FOR THE RECORD

Committed to Enhancing the Health Information Profession

Advertising | Job Bank | Gift Shop | Subscribe | Buyers' Guide | Contact

November 27, 2006

Practical Steps in RHIO Planning and Development
By Denise Reeser and Brett Griffith
For The Record
Vol. 18 No. 24 P. 8

As healthcare continues to face difficult challenges, such as preventing errors, improving patient safety, and reducing administrative burdens and waste due to duplicative or ineffective care, many recognize that technology is and will continue to be critical to solving these challenges.

The new focal point for technology application to improve healthcare is shared, cross-organizational environments such as RHIOs (regional health information organizations), otherwise known as HIEs (health information exchanges), CHINs (community health information networks), and RHINs (regional health information networks). All these acronyms indicate a system for the secure exchange of patient data beyond traditional organizational boundaries to reduce costs, improve patient care, and increase clinical efficiencies.

RHIOs continue to move forward and evolve across the country; each organization has its own unique composition and definition of size, structure, funding, data sharing, and delivery methods.

When it comes to the data side of the equation, the prime focus has been the sharing of digital information and the implementation of Health Level 7 (HL7) messaging standards that support Web-based, real-time data sharing between RHIO members. Missing from the equation so far has been the role of non-HL7 compliant data- and paper-based document assets that comprise a significant portion of the clinical information necessary for a complete patient medical record.

Since the goal of a RHIO is to enable interorganizational and intraorganizational sharing of patient information to improve quality of care and patient safety, how can an organization leave much of the clinical information sitting in disparate systems or in the file room?

Rather than wait to solve the problem of how to incorporate all data into a developing RHIO, noncompliant data and paper-based documents can easily and quickly become part of a RHIO's data-sharing strategy with technology that is currently available.

Technical Issues Abound
Putting aside business model and governmental issues, RHIOs must tackle a host of technical considerations. Although standards are evolving and feel like a moving target, some practical issues must be addressed, including the following:

• consider the existing technology environment;

• decide on the linking of data for accurate patient identification and aggregating patient's data from disparate sources;

• decide on provider identification (unique individuals vs. organizations);

• decide what the technical model is (central vs. distributed/federated model);

• follow standards development;

• ensure secure connectivity (encryption, authentication, integrity, nonrepudiation); and

• support core technologies (data integration, including connectivity, messaging, single sign-on; electronic master patient index; and electronic health record).

However, it appears the RHIO hype is ahead of the RHIO reality. According to the 17th Annual HIMSS Leadership Survey, while 14% of those surveyed are participating in a RHIO, 84% don't plan to, don't know about it, or simply don't participate.

So, when health systems think in terms of a RHIO, many should consider transitional strategies for immediate improvements as opposed to longer-term, all-electronic goals that require more time and expense.

Leverage Document Assets Sooner Rather Than Later

According to the AHIMA Practice Brief "Electronic Document Management as a Component of the Electronic Health Record," implementing an electronic document management system (EDMS) is important not only to eliminate paper but also to manage the organization's valuable assets: documents. If documents are not managed, according to the AHIMA, organizations risk increased liability and, most of all, information loss—which in the end defeats the purpose of wanting to improve patient safety and quality of care and forming a RHIO in the first place.

Perhaps an even more pressing reason for RHIOs to include document assets in their data-sharing strategy is that studies show that electronic medical record (EMR) adoption is still at the earliest stages.

According to a HIMSS Analytics 2006 report, three fifths of organizations are on the road to EMRs, but 39% are not far enough along to have core functionality or a clinical data repository. Dave Garets, the president and CEO of the HIMSS research group, says, "We're making progress, but we've got a long way to go."

As hospitals and other stakeholders grow and expand a RHIO, stakeholders will find that many participants simply do not have enough information in digital form, but do have an enormous amount in document, nondigitized form ready to flow into the medical record system. Also, even if a hospital has a fully developed EMR system, many important pieces of the clinical picture—consults, referrals, path reports, dictation, older diagnostic reports—are still sitting in a room or on the shelf.

Rather than being viewed as an albatross, documents can be seen as a precious resource and organizational asset that flows easily and cost-effectively into the hospital IT system and can be shared among RHIO members to form complete patient medical records.

Document Imaging

Integrating noncompliant HL7 data and nondigitized documents into a RHIO can be done easily and quickly. Electronic-to-electronic (E2E) feeds can capture disparate clinical information and merge it with scanned paper records, which are then linked or attached to the appropriate EMR. This data now resides in a standard SQL (structured query language) database along with standard TIFF images, which can be shared without the traditional interoperability issues.

As a user (physician, payor, coder, accounts payable, case manager, etc) accesses a patient's EMR, any and all clinical or administrative information that originated in paper form is now automatically part of the record and can be opened and viewed as an attachment. Since the document is now in a standard format, it doesn't matter what data language or sharing technique is selected—paper documents can now become electronic attachments.

Why Wait for Total Interoperability?

Perhaps the greatest barrier to RHIO formation is the task of converting more than 1,000 document types within clinical systems to an interoperable format. Instead of waiting for total interoperability among systems, E2E feeds can be implemented to provide complete access to clinical information which is currently housed in various hospital information system formats.

Formerly known as Computer Output to Laser Disk feeds, E2E-fed documents combined with the scanned paper image

produce a clean and organized electronic record which can be shared in a RHIO environment. Each RHIO is unique, but document management with E2E allows hospitals to capture all data residing in different systems and convert all those formats—even proprietary ones—into a common format that can accommodate every possible RHIO scenario.

Some hospitals will want to contract an outside vendor to manage the document scanning, indexing, and management, enabling them to integrate any and all documents into their EMR system and achieve legally complete medical records for sharing with their RHIO partners.

While some RHIOs may be able to maintain a centralized repository for data sharing, most hospitals will need help with the linking and relaying of their data among RHIO members. In this instance, an outside vendor can initially take their HL7 data stream and manipulate it so it fits within the RHIO structure and, at the same time, integrate and embed the scanned document images into the HL7 transaction as one complete process.

Leverage Your Valuable Assets

Every hospital has a large, valuable asset waiting to be tapped. In the context of EMRs and RHIO development, paper documents need to be available and integrated into the patient record or missteps and failures will occur along the way.

Current EMRs are like icebergs. Users see the tip of the iceberg but have no idea what lurks hidden away from view. Therefore, document imaging must be part of any strategy. Scanned images support a transitional strategy by making information available to users in the community without having them wait until all information is digitized.

— Denise Reeser is the principal at Health Care Information Consultants.

— Brett Griffith is president and chief operating officer of Alpha Systems, Inc.

Subscribe to For the Record Magazine!