Making Tech Dollars Count

Although initial costs for technology may be high for a small practice, technology can improve productivity and/or reduce expenses for a small or solo practice in the long run. The key is to zero in on the right hardware and software.

Fast Facts

▲ *The Center for Information Technology Leadership predicts that nationwide adoption of Computerized Physician Order Entry (CPOE) would eliminate nearly 2.1 million adverse drug events annually in the U.S. But the technology may not be the best investment for small practices right now. Page 60.*

▲ *The percentage of health insurance claims received electronically increased from 44 to 75 between 2002 and 2006, according to a member survey conducted by America's Health Insurance Plans (AHIP). Page 62.*

▲ *A practice can obtain a return on investment within 24 to 36 months by properly implementing the right electronic medical record (EMR) system for its needs, experts say. Page 64.*

Although initial costs may seem high for a small practice, the right technology properly implemented can actually turn a positive return on investment (ROI) in a matter of months, practice management consultants say. "The key is to choose the *right* application and properly implement it," says Sue Hertlein, senior consultant, The Coker Group, Alpharetta, Ga. "Most practices that fail with new technology do so because the application is not the right fit for the practice and/or they did not develop a plan, train appropriately, and/or follow their plan."

Medical practice requires masses of paperwork; technology can help practices manage documents more efficiently, freeing staff members to work on more important matters—like patient care. That, in turn, can boost patient satisfaction.

Although many physicians think in terms of practice management software and electronic medical records (EMRs), Dr. Reider points out that these may not be the best starting point: "The first step is usually to introduce activities where the physician will *get* information from computer systems rather than *put* information in," he says.

"The primary reason many small practices look to adopt technology is often to help facilitate and streamline workflow or the various processes that occur within their practice," says Tom Doerr, MD, an internist at Esse Health and chief medical officer of Purkinje, a St. Louis, Mo., healthcare technology company.

Doing some upfront research and analysis both outside and inside the practice before implementing new technology can make all the difference, Ms. Hertlein adds. "It is recommended that a practice network with similar practices to find out about their successes and failures regarding technology and then learn from their strategies," she says. "But one must keep in mind that the final decision must be appropriate for each individual practice."

This is especially important in the small practice, where resources may be limited and every dollar spent must improve the practice. "Like all the equipment physicians use in small practices, technology is a tool," says Jacob Reider, MD, medical director, Misys Healthcare Systems, Raleigh, N.C. "In order to get the most out of that tool, physicians need to have appropriate expectations for what it will do as well as what it won't. In addition to selecting the right tool for the job, physicians need to fully understand the capabilities of the tool before they try to use it."

It's also important to look the actual processes the practice is trying to automate through technology, says Dr. Doerr. "Too often practices end up purchasing various software products and automating less-than-ideal processes. It is best to invest time and effort in how to improve those processes first and then acquire and implement the technology that will facilitate the ideal work-

flow." That usually means taking slow, deliberate steps towards new technology, rather than rushing headlong into the next big IT development.

Stephen Fischer, MD, chief medical officer, Spring Medical Systems, Houston, Tex., and a solo practitioner in Spring, Tex., says there are a few key steps for small practices to take to ensure they get the most out of their technology: "The first step begins with involving all of your staff members in the selection and implementation process," he says. "If your staff is not behind the adoption of technology, it may be misused or ignored. It is imperative to have your staff trained before setup begins. Providing your staff with the most thorough training is the best way to get the most out of your investment."

Starting Points

Although many physicians think in terms of practice management software and electronic medical records (EMRs), Dr. Reider points out that these may not be the best starting point. Instead, he recommends starting with activities where the physician will *get* information from computer systems rather than *put* information in," he says.

Here he's referring to knowledge systems such as Up-To-Date, Dynamed, Clin-E-Guide, or Epocrates. With these systems and training, physicians can get help with clinical decisions at the point of care. As physicians begin to embrace technology, they would likely become more comfortable by implementing an EMR or practice management system that requires them to add patient information.

