Patient Safety and Capnography Monitoring: What Do PACU Nurses Think?

Bethany Biardi, MSN, RN, CPN, CPAN - Cassandra Demery BSN, RN, CPAN - Paige Valles, MSN, RN, CPAN
HonorHealth Scottsdale Shea Medical Center – bbiardi@honorhealth.com

Introduction/Background

Patients in the PostAnesthesia Care Unit (PACU), especially those with obstructive Sleep apnea (OSA) and opioid induced respiratory depression (OIRD) are at risk for:

- ↑ respiratory depression
- ↑ morbidity and mortality
- ↑ PACU length of stay
- ↑ healthcare costs
- ↑ dissatisfaction
- ↑ unplanned admissions

Waveform capnography is a non-invasive tool that directly measures a patient's ventilation and gas exchange providing early detection of respiratory compromise.

Findings from this study will be used to identify education needs and to develop a protocol for the use of capnography monitoring in the PACU,

Aims

1. Identify best practices for capnography use in the PACU
2. Pre/Post intervention nursing knowledge assessment
3. Nursing attitude about PACU capnography monitoring

Methods

A literature review was conducted to identify best practices for non-invasive capnography monitoring in the PACU. Findings were used to develop a multimodal staff education plan.

A 15-question nursing knowledge pe/post survey was distributed to PACU nurses and collected before and after the education rollout, along with the post 18-item nursing attitude survey.

Intervention

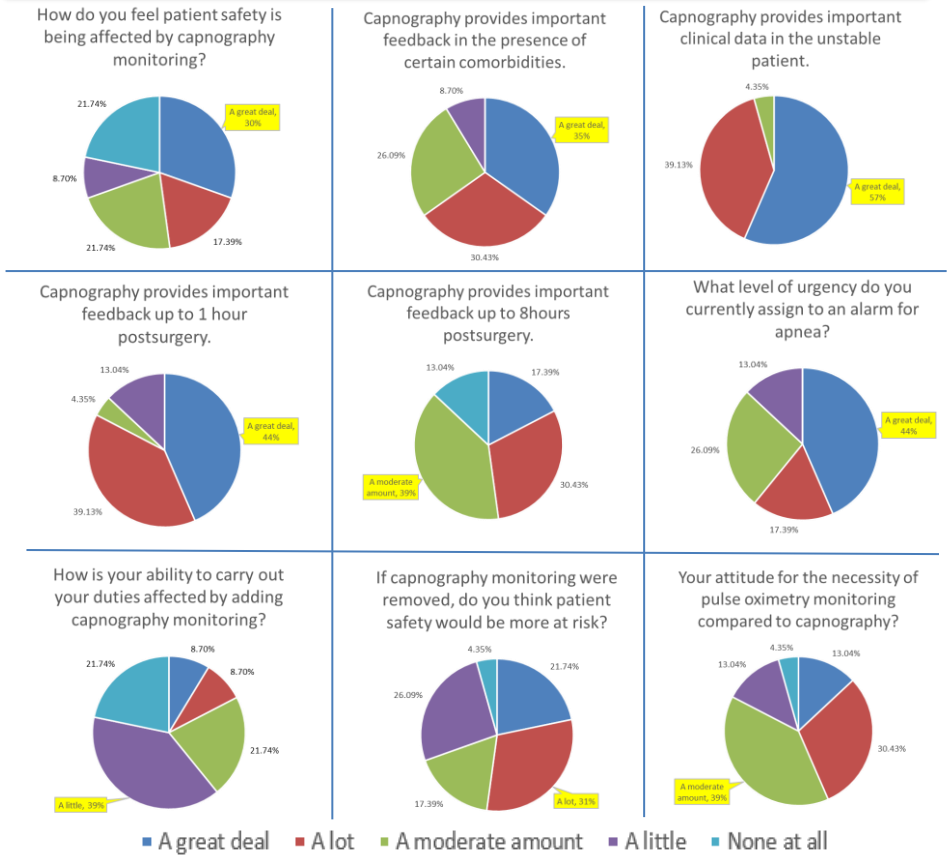
Design: Pre/Post intervention survey

Setting: 19 bed PACU HonorHealth Scottsdale Shea Medical Center, Scottsdale, AZ.

Sample: 28 pretests and 23 posttests from PACU nurses.

Tools: 15 item *Nurses' Knowledge about Capnography in the PACU* & 18 item *Nursing Attitudes Towards Continuous Capnography Monitoring in the PACU*

Results



Results & Discussion

Knowledge: There were no statistically significant differences between the pre/post nursing knowledge surveys.

Attitude: There was a statistically significant positive correlation between years of practice, nursing age, and perceived importance of capnography feedback.

Takeaways

Limitations:

- Small sample size: 28 pre-surveys, 23 post-surveys, able to match 11 by unique identifier for direct comparison.
- Difficult to track actual capnography usage or to compare usage vs opportunity.
- Most staff education was self-led; therefore, we were unable to quantify who participated and in what capacity.
- Findings may indicate that a more formal or mandatory education plan should be utilized when revisiting the most frequently missed question topics.

Successes:

- Established a high baseline of general capnography nursing knowledge among PACU nurses.
- Identified older and experienced nurses as the primary adopters for capnography monitoring in the PACU.
- Roadmap for future education efforts regarding capnography usage and adoption.

References

Available upon request: bbiardi@honorhealth.com