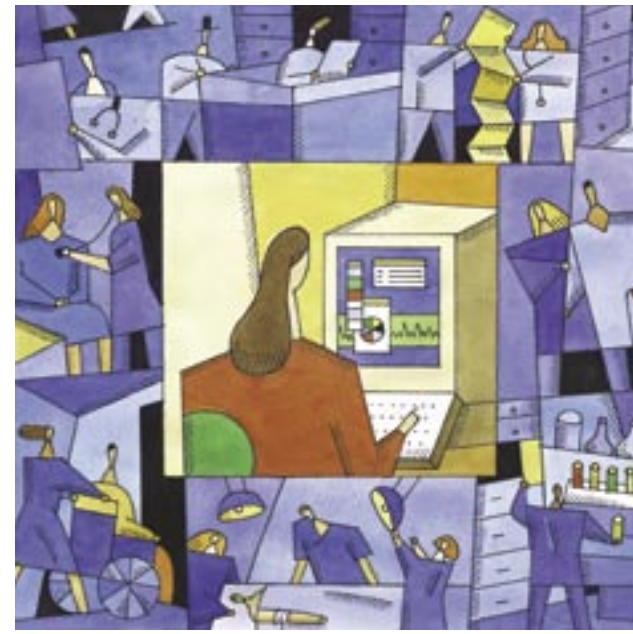
Why It's Time to Purchase an Electronic Health Record System



The old reasons for holding off may have lost their validity.

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CME Covered in *FPM* Quiz

FPM Tool inside

If you're like me, you've been intrigued by the idea of an electronic health record system (EHR) for years but figured that it would be too costly and disruptive to your practice to actually buy one. You suspected that it would slow you down and force you to interact more with a computer than with the patient in front of you. You assumed that EHRs made sense only for technophile types who didn't mind typing or fiddling with programs, and you were right – until now.

My history with EHRs

Twenty years ago, in the dark ages before the World Wide Web, when I was a family medicine resident at the Medical University of South Carolina, we had a computerized medical record. It was impressive. We had typed problem lists, medication lists and searchable notes. We also had several full-time programmers, a large dedicated computer room for our massive mainframe computer, paper charts and grant funding. It wasn't a technology that was practical for the multispecialty group practice I later joined or the private practice I helped create still later. And when I looked at EHRs five years ago, they seemed appealing, but still pretty pricey and somewhat challenging to use.

In 2003, I had the opportunity to review EHRs again as the chair of an EHR committee for our 86-physician, multisite primary care medical group in Tucson, Arizona. What I learned is that, whether for a large multispecialty group or a solo physician's office, EHRs are now ready for prime time. My group agreed. Subsequently we signed a contract that commits us to investing more than $2 million over the next five years in an EHR. And that's in a group where doctors function economically much like solo physicians and are compensated 100 percent based on productivity.

Why now?

Since 1991, with the publication of its report "The Computer-Based Patient Record: An Essential Technology for Health Care," the Institute of Medicine has been urging us to adopt EHRs – originally called computerized patient records (CPRs) or, more recently, electronic medical records (EMRs).[1] Then it was a vision, not a practical mandate. So why do it now? What's changed?

Well, hardware and software. With the speed of current computers, broadband connections and improved scanning technology, information can typically be filed and retrieved electronically faster than it can be manually. Patient note creation speed has improved dramatically with point-and-click technology, more sophisticated templates and integration of dictation with templates. With the addition of functions such as electronic prescribing, allergy checking, drug-interaction checking and remote chart access, EHRs can do things that paper charts just can't. EHRs are now more user-friendly than ever, and with each new software version release, things just keep getting better. ➤

Whether for a large multispecialty group or a solo physician's office, EHRs are now ready for prime time.

ILLUSTRATION BY ROBIN JAREAUX

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Until recently, EHRs were not ready for implementation in the typical practice. Now they are powerful, affordable and user friendly.

EHRs automate many tasks, reduce busywork, cut costs, save time and eliminate some sources of error.

They improve care and service by organizing clinical information and making all pertinent information available to you wherever you are.

EHRs are still expensive, but when implemented well, they can pay for themselves in reduced costs and enhanced revenue.

"But I've heard EHRs are really expensive and require a lot of training." While it's true they represent a significant expense, you'll see below that EHRs now offer you substantial opportunities for cost reduction and revenue enhancement. And while it's true that changing to an EHR will require a definite investment of personal time and effort, hopefully you'll conclude by the end of this article that this particular change is worth it.

What is an EHR anyway?

