

Factors to Consider When Selecting a System

Being a bit of a techie himself, Dr. Greg Hinson, a solo family practitioner and obstetrician in Nantucket, Mass., knew that he wanted clinical information technology in his office. That was the easy part.

“It seems pretty obvious to me that it’s the future, and I knew from the beginning that I wanted to move to an elaborate electronic record system,” Dr. Hinson says, “but it’s a very daunting task to find the right one.”

The marketplace is crowded, with at least 760 vendors, dealers, value-added resellers and distributors of physician practice management systems, according to industry analyst Vinson J. Hudson. This total includes billing services, outsourcing services, “turnkey” systems that manage all aspects of the office and application service provider (ASP) vendors.

The marketplace is crowded, with at least 760 vendors, dealers, value-added resellers and distributors of physician practice management systems from which to choose, according to Austin, Texas-based industry analyst Vinson J. Hudson. This total includes billing services, outsourcing services, “turnkey” systems that manage all aspects of the office and application service provider (ASP) vendors.

ASPs essentially are Internet-based products, in which the vendor manages computer servers and databases from outside the customer’s office.

On the clinical side, there are at least 300 companies in the U.S. that claim to sell an electronic medical record (EMR) or electronic health record (EHR/)/ application, says healthcare IT futurist Mark Anderson of Montgomery, Texas.

If customers are not careful, costs can balloon; technical support can be inadequate, and vendors can go out of business.

Worst of all, physicians could rebel if information technology impedes their ability to practice medicine.

The most glaring example was at Cedars-Sinai Medical Center in Los Angeles, where the medical staff balked at being required to use an unproven and slow computerized physician order entry (CPOE) system. Management took the system down in early 2003 after a physician revolt and eventually scrapped plans to try again.

Yet this sort of thing could happen anywhere because medicine is an inherently complicated pursuit.

“It seemed as if there were, on paper, a lot of good options, but as you began to look into it, some of the options that seemed like they would be quite adequate were prohibitively expensive, and others that seemed like you could afford them may actually make you less efficient in charting,” Dr. Hinson says.

Know What You Want

It is important for practices to know what they want from clinical records systems and to know that customer and vendor alike understand each other’s competencies and limitations, says Robert Seliger, president, chief executive officer and co-founder of Sentillion, an Andover, Mass.-based systems integrator and developer of security software for healthcare.

“There often is a misalignment between what provider organizations expect to achieve and what they actually will achieve,” Mr. Seliger says.

According to Mr. Seliger, medical practice managers planning for EHRs have to consider different types of patients, the type of care each patient needs and even what kinds of caregivers patients might have.

Indeed, nobody has built the perfect clinical IT system. The trick is finding one most appropriate for a particular practice.

Dr. David Brailer, the national coordinator for health information technology in the U.S. Department of Health and Human Services (HHS), recommends that physicians shopping for an EHR look at how other doctors like them use a given product.

“Every vendor that is even at stage one of going to market has a few doctors who love its product. The question is: Can they make it work outside of the zealots or the people who really are

into it? You need one of those to look at,” Dr. Brailer says.

Dr. Brailer has some ideas about the proper system for physician offices. “It’s got to be inexpensive in total cost of ownership, not just from licensing fees. That’s a huge constraint because we know there’s an upfront barrier,” he says.

“Secondly, it’s got to be easy to use.” Dr. Brailer says that this is less of an issue in hospitals and large multi-specialty groups

that have their own IT staff than it is in smaller physician practices. “I haven’t seen a lot [of clinical systems] that have really pioneered breakthroughs in a very small office that doesn’t have a back-office operation,” he says. “There are not many degrees of freedom [in small practices]. They can’t afford to throw a body at a problem for a few weeks sometimes.”

Dr. David Brailer recommends that practices choose systems that everyone in the office is comfortable with. “The doctor should not look at a product, make a choice and foist it on his front-office people, his back-office people and his nurses,” he says, adding that the entire team should be given some input into the process.

By the same token, it has to be a system that everyone in the office is comfortable with.

“The doctor should not look at a product, make a choice and foist it on his front-office people, his back-office people and his nurses,” Dr. Brailer says. “He needs to do a team-based purchase and have everybody take some time off at the end of every day or during lunchtime and have meetings and look at the products together and make a composite decision.

“Thirdly, it has to fit the needs of a small business,” he explains. “Forgetting what the doctor does clinically, it’s got to tie together clinical activities, scheduling activities and financial things. It’s got to be directly integrated into a practice system or have one packaged into it because [small practices] don’t have different departments that pass things around. They do it all right there.”

Adds Dr. Brailer, “That integrativeness around some of the overall small business operations is really, I think, a defining characteristic of where, in a lot of ways, a doctor’s office is no different than a small business in finance or retail or something like that.”

In trying to find a suitable EHR for his solo practice, Dr. Hinson turned to the Internet to research vendors and to find other

physicians with whom he could share stories, ideas and concerns. As he learned more, Dr. Hinson was able to refine his wish list.

