

Utilization of STOP-BANG to Identify OSA Prior to Upper Endoscopy



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Background

Obstructive Sleep Apnea-most prevalent sleep related disorder

- Global health risk-linked to obesity, age >50
- 10% adult cis-Females, 25% adult cis-Males
- >60% of surgical population
- Underdiagnosed, untreated-> atrial fibrillation, stroke, uncontrolled HTN & sudden death.
- Exasperated by anesthetics & sedatives
- Failure to quantify OSA risk factors ->incomplete assessment

Resulting in ↑ risk of intra & post-procedural adverse events, delayed discharge, & ↑ resource utilization.

OSA risk stratification with the reliable/validated screening tool (STOP-BANG) is supported by Anesthesiology & Sleep Medicine

Purpose and Aims

Purpose: This quality improvement initiative addressed a gap in practice and incorporated the standardized pre-anesthetic screening for OSA in adults scheduled for elective EGDs (upper endoscopies).

Aims:

1. Assess RN's OSA/STOP-BANG knowledge pre & post education
2. Assess CRNA/MD's OSA/STOP-BANG knowledge pre & post education
3. Identify OSA risk level of EGD patients, notify individuals & PCPs
4. Assess CRNA/MD perception of efficiency of OSA screening process.

Methods

Design: Pre/Post test intervention design over 12 weeks

Setting: Free-standing ambulatory surgery center in the Mid-Atlantic

Sample: Aim 1: Perioperative RNs; Aims 2&4: CRNA/MD

Aim 3: Adult elective upper endoscopy patients

Measures: Aims 1,2: Clinician OSA Knowledge Assessment scores

Aim 3: Pre-anesthetic OSA risk level

Aim 4: CRNA/MD feed-back via anonymous survey.

Analysis: Wilcoxon signed-rank, Descriptive statistics

Results

Aim 3

Baseline characteristics of upper endoscopy patients screened for OSA via STOP-BANG tool

Demographic characteristics	n =116
missing	5 (4.2%)
Age, mean (SD)	66.7 (11.7)
Sex, n (%)	
Male	28 (23.1%)
Female	88 (72.7%)
ASA status	
I healthy	1 (0.8%)
II mild systemic dis.	69 (57%)
III multiple systemic dis.	46 (38%)
IV constant threat to life	0
V gravely ill	0
Diag. HTN	
Yes	57 (47.1%)
No	59 (48.8%)
BMI >35	
Yes	9 (7.4%)
No	107 (88.4%)
STOP-BANG score (OSA risk)	
0-2 (mild)	64 (52.9%)
3-4 (moderate)	40 (33.1%)
5-8 (high)	12 (9.9%)

SD=standard deviation
ASA= Anesthesiology Physical classification
HTN= Hypertension

Discussion

- 22 RNs received the intervention-> **clinically significant increase** in mean scores on post-test OSA knowledge assessments.
- 12 CRNAs & MDs received the intervention->**clinically significant increase** in mean scores on post-test OSA knowledge assessments.
- 52 patients were identified as moderate-severe risk for OSA-notified & referred to PCP.
- **Equal prevalence (22.4%)** of moderate-severe OSA risk among individuals with mild-moderate chronic disorders.
- 23 Anesthesia provider surveys were completed->**90%** supported STOP-BANG use.

Strengths: Easily administered, patients & clinicians receptive

Limitations: Site visitation policy impeded reports of apnea from companions & site lacks electronic health records

Conclusion

- Undiagnosed OSA threatens patient safety
- Consistent pre-anesthetic OSA risk stratification allows providers to: identify, inform, & implement appropriate anesthetic plans
- Updated patient pre-procedural electronic forms will now include self-administered STOP-BANG questionnaire

References

