Healthcare Focus

Simplifying the Business of Healthcare

Learn More Inside

- What is electronic document management?
- Who can benefit from it?
- Is electronic document management best suited for registration, patient records, billing, or administration?
- How does electronic document management complement electronic medical record applications?

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Simplifying the Business of Healthcare

A Laserfiche Healthcare Focus Whitepaper

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Introduction

To improve healthcare business processes and to ensure the best patient care, service providers need to digitize and automate the collection, distribution and management of information. But although the need is acknowledged, questions remain about the right combination of solutions that will achieve a paperless environment. A number of these questions focus on electronic document management:

- What exactly is electronic document management (EDM)?
- Who needs it?
- Is it best suited for registration, patient records, billing, or the administrative departments?
- If you're implementing an application like EMR or replacing your Practice Management System, does that eliminate the need for EDM?

This whitepaper argues that implementing an electronic document management application is essential technology for any healthcare business, whether a single person practice or a multi-facility hospital organization, regardless of the practice-specific applications already in place. It provides examples of how the technology is used in various functional areas and/or departments of a healthcare provider organization. And it discusses the range of functionality available.

A Better Mousetrap

Document imaging is not new technology. What's new is the lower price of record storage combined with ever-increasing software functionality that has raised the technology to the level of comprehensive records management. Today, better-quality electronic document management (EDM) software offers extensive, regulatory-compliant, security capabilities; data extraction tools; automation modules and workflow functionality.

Best of all, the technology complements the other software applications already in use in every department of the organization. EDM serves as the repository for images that can be accessed directly from within other applications used in your organization, including accounting, HR, CRM, practice management and EMR systems.

Reality Check

Under the best of circumstances, paper is not disappearing in the next 10 years. Even as we all attempt to reduce the volume of paper we generate and receive, it is often replaced with an electronic version of the same paper record—with Microsoft® documents, Adobe® documents, Excel™ spreadsheets, text files, and even report outputs from the very applications that are supposed to make our offices paperless.

Software applications like Practice Management and EMR/EHR significantly reduce the paper generated by the functional area using the application. But the influx of externally generated documents continues. These records arrive via email and fax, to FTP sites, on CDs and flash drives and in files exported from other applications. Not to mention the mountains of archived paper records filed away in cabinets, boxes, and remote storage facilities.

A good document management solution must:

- Manage both paper and disparate electronic record formats.
- Normalize all records in a single, non-proprietary and non-alterable electronic record format like TIFF.
- Extract and separately store data for searching.
- Store records in a secure repository that limits access by user and/or folder and/or document, and or data field.
- Organize data in a way that suits the way your office works.
- Offer powerful search capabilities.

Narrowing Down Your Options

There are two broad categories of solutions to consider when shopping for EDM in a healthcare environment: stand-alone systems or modules offered as add-ons to other applications.

1. Stand-alone, best-of-class systems: Because manufacturers typically focus their development on the EDM technology, these solutions tend to offer more comprehensive functionality. They can either be used in a side-by-side manner or integrated with other applications. Pricing varies with capabilities and some products offer a la carte functionality while others take an all-or-nothing package and pricing approach.

2. Add-on modules to primary applications: Realizing the need and importance for a document imaging/management functionality, some—but definitely not all—primary application vendors offer a component that will scan and link directly into the application's record(s). The primary advantage is out-of-the box functionality permitting scanning and linking to a specific record. The disadvantage is limited functionality and limited cross-departmental use.

The decision between the two categories above most often depends on two sets of variables:

- **Single vs. multi-departmental requirements:** An organization that, for example, only needs document management to complement their EMR and that searches for digitized records almost exclusively on the basis of the patient, the key filing and searching criteria for EMR, may find that more comprehensive functionality is unnecessary. On the other hand, it would be difficult to use that patient-centric functionality in departments like HR, accounting, legal, etc. The records for other departments must be stored in secure silos or repositories that are separately controlled and that have widely varying needs for organizing, indexing, searching, and distributing.

- **Functionality vs. out-of-box integration:** An add-on module to an existing application scans directly into the primary application record(s). Images are either stored as attachments to a specific record or otherwise linked by path to the storage location. The sacrifice is typically the advanced functionality available with some stand-alone systems and described in the next section. Facilities that need to search for common records or data across patients (for instance, all patients taking a certain medication or all patients with a particular medical condition), or that need to accommodate disparate record management requirements for multiple departments need a best-of-class solution.

