Medical Records: Hybrid

What's the Risk?

"Like the paperless business office, the paperless hospital or medical office is currently a myth."[1]

There are many reasons for the persistence of paper medical records. One is that the transition from paper to the electronic medical record (EMR) is a fairly recent phenomenon. In 2013, 78 percent of physician practices were using an EMR, which suggests that 22 percent were paper-based.[2]

Many practices with EMR systems still rely on paper to fill in the gaps related to EMR capability. Examples include informed consent, authorization to release protected health information, and patient-provided health history forms. Orders for diagnostic tests may require a paper requisition if the patient wants to go to a lab that is not integrated with the practice's EMR. Along those same lines, consult notes, diagnostic results, discharge summaries, and operative notes may come to the practice in paper form.

Some physicians who are longtime practitioners or are adverse to change find that leaving behind the pen or Dictaphone and moving to a keyboard is not worth the effort. Practices have addressed this challenge by continuing to use transcription, either through speech recognition software or by providing scribes.

When the medical record exists in more than one format, it is considered to be a hybrid. According to the American Health Information Management Association (AHIMA), a hybrid health record is a system with functional components that include any of the following:

- Both paper and electronic documents without a central electronic document management system where all patient information is maintained;
- Manual and electronic processes to compile components of the medical record;
- Multiple repositories (paper or electronic) of information that need to be accessed by the end user to compile the medical records for a single episode of care.[3]

Hybrid workflows raise the potential for medical error: If clinicians need to check information in multiple locations, clinicians may be more likely to overlook some information.[4]

When Is This Risk an Issue?

Transitioning to an EMR

Hybrid workflows become much more complicated and prone to error when the practice is

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transitioning from paper records to EMR, or when transitioning from one EMR system to another. These transitions must be carefully planned and managed.[5]

Record Inventory

According to AHIMA, "[a] complete record inventory of all existing storage and management of paper, hybrid, shadow (duplicate), and electronic records must be maintained by all healthcare organizations."[6]

Additions, Amendments and Corrections

This risk becomes magnified when important patient information is added or amended, as changes must be applied consistently to all locations and formats. Consider the following: A small primary care practice was in the process of transitioning from paper to electronic records. The practice decided to start electronically prescribing medication while simultaneously maintaining the paper record.

During the transition, a patient developed a significant allergy to penicillin. The new allergy was added to the sticker on the front of the chart, and the medication list was maintained within the chart. Several months later, the patient developed a pharyngeal infection and was seen by the covering provider, who e-prescribed penicillin. The new penicillin allergy had not been entered into the electronic prescribing system, so the allergy contraindication was not flagged at the time of prescription, nor when the pharmacy dispensed the medication. The patient suffered an anaphylactic reaction requiring hospitalization.

Structured Data versus Scanned Information

A good portion of the patient safety functionality of an EMR is driven by structured, machine-readable data. Structured data is tagged in the system so that it can be searched, collated and compared with other structured data.

One example is drug interaction testing in a computerized order entry system. Clinical decision support for drug-drug and drug-allergy interaction checking is based on structured data. The decision support tool scans the structured data related to new and existing medications and allergies; identifies duplicates, contraindications and interactions; and flags the order. Clinical decision support tools are unable to scan the unstructured data contained in imaged records. Therefore it may be necessary to manually transcribe paper records into the EMR to fully utilize the capabilities of the system.

Release of Information

Hybrid work flows increase the complexity of responses to record requests as well as the time required to respond to record requests. An incomplete response to a consulting provider can

reduce the effectiveness of the consultation. Incomplete responses to legal requests for information may impede the legal process, resulting in delays, additional requests for discovery, and loss of trust. Incomplete responses to regulatory requests may result in fines, penalties, and additional regulatory oversight activities. Incomplete responses to billing-related requests affect revenue.

Special Considerations for Retention and Destruction of Hybrid Records

Unless prohibited by state law, paper records may be destroyed once the record is converted to electronic media and the user is confident that all information on scanned documents is legible.[7]

How Can I Reduce Risk?

Use the following strategies to reduce the risks associated with working in a hybrid record environment.

Maintain a Record Inventory	
Determine primary location for medical record components	• To reduce confusion and decrease the risk of error, determine the primary location for each component of the medical record. This is often referred to as 'single source of truth.' Define which medical record elements are maintained in the paper record, the electronic record, and the billing and registration system.
Create log or database	• Create a log or database to facilitate locating previously filed information and to assist staff in determining where information should be kept.
Specify where records reside	• If elements of the record are hybrid, i.e., exist in both paper and electronic format, specify by date where the records reside. For example, progress notes dated on or before July 1, 2013, are included in the paper record, while progress notes dated on or after July 2, 2013, are located in the EMR.

Manage Format and Content	
Develop process to manage content	• Develop a formal process for managing forms, paper, electronic, hybrid, and system-generated records, including input, output, and versioning of document content and access.[6]

Manage Format and Content	
Limit duplication of information	• When working with two electronic systems that are not interoperable, clearly identify which information should be contained in each system and limit duplication as much as possible. For example, when the billing and registration systems are not interoperable with the EMR, determine the single source of truth for current demographic information. Maintaining updated address and telephone information in two separate systems increases the chance for error.
Refer users to appropriate system when necessary	• Clearly indicate and cross reference where the current information is maintained. If demographic information is maintained in the billing system, refer EMR and paper record users to the billing system from the demographic page of the electronic or paper record.

