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CASE STUDY
"Dr. Holly Goes to Hollywood"

Family practitioner James Holly gains efficiencies with electronic records, using the airwaves and e-mail to promote them.

By Gary Baldwin
Managing Editor

A young mother, distraught over one of her four children's sudden illness, feels overwhelmed by her situation. Unable to get in touch with her physician, she breaks down in tears.

But another mom, faced with a medical emergency, remains calm. Her doctor is just a mouse-click away. "My physician uses e-mail," she explains.

If it sounds like Hollywood, it is-at least in part. The two mothers are actors playing in a local television commercial promoting a physician group practice in Beaumont, Texas. But the practice's managing partner-who appears in the commercial-says the depicted scene, although dramatized, is no cinematic exaggeration.

"We want to be a 21st century medical practice," says James L. Holly, M.D., managing partner at Southeast Texas Medical Associates. Spurred on by Holly, who has become a vocal proponent of computer-based patient records systems, the eight-physician family practice is well on its way. To support its electronic documentation, it has implemented an information system whose key features are excess capacity and widespread connectivity. Enabling patients to e-mail the practice is just one example.

Since January 1999, the group practice has been documenting all patient encounters using NextGen EMR, an electronic records system from MicroMed Healthcare Information Systems, a division of Quality Systems Inc., Tustin, Calif. And the practice wasted no time in transitioning to the software: Within four days of launching the system, Southeast Texas Medical was documenting all patient encounters with the NextGen application, eliminating its paper-based charting and reinvesting each physician's monthly $2,000 transcription tab in the automation effort.

"It doesn't make much sense to do a gradual implementation," Holly says. "When a woman is pregnant, she's pregnant all day long. If we're using an electronic medical record, we're using it all day long, too."

Things to come

The software, Holly says, is helping the practice accomplish one improbable goal: to become paperless.

"We're 95% there," says the family practitioner, who relishes his role as all-out information technology champion at the practice.

Public enemy #1:

"Paper is the enemy," admonishes Holly in one of his numerous e-mail treatises to colleagues. "It is inefficient; it is expensive; it is inconsistent with our business strategy in health care."

The practice's strategic vision invokes another image right out of Hollywood. The group's plan, dubbed the "Fahrenheit 451 Project," is a nod to the Ray Bradbury novel, later popularized in film, that portrayed a futuristic society in which books are burned.

But unlike the idea torchers depicted in the science fiction classic, Holly does not want to destroy information. Instead, he wants to convert it from paper to electronic form. That's the only way a modern medical practice can serve patients well, and preempt malpractice suits stemming from poor documentation, the veteran physician insists.

"I had been dealing with transcribed paper records for 25 years," Holly recalls. "But that's no way to way to do health data management adequately. How do you know which patients use which drugs? If there's a drug alert, there's no way to easily figure out who's on what."

Now, for Southeast Texas Medical Associates at least, there is. "In less than 3 hours, we can run a query, pull up every patient in the practice on a certain drug, generate a letter and get it in the mail," says Holly's son Richmond, the group's CIO. "Before electronic medical records, that would have been impossible."

When the New England Journal of Medicine published a study warning that patients using the stroke prevention drug Plavix faced a potential reduction in platelet count, the practice put its electronic medical records system to the test. It has issued such patient alerts on three separate occasions, Richmond Holly notes.

In the Plavix example, the practice identified a patient using the drug who indeed showed a decreased platelet count. The practice told the patient to stop taking the drug. It also used its e-mail "tickler" system, a delayed messaging mechanism, to later generate a reminder to a staff person to call the patient about follow-up care.

The $570,000 worth of hardware and software that makes such transactions possible is, Richmond Holly says, "sophisticated for a physician practice."

Contact

Documenting phone calls, James Holly says, gives the practice a competitive edge with patients. Although the practice's front office staff answers the phone in person, they forward patient requests via e-mail to a unit clerk. This person sorts the messages, screening and directing them to the right person. The calls are documented in the patient's electronic record.

"We know the date they called and why," Holly says. "Before we used pink slips of paper; messages were often unrecoverable."

Patients also can request appointments, prescription refills and specialty referrals by using an encrypted e-mail link on the practice's Web site, www.setma.com. "The use of the site by our patients may not be great today," Holly writes in one of his information technology manifestoes. "But two years from now it is going to be a principle means of contacting our practice."

