Remote Scribes Put The ROI In EHRs

By removing the data entry burden from physicians and placing it on remotely located scribes, ENT Specialists of Northwestern Pennsylvania has avoided the productivity dips commonly associated with EHR adoption and has actually increased patient volumes and overall revenue.

By Ken Congdon, editor in chief, Healthcare Technology Online

Ask any hospital CIO or practice manager in the U.S. what the number one barrier to EHR adoption and implementation is in their facilities, and most will unwaveringly reply — "physician resistance to the technology." Despite the financial and data exchange benefits EHRs promise, most doctors despise the technology for one simple reason — it slows them down. EHRs require a significant amount of electronic data entry, and in most cases, this burden falls squarely on the physician because they are the ones responsible for evaluating each patient, ordering tests, making appropriate diagnoses, writing prescriptions, and determining follow-up treatment. The negative impact the EHR data entry process has on physician workflow has been well documented. For example, productivity drops between 25% and 40% are not unusual and typically last 6 months or more. These drops can be even more profound if a physician lacks basic keyboarding skills. When doctors are less productive, fewer patients are examined, and practice revenue takes a hit as a result. Furthermore, the mere act of electronic data entry at the point of patient care impairs the doctor/patient interaction.

So, in this age of federally mandated EHR adoption, what are healthcare providers to do? Many have accepted the EHR as a "necessary evil" and are taking the productivity losses in stride as a cost of implementing the technology. Others have abandoned EHR use and returned to dictating or handwritten notes. Some older physicians have even opted for early retirement rather than continuing to practice medicine in an industry where EHRs are the new norm. However, a select few providers have found ways to overcome the productivity hurdles generally introduced by EHRs. These pioneers are leveraging the technology in ways that are actually making them *more* efficient, while — believe it or not — generating an ROI for their practices.

ENT Specialists of Northwestern Pennsylvania has been an innovator in this regard. This eight-physician ear, nose, and throat practice located in Erie, PA has developed a system where scribes, located in a dedicated office space remotely situated from the exam rooms, perform all EHR data entry under the direct supervision of the doctors. This virtual connection is made possible via a combination of wireless telephone headsets and high-definition display monitors located in each exam room. By removing the data entry burden from physicians, ENT Specialists has actually been able to increase patient volumes 3.6% and revenue 32% through use of EHR technology.

AT A GLANCE

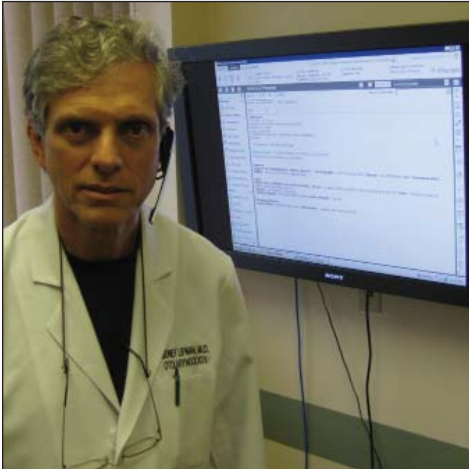|	
Problem:	ENT Specialists of Northwestern Pennsylvania, an eight-physician practice located in Erie, PA, faced physician resistance to EHR adoption and use because of the daunting data entry responsibilities they would inherit as a result of using the technology.
Solution:	ENT Specialists developed a solution that consists of high definition display monitors connected to PCs via a network of CAT 5 cable, an audio/video matrix switch, and wireless headsets. This solution allows remote scribes to perform EHR data entry under the direct supervision and direction of the physicians.
Results:	The remote scribe-assisted EHR solution allowed ENT Specialists to increase patient volumes 3.6%, improve coding accuracy, and increase revenue 32%.

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> ENT Specialists of Northwestern Pennsylvania

Dr. Sidney Lipman showcases the wireless headsets physicians at ENT Specialists use to communicate with remote scribes and the exam room monitors used to display EHR images and data.

WHAT EXACTLY IS A "REMOTE SCRIBE?"

The use of scribes to assist in the EHR data entry process is not a novel concept by any means. However, historically, these scribes have followed physicians from exam room to exam room and entered patient information via laptop or in-room PCs. These "in-room" scribes have certain drawbacks that often prevent them from serving as a viable solution to the physician data entry issue.

