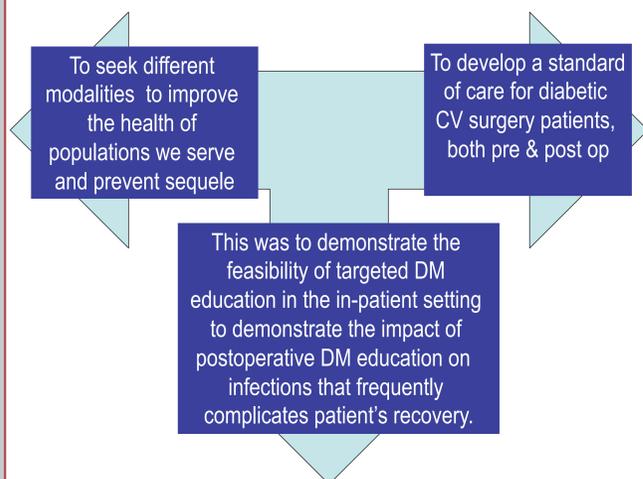


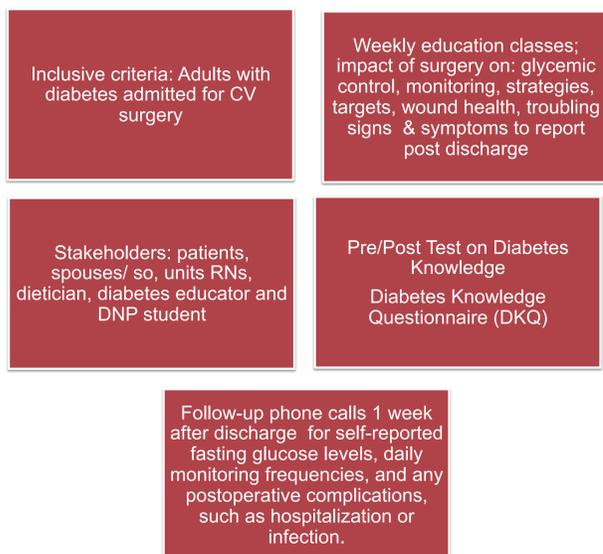
Introduction

- Despite advances in diabetes management – improving the rates of post-op wound infections in diabetics continues to be a challenge
- Diabetics are two to five times more likely to develop mediastinitis than non-diabetics
- Mediastinitis is associated with increased operative mortality
- Glycemic control has been shown to be a key aspect of decreasing the risk of developing post-operative wound infection
- The purpose of this study was to improve post-operative glycemic control of diabetics by improving diabetes self-management
- A NP-led educational intervention was developed for hospitalized cardiovascular surgical patients to facilitate achieving this goal

Purpose / Goal



Methodology



Results

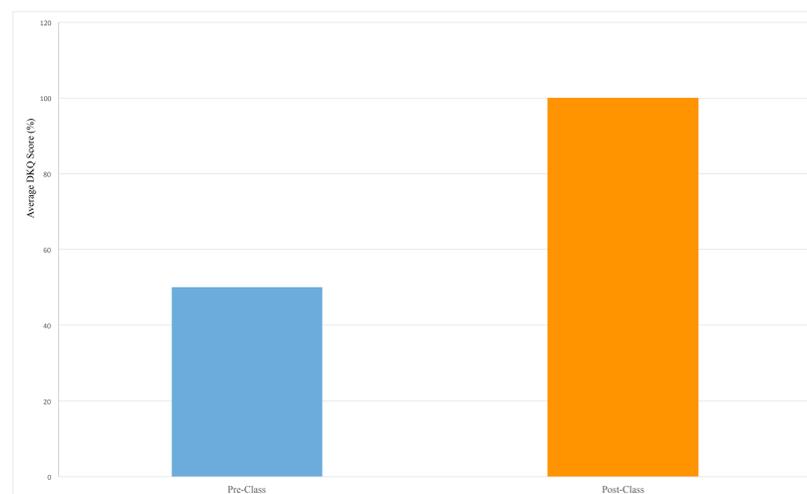


Figure 1. Average patient DKQ scores (%) before and after participating in the diabetes education class