“I wanted to find a system that would really improve the workflow in the office,” he says. He wanted messaging capability with patients and staff—not just e-mail, but something secure enough to trust with patient-specific health information. The EMR and management parts had to be integrated so that he or his assistants would not have to enter the same information twice.

“The scheduling I look at as an inherent part of the whole software package,” Dr. Hinson says.

Overall, Dr. Hinson was looking for ease of use. From the physician’s standpoint, “there is nothing as efficient as dictating notes, or for that matter, even hand-writing or filling out home-made forms,” he says. “I wanted something that I wasn’t going to have to click a thousand times in order to generate a single note. But I also wanted something with some power and flexibility in terms of templating.”

No matter what, Dr. Hinson wanted a vendor he thought he

Going On-line for Objective Information

Before he decided to purchase an integrated electronic medical record and practice management system from eClinicalWorks, family physician Dr. Greg Hinson wanted to learn all he could about the Westborough, Mass.-based vendor.

“I really thirsted for more information from users,” Dr. Hinson says. Vendor companies, naturally, will have a hand-picked list of their best customers as references. But Dr. Hinson desired truly objective information. “I wanted to be in the ‘back room’ while several users talk about the software,” the Nantucket, Mass., family physician says.

But, alas, there was no “back room” of sorts to be found, where people could have open discussions about the pluses and minuses of the vendor’s products. So he built his own.

Even before he began using the software, Dr. Hinson created an on-line group for eClinicalWorks users. Others took note and began participating. “They would post complaints and they would post concerns, but they very consistently posted how happy they were with how the company was addressing these concerns,” Dr. Hinson recalls. That was enough to convince him to become a customer himself.

could work with over the long term. “One of the things you want to get a sense for is how you’ll interact with the company because the process of implementing an EMR is not an easy process,” he advises. “There are a lot of issues because really you end up changing your practice style to fit the computer, and you want a company that you feel very comfortable in calling and knowing that they will call you back and knowing that they will respond, especially for the smaller practices.”

And yes, size matters. “A lot of the larger EMR companies seem as if they are built for the giant multi-specialty practices. They’ll designate support personnel to the 60-person practice because that’s their bread and butter,” Dr. Hinson says.

Dr. Brailer, himself a former vendor executive, mentions this as well. “The old rule of thumb that EHR vendors used to use is if the doctor’s office doesn’t have a conference room for you to demo the electronic health record in, you have a real problem ever getting them to be successful with it because having a conference room is a marker of being a bigger, more business-ori-

After about a month or so, the company found the site and reluctantly joined in the discussion. The users’ group (www.ecwusers.com) now has more than 1,500 members, and remains an open forum.

“Anybody shopping for an EMR and has demo-ed eClinicalWorks, if they want to know more information about it, they come, they register, I let them in, they can see all the dirty laundry and they can see all the success stories,” Dr. Hinson explains.

“I think people need to push vendors for access to that kind of information,” he adds. A lot of vendors have users’ groups, but the companies moderate those forums.

Dr. Hinson says that 80 percent of the posts are about the product’s shortcomings, but he believes that virtually every user, if asked privately, would buy from eClinicalWorks again because they say the company is responsive to the concerns.

“It’s important to find a company that’s actively improving on all of this and that listens to their users, even more so than a company that has a product that’s a little closer to perfect. I think it’s more important that you have a dynamic product that’s changing to fit the needs of its users,” says Dr. Hinson.

ented practice,” he says. However, he notes that an integrated practice management-EHR system allows a small practice to handle all facets of a patient care visit without back-office support.

“I think everybody’s ideal is based on the type of physician practice,” says Jeffery Daigrepoint, a principal in the Coker Group, a consulting firm in Alpharetta, Ga. “Each practice has unique needs and requirements.”

For example, Samantha Allison, general manager of HPSC, the physician practice finance division of GE Healthcare Financial Services, a subsidiary of General Electric Co., advises, “If you think that your practice is going to be growing, you want to buy something that can scale with you.”

Mr. Seliger recommends that prospective customers inquire about the financial viability of vendors, especially those that are privately held and thus do not report their earnings. Products might be used for 10 to 15 years. Will the company still be around to support what it sells?

Practices run the risk of beginning implementation of a product, only to watch the supplier go out of business and to be stuck without any technical support, says David Kates, vice president for clinical product management at Emdeon Practice Services. “The investment is a deep, long-term investment in products. This isn’t a short, 100-yard sprint. It’s a marathon that’s going to be run,” he says.

Look for Support

Dr. Brailer says that practices should seek a vendor that is reliable—not necessarily in the sense of being available all the time, but rather by having a good call center for technical support, good backup and “very predictable” upgrades.

Practices also need to look at support services, he says. “Who is there on-site to help them implement, to help them train, to help them go through the change management process? What kind of backup do they have, not only technically, but whenever you get stuck, whom do you call and how often are they there? Doctor’s offices work weird hours, and they need help all the time,” Dr. Brailer says.

