The California State University
DOCTOR OF NURSING PRACTICE

Increasing Nurse Compliance to Hypoglycemia Protocol

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Background

- Diabetes is one the leading cause of death in the United States according to CDC
- Hypoglycemia: Common complication of Diabetes Mellitus management
- Hypoglycemia can lead to severe complications:
  - Cardiovascular disorders
  - Cerebrovascular disorders
  - Increased mortality rate
- The American Diabetes Association defines hypoglycemia as: Blood glucose levels that are below 70mg/dL
- The 15-15 Rule: Effective treatment of Hypoglycemia

Inpatient Hypoglycemia Treatment Using the 15-15 Rule

Problem

The lack of compliance to the existing inpatient hypoglycemia protocol has resulted in several events of prolonged patient hypoglycemia, hyperglycemia, and increased hospital stay.

Purpose

Educate direct observation unit nurse staff on hypoglycemia treatment protocol by utilizing simulation to increase nurse compliance to hypoglycemia protocols.

Methods

- **Design**: Quality improvement Project
- Pre and post evaluation guided by the IOWA model
- **Setting:** 218-bed hospital on a direct observation unit
- **Participants:** DOU Nurses

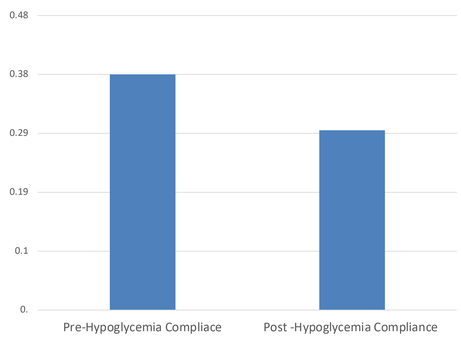
Results

Two-Tailed Paired Samples t-Test for the Difference Between Pre-Hypoglycemic Compliance *data and* Post Hypoglycemic Compliance

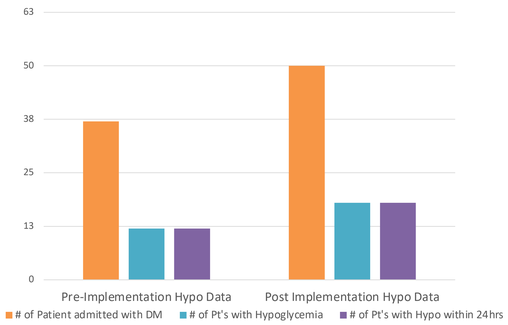
Pre-Hypoglycemic Compliance		Post Hypoglycemic Compliance				
M	SD	M	SD	t	p	d
0.38	0.50	0.29	0.46	0.53	.605	0.11

Note. N = 21. Degrees of Freedom for the t-statistic = 20. d represents Cohen's d.

The Means of Pre/Post Hypoglycemia Data



Hypoglycemia within 24 hours of Admission

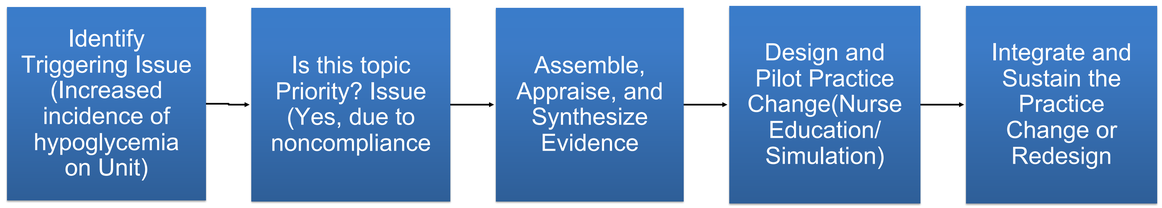


Summary Statistics Table for Interval and Ratio Variables

Variable	M	SD	n	SE_M
Post Hypoglycemic Compliance data	0.41	0.50	32	0.09
Pre-Hypoglycemic Compliance data	0.41	0.50	22	0.11
Post 24 Hours Hypoglycemic data	0.55	0.51	33	0.09
Pre 24 Hours Hypoglycemic data	0.55	0.51	22	0.11

Supporting Framework

The Iowa Model Of Evidence-Based Practice to Promote Excellence in Health Care



Discussion

- Baseline data was obtained for (January 22-March 22), and post-implementation data was pulled for (October 22-December 22)
- When pre and post data were compared There were no significant differences in hypoglycemia protocol adherence
- Majority of patients admitted with the diagnosis of DM were likely to experience hypoglycemia within the first 24 hours of their admission

Limitations

- The simulation education could only be implemented for two weeks
- This prohibited the training of travelers and registry nurses
- The facility in which the project took place experienced staff shortages following the implementation of simulation training.
- Which were attributed to an increase in COVID-19, increased sick calls, flu season, vacations, and holidays
- Managers hired more traveler nurses, who never received the simulation

Conclusion

- Discovery of increased hypoglycemic episodes during the first 24 hours of admission has been noted and may enhance future management of patients
- A new protocol has been drafted and will be reviewed and implemented by RNs in this year
- Educate all staff on nutrition specific to DM

Hypo-Protocol

Carbohydrates

References

Email Kenyatta.irvin@yahoo.com for references