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Document Management: Putting Together the Pieces

Organizations seek new uses for the technology after reaping success with various limited deployments.

By Beckie Kelly Schuerenberg, Senior Editor

Many health care organizations initially used document management systems for relatively small projects. A lot of these early projects focused on meeting the needs of billing, medical records and registration departments.

Now, some organizations are using the technology on an enterprise wide scale, building on the early successes.

For example, Asante Health System, a two-hospital delivery system in Medford, Ore., broadened its use of document management technology after a successful pilot in one department.

Back in 2002, the organization tested the system in its patient registration department to gain buy-in from users, says Alan Curriston, senior program analyst. When staff members in other departments learned they could easily access documents electronically rather than waiting for a courier or fax to deliver them, they too wanted to be part of the project.

Over the past five years, Asante's I.T. staff has had a difficult time keeping up with requests to access the system. They have enabled more than 800 staff members across 40 departments to use it to manage about 13 million documents.

"We started in registration because that's where the paper begins," Curriston says. "But lots of other departments need to see registration documents later on. So the desire to use the system to manage other documents really spread word of mouth from there. It's the one system that people have come to us for."

Eliminating Paper

Document management technology enables organizations to digitize paper documents into electronic forms that can be stored, managed and transmitted. Small provider organizations often implement such systems to help eliminate paper for a single process, such as to manage registration or billing documents, or as a transition to a electronic health records system.

"A make-shift electronic health records system is one of the classic uses for document management technology," says Alan Worsham, vice president at Beacon Partners Inc. "But there's certain things that aren't easily put into a traditional EHR. So there will always be extra documents that can be put into a document management system so it also can be used as a component to a full-blown EHR."

Many larger payers and providers also use document management technology. Though they might have the resources to implement it enterprise wide, these organizations also often limit the technology to niche applications because they already have or plan to implement other systems specifically designed to automate most of their processes.

Some hospitals, like Asante, are discovering that once successes are achieved with a document management system in one department, others want to use it as well.

But making broader use of document management systems throughout an enterprise can be quite complex, requiring organizations to spend a lot of time and money to develop storage and indexing strategies. This broader use also requires implementing new workflow processes in multiple departments for how documents will be retrieved, transmitted and managed in the application.

"Document management systems are raw pieces of technology that need a lot of implementation and configuration to be put to use," says Kyle McNabb, principal analyst at Forrester Research Inc., Cambridge, Mass. "So they are easier to get funded if they are done as a small project rather than on an enterprise wide scale."

But now that some health care organizations, like Asante, have had a few years of experience with the technology, they are broadening the scope of how it can be used within their facilities, he adds.

"These organizations are taking a leap of faith that if they can prove the technology is useful in one area, the process improvement can be taken elsewhere," he says. "The context on why they want to use it changes."

Fixing Bugs

Before rolling out the technology enterprise wide, Asante Health System wanted to test new workflow processes in a controlled environment, says Currison, the senior program analyst. The organization uses software from Perceptive Software Inc., Shawnee, Kan.

During the three-month test period, many staff members were given controlled access to the system, but only the registration department was able to scan documents into it.

This enabled I.T. leaders to work more closely with these staff members to better integrate electronic document management processes into their workflow. For example, Asante initially purchased a single scanner, from Fujitsu Computer Systems Corp.,

Sunnyvale, Calif., for the entire department. But staff didn't want to walk away from patients to scan documents.

"We learned a lot during the proof-of-concept phase, especially that a centralized scanner doesn't work," Curriston says. "So now every registrar has a desktop scanner so they don't have to break contact with patients, which shortens the registration process."

Other workflow issues evolved as Asante expanded its document management system into other departments. Its business department tried four different methods of indexing explanation of benefits forms before finding one that was easily searchable. And its surgery scheduling department routed incoming faxes directly into the system instead of having staff scan them.

One workflow process that was adopted by most departments, however, was to forgo scanning older documents. While the decision meant they would have to manage both paper and electronic forms for a while, the process was thought to be less time-consuming than scanning the older documents, Curriston says.

"Most people were so busy trying to keep up with what's on their plates now that it was difficult to come up with a backscanning process," he says. "So they decided to wait until the documents got so old that they weren't using them as frequently and could ship them offsite."

Asante still plans more uses for the document management system, including various applications within its human resources department.

"I often go into departments looking for filing cabinets to see if they are a good candidate for the software," Curriston says. "It's a continual project."