Another gold mine—or minefield—for information on EHR products is the world of IT consultants.

When it comes to picking systems and even finding consultants to help with the selection, Scott Wallace, chief executive officer of the National Alliance for Health Information Technology, invokes the principle of caveat emptor. “Lots of people buy bad advice,” he warns.

Mr. Seliger suggests that many healthcare providers seem afraid to be assertive with technology vendors. Mr. Seliger, who has been in healthcare IT for 25 years, says with more than a hint of incredulity, “I have never been asked, ‘Do you test your products?’”

A simple query like this should lead to a deeper line of questioning about who designs the tests and how the vendor documents the testing results, Mr. Seliger advises.

In reality, software vendors often have no idea, says Jonathan Bush, chief executive of athenahealth, a practice-management software and service provider based in Waltham, Mass. “The vendor literally has no way other than calling and asking for self-reported results,” he says.

“The number-one question I would ask is: How closely aligned is the vendor to me? How closely does my payment to the vendor map to my success with the vendor’s work?”

“Very close to 100 percent of sales are related to specific references,” Mr. Bush continues. But customers should seek to know about more than just the vendor’s most satisfied customers.

By a similar token, do your homework when it comes to working with consultants. “The test here is not just technical,” Dr. Brailer says. “It is, do they understand the practice environment of the small office?”

Dr. Brailer says the one area he would like people to concentrate on is not who is technically proficient, but whether the consultant understands the medical practice and how to make necessary changes among even the clerical staff. “You have to get Gladys to do her job differently. It’s not abstract. It’s very specific, up-front personal change,” he says.

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Mr. Daigrepoint cautions against consultants who might be closely tied to specific vendors or focus on only a handful of products. “You want to see that that consultant has diversified vendor recommendations,” he says.

Above all, make sure consultants are not receiving referral fees from vendors to produce specific requests for proposal, according to Mr. Daigrepoint. “Be leery of any consultant recommending a long, drawn-out RFP,” he advises.

Mr. Daigrepoint says that physicians should seek out their local and specialty-specific medical societies for advice on systems. “The AAFP is probably the best,” he says, referring to the American Academy of Family Physicians.

The AAFP and a diverse coalition of health IT advocates called the eHealth Initiative have developed a master quotation guide for getting all-inclusive estimates of the cost of technol-

Coming Soon: Vendor Certification

In the not-too-distant future, physicians will have another tool to use when evaluating EHR vendors—certification, according to Dr. David Brailer, the national coordinator for health information technology in the U.S. Department of Health and Human Services (HHS).

Establishing standards for EHR certification is among the first responsibilities of the American Health Information Community (AHIC), chartered last summer by HHS Secretary Michael Leavitt. A group called the Certification Commission for Health Information Technology (CCHIT) has a contract to develop standards on behalf of AHIC, and should have the final standards for ambulatory EHRs ready in a few months. In the meantime, physician practices can consult proposed certification criteria at the commission’s Website (www.cchit.org).

Once standards are set, vendors will be able to apply to earn certification that their products meet minimum specifications as EHRs for ambulatory medical providers.

“Right now, somebody can go to the Web and look at the CCHIT certification criteria and ask the vendor to at least self-declare whether or not they meet those. We’re not too far off from having actual certification results,” Dr. Brailer says. “I think those criteria are a starting point. Some doctors might want other features, but those are at least what we think are the starting point.”

ogy implementations. Look for that tool on the Connecting Communities for Better Health page of the eHealth Initiative's Website, <http://ccbh.ehealthinitiative.org>.

Also, Medicare and Medicaid quality improvement organizations (QIOs) in each state offer free support to practitioners and practice executives in redesigning office workflow and in collecting data for quality measurement. They do not, however, give financial assistance for IT, recommend specific vendors or provide technical support or computer programming services.

Managing Change

Mr. Kates of Emdeon suggests that the evaluation of a product has to go beyond the technical capabilities of the system to look at how it works within a practice's style and realities of the work day. For example, how quickly can clinicians pull up records or track where patients are at any given time during an office visit?

"While a lot of intelligent decision-support types of applications are useful, how disruptive is that to how you get through your day?" Mr. Kates asks.

And that gets to the heart of bringing technology into a medical practice: process improvement.

"It is rarely the case that one takes an analog process and automates it. When we automate things in healthcare, we are changing processes," Mr. Seliger says.

"We can't just electrify paper. We absolutely have to do the redesign," agrees Christine Bechtel, director of government affairs for the American Health Quality Association, the national trade group for QIOs.

Mr. Seliger says that the most common reason why Sentillion gets called in to integrate systems is that a project was not meeting its expectations—usually the consequence of insufficient change management.

Factors that providers should consider include the inherent complexity of a practice environment, the need to re-tool workflows and the urge to try to save money in a business that cannot tolerate cutting corners. "You can't build mission-critical systems for mission-critical industries like healthcare and skimp," Mr. Seliger says.