An EHR is software that allows you to create, store, organize, edit and retrieve patient records on a computer. But it's more than just the electronic equivalent of paper. Advanced EHRs also allow you to automate many time-consuming, paper-driven office tasks. They allow for electronic prescribing and medication refills, automatic formulary checking, electronic lab, imaging and referral ordering, automated charge capture, automated coding advice, interoffice and intraoffice clinical messaging, multiple note creation options, remote access to the chart, results flow charting, clinical alerts, patient education and disease management.

Creating, handling, filing and copying paper documents, forms and messages invariably involve more steps and time than performing the same functions electronically. Just witness what has happened in banking and the airlines. Paper processes cost more and take longer. Fully implemented EHRs lead toward a "paperless" office, not as a goal but as a byproduct of the benefits they offer.

How EHRs improve care

EHRs improve communication, access to data and documentation. This leads to better clinical and service quality.

Clinical quality is improved by having more ready access to all relevant clinical information at the time of the patient encounter or phone call, receipt of clinical alerts at the point of care (e.g., being reminded of a drug interaction or allergy as you're writing a prescription), the ability to easily monitor and analyze patient outcomes, and the ability to easily identify patients who are due for health maintenance or other clinical tests and/or follow-up.

KEY POINTS

- Technological advances have finally made EHR systems practical for almost any practice.
- Today's EHRs improve care, patient service and documentation.
- While expensive, EHRs can pay for themselves through savings and increased revenue.

Service quality is improved through direct e-faxing of prescriptions to pharmacies, customized, typed patient education instructions and handouts printed at the point of care and, if desired, even the ability to provide copies of clinical notes to patients and/or consultants at the completion of a patient visit. Your office can be much more responsive to patients on the phone as well. Since the patient chart will be available at the time of the first call, many "we'll pull your chart and call you back later" interactions can be eliminated.

Patient perception of your clinical acumen may benefit as well. One seasoned EHR user I talked to said that he is no smarter now than he was five years ago when he began using an EHR, but his patients sure think so.

> **If an EHR is implemented well, it will pay for itself through cost reductions and revenue enhancements.**

Coming improvements in patient service quality include the ability to offer patients secure Internet access to parts of their medical record such as medication lists, problem lists and test results.

How can I afford this?

Cost estimates can be hard to pin down. You need to include not just the software vendor's quote, but also the cost of hardware, network upgrades and computer personnel (contracted and/or hired). For a top-of-the-line EHR, plan on an initial investment of $15,000 to $30,000 per physician for software, hardware, implementation and training. But remember, you'll be amortizing that cost over five years or so. Also expect a 15-percent to 18-percent annual software support fee, which covers upgrades and service. In total, expect annual costs of $5,000 to $15,000 over the first five years. That sounds daunting until you look at the savings.

EHRs are expensive, but in talking to numerous users around the country, I learned

that if an EHR is implemented well, it will pay for itself through cost reductions and revenue enhancements. It could even make you money or allow you to go home earlier. A friend of mine brags that using an EHR allows him to go home at least 30 minutes earlier than he did in his pre-EHR days, without any reduction in his income. Savings include the following:

• **Reduced transcription costs.** If you currently dictate your notes, you're probably spending $3,600 to $12,000 per year on transcription. Using an EHR typically cuts these costs by 50 percent to 100 percent.

• **Savings in paper-chart-related costs.** Consider how much of your budget for staffing, supplies, copying, printing and storage is devoted to the care and management of charts.

• **Improved staff efficiency.** With an EHR, staff time currently devoted to searching for charts, entering charges manually, etc. can be devoted to value-added activities or eliminated, thereby reducing overtime charges.

Revenue enhancements include increased income through improved coding, improved charge-entry accuracy, and improved provider productivity:

• **Coding.** EHRs improve coding by reducing the common tendency to undercode, because they provide better documentation and typically incorporate an automated coding adviser. This feature alone may pay for the system. In a recent paper, the Central Utah Medical Clinic, a 59-physician predominantly primary care group, documented a substantial overall increase in the appropriate use of 99214 codes for visits that would previously have been coded 99213, approximately one year after implementing

QUICK FIVE-YEAR EHR COST/BENEFIT WORKSHEET

You can use the worksheet below to estimate the net annual benefit to be derived from an Electronic Health Record system (EHR) either per physician or for a whole practice. If you prefer, you can download an interactive Excel file that combines this worksheet and the "Increased annual E/M revenue worksheet," (page 46) from the online version of this article at http://www.aafp.org/fpm/20041100/43whyi.html.

