The Challenges of Bringing Connectivity to Jails via Health Information Technology: Three Case Studies

By COCHS Staff

Historically, jails have operated as islands, separate from their communities. Low-level offenders typically cycle back and forth for very short stays between jails and their local communities. For many of these "frequent flyers," the health care they get in jail is the only health care they get.

New health information technologies, such as electronic health record (EHR) systems and regional and community health information exchanges (HIEs) could help bridge the divide between jails and their communities, leading to more efficient and better coordinated care, significant health care cost savings to local jurisdictions, and improvements in both public health and public safety. But these bridges have yet to be built.

This paper describes three efforts to bring health information technology (HIT) into jails. Each initiative explored HIT from a different perspective and for different motivations, and each encountered different challenges. None has yet applied HIT to create connectivity between jails and providers in the community, giving some indication of the obstacles that lie ahead in bringing jails fully into the health care safety net.

- In Ohio, the medical director of the Licking County jail saw the potential to create connectivity with community health care providers by bringing in an EHR system. But the vision stalled when the county, due to financial constraints, declined to pay for system upgrades that would have included remote access and eventually HIE. The jail, an early adopter of health information technology, now has a limited system that is awaiting a significant upgrade.

- Correctional Healthcare Companies, Inc. (CHC), a national provider of correctional health care services, wanted an integrated electronic health information product to offer the 260-plus jails and prisons it serves. But building connectivity was not the key item on CHC's agenda—what the company really wanted was a better tool for managing utilization, referrals, claims, and charting. Although the new system has an EHR component, only a handful of jails have adopted it.

- Another national provider, PHS Correctional Healthcare, Inc., sought to develop a corrections-specific information system called Catalyst that would support high-quality care. Connectivity via bi-directional health information exchange was part of the long-term plan for Catalyst. Now that PHS has been merged into a new company, Corizon Health, Inc., Catalyst is being folded into a program that was developed as a community-based outpatient care EHR. Plans for bi-directional HIE, which Corizon notes is extremely difficult to achieve in correctional settings, are unclear.

Licking County, Ohio, Justice Center

The Licking County Justice Center, a 330-bed jail in the middle of Ohio, is an early adopter of health information technology, thanks to the initiative of its medical director, Michael Campolo, DO, and the willingness of county officials to make the initial investment. That was seven years ago, when EHRs were unheard of in jails.

Campolo had just started using a simple EHR system in his private practice and was pleased with how much easier it made everyday tasks like charting and medication tracking. The system—based on a method of documentation called the SOAP note—allowed him to enter patient updates quickly, legibly, and efficiently into a single electronic record for each patient.

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Campolo sometimes brought individuals from the jail to his family medicine practice for procedures. He reasoned that, if the jail had the same EHR system, it would be easier to convey information back and forth between the two settings.

He also felt that the jail would benefit from an EHR. "We needed a quick, simple program that records the information and stores it in a logical, systematic way and pulls up the data when you need it," he says. He persuaded county officials to purchase the SOAP-based system for the jail.

The system, he says, has made it easier for medical staff at the jail to do their jobs. It provides them with swift access to patient medical records, where they can enter updates and track medications. All charts are legible and easy to find.

However, Campolo's original hope of connecting the jail EHR with his office EHR did not come to fruition, because the county decided it couldn't afford to purchase the upgrade necessary to support remote access. "We ended up having limited use of the system," he says. He has since purchased a completely different, more up-to-date EHR for his office practice, so the two systems are no longer compatible.

An upgrade for the jail system is finally in the works. With the upgrade, Campolo will be able to access the system remotely via the Internet, allowing him to review records while outside the jail. Currently, system users can access the system only if they are physically inside the jail. Remote access, Campolo says, would greatly improve efficiency.