Caregiver users of the electronic medical records system include the practice's eight physicians and eight nurse practitioners. They are able to retrieve records at the Beaumont office, where the practice is headquartered; the practice's physical therapy clinic, which is 2 miles away; and in the emergency department at nearby Baptist Hospital, where the practice oversees some 70 inpatients a day.

The physical therapy clinic-which also houses the practice's 30 billing staff members, who use practice management software from MicroMed-is linked via a TI line to the Beaumont servers, while the hospital connects via an ISDN line.

Record retrieval

In addition, all of the physicians and nurse practitioners are able to retrieve records from their homes, also linked via ISDN lines. When caregivers access the system from their homes, they first activate an icon on their computer screen, which establishes a dial-up connection via modem.

That's a major advantage for physicians on call, says Qamar Arfeen, M.D., a pulmonologist and critical care specialist. The physicians take turns performing nightly call, fielding up to 100 phone calls, including half a dozen from the two local hospitals' emergency departments, on a busy night, Arfeen says. "If one of our patients shows up at the E.R., we know exactly what they have had done in the past," he says.

"Everything is accessible." "Its much easier to get the answers with the electronic medical record."
That translates to better- and more cost-effective-medicine, James Holly says. "A lot of patients used to spend $500 at the E.R. to be treated for an accident," he says. "Now we can see if they had a $6 tetanus shot and avoid those unnecessary costs."

The tetanus shot is one of the preventive care measures that Southeast Texas Medical has built into its standard documentation template for primary care visits. Whenever a patient is seen,

they are asked by a caregiver about their most recent tetanus vaccination.

The prompting has paid off, says Holly, who adds that 87% of the practice's patients are currently immunized. He estimates it was less than 15% prior to the practice's adoption of the electronic medical records system. The system's value is revealed during ordinary patient visits, Holly continues.

"The history is the most important part of the patient encounter," he says. "With a good history, you have a better chance of a successful encounter. The computer's ability to capture and provide historical data is the strong point of the electronic medical record. When was the patient's last flu shot? Last Pap smear? It's much easier to get the answers with the electronic medical record."

Close encounters

The practice begins each encounter by having a nurse interview the patient, recording the chief complaint, the history of present illness, and the vital signs by using pull-down menus on the patient's electronic chart.

The Windows-based NextGen EMR system provides a template of questions for various conditions, which the nurse answers using either a mouse or a light pen, choosing the answer from a list of pull-down options.

By the time the nurse has finished questioning the patient, the physician can access a thorough synopsis, Holly says. The physician goes on to complete the physical exam, adding the findings to the checklist-driven electronic chart. Most physicians prefer to use a light pen to denote their findings, he says.

"We have a comment box for each patient, to handle free text," he adds. "But we discourage its use."
The practice has, however, instituted a cash bonus program for employees who devise new ways to improve the business through automation. They may have a hard time keeping up with their enthusiastic leader, however.

"No other system of record keeping," Holly says, "can compete with electronic medical records."

"As an electronic medical record, NextGen® gives us the ability to do much more than just see patients, enter the visit data using a computer and then store the information on a hard drive . In an environment of managed care, we need to improve the quality of care while at the same time lowering the costs of that care. This solution allows us to do that in many ways including the ability to track outcomes, perform sophisticated drug studies, track patient trends and more.

"We're looking forward to working with SETMA to implement what will surely be a cutting-edge, industry leading solution," says Steve Puckett, president of MicroMed. "MicroMed's easy-to-use, comprehensive functionality will provide a system that SETMA can depend on as they build their state-of-the-art medical facility. In addition, growth of the practice can be accommodated with the sealability and flexibility of our applications."

"SETMA is undertaking a task that many organizations have yet to begin," added Patrick Cline, president of Clinitec. "We have designed NextGen® to enable healthcare providers to improve quality of care, reduce risk, lower costs and increase revenues. We are pleased that this leading-edge organization has selected our integrated system to meet their information needs."
"A continuum of care in which information is available at every point of service is critical for managed care in the 21st century," said Dr. James L. Holly, managing partner at SETMA. "When a patient contacts the physicians on call, it is imperative for the provider to have access to the medication, diagnoses, and instructions given to the patient. These systems make that possible."

About SETMA

Based in Beaumont, Texas, Southeast Texas Medical Associates L.L.P. (www.setma.com), is a growing, primary-medicine health care group, with 15 health-care providers and more than 80 support personnel. SETMA, LLP was formed by Dr. James L. Holly and Dr. Mark A. Wilson as a vehicle through which health-care providers could interact with managed care while maintaining patients' health and quality of life in a cost-effective manner.