What's New in the Patient Safety World

October 2014

Ebola Exposes Fundamental Flaw

There has been considerable attention to the fact that the recent Ebola patient in Dallas had been seen in the ER and sent home a few days prior to the admission in which Ebola was diagnosed. Undoubtedly, a root cause analysis of this case would likely reveal multiple contributing factors. But, in fact, a fundamental flaw in our "advanced" healthcare system played a huge role, predictably so.

The hospital released a statement about this issue (Texas Health Resources 2014). It indicated that the intake nurse in fact had recorded in the hospital's electronic medical record that the patient had recently traveled to Africa. But it also noted that their electronic medical record had two workflows: one for nurses and one for physicians and that the travel history recorded by the nurse would not automatically appear in the physician's workflow. Presumably the physician was unaware of the travel history (the implication was that he/she did not see the nurse's note and presumably did not take a travel history him/herself) and discharged the patient from the ER on antibiotics.

(Note that the hospital, a day after its initial statement, provided a "clarification": "As a standard part of the nursing process, the patient's travel history was documented and available to the full care team in the electronic health record (EHR), including within the physician's workflow. There was no flaw in the EHR in the way the physician and nursing portions interacted related to this event." This clarification did not mention whether the physician actually accessed that screen in the EHR that contained the travel information.)

Our March 22, 2011 Patient Safety Tip of the Week "An EMR Feature Detrimental to Teamwork and Patient Safety" addressed this very issue. Researchers (Hripcsak 2011) used the detailed audit logs of EMR's to determine the frequency of notes by various members of the healthcare team, the time spent entering such notes, the frequency with which those notes were accessed, and the distribution of types of healthcare workers accessing those notes. They found that while attending notes and resident notes were viewed 97% and 99% of the time, such was not the case for notes authored by other members of the healthcare team. In particular, **fewer than 20% of nursing notes were read by attendings and residents** and only 38% of nursing notes were read by other nurses. Note that nurses have several other means of communicating with each other (standardized handoffs, etc.). And **16% of all notes were never read by anyone!**

This seems like a journey into the past! For the longest time, hospitals were divided in how they partitioned the paper medical chart. Some hospitals kept notes by physicians, consultants, nurses, therapists, dietitians, etc. segregated from each other whereas other hospitals intermingled all the notes in the "progress note" section. We can recall medical staff meetings where some disgruntled physicians indignantly ranted "I'm not interested in seeing the *#!& social work note". Generally, as the value of teamwork became increasingly appreciated and a culture of safety adopted, most organizations migrated toward the "intermingled" model.

But with the advent of the EMR we have seen a regression back to the "partitioned" model. The statistics above mean that most physicians seldom read notes by anyone other than physicians. This applies not only to nurses' notes but also to a host of other useful tools (eg. vital sign flow charts, I&O charts, face sheets, etc.) no longer readily or easily accessible in the EMR (see our Patient Safety Tips of the Week for August 26, 2008 "Pattern Recognition and CPOE", December 29, 2009 "Recognizing Deteriorating Patients", September 11, 2012 "In Search of the Ideal Early Warning Score", May 28, 2013 "The Neglected Medications: IV Fluids" and March 11, 2014 Patient Safety Tip of the Week "We Miss the Graphic Flowchart!"). No wonder we have so many adverse events where communication breakdowns are identified as root causes or contributory factors.

Some of the problem may be related to the relative "newness" of the EMR. Most EMR's do allow some degree of customization of what is displayed and how and where it is displayed. So a user might choose to keep all clinical notes together or to sort them by provider type. In some cases, the "default" setting is the partitioned one and the physician may not even realize he/she can choose the intermingled model.

But the basic problem usually lies in the design of the EMR. Quite frankly, most EMR design has lacked adequate input from clinicians and other healthcare workers with a full understanding of both workflow issues and safety issues. Most current EMR's typically require the user to click into one progress note, then click out, search for another note and click into that note. That obviously reduces the likelihood that one user will look at the notes from other members of the healthcare team.

