WHITE PAPER

M-Health: Challenges, benefits,
and keys to successful implementation

– Kaushal Modi and Radha Baran Mohanty

Abstract

The outlook towards healthcare has changed drastically in recent times. Mobile health (M-Health) is an evolving strategy that is changing the way the world operates today. M-Health, can be defined as a medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, tablets, personal digital assistants (PDAs), and other wireless devices.

Mobile technology is creating wonders in the healthcare industry. Mobile healthcare is an important extension of electronic healthcare. It gives providers an opportunity to access the patient's clinical data and latest medical offerings at any time and place. It also helps patients with chronic conditions to remain in constant touch with the doctors, without them having to be physically available at the hospital.

This paper outlines various M-Health applications for providers and members, opportunities for payers with M-Health, challenges associated with implementing M-Health, and the recommendations to overcome these hurdles.

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Introduction

With growing technology and healthcare awareness among members, M-Health applications have become a necessity rather than an option.

Healthcare payers are leveraging the proliferation of mobile devices as a means of providing better member interaction.

With total smartphone sales for 2011 reaching 472 million (a 58 percent increase from 2010), it provides an avenue for the convergence of mobility and Web. Consumers are using mobile devices to replace desktops and laptops, and to get what they need virtually faster and more conveniently.

With the possibility of 500 million smartphone users accessing mobile healthcare apps by 2015, consumer demand will grow. Healthcare payers will have a powerful service channel that is not only affordable but also accessible across the globe via the cloud.

From a consumer's point of view

M-Health apps are recognized by payers as an effective means to differentiate their products in the market and gain a competitive edge. Common features on M-health applications include:

Locating providers	Reviewing health benefits and savings accounts	Comparing prescription prices and coverage	Enhancing health and wellness efforts	Searching for information on medical conditions or terms

A new generation of products and services, based on wireless and mobile technology, puts diagnosis or treatment decisions directly into the hands of the patient. They provide early warnings and key information about an illness, thus empowering patients to choose between immediate visits to the emergency room and waiting for an appointment. Consumer electronics companies are already exploiting the growing demand for devices and services that help people remain trim, fit, and mentally alert.

As interest in preventive healthcare increases, wellness products and online services will have a significant impact on business models. As part of preventive healthcare programs, healthcare payers look to process electrocardiogram (EKG)

data uploaded from fitness and exercise monitors. Texting capabilities are rather new and mobile payments are an area of interest for many healthcare payers.

The popularity of M-Health is rapidly expanding among consumers. According to a study:

11 percent of adult mobile phone users in the US have downloaded an application that helps them track or manage their health.

70 percent of the people worldwide are interested in having access to at least one M-Health application, and they are willing to pay for it.

Cardiac monitoring and fitness tracking are the most prominent uses of mobile-enabled connected devices.

