

Background

The Centers for Disease Control and Prevention estimate **385,000 needlesticks** and other sharps-related injuries occur among healthcare workers (HCWs) in the hospital setting each year (CDC, 2015).

HCWs are susceptible to needlestick injuries due to a lower number of HCWs compared to patients; fatigue from working long shifts; and lack of awareness of the prevalence and implications of the problem (Kargrin & Aykol, 2016).

At the project site, **62.5% of preventable needlestick injuries reported during the first half of FY20 were associated with staff failure to appropriately activate the safety mechanism on safety engineered devices following an injection.**

Objectives

DNP Quality Improvement Objectives: To increase sharp safety awareness; adopt and promote a consistent method for activating the safety mechanism on safety-engineered devices, and provide education/reeducation during new employee orientation and post-sharps injury.

- **Short-term goal:** Visual cue posters will be displayed in prominent locations on 100% of the inpatient nursing units.
- **Short-term goal:** 100% of new employee orientation presentations will include an enhanced sharp safety presentation.
- **Short-term goal:** 100% of nurses who sustain a needlestick injury will be reeducated on needlestick prevention.
- **Long-term goal:** The rate of preventable needlestick injuries among nurses working on inpatient units will be 0%.

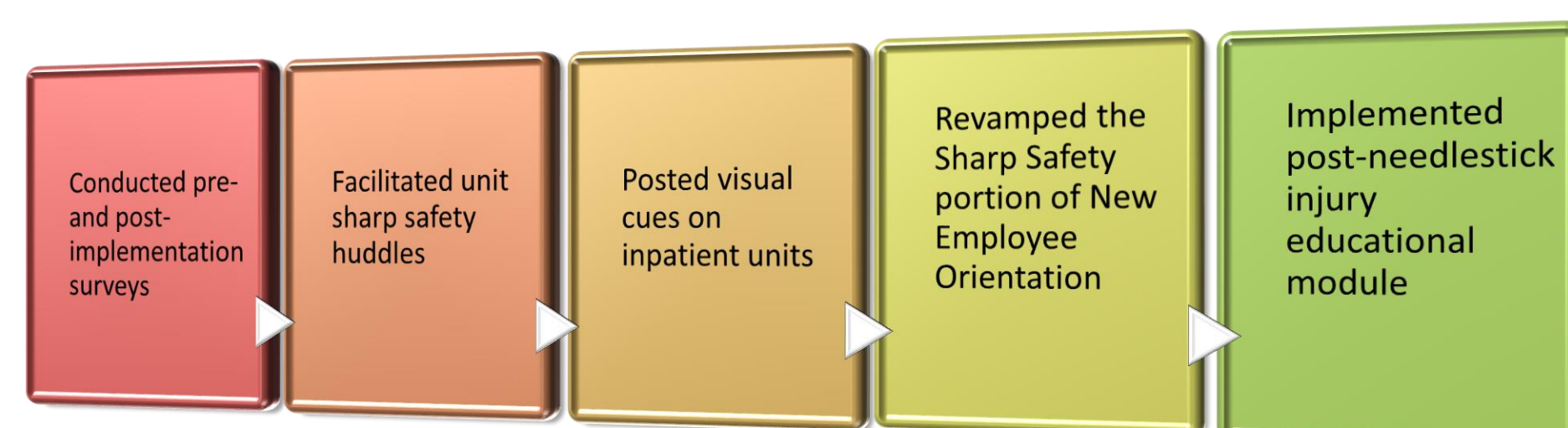
The ideal rate of needlestick injuries/bloodborne pathogen exposures affecting HCWs is 0%.

