PARTNERSHIP for HEALTH IT PATIENT SAFETY
Making healthcare safer together

ECRI Institute
The Discipline of Science. The Integrity of Independence.

Partnership Update

March 2018

Data Snapshot: Customization—Friend or Foe?

Background

A customization of the electronic health record (EHR) is a modification made to suit a particular individual or workflow. Customizations are often adopted to address improper design, usability issues, interoperability, or personal preferences. They originate because of inadequacies in the EHR related to lack of a desired option or a complex workflow. This often occurs during the implementation phase of a new EHR or an upgrade. The intention of a customization is to enhance the EHR. However, customizations can pose a tremendous risk, affecting usability and safety. In addition, customizations may stifle innovation and development as organizations become comfortable with the new workflows, because there is no pressing need for vendors to make changes to the software.

(Appl Clin Inform 2016;7(4):1069-87. Published online 2016 Nov 16. doi: 10.4338/ACI-2016-06-R-0105)

Events Reviewed

To provide safe and appropriate care, providers need access to updated, accurate information. The following patient safety events reported to ECRI Institute PSO illustrate a few of the issues that occur with improper management and oversight of customizations.

- A customization to the EHR required configuration changes, which caused a mismatch between the laboratory information system (LIS) and the EHR. Laboratory results did not transfer from the LIS to the EHR. However, providers were unaware that they were missing the most recent laboratory results for patients.
- A local configuration problem caused the alert for the third injection in the hepatitis B vaccine series to not trigger and fire. Therefore, physicians were not alerted of the need for the third injection to complete the immunization series. Hepatitis B vaccine is a series of three shots, usually given over a 6-to-12-month period. If patients miss a shot, they can resume from where treatment left off. However, the series of three must be completed for immunization to be effective.
- Documents routed through the software's messaging system failed to reach the intended providers. In most EHRs, message routing is a customizable software feature—providers and provider organizations can set preferences that are specific to providers and organizations workflows. In this case, the routing function for messages in the EHR was incorrectly set up, and providers did not receive their messages.
- A short-term fix requiring a coding change was applied to the software to correct a reported interface problem. The unintended consequence of this fix was that microbiology results were received with information missing. Although the initial issue had been resolved quickly, the coding was not updated and microbiology results continued to be received with incomplete information.

Contributing Factors

Poor management and improper implementation of the customization can lead to safety risks. These risks and associated downstream effects occur because of poor design, testing, and deployment, along with inadequate training and a lack of monitoring and oversight.

Lessons Learned

Although customizations may fix the situation at hand, they can be dangerous without skillful implementation and consistent, continuous monitoring. Often the downstream effect poses the greatest risk. Implementation of customizations requires careful planning and attention to detail and continuous monitoring through upgrades, fixes, and system changes. Best practices include the following:

- Organizations have a rigorous process in place for testing customizations
- Workflow analysis that shows work as imagined versus work as done is conducted before any system upgrade
- Staff are adequately trained before deployment of the customization
- Risk assessments are conducted before go-live
- The potential impact of the customization is carefully monitored and evaluated on an ongoing basis

(Office of the National Coordinator for Health Information Technology. SAFER Guides: SAFER Guides for EHRs. https://www.healthit.gov/safer/safer-guides)

Important Announcements

SAVE THE DATES in 2018 for Partnership Meetings

The *Partnership* for Health IT Patient Safety gathers stakeholders quarterly. Three of these meetings occur via web conferencing, and the fourth is the annual in-person meeting. The remaining *Partnership* meeting dates are*:*

- April 24, 2018
- July 24, 2018
- In-person meeting October 24, 2018

Mark your calendars. We hope to see you there!

Partnership News

Look for "Transforming Health IT by Embedding Safety," the Partnership for Health IT Patient Safety's annual report from the fourth face-to-face meeting, held on November 15, 2017.

Since the meeting's conclusion, the Partnership team has been working on projects for 2018. Meeting attendees expressed interest in clinical decision support (CDS) as a topic for a 2018 workgroup. Our workgroup will begin in April. If you are interested in participating, contact us at hit@ecri.org.

We are proud to endorse and attend the #HIMSS18 Conference and Exhibition. Keep up with the updates on ECRI's Twitter page.

Join us at the Venetian Convention Center Las Vegas
Wednesday March 7, 2018
Room 3804 level 3
1:30 to 3:00 p.m.

We will be announcing the release of the Safe Practice Recommendations for

Expert Advisory Panel

The *Partnership for Health IT Patient Safety* is sponsored through funding from the Gordon and Betty Moore Foundation.

Developing, Implementing, and Integrating a Health IT Safety Program, which can be found at www.ECRI.org/safepractices.

PSO Webinar

- April 19, 2018: Health IT Safe Practices—Embedding HIT into your Safety Program: Register here

During this program, the safe practice recommendations developed by the *Partnership for Health IT Patient Safety* to embed health IT into your safety program will be reviewed. The presenters will share implementation strategies and tools for disseminating the Safe Practice Recommendations for Developing, Implementing, and Integrating a Health IT Safety Program.

Collaborating Organizations

Need to Submit an Event?

Partnership participants can submit events through your membership portal.

If you need assistance, please contact us at hit@ecri.org.

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. If you wish to submit information for this publication, please submit items for the Update using the subject line "*Partnership* Update" to hit@ecri.org.

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