"Exam rooms are small spaces, and the physical presence of an in-room scribe can make it crowded and difficult to perform a checkup," says Sidney Lipman M.D., F.A.C.S. of ENT Specialists. "Many patients are also uncomfortable with the presence of another person in the room during their examination. Lastly, data manipulation with an in-room scribe is a difficult proposition. The scribe would have to repeatedly turn the computer screen in my direction for me to view the patient record or visually approve a progress note, lab order, or prescription. This process can quickly become inconvenient and counterproductive."

ENT Specialists' remote scribe model allows providers to delegate EHR data entry responsibilities to dedicated staffers, while eliminating the issues commonly associated with in-room scribes. At ENT Specialists, scribes work in a dedicated office space located in a separate location from the exam rooms and the physicians. These scribes have their own workspaces with two computer monitors where they have simultaneous access to the practice's Allscripts EHR system and a GUI (graphical user interface) that controls a VEEMUX CAT 5 cable audio/video matrix switch. This switch is used to push the EHR images on the scribes' computers to 32-inch display monitors located in each of the practice's 21 patient exam rooms. Exam room monitors are strategically positioned behind the examination chair where they are easily visible by the physician. This customized audio/video network was installed for ENT Specialists by Networking Technologies (Erie, PA), a data communications consulting firm and systems integrator.

Each physician is connected to their dedicated scribe via a wireless headset that serves as an extension of the practice's phone system. At the beginning of each day, the physician dials their scribe and begins to examine patients. At the beginning of each exam, the physician states the patient's name and the exam room number (e.g. "John Doe, Room 3"). This alerts the scribe which patient file to bring up in the EHR system and which exam room monitor to push the EHR screen images to. The physician then begins the process of examining the patients. Each doctor is sure to verbalize what he or she is doing so it can be recorded by the scribe in the EHR system (e.g. "I'm looking in John's right ear now. I see some impacted cerumen. I am now using a curette to remove that cerumen."). The physician can see the scribe entering this data into the EHR real-time via the screen-sharing between the scribe's monitor and the display monitor in the exam room. The physician can also instruct the scribe to pull up past patient notes, lab results, medical images, referral letters, post-operation reports, etc. for immediate reference during the exam. Furthermore, the doctor can instruct the scribe to enter a new lab order, write and send an e-prescription, or suggest alternate treatment, and visually approve these actions real time.

Procedure coding for each patient is also completed by scribe (under direct physician supervision), ensuring that EHR entry is complete and up-to-date at the conclusion of each visit. This allows the physician to move on to the next patient without having to return to the record later to review or enter any additional data. Finally, since the exam room monitors are strategically positioned behind each examina-

tion chair, physicians are able to maintain eye contact with patients throughout the encounter, preserving the integrity of the doctor/patient interaction.

ORIGINS OF THE REMOTE SCRIBE-ASSISTED EHR

ENT Specialists didn't land on the idea of a remote scribe assisted EHR out of the gates. It was a strategy the practice developed over time as a way to solve the EHR-related issues most healthcare providers face. However, unlike most private practices, ENT Specialists was an early adopter of EHR software.

"Realizing that healthcare would eventually become an electronic industry like most other markets, we began investigating EHR software in 2000 and purchased Misys in 2003 (which ultimately merged with Allscripts in 2008)," says Robert Budacki, practice administrator at ENT Specialists. "We implemented the software slowly, spending the first year doing nothing but using the scanning and indexing feature of the software to ensure it worked the way we wanted it to. We spent the next three years customizing the templates in the Allscripts EHR software to meet the exact needs of our practice. Then, in 2008 we were ready to fully implement the EHR."

While the EHR software was technically ready to be rolled out in 2008, ENT Specialists' physicians were far from ready to accept the technology because of the added data entry responsibilities they would have to take on as a result. "Dr. Lipman was actually prepared to retire if he was forced to do data entry," says Budacki. "Another physician actually brought a baseball bat into the office and threatened to destroy the computer servers that host the EHR if he was asked to perform data entry. Needless to say, I had to find another way to get data into the EHR."

The initial idea for the remote scribe-assisted EHR occurred to Budacki quite accidentally while on a routine visit with ENT Specialists' business partner, Networking Technologies. "I visited the Network Technologies' office on a completely unrelated project, and my contacts there ran me through a PowerPoint presentation where they pushed the screen images from a laptop computer to a high-definition monitor located on the conference room wall," says Budacki. "This got me wondering ... 'Could a system be built where computer screen images are directed to display on one of several monitors located throughout a facility from a single point of control?' I posed this question to Network Technologies, and they said this was possible via a network of CAT 5 cable controlled via an audio/video matrix switch. At this point, I believed we were on to something."