For proper change management, Mr. Seliger recommends having a long-term, phased plan to re-engineer workflows and advocates regular reviews of business objectives in EMR projects.

Dr. David C. Kibbe, director of the American Academy of Family Physicians' Center for Health Information Technology, says that the biggest mistake a practice can make is to look at specific systems before completing an internal evaluation of the processes.

"We want them to do a very thorough needs assessment," Dr. Kibbe says. "We want them to think about practice redesign."

IBM health IT consultant Dr. Sam Bierstock likes to talk about a concept he calls "thought flow."

"Thought flow is how a physician obtains, possesses, prioritizes and acts upon data," Dr. Bierstock explains.

"You'll hear about workflow all the time. The vendors concentrate on creating tools to support workflow, and CIOs want to support physician workflow," he says.

"When the challenge comes to physician adoption of technology, you can design the most beautiful workflow that you want, but it's got to support the way that they think and act. This is the mistake that the majority of vendors make," says Dr. Bierstock.

"The developers are off creating these workflows that have nothing to do with how physicians like to work," he says. "They don't really spend a lot of time on the research at a given client site as to how their doctors are working."

He remembers a sales call he made to an orthopedic hospital. "We showed them what we thought was this beautifully thought-out orthopedic workflow," Dr. Bierstock says. "They were not interested in the slightest."

It turned out that the physicians really needed only a handful of data points, information that took house staff two hours before each of two sets of daily rounds to compile from paper charts. "So we wrote them a crystal report, click one button, out comes the information, and they were ecstatic," Dr. Bierstock recalls.

According to Dr. Bierstock, technology needs to be designed around the way physicians think, not necessarily the way information moves through the office. "I think the key here is flexibility of configuration," he says.

Physicians should be able to work just as fast in front of a

computer as they do with a paper chart and a dictation machine. “Depending on the flexibility of the particular IT system being implemented, a physician can either configure or work with the IT people to configure that system to support his thought flow. Then you will get them buying in,” says Dr. Bierstock.

Flexibility may include the choice of multiple input devices and methods, such as traditional transcription, digital recording of dictated notes, speech recognition, templates and tables with drop-down, selectable menus, free-text entry via keyboards or, with tablet PCs, handwriting capture and recognition. Choosing the most appropriate system for your practice often comes down to comfort level.

Tablet PCs offer the convenience of electronic pens to write directly on the screen and either capture handwriting as text—in a format known as “digital ink”—or convert writing to typed text. Other hardware choices include touch screens,

speech-recognition devices, digital cameras and scanners—with or without optical character recognition (OCR) to turn scanned images into real text.

Vendors should be able to adapt to the preferences of many doctors, including those who want everything electronic and those who like to handle paper, even if it means that they have to print out an electronic chart.

A physician can even continue to hand-write encounter notes and have someone scan the paper into an EMR. “You scan in and build the workflow around it,” Mr. Kates says.

While it is not necessarily a bad thing to continue with dictation, Rosemarie Nelson, an IT implementation consultant in Syracuse, N. Y., for the Englewood, Colo.-based Medical Group Management Association (MGMA), recommends that clinicians enter orders—especially prescriptions—directly into the EMR because this improves the tracking of test results and dramatically speeds up the prescription refill process.

Dr. David C. Kibbe, director of the AAFP’s Center for Health Information Technology, says that the biggest mistake a practice can make is to look at specific systems before completing an internal evaluation of processes. “We want them to do a very thorough needs assessment,” he says. “We want them to think about practice redesign.”

Much as airlines have done in recent years, practices can offer patients the convenience of self-service check-in via the Web from home or at computer stations or kiosks in the office waiting room. If patients could electronically fill out basic demographic, medical history and insurance information just once, there would be no need to make them fill out the same paper forms on every return visit. Nor would office clerks have to decipher patient handwriting to key in this information from paper

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forms; each time data have to be re-entered, there is another opportunity for error.

Ms. Nelson says that practice managers should ask themselves what problems they are trying to solve with technology: “How do you see yourself using this? What does the EMR absolutely have to deliver in order for you to use it?”

A great way to start, Ms. Nelson says, is to try a computerized call documentation system because it helps the office staff adjust to using keyboards in taking messages and making a history of phone calls to and from patients.

Virginia Adult & Pediatric Allergy & Asthma, a practice with seven physicians, one nurse practitioner and a part-time physician assistant scattered across five medical office locations and a separate business office, has been moving slowly with its own technology implementation for fear of pushback from users.

“It would be much easier going paperless if it were a new practice,” says Laurence A. Kinzler, practice administrator. Virginia Adult & Pediatric Allergy & Asthma has been around for a quarter century, and one of the doctors is 70 years old.

The allergist practice went with integrated EMR and practice management. “This is absolutely critical, and this is what drove my decision on an electronic charting system,” Mr. Kinzler says. “There will be lots of finger pointing when—not if—interfaces don’t work, so we went with the same vendor.”

