

## **Tech Beat: Health care and mobile convergence**

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By Bob Morse

At long last, the health industry is slowly adopting technology on a large scale, moving to electronic documents, computer generated prescriptions, and information sharing. It's been a rough road as standards and privacy issues have to be grappled with beyond the sheer technical problems. But the trade-offs in efficiency, accuracy and data gathering will be well worth the struggle. Mobile technology will play an increasing role in both institutional and personal health care advances.

An example of the convergence of data and mobile applications is the recent release of an iPad app for health practitioners by Practice Fusion, a leader in electronic health records. The app allows doctors instant access to patient records in a secure environment from wherever they are as long as they are connected to the Internet.

While institutional adoption of mobile technology is starting to happen, another revolution in personal health monitoring is also taking place. An explosion of apps and add-on devices for mobile devices are putting a wealth of data gathering, sharing and eventually diagnosis in to the hands of ordinary people and health care workers in the field.

There are quite a few tools already, though in many cases they are still rather basic. Most of the consumer apps and devices focus on diet and exercise monitoring. However, the future is bright as developers begin to understand the mobile platform and stretch its capabilities at the same time mobile systems continue to become more powerful and flexible. Additionally, part of the delay of the release of more serious apps and devices has been the long approval process required by the Food and Drug Administration. However, according to a recent article in Business Week (<http://buswk.co/qr83CY>), that process should soon be streamlined allowing for a flood of new advances for both health care workers and individuals.

A few current applications and devices

An example of the type of advanced app that can improve health care is described in an article on GigaOm (<http://bit.ly/uxkcv>). The app was developed by Dr. John Moore at the MIT Media Group:

"One such app enables HIV patients at Boston Medical Center to visualize how HIV develops into AIDs, how the virus attacks their T cells and what happens if they do or do not take their cells. Using that app, he saw the percentage of patients sticking to their drug regime soar from 25 percent to 95 percent, Moss said."

Another application recently released is an ultrasound device that plugs in to a smartphone and allows a health worker to perform an onsite scan.

My Medications, provided by the American Medical Association, provides a convenient way for individuals to enter medical information such as allergies, prescriptions, and immunizations and to share that with primary care physicians.

AT&T recently released WellDoc Diabetes Manager that allows patients to monitor glucose levels and receive advice base on the input.

iBGStar is a blood glucose meter plug-in for the iPhone. iPhone BGM plug-in will interact with a not yet Apple-approved iBGStar Diabetes Manager App that will help users track blood glucose, carbs intake and insulin dose.

In a more general consumer market, Bluetooth phone device maker, Jawbone just came out with the UP, a wristband that monitors walking exercise provides alerts for prolonged sedentary behavior (like sitting at your computer),

monitors sleep habits and diet. The wristband is plugged in to the iPhone sound jack and the data is off-loaded to a free web app and can be shared on a social website.

ITriage is an iPhone app that helps you answer the questions, "What medical condition could I have?" and "Where should I go for treatment?"

The future is near

It's clear that we're just at the beginning of this mobile revolution. In the next few years expect to see devices and apps become much more sophisticated. Researchers are testing an MRI scanner attached to a Smartphone that can detect cancer. And there is a 10 million dollar prize being offered for the development of a device that can scan a body and diagnose a variety of ailments. It's called the Tricoder Prize, named after the device that Spock used in Star Trek. The future is coming fast.