

CONTRA COSTA TIMES

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## Hospitals adopting computer technologies

By Judy Silber  
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Moving toward a time when hand-written medical charts will be a thing of the past, hospitals in the East Bay are installing expensive computer technologies they hope will improve the flow of medical information.

Hospital administrators say new paperless systems will increase the efficiency of patient care and decrease the number of medical errors. Once they are in place, one electronic medical chart will contain a patient's entire record. Via computers, doctors and nurses will update the chart, write prescriptions and order laboratory tests.

"It will be huge for patient safety," said Nancy Zahradnik, nurse manager of emergency services at ValleyCare Health System. "You won't have to worry about a doctor's handwriting. You won't have to worry about missed orders."

Nearly all U.S. hospitals have sophisticated equipment at their disposal for patient care. But until now, it has looked as though they were bypassed by the computer revolution.

Most hospitals rely on paper charts, handwritten notes and other low-tech methods to keep information flowing. An emergency room might use a large eraser board to list patients' room numbers. Turning a chart upside down on a rack at the front desk might signal that a laboratory test result is in.

At ValleyCare, Zahradnik helped lead a year-and-a-half search to find a system that would completely automate the hospital's Pleasanton emergency department and Livermore critical care facility. By fall, the hospital hopes to have the new technology fully installed.

With the new system, emergency room staff will be able to record all relevant medical information onto a computerized chart, including complaints, allergies and current medications. With the old system, only one person at a time could look at the paper medical chart or add notes to it. But once the computer system is in place, nurses and doctors will have access at any time.

On handheld computers, physicians will be able to write out prescriptions and discharge orders, as well as order laboratory tests and X-rays with the click of a button. ValleyCare expects the new system will speed the flow of information. As soon as a doctor orders a lab test, the lab can send over a technician to draw blood. And as soon as the test result is in, the information will become part of the medical record. An icon will also light up on the patient's chart, signaling whether the result is normal or needs urgent attention.

In addition, the electronic charts will help organize the emergency room. For example, they will display patients' room numbers and whether or not a doctor has seen them. The computer program will also alert doctors and nurses if new prescriptions interact badly with the patient's other drugs.

Because medical information technology is pricey, hospitals have generally approached such systems as a luxury. But that's beginning to change. President Bush has put information technology on the national agenda, saying the medical system needs to catch up to the rest of the corporate world.

Hospitals are also beginning to realize that the systems can save money, said Ken Howard, executive vice president of A4 Health Systems, the company that is automating ValleyCare's emergency department. For example, they'll no longer have to provide dictation services, a common method for transcribing doctors' dictated patient notes. They'll save in copying costs. The new systems may also stave off new construction by maximizing use of already available beds.

In the East Bay, automation is starting to catch on. In addition to ValleyCare, all medical charts at Sutter Health's 26 hospitals will be computerized within the next few years. Kaiser Permanente has also started a program to fully automate its systems. Eventually, when Kaiser members visit hospitals across the country, doctors will have access to their medical records.

Of the East Bay's hospitals, John Muir/Mt. Diablo Health System is the furthest ahead.

"It's such a given, I forget that other organizations are still on paper," said Eric Saff, chief information officer of John Muir/Mt. Diablo Health System.

Four years ago, the medical center installed the same medical records system as ValleyCare for its emergency department. The rest of the hospital is already nearly paperless, and will be completely so within the next few years.

John Muir/Mt. Diablo's motivation for installing the digital technology was safety, Saff said. Though it is rare, hospitals sometimes lose paper charts, and that can lead to devastating consequences.

Now, that won't happen anymore, Saff said. "I don't know how to measure the value of that."

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