



ABSTRACT

OBJECTIVES/PURPOSE

The project investigated if providing a bedtime snack to patients with diabetes reduces hypoglycemia occurrences during an 8-week timespan on an Ortho-Surgical unit at Methodist Charlton Medical Center (MCMC).

INTRODUCTION

The American Diabetes Association's (ADA'S) Diabetes Care in the Hospital: Standards of Care (SOC) in Diabetes -2023 advises hypoglycemia prevention protocols be adopted and implemented by hospitals. ADA's SOC states that "consistent carbohydrate meal plans are preferred by many hospitals as they facilitate matching the prandial insulin dose to the amount of carbohydrates given" (1). The 8-week trial focused on hypoglycemia prevention by providing a bedtime snack for all patients with diabetes on the Ortho-Surgical unit. Evaluation of data collected over an 8-week period, demonstrated a decrease in the trial unit's hypoglycemia occurrences.

METHODS

Utilizing a fundamental design, staff of the MCMC's Ortho-Surgical unit gained experience in how to develop and present a Process Improvement Project to improve care of patients with diabetes and determination if hypoglycemia occurrences decreased with administration of a bedtime snack.

ANALYSIS

Data collection utilizing MCMC's Epic Dashboard – Glycemic Occurrences.

Inpatient diabetes population EPIC report-assigned to all team members and utilized to track snack needs on the Ortho-Surgical unit.

RESULTS

MCMC's Ortho-Surgical unit's nightshift staff recorded decreasing numbers of hypoglycemia events after beginning bedtime snack administration.

INTRODUCTION

TEAM MEMBERS

CHRISTINA HUDSON, BSN, RN
MONICA RIVERA SOTO, ADN, RN
HULDAH PIMENTEL, BSN, RN, ONC

GAP IN KNOWLEDGE

Charla Amos, MSN, RN, CDCES and Inpatient Diabetes Educator collaborated with the Ortho-Surgical Team Members to develop a fundamental process improvement project. Amos met with Charlton's Ortho-Surgical unit's dayshift and nightshift staff and led multiple rounds of:

1. education regarding prevention of hypoglycemia,
2. huddles regarding patient satisfaction of snack selections, and
3. creation of a TIGR patient education video regarding the importance of consistent carbohydrate eating patterns.

PROJECT QUESTION OR HYPOTHESIS

For an inpatient diabetes population, does providing a bedtime snack reduce hypoglycemia occurrences on an Ortho-Surgical unit?

METHODS

PROJECT DESIGN

Utilizing the Methodist Charlton's EPIC Dashboard program "Glycemic Occurrences Dashboard", an 8-week data collection period regarding hypoglycemic occurrences on an Ortho-Surgical unit.

- 1) 8-week period prior to executing bedtime snack administration,
- 2) 8-week trial period with bedtime snacks administered to inpatients with a diabetes diagnosis,
- 3) 8-week period after trial completion and continuation of bedtime snacks to inpatient with diabetes

*Charlton's Hypoglycemia Occurrence Dashboard (serum & POC glucose values) measure is less than or equal to 70 mg/dL.

ANALYSIS

MCMC's Epic Dashboard – Glycemic Occurrences. See Graphs, column to the right: 8-week increments prior to, during, and after performed by adding weekly totals of glycemic occurrences and number of patients with hypoglycemia (graphs for number of patients not shown; results reported on chart below). Inpatient diabetes population EPIC report-assigned to all team members and utilized to track snack needs on the Ortho-Surgical unit. This report mines data using Diabetes CPT codes. Comparing number of inpatients to inpatients with diabetes averages to 43.13%.

GLYCEMIC OCCURRENCES DASHBOARD RESULTS

8 – Week Time Frame Measures	No. of Hypoglycemia Occurrences	No. of Patients with Hypoglycemia Occurrences
October 9, 2022 To week of November 27, 2022	110	49
December 11, 2022 To week of January 29, 2023	90	56
February 5, 2023 To week of March 26, 2023	71	37

Project's Menu Designed for METHODIST CHARLTON'S Ortho-Surgical unit's INPATIENTS WITH A DIABETES DIAGNOSIS during the pilot

Methodist Charlton's Diabetes Bedtime & Post-Hypoglycemia AVAILABLE FLOOR-STOCK SNACKS
Choose One Option:

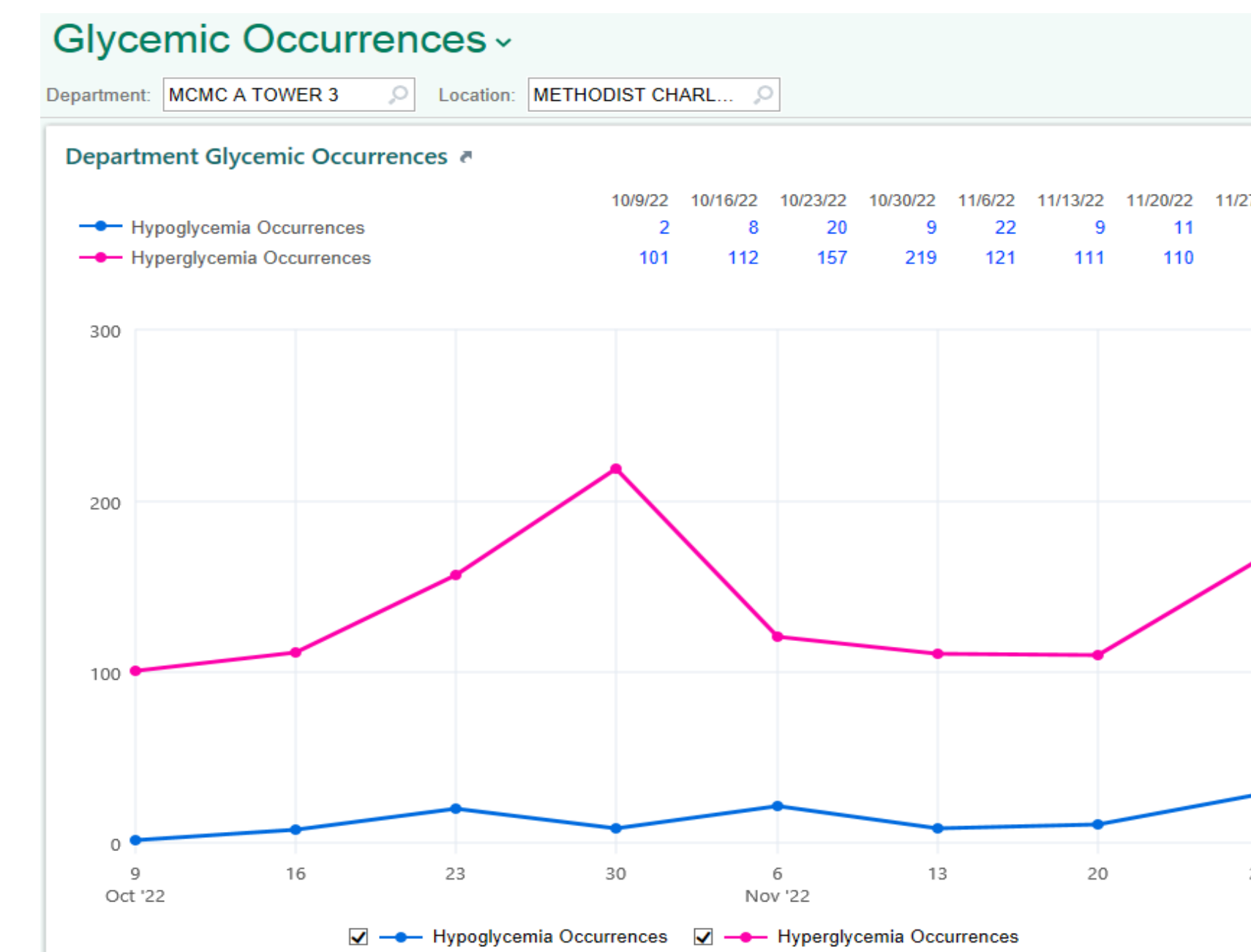
- 3 Saltine Cracker Packets Plus
1 Peanut Butter Cup
- 1 Graham Cracker Packet (3 per pack) Plus
1 Peanut Butter Cup
- 1 Regular Pudding cup
- 1 Milk + Cereal
- PLUS
- ½ cup of Ice Cream

Day 1 Choices
½ of a reduced sodium turkey and cheese sandwich on whole wheat
OR
Applesauce and a string cheese