Figure 1 provides a sample of M-Health application uses. These examples are not intended to be an endorsement of any particular solution or service provider.
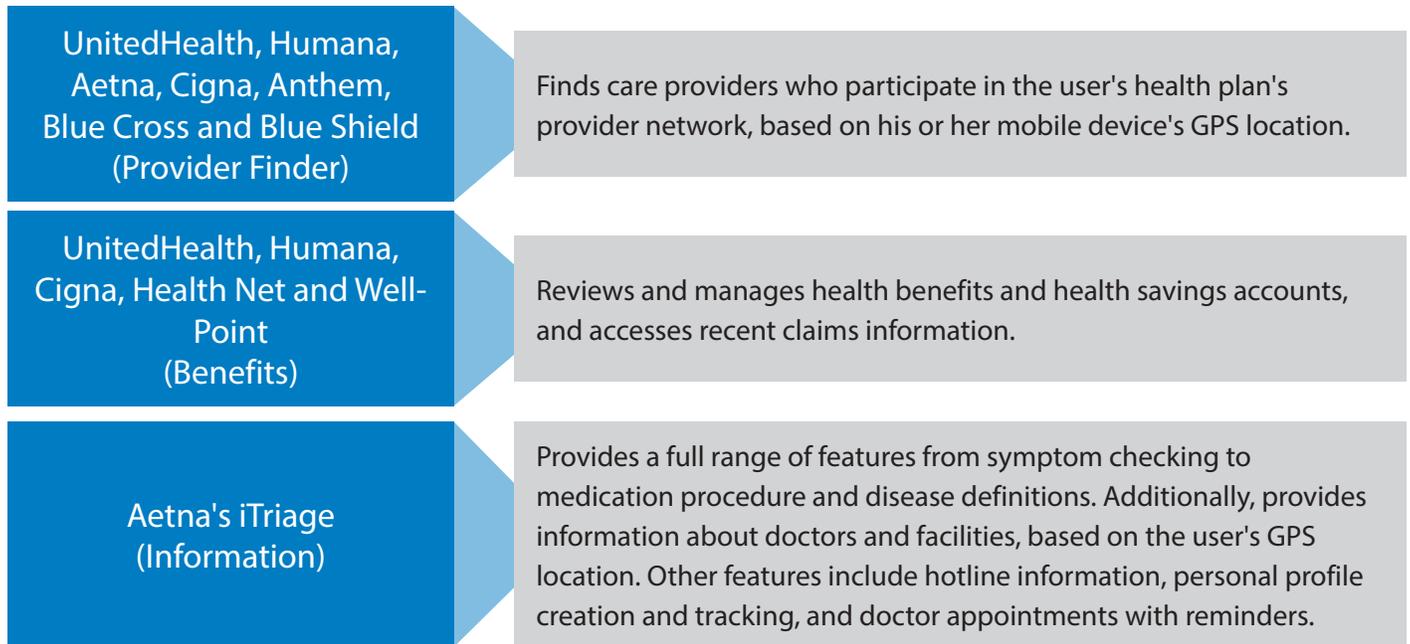
UnitedHealth, Humana, Aetna, Cigna, Anthem, Blue Cross and Blue Shield (Provider Finder)	Finds care providers who participate in the user's health plan's provider network, based on his or her mobile device's GPS location.
UnitedHealth, Humana, Cigna, Health Net and Well-Point (Benefits)	Reviews and manages health benefits and health savings accounts, and accesses recent claims information.
Aetna's iTriage (Information)	Provides a full range of features from symptom checking to medication procedure and disease definitions. Additionally, provides information about doctors and facilities, based on the user's GPS location. Other features include hotline information, personal profile creation and tracking, and doctor appointments with reminders.

Figure 1: M-Health application examples

From a physician's point of view

M-Health apps are widely used by doctors in daily practice. These offerings help doctors diagnose, monitor, consult, and treat common diseases. As M-Health allows doctors to look up information from the patient's bedside, this saves time and enables them to provide optimum treatment to the patient. As the apps are readily available on smartphones and tablets, doctors can take advantage of the increasingly flexible access to medical information. They can easily access quality resources and take important decisions on the patient's clinical care.

UpToDate is one such application that provides common questions that physicians generally ask when they see a patient. It also provides recommendations with regard to the course of treatment. This means that the doctors don't have to rush to the library each time to get an answer.

In the UK, about 100 hospitals subscribe to UpToDate, three quarters of which are NHS trusts. 1,700 individual doctors also subscribe to the service, which is accessible across desktops, Android phones, and Windows Phone 8.

From a payers' point of view

Though M-Health primarily benefits consumers and providers, there is an incentive for payers as well to promote its usage. Mobile apps that provide information or self-directed access offer an opportunity to improve a health outcome or eliminate a customer inquiry, because they are readily available.

For instance, payers offer consumers wellness programs on M-Health applications; consumers get healthcare tips, which will eventually reduce the number of claims filed. As members become more aware of diseases and their natural remedies, they will be able to lead a healthier lifestyle. The number of encounters between members and providers will reduce, which will help payers save significant amounts in claim adjudication.

Apart from financial benefits, payers can add value to their customers and use M-health applications as differentiators in the market.

