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PSO Monthly Brief

May 2012

Deep Dive Identifies Treasures to Prevent Medication Errors

Medication mishaps are the most common errors in healthcare. Indeed, medication errors represent the most frequently reported events submitted to ECRI Institute PSO—comprising about 30% of all events.

To assist healthcare facilities in learning from medication errors, ECRI Institute PSO asked participating organizations to submit at least 10 medication events over a five-week period so that ECRI Institute PSO could identify patterns and trends from the aggregated data and share the findings, as well as its recommendations. Under the Patient Safety and Quality Improvement Act, PSO members can report the data on a privileged and confidential basis.

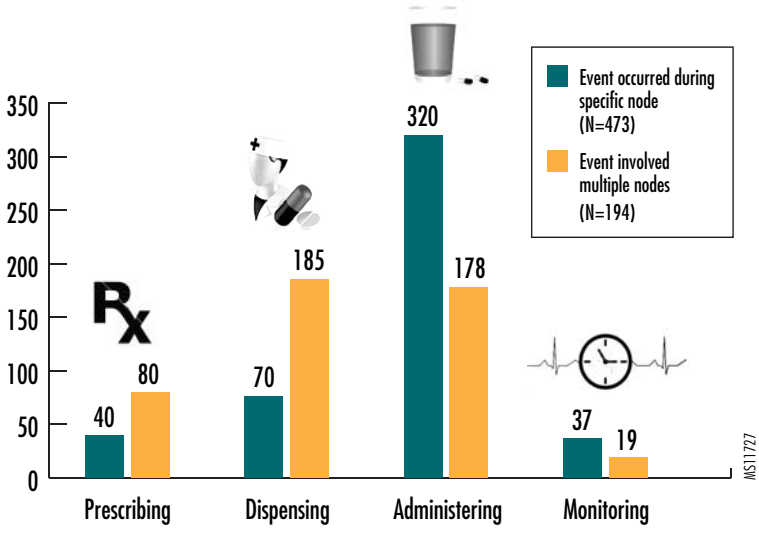
Participating PSO members submitted 695 medication events during the five-week period starting April 15, 2011, and ending May 20, 2011. Although errors can occur during any stage of the medication process, ECRI Institute PSO facilities indicated that most events specific to one stage occurred during administration of the medication (see Figure). Of the 320 reports for administration-only errors, intravenous (IV)-related errors were the most frequently occurring events, representing 36.9% of administration-only events.

ECRI Institute PSO recommended strategies for the safety of medication administration, particularly with IV infusions. The following suggested IV safety practices are recommended:

- Purchase safer infusion pumps with dose error reduction systems to reduce infusion errors caused by misprogramming
- Standardize infusion pumps available in the organization to enhance user familiarity with a pump's operation
- Limit the number of concentrations available for each infusion solution
- Require pharmacy preparation of IV solutions, and limit nurse preparation of IV solutions to emergency situations, such as those in the emergency department and critical care unit

To prevent medication errors, it is important to identify system-based causes of these errors rather than the

Figure.
Node in Medication-Use Process for Medication Event's Origination*



*Node not identified for 28 of the 695 events.

current tendency to focus on human performance. Recommendations for adopting a system-based approach to medication safety are the following:

- Provide leadership support for medication safety initiatives
- Evaluate the medication-use process to identify strengths and weaknesses
- Employ proactive and reactive risk assessment tools (e.g., failure mode and effects analysis, root-cause analysis) to identify and implement medication safety strategies
- Use multiple techniques (e.g. event reporting, chart review) to track and identify medication errors
- Involve frontline staff in medication safety initiatives

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How Can We Help You?

Whether you have questions about the final rule or want to learn more about ECRI Institute PSO and/or support for other PSOs, we would be happy to hear from you. Please contact ECRI Institute at pso@ecri.org or call (610) 825-6000, ext. 5558.