

A woman with brown hair, wearing a white short-sleeved button-down shirt and a black vest, is sitting at a desk. She is wearing a large, bright red boxing glove on her right hand, which is raised towards the camera. She is looking directly at the camera with a slight smile. In front of her is a laptop computer. The background is dark.

Technology Tandem

*Packs a
Punch*

*Learn how enterprise
content management
complements an EHR to
capture a more complete
picture of patient care.*

By Juliann Schaeffer

It's not news that the last few years have seen huge gains in the number of US hospitals and health care facilities getting into the EHR game. The Robert Wood Johnson Foundation released a report in July stating that the number of hospitals with a "basic" EHR system tripled between 2010 and 2012. That equates to four in 10 hospitals, according to the report.

But that doesn't mean most physicians are happy about jumping on the HIT train—some may liken it to getting hijacked instead. While many physicians see the promise of EHRs, the technology learning curve is proving to be frustrating more times than not. Common physician workflow qualms include less face time with patients, more clerical tasks, and too much template clicking.

And, as it turns out, there's still a whole lot of paper that goes along with "going paperless," which can further complicate operations. "Research shows that 50% to 75% of clinical and administrative content lives outside of the EMR, including electronic reports from laboratory and radiology departments, digital photographs, and video files of cardiac catheterizations," says Susan deCathelineau, MS, RHIA, vice president of global health care sales and services for Hyland Software.

"It's unlikely that health care will ever be 100% paperless," she adds, noting that improved care, not eliminating paper, should be the real endgame of electronic records. "Becoming paperless is a moving goal that keeps evolving. Although we create completely electronic processes, pen and paper are often the best data collection instruments. The goal cannot be more important than the outcome."

The part-paper processes may not be a problem in and of themselves, but they can cause headaches if an organization's paper documents aren't managed properly—and patient care can suffer as a result. "Throughout health care organizations, many types of information reside outside of EMRs and other core HIT applications," deCathelineau explains. "Consequently, clinicians and staff don't always have the information they need at the moment they need it."

For facilities dealing with poorly managed paper, enterprise content management (ECM) could be a solution, notes deCathelineau, who says integrating an ECM solution with an EHR system can enable health care organizations to electronically capture content and streamline processes that used to require paper, thus "empowering organizations to leverage [all the information available to them] to improve care delivery and patient outcomes."

Improved care delivery, better patient care, greater cost-efficiencies, and help in organizing documents—it turns out ECM, when integrated in the EHR, has the potential to improve a host of workflow and cost concerns.

A Clearer Picture of Patient Care

According to deCathelineau, the relationship between an EHR and ECM is complementary, whereby using both solutions together creates "a well-rounded system that efficiently captures and provides access to both unstructured and structured data.

"By integrating an ECM system with the EMR, information is readily available to clinicians and staff within an application they already use and understand," she explains. "This ease of access drives improvements in patient care and service by empowering caregivers to utilize the entire patient record when making critical decisions. This enables faster care delivery and eliminates duplicate services, reducing rising operational costs."

It's a case of "one is better with the other," according to Sean Morris, a Digitech Systems vice president focused on ECM system implementation across subsets of health care organizations. "EHR systems are nowhere near as powerful nor are they able to positively impact patient care if they are not executed with a document management system component included," he says. "There is far too much patient data that has always and continues to take place in a paper environment. EHRs that do not integrate paper-based intelligence will consistently miss the mark."

Although one of the early goals of EHRs may have been to eliminate paper and make all clinical information available electronically for better patient care, the reality is that "this is very difficult to accomplish because paper documents are received from other health care providers and because of the lack of interfaces from some departmental systems," explains Diann H. Smith, MS, RHIA, CHP, FAHIMA, vice president of HIM services at Texas Health Resources. "With the implementation of EHRs, the amount of paper has decreased significantly; however, organizations must have a method to incorporate paper into their EHR."

When a health care organization integrates an electronic document management system (EDMS) with its EHR, thus linking all paper documents to the EHR, it's facilitating a clearer, "more complete health care picture for clinicians by providing electronic access to all of the patient's health information," Smith says.

