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Clinical Alarm Management

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Introduction

West Kendall Baptist Hospital (WKBH) ICU is implementing best practice for alarm fatigue and clinical alarm management through noise reduction and the interprofessional collaborative interventions. Adopting the recommendation from the American Association of Critical Care Nurses to manage clinical alarms, promising outcomes prove to be the answer to alarm fatigue and improve patient safety and satisfaction.

Clinical Practice Question

Meeting the challenge of alarm fatigue and hospital background noise exceeding the recommendation from the World Health Organization, this best practice aims at reducing the noise levels and the false alarms from the cardiac monitors.

Project Description

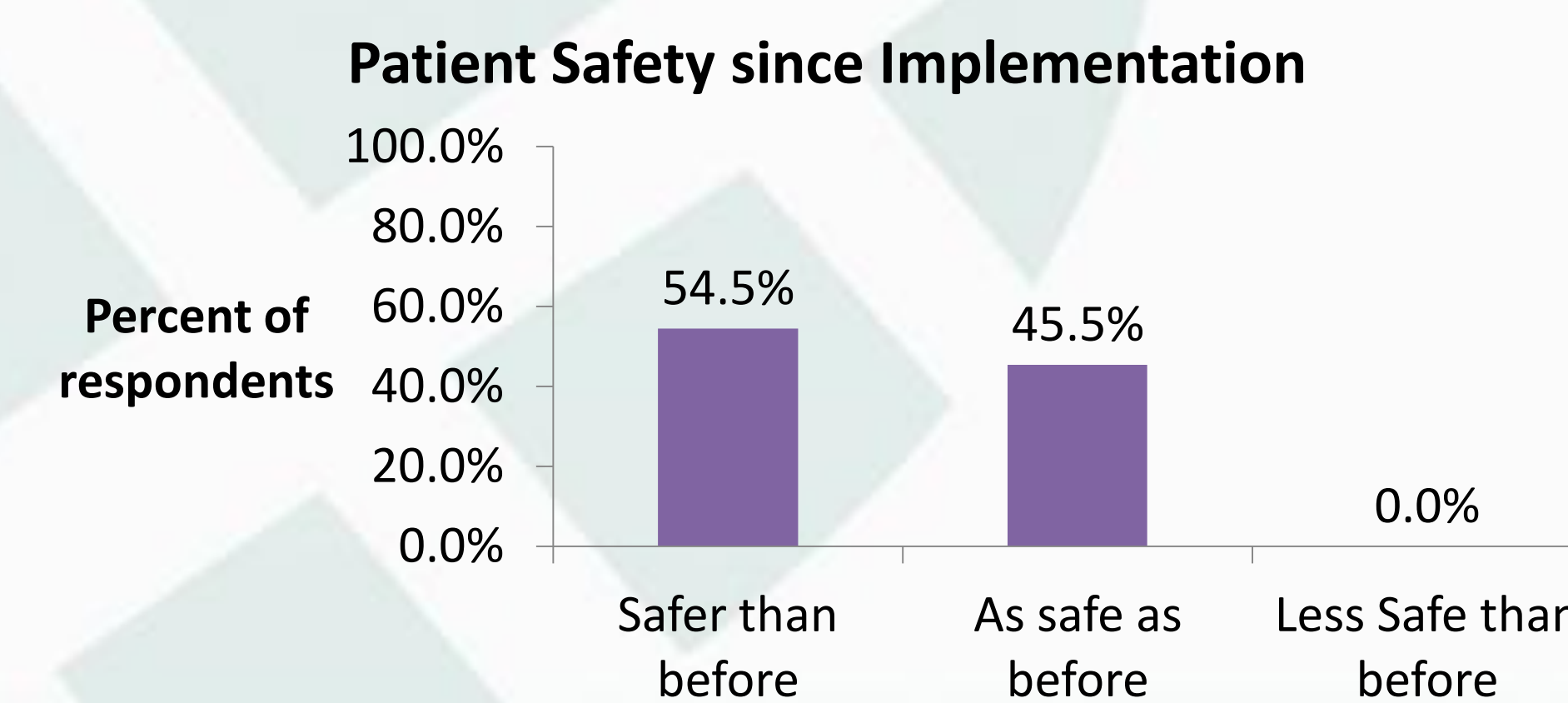
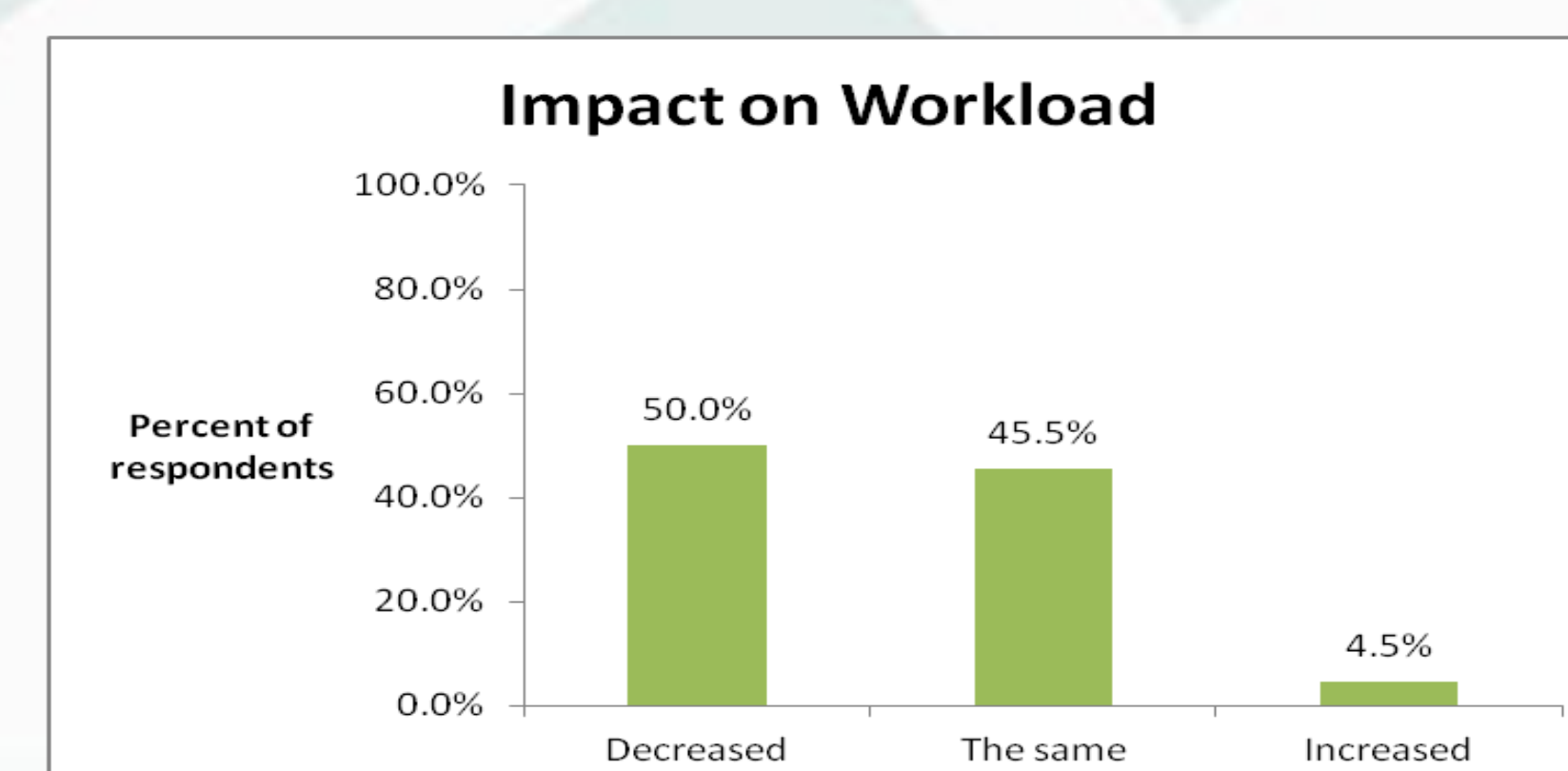
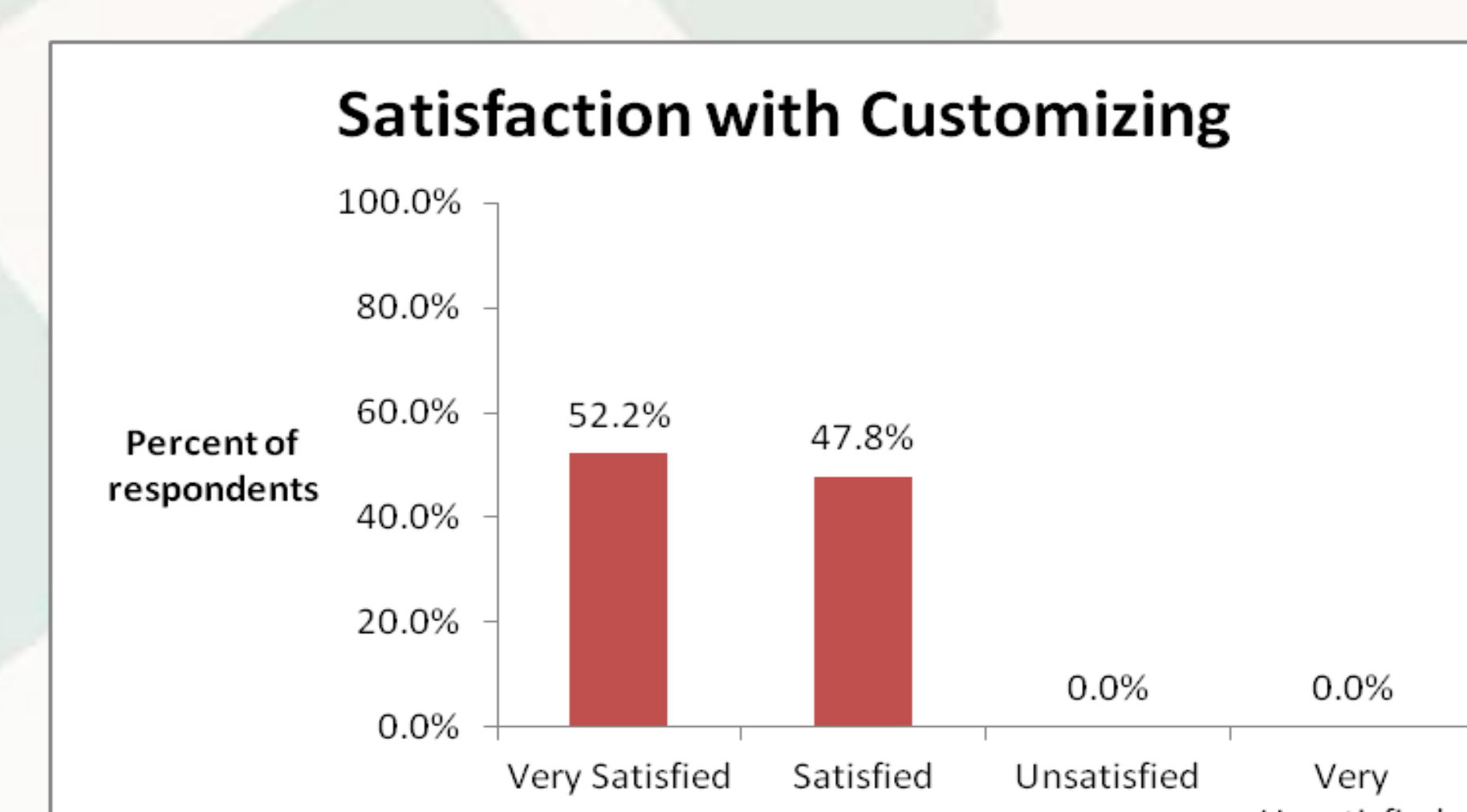
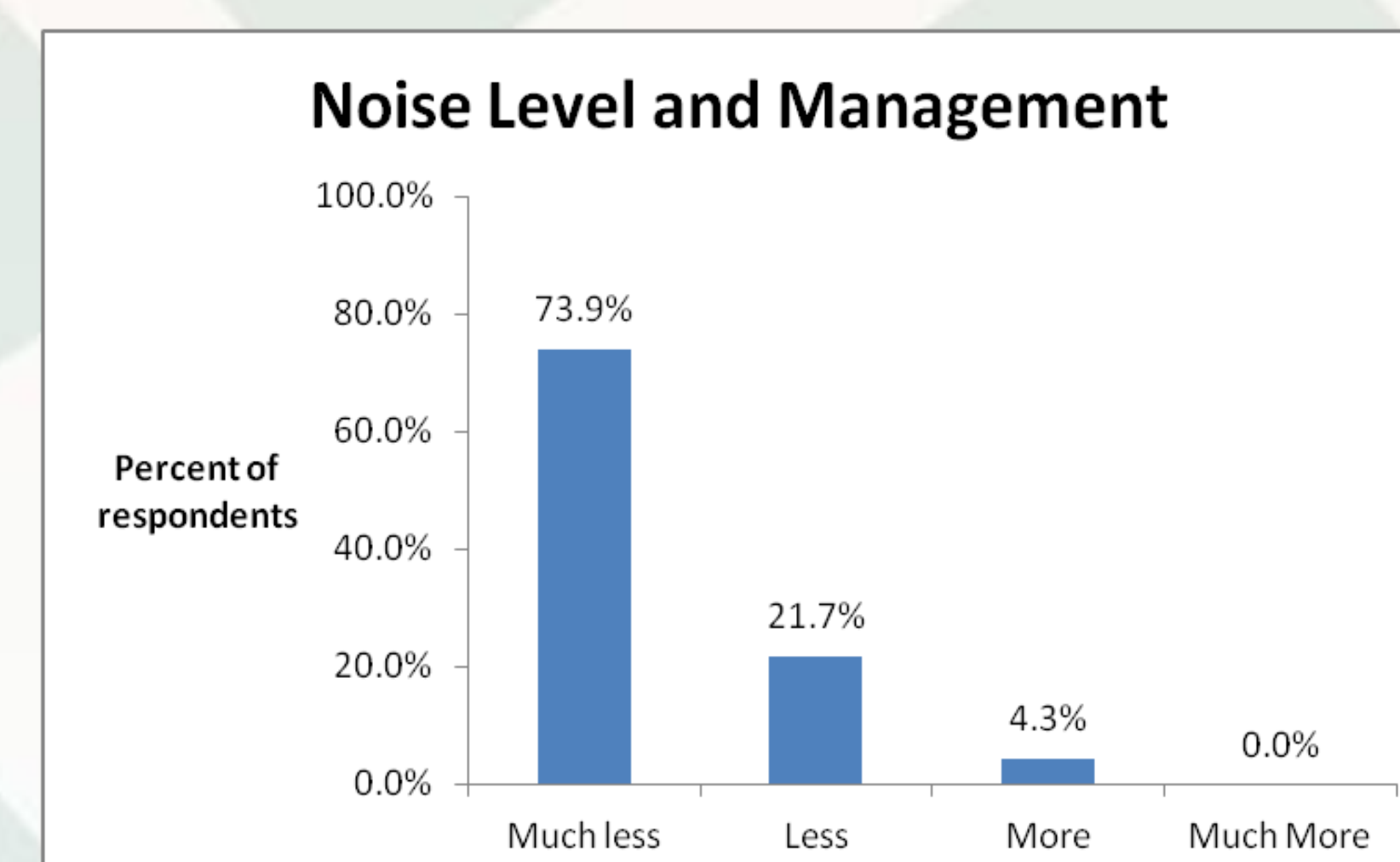
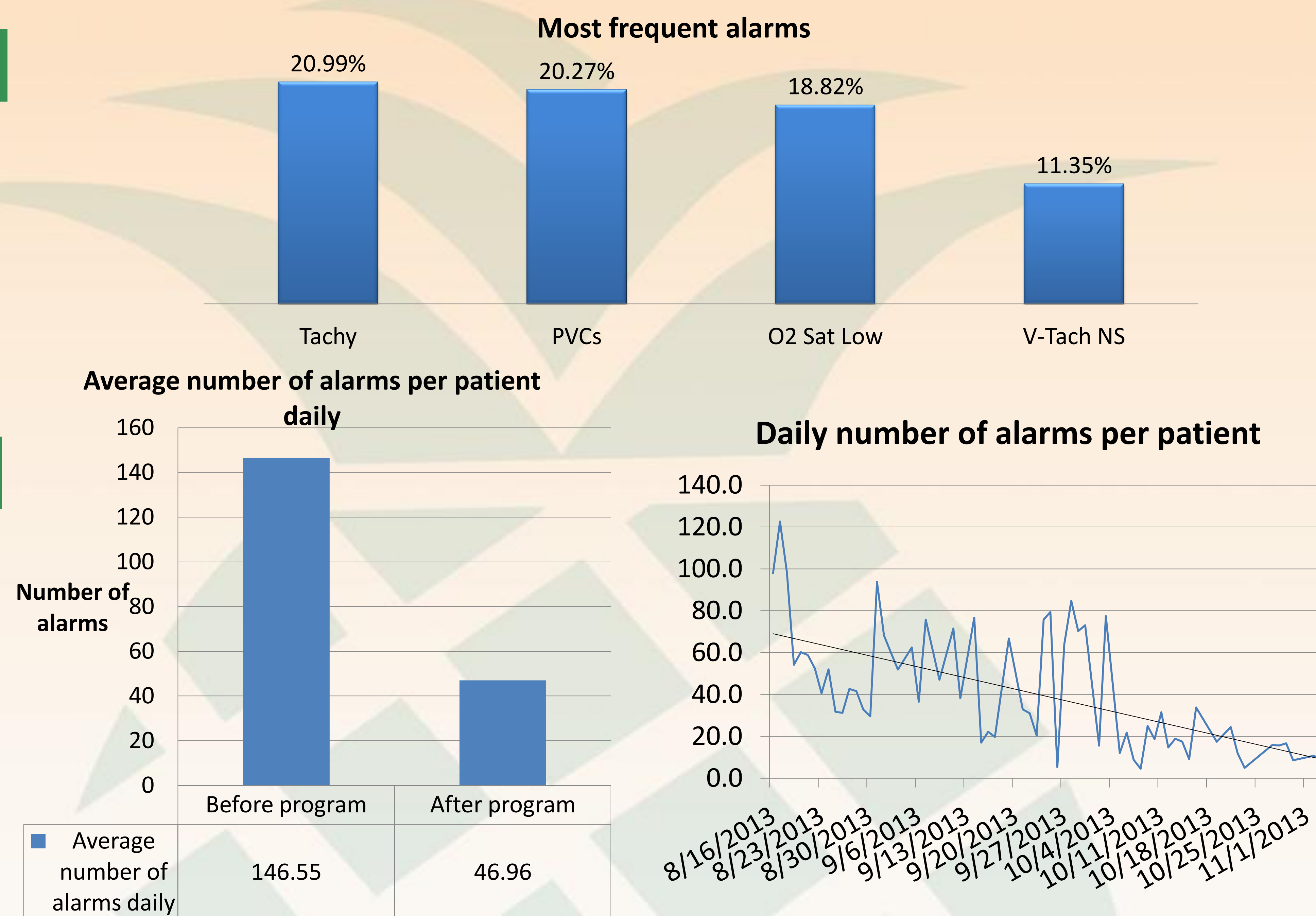
Expected Practice and Nursing Actions:

- Provide proper skin preparation and proper electrode placement
- Change ECG electrodes daily
- Customize alarm parameters of the patient's cardiac and hemodynamic monitor
- Attend initial and on going education on devices with alarms
- Collaborate with the Clinical Alarms and Noise (CAN) Council
- Monitor only those patients with clinical indications for Telemetry monitoring

An interdisciplinary team met, planned and committed to continually resolve issues related with alarm management. The team included members from the Nursing, Biomedical Engineers, Pharmacy, Respiratory, Physician and Industry partners.

Methods of Implementation

This evidence-based practice (EBP) project utilized the Clinical Excellence Through Evidence-based Practice (CETEP) model of define, assess, plan, implement, and evaluate.



Did you know that...

Talking is 60 dBA
Shouting is 85 dBA
Pager is 84 dBA
Food Cart is 90 dBA
Ventilator is 60-78 dBA
IV Pump 60 dBA
Traffic noise is 80-90 dBA
Common sources of noise: Staff Conversation 65%

Findings

Before the education and implementation of the intervention, the average alarm/alerts in the ICU was between 100-120; The practice has reduced the alarm and alert by 80 percent without any alarm related codes.

The unit is less loud and there is better response to the alarms as a result of having decreased the number of false and non actionable alarms. There is better awareness of noise levels in the unit.

Discussion

For noise reduction, the ICU team gives away the cards to any ICU staff or visitor whose speaking voice may exceed that of a therapeutic level for hospitals. In addressing the noise from the cardiac monitors, the nurses to customize the alarms within the hour of assuming the patient's care. Education and surveillance are on going in order to monitor the following:

- The number of code blues in the ICU from the time the implementation of the customization of the alarms began.
- The amount of time saved resulting from the alarm reduction versus the amount of time required to customize the alarms.

WKBH ICU will work on developing research projects based on these outcomes.

Implications

The goals in the strategies for noise reduction and clinical alarm management is for patients safety because alarm fatigue develops when a person is exposed to a number of alarm, this results in desensitized response to the alarm causing a delay in responding to the alarm or dismissing the alarm altogether.

Patient satisfaction is met as a result of the promotion of rest and sleep through noise reduction.

Employee satisfaction is also met as a result of the interventions to prevent alarm fatigue.

Reference

NTI Action Pak : Strategies for Managing Alarm Fatigue (2013). *American Association of Critical Care Nurses*. Retrieved from : <http://www.AACN.org/dm/practice/actionpak>