Win-win strategy for all entities

M-Health is a win-win situation for payers, providers, and members in healthcare. One cannot take an entity out from the equation as shown in Figure 2.
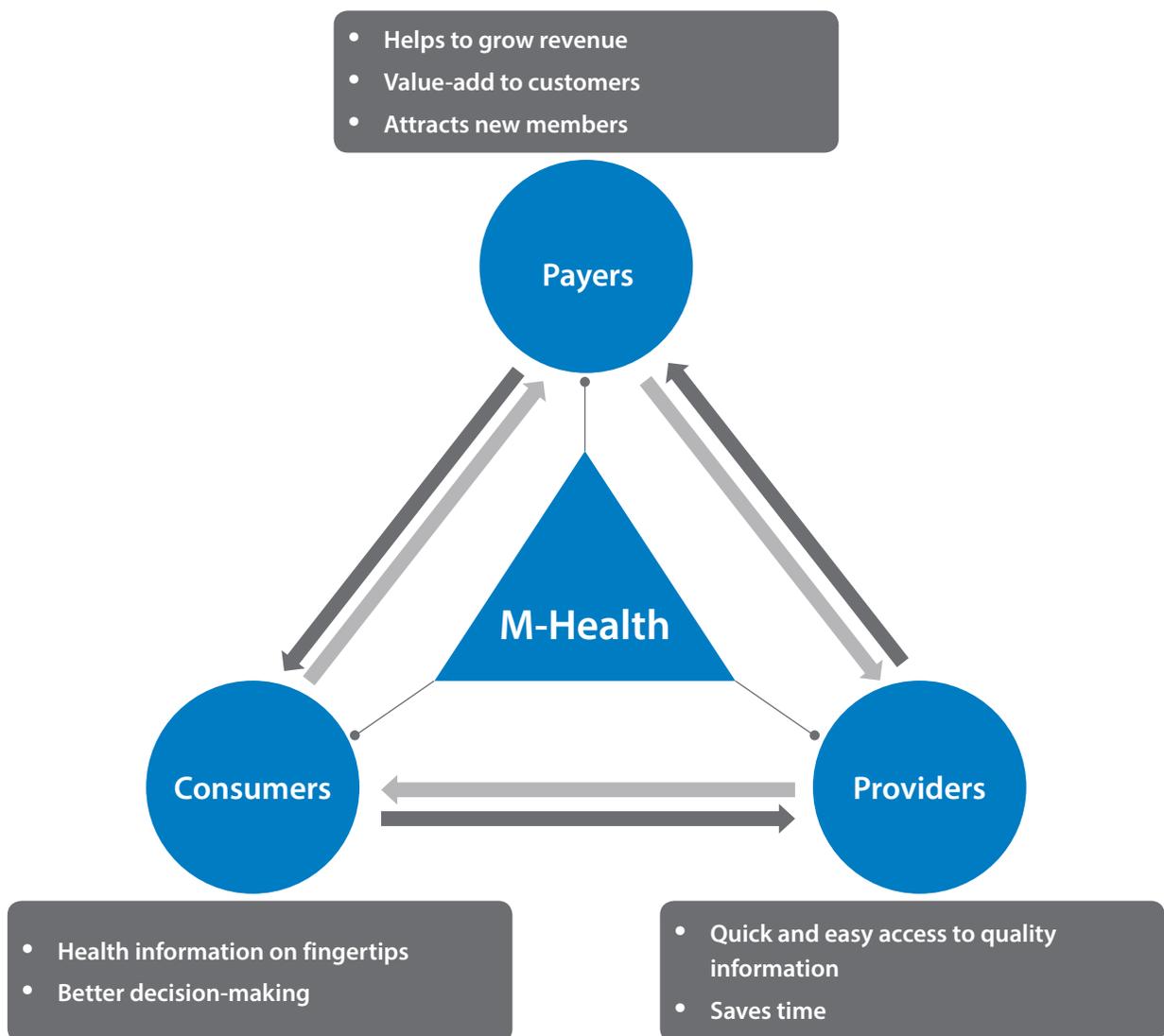

- **Helps to grow revenue**
- **Value-add to customers**
- **Attracts new members**

Payers

M-Health

Consumers

Providers

- **Health information on fingertips**
- **Better decision-making**

- **Quick and easy access to quality information**
- **Saves time**

Figure 2: M-Health benefits to payers, consumers, and providers

Challenges of M-Health offerings and remedies

Despite the growing demand, M-Health solutions come with their set of challenges:

- **Confidentiality of data:** Security and safeguarding of personal data are obvious concerns for the healthcare industry because compliance with the Health Insurance Portability and Accountability Act is essential. Additional issues arise when brand damage occurs due to poorly developed or executed mobile apps. If they fail or are 'buggy,' users are likely to become frustrated and quickly lose interest in the app. Mobile health needs proper regulation, definite rules, and policies to ensure Protected Health Information data (PHI) is handled correctly.

According to the Healthcare Information and Management Systems Society, fewer than 30 percent of facilities have mobile device use policies and 75 percent of mobile health users look up personal health information.

- **Market volatility:** Market conditions and devices evolve rapidly. Consumer habits also change rapidly, and demand can be fickle, based on latest trends. As both factors are outside the payer's control, it is critical to stay current and refresh apps often.

- **Innovation:** While mobile devices offer many ways for healthcare payers to interact with consumers, such

innovations are seldom exploited. Generating innovative ideas demands the widest possible participation and a culture that appreciates the notion that not all ideas will succeed. Innovation is difficult as it demands that organizations go beyond the 'me too' approach.