Technology is also proving invaluable in continuing medical education(CME). Younger physicians are familiar with downloading lectures to their iPods and listening to them while driving, exercising, or pursuing other activities. Older physicians (over age 50) are "right on the cusp," says Kalyan Sennerikuppam, president, The Meritel Group, IT consultants in Canton, Mich., as to whether they will utilize new technology for accessing CME. They are more likely to purchase medical lectures on DVDs or CDs than to download them to an iPod.

"The single most important investment that a practice can make is a broadband Internet connection, and enough capable

workstations or laptops so that every provider can access the Internet, and therefore many of the resources mentioned above, quickly and easily. The workstations should be replaced on a three-year schedule, and this investment should be incorporated into annual budgeting," explains Dr. Reider. "As a practicing physician, the most common error that I see in small practices is that they underspend on their hardware. Buying a faster computer or putting a printer in or near every exam room will more than pay for itself in improving workflow within the practice and saving the providers' valuable time."

Gabriela Corá, MD, MBA, president of The Executive Health & Wealth Institute, Inc., Miami Shores, Fla., and author of *Leading Under Pressure: Strategies to Maximize Peak Performance & Productivity While Maximizing Health & Wellbeing* (Xlibris Corporation, 2007), is a great believer in using technology to its utmost to run an efficient medical practice.

"Our ability to 'take care of business' has drastically increased since we have improved our computer skills and effectively applied these to our work," she says. "The amount of work we now encounter has geometrically increased since we have fully implemented Internet practices. Remember the days in which we received occasional faxes and regular mail? Remember how we used to wait for days or weeks for a response? Our expectations for instant communication have exponentially increased as wireless Internet or handheld devices can reach us anytime, anyplace. We must use technology in our favor, maximize its applied benefits, and set helpful boundaries so as not to become its slave."

Dr. Corá recommends maximizing the benefit from technology by learning specific computer programs that will help run the practice (finances, work/personal schedules, etc.) more efficiently. If you don't know how to use various programs or even a computer, hire someone who does.

In addition to making medicine's more traditional business elements easier, advances in technology are opening up new business opportunities that can offset shrinking reimbursement, according to Dr. Doerr, who provides this example: "New advances in medication-dispensing software are enabling practices to dispense safety-sealed, unit-of-use, generic medications to patients directly at the point of care. This technology enables

the process to safely occur in a matter of seconds for which the doctor can earn a profit of $5 to $15 per prescription dispensed. Not only is this a convenient service that patients greatly appreciate, it also serves as a great means to augment small practice revenues," he states.

The following is an A-to-Z guide to the alphabet soup of technology available to small medical practices:

Application Service Provider

An **Application Service Provider** (ASP) solution is an organization with whom customers contract on a subscription basis to deliver an application and provide the associated services to support it. An ASP either hosts applications at its own facility or contracts with a third-party data center to provide hosting services.

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The major difference between traditional software and an ASP solution is that the application is not hosted at the practice, but remotely. The practice must have a PC workstation and reliable Internet connection to access the application. The practice in effect "rents" the ASP through monthly payments during the specified contract period (typically three years). The physician practice owns its data.

The benefits of this arrangement are that full support is provided for troubleshooting, product upgrades, security, data backups, and server maintenance. A monthly fee to the ASP vendor covers all of these services except implementation and training costs. The California Healthcare Foundation reports in its article, "Physician practice: Are ASPs right for you?" that physician practices that don't receive any support or networking from other area healthcare organizations or entities may benefit most from an ASP solution.

Not all markets provide ASP options, so a physician practice

will need to see if any are available in their area. ASP providers do not necessarily provide all vendor products, either, so choices may be limited.

Computerized Physician Order Entry (CPOE)

CPOE is a software application that supports medication ordering, diagnostic test ordering, intervention, and referrals by providers. CPOE provides clinical decision support from a range of diagnostic and treatment-related information and tools to improve patient care as well as reduce medication costs and errors. Most CPOE systems are capable of ordering diagnostic laboratory and radiology tests and studies, as well as new or refill medications, and can arrange referrals through some type of electronic data interchange (EDI) or direct system-to-system transmission. Vendors may offer CPOE as a licensed application or as an ASP subscription.