In fact, she considers the 2005 EDMS implementation from Streamline Health to be an ideal stepping-stone to an EHR. "[EHR] implementation can take less time," she says. "It also prepares clinicians to become accustomed to using computers and completing medical records electronically."

While ECM systems, also referred to as document management systems (DMS), provide value on their own, that value is exemplified when coupled with an EHR, says Janice Wurz, a senior advisor for Impact Advisors. "While valuable as a stand-alone system, a DMS enhances the EHR user experience by cataloging and presenting the appropriate documents at the appropriate times throughout workflow," she says. "To clinicians, that can mean access to external patient history or previous lab work at the point of care. For finance, it can mean seeing all related payment information and communication."

Just how can DMS augment an EHR? According to Morris, it can be helpful to see it as a bridge to better usability in an EHR. "A 'bridge technology' is needed to connect the intelligence held within an EHR to the intelligence that resides

in paper records," he says. "There are also different areas and systems where patient info resides that need to be connected," he notes, referring to the wealth of specific and unique patient information that currently resides in disparate insurance company and physician databases.

"When that information is combined, a much more complete view of the patient is available to the physician, directly leading to improved patient care and better outcomes," he adds.

deCathelineau prefers to see ECM as the "mortar between the bricks, connecting systems that are essential to delivering care and managing organizations. Health care organizations rely on a number of IT systems, including enterprise resource planning systems, EMRs, and many other specialty systems. ECM supplements EMR technology by providing staff members with access to unstructured data."

Better Document Organization

While early EHR systems focused on the clinical encounter between the physician and the patient, Michael Sherling, MD, cofounder and chief medical officer of Modernizing Medicine, says many newer systems now consist of some kind of document management component, recognizing that medical offices are not completely electronic. "Document management systems are designed to handle most paper documents outside of the scope of EHR," he says. "A busy medical practice may receive lab results, prior authorizations, and letters from other physicians. Document management systems organize these incoming documents so that they can be viewed later on, much like a physical paper chart."

With ECM, similar documents can be electronically filed into specific categories, Smith says, allowing for easy retrieval and viewing, which then leads to greater efficiency and less error than with manual indexing. "Bar coding documents to auto index into the correct medical record and location is a huge efficiency gain," she says. "This process improves the quality of getting the right information into the right place in the medical record and decreases mistakes that can happen while manual indexing."

By centrally storing documents in electronic folder systems, data can be organized in both logical and intuitive ways, thus saving employees the otherwise wasted time of searching through a massive paper filing system. "As documents are indexed and associated with patients, ECM technology recognizes the data types and empowers staff members to view the information they are looking for and permitted to see," deCathelineau says. "Instead of looking for content in a paper file, clinicians can access content within the context of the EMR."

Not only does electronic indexing reduce error but, according to Wurz, another boon of DMS is the enhanced detail it brings to the EHR in the form of metadata that identify the document and allow it to be associated in multiple ways to various primary information systems. "The ability to store

and utilize various document indices expands the availability of each document as well as supports that the correct information is being tied to the appropriate patient record," she says. "Traditional EHR systems facilitate scanning and limited storage, but a comprehensive DMS enhances the value of the documentation by maintaining its unique nature and facilitating consistent presentation across various mediums [both input and output], archiving, reporting, and more."

Two examples to best illustrate this concept are photographs uploaded for tracking wound care and the processing of hundreds of reimbursement records for easy access by patient name.

Just what does the ECM-EHR integration look like? That depends on the facility. For example, an ophthalmologist practice may use image management systems to view the retinal thickness and fundus photography directly from the EHR. "In the plastics market, plastic surgeons can draw with their finger on the iPad their surgical approaches to abdominoplasty incisions on anatomical images," Sherling says. "In orthopedics, orthopedic surgeons should be able to fill out worker's comp claims on the iPad and e-fax them out."

According to deCathelineau, the greatest indicator of a successful ECM-EHR integration is its invisibility, which ensures a seamless transition. "ECM and EMR companies work together to create and use application programming interfaces that enable seamless integrations," she says. "Communicating at the database level, the technology is practically invisible as EMR users perform ad-hoc capture, access patient content and cardiac rhythm strips, complete signature deficiencies, or post payments from explanation of benefits forms.

