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PARTNERSHIP for HEALTH IT PATIENT SAFETY
Making healthcare safer together

Partnership for Health IT Patient Safety

Partnership Update
November 2015

We wish to thank everyone for participating in *Partnering for Action: Applying What We've Learned* on October 16, 2015. This informative and interactive meeting provided stakeholders with valuable information and actionable ideas. For those who were unable to attend, we had a full agenda on the 16th. We are currently in the process of preparing the proceedings from the meeting. These will be available within the next several months. Watch for the announcement and posting.

Health IT Safe Practices: Toolkit for the Safe Use of Copy and Paste. On October 16, the Copy and Paste Workgroup presented its findings and recommendations for the safe use of copy and paste. A draft toolkit and evidence scan were provided to all attendees. The workgroup identified four Recommendations for the safe use of copy and paste. The toolkit provides implementation resources for the safe use of copy and paste such as: self-assessment questionnaires, policy and procedure templates, educational resources, tracking tools, and action plans. Comments about the toolkit are due November 15 and can be sent to hit@ecri.org.

Patient Identification Workgroup. At the July 28 quarterly call, the *Partnership* announced patient identification as the next workgroup topic. At the October 16 *Partnership* in-person meeting, discussions about this important topic further clarified and identified the tasks of this next workgroup. A diverse group of stakeholders has volunteered to participate. The schedule of monthly meetings is posted on the *Partnership* website under the link for Workgroups. The meetings are scheduled for November 20, 2015; December 18, 2015; January 15, 2016; February 19, 2016; March 18, 2016; and April 15, 2016.

Data Snapshot: Overriding Medication Alerts

Data Snapshots provide lessons learned from patient safety reports submitted to the *Partnership*. Usability issues often are the basis of events that are reported. While "usability" encompasses the effectiveness, efficiency, and satisfaction with which users achieve their goals (Zahabi et al.), more importantly, it also encompasses the ability to learn how to use the interface, the robustness in functionality, system navigation, capability for error recovery and editing, and the degree of user control and software flexibility. (Zahabi et al.) Failures in any of these areas can potentially jeopardize patient safety and lead to events or near-miss situations.

Background
Usability issues are diverse and can include such things as the inability to document care or medications provided, ineffective alerts, missing downstream documentation, inappropriate defaults, improper transfer of information, or the waste of valuable resources due to workflow using the technology. Usability issues may interrupt workflow, make information hard to locate or difficult to enter, and impede the ability to reliably use the information previously recorded.

Event Review
The following are case examples illustrate the range of usability issues that have been reported to the *Partnership*.
In the following two reported events, there was an inability to use the technology as the provider needed to use it:

- In this first example, the cardiac monitor would not display the patient's information. Upon investigation, it was discovered that the device integration that supports such functions as cardiac monitoring, fluids, and ventilator values would not connect to the identified patient and therefore no display was available.
- In another event, a recently admitted patient required medications; however, when checking the automated

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Upcoming *Partnership* Events:

Quarterly Meeting: January 19, 2016, 3:00-4:00 PM ET

Patient Identification Workgroup: Meets monthly with the next scheduled call on November 20 from 2:00-3:00 PM ET

Expert Advisory Panel Meeting: December 9, 2015

dispensing cabinet (ADC), the medications that were in the cabinet did not match what was ordered for this patient. Upon investigation, it was discovered that the medication orders and medications in the ADC were those from the previous patient occupying that room.

In other reported events, usability became an issue when there was an inability to document appropriately or to document the care that was being provided to the patient:

- In the first of these types of examples, a medication was needed immediately for a patient. In order to accommodate this need, the ADC was overridden and the medication was obtained. The medication dispensed had not been verified by the pharmacy. Thus, because the pharmacy had not verified the medication for this individual, it was not possible to document that this medication had been given to the patient.
- A similar documentation issue occurred when orders were overridden on a patient. If this occurs, expected are accompanying or updated physician orders. In this case, there were no visible modification for physician orders for this treatment.
- In yet another example, there was no way to document that and ordered item was not used. In this case, the unused item (a unit of blood) was unable to be returned to the blood bank. A unit of blood was the incorrect blood type for the patient. The staff wanted to return the unit of blood to the blood bank; however, there was no way to return the unit via scanning or manual entry, and ultimately, the unit of blood was wasted.