After initial installation and a learning curve, CPOE systems can facilitate quicker and better patient care through quicker turnaround times for medication and diagnostic tests. They can also make it easier to keep track of orders for tests and prescriptions, since there are no paper forms to misplace. Illegible handwriting becomes a thing of the past.

A CPOE system works in conjunction with an EMR to help reduce medical errors; for example, when a physician writes a prescription, the system automatically checks to see whether the patient is allergic to the drug or if the dosage is excessive. Advanced CPOE systems have a "tremendous impact on medication safety," according to the Center for Information Technology Leadership (CITL) in its report, "Patient Safety in the Physician's Office: Assessing the Value of Ambulatory CPOE" (published by the California Healthcare Foundation, April 2004). CITL predicts that nationwide adoption of CPOE would eliminate nearly 2.1 million adverse drug events annually in the U.S.

But there are problems with the technology. The Agency for Healthcare Research and Quality's (AHRQ) study on CPOE, titled "Role of computerized physician order entry systems in facilitating medication errors," identified 22 situations in which the CPOE system actually increased the probability of medication errors. These situations fell into two categories: information

When these radio hosts say
"this one is for the ladies"
it takes on a whole new meaning.

&

Dr. Mazzullo

Lisa Mazzullo, MD, OB/GYN,
Feinberg School of Medicine,
Northwestern Memorial Hospital

Dr. Streicher

Lauren Streicher, MD, OB/GYN,
Feinberg School of Medicine,
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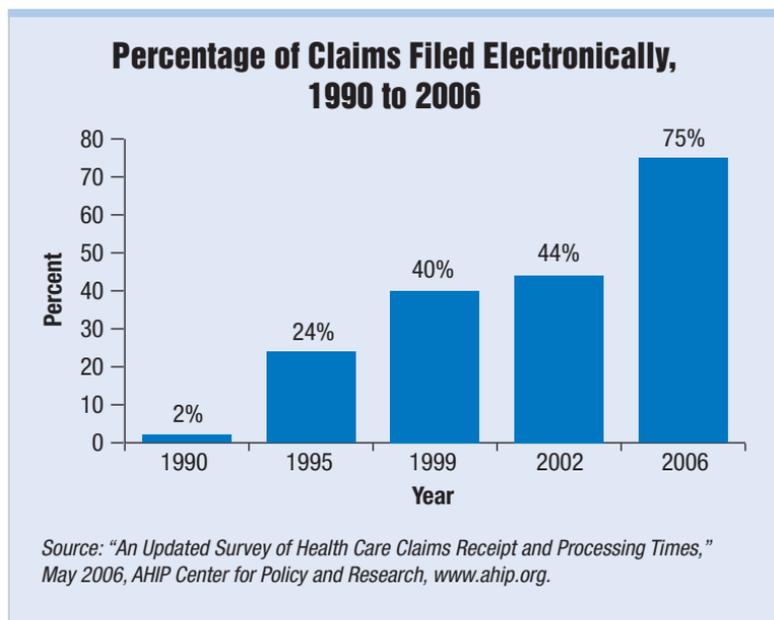with promo code: **DocDgt**

((XM))

errors generated by fragmentation of data and hospitals' many information systems; and interface problems between humans and computers, where the computer's requirements are different from the way clinical work is organized. Another problem is that using CPOE may actually take longer than paper orders. A report published in 2004 by David W. Bates, MD, MSc, medical director of clinical and quality analysis, Partners HealthCare System, Inc., found that physicians using an EMR with CPOE spent 35 seconds completing paper-based orders and 92 seconds completing electronic orders.

The bottom line for small practices may be to spend their dollars on more developed technology.

