

## Roundtable Discussion

### The “m” Factor: How Mobile Technologies Are Changing Health Care

Mobile and wireless technologies are changing health care at a rate described as viral — spreading quickly and ubiquitously among both patients and providers. Recent estimates of the number of health-related apps available for smart phones and tablet computers range from 7,000 to 70,000,

depending on how strictly “health” is defined.

But while these technologies hold tremendous promise, their usefulness generally has been limited — serving as data silos that fail to benefit the whole patient. “Too many apps have a dead end” and do not feed their data into an

electronic or a personal health record, or both.

To examine how mobile and wireless technologies are affecting the delivery of health care — and how they can help in promoting and maintaining good health — the nonprofit Institute of Federal Health Care held a roundtable discussion that included participants from federal agencies, patient and provider organizations, technology firms and academia.

Among the concerns expressed by roundtable participants were:

- ◆ Need for common standards so data from various devices and apps can be exchanged.
- ◆ Need for incentives that encourage providers to use mobile technologies.
- ◆ Need for changes in reimbursement to encourage use of technology more widely.
- ◆ Lack of literacy in information technologies among segments of both the provider and patient populations.

The ultimate goal of such technologies, roundtable participants agreed, should be to improve health outcomes.

#### Promise of Mobile Web

Accessing the Internet by tablets and smart phones via wireless connections based on the HTML5 standard could serve as an answer to the problem of data sharing, it was suggested. “It allows large data pieces on phones” and “almost every device has it.”

However, a survey by the Pew Internet and American Life Project

#### Comments from the discussion ...

- **“The technology part is easy — we have the technologies. What we need are policies that keep up with them.”**
- **Mobile technologies and apps should not be allowed to continue to fall into the Mac versus PC dichotomy that fails to maximize interoperability.**
- **Because some rural parts of the U.S. have poor cell phone service, some features of mobile apps should be available offline. These apps should have full capability when online service can be accessed.**
- **If physiologic data comes into a phone from a device, that transfer likely triggers the need for review by the Food and Drug Administration. However, “there are a lot of questions on clarity here.”**
- **To be useful, mobile health apps should be portable, participatory and personal.**
- **Initial parameters by HHS for “meaningful use” of health information systems did not include mobile devices, which only now are being incorporated into the latest iteration of requirements. “Health information technologies are part of an ecosystem that does not stop at the EHR (electronic health record).”**
- **How can it be technologically and economically feasible to amass data on individuals to provide a baseline health status? “How much can we afford to put in?”**
- **EHR manufacturers want interfaces that are unique to their particular products. “This is why we need standards. They are making cross-platform integration difficult.” Proprietary versus open coding for software remains a significant obstacle.**
- **The issue is not just one of data and apps. “We do need humans to interpret and respond” to data and their implications. “This is a huge manpower issue.”**
- **A new group of physicians and scientists, Open mHealth, is devoted to eliminating data silos ([www.openmhealth.org](http://www.openmhealth.org)) and is “gaining some traction.”**

illustrated the generational differences that confound the promise of mobile web. The May 2010 survey found that only 15 percent of baby boomers use phones to access the Internet — whereas among “millennials” aged 18 to 34, the percentage was 63 ([www.pewinternet.org](http://www.pewinternet.org)).

Pew also found that mobile connectivity is widely used among minority populations, as it often is their only means of accessing the Internet. A surprising finding is that individuals with chronic diseases are less likely to be Internet users.

Roundtable participants noted that texting has become a preferred method for using smart phones — especially among teens — and ought to be included in all future mHealth strategies.

“The mobile phone is the biggest technology platform in the history of mankind.”

### Areas Of Concern

A potential roadblock to use of wireless and mobile devices in health-care [and in all fields] is the dwindling amount of bandwidth available. “We’re in danger of running out of wireless capacity.”

Another issue of concern is reimbursement to providers for using mobile technologies. Physicians have been slow to adopt such practices as engaging in e-mail with patients, even when they are reimbursed for it, because they believe it takes too much time. However, most of those who actually use e-mail and relevant apps find they have gained time and end up liking these new capabilities.

Level of reimbursement for electronic clinical consultation remains an issue, however, because it is not as great as for a face-to-face encounter.

### Kudos To VA

The Department of Veterans Affairs is working to establish standards for mobile device apps. “Bravo to VA for working toward a common infrastructure.” This comment from one roundtable participant reflected a frequently voiced observation during the discussion — that VA can lead the way toward interoperability by “driving industry” to a “more rational” approach. “We should learn from what VA is doing.”

### Apps In Abundance

The number of health applications for mobile users is soaring. Some help people exercise properly or measure their body mass index. Some help them make healthy food choices. Some apps help patients share information with their physicians. Among examples noted at the roundtable:

♦ VA and the Defense Department together have developed the PTSD Coach, an app designed to give service personnel a means of learning about PTSD. It allows them to make a self-assessment via a 17-item checklist, provides tools for acute symptom management, and offers the capability of finding support from others with PTSD symptoms.

Currently, the PTSD Coach is entirely stand-alone, but it is hoped that will change as standards are developed.

♦ VA is working on apps for providers and patients to help enhance the delivery of evidence-based protocols and to allow them to share their experiences with other providers. It is hoped that these apps will have the capacity to interface with each other, as well as with the PHR and EHR.

♦ In a pilot project, VA is providing iPads to 1,000 caregivers of veterans that will be uploaded with a

half-dozen applications that caregivers say are most important to them.

♦ Ford Motor Company and WellDoc are developing a pilot in-car system that can monitor a driver for issues relating to congestive heart failure, asthma and diabetes.

### In The Future

The future of mHealth lies in “exchanging the right information, in the right format, from the right source, at the right time, with the right person, for maximum digital health impact.”

One prediction emerging from the roundtable is that the electronic health record in the future will consist solely of apps. As for the personal health record, it thus far has not seen great success, largely because individuals do not want to spend time entering data into it. One approach now being contemplated is to use gaming theory in developing the PHR. Gaming is by far the most popular way in which smart phones and tablet computers now are being used.

Participants in this roundtable: Kathy Beasley of MOAA; Jay Bernhardt of the University of Florida; David Blazes of the Armed Forces Health Surveillance Center; Dan Blum of TATRC; Edna Boone of HIMSS; Denise Ciotti of DefenseWeb; John Crum of Humana Military Healthcare Services; J. Michael Fitzmaurice of AHRQ; Kathleen Frisbee of the Veterans Affairs Department; Yael Harris of HRSA; Robert Jarrin of Qualcomm; Eric Kuhn of the Veterans Affairs Department; Chris Lamer of the Indian Health Service; Saralyn Mark of NASA; Vincent Michaud of NASA; Douglas Naegle of Infield Health; Kristen Purcell of Pew Internet; Dena Puskin of HRSA; Richard Satava of the University of Washington; Richard Singerman of TrustNetMD; Tom Velez of Computer Technology Associates; Jackie Williams of Humana Military Healthcare Services.

The roundtable was moderated by Rick Erdtmann of the Institute of Medicine. IFHC Managing Director is Nancy Tomich ([www.fedhealthinst.org](http://www.fedhealthinst.org)).