The CAT 5 network ended up providing each physician with a visual of their scribe's desktop, just like Budacki envisioned. However, Budacki still needed to figure out how to effectively connect physicians to their scribes so they could verbally communicate with one another. Initially, the practice tried using direct connect or 'push to talk' cell phones. However, these devices allowed patients to hear both sides of the physician/scribe conversation and produced squelching noises that were disruptive to the exam and the medical environment overall. Furthermore, physicians were required to press a button on the phone when they were ready to talk, which interrupted their workflows by making it difficult to speak and conduct a physical exam simultaneously.

It was clear the direct connect phones weren't going to work, so Budacki started searching for an alternate solution. He found it in a direct mail piece sent to him by Hello Direct, a company that sells and distributes headsets typically intended

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Practice Administrator,
ENT Specialists of Northwestern Pennsylvania

for telephone operators. The flyer promoted a wireless headset that serves as an extension of the phone system, allowing the user to stay connected to the phone while roaming throughout an office. It also provides the user with hands free phone operation. This headset completed the remote scribe technology infrastructure ENT Specialists has in place today.

SCRIBE EXPERIENCE DRIVES EHR SUCCESS

While ENT Specialists' technology infrastructure provides a foundation for physicians to communicate with remote scribes, it's really the scribes — not the technology — that ensures that the solution is a success. Budacki realized early on that, while they may be the least expensive form of labor, temporary staffers and data entry specialists were not effective EHR scribes.

"In order for a scribe to respond to a physician's instructions in real time, they need to be familiar not only with the EHR, but also with the medical terminology used and procedures conducted in the ENT specialty," says Budacki. "For that reason, all but one of our scribes are former medical assistants and nurses from our practice. Using personnel that is already familiar with our practice and our physicians as scribes shortens the training cycle and ensures the EHR data entry is performed as quickly and accurately as possible. This medical expertise is much more important than mere keyboarding skills."

ENT Specialists currently has eight scribes trained to perform EHR data entry in its facility, but not all perform scribe duties full-time. Most physicians at the practice are only in the office 2 ½ to 3 days a week. The rest of the time, they are at a local hospital performing surgery. For this reason, ENT Specialists cross trains its scribes. Each scribe is trained to work with each physician and specialty in the office (e.g. pediatric otolaryngology, audiology, etc.). At the beginning of each day, a physician is assigned a scribe, and he or she works with that scribe for the entire work day. However, the next day, that physician will likely work with a completely different scribe. Scribe cross training also allows the practice to accommodate for when a scribe or physician goes on vacation or calls off sick.

MINOR PROCESS CHANGES MAKE A BIG IMPACT

While ENT Specialists' remote scribe-assisted EHR system saves physicians from the burden of data entry, it still does require them to slightly change the way they practice medicine. For example, the physician must learn to verbalize their exam of a patient to ensure the scribe has all the information he or she needs to complete the electronic record. Physicians not only need to provide detailed descriptions of what they are doing to a patient at any given point in time (e.g. I am looking in the patient's right ear. I see that the patient has an inner ear infection, etc.), but they also need to provide detailed descriptions of prescription information, as well as procedure and follow up treatment for coding purposes. For example, during a normal exam a doctor might simply tell a patient that he or she is prescribing an antibiotic, or more specifically, Augmentin. The physician has to be even more specific when interacting with a remote scribe and say something like, "Let's prescribe Augmentin 875 mg BID (twice a day) for ten days."

Verbalizing the exam may seem unnatural to a physician at first, and if done poorly, the act can be a bit unnerving for a patient. However, the physicians at ENT Specialists say that learning to verbalize the exam is generally a short and painless process.

A close-up look at the GUI (graphical user interface) remote scribes at ENT Specialists use to push patient EHR images from their desktops to the appropriate exam room in the facility.

"We have several physicians in our office that are masters at verbalizing a physical exam," says Dr. Lipman. "They are so good patients can't even tell the doctor is speaking to someone else, even though we divulge the fact that we're communicating with a scribe at the outset of the exam. The trick is simply addressing the patient instead of the scribe. For example, instead of saying 'I'm looking in *the patient's* left ear and see an inner ear infection.' Say, 'I'm looking in *your* left ear now and can see that *you* have an inner ear infection.'"