Electronic Claims Processing

Electronic claims processing has revolutionized the claims industry. The percentage of health insurance claims received electronically increased from 44 to 75 between 2002 and 2006, according to a member survey conducted by America's Health Insurance Plans (AHIP). The survey also indicated that nearly

Percentage of Claims Filed Electronically, 1990 to 2006

Source: "An Updated Survey of Health Care Claims Receipt and Processing Times," May 2006, AHIP Center for Policy and Research, www.ahip.org.

71 percent of all electronic claims were processed automatically in 2006.

According to T.C. Yang, product manager, EDI Services Solutions, Misys PayerPath, Richmond, Va., electronic claims result in savings for both the payer and the practices submitting claims. The manual process to print and mail claims to the payer was expensive and labor intensive on both ends. With the advent of electronic claims filing, he says, providers can now file claims in a much more efficient and cost-effective manner. Similarly, payers can process and adjudicate claims more efficiently, speeding up the payment process. Eligibility verification and electronic remittances speed the process even more.

For small practices, electronic claims processing can allow the practice to take this function back in house, which can save money over outsourcing. "Outsourcing comes at significant cost, often between six percent and eight percent of gross receipts, for work than can be done very well in house at much less expense," says L. Gordon Moore, MD, owner of Ideal Micro Practice, Rochester, N.Y. "None of us loves this work, but so many have learned through painful experience that billing services have a wide spectrum of accuracy, diligence, that they would rather do the work themselves and be sure the claims are going out on time and the money really coming to them."

But Dr. Moore admits that each practice has to weigh the decision to outsource individually. "Some small practices continue to outsource billing and claims processing, having found good billing services or individuals who can support parts of the work. These practices swear by their billers and are very pleased with their choice."

Electronic Prescribing

E-prescribing is available as part of a comprehensive CPOE system or as stand-alone technology. If a practice is not ready to invest in an entire CPOE system, it might be able to afford e-prescribing. SureScripts, the largest network provider of electronic prescription services, reported that 35 million prescriptions were sent electronically last year between healthcare providers and pharmacies in the U.S., more than the three previous years combined, according to its December 2007 report. The ability to

electronically request and renew prescriptions reduces the need for phone calls and faxes to authorize them, saving physicians and pharmacists hours per day in communication while greatly decreasing wait times for both new and renewal prescriptions.

SureScripts estimates that the number of electronic prescription transactions routed electronically will exceed 100 million in 2008, increasing the country's new prescriptions and renewals transmitted electronically to approximately 7 percent.

Based on American Medical Association (AMA) estimates, approximately 6 percent of office-based physicians are e-prescribing today. These prescribers use either standalone e-prescribing software or EMR systems that have been certified for a connection to the Pharmacy Health Information Exchange. Of the approximately 1.47 billion new prescriptions and renewals eligible for electronic routing in 2007, 2 percent were transmitted electronically, SureScripts estimates. Currently, SureScripts reports more than 35,000 healthcare providers actively e-prescribe in the U.S. More than 40,000 chain and independently owned pharmacies in the U.S. receive e-prescriptions.

But while the technology offers some advantages, not everyone agrees that it deserves the play it gets: "Like so much information technology in healthcare, e-prescribing is riding a wave of hyperbole," states Dr. Moore. "There are a number of solutions to the problem of checking for drug interaction, for streamlining work process, for creating accurate and readable medication lists. E-prescribing can help with all of these things…This solution does not deserve top billing."

EMRs

EMRs incorporate information from healthcare providers, pharmacies, and health insurance providers to establish an overall patient care record. While there are clear advantages to using an EMR, many practices—especially smaller ones—have not yet converted from paper to electronic charts.

According to a January 2008 report from the California Healthcare Foundation, four factors drive EMR adoption: organization influences (size of practice, payer mix, level of integration of the care system, and organizational leadership), the state of the technology (obsolescence and ease of use), financial

incentives and barriers (providers' uncertainty about return on investment and the high cost of EMR systems), and laws and regulations (concerns about potential new legal liabilities, privacy, and other factors).

Preliminary survey results reported by *Modern Healthcare* on January 24, 2008, support the idea that cost is a major barrier. The survey found that 66 percent of respondents reported that lack of capital is the biggest barrier to EMR adoption, Financial incentives would be a big inducement to buy an EMR system, noted 80 percent of respondents.

