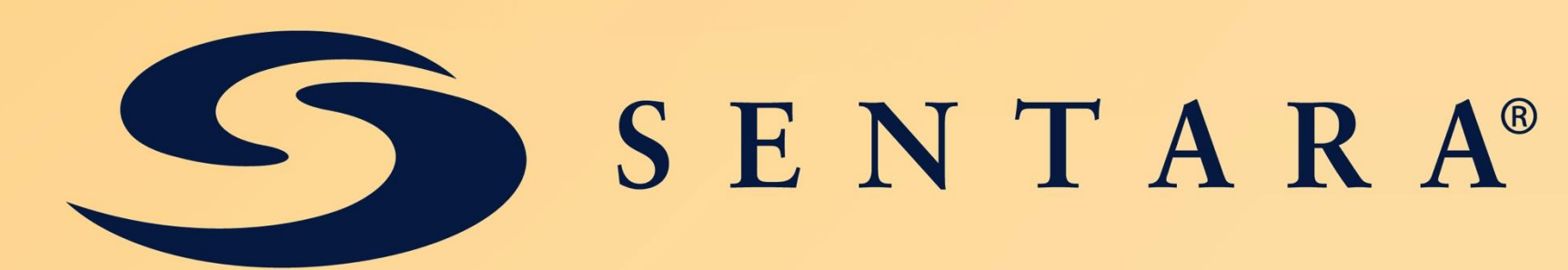


## Improving Nursing Knowledge and Confidence in Glycemic Control Programs

Danielle Tassy-Rousseau, RN and Kim Shulse, BSN, RN



### BACKGROUND

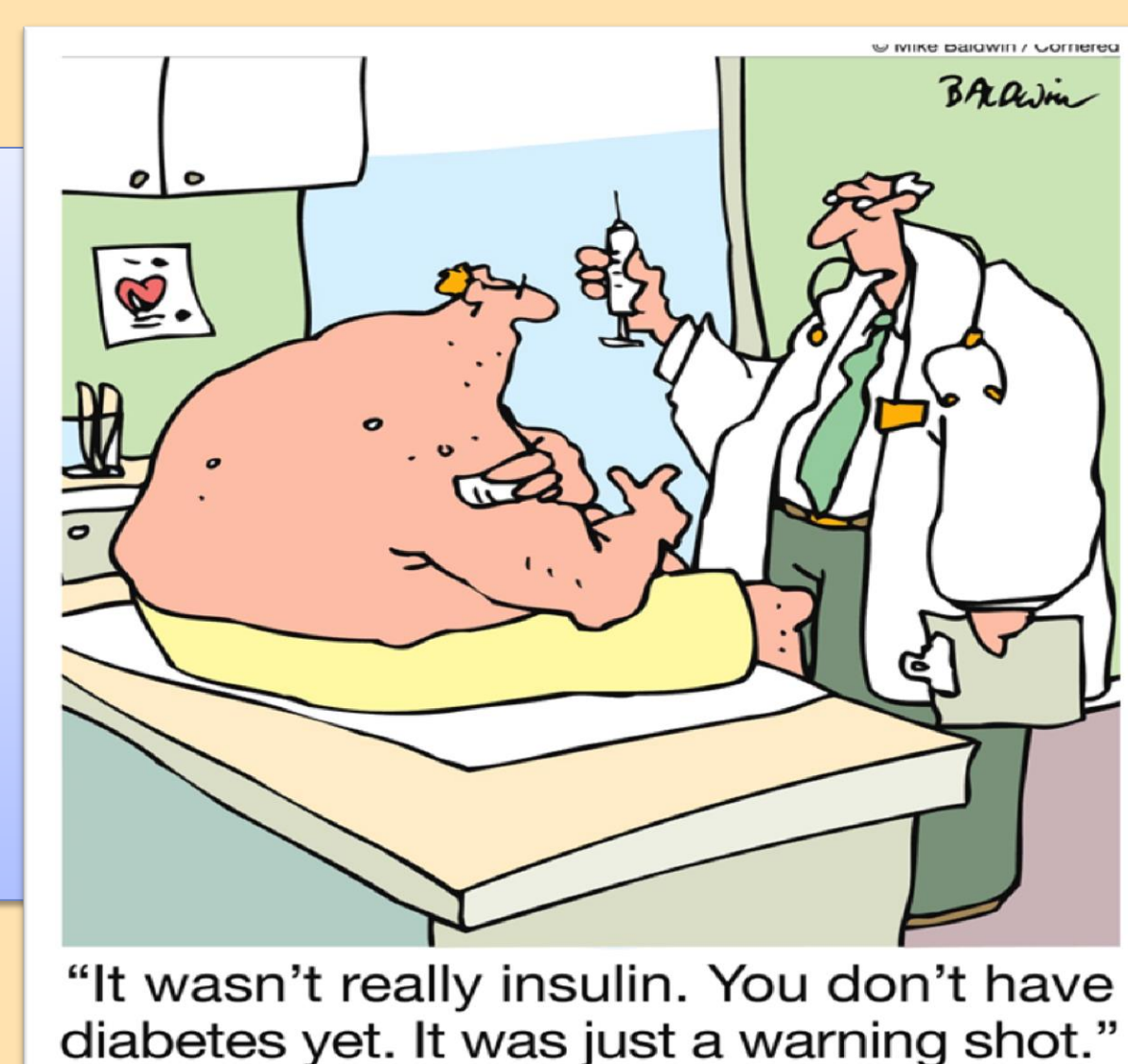
- Nearly 10% of Americans have diabetes (National Diabetes Report, 2014)
- 30% Diabetics require hospitalization (McCulloch, & Inzucchi, 2015)
- Tight glycemic control improves patient outcomes (Munoz, et al., 2012)

