PERIOPERATIVE GLUCOSE MANAGEMENT: PROTOCOL REFINEMENT AND IMPLEMENTATION

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Background: Evidence supports that poor perioperative glycemic control contributes to adverse clinical outcomes, including increased SSI. Quality improvement data at a large tertiary-care center revealed inconsistent glycemic management throughout the perioperative period.

Objectives: The purpose of this Best Practice project was to establish a consistent glycemic management plan for at-risk surgical patients.

Implementation: A multi-disciplinary team was formed to examine current practices and implement an improved glycemic management protocol for surgical patients. The protocol was piloted with vascular patients in July 2011, with planned expansion to all surgical populations. Specific details include:

- 100% of patients will have a preoperative CBG
- IV insulin protocol will be initiated on any surgical patient with a CBG > 125 or a diabetic patient with a CBG > 100
- 95% of patients meeting inclusion criteria will have a standard insulin infusion initiated by the preoperative nurse with continuation through the first 24 hours postoperatively
- Infusion patients will attain perioperative CBGs between 70 and 180 within 3 hours of infusion initiation 95% of the time.

Outcomes: Data from the vascular pilot revealed 100% compliance with preoperative CBGs, 83% compliance with protocol initiation, and 80% of protocol patients reaching target CBG ranges within 3 hours of initiation. Reinforcement of protocol procedures and dissemination to additional surgical populations is ongoing.

Implications for Practice: Perianesthesia nurses provide a critical link in perioperative glycemic control and the prevention of SSI. This project provides an example of the effectiveness of a multi-disciplinary approach to this issue.