VitalWorks, which hospital systems giant Cerner Corp. bought in early 2005, supplied both the practice management and clin-

ical software for the practice.

Still, because of adoption concerns, the practice hasn't fully deployed all capabilities yet. "It's an evolutionary process. You can't do it all at one time," Mr. Kinzler says. "The ones who aren't computer-savvy love to do the 'aha's and the 'gotcha's when it doesn't work."

Mr. Kinzler says the practice is not ready to try charge capture yet because a test with the most technologically inclined doctor failed to achieve 90 percent accuracy.

Instead of capturing charges at the point of care, physicians fill out old-fashioned, machine-readable "bubble sheets" for coding purposes, which are then scanned into the computer system, saving the doctors from electronic data entry. "You're going to customize it to your own workflow," Mr. Kinzler says.

For clinical documentation, templates allow doctors to have the same basic note for most types of exams, diagnoses, orders, test reports and referrals, with episode-specific variables. When needed, the physician can always modify or override templates with direct data entry.

Each of the five medical offices has a wireless network so that doctors can roam freely with their computers. The practice chose small laptop computers rather than tablet-type machines because the more traditional laptops have keyboards, though some of the doctors wait until they get back to their desktop PCs before entering chart data anyway. Most of the physicians do not carry the portable computers into exam rooms, Mr. Kinzler says.

Incremental Approach

He says that the practice will never get totally away from dictating notes. "But you have to have a way of getting that transcribed information into the chart," Mr. Kinzler says. Some of the doctors have tried speech recognition on a limited basis. "Frankly, they don't have the patience to train [to do] it," he says.

While some practices have chosen to scan old charts during the automation process just to have electronic copies of inactive records, Virginia Adult & Pediatric Allergy & Asthma has not. Because it is a specialty practice, patients often leave after a single episode of care. "Most of those charts will never be used again," explains Mr. Kinzler.

Though it is exclusively primary care, Family Practice Associates of Lexington (Ky.), has taken a similar tack of adding EMR components incrementally. “I think that the financial realities of a small office push you toward an incremental approach,” says Dr. Jason Butler, a medical officer with EMR vendor Allscripts.

Family Practice Associates (FPA) started with document scanning back in 1999 as a way of controlling the flow of information. “We couldn’t find charts. We couldn’t put our hands on charts. We couldn’t process the number of documents that were coming through,” recalls Susan R. Miller, the practice’s administrator.

The early thought was to go with a full-fledged EMR. (Again, scanning simply creates a digital representation of a paper chart, not actual clinical data.) But Ms. Miller was disappointed that none of the demonstration sites she visited years ago had fully deployed systems. “When someone takes you to a demo site where there’s only one doc walking around using a computer entering a few patients a day, then that’s pretty depressing because you realize just how hard it is to implement a point-of-care EMR,” she says.

FPA chose Impact.MD, a document management—read “scan-

Elements of Electronic Progress Notes

Virginia Adult & Pediatric Allergy & Asthma has identified 21 components of the electronic progress note:

Chief Complaint/History of Present Illness	Referrals
Past Family and Social Histories	Allergies
Review of Systems	Current Problems and Medication List
Physical Examination	Vital Signs
Diagnosis	Preventive Procedures
Assessment/Plan	Patient Education
Orders	Labs
Procedures	Radiology
Referring Provider	Immunizations/Injection
Prescriptions	Scanned Images
Procedures	

Source: Laurence A. Kinzler, practice administrator.

ning”—system from Advanced Imaging Concepts, a company since taken over by EMR vendor Allscripts. (The software also has gone through a name change, to TouchChart.)

Installation began in October 1999. Within two months, the practice was 95 percent “chartless,” according to Ms. Miller, in part because the physicians chose a “go-forward” strategy.

“We didn’t scan all of our charts A through Z,” Ms. Miller explains. After the go-live date, charts were scanned so that anyone who had an appointment after that time had his or her chart computerized by the time of the visit. “At the end of two years, which is how we always defined an active chart, if you had not had a visit with us, then your paper chart was boxed up and taken off-site,” she says.

Anyone returning after that time had to update his or her demographic information, but that had been standard procedure prior to the technology rollout.

The practice added e-prescribing in 2001, automated administrative work flow in 2002 and started secure, Web-based messaging with patients in 2004. Just recently, it converted to a fully functional EMR, an Allscripts TouchWorks system.

Why e-prescribing? “I think that any sort of computerized provider order entry is a good next step,” Ms. Miller says.

“E-prescribing was available to us at that point. It was just a very natural next step for us,” she says. It was still a fairly low level of computing compared with full-fledged electronic clinical documentation, since physicians generally didn’t have to enter any information until the very end of the visit.

“The added benefit of that to the practice was that it automated all of these heinous tasks of calling in prescriptions,” Ms. Miller continues. “Writing prescriptions for physicians is so much quicker electronically,” not to mention the gains in patient safety from assuring that the right patient gets the right dosage of the right drug.

