

# A beautiful mine

EMR adjusts data focus to include clinical, financial benefits

By Neil Versel

**T**he advent of the electronic medical record has shifted the dynamic of data mining from merely a pharmaceutical marketing strategy to a powerful tool for clinical and financial performance improvement.

Medical practices that have invested in EMRs are gleaning important knowledge from their own rich repositories of clinical information to identify populations for disease management, benchmark against quality standards, improve billing processes and track outcomes.

"Data mining has to do with quality of care," says James Holly, M.D., CEO and managing partner, Southeast Texas Medical Associates, a 13-physician practice with two clinics in Beaumont, Texas, that runs software from NextGen Health Information Systems.

At SETMA, the Microsoft Healthcare Users Group's 2003 Clinic of the Year, physicians are able to capture benchmarking and

quality data simultaneously with the patient encounter.

"When data is entered, it captures charges and checks against the standards of care for the specific disease state," Holly says.

The system features pop-up reminders. A single click enters an order, generates a billing code and puts the order into a file to be mined later.

Holly reports that nonpayable diagnoses have fallen by 90% since January, when the practice gained the capability of posting charges at the time of order entry. The system simultaneously associates a CPT or ICD-9 code for the order, and the physician never sees the superbill.

The practice mines its clinical database with Microsoft Access, a database program already on millions of business computers. Physicians can type in questions such as, "How many diabetic patients have not had

an eye exam in the last year?"

"We ask the question, the information pops up literally in seconds," Holly says, so the practice instantly knows what kind of compliance rate it has and compares that to national standards of care. The EMR then can generate a reminder letter or postcard to send to non-compliant patients or dial the patient's phone number.

Holly calls the system "electronic patient management."

"It shows that you can demonstrate quality without being intrusive into the physician-patient encounter," he says.

For diabetic foot care, one click generates a printout for the patient while simultaneously documenting in the record that the physician consulted with the patient on this subject.

"I want to make (the EMR) so easy that it's easier to do it than not to do it," says Holly. SETMA has been tracking patient records electronically since January 1999, so the practice has built up a fairly rich database—the key to any successful data-mining operation.

Group Health Associates, a 100-physician multispecialty practice with seven clinical centers in Cincinnati, began warehousing data a year and a half before launching its EMR from Epic Systems Corp., Madison, Wis., in 2000.

Similarly, Correctional Medical Services, which provides healthcare to 350 prisons and jails nationwide, has been warehousing information at one key site for two years with the help of a NextGen EMR in preparation for a clinical data-mining project.

But the St. Louis-based company has been mining ICD-9 and CPT codes for several years to help control expenses—a necessity in the current climate of state budgetary pressures. CIO Gary Steiner says that running prison clinics is akin to being 100% dependent on Medicaid because state governments are the only payers.

"The biggest value of data mining is being able to project costs," says Steiner.



■ Holly

## Gold standard

**DATA MINERS MIGHT AS WELL** dig for fool's gold if they don't standardize clinical records databases.

"What does it cost to do a specific procedure in a clinic vs. in a hospital? You really can't do that (comparison) without standard terminology," says Jack Bowie, vice president for sales and marketing at Apelon, a medical software developer based in Ridgefield, Conn. "One of the main drivers toward the utilization of standard terminologies . . . is to analyze the resulting data."

Apelon last month signed a long-term deal with the AMA to make the Current Procedural Technology

code set more amenable to integration with electronic medical records and physician order entry systems. The AMA regularly updates its proprietary CPT codes, and the next update will facilitate the building of massive clinical data warehouses.

In another standardization effort, the federal Agency for Healthcare Research and Quality has awarded a \$1.3 million grant to the Practice Partner Research Network to demonstrate how data mining, clinical information systems and practice management can improve the quality of ambulatory care.

—N.V.