Methods

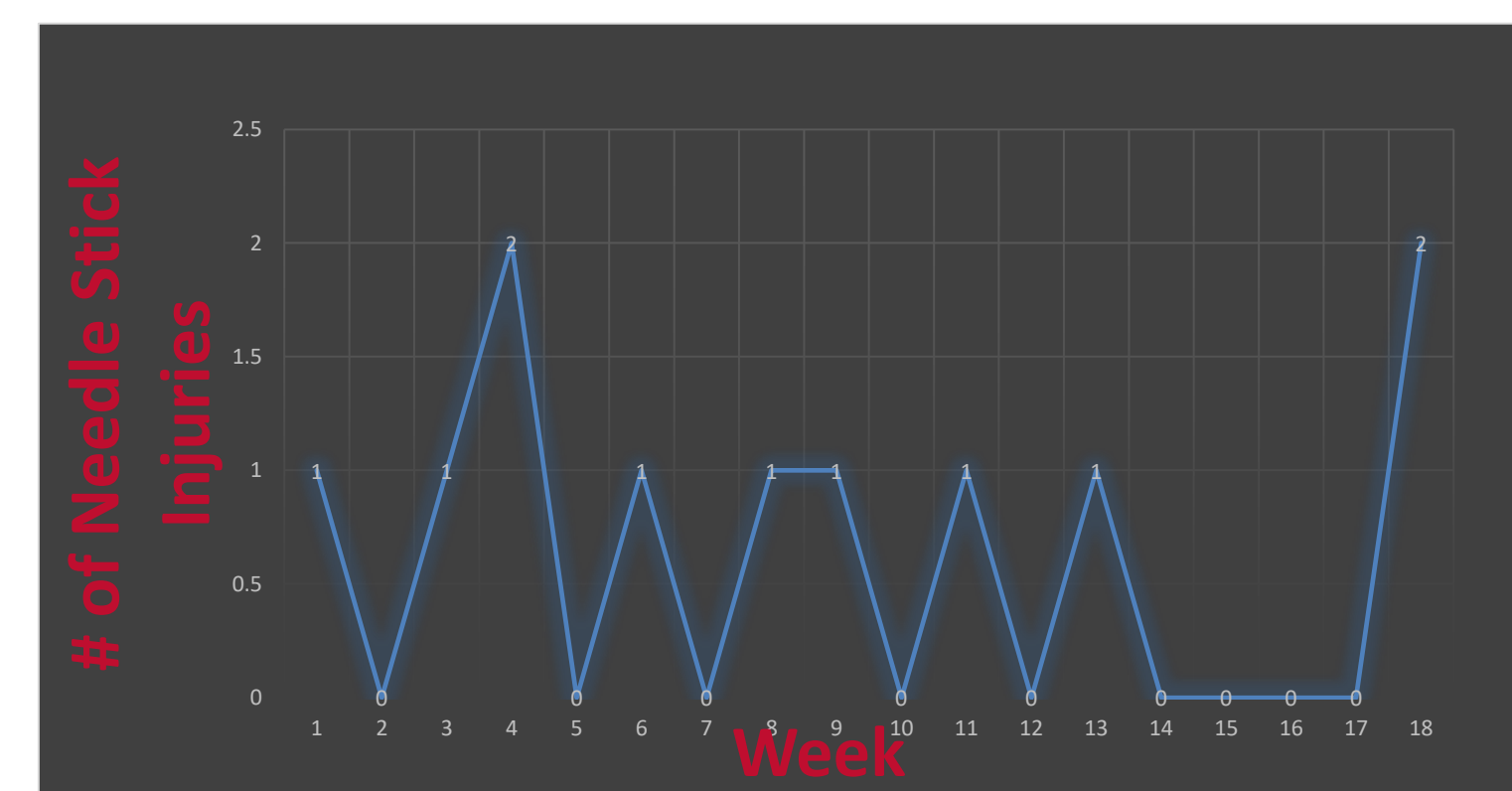
Setting: 389-bed hospital in Maryland; 21 inpatient nursing units

Target population: Inpatient nursing staff (Registered Nurses)