Initial fears that e-prescribing would slow the doctors down never came to pass. The nine physicians and two PAs at Family Practice Associates of Lexington write about 8,000 prescriptions electronically each month, for patients of all ages, so there is a “huge range” of medications prescribed, says Dr. Butler.

Clinicians develop “pick lists” of their most frequent diag-

noses and the most frequent prescriptions for those diagnoses. “It becomes very customized to the individual physician, and it becomes a three-click prescribing process,” Dr. Butler says.

Long lists of maintenance medications for patients with chronic illnesses need to be entered only once. On subsequent visits and for refills, physicians simply copy the patient’s list and generate new orders with a few mouse clicks. “You can write five scripts in five seconds, so it becomes incredibly efficient, both from the provider standpoint as well as from the staff standpoint,” Dr. Butler says.

Even after more than six years, charge capture is not in place at FPA. Clerks still must manually enter data into the practice’s Medical Manager billing system, a product that Emdeon Practice Services, formerly WebMD Practice Services, is phasing out.

There is a one-way interface from Medical Manager to the TouchChart clinical document management software so that users can access billing information from the medical record. When someone creates or updates a patient profile in the management system, the changes are sent automatically to the EMR, but EMR data cannot flow back to the management side.

A bi-directional interface lets the TouchScripts e-prescribing program download patient demographics, history and formulary data from Medical Manager and send prescription information to the EMR.

Ms. Miller says that the practice made sure its network had an open architecture to facilitate interfaces between systems. This is because interface problems create cost overruns.

It is difficult and expensive to “marry up” products from different vendors, says Emdeon’s Mr. Kates. “Integrated has inherent advantages to it,” he says. “The practices, unless they have extremely sophisticated IT expertise, then get put in the middle of when issues arise between information and workflow that spans between the two systems. They end up being the traffic cop who has to navigate between two vendors and figure out what the heck is going on.”

And the last thing any practice needs is an additional headache in the middle of a complicated technology rollout, though unanticipated expenses are bound to show up at some point.

“I think initially in any implementation, you are going to have

a little peak of cost up front, but that will quickly round off,” Ms. Nelson says.

Other factors that add to the cost of EHRs include the depth and completeness of clinical decision support, patient education materials, e-prescribing, CPOE, drug and allergy interaction checking and communications technology. Gaining on-line access to payer-specific formularies, authorization services, claims submission and adjudication services does require an initial investment, but the administrative savings can be substantial.

Virus protection, network security and backups also are key considerations, Ms. Nelson says.

Other variable costs include support for existing technology in the office, often known as “legacy” systems. “Some of that comes from setting the wrong expectations,” says Ms. Nelson.

Practices really should consider upgrading old hardware when they automate the clinical side, she says, adding that she tells clients to have a three-year “recycle” plan for their computers.

During an actual EHR rollout, there probably will be a transitional period in which the practice has to run dual paper and electronic systems, another costly proposition. Even after the switch, some clinicians will prefer to keep printouts of electronic records, so it may not be possible to eliminate file rooms.

Bigger than any individual practice, there is a second level of interfacing to consider: connections to affiliated hospitals and laboratories. Today it is mostly unreasonable to expect live connections between non-affiliated medical groups, so Ms. Nelson suggests that primary-care practices consider scanning to manage correspondence from consulting physicians.

Beyond this is the interoperable concept that Dr. Brailer has been advocating, the regional health information organization, or RHIO. Under this model, complementary and competing healthcare organizations—hospitals, medical practices, imaging centers, labs, long-term care facilities, transcription services,

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payers, pharmacies—in a common geographic area share data so that providers have access to complete, up-to-date health records, insurance information and formularies no matter where and when a patient needs care.

RHIOs are under development or at least being planned in virtually every corner of America, but complete interoperability largely remains a future goal because standards need to be developed, and competing interests—vendors included—still have questions about whether there will be central data repositories and who will control the release of information.

Financing Options

But this is something the average medical practice should not have to be concerned about anytime soon. Of more pressing interest is how to finance technology for your own operations.

“Generically answering financing questions always is a little difficult because your answer always is: ‘It depends.’ It depends on the size and scale of the hardware that you are looking to put in place and what the useful life of that equipment is,” HPSC’s Ms. Allison says.

As Ms. Nelson also noted, computer hardware tends to become obsolete after three years or so. Smaller practices might have greater tolerance for older equipment, but larger group practices are buying so much hardware that it may make sense to look into four-year or five-year financing options, Ms. Allison says.

“From a software perspective, it is a similar kind of conversation. What is it that they are purchasing? What do you think the useful life is? How does that integrate into their practice? How long do you expect it to be in the practice?” she asks.

“I definitely looked at it as a necessary investment,” Dr. Hinson says. His short list came down to three similar EMRs.

