PARTNERSHIP for HEALTH IT PATIENT SAFETY
Making healthcare safer together

ECRI Institute
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Partnership Update

July 2018

Data Snapshot: Closing the Loop on Patient Care and Treatment Delays

Background

Although many factors can contribute to patient care and treatment delays, failure to communicate test results across involved parties is a major contributing factor.

Closing the loop ensures that patient data and information that may require an action is delivered and communicated to the right individuals, at the right time, through the right mode, to allow interpretation, critical review, reconciliation, initiation of action, acknowledgment, and appropriate documentation.

Regardless of the method used, communication and tracking of test results continues to be a challenge in all practice settings. The 2018 Joint Commission National Patient Safety goal, NSG.02.03.01, addresses staff communication—get important test results to the right person on time.

Events Reviewed

Failure to close the loop may lead to treatment delays. Critical results can be missed when the loop—of receipt, acknowledgement, and action—remains open. The following patient safety events reported to PSOs contributing to the *Partnership* for Health IT Patient Safety, highlight the need for automated information technology (IT) solutions that can mitigate treatment delays related to critical test results from communication, tracking, and acknowledgment failures. Below are examples that demonstrate how important timely communication can be for patient care.

A patient was admitted to the hospital for chest pain. Troponin levels were ordered every eight hours to rule out an MI (myocardial infarction). Three blood samples were collected and sent to the lab as ordered. The event report stated that the AM critical value (>2.0 ng/mL) was not reported to the RN and that a delay in care occurred. Per the lab technician, all critical troponin results were reported by phone as required. Information did not reach the patient's provider.

A physician's order is required to change ventilator settings. An arterial blood gas (ABG) specimen was ordered and collected from a ventilated patient in the critical care unit. The event report stated that the critical ABG results were not reported directly to the critical care unit physician. Other providers seeing the patient expected that ventilator settings be changed in view of this result, however the critical ABG results had not been communicated to the critical care physician responsible for ordering changes to these settings.

An abnormal PTT [partial thromboplastin time, which looks at how long it takes for blood to clot] was repeated to ensure accuracy. The final result indicated a critical value. The result posted at 1530 and was not verbally reported until two hours later when the nurse called the lab for the result.

Contributing Factors

The causes of failure related to results reporting that may lead to treatment delays are multifactorial; orders for tests performed were not received as anticipated, results were not reported to the care provider, and results may have been missed by the provider. These are just a few examples in which there are failures to close the loop.

As seen in the reported events above, communication of critical results that rely heavily on human intervention (phone calls, verbal relays, checking and rechecking) or require a search for the information populated automatically in the electronic health record (EHR) often lead to such breakdowns in care.

Lessons Learned

Providers, staff, and patients would benefit from health IT strategies and solutions that optimize and facilitate the communication of critical test results—that is, technology that automatically pushes the appropriate information to the right individuals in a timely manner; tracks the priority and status of results; and has the ability to link and acknowledge that a result or results were reviewed and what action, if any, was taken.

In May 2017, the *Partnership*'s closing the loop workgroup began to consider how best to address closing the loop for diagnostic tests and provider-initiated medication changes and identified safe practices focusing on three areas—communication, tracking, and linking of information. In the above events, this workgroup's safe practice recommendations might have mitigated the loop failures identified if these technology solutions were available. Examples include:

- Multichannel secure communications to providers (e.g., direct messaging, messages within the EHR, email notifications)
- Tools to help providers recognize critical results (e.g., icons, colored flags, tiered alerts)
- Mechanisms that facilitate communication (e.g., routing result to appropriate team member, escalating to another team member if there is no response)
- Integration of third-party interfaces from disparate systems so that results can automatically return to the corresponding order
- Optimization of interoperability by incorporating existing tools (e.g., use application programming interfaces [APIs] to interface ABG results to critical care flowsheet or dashboard display)
- Mechanisms that let providers and staff document if and how they responded to the critical result notification

The safe practices for closing the loop are available online at Health IT Safe Practices for Closing the Loop along with implementation tools to facilitate the incorporation of these safe practices.

Technology is yet another tool to help close the loop and mitigate delayed, missed, and incorrect diagnoses.

Important Announcements

Partnership News

The *Partnership*'s latest toolkit, Health IT Safe Practices for Closing the Loop, was officially launched on July 26th. The Closing the Loop workgroup, chaired by Dr. Christoph U. Lehmann, strove to identify ways that technology can mitigate the safety issues surrounding the "Failure to Close the Loop" that compromises safe and timely care.

Your Support is Needed

We are seeking your help in working together in support of these recommendations. We are asking two things, the first is to publicly indicate your support for these recommendations. We will be publishing a list of those supporting the recommendations on the *Partnership* webpage. Second, we are asking that you share the materials with your constituents.

Please use the appropriate link below to indicate your support of this work.

My Organization Supports the Health IT Safe Practices for Closing the Loop

I Support the Health IT Safe Practices for Closing the Loop

Workgroup Updates

The Drug Allergy Interactions (DAI) Workgroup is focused on identifying health IT recommendations for capturing and transmitting information related to drug allergies to ensure that the right information is presented to the right person within the appropriate CDS intervention format at the most appropriate time in the workflow. This workgroup began with identified recommendations and is looking at how technology can facilitate safer practices. This workgroup meets monthly; meetings are scheduled on August 16th and September 20th.

The Electronic Health Record Association (EHRA) / ECRI Safer Opioid Prescribing Project is focused on identifying current and future CDS interventions and measures that can facilitate and influence safer opioid prescribing; and enable approaches for providers to assess, measure, and communicate key clinical and/or performance indicators. This workgroup is meeting monthly, and will continue to do so through September 6th.

Health IT Safe Practices

Not only is it important to develop safe practices, but it is even more important that these safe practices are implemented. It is only then that their effectiveness can be assessed. If your practice/organization has implemented any of the *Partnership*'s health IT safe practice recommendations, we would like to hear from you! Please let us know what your experience has been. Did you have a difficult time implementing these practices? Have you been successful? How did you measure your successes? E-mail your responses and questions to hit@ecri.org.

SAVE THE DATE: *Partnership* Meeting

The third quarterly meeting was held via web conference on July 24th. Attendees were asked to complete a brief survey to assist in preparation for the upcoming annual in-person *Partnership* meeting and workgroups. If you were unable to attend, a recording will be made available on the website shortly after the meeting.

The annual in-person meeting will be held at the ECRI Institute headquarters in Plymouth Meeting, PA on **October 24th**. This is our only face-to-face meeting of the year. Hear about the year's activities and learnings; contribute to planning for 2019 activities, and help facilitate the national collaborative launch. We hope you will attend!

Expert Advisory Panel

David W. Bates, MD, MSc
Kathleen Blake, MD, MPH
Pascale Carayon, PhD
Tejal Gandhi, MD, MPH
Chris Lehmann, MD
Peter J. Pronovost, MD, PhD
Daniel J. Ross, MD, DDS
Jeanie Scott, MS, CPHIMS
Patricia P. Sengstack, DNP, RN-BC, CPHIMS
Hardeep Singh, MD, MPH
Dean Sittig, PhD
Paul Tang, MD, MS

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

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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