But let's not just place the blame on IT here. The problem is as much a cultural issue as an IT issue. As noted above and several prior columns (see our What's New in the Patient Safety World columns for January 2011 "No Improvement in Patient Safety: Why Not?" and July 2012 "A Culture of Disrespect" and our March 29, 2011 Patient Safety Tip of the Week "The Silent Treatment: A Dose of Reality"), too many healthcare workers don't respect the work done by other healthcare workers. We suspect that even in those old paper-based charts that had intermingled notes many physicians probably ignored many of the notes by other healthcare workers (though less so than when the paper charts had "partitioned" sections).

One other unintended consequence of healthcare IT is that it has reduced face-to-face communication between healthcare workers. Today a doctor and nurse taking care of the

same patient sometimes don't even have a single face-to-face conversation about that patient. So much is done on the computer and we often, incorrectly, assume that the other party has read our notes and knows what we are thinking.

Aside from the impact on teamwork and quality and patient safety, think of the potential liability issues from failure to read nursing notes on your patients. "Doctor, why didn't you know the patient was complaining about ___? The nurse's notes clearly state he complained about ___ daily." Try explaining that to a jury in a malpractice hearing! The plaintiff's lawyers will have a heyday when you try to explain it was the EMR's fault. They love getting the hospital and physician to point fingers at one another.

For those of you out there saying "not **my** EMR!" we encourage you to use the audit tools built into your EMR and see how often physicians (or others) access the nurses' notes or other important notes and documents. We suspect you'll be unpleasantly surprised that your results are similar to those in the Hripcsak study.

We also encourage you to take a look at the way clinical documentation is displayed in your EMR and whether you can change that display. Also assess the number of clicks necessary to get from one area of the EMR to another and you'll find these are a significant barrier to sharing of information.

The full potential benefit of the EMR on patient safety has yet to be realized in most organizations and has often introduced unintended consequences. The recent Ebola case is but one example of such unintended consequences.

The EHR could and should be used to facilitate identification and appropriate management of such patients. At least two medical centers, Hennepin County Medical Center ([Benson 2014](#)) and Mt. Sinai Hospital in NYC ([Allen 2014](#)) have created flags that will trigger for such patients so there's an alert on that patient when their chart is opened or will alert the staff to begin isolation on that patient. Hopefully, the lessons learned from the Ebola case in Texas will be used by other healthcare systems to avoid similar problems in the future.

See some of our other Patient Safety Tip of the Week columns dealing with unintended consequences of technology and other healthcare IT issues:

- June 19, 2007 "[Unintended Consequences of Technological Solutions](#)"
- May 20, 2008 "[CPOE Unintended Consequences – Are Wrong Patient Errors More Common?](#)"
- June 17, 2008 "[Technology Workarounds Defeat Safety Intent](#)"
- August 26, 2008 "[Pattern Recognition and CPOE](#)"
- September 9, 2008 "[Less is More….and Do You Really Need that Decimal?](#)"
- December 16, 2008 "[Joint Commission Sentinel Event Alert on Hazards of Healthcare IT](#)"
- February 2009 "[Healthcare IT The Good and The Bad](#)"

- October 2009 "A Cautious View on CPOE"
- November 24, 2009 "Another Rough Month for Healthcare IT"
- April 20, 2010 "HIT's Limited Impact on Quality To Date"
- March 22, 2011 "An EMR Feature Detrimental to Teamwork and Patient Safety"
- June 26, 2012 "Using Patient Photos to Reduce CPOE Errors"
- June 2012 "Leapfrog CPOE Simulation: Improvement But Still Shortfalls"
- July 17, 2012 "More on Wrong-Patient CPOE"
- January 2013 "More IT Unintended Consequences"
- October 8, 2013 "EMR Problems in the ED"
- March 11, 2014 "We Miss the Graphic Flowchart!"

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