Finally, there are usability issues that result in ineffective alerts and communications.

- In this example, providers scanned both the medication and the wristband. However, scanning both the patient and the medication did not alert the provider or prevent staff from incorrectly

administering the same medication twice within a three-hour time frame (this was too often for this medication to be dispensed).

In another example, the pharmacist queried nursing about an antibiotic dose. Pharmacy stated that the antibiotic dose ordered was incorrect based on the weight provided. What had happened was that an incorrect weight had initially been entered and was then subsequently corrected in the record. However, the corrected weight, while updated in the record, did not appear at the pharmacy. Rather, the previously entered incorrect weight appeared in the patient banner at the top of the screen for the pharmacist to see. The staff were unaware that adjustments made are not corrected until refreshing the screen.

Contributing Factors

Usability-related events and near misses may be complicated by inadequate testing, overreliance on the technology, gaps in staff training, and the inability of the information to flow to the source intended. For example, users may assume that there will be an alert when medications are about to be given too close in time, that glucose readings will populate the correct patient chart, or that medications ordered when a patient is in a particular location will be correct and old medication orders will be cleared and not interfere with those of the next patient in that location. These usability gaps are only partially addressed with staff training on such things as the limitations of the technology, or on when and how information is able to be updated. Consistency in the applications themselves, monitoring, and testing will all aid in mitigating errors and near misses.

Health IT–Related Risk Factors

When looking at the technology, it is important to ask whether the information contained therein and the expectations of the operations are compatible and supported by the version of the technology in use. (See also the *System Configuration SAFER Guide* and the *System Interfaces SAFER Guide*). Determine if the systems are regularly tested. Ask if staff expectations are being met and if the functionalities are appropriately available.

Understanding when and if items are essentially "plug and play" (such as cardiac monitors, scales, or glucose monitors) or if additional steps are required is important in making the technology available and usable and eliminating the technology-related risk factors.

Lessons Learned
Understanding how usability impacts patient safety is imperative if health IT is to become safer and if health IT is to reach its potential in facilitating safer care. It is important to identify issues and determine who is best equipped to appropriately address these issues both in and outside of the organization. Vendors, organizations, and care providers must all work together to address usability issues. Disruptions in workflow due to usability issues impact not only the ability to provide timely and effective care but also impact the cost and the safety of the care provided.

Please send your comments and suggestions to hit@ecri.org. Remember, if you are submitting events, please use your secure communication portal.

Zahabi M, Kaber DB, Swangnetr M. Usability and safety in electronic medical records interface design: a review of recent literature and guideline formulation. *Hum Factors* 2015 Aug;57(5):805-34. doi: 10.1177/0018720815576827. Epub 2015 Mar 23.

Quarterly Meeting Date Set

The next quarterly *Partnership* call is scheduled for January 19 from 3:00 to 4:00 PM ET. During this call, there will be updates on the patient identification workgroup, a call for endorsement of the copy and paste safe practices, and an opportunity to provide input on future *Partnership* projects.

Your Submissions Are Always Welcome

The *Partnership* welcomes all of your continued contributions, including items for this publication. Please submit any Update items with the subject line "Partnership Update" to hit@ecri.org and continue to submit data, RCAs,

and help desk logs through the Partnership web portal.

Need Help Logging In?
Have a question that we can answer? Please contact Lorraine Possanza at 610-825-6000 ext. 5634 or at lpossanza@ecri.org.

ONC Provides Health IT Complaint Form

The Office of the National Coordinator for Health Information Technology (ONC) recently made available a Health IT Complaint Form to capture issues that are arising with health IT. The form is not intended to address HIPAA-related issues but rather focuses on certification, safety, usability, information blocking, privacy and security, and clinical quality measures.

Get in Touch with the *Partnership*
Do you have questions about any of these articles? Get in touch with us today by e-mailing hit@ecri.org!

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