Future of HIM: An Operational View

by James Braden, MBA

What will HIM processes, departments, and the patient record look like 10 years from now? The author offers a view of HIM operations at an academic medical center with an eye for operational, organizational, and functional structure.

The health information management profession has been progressing through tremendous changes -- particularly over the past 10 to 15 years. If the past decade can be used as an indicator, we can count on the future for HIM professionals being a period of intense transformation.

My challenge and opportunity is to look over the horizon and project a vision of operational, functional, and organizational structure for HIM over the next 10 years. I approach this task by comparing and contrasting two academic medical center HIM scenarios: 1998 and 2008. I assume that the current rate of change will remain relatively constant and that the HIM operation at the University of Texas Medical Branch (UTMB) at Galveston is a relatively typical HIM setting.

The UTMB Setting Today

UTMB is a 970-bed academic medical center consisting of eight hospitals and more than 144 clinics. It is one the components of the University of Texas system based in Austin. Approximately 125 UTMB clinics are located on Galveston Island, and the remaining clinics are scattered throughout the gulf coast of Texas. UTMB Galveston discharges more than 30,000 patients per year, is the managed care provider for a majority of the state's 130,000-person prison population, and supports about an additional 650,000 outpatient visits per year. UTMB employs more than 13,000 people, including more than 1000 physicians, and has an annual budget of about $1 billion.

HIM at UTMB

The HIM department supports more than 4000 paper-based patient record requests per day and is staffed by 149 FTEs. It provides services such as:

- Record retrieval for patient care/non-patient care requesters
- Record maintenance
- MPI database support
- IP and OP coding
- Clinical database abstracting/reporting
- Applications management
- External monitoring management
- Concurrent DRG/documentation review
- Document/outsourced transcription support
- Record assembly and chart completion support
- Cancer registry support
- Information release services

The HIM Organization and Processes

The HIM organization is composed of 18 self-directed teams. There is one layer of management between the director and the HIM teams. Although these teams continue to refine effective work processes and are relatively progressive for 1998, they contend with managing a very large volume of paper, flowing at a rapid pace throughout the circulatory system of UTMB

Galveston. They create, deliver, retrieve, assemble, and file thousands of paper-based patient records per day. They receive, organize, and file more than 8000 pieces of paper per day, leaving no backlog of unfiled reports at any time. They retrieve and deliver hundreds of records to resident and faculty physicians each day for completion, followed by updating the HIM chart completion system. They review, abstract, and code several hundred inpatient/outpatient records each day, as well as updating clinical and financial information systems. They abstract clinical data from charts in support of the cancer registry database and provide a myriad of reports from this database for members of our clinical staff. HIM staff also manage the release of medical record information to more than 700 requesters per week. In addition, they function as "gatekeepers" in conjunction with information services staff in reporting summary data from the clinical information system to clinical and financial UTMB staff.

Information System Infrastructure

The current information system (IS) infrastructure typically found at many medical centers is a client-server platform supporting an HIM local area network (LAN), which is connected to the organization's wide area network. A variety of legacy systems, such as laboratory, radiology, pharmacy, point-of-care applications, and mainframe clinical and financial systems support the clinical enterprise. In addition, the organization has standardized its suite of office applications, such as e-mail and scheduling. The HIM department employs client-server chart management, chart deficiency, release of information, transcription/document management, electronic signature, abstracting/reporting, and coding applications. Licenses for these applications were purchased a number of years ago and, as such, the applications are highly proprietary and run in DOS or Windows 3.1. Although a common database is shared in some of the applications, the current configuration is not seamless or completely integrated, requiring the staff to access different applications for various types of operational, clinical, and financial data.

As part of an HIM department reorganization a few years ago, the HIM and the health information services (HIS) departments became formally linked. The directors of both departments agreed to a transfer of two FTEs to HIS; in exchange, HIM was assured of LAN and application support around the clock, regardless of how large the IS infrastructure within HIM would become. Today, two FTEs support the 140 high-end PC work stations and HIM LAN, and two FTEs support the suite of HIM applications. The directors from HIM and HIS continue to be closely connected, especially as they have collaborated in managing the migration to the electronic medical record (EMR).

Configuration of the Paper-based Patient Record

In 1998, the medical record is largely a traditional paper record, even though it has been reconfigured in a fashion that provides the clinical staff a "core" circulating record, supported with any number of additional volumes comprising older or less clinically pertinent data provided upon request. Just five years ago, more than 1300 forms could be found in the medical record. Although this number has diminished to fewer than 900, the record continues to be largely paper based. Redundancy of data still can be found within the chart itself, as well as within the various clinical information systems that feed paper and data into it.

Although the availability of the record is outstanding for a paper-based patient record (> 99.9 percent) on more than 4000 requests per day, it still cannot meet the needs of the UTMB clinicians, researchers, and support staff who all have an increasing need to access it. The record is physically transported around the UTMB Galveston enterprise in vans, electronic transport vehicle systems, and by hand, yet it cannot always catch up with the point of care, nor is it present throughout the full continuum of care. The 10,000 daily paper patient record transactions and millions of paper reports moved per year are increasingly clogging the arteries of the UTMB circulatory system. Fortunately, UTMB Galveston is in transition and on an aggressive journey toward the EMR of the future.

One thing is quite clear: We will look very different in 2008.

