THE CHANGING ROLE
OF PAPER IN HEALTHCARE

Healthcare
Informatics
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Historically, healthcare has always been a document-intensive industry. And despite the widespread adoption of electronic health records (EHRs), it remains so today.

A single sheet of paper is critical to a high quality of patient care. That piece of paper might be a clinical note about some key patient symptoms, or an order for an important diagnostic test. Maybe it contains the details necessary to provide proper continuity of care on a hospital floor after a late-night shift change. It might be a discharge summary to hand off to a patient at release. Or perhaps that piece of paper holds key medical billing codes that will help facilitate timely and accurate insurance payments. No matter what that piece of paper may contain, there's no question that it plays a fundamental role in today's healthcare delivery system. And to play that role, it travels from admissions to the patient's bedside to the nurse's station to the file room and back again—likely making multiple other stops along the way. Given paper's inherent mobility, it is not always so easy for clinicians and administrators to track down that single sheet of paper—and the vital information on it—when they need it most.

Despite the widespread adoption of electronic health records (EHRs) across the country, healthcare entities are still dealing with literally tons of paper each year. In a recent survey of healthcare organizations reported in *Information Week* magazine, three quarters of respondents stated that they had some form of EHR system implemented. Yet, despite that impressive rate of adoption, 80% of respondents reported they were still relying on paper records—including paper charts, physician notes, physician orders and registrations documents.[1]

Historically, physicians and other clinical staff have viewed EHRs as a bit of an intrusion—something that gets in the way of the important patient/physician interaction at the point of care. While that mindset is changing as clinicians are growing more familiar with the benefits of EHRs, there is

still heavy reliance on paper. And when you consider the power that single piece of paper—the clinical note, the physician's order, the discharge summary—has in the clinical healthcare setting, having the right strategy to deal with that paper—and avoid errors, prevent losses, improve patient safety and easily incorporate clinical information into existing electronic systems in the process—becomes increasingly imperative.

PAPER IN AN EHR WORLD

When President George W. Bush pushed electronic medical records for every American during his 2004 State of the Union address, he said that such innovations would improve healthcare quality, reduce healthcare costs and increase access to affordable medical care. He also cited the important goal of reducing costly and inefficient medical paperwork. With the goal of providing most Americans access to EHRs by 2014, many hoped that widespread adoption of health information technologies would limit, if not altogether eradicate, the use of paper in healthcare.

Now, two years from that goal, healthcare entities are realizing that paper will not be disappearing from the landscape any time soon. It takes time to roll out a comprehensive EHR system—and paper can be used to fill in important clinical decision gaps as systems are developed and implemented. But even once EHR systems are fully up and running, given the incredible amount of clinical information now required for each patient, clinicians still rely on paper for notes so that computer screens do not hamper the doctor/patient interaction.

One to two billion clinical documents are produced in healthcare each year—both within individual healthcare entities and between multiple healthcare organizations. That number is not expected to decrease much in the near future. Having the right tools in place to deal with paper documents means that hospitals and physician's offices can dictate how, where and when paper is used in clinical decision support—instead of letting the overwhelming amount of traveling paper dictate it for them.

EFFICIENCY AND SAFETY

Consider the paperwork involved with a simple hospital admission. There may be a variety of pre-admission documents that a patient will bring with him or her to the hospital. There may be consent forms, referral forms, questionnaires, valuable disclaimers and insurance paperwork. All documents need to be signed and filed before the patient can be treated. Any delay in processing that paperwork may impact the patient's quality of care.