Some vendors charge a “per-seat” license for each user. Sometimes the fee varies based on the type of user, such as medical assistants, mid-level providers, nurses, receptionists and physicians. “That made it kind of deceptive as to what the ultimate price would be,” Dr. Hinson says.

He chose eClinicalWorks because it had more flexible financing options than the others. The vendor gave him the choice of

buying everything outright, buying hardware and subscribing a software license or going with an ASP. He bought a server and went with a software subscription priced per physician, with the vendor providing the financing via a lease agreement.

Mr. Daigrepoint, the Coker Group consultant, cautions that doctors should be wary of believing that an IT installation is a one-time event. “Some have the idea that it should be like going to Club Med,” he cautioned. “Technology changes rapidly and hardware doesn’t last forever.”

Ms. Nelson agrees, saying, “Technology is not something you buy once and are done.” Just as cars require oil changes at reg-

Ask the Right Questions

Rosemarie Nelson, an IT implementation consultant in Syracuse, N.Y., for the Englewood, Colo.-based Medical Group Management Association (MGMA), recommends that physicians shopping for a healthcare IT system ask vendors the following questions:

- How many total users do you have nationwide?
- What size are the practices?
- What specialties are represented by your user base?
- How many users are in my area?
- How many users have left your company and why?
- What is the number-one reason practices choose your system?
- Are any physicians involved on a day-to-day basis with R&D, implementation, etc.?
- How do you integrate ideas submitted by end users for upgrade consideration?
- Who owns the company? Is the company currently in negotiations for sale?
- Is the company involved in litigation of any kind?
- What information can be converted into your system from legacy applications?
- Are there any “hidden” costs, such as freight, taxes, third-party software, etc.?
- Will there be a project manager (and backup) assigned to our office?
- Do you supply a detailed deployment checklist?
- Do you recommend a “go live” all at once or in stages?
- Will training be done on-site in my office or at a vendor location?
- Do you provide Web-X training demos for new employees?

ular intervals, networks needs routine updating of anti-virus programs and spyware protection, she advises. Who is going to pay for the ongoing maintenance and how much will it cost?

“Establish a relationship with the vendor so there’s skin in the game until they go live,” Mr. Seliger advises. His company, Sentillion, charges a fixed fee so the company assumes the risk for cost overruns. “However, most vendors rely on the fact that you will come back to them for service fees,” he says.

In general, Mr. Daigrepoint recommends adding an extra 15 percent to 22 percent to the initial software price tag to figure maintenance and upgrading expenses. “Software is very evolutionary,” he says. Licensing agreements should state whether future upgrades are included.

Software companies sometimes offer an “upgrade pass,” according to Ms. Allison. “As new releases come out, they can make sure that they stay current,” she says. Practices also can add features as needed or to keep up with new regulations, but these details should be negotiated ahead of time.

Mr. Daigrepoint says that the three most common ways of paying for technology are with money out of a practice’s capital fund, with a line of credit and by leasing. “All of these entail giving the vendor a lot of money up front,” he says.

“If they have the lump sum available that it would take to buy, there’s the opportunity cost associated with that. That’s money that they won’t be investing in other things in their practice,” Ms. Allison says. But she suggests that practices have to balance the desire to buy outright with the opportunity cost of not having those funds available for something else.

“To me, the financing decision that our customers face is that opportunity trade-off decision,” Ms. Allison says. “What will it cost them to finance something vs. purchasing it, and what’s the opportunity cost of using the funds to purchase an EMR vs. doing something else within their practice?”

Even if higher interest rates may translate into higher monthly payments, practices have to consider whether they get a better rate of return by buying a system with cash or by investing the money somewhere else.

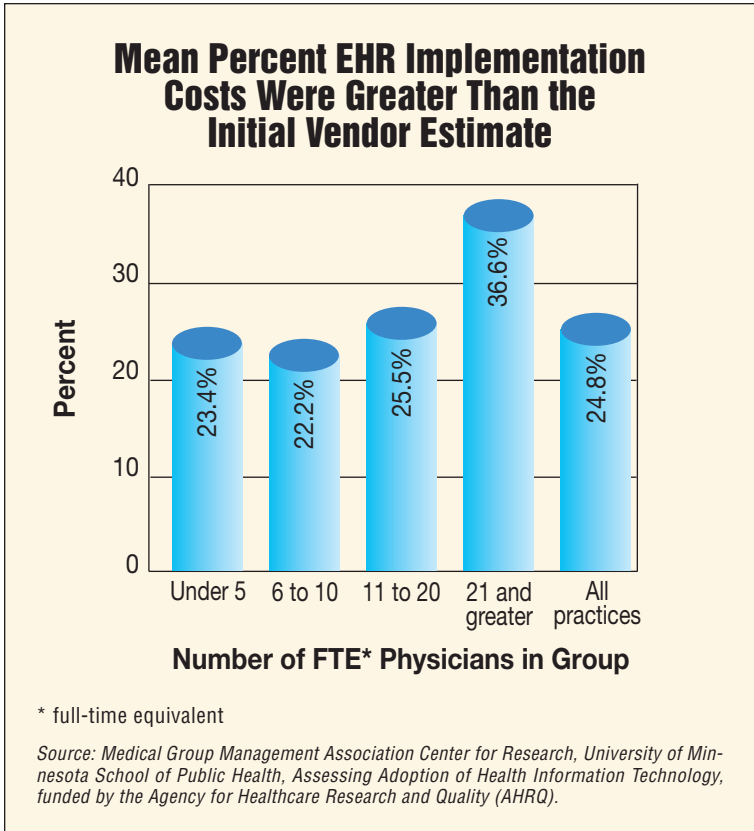
“If I can finance this at a competitive rate, it may make more sense for me to have monthly payments on this and use the cash

