

Medical apps ease burden on hospitals

May 18 2011, By Bridget Carey

When Dr. Jose Soler got a late-night call about a critically ill patient, he grabbed his iPad and checked the results of the electrocardiogram test that just had been administered. Thanks to an app that zooms within half a millimeter of every heartbeat rhythm variation, Soler made a diagnosis within two minutes.

Before the Northwest Medical Center cardiologist began using the AirStrip Cardiology [mobile application](#), he had to wait for a nurse to fax him a printout or log into a computer to load the data in PDF format, which was often hard to read.

"Having the ability to get that information on your [iPhone](#) to make a quick decision versus looking for a fax machine - it just changed the paradigm," Soler said.

Soler is among 40 [cardiologists](#) at HCA East Florida Hospitals who are the first physicians in the world to incorporate the EKG-reading app into their practices. Doctors at three HCA hospitals began using it recently on their personal iPads and iPhones.

Increasingly, doctors are using [mobile apps](#) to access patient information. Hard data is scarce. For instance, the annual market for mobile monitoring devices is estimated to be a \$7.7 billion to \$43 billion industry, as cited by a PricewaterhouseCoopers report, "Healthcare Unwired," released in September 2010.

But the trend is clear.

"This level of adoption is unprecedented. Things are changing very quickly," said health care-innovation analyst Chris Wasden of PricewaterhouseCoopers.

According to a Manhattan Research study released this month, 75 percent of U.S. physicians own some form of Apple mobile device, whether it's an [iPad](#), iPhone or iPod. The iPhone is the top smartphone choice for doctors, according to the study. About 30 percent have an iPad, and another 28 percent say they plan to buy one within six months.

Apple's popularity, says the study, is largely driven by the increasing number of apps providing access to [electronic medical records](#).

In the past, the [health care](#) industry was often behind the curve when it came to work-management technology, he said. But now, hospital staff can't keep up with physicians' demands for patient data access via mobile devices.

"Mobile health technology is the first information technology that improves their workflow to allow them to practice medicine in a different way," Wasden said.

At Baptist Health South Florida, about 100 doctors are saving time by are using their own iPads to access patient charts and medical images. Physicians at Memorial Healthcare System and HCA are tracking maternity ward patient vitals in real-time using various smartphones and tablets.

More than 10,000 smartphone apps had been filed under health care and fitness categories by last September, according to a PricewaterhouseCoopers report, the latest data available. But after weeding out low-quality junk and consumer-focused apps, only several hundred are designed for health care professionals, said Iltifat Husain,

editor and founder of iMedicalapps.com.

More than 300 health care apps have been featured on the review site since 2009. Husain - who will receive his medical degree from Wake Forest University later this month - said most medical apps are focused on reference, research and education. But the apps for tracking vitals, like AirStrip, and those for accessing radiology images - including OsiriX, eFilm or Mobile MIM - are now picking up in popularity.

"You are seeing a real boom," Husain said. "It's really creating the un-tethered physician."

The government push to move health records to a digital system is one factor. Another is the development of apps like AirStrip, which tap into existing hospital computer infrastructure.

Several hundred U.S. hospitals are using AirStrip technology, according to Bruce Brandes, the company's executive vice president. The Texas-based technology company received an undisclosed amount of funding from Sequoia Capital, which has backed tech giants including Apple, Google and Cisco.

AirStrip's newest app made a three-second cameo on the latest iPad 2 commercial. Designed to show real-time vitals of a hospital patient, that app is expected to launch in late 2011, Brandes said.

For Dr. Nigel Spear at Memorial, the AirStrip OB app lets him monitor a patient's contractions and the baby's heartbeat - even if he's not at the hospital. So far, 48 physicians at Memorial hospitals in Broward County, Fla., are using the app.

"Both physicians and nurses, we're very much taxed by the demands of the system nowadays, having to be at multiple places at the same time,"

Spear said. "You can leave the nurse to her patient without having to call her every five minutes to find out what's going on. That's a big, big plus. You can't put a number on that."

Spear, medical director of obstetrics and gynecology at Memorial, said the app sometimes helps him see he needs to hurry to the room - before the nurse even reaches for the phone to call him.

"Most physicians now really kind of expect this connectivity at their hospitals," Spear said. "It's really become the standard way of practicing."

For the past three months, roughly 100 doctors within Baptist Health in Kendall, Fla., have been using an iPad to access electronic medical records. And they wirelessly pull up test results and images without having to walk to different departments.

"It just consolidates everything in that device," said D. Wayne Brackin, chief operating officer at Baptist. "They love it."

Doctors say iPads are also helping them interact more effectively with patients, making it easier to show them diagrams as part of explaining a problem and helping recovering patients communicate.

At Florida's Memorial Hospital West Rehabilitation Center and Joe DiMaggio Children's Hospital, doctors use iPad apps such as SmallTalk to help patients who can't communicate their wants, needs and thoughts, such as "I'm thirsty." Other versions help with language, speech and cognitive therapy.

Still, for all the advantages of mobile medical apps, not everyone is to ready to jump on board with every app.

When asked about barrier to using mobile health applications, more than a third of the doctors surveyed listed concerns about privacy and security as their chief issue, according to the PricewaterhouseCoopers report.

Similar issues are slowing the approval and use of a heart-monitoring [iPhone](#) app being developed by California-based GTX Corp. The app is designed to send an alert to a doctor if the heart monitor detects a health problem, along with the phone's GPS coordinates.

"Everyone raises their hand in a room and says, 'Yes, I want this,' " said GTX Chief Executive Patrick Bertagna.

"But then doctors ask: 'Who is going to pay for this? What if the heart monitor is wrong? Am I going to get sued?' "

With the answers unclear, this - and some others apps - will likely wait.

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