SENTINEL EVENT NEWSLETTER

DIVISION OF LICENSING AND CERTIFICATION,
MAINE DEPARTMENT OF HEALTH AND HUMAN SERVICES

ISSUE 21, JUNE 2019

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EHR – "ERRORS HAPPEN REGULARLY"

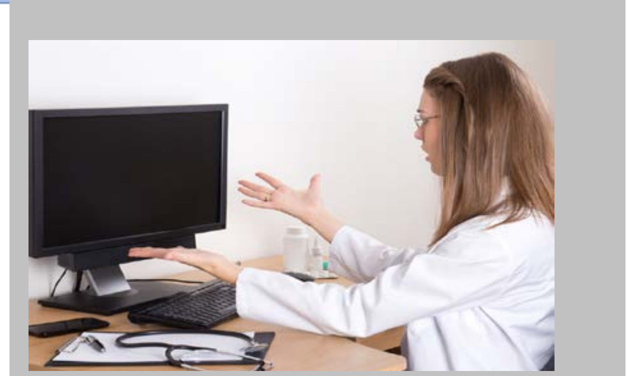
Anyone who has worked with electronic health records (EHR) will find some truth in the title of this article, which was taken from the website developed earlier this year by MedStar Health, National Center for Human Factors in Healthcare (MedStar) and the American Medical Association to address patient safety issues related to EHRs. https://ehrseewhatwemean.org/ In 2009, the federal government passed the Health Information Technology for Economic and Clinical Health (HITECH) Act, which established the Medicare and Medicaid EHR Incentive program, known as Meaningful Use. Over the past ten years, this program has provided more than $37 billion in financial incentives for hospitals and doctors' offices to purchase and utilize EHRs. However, rather than fulfilling the promise of making healthcare better, safer and cheaper, the implementation of EHRs has resulted in a compendium of unintended consequences, some of which have resulted in significant harm to patients.

The March 2019 the Kaiser Health News (KHN) article "Death by 1,000 Clicks: Where Electronic Health Records Went Wrong," provides a sobering picture of the multitude of problems that have resulted from the use of various EHRs. https://www.healthleadersmedia.com/innovation/death-thousand-clicks-where-electronic-health-records-went-wrong

For example, between 2012 and 2017, 3,243 medication errors linked to EHR-usability were identified at three pediatric hospitals; in 2018, 3,769 safety-related incidents were linked to EHRs or other IT (Quantros); and the Pennsylvania Patient Safety Authority identified 775 laboratory-test problems related to health IT from January 2016 to December 2017.

There are multiple reasons why EHRs have not been as successful as planned:

- An unfeasibly short time frame for creating a useful, interoperable nationwide record system;
- The wide variety and complexity of EHRs;
- Widespread customization of EHRs;
- Insufficient training and education of end users;
- Inability of modules, even within one EHR system to share information.



. EHR – "ERRORS HAPPEN REGULARLY" (Cont.)

Interviews conducted by KHN with physicians, patients, IT experts, health policy leaders, government officials, attorneys and EHR vendors revealed "a tragic missed opportunity: rather than an electronic ecosystem of information, the nation's thousands of EHRs largely remain a sprawling, disconnected patchwork."

Raj Ratwani, who directs MedStar, has used eye-tracking technology to demonstrate how easy it is to make mistakes when performing basic tasks using two leading EHR systems. Ratwani has identified the repetitious box-ticking and endless pulldown menus as leading to ''cognitive burden'' for providers. In a 2017 study in the Annals of Family Medicine, it was noted that doctors spend 5.9 hours (out of an 11.4-hour workday) on EHRs, compared to 5.1 hours spent with patients. 44% of the time spent on the EHR is focused on clerical and administrative tasks, like billing and coding. An American Journal of Emergency Medicine study estimated that an ER doctor makes 4,000 computer clicks over the course of a single shift.