This is a major challenge for health information management (HIM) professionals. Given that paper is not going away, how can HIM specialists quickly and accurately add those various documents, containing criti-
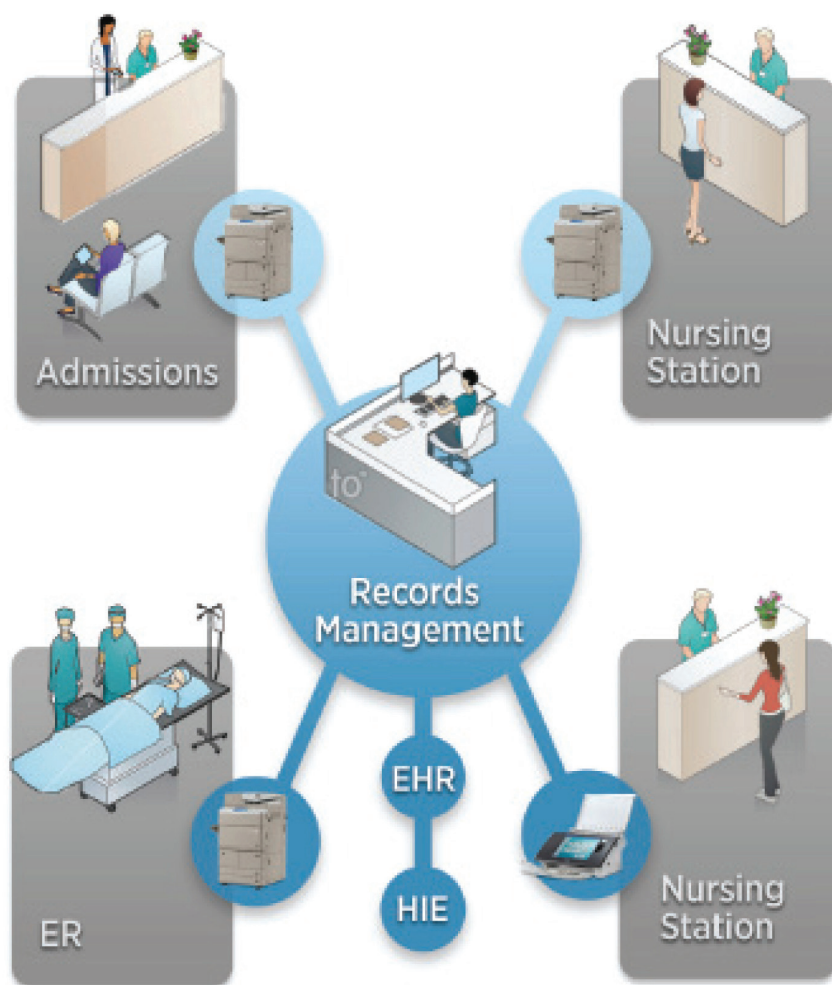
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cal data, to existing EHR systems? How can they avoid a loss of critical data—or prevent data entry errors—as they try to integrate an unstructured document into a highly structured system? And, of course, how can they make sure all care is properly documented in those systems so as to avoid issues with reimbursement? It's no small task.

If that piece of paper is lost in transit, there can be potential risk to patient safety and quality of care. Key clinical information may be lost or various orders may be unnecessarily replicated, resulting in extra costs to the healthcare organization and needless detours to the ultimate goal of high quality patient care. It is more difficult to transfer paper-based information between healthcare partners—whether it involves a simple nursing shift switch or a doctor's office sharing essential background information with the on-call physician when a patient rolls into the emergency department. In a healthcare environment that is increasingly relying on EHR systems, the continued use of paper brings many challenges.

Paper's continued role in clinical decision support has significant impact on healthcare professionals, patient safety and any healthcare organization's bottom line. Physicians should not have to waste valuable time that

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could be spent providing care to patients tracking down the right information. Patients should not have to worry about paper charts being unavailable or incomplete when they visit the doctor's office or hospital—putting their personal safety at risk. And healthcare organizations should not miss out on those important reimbursement dollars because comprehensive documentation of provided services is incomplete or unavailable.

A COMPREHENSIVE APPROACH: CENTRALIZED AND DECENTRALIZED SCANNING

How do successful organizations keep track of all that paper?

Many healthcare organizations have dealt with the problem of paper by creating a centralized record scanning department. Once a physician pens a clinical note or discharge summary, that piece of paper is then transported to the scanning department and added to the electronic record. There are several advantages of this approach. Centralized scanning has a clear workflow in place and, with a single optimized process, records

are less likely to get lost in the shuffle. HIM professionals who work in this centralized department are trained to adhere to internal standards, translating information from those paper documents to the appropriate fields in the electronic health record. And since only a few people are responsible for scanning (and then shredding) paper documents, healthcare organizations can feel more confident that they are meeting patient privacy and other Health Insurance Portability and Accountability Act (HIPAA) standards.

Those advantages, however, do come at a cost. It can often take hours or days for information to be relayed into EHRs—which may impact patient safety. And if nurses and doctors on the floor aren't adhering to documentation standards, it can be difficult to know where important information should go in the electronic health record. Those working in the centralized record scanning department may have to spend valuable time tracking down clinicians for clarification if they encounter ambiguous statements.

Because of these concerns, some information technology professionals have advocated a decentralized approach where clinical staff scan paper documents at or close to the point of care. For example, after a nurse or doctor jotted down a few notes after meeting with a patient, they would then walk those notes to a local scanning device, perhaps at the nurse's station, and scan in the document. This solves the time issue in the centralized approach, ensuring that critical information is readily available to invested healthcare partners across and between organizations—but it requires careful attention to who has access to the scanning application as well as how information is categorized and then added to the electronic record.

