

Going Electronic

Easier to use and more affordable than ever, electronic medical record systems still present a challenge for most practices. Careful planning and implementation are key to a smooth transition and realizing their full potential.

This year may turn out to be the year of the electronic medical record (EMR). EMR systems in ambulatory care settings are finally in vogue after going through a long period of limited adoption, and the convergence of several important factors is further propelling implementation. The systems, which cover the gamut from basic stand-alone units to highly sophisticated integrated products, hold the promise of both improved patient care and long-term—if not immediate—productivity gains and cost reductions.

The downside is that many of the systems still have hefty price tags at a time when physicians are facing difficult economic challenges. Knowing what you need from an EMR, selecting a vendor that meets those requirements, and carefully planning and implementing the system will help you realize its full potential with the fewest headaches.

A strategic decision

“It’s a strategic decision based on improving patient service, cost structure, and physician productivity. You shouldn’t be doing it simply to get rid of a piece of paper,” says Ron Sterling, the president of [Sterling Solutions](#), a Silver Spring, Maryland-based health information system consulting firm. “It needs to reflect what your business is about and what it’s evolving to.”

One of the main reasons physicians are climbing on the EMR bandwagon is the desire to improve patient care. The ability to have information available the moment it’s needed holds the potential of reducing errors, speeding diagnosis and treatment cycles, and greatly enhancing the ability to manage patients with chronic disease. It also dovetails with rising consumer expectations and computer-literacy.

As a practical matter, EMR systems also facilitate compliance with privacy standards of the [Health Insurance Portability and](#)



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The Washington ENT Group, of Washington, DC opened in March 2001 using the A4 Health Systems EMR. **“When we opened two years ago, people were cheering us on, but privately they were doubting that [our system] would work. Now, we have people visiting us all the time to see how it works,”** says Barth Doroshuk, seated, the chief executive officer of the practice. Physicians Catherine Picken and Thomas Troost, behind Doroshuk, own the practice and employ three other physicians.

Homework Help

Achieving Tangible IT Benefits in Small Physician Practices, California Health Foundation, September 2002. Available on line at chcf.org. Gives case examples of successful implementations, describes the types of EMR components available, and provides a list of resources.

ACG 2002 Annual Report: Computer Systems in the Physician's Office, AC Group. Available on line at www.acgroup.org. Rates the functionality of 17 major EMR systems based on surveys of the companies and includes a list of 58 EMR providers.

Electronic Medical Record Functionality for Family Medicine, Ad Hoc Committee on Electronic Medical Records, American Academy of Family Physicians. Available on line at www.aafp.org. Lists basic, advanced, and optional features of EMR systems.

Electronic Medical Records: The FPM Vendor Survey, Family Practice Management, January 2001. Available on line at www.aafp.org/fpm/20010100/contents.html. Rates major EMR systems based on surveys of the companies.

Accountability Act of 1996 (HIPAA). Another factor is that EMR applications are more robust and less costly than ever before. "The early systems strived to do everything and they were very complicated and difficult to use," says David Winn, MD, the chief executive officer of e-MDs, an EMR company based in Cedar Point, Texas. "The capabilities and ease-of-

use have improved." At the same time, prices have dropped by as much as 50 percent in the past 18 months, according to Sterling.

Finally, as early adopters have demonstrated success with EMR systems, more and more practices are willing to make the digital leap. "I think it's just part of the product acceptance curve. When we opened two years ago, people were cheering us on, but privately they were doubting that [our system] would work. Now, we have people visiting us all the time to see how it works," says Barth Doroshuk, the chief executive officer of the [Washington ENT Group](#), a five-physician otolaryngology practice in Washington, DC. The practice, which opened in March 2001, uses the [A4 Health Systems EMR](#).

Taking a another look

With those kinds of forces in play, physicians are looking anew at the benefits, economic hurdles, and implementation challenges of EMR systems. What they discover depends largely on the type of system under consideration. At the low end of function are stand-alone document scanning systems, which make transcribed records available for on-screen viewing. At the opposite end: fully integrated products that do everything from automating documentation and clinical work flow to providing decision support and electronic charge capture and coding. Less sophisticated systems generally help reduce the burden of paper and are less costly and easier to implement than more complex applications. However, they also lack power to accomplish activities like clinical decision support and

outcomes monitoring.

