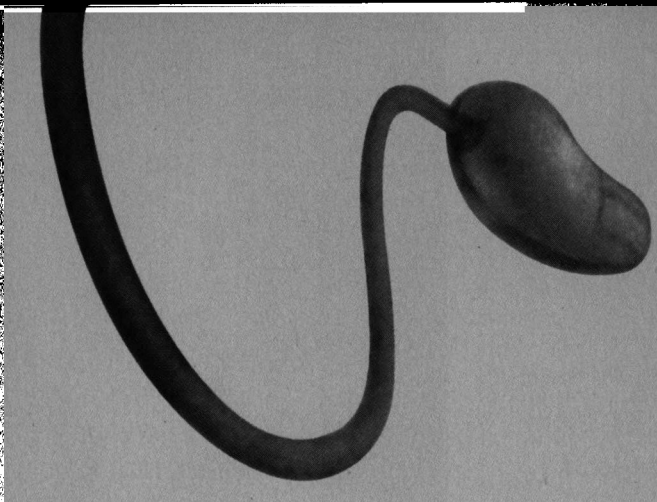




Fighting through the EHR jungle

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TARGET AUDIENCE

Primary care physicians and doctors in office-based practices.

EDUCATIONAL OBJECTIVES

After participating in this activity, physicians should be able to:

- ▶ List the key benefits of an EHR system.
- ▶ Define the various technological options doctors face in implementing an EHR system.
- ▶ Identify essential connectivity functions of an office-based EHR system.
- ▶ Discuss the key obstacles to adoption of an EHR system and strategies to overcome them.

TO EARN CREDIT FOR THIS ACTIVITY

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Editors Leslie Kane, Robert Lowes, Helen Lippman, and Julia Talsma; Instructional Design Consultant Richard Currier, PhD; and author Dr. Louis Spikol disclose that they do not have any financial relationships with any manufacturer in this article. Joseph E. Scherger, MD, the manuscript reviewer, discloses that he has no conflicts.

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You've got key
decisions to make
when choosing
the right system
for your office.
Here's help.



By Robert Lowes

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and

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For physicians, the pressure to adopt electronic health records comes from every conceivable direction.

President Bush wants an EHR for every American by 2014¹, and Medicare² and private payers³ are nudging doctors to make that happen. One Massachusetts health system is even tougher. It told its participating primary care doctors to commit to EHRs by January 1, 2008, or face

expulsion from its network (13 are scheduled to get the boot).⁴ And patients want their physicians to be as automated as their banks, according to survey after survey.^{5,6}

On top of these external factors, doctors' Hippocratic instincts often exert a strong *internal* pressure: "I could take better care of people with an EHR," many physicians think. Patient safety, after all, is the crowning virtue of digital capabilities such as always-legible prescriptions, remote chart

Illustrations by Eric Fortune

Dr. Spikol, a former consultant for the Center for Health Information Technology of the AAFP, has written and spoken extensively about EHRs.

access, and automated reminders to deliver preventive care.

Yet the most powerful motivation to adopt an EHR may be the promise of a more efficient practice. If all goes well, you and your staff will no longer go crazy looking for lost charts or wasting time on the telephone. If nothing else, an EHR could lower your stress level.

Of course, the dig-in-the-heels rebellion against EHRs remains strong, and for some understandable reasons. Too costly. Too confusing. Staff hates it. Slows things down instead of speeding them up.

Overcoming such barriers, which we

Department of Health and Human Services has contracted with a nonprofit industry group called the Certification Commission for Healthcare Information Technology to develop basic criteria for EHRs and certify products that meet them.⁷

For office-based EHRs, CCHIT has promulgated 247 criteria for functionality, security, and interoperability. Functionality criteria include the ability to display a problem list, create a prescription, and capture vital signs as searchable data. To keep this data confidential as mandated by HIPAA, CCHIT security standards require an EHR

«Patient safety, after all, is the crowning virtue of digital capabilities such as always-legible prescriptions, remote chart access, and automated reminders to deliver preventive care.»

address in the box on page 62, is a key to success—but it's far from the only one. To get the most from your EHR, you must make crucial decisions about the kind of system to buy, the level of technological cost and complexity you're willing to tolerate, and how your EHR will mesh with your practice management software. The effectiveness of your EHR also depends on connecting it to the computer systems of labs, pharmacies, and hospitals, which requires planning on your part. So before you buy, consider these four important issues.

How important is EHR certification?

While most commercially available systems do most of the same things, there's enough variability from product to product to raise the question: What are the essential features of an EHR?

The Bush administration thinks that's a question worth answering. It wants to ensure that if the government and the private sector subsidize EHRs for doctors, they don't end up investing in products with limited features. Accordingly, the

to create an audit trail. Interoperability is just as critical, because EHRs are lame if they can't swap data with other computer systems. Accordingly, certified EHRs must be able to electronically import lab results and transmit prescriptions. Next year, the organization plans to start certifying EHRs on the basis of exchanging medical summaries with EHRs from other vendors.

As of January 16, 90 programs had received CCHIT certification. Should you limit your EHR shopping list to these products?