Expense type	Total 5-year cost	Annualized cost (total ÷ 5)
Software license(s)		
Software implementation		
Hardware (obtain hardware specifications from the software vendor)		
Network upgrade		
Personnel		
Annual software support		
Total annual cost		**$**

Savings type	Estimated annual savings
Transcription	
Printing supplies	
Chart supplies	
Increased E/M revenue (from bottom row in "Increased Annual E/M Revenue Worksheet," page 46)	
Total annual savings	**$**
Minus total annual cost (from above)	**–**
Equals net annual benefit (or cost, if negative)	**=**

Note: This does not take into account savings from reduction in staff hours or include an estimate of increased revenue from better charge capture. Nor does it attempt to quantify any possible decrease in physician productivity during EHR implementation or increase in physician productivity after the EHR is fully operational. It also doesn't quantify any increased office productivity you may gain from eliminating on-site (and/or off-site) chart storage and regaining that space for patient care (i.e., exam rooms). Finally, this tool assumes that you are making up-front payments for expenses. Alternatively, you could apply leases to many of these expenses. This will improve your cash flow but cost you somewhat more in the long run.

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Among the savings that EHRs offer are reduced costs for transcription, maintenance and management of paper charts and overtime.

Today's EHRs also support improved coding, more reliable charge capture and improved productivity.

Using the worksheets in the print or online versions of this article, you can estimate the costs and benefits of implementing an EHR in your practice.

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Implementing an EHR is a big step for any practice; EHRs require new skills and new procedures, but the long-term benefit makes the pain worthwhile.

Expect to spend a year or two in adapting to the use of an EHR, learning and implementing its functions incrementally.

Talk with colleagues who have implemented EHRs and consult Web resources in the course of investigating EHR systems.

an EHR. They went from having 33 percent to having 44 percent of their visits coded 99214. Their reduction in down-coding due to their EHR produced an average billable gain of $26 per patient visit.[2]

• **Charge capture.** Automated charge entry eliminates missed or overlooked charges.

• **Productivity.** With an EHR, provider productivity increases as a result of improved office efficiency. If you eliminate half an hour of paperwork, that's two more patients you could see per day or 30 more minutes you could spend with your family.

For a useful tool to determine your potential costs and savings, see "Quick Five-Year EHR Cost/Benefit Worksheet," page 45, and "Increased Annual E/M Revenue Worksheet," below. Note that only easily quantifiable costs and savings have been included.

But I don't want to change!

It's true: Using an EHR will require some new skills and some changes in your office procedures. You won't pick up everything immediately. But you probably will pick it up quickly. Most experts recommend implementing an EHR incrementally, starting with the functions that change your day-to-day processes the least and moving to the ones that require larger changes (like using note templates) later. Be realistic. You won't go paperless overnight. More likely it will take you a year or two of working with the EHR, and a clear plan, before you'll be able to warehouse or shred all those old cumbersome paper charts and free your chart room for more productive use. Be forewarned: Converting your records from paper to electronic format will require many months of extra time and effort on your part. But the long-term gain will more than justify the short-term pain.

If you're inspired to investigate EHRs, consider talking to anyone in your community who is using one. Take a look at http://www.acgoup.org. This site, by Mark R. Anderson, sells a report about EHR vendors, but it also offers a free summary that may well be detailed enough for your purposes. Also consider contacting the AAFP's Center for Health Information Technology (http://www.centerforhit.org/). The Center, through its Partners for Patients initiative, has developed "Principled Group Purchasing Agreements" with a number of leading EHR vendors, agreements that provide EHR discounts to AAFP members. FPM

Send comments to fpmedit@aafp.org.

1. Institute of Medicine Committee on Improving the Patient Record. The computer-based patient record: an essential technology for health care. Dick RS, Steen EB, eds. Washington, DC: National Academy Press, 1991.

2. Barlow S, Johnson J, Steck J. The economic effect of implementing an EMR in an outpatient clinical setting. *J Healthc Inf Manag.* 2004;18(1):46-51.

INCREASED ANNUAL E/M REVENUE WORKSHEET

FPM Tool inside

Like the cost/benefit worksheet (page 45), this one can be used to estimate the net increase in evaluation and management (E/M) revenue to be derived from an electronic health record system (EHR) either per physician or for a whole practice. This worksheet *conservatively* assumes that only one out of ten visits you currently code 99213 (10 percent) should be coded 99214 and that the EHR remedies that. It also assumes no improved coding on new patient visits, 99211, 99212, 99214, or preventive care visits. It also assumes for simplicity that all 99213 and 99214 visits are paid at Medicare rates.

Current Medicare payment for 99214 in your area (e.g. $73.72):	A $
Current Medicare payment for 99213 in your area (e.g. $47.08):	B $
Additional income per 99214 visit (A – B):	C $
Current annual number of visits coded 99213:	D
Additional visits coded 99214 with improved coding (0.1 x D):	E
Estimated increase in revenue from improved coding (C x E):	$