THE UTILIZATION OF THE STOP-BANG TOOL AND ITS IMPACT ON NURSING AIRWAY MANAGEMENT IN THE POST ANESTHESIA CARE UNIT

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Background/Significance of Problem

In the post anesthesia setting, nurses are often required to intervene to maintain a patient's airway patency to avoid hypoxia. In some cases, this situation could have been avoided if the post anesthesia care unit nurse had knowledge of the patient's likelihood of obstructive sleep apnea. This baseline knowledge could change different facets of the nurse's care such as extubation criteria.

The use of a sleep apnea scoring tool, like the STOP-Bang scoring tool, could deter post-operative hypoxia and decrease the percentage of patients requiring nursing airway maintenance.

Clinical Question

For adult surgical patients at Methodist Hospital, will the knowledge of the pre-operative STOP-Bang score decrease the percentage of patients requiring nursing airway maintenance post-operatively?

Search of Literature/Best Evidence

A review of literature was conducted related to post anesthesia obstructive sleep apnea. There are several screening tools found in research that measure the risk of obstructive sleep apnea (OSA). However, these tools are subjective and require outpatient procedures to diagnose and/or predict obstructive sleep apnea.

The STOP-Bang scoring tool is eight objective questions that can be used by the nurse as part of the existing pre-operative routine associated with sleep apnea, post operative hypoxia and potential nursing airway management.

Contact: lmorgan@methodisthospital.net

Yes No **Snoring?**
Do you Snore Loudly (loud enough to be heard through closed doors or your bed-partner elbows you for snoring at night)?

Yes No **Tired?**
Do you often feel Tired, Fatigued, or Sleepy during the daytime (such as falling asleep during driving)?

Yes No **Observed?**
Has anyone observed you Stop Breathing or Choking/ Gasping during your sleep?

Yes No **Pressure?**
Do you have or are being treated for High Blood Pressure?

Yes No **B**ody Mass Index more than 35 kg/m2?

Yes No **A**ge older than 50 years old?

Yes No **N**eck size large? (Measured around Adams Apple)
For male, is your shirt collar 17 inches / 43 cm or larger?
For female, is your shirt collar 16 inches / 41 cm or larger?

Yes No **G**ender = Male?

For general population

Low risk of OSA: Yes to 0-2 questions

Intermediate risk of OSA: Yes to 3-4 questions

High risk of OSA: Yes to 5-8 questions
or Yes to 2 or more of 4 STOP questions + male gender
or Yes to 2 or more of 4 STOP questions + BMI > 35 kg/m2
or Yes to 2 or more of 4 STOP questions + neck circumference 17 inches / 43 cm in Male or 16 inches / 41 cm in female

Goal Statement

To decrease the percentage of patients requiring nursing airway maintenance post-operatively to be below 1% post implementation of the STOP-Bang scoring tool.

Integration into Practice

Pre-intervention baseline data was collected between May 1, 2014 and June 30, 2014. A total of 753 patients were included.

The Outpatient Surgery (OPS) and PACU clinical nurses were educated regarding the use of the STOP-Bang scoring tool in July 2014.

The STOP-Bang scoring tool was utilized August 1, 2014 through October 31, 2014 with a total of 750 patients.

The findings indicate there is an association between an elevated STOP-Bang score (representing OSA) and the need for post-operative nursing airway management.

Based upon findings, extubation criteria were modified for patients in the PACU who were at a high risk of obstructive sleep apnea.

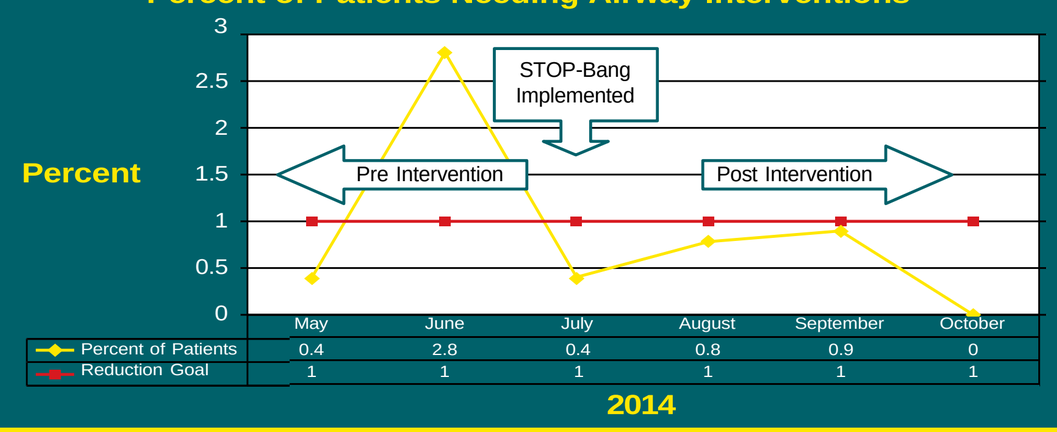
Outcome

Post implementation of Stop-Bang, the PACU saw the percentage of patients needing airway interventions consistently stay below 1%. Through the Stop-Bang protocol, clinical nurses are able to use autonomous, critical thinking skills to adapt innovation in nursing practice to provide the best results for the patient.

Evaluation of Evidence-based Practice

Changes in nursing practice associated with the STOP-Bang score and airway management are re-evaluated by the Unit Council quarterly.

Percent of Patients Needing Airway Interventions



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