Hypoglycemia is a major obstacle to achieving the glycemic goals required to prevent the long-term complications of diabetes. Despite the importance of glycemic control to patient outcomes, the process of maintaining glycemic control can be confusing and laden with risk for nurses with limited knowledge, experience, and confidence. Regardless of the target range, controlling the variability of glucose concentrations within that range is difficult, especially when caring for the critically ill.

The use of computer-based technology and tight glycemic control parameters is designed to improve patient outcomes. The purpose of this evidence based project is to determine if focused education modules improve nurses' knowledge regarding glycemic control and increase confidence in management of diabetic patients.

### EXPECTED OUTCOMES

- Improved glycemic control for patients
- Increase RNs' knowledge of diabetes management
- Develop new education modules

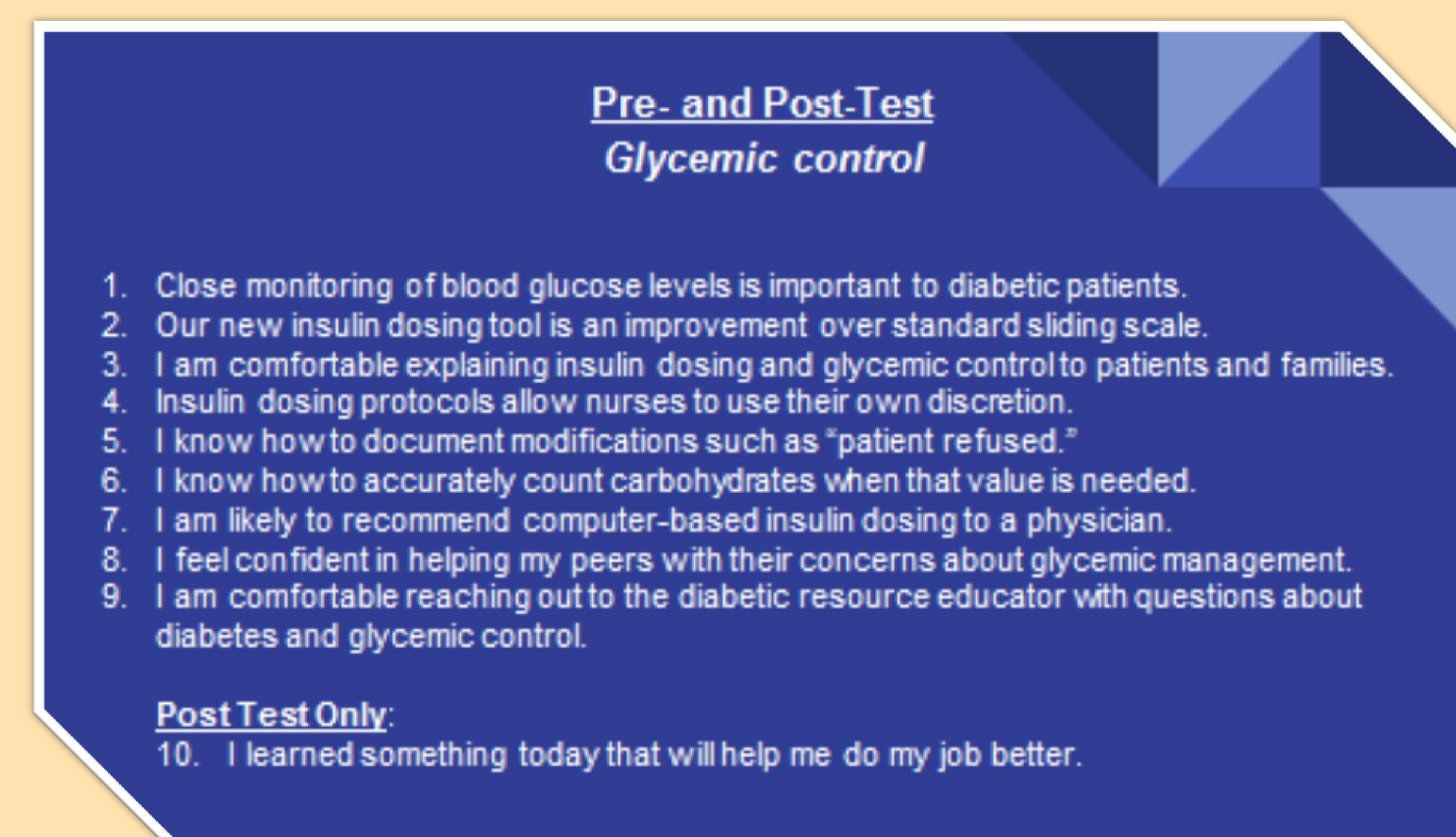
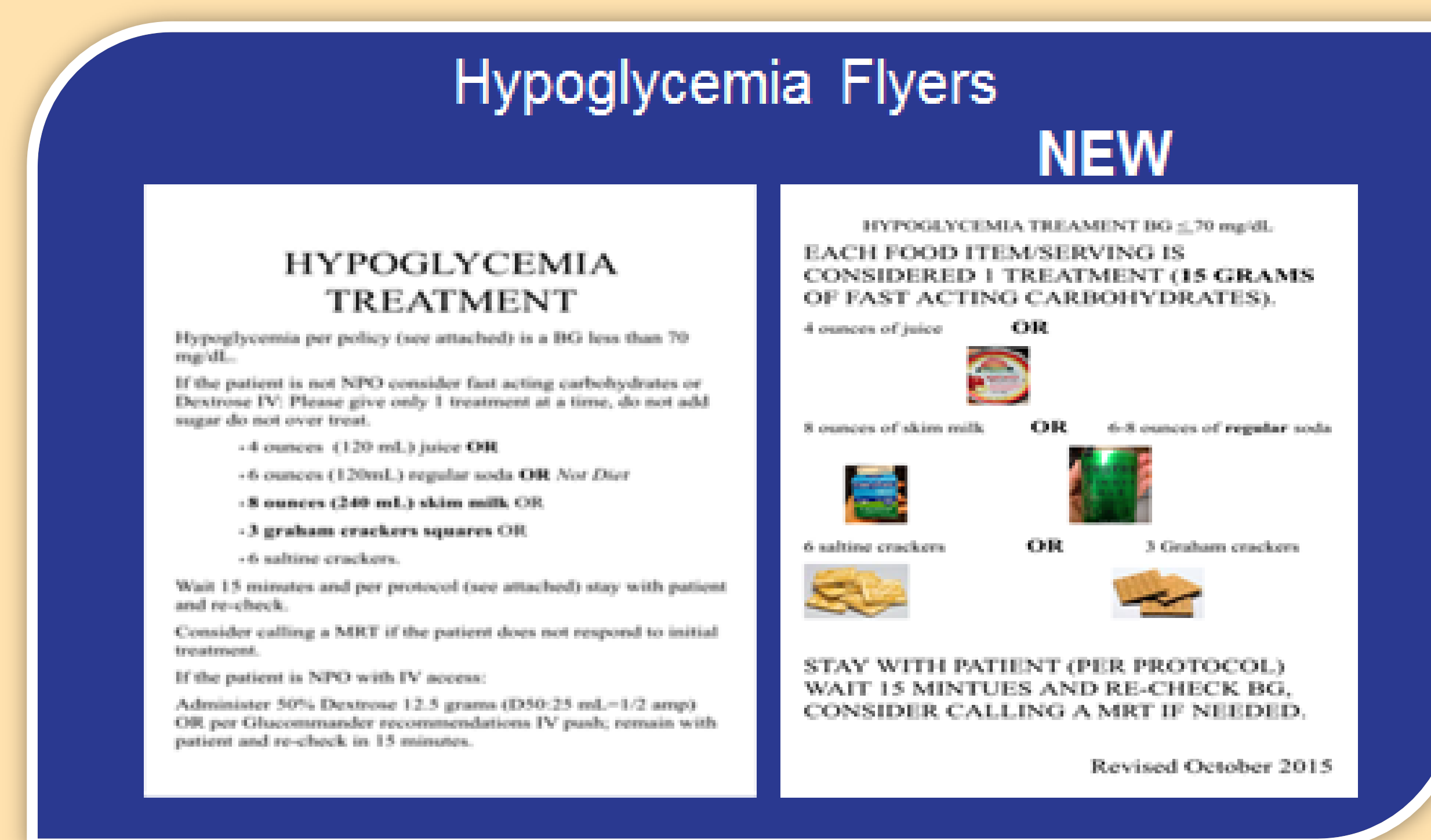


