

**Too Sweet for Surgery:
Implementing Perioperative Hyperglycemia Pathways to Optimize Outcomes**

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Background Information: Care for surgical candidates with diabetes poses multiple challenges for clinicians, including impacts related to glucose management prior to presentation, responses to intraoperative stressors, and the risks for postoperative infection with secondary compromise. Highlighting these potential adversities, optimization of glycemic control for the surgical encounter is imperative.

The health system approved a Hyperglycemia Care Pathway and Order set in 2018, but adherence had been sub-optimal.

The baseline rate of diabetes among surgical candidates was 20%. Of that group, 21% presented with a Hemoglobin A1c greater than 8%. Pre intervention, 43% of hyperglycemia (180 mg/dl or greater) was addressed using pathway guided insulin dosage, route, and timing.

Objectives of Project: The primary objective of the project was to decrease practice variability for hyperglycemic care in the perioperative environment. A secondary goal was to impact glucose values during the surgical window of opportunity.

Process of Implementation: The surgical census was reviewed in advance, with hyperglycemic patients highlighted for optimization opportunity and requisite point of care testing. Upon arrival, the perioperative nurse practitioner coordinated implementation of glucose pathway directed care, including insulin delivery. As results required, hand off to perioperative hospitalists occurred upon post operative transfer.

Statement of Successful Practice: Combined impacts linked to clinical oversight, reduced treatment variability, and pre-mixed insulin infusion availability decreased the gap of time between Point of Care glucose results and initiation of insulin therapy by 40%.

Treatment compliance scores elevated post-intervention from 2.32 to 2.72.

Given glucose elevation upon facility presentation, perioperative insulin administration did not influence outcomes in a statistically significant manner.

Implications for Advancing the Practice of Peri-anesthesia Nursing: Implementing the Perioperative Hyperglycemia Pathway and Order Set limited treatment variability, positively impacting the timely delivery of best practice interventions. Accelerating time to treatment did not offset deficits in baseline glucose control, nor did it have bearing upon post discharge recovery and glucose management. The prospect for meaningful change lies here.

PeriAnesthesia nurses must broaden their purview, collaborate with colleagues, and assemble their power to influence diabetes management beyond the present boundaries of practice.