- **Integration with existing IT systems:** With the development and use of M-Health, healthcare organizations need to ensure that these mobile apps and technologies are integrated with existing health IT systems and standards. For that to happen, latest M-health technologies need to be properly researched and all loop holes during integration need to be addressed.
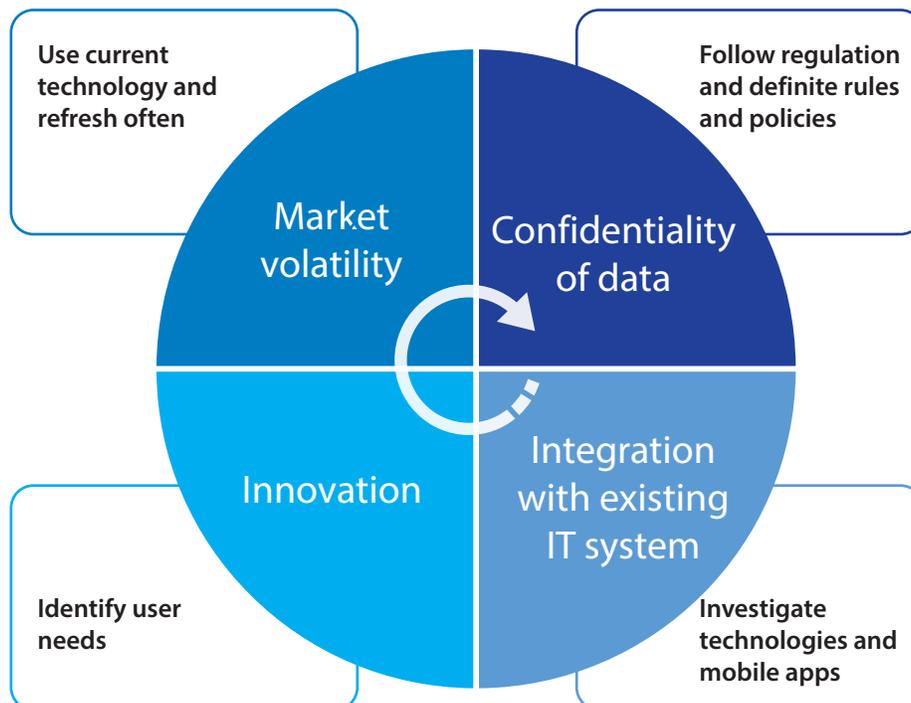

Figure 3: M-Health challenges and solutions

Keys to successful implementation

The technology aspect of offering mobile apps is usually viewed as a major challenge. However, in practice, technology is most likely to be the least challenging. While confidentiality of data can be addressed through proper regulation and policies, challenges such as market volatility and IT are of a more serious concern. For a successful implementation, payers should focus on:

- User adoption of apps
- Access via multiple devices
- Identification of user needs
- Measurement of user satisfaction

Offering mobile business-to-consumer (B2C) healthcare solutions requires payers to understand consumer mobile devices and mobility habits, and how they change. Healthcare payers must first focus on identifying member needs and goals, and select apps that drive expected outcomes. Asking, 'What do members want?' vs. 'What does the business need?' or 'What devices and habits do customers have?' vs. 'What will the payer's competition attempt to provide?' – lead to very different approaches. Deciding which way to position mobile app offerings becomes the overall challenge. Payers must establish and confirm their mobile app strategy, and decide which mobile apps best fit their business goals.

Conclusion

- The growth of mobile devices provides an opportunity for US healthcare payers to use mobile apps and increase direct-to-consumer connection with members.

- M-Health apps enable members to access important health- and benefits-related information, potentially eliminating the need for human intervention via customer service inquiries.

- Payers implement M-Health apps as a cost-effective way to better serve and enhance their member experience by offering self-directed access.

- Most M-Health solutions, which are sold by a majority of mobile app development vendors, center around locating healthcare providers, managing health benefits, and searching for medical and health information.

- Advances in mobile device capabilities cause healthcare payers to recognize the opportunity to increase brand loyalty.

Healthcare payers should keep in mind the following:

- Decide the role mobile apps will play in reaching consumers.

- Select an app that will engage direct member response.

- Determine the controls and budget for management of mobile solutions.

- Discover and clarify mobile app objectives routinely, taking into consideration changing business goals, consumer mobile device trends, app usage, and member feedback.

- Emphasize the member experience via app design to increase user adoption and drive competitive advantage.

- Identify mobile app development vendors who can adapt to potential regulatory challenges and can move mobile apps seamlessly into the next generation of healthcare.

M-Health technology is an extension of other member engagement activities. It is critical for payers to have an enterprise mobile strategy that includes offering mobile apps. However, without thorough planning, M-Health initiatives run the real risk of starting with a bang but ending with a whimper.

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