In the long run, Campolo hopes to be able to link electronically with health care providers in the community, such as the local hospital emergency room. "Now, everything comes in by paper—ER visits, lab results," he says. "We have a good working relationship with the hospital, and we're always calling the ER ahead of time to let them know when we're sending someone down." Most challenging of all, he says, is getting health records from state and federal prisons when inmates are brought back to the jail to testify for a local case or for a short stay during a transfer to another facility.

Campolo notes that the jail population has changed significantly during the 28 years he's been medical director. "More and more long-term and sicker people are coming into the jail, and you need to monitor their health," he says. "When I started, if you were diabetic or on oxygen, you didn't get put in the county jail. Now we have paraplegics, people on long-term oxygen, people with sleep apnea, and people with HIV." Half to three-quarters of his jail population has some form of mental illness.

"They come in and we don't know what they're on or what they're taking," he says. "It takes at least a day or two to get their records."

Correctional Healthcare Companies (CHC)

As a major provider of inmate health care services, Correctional Healthcare Companies (CHC) wanted a single electronic tool that would manage utilization, claims, referrals, medications, and charting. Although the company had been using a commercial EHR system called CORE EMR, it decided to develop its own product.

"We wanted a system that would improve our health care delivery, and, in doing so, directly improve the service we are able to provide our clients," says Raymond Herr, MD, chief medical officer of CHC. "The system needed to go beyond just being an electronic health record and had to streamline our utilization management work and our claims processing."

The result—an Internet-based suite of products called VIZION—launched in 2010 and has been implemented at varying levels across CHC's 260-plus jail and prison sites. Most sites use VIZION for managing referrals and medications, but only a handful of jails have incorporated VIZION's EHR component.

The 400-bed jail in Douglas County, Colo., is one of them. Gagan Singh, the medical director for the jail, says that the VIZION system has improved decision-making support as well as cost-effectiveness.

Remote access to the system makes it possible to do a substantial amount of review and communication off-

site, which is important to Singh, who is at the jail for only a half-day each week. "This is the only way I can cross-check my medications," he says.

No longer do nurses pore through pages of medical records. Instead, they pull up the information they need quickly and easily on the computer. Documentation is clear—no more time spent trying to decipher illegible handwriting. And although every order needs to be reviewed and signed by a physician, it can all be done electronically, Singh says.

"If you have 400 inmates, you can't provide effective treatment with a half-day of physician time," he notes. "The nurses are my eyes and my ears, and I have the electronic system as a backup. Basically we are doing telemedicine over the phone."

Pharmaceutical management has also improved with VIZION, says Singh. Many people enter the jail with multiple conditions—particularly diabetes and hypertension—that require medications, and others come in with over-the-counter pain relievers such as Tylenol. Nurses at the jail used to spend two days a week reviewing medication orders when they were handwritten, but VIZION automatically checks for drug-drug interactions and other red flags.

Singh says that VIZION can help jails manage patient populations that are complex, with a high burden of illness and little to no access to health care outside the jail. A significant proportion of the population cycles back and forth between the jail and the community. At the Douglas County jail, average length of stay is 10 to 14 days, Singh says, and many offenders are readmitted several times a year.

Currently there are no plans to link VIZION with community-based health care providers.

Herr predicts that it will take time for many of the nation's 3,300 jails to adopt EHR systems like VIZION. In some cases, resistance to new technologies is the primary barrier. For smaller facilities, cost can be the crucial impediment; county and local governments may be hard-pressed to justify purchasing expensive computer systems to provide health care for offenders.

Yet there appear to be the makings, at least, of a business case for correctional EHR systems. Both Herr and Singh say that VIZION is reducing emergency room admissions and length of hospital stays.

Corizon Health, Inc.

Carl Keldie, MD, and Conni Thran, RN, CCHP, wanted to change the world—at least the world of correctional health care. In 2007, while they were both working for a correctional health care provider called PHS Correctional Healthcare, Inc., they embarked on an ambitious endeavor to develop a highly robust information system specific to correctional health care settings. The system, dubbed Catalyst, would incorporate virtually every policy, every form, and every directive used by the company to manage and provide care.

