Impact of Pharmacist Driven Perioperative Blood Glucose Management Protocol on Postoperative Blood Glucose Control

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St. Peter's Health

Background

Management of blood glucose in postoperative patients is essential for preventing postoperative complications and hospital readmissions.[1-4] Hyperglycemia and hypoglycemia are experienced by many individuals inside and outside of the hospital. Surgical patients are at a higher risk for hyper- and hypoglycemia following their procedure. Uncontrolled blood glucose levels prolong hospital length of stay, increase morbidity and mortality, amplify postoperative infection risk, and increase healthcare costs.[2] The purpose of this project is to develop and implement a pharmacist driven perioperative blood glucose management protocol with the goals of decreasing the frequency of uncontrolled blood glucose postoperatively, minimizing hospitalist consults purely for blood glucose management, and enhancing collaboration between physicians and pharmacists, ultimately benefiting both the hospital and patient care.

Objectives

Primary Objective: To evaluate the percentage of blood glucose levels that are out of range in patients that are admitted longer than 12 hours pre- and post- implementation

Secondary Objectives:

- Frequency of hospitalist consults pre- and post- implementation
- Percentage of patients with short acting insulin but no basal insulin
- Time to restart antidiabetic agents
- Incidence of hypoglycemia
- Time spent for pharmacists
- Incidence of starting sliding scale insulin
- Provider satisfaction

Areas of Impact

Same Day Services	Pharmacist will complete screening for surgical patients
Surgical Team	Provider will order blood glucose management protocol
Hospitalists	Reduction in consults due to pharmacist's new role
Surgical Pharmacists	Will monitor patient and use blood glucose management protocol to treat patients

Methods

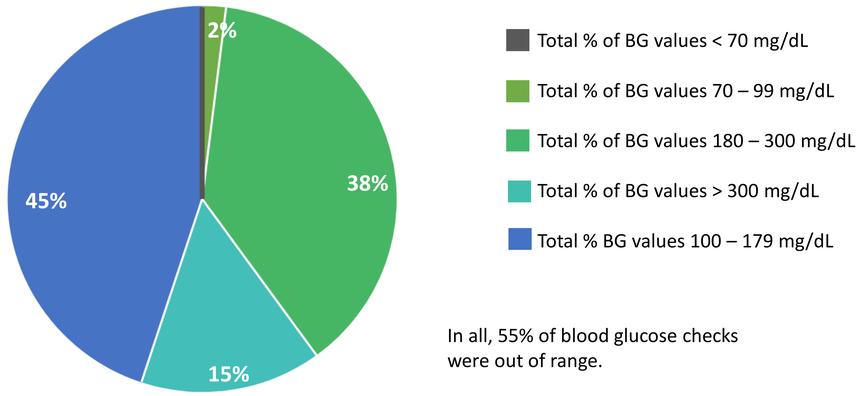
Phase I: Development *Aug - Dec*

Phase II: Implementation *Jan - Mar*

Phase III: Data Analysis *Apr - Jun*

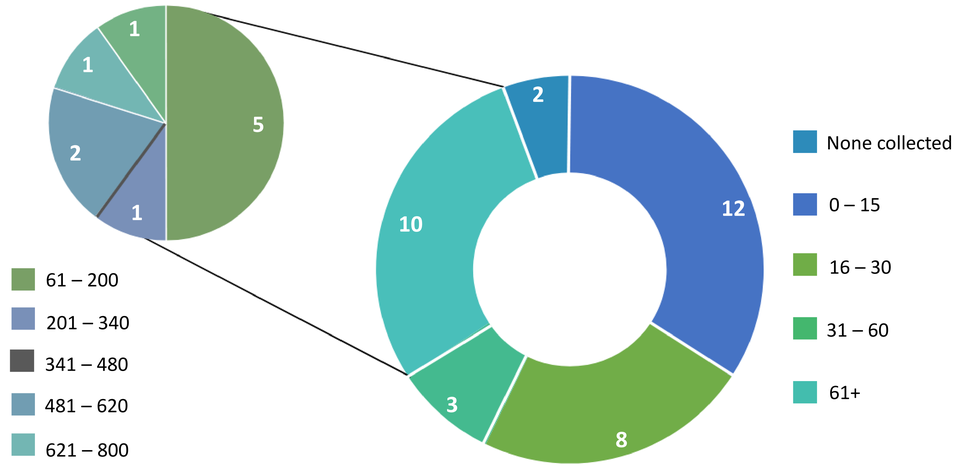
Retrospective Data

% of Blood Glucose Out of Range

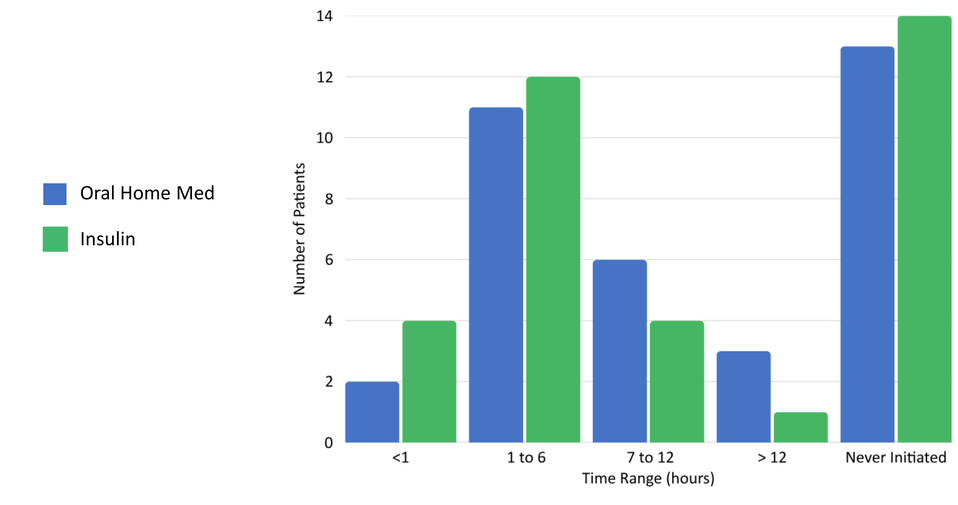


In all, 55% of blood glucose checks were out of range.

Time to First Glucose Check (minutes)



Time to Initiation of Antidiabetic Agents



Phase I: Development

- Literature review
- Develop blood glucose management protocol
- Gain approval from surgical department and hospitalists
- Collect retrospective data

Phase II: Implementation

- Implement pharmacist role in screening and using post surgical protocol

P&T Committee approval → 13-Week pilot phase → Implement pharmacist roles targeting identified areas of impact → Prospective data collection

Phase III: Prospective Data Analysis

- After project implementation in January and data collection through March 2026, data analysis will be completed to evaluate changes implemented.
- Findings will be presented to key stake holders.

Discussion

Implementation of a pharmacist driven glucose management protocol aims to improve patient care at St. Peter's Health.

- ✓ Develop screening tool to aid pharmacists in preoperative identification of patients at high risk for uncontrolled postoperative blood glucose levels.
- ✓ Develop protocol to guide pharmacist-led management of blood glucose levels postoperatively in high risk patients identified by the screening tool.
- ✓ Complete retrospective data analysis of perioperative patients.
- ❑ Implement the pharmacist driven blood glucose management protocol and prospectively collect and analyze data.
- ❑ Evaluate the impact of the protocol by comparing the percent of out of range blood glucose levels in the retrospective and prospective study arms.

Author Disclosures & References

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:

Lindsey McDaniel: Nothing to Disclose
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