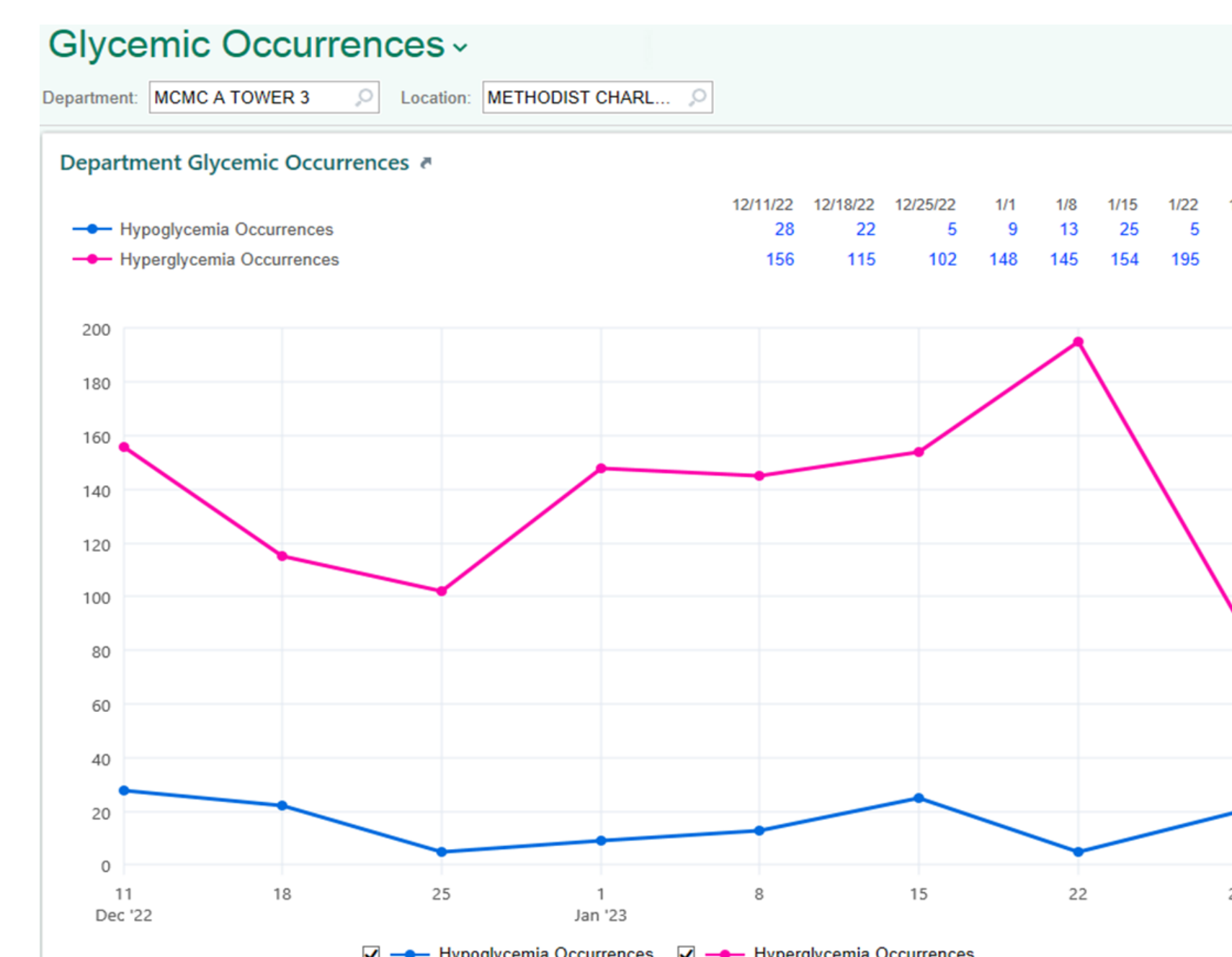
Day 2 Choices
½ of a peanut butter sandwich on a whole wheat
OR
Celery sticks with hummus

Day 3 Choices
Reduced fat cottage cheese with blueberries or seasonal fresh fruit
OR
3 packets or 6 unsalted saltine crackers with a hard-boiled egg

