Introduction

Health-Care Facility
- 718-bed acute care, academic medical center
- Serves as the region’s only 267-bed level 1 Trauma Center
- International reputation in oncology, transplant, and bioterrorism
- Founded as a veteran’s hospital in 1937
- Inpatient and outpatient pharmacy services include:
  - Inpatient service-line integrated clinical practice model
  - Emergency Department
  - Mental Health
  - NCI Cancer Center
  - URAc-accredited Specialty Pharmacy
- More than 36,000 discharges and 700,000 admissions annually

Background
- Diabetes and stress-induced hyperglycemia impact an estimated 26-40% of all hospitalized patients
- Hyper- and hypoglycemia occurrence in hospitalized patients have demonstrated adverse outcomes including:
  - Increased healthcare expenditure
  - Longer lengths of stay
  - Higher mortality
  - Great odds of being discharged to a skilled nursing facility
- The risk of causing a preventable adverse drug event (ADE) is highest probability of causing a preventable adverse drug event (ADE) of all injectable medications
  - Estimated increased cost of $3,500 per preventable ADE per patient

Professional Organizations have endorsed pharmacist involvement in the delivery of acute glycemic management of hospitalized patients
- American Diabetes Association (ADA)
- American Society for Clinical Pharmacology (ASCPh)
- American Society of Health-System Pharmacists (ASHP)
- Diabetes Education Coordinators
- EHR system analysts
- Service-line aligned clinical pharmacists
- Pharmacy stewardship collaborates with:
  - Diabetes, Endocrine, and Metabolism (medicine specialty service line)
  - Nutrition
  - Mental Health
- pharmacy, psychology, and social work
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Purpose
Developing a pharmacy stewardship model
- Reduce patient harm related to insulin administration
- Optimize institutional glycemic outcomes
- Ensure healthcare providers within the institution are up-to-date in their knowledge and approach to treating glycemic excursions in the hospital
- Enhance education efforts across all interprofessional service-lines within the organization

Evidence of Practice
- Vascular disease is a marker for inferior quality of life (QoL) in chronic kidney disease (CKD). The Diabetes Stewardship is an innovative pharmacy model that has been shown to improve glycemic control and quality of life for patients with diabetes and renal failure.

Institutional: Percent of Patient Days with Hypoglycemia Occurrence (defined as a blood glucose < 70 mg/dL)

Critical Care: Percent of Patient Stays with hypoglycemia Occurrence (defined as a blood glucose < 70 mg/dL)

Non-Critical Care: Percent of Patient Stays with Hypoglycemia Occurrence (defined as a blood glucose < 70 mg/dL)

Institutional Glucometric Outcomes:
Society of Hospital Medicine (SHM) Glycemic Control eQUIPS Program

Data collected January 2015 – June 2020

- % of patient days with hypoglycemia occurrence (defined glucose < 70 mg/dL)
- Institution greater than 75% relative risk reduction
- % of patient stays with hypoglycemia occurrence (defined glucose < 70 mg/dL)
- Critical care: relative risk reduction of 64.2%
- Non-critical care: relative risk reduction of 48.7%

Institutional: Percent of Patient Days with Hypoglycemia Occurrence (defined as a blood glucose < 70 mg/dL)
- Hospital: 25.4% of patient days
- Critical Care: 29.4% of patient days
- Non-Critical Care: 17.5% of patient days

Inpatient Pharmacist Interventions
- Reduced length of stay by 0.46 days
- Greater than $690,000 in formulary management strategies

Diabetes Education Provided
- Construction and delivery of live, in-person insulin titration course
- Ongoing, over 500 nurses have completed the course

References

Increased Nursing Diabetes Education Provided

Revised: 3/1/2020

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