

# Improving Personal Protective Equipment Compliance by Staff on a Progressive Care Unit

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## Introduction & Background

### Introduction:

- Personal Protective Equipment (PPE) is essential to prevent the spread of organisms between patients
- The current PPE compliance rate of this progressive care unit is 67%. This QI project will improve staff knowledge of PPE and improve PPE compliance.

### Background:

- If hospital staff do not wear appropriate PPE prior to entering a patient's room who is on isolation precautions, they could transmit resistant bacteria to other patients, which could lead to a hospital acquired infection (HAI).
- HAIs cause 90,000 deaths each year and cause significant financial strains, between 4.5 and 5.7 billion dollars
- One way healthcare providers can prevent HAIs is proper use of PPE for patients on contact precautions

## Purpose & Aims

This QI project sought to increase the knowledge of PCU staff, at an urban academic medical center in Baltimore, regarding the importance of proper PPE as well as increase PPE compliance with staff.

**Aim 1:** Increase the knowledge of PCU staff about the importance of proper PPE compliance, through an educational intervention, as measured by pre- and post-test measurements of staff's knowledge

**Aim 2:** Increase the compliance rate for donning PPE prior to entering an isolation room from baseline rate as measured by direct observation.

## Methods & Intervention

**Design:** 1 group, pretest, posttest design

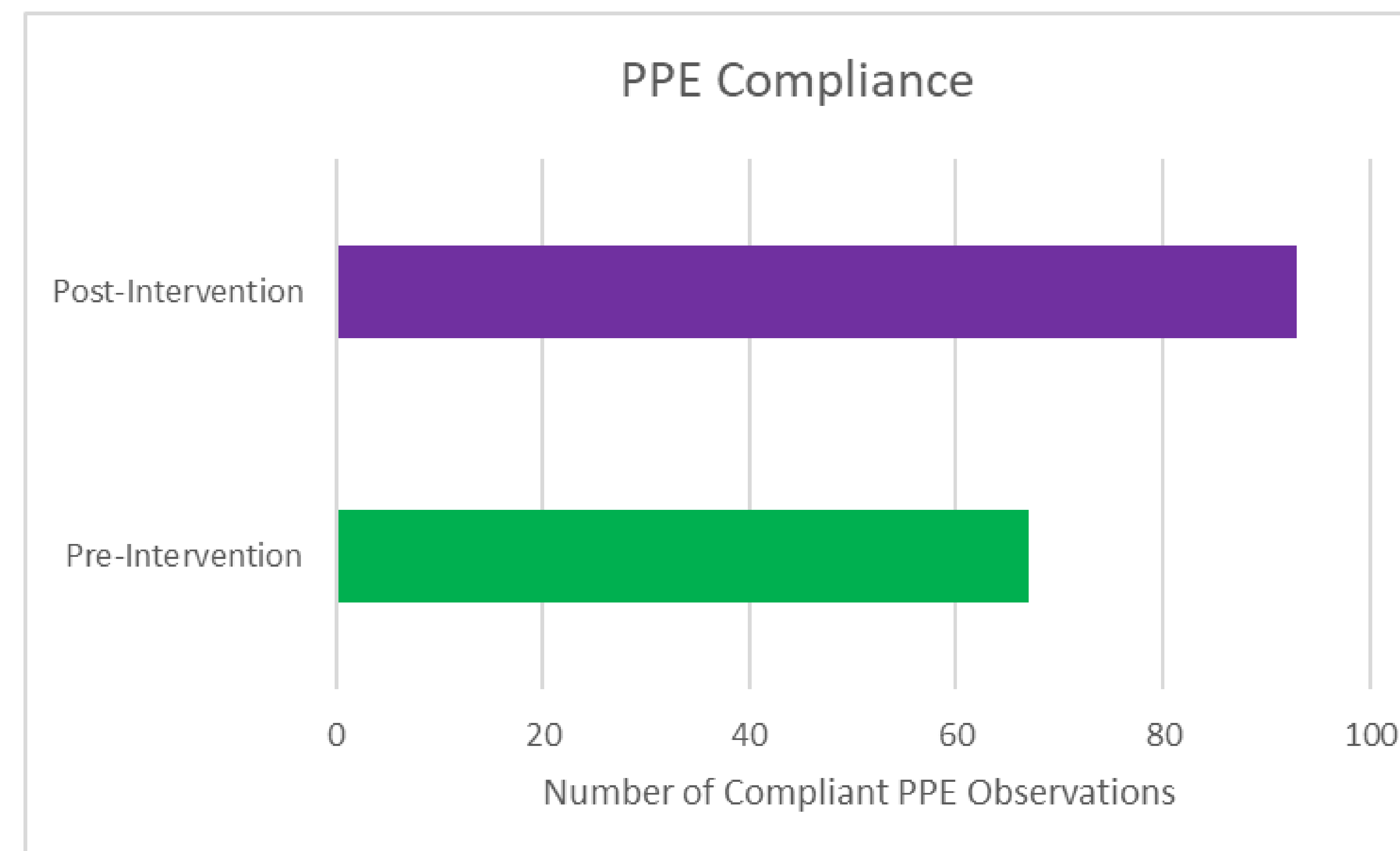
**Sample:** convenience sample consisting of staff such as registered nurses, clinical technicians and support staff

