

Special Audio Transcript

Headline: Several Forces Driving Explosion in Mobile Health Care Industry, Experts Say

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Last fall, San Diego cardiologist Eric Topol was flying home from a conference back East.

Just after the flight leveled off, the pilot got on the intercom and asked if there were any doctors on board. A passenger in the back of the plane needed medical attention.

Topol went to the last row of seats and found a passenger who was sweating profusely and complaining of chest pains.

(Topol): "It wasn't clear whether he had indigestion or a heart problem. But I thought, 'Well gee, I had this device I can attach to my phone back in my bag, and I can maybe do a cardiogram and sort this thing out.'"

Topol had been beta-testing an application that allows someone to perform an ECG with an iPhone using a special attachment.

He grabbed his phone, placed the attachment on the passenger's chest and then on his fingers.

Within seconds, Topol's phone displayed the passenger's heart rhythms.

(Topol): "And I could see, that he had what we call an anterior, front-of-the-heart large heart attack."

After speaking with Topol, the pilot made an emergency landing. Paramedics rushed the passenger to a hospital, where cardiologists were waiting to treat him.

Topol says the digital revolution is dramatically changing health care. He's written a book about it called "The Creative Destruction of Medicine."

(Topol): "What's happened is as medicine's gotten unplugged, and now the center of it is this powerful mini-computer, also known as a smartphone, all sorts of things are being created that we didn't conceive before."

The use of mobile phones, apps and wireless sensors to collect and monitor health data is growing rapidly.

This is a special report for *iHealthBeat*, a daily news service of the California HealthCare Foundation. I'm Kenny Goldberg.

The market research firm GlobalData predicts by 2018, the worldwide market for mobile health technology will reach \$11.8 billion. That's compared with a value of just \$1.2 billion in 2011.

Chuck Parker is executive director of Continua Health Alliance, an international health device industry trade group. He says there are a number of forces that are fueling the explosion.

(Parker): "I think consumers are definitely one area that are driving this. Individuals are becoming more cognizant of their health and have a desire to manage their health conditions more effectively."

Parker says another factor is the need throughout the health care industry to reduce costs. Mobile health apps can help do that.

(Parker): "Individuals recover better, and it's less costly, to manage them at home, rather than inside of hospitals or long-term care facilities. And by using these tools we can help individuals stay home safer in a healthier environment for them, on a longer-term basis."

And then there are companies that are creating the apps and newfangled medical devices.

Take Proteus Digital Health. The Northern California-based company has created an ingestible sensor that can be integrated into a pill.

The FDA-approved device is designed to monitor compliance. Once the pill is taken, the sensor transmits the dosage and time it hits the stomach to a patch worn on the skin. The patch communicates with a smartphone app, which in turn sends the information to a doctor.

Parker says that's where the industry is going.

(Parker): "As meaningful use has driven the adoption of electronic medical records, sort of the next level of that, we're gonna start driving towards more of that personalized medicine, and you'll see more clinical applications applied to individuals. Ultimately, what this means is that you can potentially be prescribed an app."

Eric Topol is already doing that with some of his patients.

He recently prescribed an app called iHealth to an elderly woman who has high blood pressure. Using the app on her smartphone, she sends Topol her blood pressure readings on a regular basis, and he's able to tweak her medication accordingly.

Topol believes apps will get much more sophisticated.

(Topol): "Everything from quantifying depression, quantifying your eye pressure for people with glaucoma, brain waves to prevent seizures, asthma detection to prevent an attack. So it's just going to basically get into virtually every area of medicine, and that's going to take a few years."

Paul Sonnier is head of digital health strategy for the consulting firm Popper and Company. He's also the founder of a digital health group on the social media site LinkedIn. In just three years, his group has amassed 12,400 members.

Sonnier says the word on the street is big things are coming.

(Sonnier): "There's a lot of opportunity. There's a lot of changes happening in our health care systems. There's a lot of opportunity for consumers to be aware and have very powerful and engaging tools that are sticky. And you have that confluence of factors."

And among the general public, there's a sense of fascination and excitement about the idea of using a smartphone as a medical device.

Eric Topol says he learned that after he used his phone to diagnose that passenger's heart attack.

(Topol): "After he got off the plane, the pilots and the flight attendants all wanted to have their cardiogram done."

This has been a special report for *iHealthBeat*, a daily news service from the California HealthCare Foundation. If you have feedback or other issues you'd like to have addressed, please email us at iHB@CHCF.org. I'm Kenny Goldberg. Thanks for listening.