Ensure Access	
Move records to the EMR	• Decrease the risks associated with hybrid records by moving as many records as possible to the EMR.
Scan or abstract data	• Determine which information can be scanned and which information must be abstracted into the system as structured (machine-readable) data.
Ensure timely scanning	• Scan forms and documents as quickly as possible to ensure accessibility when needed. A typical time frame is 24–48 hours.
Define timeframe for retention of scanned documents	• Determine if your state regulations address retention of paper-based records that have been converted to EMRs. • Before destroying scanned documents, ensure that all information has been scanned and the scans are legible/readable. Depending on the organization's comfort-level with scanning process and appetite for risk, consider retaining scanned documents for six months.

Manage Authentication

Maintain signature list	• Recognize that authenticating paper records may involve use of initials, signatures or both. Maintain a list of employee signatures and initials to facilitate attribution of the signature to the person who made the record entry. See the sample ***Authorized Signature Log***.
Ensure all staff members use their own electronic signatures	• Ensure that all staff members who enter clinical information into the EMR have an electronic signature and the ability to authenticate their record entries. Prohibit staff members from entering documentation into a screen that another provider is logged into or using another provider's electronic signature.
Know which documents require authentication	• Recognize that some scanned documents, such as diagnostic results, patient-completed history forms, and consult notes, should be dated and authenticated by the provider. For more information, see the chapter titled ***Medical Records: Documentation***.
Authenticate electronically, when possible	• Determine whether the documents can be authenticated using e-signature after scanning or if providers will manually date and sign prior to scanning. This decision will be driven by EMR functionality. Ideally, push scanned documents to the physician workflow for authentication. Routing documents for manual signature increases the risk of a lost or misplaced document and greatly increases the time to scan.

Abstract Well

Determine which information to abstract	• When initiating or changing EMRs, work with providers to determine which information must be manually entered into the system. Abstracted information often includes current medications, allergies, immunizations, demographics, the most recent diagnostic testing results, and past medical and surgical history.

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Abstract Well	
Develop abstracting process	• Once the appropriate information is identified, work with clinical support staff to develop a defined process to accomplish the abstraction.
Ensure accuracy	• Recognize that a comprehensive abstraction validation system is essential for patient safety. ○ Review abstracted records to ensure the accuracy of entered information. ○ Have clinical staff abstract in pairs and check each other's work after each record until accuracy is demonstrated, then select a representative sample of charts for review daily (10–20 percent). ○ Require providers to confirm the accuracy of information by validating it with the patient and against historical records.

Develop Hybrid Computer Downtime Procedures	
Determine which information to scan or manually enter	• Develop a plan for managing paper documents created during EMR downtime. Some information, such as progress notes, may be scanned and cross referenced with the EMR once the system is online. Update clinical orders, new allergies, and the clinical problem list by manually entering the information in the EMR. Ensure that the manual entries reflect the actual date the care was provided as well as the date the entry was made.
Share telephone messages in a timely manner	• Use caution when handling telephone messages during downtime. Remind telephone staff members that patient information received by telephone during this time must be documented by hand, e.g., by using a memo sheet and shared with the clinical staff or provider in a timely manner. Do not hold clinical messages in the hope that the system will return to function quickly.

Manage Corrections, Amendments and Additions

Identify single source of truth

- Limit duplicate documentation by identifying the single source of truth for each piece of clinical information. For example, if the practice uses electronic prescribing, document medications and allergies in the electronic prescribing system. Advise staff members that the system contains the most current and reliable medications and allergies. Ensure that staff members use the e-prescribing system for medication and allergy reconciliation and update this system when medications and allergies change.

Develop policies and procedures

- Develop policies and procedures for correcting, amending, and adding information to the electronic medical record. For more information, see the chapter titled ***Medical Records: Electronic***.
- Develop policies and procedures for correcting, amending, and adding information to the paper records. For more information, see the chapter titled ***Medical Records: Paper***.

Ensure Appropriate Release of Information

Consider combining paper record and electronic record

- Recognize that in a hybrid environment it may be difficult and confusing to tell the story of the patient's care when it resides in both paper and electronic media. When releasing information, consider printing the electronic record and compiling the electronic and paper records into chronological order before releasing to reflect the continuity of care.

Explain how information is organized

- Use a cover sheet to explain that the record includes chronologically sorted electronic and paper records to reduce potential confusion related to hand-documented records comingled with computer-generated records.
- When an electronic copy of a hybrid record is requested, scan the paper components and save them to digital storage media (disc or flash drive) as a PDF. Transfer the electronic files to the digital media.

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Ensure Appropriate Release of Information	
	Advise the recipient that the records are not chronological.
Have skilled staff member review prepared record before release	• Recognize that releasing records in a hybrid environment can be particularly challenging. Consider requiring a second staff member who is skilled in records management to review the prepared record for completeness and accuracy prior to release. For more information on releasing records, please see the chapter titled ***Medical Records: Release***.

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