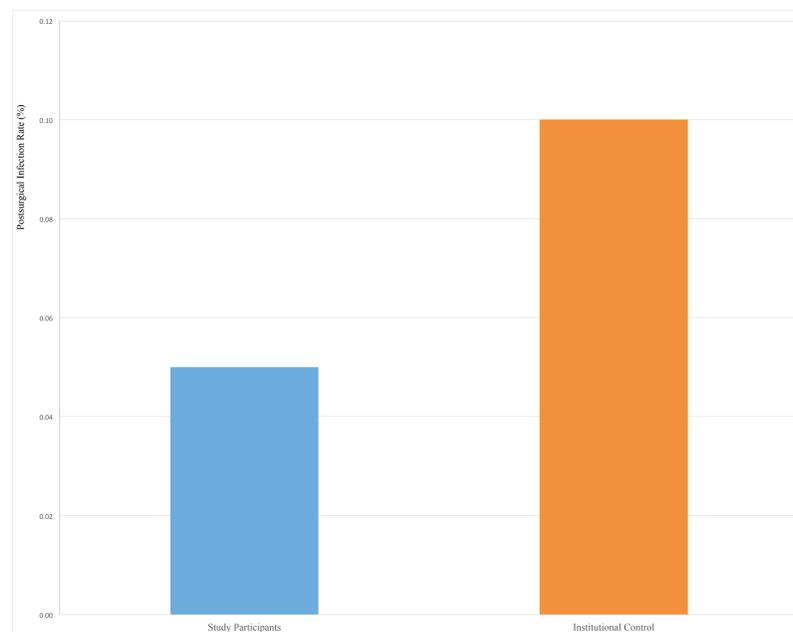


Figure 2. The impact of diabetes education on infection rates in CV surgical patients.

- Although the observed reduction in infection rates was not statistically significant at the 95% confidence interval, the 5% reduction suggests that a potentially significant effect could be found by observing a larger sample population (Association for Professional Infection Control & Epidemiology, 2005).
- The results of this pilot project indicated that peri-operative diabetes education focused on the specific needs of the CV surgical patient contributed to better glucose control after discharge from the hospital and minimized risk of postsurgical infection. recommendations for general diabetes education. with the knowledge, skills, and beliefs needed to achieve glycemic control

Summary

- Patients with diabetes are at increased risk for coronary artery disease and frequently require CABG procedures.
- Diabetes (and stress hyperglycemia in non-diabetic individuals) is also an independent predictor of morbidity and/or mortality in patients admitted to the hospital with myocardial infarction or unstable ischemic syndromes, as well as those undergoing a variety of surgical procedures.
- Long-term mortality rates are higher in diabetic patients after CABG, and a number of studies have demonstrated increased short-term morbidity and mortality.
- Therefore, patient knowledge of glycemic control post op is important in achieving this goal.

Conclusions

1. This small scale project demonstrated a reduction in the population involved in the study. Therefore, a recommendation for a larger scale study to further expand that benefit for this patient population.
- 2.. Recommendations include education and monitoring of glycemic control , post cardiac surgery , creating audit processes, consistent monitoring for infections, and periodic, multidisciplinary review of best practices in preoperative, intraoperative, and postoperative patient care of the diabetic patient.

References

1. American Association of Clinical Endocrinologists. (2004, March/April). Effect of hyperglycemia and continuous intravenous insulin infusion on outcomes of cardiac surgical procedures: The Portland diabetic project. *Endocrine Practice*, 10(Supplement 2), 21-33. <http://dx.doi.org/10.4158/EP.10.S2.21>
2. Association for Professional Infection Control & Epidemiology, Inc. (2005). Developing and comparing infection rates. In *Text of infection control and epidemiology*, pp. 1-7. Retrieved from <http://text.apic.org/table-of-contents>
3. Furnary, A. P., Grunkemeier, G. L., Bookin, S., Kanhere, V., & Starr, A. (1997). Glucose control lowers the risk of wound infection in diabetics after open heart operations. *The Society of Thoracic Surgeons*, 67, 352– 362. Retrieved from <http://www.sciencedirect.com/science/article/pii/S0003497596010442>