Center for Transforming Healthcare Targets Safe Use of Insulin

In November 2012, The Joint Commission Center for Transforming Healthcare launched its ninth project, which aims to reduce insulin-related medication errors in hospitals. While research shows that safely using insulin to achieve optimal blood glucose improves patient outcomes, using insulin inappropriately can be life threatening.

In the United States, more than one in five hospitalized patients have diabetes. An additional one in five patients not known to have diabetes have elevated hemoglobin A1c during hospitalization. Hospitalized patients with diabetes who are taking insulin may be unable to manage their glucose readings and insulin administration, and staff may not be trained or available to help with these critical tasks. However, glycemic control is essential not only to manage diabetes but also to help prevent hyperglycemic events induced by critical illness, stress, and medical treatment. The Centers for Medicare & Medicaid Services names poor glycemic management on its 2013 list of 15 hospital-acquired conditions (HACs); it will no longer reimburse hospitals for additional costs associated with these preventable medical errors.

For years insulin errors have been associated with the highest risk of injury to patients. The Institute for Safe Medication Practices identifies insulin as one of the top high-alert medications. In fact, approximately 40% of 888,000 identified adverse drug events (ADEs) reported to the Medicare Patient Safety Monitoring System—and 25% of 100,000 reviewed emergency hospitalizations of patients over age 64 for ADEs—involved insulin or other diabetic agents. Hypoglycemic events can result in a patient suffering symptoms ranging from moderate confusion to severe convulsions, coma, and death. Untreated hyperglycemia can also result in ketoacidosis and other serious adverse clinical outcomes, prolonged length of stay in the hospital, and poor patient experience of his or her hospital treatment. Of the 2,685 medication error reports submitted to the Pennsylvania Patient Safety Authority, the predominant types of medication errors associated with insulin were drug omission (24.7%), wrong drug (13.9%), and wrong dose or overdose (13%).

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Using RPI to Uncover and Address Challenges

These adverse drug reactions and events can be prevented, and insulin can be used safely to achieve optimal glycemic control for hospitalized patients. Using Robust Process Improvement™ (RPI)* methods and tools, the Center for Transforming Healthcare will work with the following six health care organizations to identify root causes of preventable insulin errors and find solutions that are relevant to specific causes at each of the organizations:

1. Atlantic Health System, New Jersey
2. The Johns Hopkins Hospital, Maryland
3. New York-Presbyterian Hospital, New York
4. Sharp HealthCare, California
5. Texas Health Resources, Texas

The solutions for this project, which are targeted for publication in early 2014, will be tested, validated, and disseminated among other organizations.

The Joint Commission Center for Transforming Healthcare has eight other improvement projects in process:

1. Hand Hygiene
2. Wrong Site Surgery
3. Hand-Off Communications
4. Surgical Site Infections
5. Preventable Hospitalizations
6. Safety Culture
7. Preventing Falls with Injury
8. Reducing Sepsis Mortality

For more information on these projects and other Center activities, visit http://www.centerfortransforminghealthcare.org. For more information on the insulin safety project, contact project leads Elizabeth Reinking, MBA, at ereinking@jointcommission.org or 630-792-5287, or Siew Lee Grand-Clement, RN, MSN, CPHQ, at sgrand-clement@jointcommission.org or 630-792-5288.

* RPI is a fact-based, systematic, and data-driven problem-solving methodology. It incorporates tools and concepts from Lean Six Sigma and change management methodologies.
Center for Transforming Healthcare Targets Safe Use of Insulin (continued)

Continued from page 7

References