

## Doctors turn to smartphones, tablets to access medical data

July 22 2011, By Jim Fuquay

If a patient of Arlington, Texas, physician Ignacio Nunez shows up at the emergency room when the doctor is not at the hospital, he doesn't have to wait long to start investigating what might be wrong.

The obstetrician/gynecologist can call up an expectant mother's medical records on his <u>iPhone</u>, or even watch the fetus's heartbeat on the device once the woman is connected to a hospital monitor, wherever he might be at the time.

"Maybe I made my rounds in the morning, but at 2 p.m. a nurse calls and says, 'We don't like the way an EKG looks.' I can see it. I don't even have to leave my house," he said.

According to AirStrip, the San Antonio software company that developed the app Nunez uses, there is only a three- to five-second lag to get information to the physician's mobile device. AirStrip also makes a version for <u>cardiologists</u> and has an upcoming version that will monitor other critical data in intensive care units and emergency rooms.

Luis Saldana, associate chief medical information officer for Texas Health Resources, said that by linking <u>mobile devices</u> such as smartphones and <u>tablet computers</u> to hospitals' <u>electronic medical records</u>, "we're trying to extend the physician beyond the hospital."

"We're trying to give physicians as many options as we can," Saldana said, such as seeing any X-ray the moment it becomes available.



At Huguley Memorial Medical Center in Fort Worth, physicians have been able to view selected patient medical records, such as test results, on smartphones for about six months, said Tammy Collier, chief nursing officer.

"What we see physicians doing is preparing themselves with very current information," Collier said. "They have so much more information available at their fingertips."

Mobile access is also a way to draw more value out of the big investments hospitals have made in electronic records in recent years. According to consultant Accenture, North American hospital systems spent \$7.4 billion in 2010. And the 2009 stimulus act promised \$50 billion over five years to help move government and private health care providers to electronic records.

Texas Health Resources says it has spent \$200 million-plus on <u>electronic</u> records systemwide.

That's a lot of money, but "one of the problems is making it easy to use," said Brian Dolan, editor and co-founder of MobiHealthNews, an online newsletter that covers mobile technology in the health care industry. "If you make it easier to access through technology," physicians and patients can make greater use of the data available, he said.

While many physicians have desktop or laptop computers in their offices, and hospitals have desktop computers at nursing stations or physician quarters, putting information on a mobile device seems to make a difference, some say.

"It's just the way doctors use tablets. There's more of a willingness to share with the patient," Dolan said. "The collaborative nature is more of a game-changer."



According to Saldana and others, getting physicians to carry smartphones or tablets is an easy sell.

"Many doctors are now carrying iPads," Saldana said of Apple Inc.'s tablet computer, which dominates its market.

Dolan said about 30 percent of physicians have an iPad and more than 80 percent have smartphones, which include the iPhone and many other devices that use the Android or other operating system to turn a cellphone into a functional computer.

Nunez said that while he owns both an iPhone and an iPad, he finds the tablet computer too large for his daily work. And with an iPhone, he said, "I can find the medical record, look up information and do it while I'm talking" to a patient, doctor or nurse.

IPads in particular are handy for viewing X-rays and other medical images, Saldana said. "The resolution is very good," he said.

While such apps are widely available, they draw their data from secure hospital-based networks. So consumers likely won't be able to make much use of the app on their device.

Meshing a popular trend like mobile device apps with medicine can also run into other speed bumps.

Dolan said an iPhone app featured on iTunes when Apple opened its App Store in 2008 was a medical image viewer from MIM Software.

It looked impressive, but wasn't approved by the Food and Drug Administration, he said, and had to be removed from Apple's online store. It finally got that approval in February, along with a version for the iPad.



While mobile medical information today is focused on distributing existing electronic health records, future uses will likely include creating medical data as well.

"The next trend, with chronic diseases, will be leveraging this technology in the home," said Bruce Brandes, chief strategist for AirStrip.

"We will capture information and distribute it, via online alerts, to a physician."

For example, he said, a patient with congestive heart failure or one with a high-risk pregnancy could be continuously monitored.

"The doctor doesn't need to see the last four days of data. He wants something that triggers an alarm that goes to his smartphone" right when a crisis is imminent, Brandes said.

AirStrip is working with other companies that develop the technology to collect that data, using an adhesive strip or other mechanism containing tiny sensors, and wirelessly relaying it to a database.

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