GOVERNMENT
HEALTH IT
PUBLIC/PRIVATE HEALTHCARE CONVERGENCE
NOVEMBER-DECEMBER 2009 • VOLUME 4 NUMBER 6

Training DAY

For health IT extension centers, the lesson plan is: stress value, workflow

PAGE 14

Why are MMIS contracts slipping?
P. 7

HIEs get funding, with strings attached
P. 18

Smartphones: population health game-changer
P. 24

HIMSS

CONTENTS

4
Editor's note
Looking back on meaningful use

6
Dispatches
A meter on meaningful use; Why are MMIS contracts slipping?; Health data in the raw; FDA answers an IT wake-up call; Does your registry need a tune-up?

12
Op-Ed
Greenspun on clinical foundation for HIT extension centers; Gallagher on disparities in healthcare data protection

27
Military Health IT
A federal data matching program helps financially strapped vets

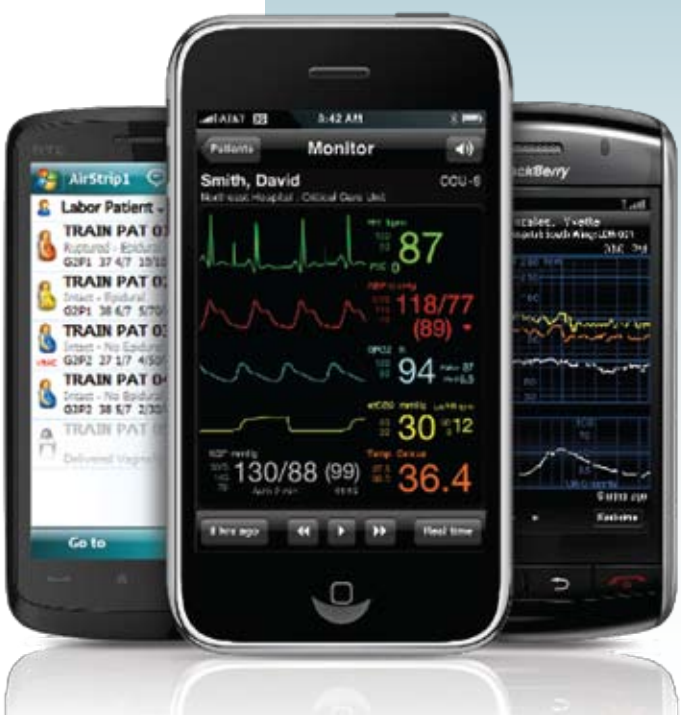
29
Population Health
Community health IT may be a big cost saver

34
Measures
HHS 2010 IT budget snapshot

15
Training day
When the feds rollout health IT extension centers, the lesson plan should be: stress IT fundamentals, measurable value.

18
HIE wire
Health information exchanges are getting more federal funding, but serious strings are attached.

24
Bodyguard
Attached to patients and populations on the move, the smart phone is a public health game-changer.



Bodyguard

The mobile phone has become the public health technology of choice for maintaining continuous care for patients and populations on the move.

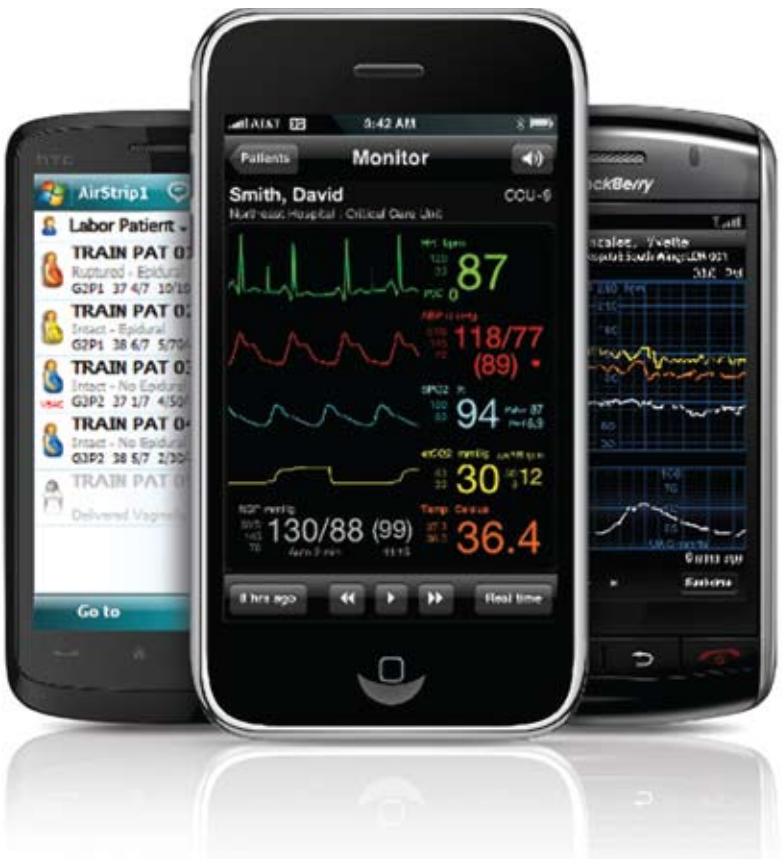
BY BRIAN ROBINSON

When people talk about health IT the picture that most often comes to mind is of computers, the Internet and full-fledged systems, such as electronic health records and telemedicine. But the tool that may have the biggest impact on health IT is far more ubiquitous: the cell phone.

