

Partnership Update

September/October 2018

Data Snapshot: How Health Information Technology Can Facilitate Safer Opioid Prescribing

Background

The opioid crisis is being addressed from many different perspectives with federal, state and local governments, community organizations, medical associations, and others working to address the crisis through prevention, treatment and recovery programs, increased availability and distribution of reversal agents, support services, research, and pain management.

What role can health IT play? In particular, is there a role for technology in the safer prescribing of opioids? The event described below was submitted under the protection of the ECRI Institute PSO and reviewed by the patient safety analysts for shared learning.

Case Study Event

A 76-year-old male with a history of atrial fibrillation, degenerative osteoarthritis, spinal stenosis, and depression who lives independently presented to the emergency department (ED) a few hours after he tripped and fell in his driveway. The patient complained of severe low back and right hip pain. In addition to Plavix (medication used to prevent blood clots), the patient stated that he takes OxyContin (oxycodone-opioid medication) and Soma (muscle relaxant) as needed for severe back pain and muscle spasms however, he had not taken these medications for a few weeks. X-ray images were negative for fractures. In the ED, the patient received two doses of Dilaudid, for a total of 1 mg. The patient was discharged from the ED and returned home with his daughter. Approximately three hours later the patient experienced respiratory arrest and was transported back to the ED by ambulance. During transport, he was intubated and an opioid reversal agent (e.g., Naloxone) was administered. Following administration of the reversal agent, the patient became fully alert.

How did this event happen? First, the 1 mg dose of Dilaudid, was greater than the recommended dose for a patient of this age and physical status; next, it was unclear whether the patient had taken his prescribed pain medication and/or muscle relaxant at home prior to presenting to the ED and finally, it was unclear whether the patient's medication history and daily medication doses had been obtained. What tools could be in place to mitigate such events?

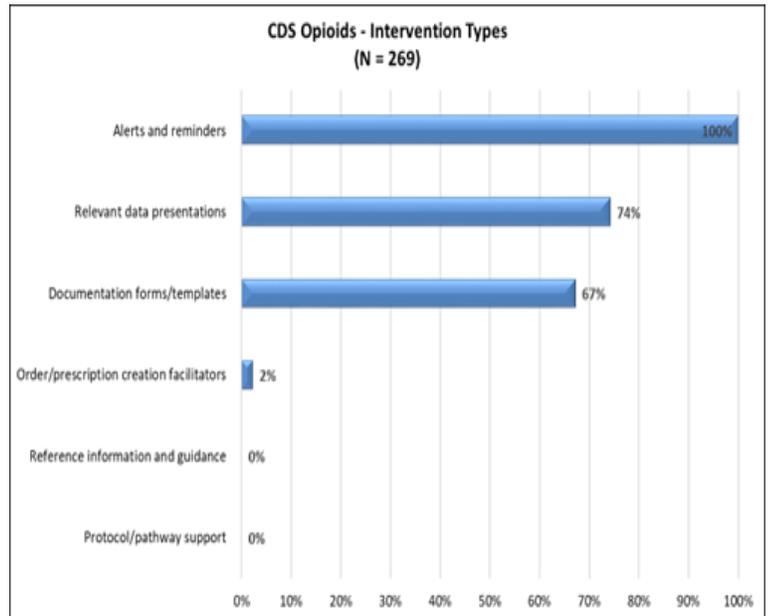
What We Are Learning

There is evidence showing that clinical decision support (CDS) used within the electronic health record (EHR) has the greatest impact on process outcomes (e.g., the ordering of preventive clinical and treatment services and enhancement of the user's knowledge pertaining to a medical condition) Campbell, 2016. However, CDS is not a panacea.

A review of the events submitted to the ECRI Institute revealed 269 opioid safety events related to CDS intervention. The majority of the CDS intervention types seen were alerts and reminders. That was followed by relevant data presentations, documentation forms/templates and order/prescription creation facilitators. The functionality of the safeguard was

analyzed revealing that 41% of the time the CDS safeguard was not acknowledged or was bypassed, 26% of the time the CDS safeguard did not function as expected, and 14% of the time the safeguard was unavailable.