> "**There is a lot of** disagreement about where the cost of an EMR system should be borne," says Charles Shaefer, MD. "Should the individual practices bear the cost or should the healthcare system? Medicaid or third-party payers should have some stake in it because they reap benefits and use the information. I think that all of this controversy is pointing toward a universal EMR system in the future."

"There is a lot of disagreement about where the cost of an EMR system should be borne," says Charles Shaefer, MD, internal medicine, University Primary Care, Inc., Augusta, Ga. "The question is, should the individual practices bear the cost or should the healthcare system? Medicaid or third-party payers should have some stake in it because they reap benefits and use the information. I think that all of this controversy is pointing toward a universal EMR system in the future."

But what does a small practice do in the meantime?

"For a small practice, the best place to start is by implementing a basic EMR," says Dr. Fischer. "That way you still have the capability of scaling up, and also to integrate with other programs, medical devices, etc.

"Look for inexpensive, easy-to-use EMR software," he advises. "New generations of EMR software can now be implemented for as little as $5,000 per doctor as compared with the $9,000 to $10,000 per doctor of the older-generation EMRs. Products can be installed and operational in just a few days with little interruption to the practice. By first implementing a basic system, your practice will get the benefits of basic charting from the start and can also benefit from new developments."

"The benefits of a good EMR system can far outweigh the

decision to continue to use paper charts for most practices," explains Ms. Hertlein. Some small practices assume that since they have limited funds, they cannot afford an EMR system; but a good EMR can reduce costs, improve productivity, improve patient care, eliminate the never-ending search for lost charts, and much more, Ms. Hertlein says. If the right system is chosen for a practice, and if it is implemented correctly, a practice can obtain a return on its investment within 24 to 36 months. This

Truly Solo Practice—Made Possible Through Technology

In 2001, L. Gordon Moore, MD, faculty member of the Institute for Healthcare Improvement, Rochester, N.Y., realized that his medical practice wasn't all that he wanted it to be, so he set out to make it better. He quit his salaried position and opened his own office. He is the only employee, so it is truly a "solo" practice. Dr. Moore acknowledges that he wouldn't be able to sustain his practice—which is based on the model called "Ideal Medical Practice," or IMP—without employing technology to its utmost.

The IMP is a new medical practice model that strives to improve efficiency, quality, and the doctor-patient relationship. Care is driven by the patient's values, needs, and goals; and the majority of the office visit is spent with the physician. Technology is a big aspect of this model because it frees the physician's time to spend with patients.

Before launching his practice, Dr. Moore spoke to colleagues and peers at national medical meetings—some of them IT experts—to get their recommendations on the best software to enable him to be an efficient and competent solo practitioner. He specifically asked them what tools worked best in small-practice settings. Medical organizations have processes in place to help members make effective software choices, he notes.

"Technology helps me simplify a lot of processes that were time consuming," he explains. "I pull up patient records via the Internet, as opposed to having paper files. I have a computer in my combination office/exam room, so I can create notes in real time. I utilize CPOE for lab tests, radiology, and prescriptions, so that means no paper shuffling, and it's quicker. The only drawback I've seen is that paging through an electronic chart does take a little longer than paging through a paper one."

He says that the transition was a lot easier than he could have ever

return will be generated through reduction or elimination of transcription costs; elimination of chart expenses and other paper costs; reduction in staff costs, by re-purposing staff to other tasks and/or not hiring new staff due to growth; and an increase in billed charges (usually due to better coding).

Integrated EMR/Practice Management Systems

Some practices invest in an operational running system that

imagined. Dr. Moore cites a speech by Don Berwick, MD, MPH, president and CEO of IHI, as an incentive for his career change. The speech described the healthcare practice of the future and an IHI initiative called the "Idealized Design of Clinical Office Practice." Dr. Berwick pointed out that healthcare is all about the physician-patient interaction and that fundamental redesign was needed to achieve this end. Dr. Moore realized that change was possible, and he set out to redesign medicine for himself and his potential patients.