Asante doesn't plan to use document management for inpatient medical records. Instead, the delivery system will use a electronic health records system from SoftMed Systems Inc., Silver Spring, Md.

But some other smaller health care organizations, including Gooding (Idaho) County Memorial Hospital, actually began their document management system efforts in the clinical department.

Last summer, the 14-bed rural, critical-access hospital purchased a Web-based system from Alpharetta, Ga.-based Optio Software Inc. to help cut down on the \$150,000 a year it had been spending on paper and printing costs.

Before Gooding deployed the system, a group comprising its medical records director, director of nursing, a physician and an I.T. staff member evaluated the hospital's paper charts to determine which types of forms should be saved in the application. Medical records department staff then scanned each selected form and developed a template in the system that uses bar codes to identify it, as well as each patient.

The group also decided that upon implementation, only 90 days' worth of basic lab results, medical histories, physical exam summaries and current diagnostic information should be scanned for each patient. The primary-care hospital's six physicians, however, can request to have older information scanned.

Additionally, the hospital worked with the vendor to integrate the document management system with its health care information system, from Health Management Systems Inc., New York. As a result, demographic information and bar codes generated within the HIS system at admission are automatically loaded onto corresponding clinical forms within the document management system.

The forms then print at nursing stations before the patient is treated, and nurses document on them during care. After the patient is discharged, the completed forms are sent to the medical records department to be scanned into the document management system.

"Putting records in electronic form has made our medical records office more efficient because there's less paper to deal with," says Rod Larsen, CFO. "And it creates a broader and more secure method for other people to access the records."

The system also has been a more affordable alternative to an electronic health records system for the small hospital, Larsen adds.

"We weren't looking for a huge system because we aren't that complex in our HIS technology," he says.

Expansion in the works

Though the hospital's document management system only has been up and running since April, executives already are considering other uses for it. For example, they plan to implement an electronic signature module in the technology that will enable patients to sign consent forms using signature pads from Topaz Systems Inc., Simi Valley, Calif. After the consent forms are signed, they will be scanned into a patient's file within the application.

Executives also hope to extend the use of the document management system beyond the small hospital. They want to integrate it with another Optio document management system used at a nearby tertiary hospital that Gooding often sends patients to for more complex care so the organizations can develop a joint enterprise master patient index, Larsen says.

"We needed a document management system that is scalable and affordable," he says, "so it could function in a 400-bed tertiary care hospital as well as a 14-bed critical access hospital. It's a repository that simply collects, displays and delivers data."

While Gooding's document management system uses bar codes to help index the forms it collects and displays, many other methods of filing forms in the technology are available.

Health care organizations should work with their vendors to learn or create other types of best practices for indexing-especially as they expand the way they use their document management systems, says Worsham, at Beacon Partners.

"Indexing documents requires some thought and is very dependent on what the document is, what it will be used for and who will be retrieving it," he says. "The key is to find a way to index so the person trying to find a document doesn't have to think hard about how to find it."

Some document management system vendors are integrating their applications with other information systems to create enhanced indexing capabilities. Such integration, for example, could enable a hospital registration or practice management system to offer links or pointers to specific forms within a document management system during different points of the registration process. It also could enable a revenue cycle management system to offer links to copies of checks that were scanned into a document management system.

"This type of integration can make document management system processes more useful," Worsham says. "If it's working right, users won't know the document resides in another system."

Enhanced customer service

By integrating its document management system with a proprietary customer relationship management application, one small managed care plan was able to enhance indexing processes as well as expand how it used both technologies.

In mid 2005, Nashville, Tenn.-based Windsor Health Plan purchased document management technology from Cabinet NG Inc., Madison, Ala., to better handle forms required for a new Medicare plan it was offering to 3,000 members in Tennessee and Alabama. Such forms include bills, correspondence, handwritten letters and other documents.

Before deployment, the plan's I.T. staff worked with the vendor to ensure current methods for indexing paper documents were extended to the system. Now staff can search forms within the technology via a member's name, identification number or Medicare number.

Although one employee has been assigned to scan forms into the document management system, the technology also can receive faxed documents and prompt staff to determine how they should be indexed. So far, all documents from 2007 are in the system as well as nearly half of those from 2006. The payer, however, is looking at ways to expedite

scanning, says Barry Shermer, vice president, information technology at the organization, a subsidiary of Windsor Health Group Inc.

