



*When Will Healthcare Go Mobile?*





**DESPITE WIDESPREAD USE OF SMARTPHONES TO PERFORM A VARIETY OF TASKS, EXPERTS SAY CONSUMERS ARE STILL WAITING FOR THE RIGHT INCENTIVES TO PUSH THEM TO USE THEIR PHONES TO ACCESS PERSONAL HEALTH RECORDS AND MANAGE THEIR MEDICAL INFORMATION ON THE GO.**

*By Ed Rabinowitz*

**M**obility is the buzzword *du jour* when discussing information technology trends in healthcare, especially when talk turns to physicians' tech preferences. According to a recent study from Manhattan Research, 64% of US physicians use a smartphone (<http://tinyurl.com/clojeb>). On the surface, that might indicate an expanding role for cell phones and personal health records. Looking deeper, however, reveals slow movement in that direction.

According to Erika Fishman, director of research at Manhattan Research, PHRs are still in the pilot stage, and the use of mobile devices by consumers for health and medical information seeking is still a relatively new activity. However, former Medem CEO Ed Fotsch, MD, says that we have come to a fork in the road on the long path to widespread PHR adoption. The question is whether PHRs and other IT applications will become popular central repositories for patient-controlled information. And the cop directing traffic at that intersection is the physician.

"If docs offer [PHRs], patients will use them," Fotsch says. "But if it's going to be this transportable model that's envisioned by a lot of people in healthcare, it has to work for more than one doctor."

### **Continuity of information**

Stan Shepherd, MD, chairman of Health One Global ([www.healthoneglobal.org](http://www.healthoneglobal.org)) and a family physician practicing in London, England, says that the cardinal activity of any healthcare system is to deliver care that is effective from both a clinical and cost perspective. The key ingredient to making that happen, he says, is continuity of patient information in the form of interoperable data. But what exists instead in current healthcare systems is colossal fragmentation of information.

"I put a computer in my practice in 1982," Shepherd recalls. "It was huge, and it had five megabytes of memory. Today, my cell phone has 1,000 times the memory. But all I've seen in 20-plus years is that we have simply replaced paper fragmentation with electronic fragmentation."

As evidence, Shepherd points to the £12 billion the UK is spending on a system that will provide everyone in the country with a PHR. The problem is that there is no plan for the UK system to be interoperable with any French system, despite the fact that France sits just 22 miles across the English Channel.

Shepherd suggests turning the healthcare delivery model upside down. Instead of healthcare

professionals being responsible for the continuity of information, put it in the hands of healthcare consumers in the form of an electronic PHR. "If the patient has the data, then whatever healthcare professional they see can access it through the patient's PHR. You're no longer relying on the neurologist telling the cardiologist. It's all recorded on the patient's health record."

That approach is currently being tested through a pilot program that makes electronic PHRs available to Special Olympics athletes. The pilot—a joint effort by Special Olympics, the US Centers for Disease Control and Prevention, and Health One Global—was launched at the 2009 World Winter Games in Boise, ID.

"People with developmental disabilities have really been bumping around the system in a somewhat random fashion, being handed off from provider to provider," with little in the way of coordinated care or information sharing, says Stephen Corbin, DDS, MPH, a member of the Special Olympics leadership team. "Along the way, you have frustrated family members and frustrated providers. It's just a terrible situation."

The health screenings that were performed at the World Winter Games on athletes from around the

world now form the foundation of their athlete PHR (APHR), which they can carry with them wherever they go, and can be used as a baseline to track their health progress. The APHR “will be available over the Internet and accessible by PC, laptop, PDA, or cell phone. This technology will enable athletes to manage and control access to their health information with security and privacy. The APHR will also be available in multiple languages, making it available and functional for athletes worldwide” (<http://tinyurl.com/lomzmx>).

### Cell phone applications

The average consumer might not be using his or her cell phone to research, obtain, and transfer important healthcare information, but its popularity and ubiquitous nature make the device a natural for health information exchange. Consider that in 2007, more than 250 million Americans—or 82.4% of the US population—subscribed to some type of cell phone plan, according to CTIA, a nonprofit trade group for the wireless communications industry (<http://tinyurl.com/m6qate>).

“The mobile device has become so central in people’s lives,” says Mark White, president of MyRapidMD ([www.myrapidmd.com](http://www.myrapidmd.com)), developers of “meaningful personal mobile content for cellular phones.” According to White, “there are 300,000 people in the US who trust the cell phone enough to zip their account numbers and transfer dollars [over the phone]. It suggests their confidence level in the encryption standards is getting better and better.”