To be sure, the stamp of approval carries a lot of weight, given the breadth of CCHIT membership, which includes physicians; executives from the hospital, insurance, and software industries; and independent IT experts. However, you shouldn't necessarily rule out EHRs from small vendors who are deterred from seeking certification by a \$28,000 application fee. Some of these products—basic but effective—are geared to small practices that can't afford more sophisticated systems. As these less expensive programs gain market share, they, too, may seek certification.

Groups of 10 or more doctors, however,



should pay closer attention to CCHIT certification, since they'll need more sophisticated systems than small practices and, presumably, are able to afford them. What's more, EHR certification may become imperative. A Medicare pilot project will reward up to 1,200 practices that use EHRs to reach certain quality goals, but only if their systems bear the CCHIT imprimatur.⁸ If this becomes the norm for physician compensation, you could forfeit money by buying a noncertified EHR.

Should I consider a remote model?

Another technological fork in the road is choosing between an EHR program hosted on your own office computer and a system hosted on a remote computer and accessed via the Internet. The hosting entity—known as an application service provider, or ASP—can be the EHR vendor, a billing service, or a hospital. The ASP model reduces the cost and complexity of an EHR, but it's not for everybody.

With an ASP model, you're merely renting EHR software, as opposed to owning it as you would when it's installed in your office. Accordingly, you don't have to pay a license fee, which can easily top \$5,000 per doctor, not counting an annual fee for maintenance and support. With an ASP, you only pay one monthly fee, ranging from about \$250 to \$1,000.⁹

In the long run, renting software costs more than buying it. However, using an ASP makes it easier to get into the EHR driver's seat, and it yields other major advantages. For one thing, you needn't buy an expensive server for hosting the software yourself. And you're spared the task of maintaining the server, installing software updates, and backing up your data—that's all done by the ASP. If you're in a small practice lacking IT expertise, a remotely hosted system keeps things blessedly simple.

You can still make a case, though, for installing EHR software on an office server. Perhaps you practice in rural America where high-speed Internet connections are intermittent, or slow. It also may be easier to download data from medical devices like ECG machines into an EHR when the

software is hosted onsite.

More than anything, though, you may choose the traditional EHR model because you loathe the idea of your patient records sitting in a computer across town, or possibly across the globe. Are they safe there? Could you lose access to them? True, you still own patient data tended by the ASP, and you're supposed to get it back in some form if you part ways with the company or it goes under, but without the EHR software, the returned data may not be easy to use.

So if you belong to a large practice that can afford to buy EHR software outright and hire IT experts to tend your server, the traditional EHR model could be a sound choice.

How do I connect an EHR to billing software?

You can't reap the full benefits of an EHR unless it's connected to your practice management system. When they're linked, patient demographic information entered on the practice-management side automatically populates the EHR. And the diagnoses and services you document in the EHR generate an insurance claim on the practice management side—no more paper charge tickets.

You can achieve this vital connection with an interface between your current practice management system and the new EHR. Makers of popular EHRs have already written interfaces to popular practice management systems, so find out what's available before settling on an EHR vendor. However, expect to pay \$10,000 or more for this digital connection, says Syracuse healthcare IT consultant Rosemarie Nelson. An interface written from scratch will be just as expensive.

Linking the two systems like this makes sense if you're in love with your current practice management program. If you're not, consider installing a new scheduling and billing program that works in tandem with the EHR. Increasingly, EHR vendors offer practice management programs, giving you a one-stop shop.

The advantage of buying an EHR and practice management system from the same company is that they may be built on the



Overcome roadblocks to implementation

The electronic health record dates back almost 40 years.¹¹ Yet only about 12 percent of the nation's physicians have the full-fledged EHRs the government recommends, according to the CDC.¹²

In numerous surveys, physicians cite affordability as the top barrier to adopting EHRs, and for good reason.^{13, 14} When you throw in training, installation, support, and other ancillary expenses except for hardware, these programs can cost as much as \$51,000 per doctor over three years, according to a recent survey by the AC Group in Montgomery, TX.¹⁵ Not far behind the affordability issue is the fear of reduced productivity—and revenue—as doctors and staff master the new system.

However, taking the financial plunge is less scary when you can expect a return on your investment. A study in the journal *Health Affairs* in 2005 reported that among 14 solo and small practices launching EHRs, the investment was recouped in 30 months, on average, and the practices "profited handsomely after that."¹⁶

The ROI results partly from cost savings. An EHR will eliminate the need for a transcriptionist, a file clerk, and perhaps other staff as work flow is streamlined, and you'll spend less on paper and postage.

EHRs can also boost revenue. Many doctors who habitually undercode find that an EHR helps them code more accurately—and net higher reimbursement. Some physicians increase their productivity by converting their old records room into an extra exam or procedure room. Pay-for-performance bonuses—more easily attained with an EHR—can approach \$10,000 a year in some places.¹⁷

Temporary inconvenience, permanent improvement

These financial prospects will help you endure the initial productivity drop that you'll likely experience in the first six to nine months you adjust to the new system. You can make the learning curve less onerous by slowly phasing in EHR functions.

