

Going MOBILE

Mobile technology offers tremendous opportunities for the healthcare industry to address some of the most pressing global challenges: make healthcare more accessible, improve patient outcomes, and reduce costs.

Expectations are high that mobile technology will help to increase access to care in emerging markets and transform the developed world's costly healthcare behemoths into less expensive, prevention-based, and patient-focused systems, so say the analysts who compiled PwC's Emerging

mHealth: Paths for Growth report. The surveys conducted for this research program found that although patients see relatively modest change so far, large numbers expect that mHealth will have a significant impact on how care is delivered in the next three years. Roughly one-half predict that it will improve the convenience (52%), cost (46%),

and quality (48%) of their healthcare. Similarly, 59% of doctors and payers believe that the widespread adoption of mHealth in their countries is inevitable in the near future.

According to the mobile tech consultancy Research2Guidance, there are approximately 100,000 mobile health apps in more than six app stores, with the top 10 apps gen-

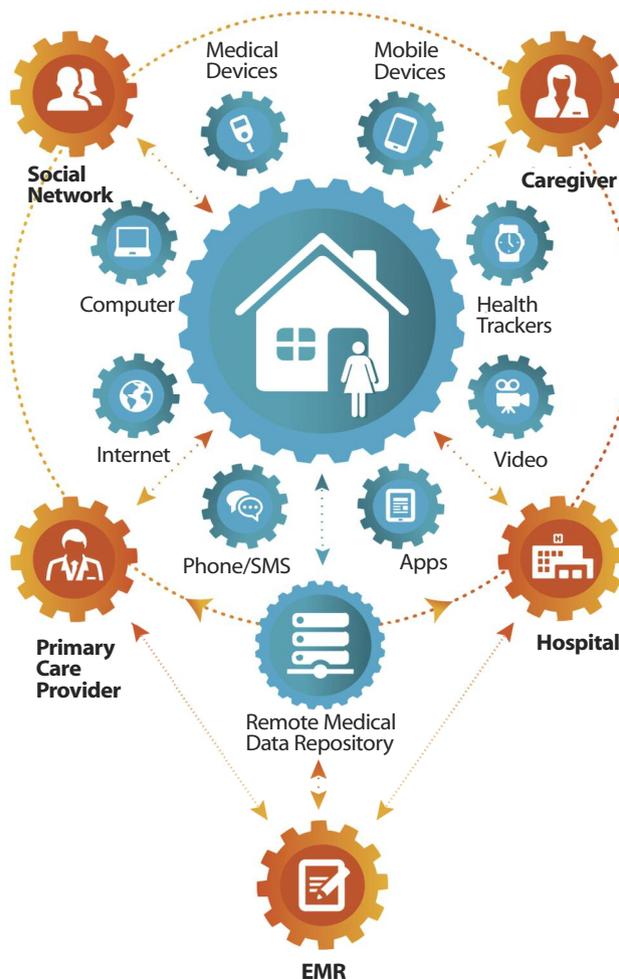
Search for Quality and Efficiency are Top Incentives for Doctors to Adopt mHealth

What would spur doctor adoption of mHealth?

- 36%** Improved quality of care/better health outcomes
- 32%** Easier access to care for existing patients
- 32%** Reduction in administrative time for medical personnel, allowing greater time for patients
- 29%** More efficient internal processes/communication
- 28%** Ability to reach previously unreachable patients
- 26%** Patient expectations/demand
- 25%** Lower overall cost of care for patients
- 17%** Opportunity to provide new services and/or tap into new markets
- 16%** Ubiquity of smartphones and applications in all areas of life
- 14%** Encouragement by regulators
- 13%** Expectation/demand of medical personnel or employees

Source: Economist Intelligence Unit, 2012

Leveraging technology to enable health anytime, anywhere



Source: Center for Connected Health

The Center for Connected Health has developed one of the first information technology platforms for connecting remote patient data to the electronic medical record. This enables health care providers, caregivers and patients themselves to access individual data and benefit from health insights.

erating more than 4 million free downloads every day.