UTMB Galveston in 2008

In 2008, UTMB Galveston will be part of a large integrated system within our region of the country and will continue to be a major academic medical center, retaining its reputation as a leading center for innovation in research, thoroughness in teaching, and excellence in patient care. Our complex will have far fewer operational beds given the rapid expansion of outpatient care,

preventive care, capitated payment for services, and managed care penetration. UTMB will have significantly increased its depth and scope of primary care clinics across the gulf coast of Texas.

UTMB will experience tremendous restructuring/reengineering of its organizational structure, and staffing will have been reduced to be commensurate with the scope of inpatient/outpatient services, research, and teaching. The organizational structure will have migrated from relatively autonomous departments to integrated teams. These teams will be centered on major clinical and operational processes that have been identified as essential by customers and consistent with our mission statement.

The continuous process improvement work we have seen in 1998 will be routine and an integrated part of our organizational fabric/culture in 2008. Although UTMB will obviously change its composition/distribution of services, the EMR will offer the staff new tools and skill sets. Through the ongoing implementation of the EMR, some areas of the organization will see significant downsizing or elimination, while many components of the organization will merge into overlapping teams. At the same time, the ongoing implementation of the EMR will spawn the creation of new needs and opportunities, resulting in the creation of teams to manage and support new work processes expressly identified by customers. These changes will represent tremendous opportunities for the professional development of staff as well as the ongoing development of the success of UTMB Galveston.

The Configuration of the Medical Record in 2008

In 2008, the UTMB medical record will be electronic and will be integrated across our clinical enterprise. The front end of this record will be client-server and Web based, having taken advantage of the development and implementation of a secure and robust UTMB intranet. Our enterprise person index will provide rapid access to a patient record by an individual identified as an authorized user anywhere in the world. The EMR will comprise a number of data repositories owned and managed by important data experts (i.e. lab, radiology, HIM, etc.).

The front end of the EMR will seamlessly present the data across the continuum of care and throughout our enterprise in a format preferred by the user. The vast majority of data in the medical record will be captured electronically by the provider at the point of care. Each word entered into the EMR, along with its context, will be codified, enabling it instantly for use in discreet analysis, patient care, or decision support.

A minor segment of the record will be composed of the residual of the relatively small volume of "old medical record" (i.e., paper) scanned onto optical drives and CDs. In addition to data, users will have access to voice and image files embedded into the medical record data. The HIM team will continue to provide some parallel processing support of "paper/image" medical record services as UTMB rapidly migrates to the EMR.

The HIM Organization in 2008

In contrast to 1998, the HIM organization at UTMB Galveston in 2008 will have matured into a much more integrated team-based organization. HIM will employ teams with a number of functional responsibilities.

The record retrieval and chart maintenance teams will assume the responsibilities of scanning documents, validating accuracy and quality of scanned documents, and filing those documents electronically. Although this process initially will be labor intensive, the labor force will rapidly diminish as the quality and efficiency of scanning and indexing will allow the emerging critical mass of completely electronic documents to interface automatically and be accurately "filed" into the patient record.

MPI database support will continue to edit, validate, and troubleshoot the enterprise person index (EPI). The EPI will contain a series of person populations, including patients, support providers, employees, and members of the managed care member base.

Most of the coding operation will occur at the point of care and will migrate from a facility-based operation to staff performing a clinical data support function from remote sites or their homes. The EMR will be generating ICD-10 and SNOMED codes driven directly from algorithms based upon electronic documentation and will query the provider if needed documentation isn't provided. The primary role of the HIM coders will move from abstracting and coding to validating and auditing the coded data found in registries and repositories. In addition, they will provide consultative assistance for the clinical, administrative, and research staff with data review and outcomes analysis.

The EMR will preclude the need for the record assembly and the deficiency analysis/completion support operation. Some of these staff members will support the scanning and document quality validation teams.

The need for transcription services at UTMB will dramatically diminish with the integration of voice recognition engines within the EMR. Some of the document management staff members will redirect their efforts to ongoing data integrity management and maintenance of the various repositories of data/documents across the expanding clinical enterprise. This work will ensure that there is consistency, accuracy, and integrity of the data elements and file structures as we add new components to our evolving integrated healthcare system.

Members of the abstracting/reporting team will assume responsibility for supporting strategic planning and decision making using a variety of data analysis/reporting and data modeling tools. This work will be critical as our organization focuses increasingly on clinical trials, clinical practice guidelines, and outcomes research.

Information release will occur through seamless, pre-defined electronic transfers of information to authorized end users. Members of our information release team, among others, will migrate to assuming roles of managing EMR security-in conjunction with individuals who were once in a "department" known as information services. Among their responsibilities will be auditing user profiles against actual usage patterns to identify potential anomalies for more intensive investigation and assisting authorized users with efficiently accessing the information for which they have a "need to know." They will also be essential stakeholders in the promulgation of information security policies and privilege systems.

The HIM director will maintain the responsibility of defining the vision and direction of the EMR as it is integrated and developed across the clinical enterprise. This person will also be responsible for the ongoing education of users and teams, advancement of systems/applications, reengineering of work processes, support of security/access, and promulgation of policy across the clinical enterprise. This person will likely be on the same level and management team as the HIS director, and together they will continue the integration and consolidation of their organizations.

Conclusion

Clearly the future of HIM will be packed with tremendous challenge, opportunity, and change. HIM professionals who embrace this change and become agents of change will successfully make the transition to leading their organizations through the implementation and management of the EMR. Their ability to plan and progressively prepare the foundation of their HIM organizations today will directly influence their future as managers of their organization's health information tomorrow. Based on this premise, the future of HIM is a bright and exciting journey into territory that will be richly rewarding for healthcare organizations and for health information management professionals.

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