

Reduction of Hospital Hypoglycemia with eGMS and Quality Programming Across 180 US Hospitals

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Objective:

Hospital hyperglycemia affects up to 40% of all inpatients and has been associated with worse outcomes, including increased length of stay, surgical site infections and cost. There are very few publications focused on glycemic benchmarking that look at a large number of hospital in the United States. This lack of a true benchmarking can lead to confusion among clinical and financial leadership in the hospital as to when to begin a glycemic improvement project. Because eGlycemic Management Systems (eGMS) has been in use now for over 10-years, and thought of as best practice in the critical care setting, we measured the clinical impact of an eGMS in a large number of hospitals across the US.

Method:

This Retrospective Quality Improvement Study evaluated the nation-wide safety of eGMS IV insulin management in 180 hospital and across 590 hospital units. Data was collected from the EHR and Lab systems from each hospital over a 24-month timeframe (12/10/17 – 12/10/19). Glucose targets ranged from a low end 80 mg/dL highest at 200 mg/dL in the varied hospital units. Primary objective was to measure impact on glycemic care, initially with a primary focus on patient safety as evidence by severe and mild-moderate hypoglycemia.

Result:

The utilization of eGMS was observed in 108,535 patients who received 3,132,493 blood glucose test during their hospital stay. Mild to moderate hypoglycemia measured as blood glucose events <70 mg/dL was 0.55% and Severe hypoglycemia measured as blood glucose events <40 mg/dL was 0.015%.

Conclusion:

This data suggest hospitals can benchmark versus safe and low rates of hypoglycemia eGMS had among this large number of patients, hospital units and hospitals in this study.