### METHODS

- Literature search
- Pre-intervention survey of a broad cross-section of staff for baseline awareness, knowledge, and confidence
- Educational intervention reinforcing Sentara Healthcare's protocol for glycemic control as an intervention
- Post-education survey for awareness, knowledge, and confidence growth
- Data Analysis

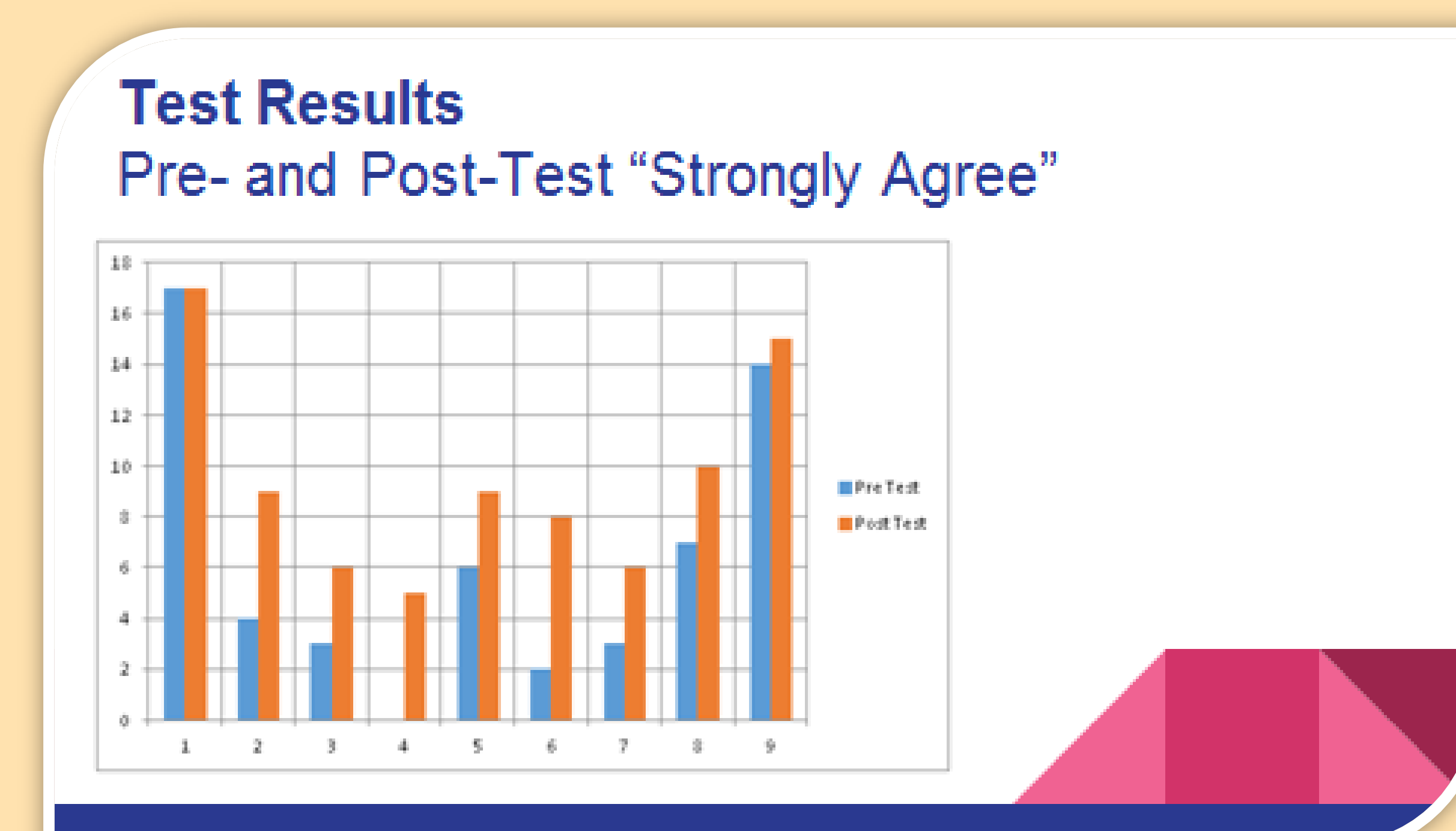
### LITERATURE REVIEW

- Nurses' knowledge, interpretation and experience are key to patient outcomes (Salamah, et al., 2011).
- Early and aggressive care reduces morbidity (Diabetes Inpatient Management, 2012).
- Diabetes educators play vital role (Diabetes Inpatient Management, 2012).



