Digital safety net

A Web-based system in Orange County, Calif., has dramatically improved health care for the indigent

BY HEATHER B. HAYES

In Orange County, Calif., the most medically vulnerable population is a group of 25,000 people who are 21 to 64 years old, impoverished, often chronically ill and sometimes homeless. In addition, some of them are addicted to alcohol or drugs.

Nevertheless, when a member of this group shows up in an emergency room, physicians have access to better medical information about them than they do about patients with commercial health insurance.

That anomaly is the result of a cutting-edge Web-based system established by the Orange County Medical Services Initiative (MSI), the local safety net program that pays for medical care for those who have little or no financial resources.

The new system has been so successful in improving outcomes for that patient group that it has grabbed the attention of other health care organizations in Orange County and is seen as a model nationwide for serving uninsured and underinsured patients.

Launched in early 2007 at the request of ER doctors who wanted more clinical and diagnostic data on low-income patients, the new MSI system acts as a community health

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record and a kind of mini-regional health information organization (RHIO).

Using a Web front end and a back-end database of claims and clinical data, the system keeps tabs on a patient's visits to any of the county's 22 ERs, 14 community clinics and about 200 primary care physicians. It also tracks prescriptions and the results of any laboratory and radiology tests.

"ER physicians who are using it frequently are extremely happy with it," said Dr. Peter Anderson, director of emergency services at Fountain Valley Regional Hospital and Medical Center.

He added that the system has significantly improved continuity of care and health outcomes for the county's poorest residents, who show up in ERs and community clinics as often as twice a month for major and minor issues.

Dan Castillo, MSI's administrator, said the system has performed so well that it will soon be expanded to the county's Medicaid program, which covers 370,000 people, and the county's program for the uninsured, which assists 455,000 residents.

"Everybody here is pretty excited about this because you're talking about some pretty big leveraging when an ER physician has the ability to tap into the health information of 850,000 lives and the impact that has on health care and costs," he said.

Health IT renaissance

In the past, MSI relied on a manual enrollment process and a paper-based recordkeeping system. That meant patients had to wait more than 45 days to see if they were eligible for participation, and MSI had a limited ability to link its medical records or case management information with ER visits.

Furthermore, patients had no regular source of care and no clinical information at the point of care, and they were more likely to report that they had not received needed medical care.

The new MSI system, by contrast, has fostered a health information technology renaissance, Castillo said, with the following benefits:

■ A standardized, paperless enrollment process that has resulted in a 30 percent reduction in the number of employees handling eligibility issues and a decrease in the time it takes to determine eligibility from 45 days to a few days.

■ A 5 percent reduction in nonemergency ER visits.

■ A reduction in duplicate prescriptions, for a savings of $600 per patient per year.

■ Diagnostic and ancillary savings of $130 per patient per year.

■ A greater ability to recognize patients who are abusing prescription drugs and refer them to rehabilitation programs or pain management specialists.

MSI faced some tough issues in developing and deploying the system, but most of them were cultural rather than technical, Castillo said.

With more than 3 million residents, Orange County posed some unique challenges: All 22 hospitals in the county are privately owned and all have different IT systems.

However, the fact that the county government didn't run any hospitals turned out to be an advantage, said Chris Cruttenden, president of NetChemistry, a systems integrator that, along with ELM Technologies, helped build the Web-based system and manages the back-end database and applications at its facility in Newport Beach.

"Sometimes with a county hospital system, they want to keep all of the patients within their own IT system, but because we had all these disparate hospital systems, it allowed the MSI program to take the lead," Cruttenden said.

Protecting clinical data

Still, getting all the hospitals to participate and provide daily information updates was probably the biggest challenge because many were concerned about sharing clinical data and how it might affect their compliance with national privacy rules. To deal with those and other issues, officials made a point of involving the local hospital association and ER physicians when they took their first steps to develop the system 3½ years ago.

Castillo said the system was built to the

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specifications of ER physicians. "Physicians have long had problems with this population," he said. "And that's mainly because if a patient goes to Hospital B one week and then Hospital A the next, Hospital A has no idea what happened at Hospital B. That results in lots of duplicate tests, duplicate prescriptions and frustration. Now, Hospital A talks to Hospital B, as well as hospitals C, D, E and so on."

By taking ER physicians' input into consideration, MSI built the system to be highly intuitive, without any need for physician training, and it added only a single step to the clinical workflow.

"All you have to do is sign on and then put in a couple of pieces of information, such as the patient's name and their Social Security number or birth date, and then you're in and you can find what you need pretty quickly," Anderson said. "It's really quite easy to use."

A patient record features a health summary and clickable tabs to more detailed

information, including medical history and prescriptions. An ER physician can add notes to the summary, refer the patient to a community clinic or schedule a followup appointment at the clinic.

Castillo said the system also has an alert feature for the records of its 1,000 sickest patients with chronic conditions such as diabetes, hypertension, asthma or congestive heart failure. When one of those patients arrives at an ER, the hospital notifies MSI and the patient's case manager. If the patient is admitted, the caseworker can begin discharge planning with the patient, the physician and the hospital.

Under the old paper-based system, MSI would rarely know if one of those patients had been admitted. "This led to longer lengths of stay and higher costs for the overall health system," Castillo said. "The new mechanism empowers our hospital partners and MSI to take a proactive approach to this population."

A case manager can now take steps to get patients to the next appropriate place quickly, which could be a nursing home, specialty care facility or homeless shelter. The ability to move patients to the next level of care has tremendous financial implications because hospitals are the most expensive places to receive care. MSI and hospitals can now reduce the length of stay and move patients to more appropriate facilities.

Castillo said the goal was to provide better continuity of care and eliminate excessive costs, but the initiative is having another compelling benefit. "What we think we're doing is changing patient behavior," Castillo said, adding that through the system, 13,000 enrollees have now been assigned a medical home. "With this system, we are not only enabling physicians to better treat a patient's medical conditions, but we're also empowering patients to better understand and take the steps required to comply with the treatment protocol and help manage their own health." ■