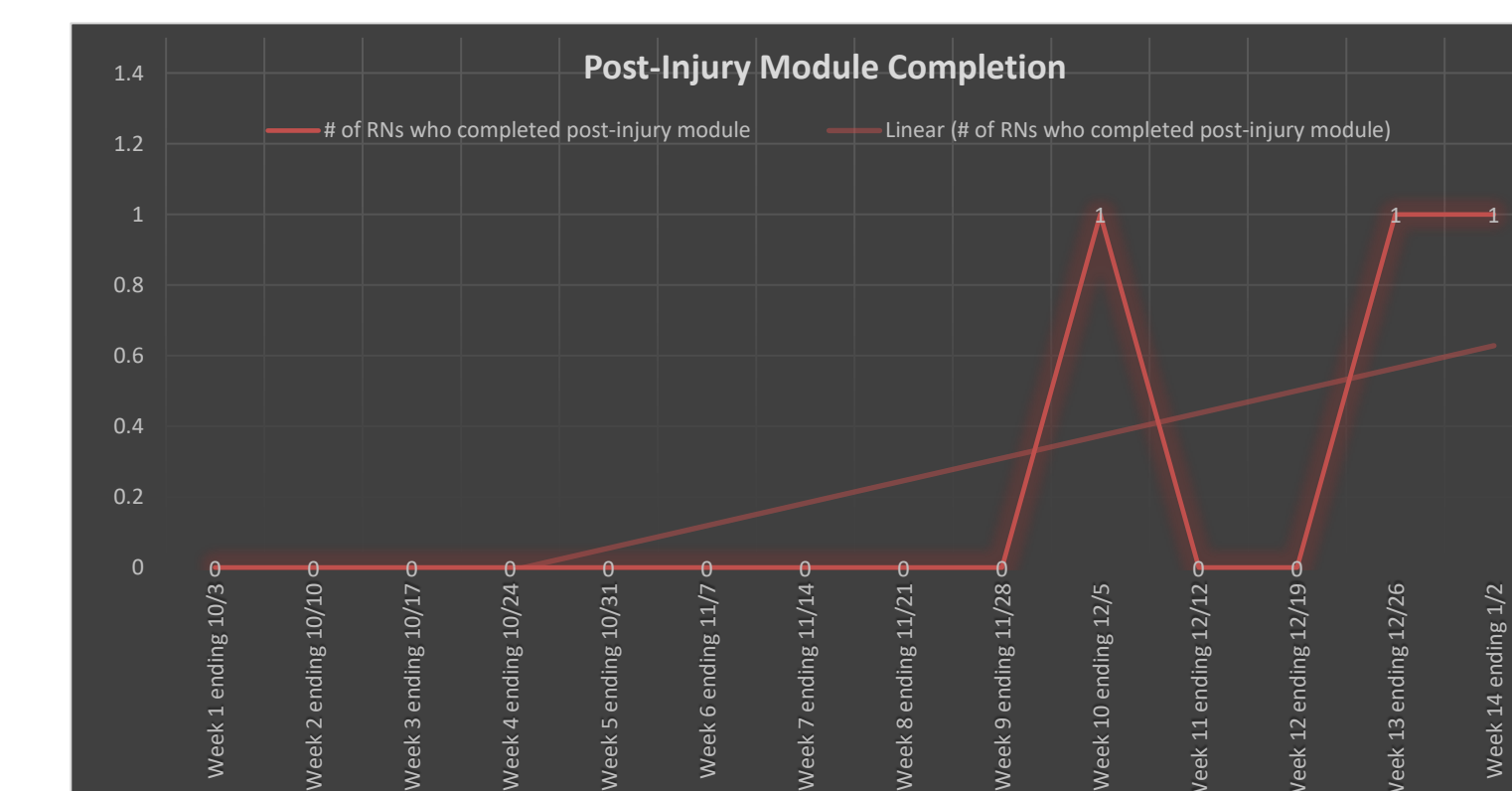
Exclusion criteria: Agency staff, providers, phlebotomists, outpatient RNs.