"History and physicals still make their way by fax or by mail from physician offices into health systems," she continues. "Physiologic drawings of fractures and burn injuries are most easily done with a paper and pencil. The complete patient record, including structured and unstructured data, is available directly from the EMR, without toggling between applications or windows, making information available at the point of decision making."

Cost-Efficiencies, Improved Care

According to Wurz, increased efficiencies in productivity and cost are the primary drivers behind every DMS selection. "Efficacy is the expected result of consolidation of various point solutions: a common, shared document repository, elimination of double documentation, and the ability to integrate with clinical and business management systems," she says.

deCathelineau says the care improvements are mainly because of physicians making better decisions when they have access to all available patient information. "With access to the nearly 65% of the patient record stored outside of the EMR, clinicians can make more informed decisions, resulting in improved patient care," she says.

Then there are the cost-efficiencies which, according to Sherling, come from reducing paperwork and freeing physicians to do what they do best: care for patients. "If we look at the economic value of a physician's time and understand where the bottlenecks are, any system that reduces the burden of paperwork will create cost-efficiencies," he explains. "Many dermatologists and orthopedic surgeons spend time dictating or typing a consult letter to referring physicians then mailing it out. These same specialists hire staff to scan in outside medical records. EHR systems that can create consult letters on demand with one click and e-fax them back to referring physicians save doctors transcription fees and time to see more patients.

"Look for EMR systems that can also receive faxes from the outside world and route them into the EMR without the need for scanning," he adds.

Not only does ECM eliminate certain paper processes for physicians, it also saves them the time it takes to track down paper files. "Electronic linking of scanned documents in the EHR provides complete simultaneous access to clinicians," Smith says. "This eliminates the need for clinicians to access multiple systems or track down paper that may be filed in a binder at the nurses' station."

With ECM, clinicians can view these documents remotely as they do in an EHR, saving time and money. For example, after implementing an EMR in 2003, the Mental Health Center of Denver still was frustrated with paper processes. After the facility implemented Digitech's ECM product, which worked in conjunction with its EHR, it produced a 1,315% return on investment and full project payback in six weeks, according to a study by independent analyst Nucleus Research.

"When you take a document and content management system and put it in place as a central repository for a health care facility, I think you're going to get better efficiency, more control over the information and how it's stored. And ultimately, the health care facility—whether it's a hospital or a small practice—can save money," Morris says.

Coming Soon: Two Solutions in One?

Health care organizations can benefit from both EHRs and ECM, but they're better off having the technologies work together, says Smith, who notes that vendors are taking notice and starting to offer dual solutions. "EHR vendors

and EDMS vendors are working together to solve complex business problems that organizations face when one system may not provide everything that is needed," she says. "The vendors are listening to their customers and providing solutions that bridge the technology of both for a fully integrated electronic solution."

Sherling also sees more two-in-one solutions coming down the pike. "The right HIT systems will try to bring the best of both EHRs and document management into one product," he says. "Designs that try to re-create a paper chart by scanning in paper documents miss the opportunity to increase efficiencies in the physician practice. Using mobile touch technology, patients can sign consent forms with their finger, and physicians can take high-resolution pictures of their patients' diseases that flow

directly into the EMR without the need for a scanner."

According to Sherling, the most innovative EHR systems, with well-integrated document management functionality, will not only ease the process of digitizing existing paper records but also structure that data to increase its navigability and value. "Instead of scanning a photograph into the EMR, which is unstructured, take that same photograph from the iPad and link it to the diagnosis within the record and it becomes structured and more valuable to the practice," he says.

There's great potential for ECM-EHR integrations, says Wurz, who has seen glimpses of

how these technologies can optimize workflow. "I have had the honor to work on quite a few DMS projects in the health care space working with multiple clients and vendors," she says. "There are some really cool things emerging to integrate document access within the EHR and even to simplify process and support across multiple departments."

For example, an academic medical center is using the application for its clinical endeavors as well as research. Similarly, a university has simplified support and efficiencies for information services and the various departments using the application. "The key to success is organization and workflow assessment," Wurz says. "When organizations take the time to understand their processes and document procedures, they see the efficacy of the DMS-EHR partnership."

— Juliann Schaeffer is a freelance writer and editor based in Albutis, Pennsylvania.

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