically collect data from patients’ hand-held devices and pass that information to doctors, rather than requiring patients to read the data and phone doctors.</td>
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Looking Forward
Patient engagement isn’t just the latest buzzword sweeping through the healthcare landscape; it is a critical communication strategy every healthcare organization, large and small, needs to embrace. There are many reasons for doing so, including federal incentives, but perhaps the best reason of all is that patient engagement provides a gateway to better outcomes, not to mention lower costs. (See Figure 4, previous page). Cost-efficient and effective technologies - wearable tech devices, fitness apps, EHRs, medication reminders and online doctor reviews, for example - can empower patients to be active participants in improving their own health, and sharpen the focus on the patient. Healthcare providers can play a vital role in this transition by offering these services to their patients, and collaborating with them as they gain the knowledge and experience to effectively manage their own care.

In our view, healthcare payers should keep in mind the following:

- Ensure priorities and end-goals drive design: Have a clear understanding of user experiences - in other words, who will use the service, why will they will use it, and how they will use it?
- Align with user trends: Patient adoption of m-Health apps is directly proportional to the awareness and knowledge of end users.
- Keep apps patient-centered and relevant: Is a patient or a patient’s caregiver more likely to access an app? Asking such questions prior to development will help determine the best user interfaces and navigation flows to increase adoption rates.
- Address limited health literacy: How an app depicts and presents information matters. Simple, crisp, and relevant messages should be conveyed in a user-friendly manner.
- Create a patient community: Apps should be designed to allow patients to interact with one another - helping them to feel more comfortable, engaged, and part of a supportive community.
- Enable interaction with other applications: Linking applications to consolidate health data and allow patients to build their own health libraries can support a more patient-centered approach to care.

Footnotes
1 http://www.pewinternet.org/fact-sheets/mobile-technology-fact-sheet/.
10 http://www.brookfieldparksurgery.co.uk/mf.ashx?ID=1117a49b-03e1-4049-abd0-d7dd0a5b9b96.
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