Furthermore, analysts say the market for mHealth app services will reach \$26 billion by 2017.

Not only are consumers taking advantage of smartphones to manage and improve their own health, but also healthcare professionals. A significant number (15%) of mHealth applications is primarily designed for healthcare professionals. These include CME (continuing medical education), remote monitoring, and healthcare management applications.

Research2Guidance analysts say with more and more traditional healthcare providers joining the mobile applications market, the business models will broaden to include healthcare services, sensor, advertising, and drug sales revenue.

With the growing sophistication level of mHealth applications, only 9% of the total market revenue in the next five years will come from application download revenue; 84% of total mHealth application market revenue will come from related services and products such as sensors.

(Editor's note: For a comprehensive overview of the mHealth space, please see the March issue of PharmaVOICE. To read more about connected health, please see the ebook associated with this issue: Connected Health: Becoming a Reality for the Life Sciences.)

The mHealth Universe

PwC defines mHealth as the provision of healthcare or health-related information through the use of mobile devices (typically mobile phones, but also other specialized medical mobile devices, such as wireless monitors). Mobile applications and services can include, among other things, remote patient monitors, video conferencing, online consultations, personal healthcare devices, and wireless access to patient records (EMR and EHR) and prescriptions.

A broad variety of stakeholders take part in mHealth. They include patients and patient advocacy groups; healthcare professionals (doctors, nurses, and other professionals who patients see as part of normal healthcare); institutions where care is provided (hospitals, clinics and others); payers (government and private); medical device companies; biopharmaceutical companies; technology companies (devices, applications, software, infrastructure, data analytics, and others); telecommunication services providers; pharmacies and other healthcare-related retail outlets; NGOs; regu-

Five Mobile Trends

1. Apple will fill the enterprise void created by the impending demise of BlackBerry.

According to Bill Seibel, founder of Mobiquity, there are six reasons why Apple will take over from BlackBerry:

- » BlackBerry is failing — it lost \$965 million in the most recent quarter and is planning to eliminate 40% of its work force by the end of 2013;
- » Microsoft lacks the acceptance and market traction needed to fill the gap that BlackBerry's demise is creating;
- » Android is "gaining penetration into the consumer marketplace;"
- » Enterprises will invest more in "B2E (business to employee) in 2014 and beyond;"
- » Apple — with its "reputation for quick reaction to malware, better device management, and BYOD (bring your own device, meaning employees can use their personal devices for work instead of getting IT-approved models) — is continuing to make inroads into the enterprise;
- » Apple is enhancing its enterprise-friendly "capabilities that appeal to the enterprise (such as security, more control over apps, single sign on, lower cost: iWork bundled for free), which will help Apple to target and win the enterprise.

2. Wearables will not catch on until well after 2014.

Mr. Seibel believes that wearable computing will only gain market acceptance if it satisfies three tests: function, fit, and fashion. Very few wearables now pass these three tests in his view.

"Even though the form is there today — watches, glasses, rings, wigs, bras; the function isn't quite there yet," he says. "Except for some of the healthcare and fitness wearables. And for wearables, there's a third F that's important, and that's fashion; and for most of the wearables, the fashion is definitely not there yet."

3. Analytics will help companies change consumer behavior.

Mr. Seibel believes that a combination of easy collection of data about consumer behavior coupled with the ability to analyze all that data will nudge individuals into changing their behavior for the better. However, that ability to collect and analyze personal data will make privacy a continued concern.

"The purveyors of mobile solutions will know more about us than we know about ourselves," he says. "But the corollary is that privacy will emerge as a real issue in 2014. For example, healthcare providers want consumer to take their medications and lead a healthier lifestyle. Mobile has architecture to support it, but analytics is the fuel."

4. Cars get connected.

Mr. Seibel expects cars to get connected in 2014. This will help people to unlock cars, start up their engines, and monitor them remotely.

