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## Implementation of a High Protein, Low Carbohydrate Snack Intervention to Reduce Nocturnal Hypoglycemia.

Approximately one in nine adult Americans are diabetic of which a third experience low blood glucose levels at night. This dangerous condition (hypoglycemia) is often underdiagnosed. Research suggests that consumption of a protein snack can decrease the risk of glucose instability. The project was conducted in a hospital, in an inpatient medical surgical unit. Each year, 180,000 patients, 60,000 who experience nocturnal hypoglycemia or glycemic instability are treated. The proportion of adult hospitalizations with diabetes at the project cite increased from 17.1% in 2000 to over 30% in 2023. Studies such as Abbie et al. (2020) and Riley (2024) have shown that snacking at night with a high-protein snack can stabilize glycemic variability, thus reducing morning hypoglycemia events. Roach et al. (2022) conducted a systematic review to evaluate if consuming a bedtime snack could improve hypoglycemia in diabetics. The clinical framework that guided the project was the PDSA model. The project was limited by manual data collection, use of single clinical site, and lack of variety in the high protein nighttime snack. Implications were that the outcomes of this intervention project support earlier evidence-based research showing that nocturnal hypoglycemia is preventable with a high protein low carbohydrate snack. Recommendations include repeating this or similar projects before implementing a high protein snack as part of a new standard of care. For sustainability, results will be shared with the central office and system-wide so that other facilities in the system will have the option to test, modify, and implement the new protocol. Conclusion of the projected resulted in 89% decrease in nocturnal hypoglycemic events in the project unit. Project dissemination consists of presenting a comprehensive analysis to senior leadership in the hospital's Medsurge unit and central office.