The way EMR databases are structured and maintained also varies. Application service provider (ASP) models run over the Internet. Practices "rent" the software and have the option of downloading and running it on their own systems or interacting with it through a browser. In either case, data is stored remotely and maintained by the vendor rather than on a file server at the practice's office. Client-server models are based in the practice, where data is maintained on a file server. Providers pay licensing fees to operate the software and also purchase back-up systems and other hardware. Affordability and easy implementation and usage are the main advantages of ASP systems, but they have some distinct shortcomings, most notably the speed, reliability, and security of data and communications.

Understandably, ASP models are much less expensive than client-server systems. Some cost less than \$1,000. In contrast, depending on the level of sophistication and implementation support, client-server applications can cost anywhere from \$15,000 to \$50,000 per physician.

Finding benefits

Virtually no one disputes that EMRs enhance patient care. For many people, however, the jury is still out as to whether the systems do anything to improve an income statement. The ability to improve patient care is the only compelling reason to implement an EMR, according to Scott Yates, MD, the president of [North Texas Medical Group](#), a six-physician internal medicine practice in The Colony.

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“We don’t make more money because of an EMR, and it didn’t lower our overhead at all,” he says. However, the EMR makes it possible to follow and track outcomes for patients with chronic diseases such as diabetes. These outcomes may lead to reimbursement improvements down the road. “If we provide better care and can prove it’s better, we may eventually get support for higher contract rates,” he says. Yates opened the practice three years ago using the [GE Medical Systems Logician](#) product.

As important as providing better care is, it usually doesn’t translate into bottom-line benefits. Although some practices have yet to find economic gains from EMR systems, others insist the switch has produced cost savings and increased productivity. According to Doroshuk, the Washington ENT Group has about one-third the support positions per physician of a typical otolaryngology practice, and it has virtually no transcription expense, which would run several thousand dollars a month for a similar-sized practice operating in a paper-based environment.

EMRs also improve physician productivity by enabling them to see more patients in the same amount of time, argues Tom Landholt, MD, a solo family practitioner in Springfield, Missouri, who also is a consultant to GE Medical Systems. For example, a doctor might spend three to five minutes diagnosing a case of strep throat, but have 10 to 15 minutes allotted for the visit on his schedule. “If you do that through the course of the day, you just scheduled an hour you didn’t use,” he contends. EMRs improve work flow by minimizing the amount



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of time spent in repetitive tasks outside the exam room, he says. “In a typical outpatient practice, most of the tasks are done by others. The doctors are not the people delivering care; they direct care. And it’s all the systems surrounding the doctor—like pulling charts and faxing records—that are inefficient.”

Exactly how much time EMRs can

shave from office visits is debatable, according to Michael Mytych, the president of [Health Information Consulting](#) in Menomonee Falls, Wisconsin. He estimates that while EMR products save at least 30 minutes each day on established patient visits, they add 10 minutes to new patient visits because symptom- or system-driven templates lead to the collection of

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more thorough information. However, the extra time for initial visits “can be mitigated with a pre-visit survey that the patient completes and is uploaded into the system,” he says.

One practice that has seen financial savings is the [Colorado division](#) of the Kaiser Permanente Federation, which experienced an eight percent drop in visits after implementing an EMR. “We weren’t trying to do that. It was a result of having information available when it was needed, so that we could address problems during a single office visit, or handle issues over the phone. With those visit slots made available, we were able to see eight percent more people with the same staff as before,” says Andrew W. Wiesenthal, MD, the associate executive director for clinical information support.

The division also saw its Medicare HMO rates increase. “Our reimbursement is based on risk adjustment that’s triggered by the disease burden measured by the diagnostic complexity of our Medicare patients. To do that, we collect management codes. The difference in having the machine do it [versus manually] is staggering. The system pays for itself right there,” says Wiesenthal. Kaiser was on the forefront of the EMR wave, initially developing a homegrown product in collaboration with IBM that was implemented in its Colorado and Hawaii divisions. However, in February 2003, it announced plans to complete implementation in other divisions using the [Epic Systems EMR](#).