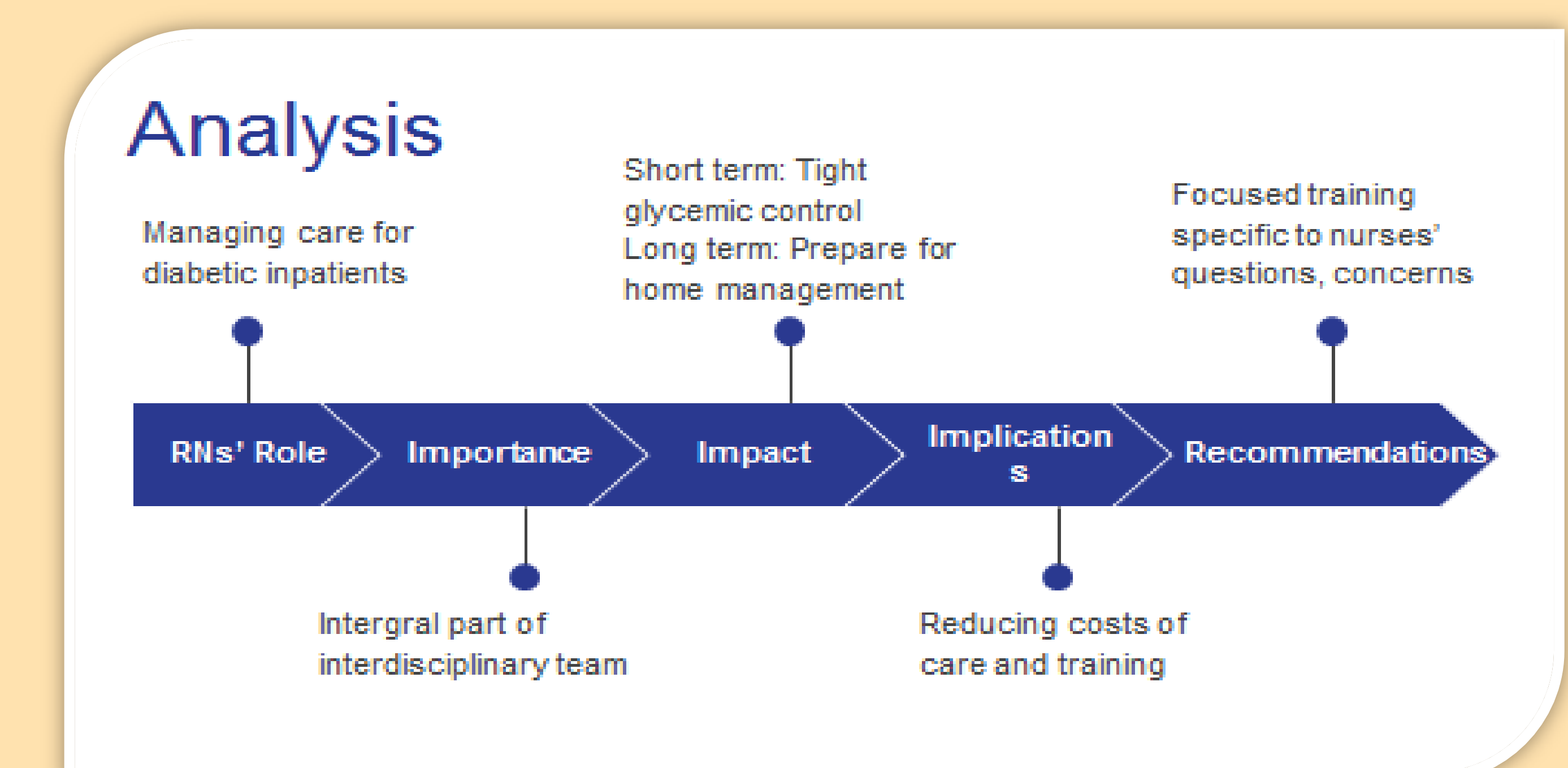
### RESULTS

Following the educational intervention all nurses acknowledged the value and importance of close monitoring of blood glucose levels; many identified the new insulin dosing tool as an improvement over standard sliding scale; some identified an increase in knowledge related to accurately counting carbohydrates and documentation of modifications such as "Patient Refused". Nurses also reported an increase in comfort and confidence related to patient and family education, peer coaching, and utilization of the diabetic resource educator. Some nurses acknowledged being more likely to recommend computer-based insulin dosing to a physician.



### CONCLUSION

Short personalized patient educational modules to increase knowledge, confidence and interpretation of glycemic control principles are key in enhanced patient outcomes. Increased nursing knowledge of diabetes management will improve confidence using the glycemic management program.



- Testing indicates new approach is effective.
- Nurses like "Roving In-services."
- More time needed to determine effectiveness on rates of hyperglycemia.

### Summary

### Evaluation

**DIABETES**

#### Nurses Report:

- New knowledge of diabetes management.
- Confidence in working with diabetic patients.
- Preference for new, shorter classes.