"I have seen these capabilities introduced for Audi — in car WiFi and Google maps integration — and Tesla's partnership with AT&T," he says. "But 2014 should be the year where mainstream car manufacturers introduce smart connected cars and apps that handle a range of functions from remote unlocking and starting, to maintenance monitoring to WiFi connection and integration of Web services. We will see a lot of innovation in this area as far more features continue to appear and evolve."

5. FAA allows personal calls on flights, but most airlines continue to ban calls.

Mr. Seibel says while the FAA will allow use of personal mobile devices to make calls in-flight as no real safety hazard has been realized through years of testing, most airlines will ban the use of electronic devices below 10,000 feet and prohibit calls in-flight. This is due to consumer demand, as few flyers want to sit next to a person speaking loudly on a smartphone.

Source: Bill Seibel, Mobiquity (Forbes, Dec. 2013)



lators; policymakers; and a series of new entrants that include, among others, entrepreneurs and retailers.

Mobilizing Stakeholders

Experts say mobile is a tool, not a new type of medicine, and its meaning will emerge from how it is applied within existing healthcare systems. This will be determined more by the interests of the various stakeholder groups than by the actual technology. The various stakeholder groups will also shape the use of mHealth and speed of adoption.

A Harris Interactive/HealthDay survey in mid-2013 found that more than 30% of respondents were eager to use mobile phones and tablets for actual healthcare services, such as monitoring blood pressure or blood sugar, or even getting a diagnosis. The ability to connect providers, patients, payers, and other stakeholders through smartphones, mobile applica-

tions, and monitoring devices as well as linking to electronic health records, patient portals, and secure messaging is driving innovation throughout the care continuum and improving patient outcomes.

Doctors are buying into mobile technology, say PwC analysts, because it can help meet some of their needs, such as monitoring patient compliance, accessing records, and communicating with colleagues.

One of the most popular medical apps, for example, is Medscape, a free service that provides the latest medical news and information about diseases and drugs. While improvement of care is a bigger driver than simple convenience, doctors hope that it will happen through streamlining, rather than reinventing, existing systems.

Patients believe that mHealth offers them easier access to care and more control over their own health. This, however, involves a substantial and disruptive move away from

doctor-directed care toward a patient-as-consumer model. Clinicians would remain important, but not always the patient's first option: already, among those who use mHealth services 59% say these have replaced some visits to doctors or nurses, according to PwC's research.

Payers already display interest in mHealth, and the economic pressure for more patient-centered, preventive care is likely to drive them further toward the patient's viewpoint.

The world today is truly connected wirelessly; there are almost as many cellular phone subscriptions as there are people on the planet. According to the International Telecommunication Union, there were almost 6 billion mobile phones in use worldwide in late 2011.

The ubiquity of mobile technology offers tremendous opportunities for the healthcare industry, including pharmaceutical companies, providers, payers, and support compa-

VIEWPOINTS



TIM DAVIS

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The BYOD Era

Continuing advances in mobile technology are

phenomenal. As a result smartphones, tablets, and wearable technologies like activity trackers and even glasses will become commonplace to help patients and caregivers better manage conditions. The increasing prevalence of such devices will leverage a BYOD approach to healthcare, giving patients the ability to self-monitor, and receive personalized information and advice, giving us all the opportunity to have greater involvement in our own healthcare.

mHealth technologies can help cut costs and reduce the number of times patients have to return to their doctors for follow-up visits.

Remote monitoring of a patient's vital signs, for example, would allow doctors to check in on their patients and interpret the results, without the patient having to return to the doctor's office. The doctor can then call the patient to give a diagnosis, all without the patient having to leave home.

of the roadblocks that must be addressed quickly and coordinated at a state and federal level.