Functionality Considerations

Today, many scanners come packaged with free software that allows you to manually name and even minimally index scanned images. While this functionality can be useful for home users, for businesses considering electronic records management, manually naming and minimally indexing scanned images are only the first things to consider.

The immediate challenges for a healthcare environment with that approach are first, securely storing the records and second, finding a specific document or page or field quickly and easily. The strength of these two features, in conjunction with optional advanced functionality like data extraction, workflow, web access, distribution option and audit trail are what will ultimately determine the right application for your environment.

Data Capture: Data capture is the process of extracting specific information that facilitates quick retrieval. This can be accomplished via full-text OCR and through population of index fields with specific data.

Automation: Advanced document management systems allow for automating the data extraction and field population process via capabilities like document identification, zone OCR, pattern recognition, bar codes and database look-ups. In addition, the application will automatically name documents, create and name folders and sub-folders and file records accordingly.

Security and Data Storage: Both records and corresponding extracted data must be stored in an efficient and secure manner. HIPAA and JCAHO requirements are easily met with multiple levels of access control, from initial system access to controlling the departmental silos to group or individual folder and records access and even field- level visibility.

Data Retrieval: The ultimate goal in implementing an electronic document management solution is to find records quickly. Advanced search capabilities include folder structure navigation in combination with full text search, template field search and searches on known properties about the record. You should be able to search across defined groups of records at one time. Fuzzy search capabilities should allow you to search even if you are unsure of the spelling of the search term. Finally, results should be customizable and exportable for on-the-fly reporting.

Workflow and Distribution: A proper solution for managing documents should offer an electronic replacement for manual processes. Advanced workflow functionality securely routes records organization-wide and optionally alerts appropriate personnel to action or inactivity. Staff should be able to email or fax from within the application, and download records to CD, DVD or USB drives.

Audit Trail: It is essential for a healthcare administrator to be able to answer questions about who accessed records, why they were accessed, when they were accessed, where they were accessed and what they did with them for every patient and personnel record under their control. Advanced functionality can even require users to input reason codes before printing or faxing a record. This type of functionality also serves the dual purpose of monitoring and reporting on staff productivity for employees like coders.

Integration

At some point in the evaluation of an electronic document management solution, the question arises: Will this EDM system integrate with my XYZ application? Integration means different things to different people, so it is important to understand what type of integration is appropriate for your particular situation. Here are the various ways that EDM applications are used in a real-world environment.

- **Side by side:** Most people are accustomed to working with multiple applications like Outlook, Word, and Excel simultaneously. More often than not, EDM is simply one more window that you can toggle to for retrieval of electronic records.
- **Data Look Up**: The data indexing capabilities available with some EDM solutions allow you to populate template fields automatically. One source of automatically populated data is information already stored in another application, such as practice management or EMR. More advanced EDM solutions will offer real-time look-up functionality right out of the box.
- **Data Push to Other Applications:** Data that is manually or automatically captured into template fields can also be exported to other applications. A good example of this is when coders input the billing code into an index field associated with a source billing document, and this code is directly exported to the billing application to eliminate double entry.
- **Image-Enablement:** The most common integration of stand-alone EDM with third party applications involves searching the document repository from within the other application. Most often, this happens by activating an icon or function key that opens the EDM application and triggers a search. Search criteria are provided by the third party application active screen. For example, from within the patient collection screen of a billing application, staff can automatically bring up the specific stored images for that patient transaction. Related EOBs, checks and correspondence can be retrieved in seconds.As noted above, add-on solutions typically provide their definition of integration, namely scanning directly to a particular patient record. This won't help with other applications, however, and the same result is easily accomplished for stand-alone solutions with application tool kits.

EDM in Everyday Use at a Provider Facility

Registration

From the moment patients walk up to the registration desk, they provide all sorts of documents: insurance cards, identification cards, patient information forms, signed privacy notice acknowledgements, among others. Rather than physically storing copies of these records in the patient file, they can be scanned into the EDM. With advanced functionality a system can automatically:

- Name the document.
- Determine whether file already exists for the patient and store the document in the appropriate folder or sub-folder.
- Create the folders for new patients.
- Populate the document index fields.
- Extract all text using Optical Character Recognition (OCR) technology so that users can search any word in the document.
- Make the images available from within the Practice Management application without having to toggle between applications.