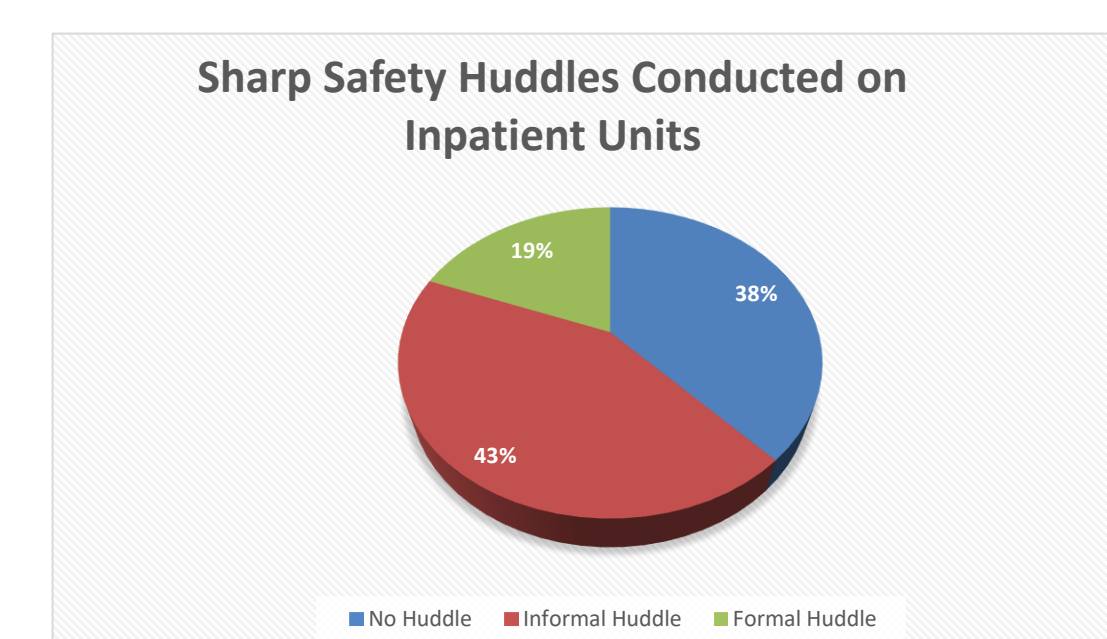
Results



OUTCOME



PROCESS

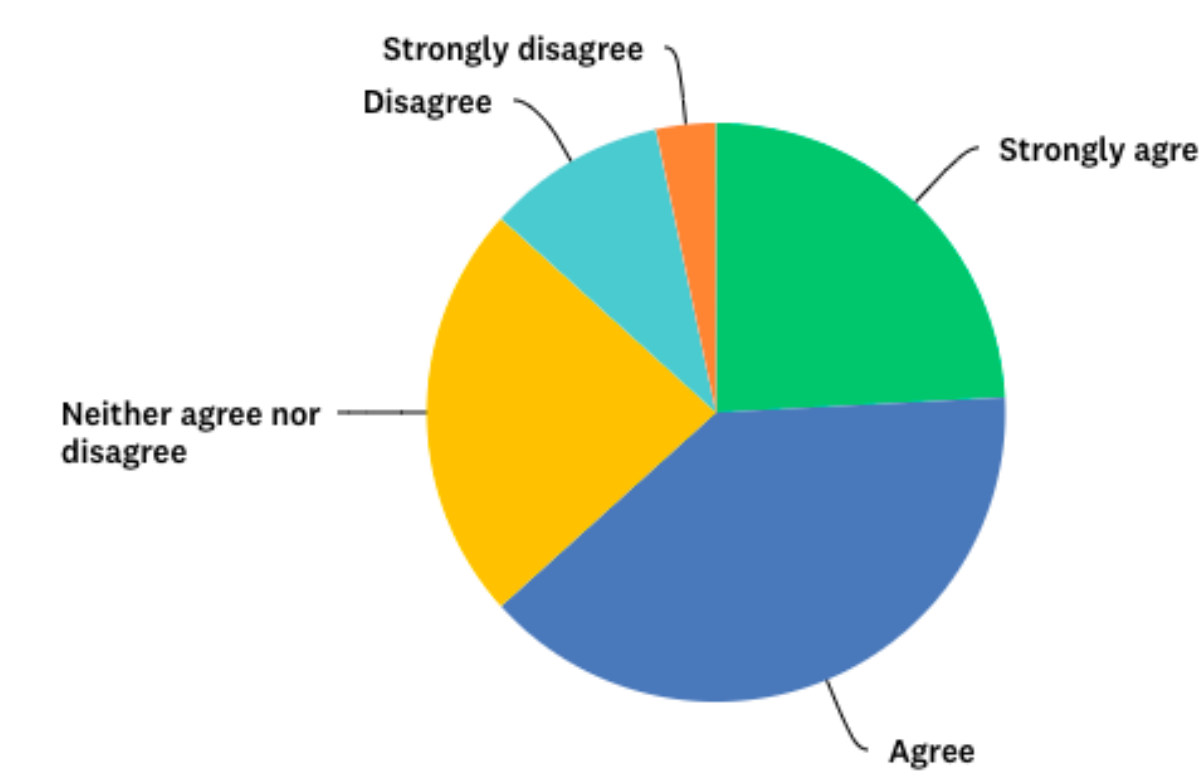


STRUCTURE

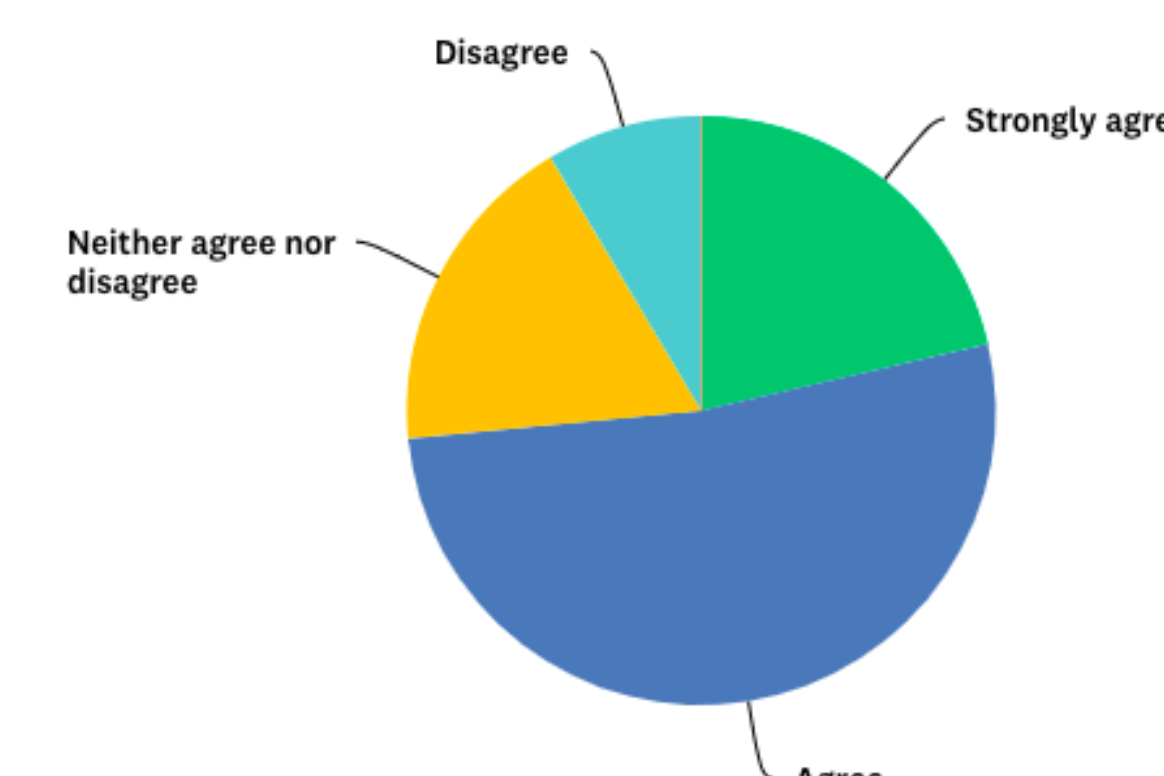
Figures

Staff Response to Selected Pre-Implementation Survey Items

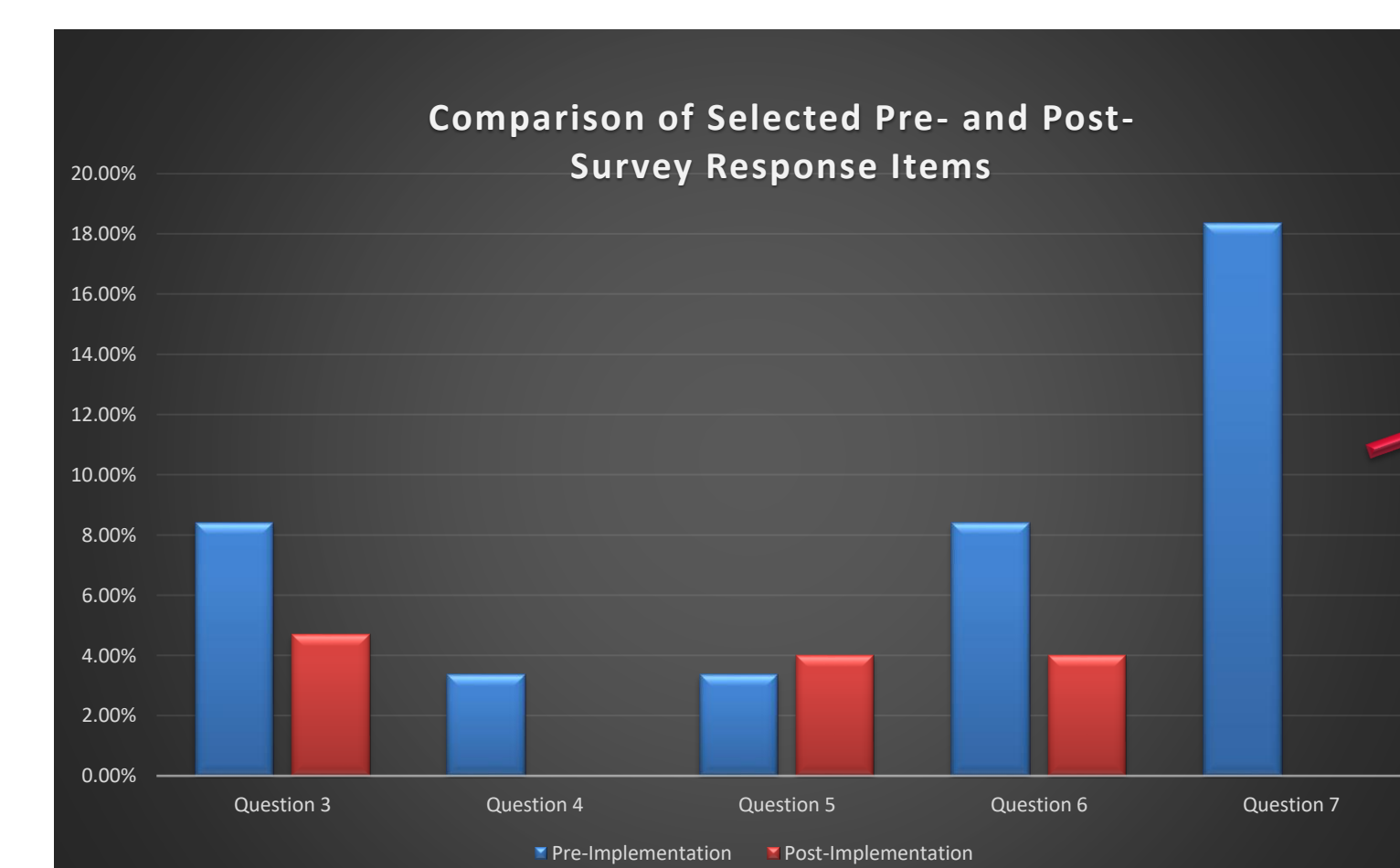
Q2: Preventable needle stick injuries are a concern at [project site]



Q8: Many preventable needle stick injuries occur because the safety mechanism was not engaged on a Safety Engineered Device

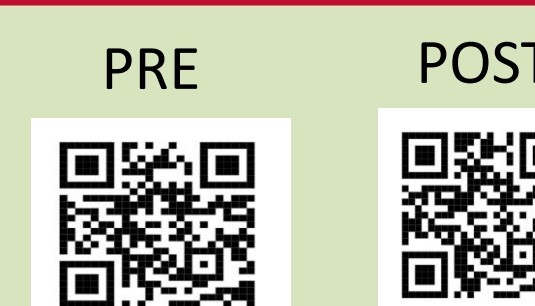


Survey Response Item Comparison



This graph reflects the percentage of respondents (out of 100%) who answered "Disagree" or "Strongly Disagree" to selected survey items (Note: percentage of those who answered disagree or strongly disagree combined for brevity).

Access full pre- and post-implementation survey data:



Sharp Safety Awareness Strategies



Discussion

The pre-implementation survey, sharp safety huddles, posting of the visual cue, and distribution of pens increased awareness of sharp safety.

Implementation of the revised NEO Sharp Safety presentation and implementation of the post-needlestick injury education module reinforced important sharp safety information and techniques.

During the implementation period, the rate of needlestick injuries decreased from 0.47 (baseline) to 0.2, even reaching 0.12 at one point of data collection.

Collectively, the interventions were well received by staff and appeared to influence a modest reduction in the rate of needlestick injuries.

The COVID-19 pandemic and a change in the Sharp Safety Coordinator impacted some areas of project implementation, namely, the number of sharp safety huddles conducted.

Limitations: Small sample size.

Conclusions

A multi-faceted sharp safety campaign is an effective way to increase awareness of sharp safety and reduce the rate of preventable needlestick injuries in nursing staff.

Sharp safety is especially important during the COVID-19 pandemic where nurses and other health care professionals are working under stressful conditions and handling more needles in the mass vaccination initiative.

Pandemic-related short-staffing, staff burnout, staff mental state, and subsequent effects on mindfulness and susceptibility to injury is an area where future investigation is needed.

References



Acknowledgments

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