Now the payer's customer service representatives can search the document management system while on the phone with a member instead of putting them on hold to find paper forms. They also can handle a higher volume of calls because they don't have to spend time looking for paper. These efficiencies have enabled Windsor Health Plan to quadruple its membership without adding new staff-or filing cabinets, Shermer says.

"CMS requires tons of correspondence which creates tons of paperwork for Medicare members," Shermer says. "But now our customer service department immediately can pull up the same form the member has when they call."

While Windsor Health Plan hasn't finished scanning forms into the document management system, its I.T. staff already has expanded how the organization uses the system. Earlier this year, they integrated it with a home-grown customer relationship management application.

The CRM system, which was designed to enable customer service representatives to log member call notes, claims status and eligibility status-among other capabilities-now features an icon they can click to be logged into the document management system. The integration also passes identification information for the member they were helping in the CRM system to the document management system so users immediately are presented with all documents related to that member.

Windsor Health Plan executives now want to use the document management system to manage health care provider contracts as well as various forms in the organization's finance department and home care network services division.

"We're definitely still getting up to speed with the document management system," Shermer says. "But we've gotten good feedback from our customer service representatives, and it will only get better as we continue to backfill more historical data into it."

Bigger Provider, Smaller Niche

Many smaller provider and payer organizations, like Gooding and Windsor, are planning an enterprise wide strategy for document management technology after achieving success in limited deployments. In contrast, many larger health care organizations limit their use of document management systems to narrower applications because they have the resources to invest in systems, such as electronic health records, for eliminating paper.

Abrazo Health Care, for one, is using document management solely in the medical staff offices of each of its six hospitals.

The delivery system's Arrowhead Hospital first began using the ShareScan OP system from eCopy Inc., Nashua, N.H., in February 2006 because the three employees in its medical staff office periodically had to work overtime and hire temporary employees to effectively manage physician credentialing documents. State and federal regulations require all organizations to retain and update these documents, which include state licensures, malpractice insurance certificates and Drug Enforcement Administration prescribing certifications.

The 220-bed, Glendale, Ariz.-based provider organization uses the Midas+ Seeker system from Affiliated Computer Services Inc., Dallas, to manage these documents for physicians seeking privileges at the facility. Most of these forms are submitted electronically from credentialing verification organizations. The hospital scans the more than 250 credentialing-related paper documents it receives monthly for its nearly 700 physicians who already are affiliated with the organization, says Linda Smith, medical staff coordinator.

The eCopy ShareScan OP technology comprises a digital copier that can turn scanned documents into digital files. The vendor customized the software embedded in the copier to send the digitized documents to the Midas+ Seeker system's server. It also developed a screen that pops up on the copier to ask medical office staff for the provider identification number for each document so it can index it correctly in the legacy system.

Staff must enter a password into the copier to begin scanning and filing documents. They also must enter a different password into a PC to retrieve the electronic documents in the Midas+ Seeker system.

"Now our staff is able to easily manage scanning all these documents within the specific regulatory timeframes without the extra expense and potential errors associated with using temporary help," Smith says "It's taking us about four hours a month to do what used to take more than 40."

Soon after Abrazo Health Care's other hospitals learned about the efficiencies Arrowhead Hospital was achieving via its integrated document management system, they too implemented it in their medical staff offices. The delivery system now is working with eCopy to help improve document scanning in its medical staff offices as well as to find other uses for it, Smith says.

"It's amazing how this technology is helping us manage these documents compared with how we used to do it," she says. "It's reduced our business process costs, time and errors. It's really streamlined the whole process."

Sidebar

Easing the Exchange Of Research Documents

Frustrated by the difficulty of using other file sharing technologies, a major teaching hospital turned to a document management system to streamline the complex task of

sharing research and grant-writing documents. The surgical planning laboratory at Brigham & Women's Hospital in Boston is using technology from Xythos Software Inc., San Francisco.

Before deploying the application, the lab relied on FTP servers and e-mail attachments to exchange the documents among its 1,000 employees as well as thousands of other researchers, clinicians and organizations across the United States. The lab's I.T. staff began searching for a new transfer technology because the current methods were too difficult to manage and secure, says Michael Halle, director of technology development at the surgical planning laboratory.

While research documents already were in electronic form, they decided to use the technology's Web file server to manage the exchange of its electronic research. Before implementing the system, I.T. staff integrated it with the lab's home-grown authentication technology so they could control which users have access to the documents. The authentication system manages access for lab staff members as well as for its affiliated researchers and organizations.