Archived Records

Archived records are a perfect candidate for EDM. By definition, they will not be converted into an EMR system because they're not accessed often. They will remain in paper form taking up valuable real estate or incurring storage space expense. According to a 2006 SEC filing of the global leader in physical record storage services,

> Storage revenues, which are considered a key performance indicator for the information protection and storage services industry, *are largely recurring since customers typically retain their records for many years*. This marks the 72nd consecutive quarter for which the Company has reported increased storage revenues (emphasis added).[1]

With electronic document management, archived records are converted to digital images and are easily archived on CD or DVD. Because archived records are likely filled out by hand and are not subject to frequent searching, record indexing is typically kept to a minimum and includes the patient identifying information, document type, and most recent visit date.

Active Records

Whether or not your organization is planning on implementing a primary application like EMR, you still need to address existing paper records along with the inevitable paper and electronic records generated outside the organization and outside the new application. In this case, EDM is not only still necessary, but can help facilitate transition and implementation of a new EMR system.

Consider the process of implementing an EMR:

1. All active records are not mass-converted. Instead, on the go-live date, the first record in the system is the first patient in the door.
2. The chart is located and patient information that can be manually input is entered into the new EMR to create the patient record.
3. Moving forward, as much information as possible is input into, and managed by, the EMR. However, historical physician's notes, lab results, operative records, and any other documents that are not easily convertible to data or simply best maintained in image form must either be kept in a physical folder or somehow scanned in and linked to the new patient record.

By implementing a document management solution first, all active records can be digitized at once and paper charts are immediately eliminated. Index information can be exported into the eventual EMR to automatically create a patient record. Or image enablement allows the entire pre-implementation record to be available from the EMR patient record with one click. New information is captured and managed by the EMR moving forward. Instead of an extended implementation period necessitating a hybrid mix of paper charts and EMR, by implementing EDM first, the patient record department can be paperless immediately.

Release of Information Management

There is a reason why many provider organizations are outsourcing the management of ROI—state and federal regulations have made the process extremely complex. Both providers managing requests themselves and outsourced ROI vendors must establish a records release management process that is both compliant and verifiable. An advanced electronic document management solution offers both.

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[1] "Iron Mountain Incorporated Reports Fourth Quarter 2006 Financial Results."
Retrieved from http://investors.ironmountain.com/phoenix.zhtml?c=91787&p+irol-newsArticle&IC+968222&highlight=

A combination of workflow, mandatory review fields and audit functionality ensures that every required step in the process is performed. These steps include initial request logging, tracking of key dates, requestor authentication, electronically highlighting and/or redacting non-requested sensitive information and sequential review.

Unless the organization is already using EDM for the entire patient record, there is a good chance the requested records may be in multiple departments, systems and/or multiple formats like paper, electronic and data. EDM allows multiple formats to be converted into one format, such as a TIFF image, and managed centrally. Mailing documentation and related information is similarly tracked, and the entire process is verifiable with audit trail functionality.

Credentialing

EDM streamlines the entire credentialing process by managing and indexing application forms, form letters, licenses, evidence of insurance and all other supporting documentation. Worklists and pending item reports are easily generated. Expiration dates can be tracked with index fields, email alerts can be created and an auditable review process can be implemented.

Emergency Rooms

In spite of hospitals being at the forefront of EMR adoption, for a number of reasons a significant percentage of hospital ERs still work with paper charts. Often, patients are logged into an electronic ADT system but actual treatment is still documented in paper charts that must be reviewed and reconciled at the end of each shift with a cumbersome and manual process. Every admission must be accounted for and each chart must be checked for completeness. Missing documentation must be tracked down. Chart copies must be made for billing and independent physicians.

With EDM, the ADT log can be used to automatically create the individual patient charts. Paper charts are scanned upon discharge and immediately made available electronically to administration, nursing and billing staff. By sorting the chart document types, any missing records are immediately identified and can be easily followed up on. Independent physicians can be given remote access to appropriate records. Physical record transport is eliminated. The entire process is automated and the time and effort involved in managing the process is significantly reduced.

