These are certainly busy times for Carl Cameron, Chief Information and Analytics Officer at Holyoke Medical Center, and much of this work is focused on the creation of a health information exchange (HIE) between the western Massachusetts hospital and the array of providers with whom it works on a daily basis.

Not only has the 198-bed healthcare facility spearheaded a local community health exchange that is bridging the information void within the hospital’s service area, but it is also connecting to the Commonwealth’s statewide HIE, called the Massachusetts Health Information Highway, or Mass HIway.

These efforts are less than a year old but are already paying dividends and opening doors to a spectrum of possibilities to improve care, while also allowing for the implementation of real-world health information technology applications for HIEs, such as electronic health records (EHRs).

The strategy began to materialize within the past few years when the Centers for Medicare and Medicaid Services (CMS) Meaningful Use program began and started providing financial incentives for strategic EHR adoption.

“I approached our physician hospital organization about how we can help the community reach its goals in terms of meeting Meaningful Use and bringing in electronic health records,” said Cameron.

He beefed up his health information technology division at Holyoke Medical Center (HMC) to provide the hosting and support for any of the providers in the community who wanted a contract with HMC and eClinicalWorks, an EHR system.

Additionally, a community health information exchange, HMC HealthConnect, was established to share patient data across providers in different locations.

Initially, HMC delivered laboratory results, radiology results and departmental results in real-time, directly to the EHRs within the physicians’ practices.

“So they’re getting the results faster than they used to get them in the paper world,” said Cameron. “They don’t have to come in and weed through faxes.”

To date, there are 47 providers in the community, in addition to HMC’s emergency and in-patient services department connected to the HMC HealthConnect. HMC created a unified patient consent process, where if a practice decides to participate with the hospital and signs a participation agreement, anytime it makes a notation in its EMR, it automatically goes to the health exchange. The same happens on the HMC side. If a patient is discharged from the emergency department or from in-patient services, the notice automatically goes to the health exchange, thus creating a repository for continuity of care documents (CCD) on HMC HealthConnect.

“That’s basically what we started with, the simple CCD required under (Meaningful Use Stage 1) so that we could work with doctors on changing the flow in their offices, how they truly do continuity of care across the continuum, and getting them to understand that with their EMR, they can now see documents out in health exchange,” said Cameron.

(over)

“From the standpoint of privacy and a data protection, that’s all built in. We’re running about a 96 percent opt-in rate, so we have high involvement from our patients.”

—Carl Cameron, Chief Information and Analytics Officer, Holyoke Medical Center
If a patient consents that the doctor can exchange his or her information via the HIE, the doctor will then be able to view it and exchange it with other providers.

The same can be done with specialists or referral providers the patient visits, whether at the hospital or externally. Additionally, if the patient visits a specific healthcare professional but does not want that provider to see and exchange information, he or she can opt out.

“So it really gives the patient the flexibility of who can see the data,” explained Cameron. “From the standpoint of privacy and data protection, that’s all built in. We’re running about a 96 percent opt-in rate, so we have high involvement from our patients.”

To make it easier for providers using different EHRs to participate in the system, it is not necessary for them to leave their EHR to access information. Holyoke has built a function into its EHR which allows a provider using a separate EHR system to see there are patient-specific documents on the health exchange, click a button, and then view those documents without leaving their own electronic records system.

“Our goal was ease of use: How can we make it so providers don’t have to leave the EMR that they’re in and go to another Web portal to search the exchange,” said Cameron.

**Taking on Diseases Through HIE**

In an early project related to HMC HealthConnect, the system is being used to improve patient care around two specific diseases: Chronic Obstructive Pulmonary Disease (COPD) and Congestive Heart Failure (CHF). When patients with either disease are treated at Holyoke and then released, the discharge instructions can be sent electronically to providers within Western Massachusetts Physicians Associates, a physician practice group, which falls under the Valley Health System umbrella, of which HMC is an affiliate.

The goal is to ensure a COPD or CHF patient receives a follow-up visit within seven days of hospital discharge so that the primary care physician responsible for the patient is treating the diseases more actively and aggressively. And the early results are promising.

“When we started and were not doing any electronic exchange, we found that roughly 20 percent of these patients were able to get a visit within seven days after being discharged,” explained Cameron. “Since we went electronic and started working through the health exchange, we’re reaching 43 percent.”

For the patient this creates solid linkages across the care continuum, allowing the primary care provider to view discharge instructions electronically, helping to eliminate the confusion that occurs when a patient shows up without papers and is uncertain about the instructions received from the hospital. For the hospital, it creates a system which increases patient engagement, helping it identify potential problems post-discharge, and in an efficient and cost-effective manner.

**Onto the Mass HIway**

HMC has also connected its community health exchange to the Mass HIway, serving as an example of how the HIway operates as a statewide “network of networks.” The external connection is designed to allow providers within the community exchange to share information throughout the state.

The HIway is a collaborative effort between the Massachusetts eHealth Institute (MeHI) and the Massachusetts Executive Office of Health and Human Services (EOHHS). EOHHS leads infrastructure development and operation of the Mass HIway, which will demonstrate measurable improvements in care quality, population health and reduce health care costs. Mass HIway funding is provided by the Office for the National Coordinator for Health Information Technology (ONC), the Centers for Medicare & Medicaid Services (CMS), and is sustained through private contributions.

Cameron said efforts are underway to facilitate some behavioral health use cases between Holyoke Medical Center, Holyoke Health Center (a Federally Qualified Community Health Center) and River Valley Counseling Center, the primary behavioral health component for referrals.

Cameron said the HIE adoption rate will also rely on the EHR vendors expanding their offerings and additional providers joining. For hospitals such as HMC, the mission is also to communicate the day-to-day benefits to their regional healthcare partners. As he noted, doctors are focused on the care of their patients, so the information provided by HIEs – and how it can improve the care of their patients – is the paramount goal.

“It’s also about having to change physician patterns, in terms of how they see a patient, which is more episodic in terms of ‘what is affecting the patient today,’ rather than being worried about who’s going to see the documentation down the line when something else happens or there is a referral,” said Cameron.