Anesthesia-Led Obstructive Sleep Apnea Screening and Referral Program

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Background

- In the US, 17.4% of women and 33.9% of men aged 30-70 years old have at least mild obstructive sleep apnea (OSA)\(^1\)
- In the perioperative environment, OSA patients are twice as likely to have cardiac and pulmonary complications\(^2\)
- Up to 70% of surgical patients have OSA, with the majority (80%) of these patients presenting to surgery undiagnosed\(^3\)
- Inconsistent perioperative OSA screening and postoperative primary care (PCP) referral fails to provide a path for diagnosis and treatment for at-risk patients

Purpose & Specific Aims

**Purpose**: To implement and evaluate the effects of a 12-week OSA screening program in adult surgical patients utilizing the STOP-Bang questionnaire and standardized referral to postoperative PCP

**Aim 1**: Determine provider confidence level with project implementation

**Aim 2**: Determine provider compliance with project implementation by measuring proportion of patients with completed STOP-Bang scores

**Aim 3**: Determine OSA risk stratification of adult surgical patients by measuring STOP-Bang scores

**Aim 4**: Determine postoperative PCP referral rates for moderate to high risk OSA patients

Methods

**Design**: Pre-Post intervention

**Setting**: 18-bed small urban hospital with 8 operating rooms

**Samples**: 16 anesthesia providers (CRNAs) and 302 adult surgical patients (151 pre/151 post)

**Measures**: Five Point Likert scale, STOP-Bang completion rate, STOP-Bang score, PCP referral rate

**Analysis**: Descriptive statistics, Chi Square test

Results

**Aim 1**: Mean provider confidence score of very to extremely confident

- Mean confidence score was 18.9 out of 20 possible points (SD 1.9) and median confidence score was 20

**Aim 2**: 93.4% compliance in STOP-Bang completion

- 65.6% of adult surgical patients had a completed STOP-Bang score. \(n(N = 302) = 147.3, \text{P} = .000\)

**Aim 3**: Mean STOP-Bang score of 3.7, SD 1.1, placing the sample patient population at moderate risk for OSA

- 68% of patients at moderate risk

- 18% of patients at high risk

**Aim 4**: 10.6% of adult surgical patients were referred to PCP postoperatively.

- 88.9% of high risk patients referred to PCP

- No moderate risk patients referred to PCP

Discussion

- High provider confidence and compliance with STOP-Bang questionnaire\(^4,5\)
- OSA detection is improved with standardized screening utilizing STOP-Bang questionnaire\(^6,7,8,9,10\)
- OSA risk stratification can be utilized for perioperative planning and guideline development\(^11,12,13\)
- PCP referral reserved for high risk patients, limiting unnecessary referral and resource utilization

Limitations

- Condensed project timeframe

- Single institution study

- Lack of a mandatory STOP-Bang screening requirement at the project site\(^14\)

Conclusion

- These results highlight the need for a standardized screening and referral program for at-risk OSA surgical patients in not only addressing the gap in OSA screening, but in providing a pathway for diagnosis and treatment.

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