resources for other things in practice,” Ms. Allison says.

“Technology being technology, you see a lot of people who are more interested in leasing something so they can then upgrade at the end of that lease term and have the latest technology,” Ms. Allison says. But then, you may end up with higher monthly payments than if you had decided to finance a purchase, she cautions.

“The other side of this is, depending on what it is that the practice is looking to purchase, it could be a substantial cash outflow that they may or may not be in position to handle,” Ms. Allison continues. This often comes up with smaller practices.

Some of the payment and financing models are changing as tech-



nology improves. At Family Practice Associates of Lexington, real-time on-line formulary checking is replacing the old method of downloading updates at regular intervals, for example.

“The total cost of ownership is sometimes hard to get to because the vendors know their costs, but often they don’t know the cost of your whole exposure. But I think a separate factor is: how is it paid for?” Dr. Brailer says.

“Technology is not something you buy once and are done,” says Rosemarie Nelson, an MGMA consultant. Just as cars require oil changes at regular intervals, networks needs routine updating of anti-virus programs and spyware protection, she advises. Who is going to pay for the ongoing maintenance and how much will it cost?

“The more it’s paid on an accrual basis against cash flow, as opposed to a big lump-sum purchase price, is probably a success factor,” adds Dr. Brailer, who has a Ph.D. in economics from The Wharton School at the University of Pennsylvania in addition to his medical degree from the University of West Virginia.

Mr. Daigrepoint puts this concept into more user-friendly terminology: Some vendors will ask for 50 percent at the time the contract is signed and the balance in 30 days. “But it’s going to take a lot longer than that to complete an implementation,” he says. “Set goals and milestones, and hold the vendor to them.”

As discussed in Chapter 1, HHS officials have proposed regulatory changes so that hospitals and health systems could help affiliated medical groups procure IT products and services. “Under the proposed anti-kickback and self-referral exception, that would be allowed, up to a dollar limit,” Dr. Brailer says.

A growing promotion in healthcare financing is something already well-known in consumer circles: 90 days “same as cash.” Unlike the consumer offer, however, business customers generally are not charged retroactive interest if they do not pay off the balance within 90 days. “You are giving the customer time to decide whether or not they want to pay cash or if they want to spread the payments over time,” Ms. Allison says.

“For a larger group practice, we look at something called a bridge to budget,” she says. If, for example, a practice is close to the end of its fiscal year and has used up its budget for the year, the financier can allow the lender to defer payments interest-free

until new spending authorizations are available. And, as with most contracts involving large organizations, terms are negotiable.

“You’re going to want to look at administrative fees, documentation fees. You’re going to want to look at prepayment penalties,” Ms. Allison says. It is a matter of understanding where to look for hidden costs. Others include fees for late payments and early termination.

With interest rates going up, loans with variable rates are not very popular right now. When interest rates fall, there tends to be more of a demand among physician practices for refinancing rather than variable-rate terms, however. Larger practices taking multimillion-dollar loans, of course, do have more flexibility in looking for custom-structured terms.

Turn to vendors rather than third-party financiers when coming up with a budget for hardware, software, service and support, Ms. Allison says. “They work with their customers to try to give them full support to try to make sure the customer is successful in using the technology.”

In a highly competitive marketplace, an increasing number of vendors are taking on risk on behalf of their clients. “You’re going to have to get payment for services rendered, for results, not for the tools to go and create results,” predicts Mr. Bush of athenahealth. His company is among those that essentially guarantee results, charging their clients a percentage of additional revenue generated from the technology, rather than a predetermined flat fee.

Alteer, an EMR-practice management software vendor from Irvine, Calif., and Emergency Care Documentation Systems, a Chicago-based developer of EMRs for emergency medicine, are among those who essentially guarantee results.

“You don’t pay the doctor for getting a medical degree. You pay the doctor for a service,” Mr. Bush says. He thinks it will become the norm in healthcare for customers of vendors to pay on a per-event basis, not for software.

“I find it instructive to look at other industries that we think of as highly standardized,” he says, citing the credit-card industry. In that business, customers don’t buy the software; they rent a terminal and pay per transaction.

In an immature marketplace like the one for clinical IT, such evolutions are not out of the question.