

# Future Trends in Practice Technology

## Chapter FastFACTS

- 1. New criteria for EHRs could lead to more vendors and more options for physicians.**
- 2. EHR technology is moving away from office-based servers and equipment toward Web-based platforms and mobile devices.**
- 3. More portable, Web-based technology can enhance the increasingly interactive, patient-centered nature of healthcare today.**
- 4. “Clinical groupware” is Web-based applications that allow patients, physicians, and organizations to communicate on a common network.**
- 5. Interoperability between systems may change the type of system you’ll ultimately need.**

**A**ny talk of future trends in technology for primary care practices will inevitably center on EHRs. Whether you’ve decided to buy an EHR system now or to wait for more details about how to qualify for incentives, the federal government’s focus on meaningful use of EHRs is ushering in a new era of health information technology.

As vendors are forced to meet standard requirements in order to have their products certified, experts predict that it will get easier for physicians to select and implement a system that will meet their needs. And making the move into EHRs may inspire physicians to look into other ways to use technology to improve



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patient communication, quality of care, and possibly their practices' bottom lines.

The interim final rule issued by the ONC at the end of 2009 sets initial standards, implementation specifications, and certification criteria for EHR technology. Ensuring that products adhere to a common set of standards paves the way for physicians to take a modular, incremental approach to assembling technology instead of investing in an expensive, comprehensive new system.

### **What's Coming: the Big Picture**

These developments could precipitate a major shakeout in the EHR vendor industry. "Legacy" or comprehensive products typically offered by the larger companies will likely become less popular than cheaper, modular products, allowing smaller competitors to enter the market—and giving doctors more choices, Dr. Kibbe says. "Physicians will be looking for low-cost products that maximize return on government incentives and minimize hassle and disruption to their practices."

But that industry shakeout may take a while to evolve, notes Mr. Zych, Geisinger's associate chief legal officer. "While I would hope and trust that multiple vendor-created modules could eventually be put together without creating greater patient safety issues, I do not believe the current state of the market is aligned so that incentives—financial or otherwise—for creating individual interoperable systems are really in place," he says. His advice for doctors in private practice: "Try to determine your five-year needs, and get an integrated system that at least makes an attempt at providing a one-size-fits-all system."

Meanwhile, established companies are anticipating the increased competition and adjusting their products accordingly. GE's Centricity EHR for example, delivers Web-based services that "by their nature, are modular," says Michael Nolte, vice president and general manager of marketing for GE Healthcare IT. As GE builds on the service-based architecture, customers with very basic systems will be able to add on components as their budget allows.

"If [doctors] are running the very latest version of Centricity EHR, their gap to meaningful use is very small because ... [their

system] has been able to achieve the vast majority of the criteria for years,” he explains. “If they are running an EHR that is less sophisticated, they may have a larger gap and, if faced with two choices (replace everything or add modular components that deliver a more ‘complete’ solution) it may be more cost effective—if not always optimal for other reasons—to do the latter.”



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**Alan L. Silver, MD, MPH**  
Medical Officer  
IPRO, New York

## Technology and a Typical Day

The move toward more portable, Web-based technology is in line with the increasingly interactive, patient-centered nature of healthcare. To get an idea of how technology would work in the ideal office of the future, consider the intent of the “Ambulatory Practice of the Future,” a joint project of Massachusetts General Hospital, the Mass General Physicians Organization, the Stoeckle Center for Primary Care Innovation, and the Center for the Integration of Medicine and Innovative Technology. The first such practice, scheduled to open sometime this year next to Massachusetts General, puts the patient at the center of a collaborative-care team made up of a physician, nurse, life-balance coach, and care coordinator.

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In this ideal practice, patients will be empowered to engage in their own care while providers enjoy a more comfortable, flexible work environment. Here's how the brochure for the project describes the start of a typical day for a physician in the practice:



**“Now you have islands of excellence that don’t always coordinate and communicate. In the next decade, my hope is that we’re working as a system, not just as different people marching to their own beat.”**

**P. Jon White, MD**  
IT Director

Agency for Healthcare Research and Quality

“After the team huddle, Dr. Nicole checks her e-mail to make sure her communications are current with her members. She has a message from Ray, who is homebound. He asks her a question about a rash that’s developing on his leg. Dr. Nicole sees that Ray is currently online and sends him a quick instant message asking if they can have a video conference later in the day. They arrange to talk at 2 p.m. when Dr. Nicole is scheduled to be at her desk for answering e-mail questions, conducting virtual visits, and doing research.”

According to the project’s vision, technology—while sometimes maligned as impersonal—has the potential to vastly enrich the patient-physician relationship. Some of the latest technologies to improve patient care seem to support that sentiment (see “A Sample of Next-generation Tech Tools,” opposite).

“I suspect that there will be more frequent and focused interactions between clinicians and patients, much of it virtually,” says IPRO’s Dr. Silver. “I’d like to believe that HIT will allow us to provide mutually agreed-upon care management and shared care (that is, between patient and clinician) and that it will allow us to spend more time on human interaction.”

## **Evolving Technologies**

Looking ahead, the greatest development that may have a profound impact on how you practice is just getting underway:

## A Sample of Next-generation Tech Tools

Here are some examples of next-generation technology tools for practices that are available now, according to *The New York Times*:

**HelloHealth** ([www.hellohealth.com](http://www.hellohealth.com)) lets doctors communicate with patients using instant messaging tools. The service facilitates storing conversations in the patient's file as well as billing and insurance filing.