TIM GARDE

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Video Going Mobile

Smart use of video content

has become more valuable as mobile audiences continue to expand to an expected more than one-quarter of the U.S. population in 2014, according to eMarketer, 2013. Most mobile users find video more compelling, more memorable, and more user-friendly than text in a small-screen format, so why not show a patient what to expect in her first week on a new treatment regimen? Why not show a healthcare professional how to use an injection device in a format he can share with patients? Video is a natural for content-heavy healthcare marketing — especially on the small screen. So give your visitors what they want — more video content.



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Technology Roadblocks to Overcome

While the technology and opportunities are pushing forward, guidance surrounding compliance with such things as licensing for cross-state or inter-country care, coverage for new care models, the ability for insurance companies to pay and for providers to accept payment, and privacy rules surrounding the storage and transfer of personal health information are just some



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mHealth Connect

Physicians and Patients

nies, to address one of the most pressing global challenges: making healthcare more accessible, faster, better, and cheaper.

PwC analysts say unlike many other forms of communication, such as the Internet, mHealth will likely have a greater effect on how care is delivered for three reasons: mobile devices are ubiquitous and personal; competition will continue to drive lower pricing and increase functionality; and mobility by its very nature implies that users are always part of a network, which radically increases the variety, velocity, volume and value of information they send and receive.

Even before the advent of mobile connectivity the distinct lines between traditional health sectors were blurring and new business models were emerging. mHealth is dropping into a perfect storm, enabling and accelerating three major global trends already in play in healthcare.

According to McKinsey, big data, social media, and mobility are shaking up the business models of many industries. In consumer marketing, for example, the traditional con-

sumer-purchasing funnel is giving way to the consumer decision journey. In this new, interactive arena, purchasing choices are mediated by social networks, mobile devices, and peer influence, offering marketers ever more effective ways of managing their brands at a time of stressed budgets. Similar disruptions are rolling through sectors from media to financial services.

And while the healthcare industry has not been at the leading edge of such technology adoption, a number of factors, however, are pushing the sector toward greater "connectedness," McKinsey analysts say. This trend has implications for biopharma, where opportunities to follow the technology path of other industries are increasing rapidly.

Further, as mHealth and telehealth become more mainstream, vendors and service providers will need to bolster the infrastructure behind these new tools. While some barriers to telemedicine licensing and insurance coverage remain, the FCC and others are working hard to expand connectivity between rural areas and standardize the industry. **PV**

Patients define mHealth in terms of access and control

How patients define mHealth

- » **44%** Use of mobile phone to learn about/monitor wellness (e.g., weight, diet, amount of exercise)
- » **43%** Contact between patient and healthcare provider by mobile phone or other device
- » **42%** Accessing health telephone call centers/advice lines/emergency services
- » **29%** Automated contact with healthcare provider (e.g., reminders about appointments or to take medication)
- » **25%** Healthcare providers monitoring a specific patient condition (e.g., chronic disease)
- » **8%** Community health promotion or information initiatives sending messages to mobile phone
- » **18%** Medical professionals having remote access to electronic patient records
- » **14%** Support for medical professionals making decisions remotely
- » **5%** Collecting patient data for clinical trials

Source: Economist Intelligence Unit, 2012



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An Overwhelming Advantage

Ogilvy CommonHealth Worldwide, representing the largest assembly of creative talent in the world of healthcare communications with 65 offices across 36 countries, provides marketing services including brand identity and development, clinical trial recruitment, digital/interactive services, direct-to-consumer, direct-to-patient, global integration, managed care marketing, market research and analytics, medical advertising and promotion, medical education, media planning and buying, public affairs and relations, relationship marketing, scientific communications and publications and strategic consulting. The organization also houses and maintains individual Ogilvy CommonHealth and Ogilvy Healthworld brand identities within the marketplace.

Your Audience Has Gone Mobile.

87%

Of 18-35 year-olds would use a mobile medication reminder app

51%

Of physicians use smartphones for professional purposes

Has Your Marketing Plan?



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Source: Star Life Sciences Medical Monitor™ 2013