Providers operating in primarily fee-for-service environments are struggling to see how an EMR can produce similar economic benefits. An example is [Austin Regional Clinic](#), a 140-physician multi-specialty practice in Austin,

Texas. “Those are great arguments for managed care, but in fee-for-service, time spent on the phone is an expense; it doesn’t generate revenue, and we’re already above the norms for productivity, so there’s probably not that much to be gained,” explains Russell Krienke, MD, the group’s medical director. Austin Regional Clinic is in the throes of deciding how to proceed with an EMR implementation.

Compounding the financial picture is that while EMRs enable reductions in the number of medical records staff, they often require new, more expensive outlays. “The staff you don’t have to have, who are pulling charts and locating documents, are fairly inexpensive and part-time. But if you have a sophisticated system, you have to have maintenance and network support. So instead of \$5,000 per month for medical records staff, you may pay \$12,000 per month for computer data specialists,” says Yates, the internist from North Texas Medical Group.

Small practices in a bind

As difficult as it is for multi-specialty groups to justify the cost of an EMR, it’s doubly hard for the two- and three-physician practices that dominate the medical landscape. A [survey](#) conducted in 2002 by ACGroup, a health-care research and consulting firm based in Spring, Texas, found that while 38 percent of university and staff-model physicians were using an EMR, less than 1 percent of community based physicians were.

When they first appeared, ASP model systems seemed like a perfect solution for smaller practices, but some have since fallen short of the mark. One of the most well-publicized failures occurred last year when GE

Medical Systems notified users that it would no longer support Encounter, its Web-based EMR product, which meant that providers would lose access to patient records. Among those who scrambled to find alternatives was Orly Avitzur, MD, a solo-practice neurologist in Tarrytown, New York. “It was extremely unnerving, but despite that, I’m still very enthusiastic about EMRs,” she says. Avitzur switched to [Amazing Charts](#) and was able to cut-and-paste most of the data from Encounter to the new system.

In recognition of the problems faced by small practices, the [American Academy of Family Physicians](#) announced in January that it plans to develop an ASP-type EMR that will use an open-source software, which has no licensing fees. Plans are to make the system available for as little as \$150 per month, including training and support.

Selecting features, choosing vendors. Regardless of the size of a practice, implementation of an EMR is daunting from start to finish. Just finding the product that best suits your needs is no small feat: How do you choose from more than 200 EMR providers?

Yates visited vendor booths at health information conferences. Eventually, he developed a list of all the features he’d seen and then rated their importance to his practice on a five-point scale: required, useful, nice, neutral, and not helpful. He seriously considered only the companies that had all features he’d rated as required, which left just a few contenders. From there, he considered the vendors’ financial stability with input from his accountant.

[Advanced Healthcare](#), a 250-physician multi-specialty practice in Milwaukee, used a similar process. A

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committee charged with selecting an EMR created an extensive list of features and functions grouped by major EMR components, such as automated documentation, computerized physician order entry, and clinical workflow automation. The group then determined which features would be essential, nice to have, or frills, and rated vendors on whether they did or didn't have the feature, or when they didn't, whether they could articulate a time period for making it available. A front-runner throughout the process, Epic Systems won the nod from the committee, according to Marc Olsen, MD, a family practitioner and official physician champion of Advanced's EMR implementation. The practice started its selection process in 1998, and will complete the EMR installation this year.

The types of features considered important vary depending on your practice set-up and the problems you want to solve, but in general, easy, fast usage and affordability are essential. Another important consideration is whether the product will interface with other systems and equipment in your office. "If you have stand-alone EMR, billing, and scheduling systems, they're not very functional if they don't integrate. You need to look at the suite of products used and how they communicate," advises Olsen. Beware: Some EMR vendors have done more to make a practice's various systems "talk" to one another than others. "A few of our people went to [a technology conference]. It was a little disappointing that they heard from vendors that their systems were proprietary, don't talk to others, and they can't make them interface," Krienke reports. Whether part of an EMR or

purchased separately, scanners, and fax servers are vital for incorporating documents into the EMR received from external sources.

