

# BusinessWeek

## PAGING DR. IPHONE: TAPPING A PHYSICIAN'S DIGITAL REFERENCE

This family doctor is using Apple's smartphone and numerous medical mobile apps to save time, see more patients, and provide better care

**D**an Diamond is a family practitioner who works at the Doctors Clinic in Silverdale, Wash., not far from Seattle. If he forgets his stethoscope when heading to work, he won't go back home for it, since he can borrow another at the practice. Not so Dr. Diamond's iPhone. "If I leave my iPhone at home, I will turn around and go back for it," he says. "It's that important."

Apple's iPhone has become a critical tool for saving time and improving the quality of the care Diamond provides, particularly when he's with patients, he says. Of 22 applications Diamond has installed on his iPhone, 10 are health related. The most important, he says, is Epocrates Essentials, which lets him quickly check for drug interactions, look up disease symptoms, and find out what lab tests he might need to order. "I don't have everything I need to know memorized," Diamond says. "This makes me look like I do."

Epocrates Essentials is one of at least 278 downloadable tools in the "medical" section of Apple's iTunes App Store, a compendium of more than 25,000 games, tools, and other applications available for use on the iPhone.

### A \$17 BILLION MEDICAL MODERNIZATION

Diamond's deepening dependence on health-related mobile apps underscores the potential that the iPhone and other Web-enabled wireless handsets can

play in overhauling the way physicians and hospitals dispense health care. "The lead application is for doctors to look up information so they can be up-to-date with the latest [Food & Drug Administration] warnings and new drugs to help them write prescriptions," says Harry Wang, director of health and mobile research at Parks Associates in Dallas. "But in the future you'll see devices like the iPhone be a portal to a lot more medical information like patient records and lab results. They'll eventually be writing prescriptions directly from their phones."

Reliable and convenient access to digital health records is likely to take on added importance as the Obama Administration doles out \$17 billion in economic stimulus spending with an eye to modernizing the U.S. health-care system and pressing hospitals to begin keeping electronic, rather than paper, records.

Diamond doesn't use his iPhone for medical records, which in his clinic are still maintained on paper; he expects to move to a digital format later this year. He uses his iPhone for a number of other tasks. A medical-specific calculator application called Mediquations handles the wide range of math-related tasks confronting a medical doctor, with body-mass indexes, ideal body weights, acid-base balances, and some 200 other formulations doctors regularly use.

### THE FUTURE IS NOW, AT LAST

An app called ACLS contains a reference for the urgent care of people having heart attacks. Another program displays illustrations from the *Netter's Anatomy* reference book. "I might have a patient with a knee problem and I can pull up a picture of the knee and show them what I'm talking about and why it hurts," Diamond says.

His description of how he uses his iPhone reminded me of video I watched early in my career, when I was a health-care reporter for a small newspaper researching a story about medical expert systems—computers designed to reduce human error in the provision of health care.

Produced by Hewlett-Packard, the video depicted a typical day in the "emergency room of the future:" Doctors and nurses all carried touch-sensitive, wireless tablets with color screens. In a key scene, a sick child is brought in after she's eaten some wild berries while playing. A playmate who isn't sick sits in the emergency room, using an electronic tablet to sort through pictures of berries the sick girl might have eaten. Once the friend recognizes one, the medical staff knows how to treat the victim. Technology makes for a happy ending.

### SAVING AN HOUR A DAY

That future is getting closer. Of course, there are key differences between the

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tablet in that video and the iPhone. For one thing, the fictitious machine was part of a larger system that includes hospital servers, medical databases, and pharmacies.

Still, I am struck by how much those fictitious tablets so closely resemble the iPhone in appearance and function. And Diamond's experience shows that using the iPhone in a medical setting doesn't have to be a complicated, expensive

proposition. With the exception of Epocrates—which costs \$149 a year, or \$249 for two years—all of Diamond's medical applications were either free or cost less than \$5 to install. Using them saves him about an hour per working day. That's a pretty big savings for a professional who can see four or five patients an hour. "I work until 2 p.m. every day just to cover my overhead costs," he says. "Getting an extra hour is huge."

My hunch is that there are quite a few other doctors and medical professionals like Diamond among the 14 million iPhone users out there. Are you using the device in your practice? What difference does it make in how you provide care?

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