**Setting:** Progressive Care Unit at an urban academic center in Baltimore City

**Inclusion Criteria:** staff of the hospital above the age of 18

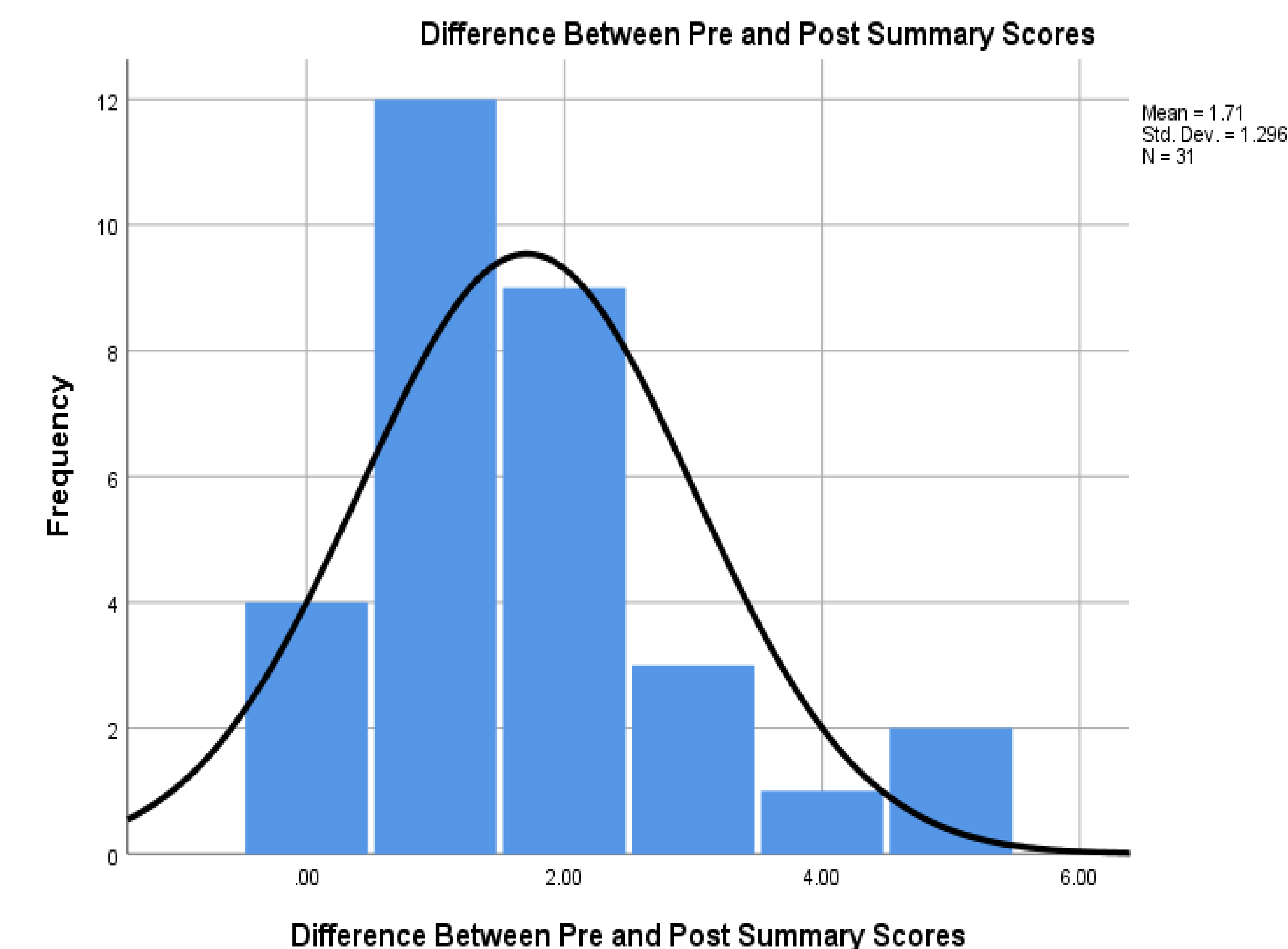
### Intervention:

- 31 staff members of the PCU completed a pretest to assess their knowledge of PPE.
- The pretest was followed by an education module by the Centers for Disease Control (CDC) about the importance of PPE and how to properly don and doff PPE.
- This education module was followed by an immediate posttest.
- 100 PPE observations were completed prior to the beginning of the intervention and 100 more after.



## Results

- Based on the results of the Wilcoxon Signed Ranks Test, there was a statistically significant change in pre and immediate post-test scores ( $Z = -4.610$ ,  $p = .000$ ) following the education module.
- Changes in PPE compliance amongst staff had a clinically significant improvement.
- The rate of PPE compliance prior to the education session on the PCU was 67% and post-education session was 93%



## Conclusions

- This pilot study found that knowledge scores of staff about PPE showed a statistically significant change after an education session.
- Brief educational interventions such as a 15-minute presentation about the importance of PPE was shown to help compliance.
- Limitations of the study include COVID-19 pandemic, use of a convenience sample, and independent sample groups for pre- and post-education PPE observations.