MyRapidMD is banking on that rising confidence level, as well as the emergency first response community’s need for accurate information, with its Emergency Service Profile (ESP) application. ESP is not an electronic medical record; it’s an emergency service record that is stored in an individual’s cell phone. The ESP stores critical emergency medical, identification, and contact information, including an individual’s blood type, current medication list, information about allergies or recent surgeries, and who to contact in an emergency. According to the company, ESP is compatible with virtually every make and model of mobile phone.

“If you give me one piece of information that suggests I shouldn’t poke you with nitroglycerine because you’re taking Viagra, that’s the difference between me being able to save your life and not knowing that I’m about to kill you,” White says.

Emergency service providers are alerted to the availability of the information through wallet ID cards, cell phone stickers, key chain cards, and a transparent

automobile windshield sticker. There’s also a refrigerator magnet in case of a home-based emergency.

“A kid gets a bee sting in school, or a teenager falls off a bike... the list goes on,” says White, detailing the situations that might arise in which emergency information would prove beneficial. “One piece of information can have a direct impact on the outcome.”

### Behind the scenes

Electronic toll-collection systems like E-ZPass (<http://en.wikipedia.org/wiki/E-ZPass>) use a transponder placed in or on your car that enables you to drive through a tollbooth and pay without stopping. It may seem simple, but a series of complex transactions are taking place behind the scenes. The same principle is at the heart of Ideal Life ([www.ideallifeonline.com](http://www.ideallifeonline.com)), a Bluetooth-enabled, wireless home health monitoring system that adapts to people’s lifestyles.

Harvey Goldberg and his son Jason founded Ideal Life based on the belief that people communicate differently. The Ideal Life blood pressure manager looks much the same as many other blood pressure devices you might find on the shelf at any chain pharmacy. The difference is the Bluetooth pod embedded inside the Ideal Life monitor, which wirelessly transmits real-time information to physicians in a variety of formats: fax, e-mail, or integrated directly into an EMR.

“Cell phones are important, but so are land lines, because there are dead zones even in major cities,” Harvey Goldberg explains. “The right system is one that is fully integrated, multi-channel, communicates the way patients communicate, and integrates into their lifestyle. That’s how you drive compliance, and that’s how you drive outcomes. And when you improve outcomes, you lower healthcare costs.”

According to the American Heart Association, approximately 5.3 million Americans suffer from congestive heart failure, at an estimated direct and indirect cost to the healthcare system of \$34.8 billion

in 2008 (<http://tinyurl.com/nu78lz>). A recent Ideal Life study focused on a population of 417 congestive heart failure (CHF) patients in a Medicare Special Needs Plan. The patients were divided into two populations—217 were required to call a toll-free number and enter their daily body weight over an integrated voice response (IVR) system; the remaining 200 patients used an Ideal Life scale that automatically sent data to the company’s information management platform.

After three months, the IVR group had a 65% retention rate, whereas the Ideal Life group had a 99.5% retention rate. In the three months prior to study initiation, the IVR group had a hospital admission rate of 620 per 1,000, and the Ideal Life group had a rate of 630 per 1,000. Three months later, the Ideal Life group experienced a 57% decline in hospital admissions, or a 27% admission rate, compared with a 46% decline for the IVR group, or a 33% admission rate.

“Part of our mission is ease of use,” Goldberg says, “so the patient has nothing to do once they plug the product in. And it’s scalable for large populations.”

### Moving forward

What’s the future of IT adoption in healthcare? When it comes to PHRs, many wonder whether patients will be compelled to use them. Fotsch says that most people are relatively healthy, or at least think they are, and when they’re healthy, they

don’t want to think about medical records and other healthcare information.

Fotsch believes that physicians will have to offer a service that not only fulfills consumers’ expectations of better communication with their physician, but offers better value as well.

“It’s kind of like going back to ATMs when they first started,” Fotsch explains. “They got me money from outside of my bank after hours, but when I traveled, I was on my own. Over time, I expected to be able to get money from any of my bank’s branches, and then, as the system matured, that I would be able to get money from any ATM. So the expectations grew, but there were a couple of things that drove that. Number one is that money is a lot more fun to think about than healthcare. And number two, consumers were willing to pay to access their funds. When they’re traveling, consumers have shown they’re willing to pay a dollar to get \$100. But there has not been a similar economic model in healthcare.” *md*

*Ed Rabinowitz is a veteran healthcare journalist based in Bangor, PA.*

**“IF YOU GIVE ME ONE PIECE OF INFORMATION THAT SUGGESTS I SHOULDN’T POKE YOU WITH NITROGLYCERINE BECAUSE YOU’RE TAKING VIAGRA, THAT’S THE DIFFERENCE BETWEEN ME BEING ABLE TO SAVE YOUR LIFE AND NOT KNOWING THAT I’M ABOUT TO KILL YOU.”**