

# Document Imaging, Workflow Restructure Department

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HealthEast Care System in St. Paul, MN, began its journey toward an EHR in 1998 with the implementation of an online nursing documentation system in which nurses enter information using desktop and laptop computers and wireless devices. A network of integrated care services with three acute care hospitals and one long-term acute care rehabilitation hospital, HealthEast has 649 licensed beds and approximately 37,500 annual discharges. The EHR is live at two hospital sites. At Woodwinds Health Campus, the first site, we were able to implement the EHR when the hospital opened in 2001. St. John's Hospital, the second site to implement the EHR, has more than 17,000 discharges, more than 31,000 emergency room visits, and approximately 88,000 outpatient visits per year.

Initially, documents from the online nursing documentation system printed in the HIM department after discharge, which significantly increased the volume of paper processed and stored. This growth in paper, along with the need to streamline the work processes in the HIM department, led to the selection and implementation of a document imaging and workflow automation system.

## The Department, Pre-conversion

Our HIM department at HealthEast was organized with two directors responsible for specific functions across all four hospital sites reporting to the system director of health information services. The director of health record services was responsible for release of information, storage and retrieval, discharge record processing, transcription, and admitting department functions. The director of data services was responsible for coding and abstracting, registries, and report queries.

Lead roles included a site supervisor who oversaw the daily operations of the clerical area, a data coordinator responsible for daily activities of the coding area, and a clerical lead who provided work direction on the evening and night shifts. Level one HIM clerks performed tasks related to filing and retrieval while the level two HIM clerks were primarily responsible for release of information, chart assembly, and assisting physicians with chart completion.

Data services included the positions of data specialists, who were primarily responsible for coding, abstracting, and discharge analysis, and data analysts, who worked with requests for data, and data coordinators, who were in lead roles.

## Time to Prepare

We began planning for the launch of the EHR a year in advance. During this period, the HIM department needed strong leadership to manage the change and ease the concerns of employees. By hiring a site manager to oversee HIM functions, the director of health record services was able to assume the role of project manager and focus on project management tasks and establishing implementation teams. The site manager handled change management issues and was instrumental in training staff and developing new HIM policies and procedures. Further, she held daily meetings with staff to keep the lines of communication open. Responsibilities for admitting and transcription services were reassigned to the system director of HIM services.

The HIM supervisor role was redefined to focus on discharge record processing, which would be the area most affected by new tasks related to scanning and indexing. She became the expert on scanning and indexing and assisted with training and troubleshooting.

At this time, we began working with each department responsible for creating the source documents that were sent to our system electronically to determine how and when they would reach the electronic record. The radiology department experienced the greatest level of change, because its information system did not have an electronic signature component. We had to train radiologists to sign reports in our system and develop the related workflow. We also worked with the medical

transcriptionists to improve the accuracy of medical record number assignment. Prior to the implementation of the EHR, the clinicians entered only the medical record number. Now, they enter the entire account number into the dictation system.

## New Roles Emerge

During this transition period, three new positions were developed. The compensation and benefits department assisted by performing a market analysis to establish a job grade and pay scale for each. The positions were:

- **Implementation specialist:** this was a temporary position primarily responsible for organizing and redesigning medical record forms to prepare for scanning and indexing. The implementation specialist coordinated the effort to apply bar codes to forms, develop a database of all forms, and work with department contacts on forms redesign. The implementation specialist also performed other project tasks as assigned by the project manager. This position required strong PC skills, the ability to work effectively in teams, strong organizational skills, knowledge of HIM workflow and processes, and attention to detail.
- **Imaging specialist:** the imaging specialist was responsible for prepping, scanning, quality control/indexing, and maintaining the scanning equipment. Skills required for this position included keyboarding, knowledge of the medical record, and attention to detail. Initially, three imaging specialists were hired: two were internal HIM transfers and one was an external applicant.
- **HIM systems specialist:** this position was created shortly after the EHR launch. The HIM systems specialist reported to the director of health record services and worked closely with the two system administrators in the IT department. Tasks included setting up new users, training users outside of the HIM department, monitoring queues such as the fax queue, maintaining the automated workflow documentation, troubleshooting, and maintaining assigned tables such as the document master file. The requirements for this role included problem-solving abilities, experience with computer applications and databases, knowledge of HIM workflow, and ability to work with caregivers and support staff.

## Job Descriptions Change with Technology

Data specialists (also known as coders) learned to code from the online chart while using an online encoder and the medical record abstract simultaneously. The responsibility for discharge analysis was reassigned from the data specialists to clerical staff working in the physician incomplete area. This allowed data specialists time to learn the new system and to better meet their coding turnaround times.

HIM clerks working in the chart completion area received training on online discharge analysis. As the system went live, these clerks were very busy pulling records still in paper form and assisting physicians with chart completion using the new system. The need for copying and mailing records to physicians for signature decreased. The implementation specialist and management staff assisted with discharge analysis during this time. As the old work from the paper system diminished, the clerks were able to shift their efforts to online discharge analysis. Paper charts in the incomplete files were completed and filed within six months of going live.

HIM clerks learned how to prepare records for scanning, which replaced sheet order assembly. Filing and retrieval gradually decreased as records became available online. Loose filing backlogs disappeared. Records pulled for research studies no longer involved searching for paper records; instead, staff searched for the electronic medical record and placed encounters in a work queue for reviewers to view the online record. As staff became more efficient, some clerical positions were eliminated through attrition or through transfer to imaging specialist positions. (See "The HIM Department in Transition", below).

## The HIM Department in Transition

	Full-time Equivalents		
Position	Before Conversion to EHR	Transition Period (During)	After Conversion to EHR
HIM Clerk, Level I	9.6	8	3.3
HIM Clerk, Level II	7.4	5.7	4.8

Follow-up Clerk	0	0	1
Forms Coordinator	0	0	.4
Imaging Specialist	0	3.1	5
Implementation Specialist	0	1	0
Lead Clerk (evenings)	1	1	0
Manager	0	1	1
Supervisor, Day	1	0	0
Supervisor, Evenings	0	0	1
Systems Specialist	0	1	0
Director	1	1	1
Total	20	21.8	17.5

## An Ever-evolving Structure

The HIM organizational structure continued to evolve after implementation of the EHR. For example, the HIM supervisor moved from the day shift to the evening shift to supervise imaging specialists and to assist physicians and other caregivers during evening hours. Also, the evening lead clerk position was replaced by a new position, HIM follow-up clerk, who performs tasks related to the integrity of the EHR. The follow-up clerk's duties include researching records not checked into the HIM department and reviewing assigned queues in the automatic workflow to ensure encounters are moving along the workflow thread. Finally, a forms coordinator role to manage ongoing forms design is now a permanent position.

One year after going live with the EHR, the HIM systems specialist moved to the IT department to fill a vacant EHR system administrator position. At this point, the HIM staff were confident in their knowledge of the new system and no longer needed the on-site support of the HIM systems specialist so we decided not to fill this position. We now have two system administrators: one with an HIM background and one with a strong IT background.

Additional clerical positions were either eliminated or changed to imaging specialist positions. Imaging specialists on the day shift scan and index the emergency room and inpatient discharge records. On the evening shift, the imaging specialists scan and index the outpatient records. Two clerks on the night shift collect records and begin the prep work.

The organizational structure will continue to evolve as the HIM staff gain confidence in using the EHR technology to its full potential. Physicians now ask when this technology will be available at our other two hospital sites and the HIM staff are organized and prepared to meet this challenge.

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