EHR Adoption: What's Happening? Part 3

A look at Denver Health's interesting approach to EHR implementation.

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LESLIE: As we wrap up our three-part series we take our readers to Denver Health, formerly known as Denver General Hospital, the Rocky Mountain region's academic Level I trauma center, and the safety net hospital for the Denver area. The Denver Health system integrates acute and emergency care with public and community health.

PATTY: Denver Health has been recognized by the Commonwealth Fund Commission on a High Performance Health System as a "learning laboratory" for the nation. It also has been recognized for its best practices in enterprise management and as one of the top most wired hospitals.

LESLIE: This month we visit with Mary Beth Haugen, MS, RHIA, director of HIM and information services (IS) of this integrated system. Of great interest is Mary Beth's role. A couple of years ago, the HIM and IS departments merged to facilitate the adoption of the EHR. Mary Beth's role expanded to include oversight of IS functions in addition to HIM functions. She has been on a great professional journey.

PATTY: Well then, let's get started. Hi, Mary Beth. Before we talk about your organization's EHR adoption, let's discuss your role at Denver Health and the unique reporting structure.

MARY BETH: My role includes leading the migration from HIM to e-HIM as well as IS functions such as implementing clinical components of the EHR, Web development and financial systems, including registration and time and attendance. I report to the chief information officer. The IS teams that report to me include clinical applications, financial, training and workflow teams. The technical aspects of IS report to the chief technology officer.

LESLIE: What HIM functions do you oversee?

MARY BETH: Coding, cancer registry, document imaging, phy-sical record storage, birth certificates, transcription; everything within the HIM department transferred to IS during the merger of the two departments.

PATTY: It sounds like a win-win for HIM and IS and a big change.

MARY BETH: It has been a huge change and a positive one. HIM brings much to the table, such as an understanding of clinical information flow; national, state and local regulations; how records/data are used; data standards; and legal health records, to name a few. The synergies achieved by being one department have enhanced the quality of the content of the EHR and its adoption. While there was good collaboration before the merger there wasn't necessarily optimum coordination.

LESLIE: Have you experienced other benefits from the IS/HIM merger?

MARY BETH: Internal customer service has improved. We are more nimble and can support the organization better than we could as separate entities. Also, we have seen a significant drop in duplicate medical record numbers. This is a result of truly understanding the technical and HIM issues around duplicate medical record numbers. Alerts and other technology tools were added to various databases to reduce the duplication rate. We went from a duplication rate of 10 percent to less than 1 percent.

PATTY: From a data management and patient safety perspective this is a very important outcome.

MARY BETH: We couldn't have achieved this significant reduction in medical record duplication as two separate departments. The other thing that has changed is the role of HIM managers. We created a data integrity division that is managed by an HIM manager. She has IS and HIM data integrity functions reporting to her. We also have an EHR manager who oversees all the EHR components. She also represents the HIM perspective regarding the legal EHR and has HIM and IS professionals reporting to her. Another team member, the assistant director, focuses on coding and registries.

LESLIE: How did this opportunity to merge come about?

MARY BETH: I formed good relationships with key people in the organization, including the CIO. I worked my way to the table as much as possible. When the CIO developed the vision for the merger in 2005, we had already collaborated together for several years. We came to know and appreciate each other's knowledge. The merger of our subject matter expertise was just what the organization needed to advance the EHR. The chief financial officer, whom I reported to at the time, saw the benefit and supported this change in structure.

PATTY: Do you think that HIM departments should move in this direction?

MARY BETH: I really do think this is the future of HIM departments. While I was concerned initially that HIM might lose its identity or funding for certain HIM projects, the end result was the complete opposite. HIM has stronger roots in the organization and is integrated throughout the EHR. At some point you just have to take the leap of faith and go for it.

LESLIE: Let's switch gears now and talk about your organization's EHR.

MARY BETH: We began our EHR journey in 1995 with the implementation of document imaging. The impetus for implementing document imaging was to enhance access to medical records. Our retrieval rate was less than 40 percent as physical records moved across the integrated health system. We needed to improve access and provide clinicians with the medical record during treatment.

Fast forward to today, we currently scan within 12-24 hours of receipt. The documents are then boxed by scan date and shredded 6 months later.

