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Ethel Roy, 81, visited earlier this month with Dr. Stephen St. Clair, her urologist, at his office in North Adams. (Stephen Rose for the Boston Globe)

## Hope, challenges in computerizing medical records North Adams blazes a trail

By Liz Kowalczyk, Globe Staff | January 30, 2007

NORTH ADAMS -- This old textile city is about to become the first in the United States where residents have electronic medical records that in an instant can be viewed by any physician and many nurses in the community, from their offices, the local hospital, or the visiting nurses association.

North Adams, a city of about 14,000 residents in the northern Berkshires, plans to turn on its computer health network next month. Similar networks of shared patient information are scheduled to go live in Brockton and Newburyport this summer, and doctors are working on a system for Boston as well as ways to link doctors and hospitals across the state.

The health care industry and state and federal governments have pinned great hopes on electronic medical records, which proponents say will help reduce medical errors and costs. Patients typically are treated by multiple physicians, clinics and hospitals, and a computerized records network allows doctors to find information quickly in an emergency, alerting them, for example, if a patient has a dangerous allergy to a medication, or if they are about to order an expensive test a patient has already had.

"What you're seeing in North Adams is revolutionary," said Dr. John Halamka, chief information officer for Harvard Medical School and Beth Israel Deaconess Medical Center in Boston.

But North Adams' experience shows just how challenging it will be to switch to computerized records on a large scale, and link them into a network that allows so many people access. Every family must be asked to sign consent forms allowing their health information to be entered into the system. During the first month of learning to use computerized records, some doctors in the city lost business because they worked more slowly, seeing between 20 and 50 percent fewer patients. Doctors and office staff are struggling to find time to type and scan information from

thousands of pages of paper medical records into the electronic records, and many say that process won't be complete for months or maybe years. Still, only one practice so far, Adams Internists, has refused to participate.

If making the transition has been difficult in North Adams -- a city with about 75 doctors in private practice and just one small hospital -- the issues are likely to be far more complicated in Boston and other big cities, with large, competing hospital systems and physician networks that use different computer systems. The start-up costs will be more of a concern elsewhere as well; in North Adams, an outside grant, not the doctors, paid for the substantial cost of hardware, software, technical support, and training.

"We're at a very fragile point in these exchanges, struggling to overcome technical issues and privacy issues and to be financially sustainable," said John Glaser, chief information officer for Partners HealthCare System, referring to the roughly 200 projects in communities across the country that are creating medical records networks. Glaser, along with Halamka, belongs to a Massachusetts group that is developing ways to connect medical records systems statewide.

About 49 percent of doctors in Massachusetts, mostly in large teaching hospitals, and 15 to 20 percent of doctors nationally, now use computerized records, although they usually are not linked across practices or hospitals. In North Adams, 80 percent of doctors will have electronic medical records by May, said David Delano, director of information technology for Northern Berkshire Healthcare, which includes North Adams Regional Hospital.

Using a \$50 million grant from Blue Cross and Blue Shield of Massachusetts, the Massachusetts eHealth Collaborative is helping North Adams, Newburyport, and Brockton establish community-wide networks to demonstrate their feasibility. Micky Tripathi, president of the collaborative, said that there are communities, such as Indianapolis, where many patients have computerized records that are shared among hospitals and some doctors. But, he said, North Adams will be the first where all the computerized records will be connected throughout the community.

In North Adams, a local group of doctors and health care executives decided that, to guard against unauthorized access to the most sensitive patient information, doctors would create full electronic medical records for their patients that would reside only on that doctor's computer. Separate community medical records, called the eHealth summary, would reside on a shared network; these shared records can be viewed by physicians in their offices, doctors and nurses at North Adams Regional, the local visiting nurses association, and medical staff at the local hospice.

The community record includes all of a patient's basic medical information, including medications, test results, parts of his or her family and medical history, diagnoses, and surgeries. It does not include notes doctors take during appointments, which often can include very personal information about marital struggles or work problems.

Many North Adams residents have worried that computer hackers or curious office staff could look at their medical records. So, the group overseeing the project mailed information to all 20,000 homes in the city and its suburbs and hosted radio call-in programs to answer questions about security.

The education campaign seems to be working. Hertzig, Gerrity, Griffin & Degrenier, a large pediatric practice, has so far asked parents of about 1,200 of its 5,000 patients to sign up, and 98 percent have agreed, nurses said.

Paige Gleason, an emergency medical technician who waited as her son Christopher, 15, saw Dr. Robert Hertzig one morning last week, said that when she first read about the project last fall, she "was not crazy about it."

"The reservation I had was because it's accessible to anyone and everyone, I was afraid that people who were not authorized would be able to see my family's records. Everyone was talking about it, and people were worried."

But she said the more she investigated the program, the more confident she felt that it wouldn't be abused. There are different levels of access; doctors and nurses will get a special password to see a patient's community record. Secretaries will be able to see limited information such as a patient's insurance plan. The system automatically tracks who accesses patients' records, and patients can request these reports. And the medical information is stored in code, which can be unscrambled only by software on the doctors' computers.

These safeguards reassured Gleason, who recently signed up her son and daughter; she said the community records could help doctors care for her children if they end up in the emergency room.

Doctors said they believe the electronic records will improve patient care. Dr. Paul Rosenthal, a cancer specialist in North Adams, said that on rare occasions, he's prescribed chemotherapy to a patient without knowing another doctor had put the person on blood pressure medication, a combination that has to be carefully managed because it can cause blood pressure to plummet.

"Most patients don't have any idea what medicines they're on," said Dr. Stephen St. Clair, a urologist. "You call the primary care physician and they have a list of what they gave the patient. But they may not know what the cardiologist and neurologist gave them."

Even with the benefits, connecting the entire state, or even just Boston, will be extremely difficult.

Partners, the parent company of Massachusetts General Hospital and Brigham and Women's Hospital and the largest health care network in Massachusetts, has concerns that patient data could wind up in the wrong hands if it grants doctors outside its network complete access to its electronic medical records, Glaser said.

In the end, the group working on statewide connectivity probably will recommend something more limited than the North Adams model, such as patients agreeing that records of their consultations with a cardiologist, for example, be sent electronically to their primary care doctor, according to Halamka. This would not help doctors access information in the emergency room. To solve that issue, Halamka said patients eventually may carry cards containing data on their medical history, which would allow them to decide who can see it.

In North Adams it's clear that the benefits partly will depend on how much time physicians spend entering information into the computerized records.

Ethel Roy, 81, recently gave permission for St. Clair, her urologist, to send her medical information to the community record. "I've had so much medical care, I think I've been to every doctor in town," she said as she waited for her appointment last week.

But she's also had 34 operations, many of them at Mass. General, Baystate Medical Center in Springfield and Albany Medical Center -- records that, because they are kept at facilities outside North Adams, normally would not be part of her community record. St. Clair, however, took a three-page typed sheet she carries with her describing her care at various hospitals, and entered it into the system. ■