Billing

In a paper environment, source documentation is delivered to the centralized billing department where it begins a workflow process that includes financial verification, coding, billing input and claim generation. If there are remote centers or remote coders, physical transport back and forth adds days to the collection process. Missing documentation adds further delays to the cycle. Volumes of paper EOBs take up excessive physical space and are painfully cumbersome to search for.

With an EDM system, remote offices can scan across the web to the EDM billing repository at the main office. As with the registration desk example, advanced functionality can create and name folders automatically or confirm that records exist and automatically file the records in the appropriate folder. Look-Up functionality can read data for existing patients and automatically populate template fields. In the same way, new or updated demographic information can be pushed back to the billing application.

Electronic workflow can sequentially alert each staff member that they have work waiting. Coders can work remotely and code directly into template fields, which can be sent directly to the billing application, eliminating double-entry and errors. Exceptions and/or charts with missing documentation can be easily flagged and routed to appropriate staff for resolution. Inactivity alerts advise supervisors about unprocessed records.

The cumbersome EOB management process is just as easily handled with EDM. EOBs can be processed in batch and easily indexed. Advanced Search functionality allows searches on all or part of any known information about a claim transaction, allowing retrieval literally in seconds.

Administration, Human Resources, Legal, Accounting, Tax and Facility Records

Any paper-intensive department, or any department striving to become paper-free, can benefit from an electronic document management solution. With a stand-alone application, each department or functional area can establish their own secure records silo with unique folder structures, index templates and user-defined workflow rules.

Consider a typical requisition-to-check cycle for procurement and see how EDM can streamline the process:

1. An electronic requisition is completed and automatically routed for approval based on amount and/or item category.
2. Approvers authorize the purchase and the requisition is routed to purchasing.
3. Purchasing sources the item and creates an electronic purchase order which is linked to the requisition and can be emailed to the vendor from within the EDM system.
4. Goods are received with a bill of lading, which is scanned and linked to the purchase order.
5. Invoice is received, scanned and linked to the purchase order.
6. Accounting retrieves all linked documents at once for matching and payment.

These same concepts and functionality can be applied to departments that manage personnel, legal, tax, and facility records. All these departments can benefit from replacing paper with digital images, and those benefits are multiplied with the additional functionality available with advanced electronic document management systems.

Conclusion

Electronic document management is essential technology for any healthcare environment. Advances in functionality, in combination with the dramatically decreased cost of record storage, have resulted in EDM solutions that can economically and effectively accommodate the most rigorous requirements.

To select the most appropriate EDM solution for your organization, an enterprise-wide needs assessment is the best starting point. If multiple departments need EDM and if each department has varying security and functionality requirements, then a best-of-class application may be the appropriate solution. If only one department needs EDM, it may be that add-on functionality from existing applications used in that department may suffice.

When evaluating applications, consider the wide range of functionality available today. Critical components include a secure repository and flexible search capabilities. Optional features include data extraction, automation modules, audit trail and workflow functionality.

Integration between EDM and other applications is indispensable in some environments and unnecessary in other. Integration has different meanings to end-users, IT staff and vendors, so it is crucial to clearly define your terms before evaluating the interoperability capabilities of the solutions under consideration.

Your entire organization will benefit from implementing an EDM solution. Billing, registration, patient records, human resources, legal, accounting, tax and facility management departments can now all enjoy fast and easy access to records while complying with all appropriate regulations. From the front desk to the back office, electronic document management solutions create efficiency, streamline operations and help the business of healthcare focus on patient care, rather than paper-shuffling.

About Laserfiche

Laserfiche creates simple and elegant document management solutions that help organizations run smarter. Since 1987, more than 23,000 organizations–including numerous hospitals, medical centers, physician's offices, medical billers and insurance companies worldwide–have used Laserfiche software to streamline processes for managing documents, records and workflow. By digitizing paper archives, Laserfiche enables users to instantly pinpoint the information they need, to collaborate more effectively and to complete daily tasks more efficiently. Secure Web access allows organizations to share information with remote offices, business partners and customers, while user- and role-based security options ensure compliance with government- and industry-mandated standards, including Department of Defense (DoD) standard 5015.2.

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