- Improved glycemic scores to be determined.

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### REFERENCES

- Diabetes Inpatient Management. (2012, February 9). Retrieved from [https://www.diabeteseducator.org/docs/default-source/legacy-docs/\\_resources/pdf/research/Diabetes\\_Inpatient\\_Management\\_TDE.pdf](https://www.diabeteseducator.org/docs/default-source/legacy-docs/_resources/pdf/research/Diabetes_Inpatient_Management_TDE.pdf)
- McCulloch, D., & Inzucchi, S. (2015, January 7). Management of diabetes mellitus in hospitalized patients. Retrieved from <http://www.uptodate.com/contents/management-of-diabetes-mellitus-in-hospitalized-patients>
- Munoz, M., Pronovost, P., Dintzis, J., Kemmerer, T., Wang, N.-Y., Chang, Y.-T., ... Golden, S. H. (2012). Implementing and Evaluating a Multicomponent Inpatient Diabetes Management Program: Putting Research into Practice. Joint Commission Journal on Quality and Patient Safety / Joint Commission Resources, 38(5), 195–206.
- National Diabetes Statistics Report. (2014). Retrieved from <http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>
- Salamah, C., Byrbe, T., Naffe, A., Vish, N., DeJong, S., Muldoon, M., ... Adams, J. (2011). Glucose control and opportunities for health care improvement in a hospital setting. Retrieved from <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3012280/>