When hybrid records cause harm

How to avoid putting yourself at risk when making the switch to an EHR

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In 2010, Jane Doe, age 68, visited her urologist because of a urinary tract infection (UTI), problems with incontinence and gross hematuria. The urologist ordered computed tomography urography (CTU). A few weeks later, the CTU was done. The urologist examined the scan and found no abnormalities. He wisely waited for the final word from the radiologist, who was also interpreting the CTU. The radiologist, however, did find a problem and noted it in the patient's medical record: “The uterus demonstrates central decreased attenuation raising the possibility of underlying neoplastic changes. Ultrasound is recommended for further evaluation.”

This is when the trouble began. The health system had switched from a paper medical record system to an electronic health record (EHR) system on the very day the CTU was ordered. Three weeks later, when the scan was done, the radiologist dictated his interpretation directly into the EHR, unbeknownst to the urologist. The urologist, who expected to get a paper copy of the results, assumed no news was good news and simply treated Jane’s UTI with ciprofloxacin. The urologist never saw the radiologist’s note.

Jane returned several times with worsening symptoms. However, it wasn’t until 18 months later that she finally received a correct diagnosis from a different physician. Based on her symptoms during a routine exam, her OB/GYN ordered a test for a cancer marker and a transvaginal ultrasound—the same test that the radiologist had recommended 18 months earlier. The OB/GYN found elevated levels of the cancer marker and identified a large uterine mass through the ultrasound. The mass was then biopsied. Jane was diagnosed with advanced uterine carcinoma and suffered through three rounds of chemotherapy, plus surgery to debulk the tumor. Her life expectancy was considerably decreased.

EHRs and patient safety

Since 2008, adoption of EHR systems has increased five-fold across the United States. Currently, 59 percent of hospitals have implemented a basic EHR, and an additional 34 percent have arranged for, but not yet implemented, a certified EHR.1 Although lagging behind hospitals in their adoption rate, office-based practices also are rapidly implementing to EHRs. With the Centers for Medicare and Medicaid Services’ EHR incentive programs for meaningful use progressing to Stage 2, hospitals and clinics that have not yet done so will have to switch to an EHR during the next few years.

It is hard to argue against the benefits of EHRs. They can help ensure patients obtain preventive care. They can help prevent medication errors. And they can assist with clinical decision making for management of patients with chronic conditions. EHRs also capture data that can be used in research and for improving population health.2

But the wave of rapid implementation has had an unintended consequence: During the transition from paper to electronic records, hybrid records are often unavoidable. If they are not managed well, patients can be harmed. Stories like Jane’s are making their way into the patient-safety and malpractice literature.3

In one study of EHR-related malpractice claims by CRICO Strategies, problems with hybrid records and conversions were found in 16 percent of the claims with at least one EHR-related contributing factor. This was second only to “incorrect information,” which was identified in 20 percent of claims.4 In an analysis of MMIC’s claims from 2010 to 2012, only 1.1 percent involved an EHR-related contributing factor. Although that may not seem like a significant number, it may not tell the whole story, as years can pass between the time an incident occurs and when a claim is made. In the EHR-related claims from 2010 to 2012, the incidents occurred as early as 2007—three years prior to the claim. Given this time lag, it is reasonable to predict an increase in EHR-related claims in the coming years and that some of those claims will be the result of having hybrid records.

Additionally, “hybrid records” are not exclusively a mix of paper and electronic records. They also can include information from nonintegrated electronic systems such as a practice management system, a lab information system, a picture archiving and communication system, or even a legacy EHR system. (Operating with these
disparate systems can cause hybrid records to persist indefinitely.)

Sources of information including transcribed documents, faxed documents and X-ray films also can contribute to the creation of hybrid records.

Jane’s case illustrates one point at which problems can arise—during an initial EHR implementation. However, problems involving hybrid records can occur any time disparate systems are maintained.

**How to avoid problems**

You can do number of things to minimize the risks associated with hybrid records.

Know where and when to look for information.

When EHR modules are rolled out over time, medical records can become moving targets. And no formula for “going live” fits all practices. Some groups bring their EHR online one location at a time, others do so according to physicians’ specialty or even their technical aptitude, still others use a combination of approaches. During transitions, knowing where to look for certain information is crucial to patient care and avoiding risk.

A helpful tool for tracking this during transitions is a simple and easily accessible spreadsheet on which you document shifts of information. At the very least, it should allow you to list the record type (eg, lab results, X-rays) and the system (eg, film, CD-ROM, EHR, picture archiving and communication system, lab information system). If groups of providers transition at different times, information about that should be noted as well. This becomes especially important when a physician sees a patient on behalf of a colleague. A useful example of a tracking tool can be found in the American Health Information Management Association’s guide for the legal record.1

Think through how you notify staff about critical information.

With an EHR, incoming documents can easily be missed if they are not routed through a messaging inbox or logged in a task queue or other monitoring system. Make sure your staff understand the importance of filing and tasking test and lab results accurately, no matter where those results originate (from electronic interfaces with external organizations or manually scanned or filed documents). Help staff define the different levels of notifications for critical and noncritical results.

Look for open orders.

Make sure your staff can use your EHR to identify all modes for ordering tests, so they are able to create appropriate audit reports. Had such a process been in place, Jane Doe’s adverse outcome would likely have been avoided.

**Conclusion**

To minimize the risk of problems associated with hybrid records, physicians must stay engaged throughout EHR implementation. They must be able to identify gaps in information related to patient care, define critical thresholds for notification and empower EHR support staff to create appropriate audit processes. MM

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**REFERENCES**