The integration with the new document management system also created a single-sign-on capability between the systems, Halle says.

Now, if a lab staff member wants to share a document, they select it on their desktop, upload it to the Xythos Web server, then choose which users or groups of users can access them. Recipients receive an e-mail with a link to their document within the server.

The system also enables the lab to make some documents open to the public, but others available only to select users for a limited amount of time. It also offers auditing capabilities.

"When we used other transfer technologies, we often lost track of which file versions our staff were sending and recipients often had a hard time keeping up with them as well," Halle says. "But the document management Web interface was pretty easy for everyone to adopt, and once they realized it offers expanded transfer capabilities, they adopted it across the board."

The document management system has improved file transfer capabilities so much that the lab's staff members and affiliates are using it to exchange more documents than the organization originally anticipated, Halle says.

"It's inviting new people to collaborate together when our previous exchange technologies would have been an impediment to them working together," he says.

Sidebar

Document Management As A Cost-Cutter

Duke University Health System's foray into document management technology started with a niche application, albeit a very large one.

Over the past two years, the OnBase system from Hyland Software Inc., Westlake, Ohio, has helped the delivery system streamline processes enough to eliminate 45 FTE positions through attrition and reduced overtime. Although executives didn't reveal the amount of money this saved, they did indicate that it has enabled the Durham, N.C.-based provider to achieve a complete ROI of the system within nine months.

In 2001, the delivery system established a consolidated billing organization to streamline how accounting functions were handled for its three hospitals and physician groups. But executives at the delivery system soon discovered that the Patient Revenue Management Organization's 1,200 employees were having a difficult time handling the more than 80,000 documents they created or received each day. Such documents include checks from payers, patients and banks as well as explanation of benefits statements, 835 remittance advice transactions, and other patient correspondence.

The employees had to manually enter information from these documents into a patient account in one of several legacy billing systems, which often resulted in data being posted in the wrong application. This often caused other problems downstream, such as high revenue cycle days and customer service calls from patients or organizations inquiring where their payment had gone.

Additionally, the disjointed process was resulting in \$12 million a month that was left unapplied to any account.

"We found ourselves buried in paper," says Pete L'engle, senior manager of eHealth. "So we needed to put everything in one place with one click access for everyone in our organization."

Executives anticipated they'd need to purchase document management, electronic data interchange and workflow systems to fix their accounting woes. But after researching these technologies, executives concluded they could get all the functions they needed from the OnBase document management system.

For the next few years, Duke worked with a reseller of the technology, ImageSoft Inc., Southfield, Mich., to develop EDI integration with its banks and payer partners so the checks and documents they send to the delivery system automatically could be received in the new document management system.

Duke also worked with the reseller to integrate its various billing systems with the new technology so revenue management staff could use the legacy applications to access

information in the document management system. They also jointly created new workflow processes for staff to use with the new technology.

Duke went live with the integrated system in July 2005. Now information from electronic documents received in the system is automatically posted into the correct billing system. Designated employees manually scan and post the required data from the remaining paper-based documents. And the organization's cash management department employees are equipped with dual-screen monitors so they can search for a document from a billing system on one screen and view it in the document management system on the other.

The new technology and processes have helped the Patient Revenue Management Organization ensure payments are posted in the correct system the same day they are received. In addition to helping reduce FTEs, it also has helped reduce unapplied cash from \$12 million a month to less than \$1 million.

"We didn't just use the document management system for scanning and retrieving documents, but to completely automate our cash management process," L'engle says. "We went from having a paper-based cash handling system to using the technology as the link between our banks, general ledgers and billing systems."

It didn't take long before other Duke departments found ways to share some of the success the Patient Revenue Management Organization had achieved with the document management system. About six months ago, clinical executives began using the technology for a legal medical record initiative.

While Duke uses a self-developed data repository for most of the clinical information it generates internally, it still maintains files for paper documents it receives from external sources. Now the delivery system is scanning some of these forms into the document management system and integrating the application with the clinical data repository so clinicians and other staff members can view them from the proprietary system.

"We wanted to use the same technology to accomplish this," says Michael L. Russell, M.D., associate chief information officer and associate professor of medicine. "We are building a separate environment for the clinical data, but we've found a lot of synergies in the way the Patient Revenue Management Organization is using the document management system."