Lack of support from fellow doctors and staff is a perennial roadblock to EHR adoption. To win the necessary buy-in, involve everyone from the most senior doctor to the new file clerk at the earliest stage possible. What are their misgivings about EHRs? What benefits do they envision? How might the practice redesign routines like prescription refills? You can't satisfy everyone completely, but listening will help melt resistance and improve teamwork.

Another effective way to overcome resistance is to visit a practice of your size and specialty that has gone digital. Watching an EHR in action separates myth from fact. Japanese quality-management gurus have a phrase for this—"genshi genbutsu," or "go and see." If you witness someone else's success with EHRs, you may be more optimistic about your own high-tech conversion. As we say here, seeing is believing.

same database. This eliminates the problem of faulty interfaces that garble information flowing between two separate databases. For smooth computing, consider the single-database option, assuming, of course, that the system's EHR and practice management features satisfy your needs. If it takes forever to schedule a patient or prescribe a medication, a single database isn't reason enough to buy the system.

In contrast, some vendors offer EHR and practice management systems that are merely interfaced. If the interface has a poor track record with the vendor's clients, keep shopping. If the interface works fine, you'll still want to pass if one program is super but the other is subpar. In addition to talking to doctors who are already using the systems, you may want to hire a healthcare IT expert to help you make these assessments.

What about lab, hospital, and pharmacy links?

By itself, an EHR will do much to rid your office of inefficient paper. But there's one more step you need to take—network your system to the pharmacies, labs, and hospitals that you use.

Take pharmacies. Printing out a prescription keeps you in the paper world. At the very least, send the pharmacy an electronic fax from your computer. But the best solution is true e-prescribing, in which your computer transmits the Rx directly to the pharmacy's computer via electronic data interchange, or EDI. Once EDI is set up, the pharmacy can electronically message you back, say, to alert you to a medication allergy, instead of contacting you by phone.

To enjoy these important efficiencies, you'll need to pick an EHR vendor that connects to the Pharmacy Health Information Exchange, an EDI gateway to most pharmacies, especially those in the national chains. This exchange is operated by SureScripts, a company formed by the pharmacy industry.¹⁰ For a complete list of EHRs certified by SureScripts for e-prescribing, visit www.surescripts.com and click on the "Physicians" link.

Likewise, shop for an EHR vendor that

has already created an EDI interface with national laboratories such as Quest and LabCorp, or popular lab software systems used by hospitals. That way, you can electronically order labs and have results automatically filed in the EHR. It's imperative to avoid receiving this information on paper, given the high volume of lab results

What will an EHR do for my practice?

EHR technology is designed not just for storing information, but also for managing it more effectively. Take the medication list of a patient's chart. In the paper world, you fill out a prescription and then rewrite the information in the med list. EHR users only have to write it once; prescription data automatically populates the med list. What's more, the EHR can separate active and inactive medications and lets you reorder an inactive one with a few clicks.

Such data acrobatics help doctors deliver better care. You can easily create graphs to track blood pressure and HbA1c values and share them with chronically ill patients as a motivational tool. An EHR also makes it easier to manage lab orders by reminding you to follow up with the patient or lab when results are overdue. Guideline-equipped EHRs also can help you diagnose and treat conditions (suggesting, as opposed to dictating, your options) and warn you when a particular drug is contraindicated based on the patient's condition or another medication.

While you normally treat one patient at a time, EHRs put teeth into the notion of population-based medicine. If the FDA recalls a medication, you can generate a list of every patient who takes it within seconds and get a letter in the mail to them. An EHR with a "patient registry" function can calculate what percentage of your diabetic patients have an HbA1c reading under 7, the kind of data needed to earn pay-for-performance bonuses. Coming up with that number manually would be a nightmarish job.

Besides improving patient care, the EHR creates new and more efficient ways for you and your staff to work together. When patients call in with questions, the EHR's built-in messaging system replaces handwritten notes that normally fly back and forth between you and your staff. You and a midlevel can look at the same chart simultaneously on different computers and exchange internal messages about treatment issues.

Likewise, you'll experience streamlined communications with patients if your EHR program comes with a secure, password-protected Web portal where they can request a prescription refill, ask you about a nonurgent medical problem, or view test results. In the process, you and your employees will spend less time tied up on the telephone.

pouring into the average doctor's office.

Pulling in patient data such as discharge summaries and radiology reports from hospital computer systems should be lower on your priority list than lab results, and probably doesn't justify spending money on additional interfaces. Instead, you can receive hospital data in the form of electronic faxes and download them into the EHR, suggests consultant Rosemarie Nelson. Or, if the hospital puts patient data on a website, you can download documents as PDFs or Word files or cut and paste data into your EHR.

EDI interfaces with hospitals will become more common with the growth of regional health information organizations, or RHIOs. These groups consist of hospitals, physicians, insurers, employers, independent labs, and other healthcare players in a given community that electronically share patient data.

Once a RHIO takes root where you live, the connections will simplify full EHR implementation, leading to that day when you no longer waste time looking for Mrs. Jones' chart or hard-copy lab reports. And maybe you'll feel a little less stress as you practice medicine. ■

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