Evidence-Based Practice Approach to Reduce Inpatient Hypoglycemia
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Problem:
Hypoglycemia in the inpatient has the potential of becoming a serious event. One episode may cause myocardial infarction, arrhythmias and stroke, among other events. The Del Sol Diabetes Treatment Center (DTC) undertook the task of identifying the best practice to reduce inpatient hypoglycemia.

Evidence:
DTC conducted an extensive root-cause analysis and researched evidence-based articles. The team explored the underlying cause of inpatient hypoglycemia and determined one factor was the nurses’ knowledge deficit. The prevention and treatment of hypoglycemia were identified as areas where more coaching was needed.

Strategy:
After review of evidence-based articles, DSMC chose Penn State Hershey Medical Center’s Clinical Practice Model on nursing staff education based on the similar problem of nurses’ diabetes knowledge deficit in the inpatient setting. This practice model demonstrated to be successful in increasing nurses’ knowledge.

Practice Change:
DSMC classifies a Blood Glucose (BG) <65mg/dl as hypoglycemia. A review of 1,033 patient records exposed a lack of staff nurses’ knowledge regarding diabetes medications. An analysis of BG records revealed 7.5% patients experienced hypoglycemia from October – December, 2010. DSMC revised the Standard Medication Administration Times policy to specify diabetes medication administration times. The Certified Diabetes Educators (CDEs) provided hospital-wide education on hypoglycemia prevention and treatment. DTC also developed a computer-based diabetes education module for nurses.

Evaluation:
Monthly meetings were held with Nursing, Administration and Physicians to discuss progress. Staff required continued reinforcement on all aspects of diabetes, including diabetes basic care.

Results:
At the end of February 2012, 93.56% of nurses had completed the computer-based education module. Of 3,916 patients, the average inpatient hypoglycemia incidence declined to 6.70% in 4th quarter 2011.
**Recommendations:**
Nursing education will continue. In addition to live presentations, a mandatory computer-based education module attached with CNE will be made available. Audits of hypoglycemia episodes will continue for quality improvement.

**Lessons Learned:**
Data collection was exhaustive. DTC required creativity to obtain assistance. Education and reinforcement of staff is long-term.

**Bibliography:**