Some 4 billion people are now thought to carry cell phones, whereas only 400 million have Internet access. In the United States, according to market watcher Manhattan Research, nearly two-thirds of all physicians have mobile devices that they use for their work.

For organizations such as the Centers for Disease Control and Prevention (CDC), whose mission is to provide health information to people as and when they need it, the mobile phone represents an unprecedented tool for providing continuous care, according to Dr. Jay Bernhardt, director of the CDC's Center for National Health Marketing.

"The real benefit of the mobile phone is that it is always on or near to a person's body," he said. "So you can get messages to them about such things as flu shots, and they'll have a better chance of receiving that information in a place and time where they are best able to use it."



The CDC has just launched a pilot program to provide such information to people about the H1N1 swine flu virus. Another pilot targets those who don't have a computer and Web access, allowing them to dial-in to particular numbers to get tips about the flu and other topics.

You can also do things that are unique to the mobile phone platform, Bernhardt said, like linking messaging technologies with someone's Zip code so they can get texts about occurrences in their specific locality, such as where to get HIV tests.

In fact, the CDC is one of the few government agencies that has a Web site (http://m.cdc.gov) designed for cell phone access.

Battle aftercare

The military thinks mobile phones can be a critical resource for improving ongoing care for soldiers returning from the battlefield, and the Army's Telemedicine and Advanced Technology Research Center (TATRC) at Fort Detrick, Md., is looking into just how that could work.

One program follows soldiers as outpatients once they have received initial care and are released from the Walter Reed Army Medical Center. It matches soldiers with mentors at community-based transition units who can help guide the soldiers in what they need to do for their extended care and treatments.

The problem, said Col. Ron Poropatich, TATRC's deputy director, is that soldiers can end up anywhere up to 600

miles from any of these transition units. As well as enabling the mentors to stay in touch daily with phone calls, mobile phones also allow them to augment those with text messages.

That could be particularly useful in cases such as traumatic brain injury, Poropatich said. Regular text messages can be sent to people about things they would have trouble remembering on their own, such as medications and appointments, as well to provide education and hints targeted to their specific injuries.

The system also provides for feedback that can ensure timely treatment. For instance, a soldier's case manager can send out regular questions through a secure server and get responses back the same way. Those responses can be automatically correlated in graphical presentations that are displayed on a dashboard that tracks a soldier's medical trends over time.

The tech can also help prevent logistical snafus. "If a mentor goes on vacation, for example, his replacement could end up having to make 80 or 100 calls a day, and that's just not possible," Poropatich said. "So the text messaging piece is a good way to augment other things that we need to do, as well as provide a way to chart those trends."

Should FDA regulate smartphones?

Is there a likelihood that mobile health applications will become part of the spectrum of regulated medical devices?

Officials at the Food and Drug Administration (FDA), which regulates medical devices, are already speculating that mobile applications will be fair game because they increasingly perform medical functions.

The question is, when do mobile devices become more than a way to collect and transmit data?

"There's no reason for cell phones or smartphones themselves to be regulated," said Russell Fox, a member of the communications practice in the Mintz Levin law firm. "But when the application performs an evaluative function, and that combines with communications, that could add up to a medical device."

In other words, if a phone collects information but then is smart enough because of the application embedded in it to interact with that data and then send it to a doctor along with a recommendation for treatment, that could be seen as a medical device.

However, it's probably the developer of the software that will come under the FDA's scrutiny. "I think we will see that regulation," Fox said. "Given the pace of technology innovation, I think it's something that demands the FDA's attention now."

Smartphone lifeline

The next stage in the mobile health revolution is already underway, following the introduction of the iPhone in 2007, by Apple Computer. After that, other phone companies rushed to launch their own versions of the smartphone, and the likelihood is that several years from now all mobile phones will be either smartphones, or have substantial smartphone capabilities.

Regular mobile phones have sophisticated voice and texting functionality, with some limited Web browsing and video capabilities. Smartphones, on the other hand, can download and display high resolution images on relatively large screens, and both record and stream full-speed video as well as deliver all of the usual voice and text applications.