Another process change ENT Specialists' physicians have implemented to improve the effectiveness and efficiency of their remote scribe-assisted EHR is to standardize the patient exam sequence. For example, each doctor will look in the patient's left ear first, right ear next, left nostril next, right nostril next, throat, etc. This uniform exam sequence is actually printed on a cheat sheet that is posted on the wall behind each patient exam chair. This standardized flow to the exam allows the scribe to know what's coming next so they can stay one step ahead of the physician when filling out the electronic record, expediting the data entry process.

INCREASED PRODUCTIVITY AND REVENUE *IS* POSSIBLE WITH EHRs

Remember the physicians at ENT Specialists that were prepared to retire or bash the EHR servers with a baseball bat when faced with the prospect of data entry? Well, those feelings didn't immediately go away the instant the remote scribe-assisted EHR was proposed. To the contrary, the physicians were skeptical of the solution at best. However, the system quickly proved its worth.

"A few months after we started using the remote scribe-assisted EHR, the 'baseball bat' doctor left me a voice mail message," says Budacki. "I was sure he was ready follow through on his threat to destroy the EHR servers. However, to my surprise, his voice mail praised our remote scribe-assisted EHR solution. In fact, he said the system was so effective that he was actually in a position to *add* five patients to his schedule."

These productivity gains weren't an isolated event. After the first three months of implementation, ENT Specialists performed a thorough ROI analysis of its remote scribe-assisted EHR solution. The practice discovered that it was actually able to increase overall patient volumes by 3.6% as a result of the system. All providers noted increased efficiency and were able to see/bill more patients per hour. On average, physicians were able to see 4.14 patients per hour following the implementation of the system compared to 3.81 patients per hour prior to the solution. Additionally, physician hours expended on patient care and charting actually decreased by 140 during that three months.

Furthermore, the remote scribe-assisted EHR also helped to significantly improve ENT Specialists' coding accuracy as a result of improved documentation and real-time data entry. The efficiency gains and coding improvements directly contributed to a 32% increase in revenue from billed visits.

"Every minute a doctor spends typing into a keyboard, writing into a chart, or speaking into a Dictaphone is a minute they aren't able to spend with patients," says Budacki. "We've been able to takes these responsibilities off the doctors' plates with our remote scribe-assisted EHR. The ROI that we've generated as a result more than pays for the cost of the networking equipment, the EHR licenses, and even the annual salaries and benefits of our scribes. It's the only true ROI I've ever seen

with EHRs."

An additional benefit of the remote scribe-assisted EHR is improved physician/patient interaction. Since the patient's record is clearly visible on the monitor located in each exam room, the physicians at ENT Specialists are finding that patients are taking an increased interest in their medical record and ongoing health management.

"Patients are inevitably curious when I have the scribe display an element of their chart on the exam room monitor," says Dr. Lipman. "They inquire about what certain entries or diagnoses mean, and ask more questions in general. Our remote scribe-assisted EHR has really helped to spark a dialogue between the physicians and patients in our office, which was an unintended and unexpected benefit."

SUMMARY

Many providers believe that EHRs are a necessary cost of doing business in the healthcare industry today. In fact, some providers believe that the only monetary payback from an EHR investment is the incentives offered by the federal government for EHR adoption and Meaningful Use. Other providers are waiting for a "magic bullet" technology to be introduced that alleviates EHR data entry requirements. Advancements in voice recognition software are often referred to in this regard. However, while voice recognition may eliminate free texting requirements, physicians will still need to edit the dictated note and navigate the EHR for ancillary data including labs, radiology reports, and scanned documents. ENT Specialists' remote scribe-assisted EHR is a solution that practices (and hospitals) can implement today that removes the entire data entry burden from the physician, resulting in improved productivity, documentation, and revenue.

Dr. Lipman sums it up best: "Even if we weren't being forced to use EHRs by the federal government, we would elect to use our remote scribe-assisted EHR solution because of the efficiency gains it brings to our practice. Plus, it's super easy for physicians to use. You can take any ENT physician from any office throughout the United States, bring them to our office, and we could have them up and running on our EHR system in ten minutes."

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