Patient Safety Tip of the Week

April 16, 2024

Interruptions During Medication Administration

Distractions and interruptions are among the most frequent causes of errors that can impact patient care and safety (or, for that matter, safety in any industry). Of course, not all interruptions are unimportant. There are clearly urgent or emergent situations in which interruptions are appropriate. But many interruptions may be inappropriate during critical procedures. Often, we underestimate the frequency with which we are interrupted. We once analyzed our own daily work schedule to see how often we were interrupted or distracted. We were amazed at what we found, both in terms of frequency and nature of the interruptions and distractions!

One of the medical settings most vulnerable to distractions and interruptions is medication administration. Sims and colleagues addressed this issue in a quality improvement project on a 20-bed telemetry unit in a teaching hospital (Sims 2024). They created a “Frequency of Distraction” tool for nurses to quantify how often they were distracted by nonemergent interruptions during medication administration and reasons for those distractions/interruptions. Some common categories in the tool were:

- Physician-related
- Patient-related
- Calls
- Face-to-face conversations
- Unavailable resources

Nurses would simply put a tally mark in the appropriate category for each distraction. They did this during medication administration rounds daily for 7 days. The data collected showed that interruptions occurred most frequently due to patient-related interruptions, seeking unavailable resources, face-to-face conversations, and phone calls. Phone calls were a more frequent event during day shifts and patient-related distractions were more frequent on the night shift.

Once they identified the frequency and nature of the interruptions and distractions, they implemented a bundle of interventions, which they called “The Golden Hour”, to minimize those interruptions and distractions. They put up banners telling all to
communicate with the clerk or the charge nurse as the first contacts for communication before interrupting the primary nurse for nonemergent needs. They also provided bedside flyers for patients, informing them of the reasons for the project. Patient status was also reported to the charge nurse prior to starting medication administration rounds (presumably to identify and prevent potential interruptions). The nurses doing medication administration would then put on a “Do Not Disturb” vest and change their status on their assigned communication device to indicate they should not be disturbed except for emergent needs. Lastly, each nurse placed a sign outside the patient’s room when medication administration was in progress at the bedside.

The project produced some impressive results, though the numbers in the project were small. The frequency of unexplained late medications decreased from 88% to 12% after the intervention and unexplained late PRN reassessments decreased from 82% to 18%. Interruptions from patient-related interruptions decreased 49%, those from phone calls decreased 60%, face-to-face conversations decreased 30%, and unavailable resources decreased 41%.

Nurses’ perception of the impact of interruptions improved considerably. The proportion of nurses who felt interruptions negatively affected their ability to focus decreased from 77% to 58% on day shift and from 50% to 39% on night shift. The proportion of nurses reporting anxiousness about making a medication error relative to interruptions decreased from 69% to 17% on day shift and from 50% to 11% on night shift. The proportion of nurses reporting feeling rushed during medication administration decreased from 85% to 33% on day shift and 75% to 11% on night shift after the intervention. 83% of day shift nurses and 67% of night shift nurses felt the interventions should continue.

Impact on medication errors was difficult to assess because of the small sample size. Only one medication error had been reported in the pre-intervention periods and none occurred in a similar time frame after the intervention.

As a result of this QI project, they plan to adopt the interventions and begin standardizing the initiative across inpatient acute care units in their hospital system.

One thing missing from this study is consideration about weekends and holidays. In our many columns on the “weekend effect” we’ve noted how weekends and holidays often increase the interruptions nurses experience. The lack of clerical staff at those times increases the burden on nursing staff. Family and friends visit patients more frequently at those times and want to ask nurses about patient status or simply ask for directions. Though face-to-face interactions with physicians may be fewer on weekends and holidays, nurses often have to spend more time on phone calls with physicians (and often with covering physicians who need more information about individual patients).

Various interventions to reduce interruptions and distractions during medication administration are quite well known. But we think the key lesson learned from the Sims study is that you need to understand the nature of the most common interruptions and distractions at your facility. While they may generally fit the categories in Sims’
“Frequency of Distraction” tool, you are likely to find certain categories are more frequent at your facility. Understanding those specifics should help you tailor your interventions to minimize those interruptions and distractions.

We applaud Sims and colleagues for this very informative work!

Prior Patient Safety Tips of the Week dealing with interruptions and distractions:

- August 25, 2009  “Interruptions, Distractions, Inattention…Oops!”
- November 3, 2009  “Medication Safety: Frontline to the Rescue Again!”
- May 4, 2010  “More on the Impact of Interruptions”
- October 12, 2010  “Slowing Down in the OR”
- March 8, 2011  “Yes, Physicians Get Interrupted Too!”
- July 31, 2012  “Surgical Case Duration and Miscommunications”
- August 28, 2012  “New Care Model Copes with Interruptions Better”
- November 27, 2012  “Dealing with Distractions”
- April 16, 2013  “Distracted While Texting”
- May 21, 2013  “Perioperative Distractions”
- July 1, 2014  “Interruptions and Radiologists”
- November 2014  “More Radiologist Interruptions”
- March 17, 2015  “Distractions in the OR”
- July 21, 2015  “Avoiding Distractions in the OR”
- August 30, 2016  “Can You Really Limit Interruptions?”
- November 8, 2016  “Managing Distractions and Interruptions”
- March 7, 2017  “Nested Interruptions”
- April 11, 2017  “Interruptions: The Ones We Forget About”
- February 13, 2018  “Interruptions in the ED”
- May 2018  “Cost of Interrupting a Radiologist”
- December 2019  “Hospitalist Shifts Matter, Too”
- January 28, 2020  “Dang Those Cell Phones!”
- September 2020  “AORN on Distractions and Interruptions”
- February 23, 2021  “Cellphones and the OR”
- November 2021  “New Risk Factor for Patient Safety Events: Motor Vehicle Accidents”
- January 11, 2022  “Documenting Distractions in the OR”
- July 12, 2022  “Radiologists Racked by Interruptions”

References:
https://journals.lww.com/jncqjournal/citation/2024/04000/decreasing_nonemergent_nurse_interruptions_during.1.aspx

http://www.patientsafetysolutions.com/

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