He rents a room from a specialty physician and sees patients there. The specialty office's staff informs him by intercom that his patient has arrived. The exam room doubles as his office, reducing his overhead. When he is with a patient, an answering machine takes his calls. Patients are free to call his cellphone after hours, and he says that they don't abuse this privilege by calling at all hours of the night.

He realized that by using technology to its maximum, he could manage the non-physician tasks with very little hassle and eliminate the majority of office expenses while increasing the time he is able to spend with patients. Dr. Moore sees an average of 11 patients per day, 4.6 days per week, for an average reimbursement of $87 per visit. Dr. Moore says that more than 90 percent of his claims are paid within 30 days of the date of service. He spends about an hour each week getting bills out as well as receiving the "explanation of benefits" and posting payments.

Dr. Moore believes technology helps him provide more reliable patient care, too. He uses a disease registry to track patients who have chronic diseases, which has led to documented improvements in health outcomes. More than 75 percent of Dr. Moore's hypertensive patients have attained the goals outlined by the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC VI). The average U.S. internist has 19 percent of his/her hypertensive patients treated to goal.

will handle administrative tasks, while others may be more interested in investing their money in a clinical system, notes Jeffrey Hertzberg, MD, MS, founder and owner of Medformatics, Minneapolis, Minn., an independent consulting company. It makes sense to purchase a single software system that can handle both sides of the medical practice, he says.

Dr. Hertzberg advises practices that are affiliated with a hospital or health network to exercise their option to purchase the same EMR software as other members, especially if it is available at a reduced cost. If integrating with a hospital or health network is not an option, then it is best to hire a consulting company that specializes in healthcare IT to determine the practice's needs and set up the appropriate EMR system. Small practices should consider incremental implementation of EMR features. Implement an infrastructure and software that will support both aspects of the practice, and add to it as finances allow, he says.

Practice management software can not only help reduce the burden on administrative staff, it can also ensure maximum production through an automated scheduling program, and ensure timely and accurate reimbursement for services, notes Dr. Doerr.

"A good practice management system can be the equalizer for a small practice when combating payers," states Dr. Doerr. "I typically recommend an integrated practice management and EMR system as it can further streamline workflow by capturing charges at the point of care. E-prescribing and EMR software can help practices avoid errors as well as facilitate more efficient and effective patient care. EMR technology can significantly improve coding, particularly E&M codes, which can have a significant impact on the bottom line."

The potential return on investment from an EMR system encompasses five areas, according to Dr. Hertzberg: labor savings; savings from unnecessary transcribers; time and labor savings from unnecessary chart handling; missed charges (because an EMR facilitates data capturing); and productivity.

"The technology pays for itself in a couple of years," he says. "Patients are coming to expect electronic prescriptions and being able to have their personal health records exported to a flash drive that they can carry with them, and there is no reason not to accommodate them."

Mobile PCs

Physicians rarely sit still for long, and their choice of technology reflects this. According to a white paper, "Future of mobile clinical devices," published in June 2007 by Health Industry Insights, more than 80 percent of medical practices and hospitals use laptop PCs, and 75 percent use computers on wheels. Seventy-one percent of hospitals and medical practices report owning Personal Digital Assistants (PDAs).

Physicians are the most frequent users of PDAs, which are mainly used for access to drug databases, medical calculators, and other medical reference material; personal schedule management; contact databases; e-mail access; and e-prescribing.

"Almost everyone agrees, most strongly, that the use of PDAs is very important. Physicians can improve error avoidance by using a PDA," explains Dr. Shaefer. "We're doing more with less today, and we need to find ways to lighten our load. PDAs are very helpful. If I save 20 minutes a day through using a PDA, then that's one or two more patients per day that I can help. Physicians need to find more tools, like PDAs, that help us streamline our work."

Laptops also have a place in medical practices of any size, experts say. Drug databases, care plans, physician notes, clinical pathways management, and patient charting are all efficient uses of this type of hardware.