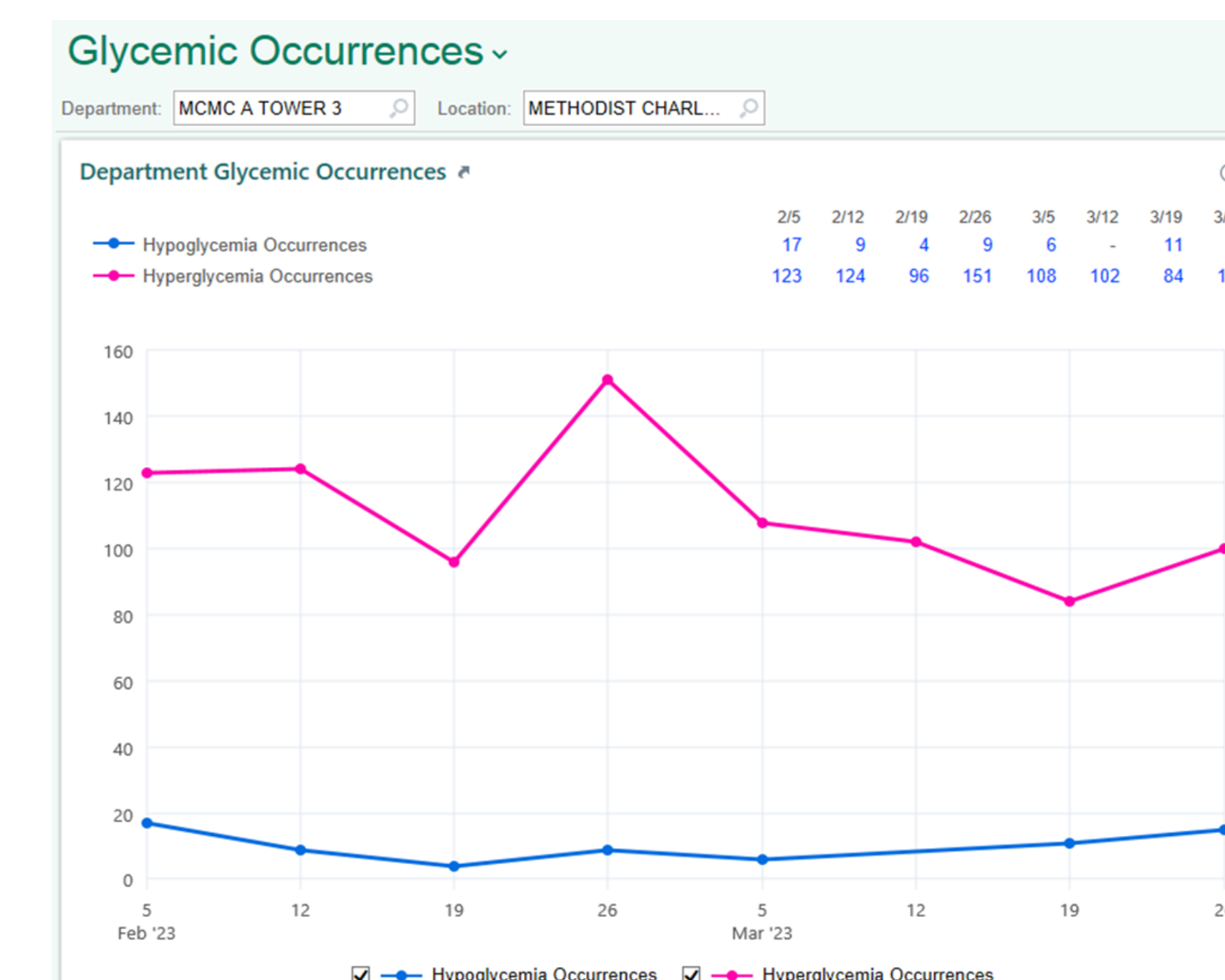
8-WEEKS PRIOR TO TRIAL



8-WEEKS DURING TRIAL



8-WEEKS AFTER TRIAL'S END



CONCLUSIONS

The 8-week trial of providing a bedtime snack to inpatients with diabetes demonstrated a decrease in hypoglycemic occurrences over an 8-week timespan. Our team reviewed charts to discover that some of the hypoglycemic occurrences were patients with no diagnosis of diabetes who were NPO for procedures. Process improvement project data reported to hospital leadership resulting in diabetes bedtime snacks for all inpatient units.

DISCUSSION

- Dietary Snacks not enough on weekends: PLAN: additional floor stock snacks
- Staff challenges resulted in higher numbers of missed snacks: PLAN: will ask at Charlton Team Leader meeting and Staff meeting for ideas to improve compliance. PLAN: ask EPIC to place bedtime snack on Nurse Task List
- Staff misunderstood portion size too small: PLAN: Just in time education was done weekly with those delivering snacks to ensure staff have better understanding
- Trends identified: NPO status on inpatients who did not have a diabetes diagnosis; patient at safety risk with any hypoglycemic incidences: PLAN: continue to track; consider snacks for procedural patients NPO at midnight
- EPIC changes require Methodist System-wide acceptance: PLAN: Assessment of snacks protocol at each entity

REFERENCES / ACKNOWLEDGEMENTS

1. ElSayed NA, Aleppo G, Aroda VR, et al., *American Diabetes Association*. 16. Diabetes care in the hospital: Standards of Care in Diabetes—2023. *Diabetes Care* 2023;46(Suppl. 1):S267–S278
1. Seisa MO, Saadi S, Nayfeh T...
2. Those who went above and beyond to assist with the project were the nightshift nurses and staff on MCMC's Ortho-Surgical unit and food services director Mr. Roy Zinn