Given the abundance of paper in healthcare, the optimal approach to paper documents is not an either/or solution but rather a complementary workflow that includes both centralized and decentralized components—especially as organizations make the shift to mostly paperless systems. Decentralized scanning stations can complement a centralized approach, inserting vital clinical information and documents as needs arise. Scanning applications that allow for specific user access and tasks, as well as easy tagging capabilities, will provide ample benefits for patients, clinicians and healthcare organizations as a whole. They can ensure that the right information is available at the right time, improving safety and overall quality of care.

Most healthcare organizations have already invested in multi-function printers (MFPs) and scanners. They can be easily accessed in administrative offices as well as on the hospital floor. Leveraging these existing equipment investments can help physician's offices and hospitals deal with the profusion of paper—and help improve the overall quality of patient care.

PAPER: A HEALTH STORY

The Health Story Project is a unique collaboration of industry leaders with the mission of promoting comprehensive electronic health records that tell an individual patient's complete health story. One cannot tell the complete health story of a patient without the critical information contained within unstructured sheets of paper.

To meet both objectives, the Health Story Project is partnered with HL7 and has reached out to clinicians and HIM professionals across the country to develop a set of national data standards for clinical documents. These standards will increase both the speed of entry and accessibility—but also make sure that no piece of important clinical data is left behind. The group discovered that seven unstructured documents made up the bulk of errors in integrating paper data into EHRs. These include the consultation note, the history and physical, the progress note, the operative note, the diagnostic imaging report, the discharge summary and the procedure note. Many of these documents vary from organization to organization (and even, at times, department to department) or exist as an image file or unstructured text file. In order to raise the level of interoperability as these paper documents were migrated to electronic systems, the group focused on the users—the clinicians and other key healthcare personnel who work with these records on a daily basis.

Standards are critical to meaningful use. And they are just as important to help transfer the right information from paper documents to more structured EHR systems. Canon understands this. That is why Canon has worked closely with the Health Story project to develop standards for data entry. It has worked closely with the people who use these paper documents every single day—as well as the HIM professionals who will be expected to help transfer those notes to electronic records. By carefully analyzing the unstructured information in common paper documents, Canon was able to offer experienced guidance on how to put key information into a structured format. The resulting workflows are not only meaningful but user-friendly, regardless of whether they are scanned into the system using a centralized or a decentralized approach.
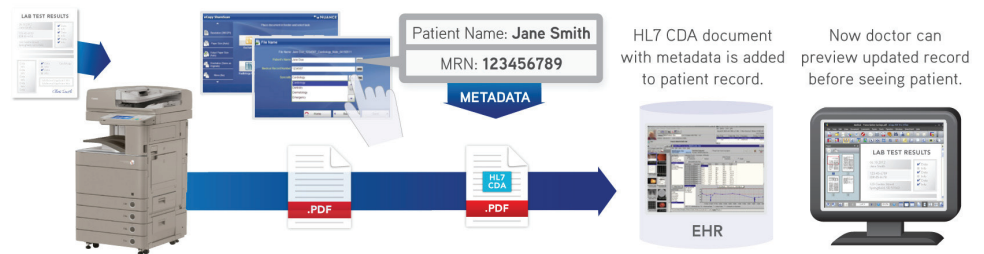
SIMPLIFY YOUR PAPER-TO-EHR WORKFLOW

Given the changing nature of paper and EHRs in healthcare, Canon has partnered with Nuance to better understand the healthcare organizations' need to be strategic about their information technology investments. This is why they've worked hard to try to create a solution that leverages equipment that most hospitals and ambulatory care settings already have.

By pairing Canon's imageRUNNER ADVANCE or imageFORMULA ScanFront 300E devices with the embedded Nuance eCopy Share Scan application, your organization can quickly and accurately scan

Patient Name: **Jane Smith**
MRN: **123456789**
METADATA

HL7 CDA document with metadata is added to patient record.

Now doctor can preview updated record before seeing patient.

.PDF

HL7 CDA .PDF

EHR

paper documents into your existing EHR system. Canon, with its own embedded application, is the only company that can provide a consistent and secure scan-to-EHR workflow for streamlining automated tasks. Using HL7-compliant metadata, and customizable buttons, this solution means you don't have to worry about your tests results, referrals, reports or discharge summaries getting lost in the system. This unique solution can both identify and categorize your paper documents in an intelligent and meaningful fashion, ensuring that you capture the relevant patient data your clinicians need—helping support a high quality level of patient care.

With the right tools and workflows in place, your organization can harness that power to increase patient safety and improve quality of care. Canon's distinctive scanning solution can help you do just that. And given the challenges of the continued and changing use of paper in the healthcare environment, EHR use doesn't get any more meaningful than that. ■

REFERENCE

1. http://www.informationweek.com/healthcare/electronic-medical-records/doctors-cant-tear-themselves-away-from-p/232602972

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