**MicroCHIPS** ([www.mchips.com](http://www.mchips.com)) has developed a continuous glucose monitor to help patients manage diabetes. The implanted monitor wirelessly delivers continuous glucose measurements, with alerts built in to warn patients and doctors about potentially dangerous fluctuations.

**ReachMyDoctor** ([www.reachmydoctor.com](http://www.reachmydoctor.com)) consolidates a patient's health history information to make it easier for the doctor to see which procedures or screenings are needed. It also facilitates group chats among doctors involved in a patient's care.

**Vision Tree** ([www.visiontree.com](http://www.visiontree.com)) provides services to physician offices that enable patients to fill out their medical histories online, request refills, and make appointments.

“clinical groupware.” The term refers to newer Web-based applications that allow patients, physicians, and organizations to communicate on a common network. The applications speak a common computer language, allowing physicians to assemble applications from a variety of vendors, buy incrementally, and create customized sets of applications for their practice, much like the iPhone, which allows thousands of applications written by thousands of companies to operate on a common platform.

Generally, EHR technology is moving away from office-based servers and equipment toward Web-based platforms and mobile devices, which is good news for small practices, Dr. Kibbe says. In a post on “Kibbe and Klepper on Health Care” (<http://kibbeandklepper.blogspot.com>), a blog he co-hosts with Brian Klepper, PhD, Dr. Kibbe predicts that EHRs will increasingly focus on affordability, connectivity, and ease of use.

“Designing EHRs for a small planet would avoid lengthy and disruptive installations and long training cycles involving expert consultants. Instead, they would favor modular, browser-based EHR software that is familiar to physicians, their staffs, and their

patients, and that can be navigated simply,” Drs. Kibbe and Kepler wrote in January. “EHR software that looks more like Facebook (and less like a database manager’s tool kit), that can work through Web browsers and mobile devices, and that can be incrementally expanded as new uses arise, is not only likely to be more adaptable than today’s EHRs, but also less expensive to own and operate.”

For example, envision a day when adding a new technology or service to your practice is as easy as downloading an application to your iPhone, says Vince Kuraitis, JD, MBA, principal and founder of Better Health Technologies, a consulting firm that helps companies develop strategy, partnerships, and business models for chronic disease management and eHealth applications. Remote patient monitoring could be an interoperable application instead of a separate, standalone piece of hardware or software, for example, says Mr. Kuraitis on his blog. As with the iPhone, a common health IT platform would allow you to buy interoperable applications.

### **The Promise of Interoperability**

The idea for different systems to communicate via a common network also gets a boost from the government regulations’ focus on information exchange; this interoperability will not only change the type of system you’ll ultimately need—given that it’s still years away for most practices—but will also unleash the real power of EHRs to help coordinate care across a range of providers and institutions.

For example, imagine a future in which a patient goes to any emergency room and the physician is able to pull up his most current allergy, medication, and problem lists. That interoperability between systems is the greatest challenge ahead for technology, but it holds perhaps the greatest promise for increasing quality of care: “Ideally, there will be networks that can identify where the patient’s data can be found by any authorized professional,” says Dr. Adler of Arizona Community Physicians in Tucson, Ariz.

The ultimate goal, says the AHRQ’s Dr. White, is for providers and healthcare systems to share a commitment to deliver the best possible care. “Now you have islands of excel-

lence that don't always coordinate and communicate," he says. "In the next decade, my hope is that we're working as a system, not just as different people marching to their own beat."

The idea of interoperability may be closer to reality than you think. Just last December, medical organizations that operate



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**Kenneth G. Adler, MD**

Medical Director of Information Technology  
Arizona Community Physicians, Tucson, Ariz.

with two of the nation's largest health EHR systems took a step in that direction by initiating a pilot program to exchange EHR information using HHS's Nationwide Health Information Network. The Department of Veterans Affairs (VA) and Kaiser Permanente invited veterans in the San Diego area to join the pilot, which connects Kaiser's HealthConnect and the VA's VistA.

“This partnership demonstrates the power of a large-scale EHR that safely connects several care systems,” says Andrew M. Wiesenthal, MD, associate executive director of The Permanente Federation, in a Nov. 25, 2009, news release. “Securely digitizing American's healthcare information is only the first step in realizing the cost saving and improved quality benefits possible with healthcare technology.”

After the first invitations were sent out to veterans, 40% of the eligible patients opted into the system, said John Mattison, MD, assistant medical director and chief medical information officer

### What Should You Do with Your Life Insurance Policy?



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for Kaiser Permanente Southern California. “We are working jointly with the VA and Department of Defense to expand the functionality and begin rolling the system out across the country in all three of our institutions.”

The spread of interoperability across the country, though, is just getting underway, says Dr. Leavitt of CCHIT. “All certified systems must be able to send and receive standardized continuity-of-care documents, but there are no highways to send them over now,” he explains. Think of cellphone networks, he suggests—you can buy a cellphone, but you can’t use it without long distance companies’ facilitating transmission. The Kaiser-VA project may be one of the building blocks for such a large-scale network. Even now many other institutions across the country have indicated their interest in joining the project.

For now, practices won’t realize all of the benefits of EHRs until systems interoperate, Dr. Adler emphasizes. “EHRs are the first building block before this huge explosion in quality we’re going to see down the road. Once all the building blocks are in place, we’ll see a remarkable change in our ability to monitor and improve on what we do as physicians,” he says.