Historically, Catalyst was preceded by the Rikers Island Information System (RIIS), which PHS developed for the New York City jail system to process information taken from inmates via a health questionnaire. Although PHS subsequently used RIIS as the platform for developing the first version of Catalyst, the Catalyst program was never deployed in any of the New York City jails. Instead, the city's Department of Health and Mental Health ultimately decided to adopt a commercial EHR program called eClinicalWorks (eCW). Meanwhile, development of Catalyst continued.

In June 2011, PHS' parent company, America Service Group, Inc., merged with the owner of another major correctional health care provider, Correctional Medical Services, Inc., to create Corizon Health, Inc., which provides health care in more than 400 prisons, jails, and other correctional facilities. Keldie became Corizon's medical director and Thran is the new company's vice president of clinical programs and applications.

By the time of the merger, Keldie and Thran had completed several major components of Catalyst, but more work remained. They expected to bring Catalyst to

fruition under Corizon, but, after reviewing the financials, the company's leaders made a strategic decision not to move forward with the project.

That was the end of development for Catalyst, which remains active as a "legacy" system at 22 Corizon sites. Corizon is currently retooling its HIT efforts around eCW, the system selected by New York City. Whereas Catalyst focused on quality improvement and patient safety for correctional settings, eCW is a conventional EHR that was developed for non-correctional outpatient settings. Keldie and Thran are working to create a rules engine for eCW that will incorporate some of Catalyst's function-alities. Ultimately, eCW will be deployed across all the company's sites, replacing Catalyst completely.

But Catalyst is unique, according to Thran. "Catalyst was built for corrections, and that's what sets it apart," she says.

It is also what made development of the system so complex and time-consuming. Essentially, through Catalyst, Keldie and Thran sought to standardize every aspect of correctional health care. That proved to be a Herculean task.

"We had so many different paper tools that we standard-ized for our clinical staff—nursing staff doing sick call, mental health staff doing group therapy, obstetricians who come on site and take care of our pregnant inmates," Thran says. "We literally have hundreds if not thousands of documents that we use to standardize our approach, at least on paper. Translating these into an electronic information system was extremely time-consuming. It took thousands of hours."

The end result was a system that recognizes and addresses many of the most daunting challenges to providing health care in a correctional setting. For example, Catalyst can tell where an offender is—whether he is actually in the jail or in another facility or whether he's been released.

Catalyst also differentiates among and responds to different levels of illness acuity, which is critical in jails, where the population tends to have a heavy disease burden. It can identify a person with mild asthma who's never been hospitalized versus someone who's been hospitalized several times or is taking corticosteroids and needs an expedited admission.

Keldie and Thran also recognized the need for Catalyst to support HIE. Even though HIE is virtually non-existent in the correctional world, the ability to interface and synchronize data around a patient in multiple systems will become increasingly important. "Right now, it's all a paper process," Thran says, but that has to change.

Currently, Catalyst can receive data from external sources, such as lab contractors, and a couple of Corizon sites continue to use the system that way. However, the system doesn't make health care data from inside the jail available to outside providers.

Bi-directional linkages with community providers, such as clinics and hospital ERs, represent a much more complex level of information exchange, partly because ICD9 and ICD10 codes developed for fee-for-service environments would need to be incorporated in such a way that jails, which have never used these diagnostic codes, could recognize them. "That's what the extended build-out of Catalyst ultimately would have included," Keldie explains. "But we didn't get to complete that level."

Now that Corizon is transitioning over to eCW, plans for HIE are unclear. Thran says that eCW includes HIE for the non-correctional settings that were core to its development. However, that capability "does not exist in the correctional world yet," she adds. But clients are demanding it. "We know it has to happen," she says. "It's more a matter of how much time it will take to work it all out."

Keldie agrees. "Getting community linkages to your offsite providers and inpatient settings will be big," he says.