



The Children's Hospital

Improving patient care by transforming paper to easily accessible electronic records

Benefits

- Improves patient care by providing clinicians and administrators with quick, easy access to medical records
- Eliminates need for paper filing room and labor to file paper records, enabling move to new hospital facility designed with minimal storage space for paper documents
- Significantly reduces risk of lost documents
- Provides foundation to manage wide range of clinical and non-clinical content

Business overview

Founded in 1908, The Children's Hospital is a private, not-for-profit pediatric healthcare network located in Denver and 100 percent dedicated to caring for kids. It has been ranked one of the best children's hospitals in America by U.S. News & World Report for more than a decade. With 1,130 pediatric specialists and more than 2,400 full-time employees, Children's is home to a number of nationally and internationally recognized medical programs.

Challenges

"Paper is on its way out in the hospital environment, but it will be a long time before it is gone entirely," says Sharon Dody, project manager at The Children's Hospital. "Patient forms filled out by hand and paper documents originating from other hospitals will be around for quite some time." Consequently, while in the process of implementing electronic medical record (EMR) software from Epic Systems, The Children's Hospital knew it also needed a fast, efficient way to transform paper to electronic records now and in the foreseeable future.

Eliminate paper to enable move to new facility

When the hospital began planning its 2007 move to a new facility, the need to transform paper became more urgent. The current hospital facility has a large file room devoted to storing paper medical records. The new facility has been purposefully designed with very little space to store paper.

EMC solution

"Initially we were charged with identifying a document management solution for the hospital's clinical areas," explains Dody. "As we began to better understand the concept of content management, we broadened our search to include solutions that could incorporate workflow, collaboration, records management, e-mail management, and so on. We chose the EMC Documentum platform because it offered the broadest range of content management functionality for the future, and because it supplemented, rather than replicated, the functionality of the EMR."

Business profile

The Children's Hospital

One of the premier pediatric medical centers in the United States

Industry

Healthcare

Geographies

Denver, Colorado

Business solution

Transactional content management, knowledge management, patient records management

EMC products

EMC Documentum enterprise content management platform, EMC Captiva InputAccel, EMC CLARiiON, EMC Symmetrix

Deployment summary

Hundreds of healthcare providers and administrators access the EMC Documentum system from within the hospital's Epic Systems healthcare information management system to view medical records and other clinical information. Eventually 5,000 users will use the system to access clinical as well as non-clinical information, such as correspondence.

EMC partners

EMC Documentum Professional Services

With help from EMC Documentum Professional Services, The Children's Hospital integrated the EMC® Documentum® system directly with its new Epic Systems EMR, beginning with the Epic ambulatory module. Other Epic modules at The Children's Hospital that are being rolled out in the fall of 2007 include clinical documentation and Computerized Physician Order Entry (CPOE) for the inpatient areas, Health Information Management, and Radiant (Radiology Information System). Epic modules currently in production include Cadence (scheduling), ADT/Prelude (registration), Resolute hospital billing, Emergency Department, and Pharmacy. All of the clinical modules will be integrated with the Documentum system.

Transforming one million pages of paper with automated scanning

Using EMC Captiva® InputAccel® software, along with the EMC Documentum system and barcoding, has enabled The Children's Hospital to automate the scanning and data capture process to transform paper documents into useable electronic information. Before scanning paper documents, clerical staff throughout the hospital affix barcoded labels to them to identify the patient and visit to which it belongs. When the documents are scanned, InputAccel indexes every document. An administrator then verifies that the index fields—document type, medical record number, and encounter number—are as expected.

After quality assurance review, the scanned images are then automatically released to the EMC Documentum system which extracts the indexed metadata from the files, creates an HL7 (healthcare interface language) message, and sends that message to an interface engine that sends information about the content to the Epic system. The appropriate hyperlinks to the content are then automatically created so that users can click on a medical record in the Epic system and instantly view the supporting document images. The hospital expects to scan one million pages annually.

Providing easy access to scanned information for 5,000 doctors, nurses, and others

Because the Epic system already has robust security, The Children's Hospital IT set up the EMC Documentum system so that anyone with security clearance to the Epic patient record, whether a doctor or social worker or volunteer, could click to view scanned images stored in the Documentum repository that are related to those patients. Because users were already familiar with the Epic environment, training was minimal. Children's anticipates that up to 5,000 clinical users could access images in Documentum after the EMR is completely implemented.

With the EMR, physicians are also no longer limited to viewing patient records and other information only while at the hospital. They can view patient records from home or at their external offices, and they don't have to wait for someone to pull the record from a filing room. They can also view an image stored in the Documentum system at the same time others are viewing it.

A select group of users in the Health Information Management department access the records in the Documentum system using the EMC Documentum Webtop browser-based interface. In addition to viewing images stored in the system, these users can perform tasks such as merging patient records, changing or updating metadata, and performing custom searches. The Children's Hospital also envisions giving the compliance office direct access through Webtop due to its need to audit access to patient information.

Improving patient care with improved access to information

"Improved access to information—being able to quickly view patients' records before they come in for a visit, for example—can improve patient care," says Dody. "Previously providers had to thumb through a paper chart; now they click with a mouse to see the same information and more, all within seconds."

In an emergency, there is no substitute for quick access to critical clinical information.

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Sharon Dody, Project Manager

Reducing risk of lost documents

Transforming paper documents into easily accessible electronic files also greatly reduces the risk of lost or misplaced information. "Records originating from another hospital used to be particularly vulnerable," says Dody. "Providers complained that when they sent such records to the medical records department, they had difficulty getting them back. So then they hesitated to send the records and the incidence of misplaced records increased even more." Now all the medical records are in one place—in the EMC Documentum repository—and backed up nightly using EMC CLARiiON® and EMC Symmetrix® networked storage systems.

Looking forward

After the move to the new facility has been completed, The Children's Hospital plans to use the EMC Documentum platform to automate approval processes for hospital policies and other documents, manage invoice processing, enforce records retention policies, facilitate collaboration, publish web content, and more. "With the pending move, our primary focus is getting rid of paper," says Dody. "But once the move has been accomplished, we look forward to leveraging the EMC Documentum system's rich content management functionality to improve processes in clinical areas as well as non-clinical areas, such as human resources, finance, and facilities management."

Summary

With the EMC Documentum platform and EMC Captiva InputAcce^l, The Children's Hospital is transforming over a million pages of paper into easily accessible electronic information—thereby enabling a move to a new hospital facility and, even more importantly, improving patient care. In addition, the hospital is laying a content management foundation that will allow it to improve business processes and reap additional benefits, in both clinical and non-clinical areas.

About EMC

EMC Corporation (NYSE: EMC) is the world's leading developer and provider of information infrastructure technology and solutions that enable organizations of all sizes to transform the way they compete and create value from their information. Information about EMC's products and services can be found at www.EMC.com.



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