CDS Functional Status - Opioids



Contributing Factors

In the above event, the provider was not alerted to potential cautions or interactions; no order set was available; alternative therapies or treatments were not presented to the provider. In addition to the health IT-related factors leading up to this event we should also consider whether the patient was a poor historian, did not share an accurate medical or medication history, or was confused or alone without the support of a caregiver to provide accurate information. Adding to this a potentially chaotic ED, lack of prior charts, inability to check the prescription drug monitoring program (PDMP), and the influence of the providers' prescribing habits. Any of these factors can lead to negative outcomes.

Lessons Learned

Knowledge of prescribing habits, patient risk factors, medication history, and recommended dose information are all needed to fight the opioid epidemic. Better use of CDS can inform safer prescribing of opioids by providing aggregated information, alerts, education, recommendations, and measures at the appropriate time in the workflow.

- CDS should be triggered by data elements, risk factors, and prescribing guidelines
- The five rights 5 Rights can provide a framework to guide implementation of CDS
 - Getting the right information
 - To the right person
 - Through the right intervention format
 - Delivered through the right channel
 - And at the right time in the workflow

Conclusion

One of the many benefits of the EHR is the ability to use relevant, up-to-date information that is integrated into the patient record. CDS interventions have the potential to arm providers with tools based on key information. CDS interventions implemented for opioid prescribing have the potential to inform safer prescribing.

The *Partnership for Health IT Patient Safety* and the Electronic Health Record Association (EHRA) convened the Safer Opioid Prescribing Project, which held its last meeting on September 6, 2018. The workgroup focused on identifying current and future CDS interventions and types of measures to inform safer opioid prescribing. The workgroup is synthesizing the information gathered and finalizing their findings. To learn more about this workgroup plan on attending the In-person meeting on October 24, 2018.

Important Announcements

SAVE THE DATE: Partnership for Health IT Patient Safety 5th Annual In-Person Meeting

Collaboration: Building a Path to Sustaining Health IT Safety

Wednesday, October 24, 2018

ECRI Institute (suburban Philadelphia)

Please join us for our 5th annual In-person meeting. This year's meeting discusses "collaboration" for sustaining health IT safety.

[CLICK HERE TO SEE THE AGENDA.](#)

This is our only face-to-face meeting of the year. Take advantage of the opportunity to collaborate with your peers to inform safety. We look forward to seeing you.

[Register today!](#)

Partnership News

NEW Podcast Series: Closing the Loop, Hear What the Experts Have to Say

Part two of our three-part podcast series—featuring Dr. Christoph Lehmann, Dr. Hardeep Singh, Mark Segal, Dean Sittig, and Patricia Giuffrida—is now available. In [Closing the Loop through Technology and Collaboration](#), experts look deeply into the factors that impact closing the loop and who is responsible to monitor the loop. Listen to expert tips during this 15-minute podcast at www.ecri.org/safepractices.

Workgroup Updates

The Drug Allergy Interactions (DAI) Workgroup has focused on identifying health IT recommendations for capturing and transmitting information related to drug allergies.

The Electronic Health Record Association (EHRA) Safer Opioid Prescribing Project has focused on identifying current and future CDS interventions and types of measures that can be incorporated to support safer opioid prescribing.

We will provide updates and share what we have learned from these workgroups at the upcoming in-person meeting on October 24, 2018. We hope to see you there!

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
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Paul Tang, MD, MS

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

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Implementing Health IT Safe Practices

Not only is it important to develop safe practices, but implementing safe practices to make care safer for all is the ultimate goal. It is only then that safe practices' effectiveness can be assessed and measured. 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? Email your responses and questions to hit@ecri.org.

Collaborating Organizations

Working Together:



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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

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



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