A year-long research project at Walter Reed's diabetes institute allows patients who are smartphone users to download daily short video clips of hints on how to help deal with their diabetes through exercise, diet and close monitoring of their blood glucose level. Halfway into the project, two-thirds of those who did view the clips showed significant improvement.

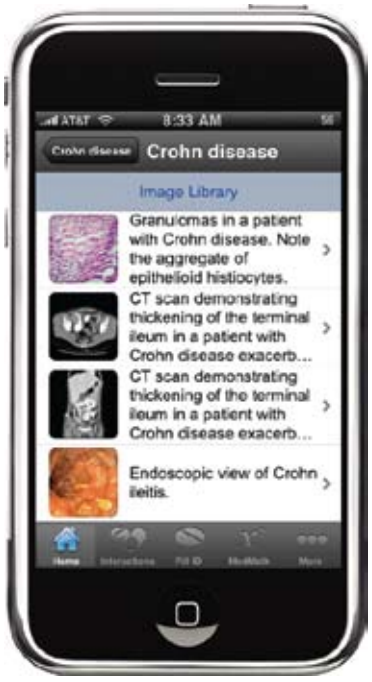
Health application providers likewise see smartphones as having a big impact on their business. There are more than 1,500 health applications already in Apple's online app store.

"When the iPhone and other similar phones came out and doctors started using them, the [mobile phone] user interface began to change and that changed the game for us," said Dr. Cameron Powell, president and chief medical officer of AirStrip Technologies. "It's a paradigm shift among [health] providers and their expectations of these devices."

AirStrip develops applications that pull critical information directly from existing patient monitoring systems in hospitals, including real-time waveform data such as pulse and respiration rates, and delivers that directly to physicians' laptop and desktop computers, and to mobile devices such as smartphones.

Some 80 percent of physicians are projected to have an iPhone or other smartphone by the end of 2010, Cameron said, so there's no doubt this is where the delivery of this kind of real-time medical data is heading.

Epocrates develops clinical information and decision support tools for over 800,000 healthcare professionals so they can find answers more quickly at



the point of care. Its software is used by around one-third of all the physicians in the United States, and over 40 percent of medical students.

The iPhone allows huge picture databases to be added to the programs Epocrates provides, said Michelle Snyder, the company's senior vice president, subscriber business. Physicians find that useful to show images to their patients when describing illnesses, plus it gives the doctors themselves a more image-based research feature for the diseases they are treating.

It also provides a safety feature for physicians. They can take a description of pills patients provide and match them to the database in the iPhone, and then actually see what the pill is and what is indicated for it.

There are also real opportunities for such things as lab results and x-rays to be delivered directly to a doctor's mobile phone, Snyder said. "The new technology has really broadened people's ideas of what is possible," she said.

A mobile divide?

But it could take a while for smartphone technology to ubiquitous in healthcare. That's because it's not scalable yet to patient populations most in need of mobile health services, such as the elderly and underserved, who are unlikely to carry expensive devices, said Dr. Joe Kvedar, director of the Center for Connected Health.

Yet there is enormous near-term potential for text messaging, he said. There's widespread availability of phones that can do that, and it's very cheap to build a program around messaging.

Current and planned projects at the Center include daily text messages to people to remind them to put on sunscreen; messaging pregnant teens to make sure they go for prenatal checkups; and reminders to drug addicts to come in for health checks.

"Mobile is our way of crossing the digital divide," Kvedar said.

With more than half of the world's population having cell phone coverage there's already been an explosive growth, said the Army's Poropatich. Mobile health is already here and is providing real value around the world.

"To my mind, it is going to be the technology of choice for any future health program," he said. ■

Mobile boon to Third-World healthcare

The U.S. military is operating under a November 2005 Defense Department directive to provide "support for stability, security, transition and reconstruction" for countries they operate in around the world, and mobile health is proving to be a major tool for that.

In Africa, for example, there are more mobile phone users than fixed-line subscribers. More than 14 percent of Africans now use mobile phones and the number is rising fast. Also, unlike in the United States, text messaging is far cheaper than voice.

The use of mobile phones for such things as HIV and AIDS reduction on the continent is one program that's being considered as part of the U.S. Africa Command's operations. Other things could include maternal and child healthcare, remote clinical consultations and biosurveillance research.

Africa is the highest medical risk continent the military operates in, and helping to provide better health is seen as one of the main avenues to increasing security and stability there.

In Afghanistan, the problem is that some 75 percent of the population is illiterate, so text messaging would not be effective. But voice messages and knowing which buttons to push on the phone has been found to be an effective means of providing healthcare information. Plus, cell phones are about the only electronic communication tool available for the country's population.

And in Peru, the U.S. Naval Medical Research Center in Lima is working with the Peruvian military on a project that is using cell phones to collect data for biosurveillance detection, and to send out alerts on suspected emerging infections.