PATTY: Six months seems like a long time.

MARY BETH: Every organization has to determine their risk tolerance. I suspect at some point we will shred within 30 days.

LESLIE: What came after document imaging?

MARY BETH: We have implemented many applications since document imaging. A key application is the Lifetime Clinical Record (LCR), which provides a longitudinal view of patient data, such as lab work. There

is also access to pathology and radiology. Over the years we have developed this tool into an outpatient documentation system, which can run rules and alerts for chronic diseases or preventive care, such as the need for an immunization. There are also pointers in the system, which allow clinicians to view document images without leaving LCR.

LESLIE: How do providers access their patient information?

MARY BETH: Clinicians sign on using a smart card. They are then presented with important links, their patient lists, and various tools we created that are helpful to them. They are also notified of any charts that need to be signed or dictated and it will highlight in red anything that is delinquent. Logging off the system requires them to remove their smart card.

LESLIE: How do providers sign their scanned documents?

MARY BETH: They sign scanned documents utilizing electronic signature functionality within the documentation management system. They review their record and assign a personal identification number (PIN) after each document.

LESLIE: This all sounds terrific. Are there other components to your EHR?

MARY BETH: Our EHR vision supports a mission of patient safety so it was natural for us in 2003 to move on to Computerized Physician Order Entry (CPOE). We agreed to be a beta site and our physician executive leadership supported the CPOE implementation. We decided because this was an expensive initiative we would pilot it first. We chose the Medical Intensive Care Unit (MICU) for the pilot.

PATTY: Why the MICU?

MARY BETH: We thought if we could be successful in MICU we could implement CPOE anywhere. The pilot lasted a year. It took that long to understand workflow and to work with our vendor to prepare the system to roll out across Denver Health. During the pilot we also worked on updating our pharmacy and laboratory modules.

PATTY: What was the rollout like?

MARY BETH: We took an incremental approach to our rollout rather than big bang. We started with inpatient units with the exception of moms, newborns and pediatrics. All the intensive care units went live. The incremental approach was hard on the team, especially when patients were being transferred back and forth between CPOE and non- medical and surgical CPOE floors. It also required 24/7 support.

LESLIE: Have you brought up the moms, newborn and pediatric units on CPOE?

MARY BETH: We are scheduled to go live mid-September. And because we have the experience, we will go live with a big bang approach. It took some time to get to this point because we had to re-write all of our weight-based dosing. We also took the time to incorporate lessons learned in our CPOE planning and implementation.

LESLIE: What's next?

MARY BETH: A closed-loop medication management solution to automate the medication process is next. We plan to go live in October with full implementation by July 2008. We plan to bring up a unit every 2 weeks and

will take a break in November and December to work on a few other initiatives. We are taking the incremental approach as this has been recommended by our vendor and others who have automated their medication process. A 1:1 training ratio at go live is recommended.

PATTY: What would you recommend to our readers who are getting started or are in the throes of implementing components of the EHR?

MARY BETH: Implementing an EHR requires a significant level of collaboration and cooperation across the organization, and it will include vendors and consultants, whose expertise and experience will make them important partners. Building good relationships with all who are involved must begin as soon as possible.

I also recommend that people take advantage of all the work that has been going on over the past few years. The American Health Information Managment Association (AHIMA) has some great resources and because of that you don't have to reinvent the wheel. There are lessons learned and a vast network of HIM professionals to tap. AHIMA's community of practice connects with HIM professionals across the country. Also, just picking up the phone and calling a peer helps. I rely heavily on my peers in Denver for moral support, and as my sounding board.

PATTY: Sometimes picking up the phone is awkward. You want to be respectful of people's time especially if you don't know them.

MARY BETH: That's true but from my perspective and that of my staff, we love to share our story. If we can make it easier for someone else, we want to do that. Most people are willing to share their trials and tribulations and successes.

LESLIE: Thanks for sharing your story with our readers. Best of luck to you as you continue your EHR implementation. We look forward to catching up with you next year.

PATTY: Next month we explore the hot topic of public reporting and secondary uses of data. Until then, Leslie and I wish you a wonderful summer.

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