

ETIOLOGY AND MANAGEMENT OF HYPOGLYCEMIA IN A COMMUNITY TEACHING HOSPITAL

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Background: Hypoglycemia, defined as a blood glucose level below 70 mg/dL, is a significant safety concern in hospitalized patients receiving insulin or other glucose-lowering therapies. In the inpatient setting, hypoglycemia is associated with increased morbidity, prolonged length of stay, higher healthcare costs, and elevated mortality risk. Current guidelines and quality indicators emphasize individualized glycemic targets and vigilant monitoring to minimize hypoglycemia risk. Understanding the prevalence, risk factors, and outcomes associated with hypoglycemia is critical for developing targeted interventions and improving patient safety.

Objective: The primary objectives are to determine potential causes of hypoglycemic episodes and identify interventions that may prevent reoccurrence of hypoglycemia during admission. Secondary objectives include correlating therapy changes in response to initial hypoglycemia episode with its etiology, frequency of hypoglycemia reoccurrence within 24 hours, 48 hours, and 72 hours of the index event, and incidence of adverse events resulting from hypoglycemia.

Methods: This is a single-center, retrospective chart review of non-critically ill patients admitted to a large community teaching hospital who experienced an initial hypoglycemic event within 24 hours of an insulin dose. Hypoglycemia alerts generated by a clinical decision support system will be used to identify patients who experience a blood glucose level of $<70\text{mg/dL}$. Patients will be included if they are ≥ 18 years of age, with or without diabetes, experienced at least one episode of hypoglycemia within 24 hours of receiving a dose of insulin. Patients will be excluded if, at the time of the index event, they were admitted for less than 24 hours, in the ICU or step-down units, on an insulin pump, are pregnant or have gestational diabetes, code status of comfort care, or if the patient was hypoglycemic on arrival without reoccurrence on admission. Pertinent data collected will include demographics, type and dose of insulin ordered, and frequency and associated causes of hypoglycemia. This is a quality improvement project which was deemed exempt from IRB approval.

Results: In progress

Conclusions: In progress