Given the instability in the EMR vendor community, assessing the staying power of a company may be more art than science. To determine whether one is a good match for your needs, Mytych suggests finding out about its customer base and pace of growth. "If you're an orthopaedist but the vendor doesn't have many of those types of practices, the product probably won't meet your needs," he explains. Likewise, "if it's a relatively inexpensive product and they only have a few customers, will they be able to maintain minimal support?"

The reliability of EMR systems is a common concern of practices during the selection process. However, at least for client-server applications, the risk of crashes and lost patient records is quite low as long as you institute appropriate back-up measures and choose a system with a well-structured database.

You might consider hiring a consultant to help clarify practice needs and sort through vendor proposals. The decision to do so should turn on whether there is sufficient in-practice expertise to conduct a thorough and timely evaluation. Be careful, however, to locate one with experience specifically in EMR systems.

Surviving implementation

The complications of deciding whether to purchase an EMR system and selecting a vendor pale in comparison to the challenges of actual implementation. Those who have been through it say the key is good planning and consensus about use of the

EMR. "You can't have a pocket veto sitting around the table. To have some continue to use paper records [after implementing an EMR] is inefficient and a failure," says Doroshuk.

That point is not lost on Kenneth Mitchell, MD, the chair of the board of directors of [Austin Diagnostic Clinic](#), a 125-physician multi-specialty practice in Austin, Texas. The practice implemented the GE Medical Systems Logician product in November 2000 and is behind in achieving budgeted savings from the system, largely because not all physicians have fully adopted it. "Doctors are using it at all different levels. Some only review lab results and sign dictation, while others do virtually 100 percent of their charting and dictating in EMR," he reports. At the time of installation, the practice was spending about \$110,000 per month on transcription, which has since been cut by 25 percent, but still has another 25 percent to go before achieving projected levels.

Landholt advises streamlining procedures in the office before starting implementation. "If you automate a bad workflow, it's still a bad workflow," he says. Apparently this is a major stumbling block for many practices. Sterling reports that it's not uncommon to see situations where only the physician has a laptop, so the nurse records the patient's chief complaints on post-it notes stuck on the doors of exam rooms, which the physician subsequently enters in the EMR while conducting an examination. "That defeats the purpose of having an EMR," he says.

Devoting sufficient resources to training is another must. Without it, a practice will never achieve the full potential of the EMR, and some implementations even fail. "In situations

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where doctors say 'I can figure it out; I don't need training,' it's always a disaster. In the really successful implementations, people pay for training and then afterwards when we follow-up, we always find things they can improve on," says e-MDs' Winn.

Another ingredient to successful installations: one or more physician champions willing to devote time and energy to keep the project on track.

Phased implementations work best, but an issue for each practice is balancing necessary productivity cutbacks with cash flow requirements. Advanced Healthcare went through a two-phase implementation, first initiating primary care physicians and larger clinics to the most basic features of the EMR, including order entry and coding.

During that two-week period, affected doctors reduced daily visits by one-half. The next phase lasted six to eight weeks, during which staff became familiar with more sophisticated EMR functions like documenting and prescribing. After the EMR was implemented throughout primary care, a similar process took place in successive specialty areas.

Smaller practices using less complicat-

ed systems may not have the same level of disruption. For instance, Avitzur trained herself over a weekend and estimates she lost no more than one hour of productivity each day for the first week following implementation.

Still, for most practices the implementation process isn't easy even with excellent training and support. Some of both clinical and administrative staff may jump ship because the change is simply too difficult. But those who tough it out quickly wonder how they ever functioned without an EMR. As Doroshuk puts it, "For people looking over our backyard fence, I'm saying the water's OK. It'll work out fine." ■

Gina Rollins is a free-lance writer based in Silver Spring, Maryland. This is her first article for Unique Opportunities®.