What can be done to improve the current situation? Raj Ratwani is pushing for a central database to track errors and adverse events related to EHRs. Seema Verma, the administrator for the Centers for Medicare and Medicaid Services, has promised to reduce the documentation burden on physicians and end the gag clauses that have been used to protect the EHR industry from full disclosure of EHR-related adverse events. The Pew Charitable Trust, the American Medical Association and Medstar have developed a resource document, "Ways to Improve Electronic Health Record Safety," which includes recommendations on how to advance usability and safety throughout the EHR software life cycle. It can be used as the foundation of a voluntary certification process for EHR developers and implementers and includes criteria

. EHR – "ERRORS HAPPEN REGULARLY" (Cont.)

detailing what constitutes a rigorous safety test case and the creation of sample test case scenarios based on reported EHR safety challenges.
https://ehrseewhatwemean.org/

Researchers examined usability of the two major EHR systems—Cerner and Epic—which account for a large percent of the U.S. market. Their goal was to identify adherence to basic usability principles by examining the two systems in use. They found large variability by clinical site in time, clicks, and error rates, with some error rates reaching 50 percent. Improved usability and safety require shared responsibility and action from stakeholders, including patients, providers, vendors, and policymakers.

The site has videos of real and simulated EHR usability challenges. The videos demonstrate the wide variation in usability across different EHRs, as well as the challenges observed while using the EHRs in practice. Some videos are screen recordings of an actual EHR, and other videos are fictional representations of an EHR that demonstrate the usability challenges observed during the study.
https://ehrseewhatwemean.org/videos/

DIAGNOSTIC OVERSHADOWING

Diagnostic overshadowing refers to the negative bias impacting a clinician's judgment regarding co-occurring disorders in individuals who have intellectual disabilities or mental illness. Symptoms or behaviours that may be due to a specific mental illness are attributed to another disorder without considering alternative etiology.

In a Patient Safety Network Commentary, "Diagnostic Overshadowing Dangers," Maria Raven, MD, MPH, MSc uses a case of failure to correctly diagnose a myocardial infarction, in part because of the patient's past history of opioid abuse https://psnet.ahrq.gov/webmm/case/412/
This commentary illustrates some of the challenges of providing acute medical care to individuals with co-morbid behavioral health conditions, especially those who are

DIAGNOSTIC OVERSHADOWING (Cont.)

referred to, pejoratively, as ''frequent fliers.'' Individuals who frequently seek care from emergency departments often have underlying co-occurring mental health and/or substance use disorder diagnoses, yet typically their chief complaint is not related to these conditions, but rather to nonbehavioral medical problems. These individuals are vulnerable to diagnostic errors and provider biases that negatively impact their care.

Patients who have severe mental illness or who are actively using substances can often be labeled as ''poor historians,'' particularly if there is no one to advocate for them or validate their medical/social history. Providers may rely on documentation from previous visits, copying and pasting previous history into a current note, which may or may not be accurate or relevant. Underlying suspicions or malingering or drug-seeking behaviors can result in a failure to conduct adequate diagnostic testing and treatment. Diagnostic overshadowing can prevent or delay making an accurate and complete diagnosis, even if such conclusions would be obvious in patients without behavioral health conditions.

In the case presented in the Commentary, a 72-year-old woman, with a history of opioid use disorder, presented at an emergency department complaining of epigastric pain. She had abnormal vital signs and an elevated troponin but did not receive further diagnostic cardiac testing or intensive monitoring. The author attributes this lack of vigilance on the part of the treating providers to the patient's former opioid use overshadowing the correct diagnosis of ST-elevation cardiac infarction.

In a busy emergency department, it is easy to see how this could happen. Harried providers are dealing with conflicting priorities, and a patient with a past history that implies malingering or drug-seeking can easily have his/her presenting complaint minimized in an effort to keep up with production pressure. There are ways to assist providers to side-step diagnostic overshadowing. The Commentary lists three types of interventions:

- Include in health professional training how to care for individuals affected by mental illness and substance use disorders, with an emphasis on this population's increased risk of co-morbid medical illness and mortality.

- Use of technology, such as test or pager alerts to communicate critical lab values or vital signs thereby reducing the chances that they may be overlooked.
- Standardization of approaches to abnormal vital signs and lab values, regardless of co-occurring mental health issues.

Dr. Raven concludes the commentary with the following points:

- Healthcare providers require more training to provide high-quality care for frequent users of emergency departments, many of whom have underlying mental health and substance use conditions.
- Frequent users of emergency departments have a high burden of medical disease and are frequently admitted to the hospital.
- Diagnostic overshadowing is an under-recognized patient safety issue, and providers must:
  - Recognize it exists and can adversely impact their ability to provide high-quality care;
  - Increase efforts to obtain an accurate history when caring for frequent emergency department users and those with behavioral health diagnoses and to recognize the need for objective data when documenting; and
  - Use interventions that can reduce diagnostic errors and enhance patient safety.

MEDICAL MALPRACTICE

CRICO Strategies is a division of The Risk Management Foundation of the Harvard Medical Institutes Incorporated. CRICO Strategies' national Comparative Benchmarking System (CBS) was developed to gain insights into the systemic risks underlying adverse events, identify emerging risks and comparing data over time. CBS contains 30% of the medical professional liability (MPL) cases filed from across the United States.

In its 2018 Benchmarking Report CBS ("CRICO 2018 CBS Benchmarking Report, Medical Malpractice in America, a 10-Year Assessment with Insights") analyzed adverse events that affected 124,000 patients, their families and the health care providers involved. One of the sections in this report looked at the correlation between the severity of an injury with indemnity payments. Injuries that had a high severity were 41% more likely to lead to an indemnity payment, and those payments were, on average, four times higher than for medium and low severity cases.

MEDICAL MALPRACTICE (Cont.)

Over the ten-year period, nearly two-thirds of obstetrics-related cases and 63% of cases involving a diagnostic error involved high-severity injuries. Conversely, 72% of surgery-related cases involved medium or low severity injuries. Death-related cases accounted for the largest amount of total indemnity, but severely-injured patients under age 40 received the highest payments.

CBS identifies high-severity injuries, with examples, as follows:

- Permanent, significant – sub-optimal management of a non-English speaking patient's compliance with consults delayed diagnosis of a brain tumor resulting in permanent vision loss
- Permanent, major – patient with vascular occlusions required bilateral leg amputations after a vascular consult was delayed
- Permanent, grave – mismanagement of anticoagulants after a heart attack resulted in patient suffering a stroke
- Death – patient with a history of aortic dissection complained to PCP of chest pain. After an x-ray, patient died at home. Posthumous reading of the x-ray showed an enlarged aorta, which ultimately ruptured.

Patients with severe, permanent (non-fatal) injuries seek compensation – in addition to pain and suffering – to cover the health care costs and lost income of their remaining years (sometimes decades).

CBS points out that high-severity outcomes and a greater likelihood of high payments make these cases focal points for both claims management and risk management. Effective risk-reduction efforts targeting the root causes of high-severity cases should also help reduce less severe events.

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CHANGES WITH THE SENTINEL EVENT PROGRAM

We are very pleased to announce that Michelle Caldwell will be joining the Sentinel Event Program. Michelle has direct experience in identification of sentinel events and conducting root cause analyses in her previous work with Maine General Medical Center. Michelle has 27 years of experience in healthcare and has a master's degree in Healthcare Administration. Michelle will begin her work with the SET on July 8th.

We are also announcing the promotion of Joe Katchick to Assistant Director of Compliance and Operations for the Division of Licensing and Certification. Joe will continue to have oversight of the SE Program, and will be an ongoing resource for the SET. Until the SE Manager position is filled, Joe will continue to provide management and direction for the SE Program.

SENTINEL EVENT TEAM

Joseph Katchick, R.N.

Sentinel Event Team Manager