Development of a Clinical Reference for Screening and Perioperative Management of Patients with OSA

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Background
- Obstructive sleep apnea (OSA) affects 22 million in the United States with 80% undiagnosed
- Undiagnosed OSA leads to high healthcare costs and various comorbidities
- Improving OSA screening can help decrease healthcare costs and provide excellent patient care

Purpose
To develop, implement and evaluate an OSA clinical reference (CR) that ensures best practice for screening and treatment of patients at risk for OSA

Literature Review
STOP-Bang Questionnaire screening tool shows highest sensitivity and specificity

Supporting Framework
Revised Iowa Model

CR Development Overview
- Step 1: Perform a preanesthesia evaluation
- Step 2: Using the STOP BANG (SB) tool, determine if the patient is at a low (≤ 3) or high (≥ 4) risk for OSA
- Step 3: A SB score ≤ 3 or previously diagnosed with OSA proceed to surgery with usual care
- Step 4: A SB score ≥ 4 or previously diagnosed with OSA, provide ID wrist band and follow algorithm
- Step 5: Preoperative Optimization- Appropriately optimize patient for surgery and anesthesia
- Step 6: Intraoperative Management- Consider the following best practice recommendations
- Step 7: Postoperative Management- Consider the following recommendations listed below
- Step 8: Discharge Management- provide patient with information and follow up care instructions

OSA Clinical Reference
- Complete OSA preoperative screening tool STOP BANG
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  - Patient with suspected OSA
  - Patient diagnosed with OSA

Methods
Setting: Kaiser Permanente Fontana Medical Center in San Bernardino County, CA

Sample: Patients >18 y/o, ASA I-III, undergoing general anesthesia at FMC between February 2020 through May 2020 (Excluding patients diagnosed with OSA, pending a sleep study, emergent surgery, or non-operating room anesthesia)

Measures:
- Outcome measure: The number of patients screened with the new CR
- The total number of patients having surgery

Compliance rate
- The number of patients referred to the sleep clinic
- The total number of qualifying surgical patients

Barriers and Limitations
- Unable to collect baseline and post-implementation data
- Shown data due to cancellation of elective cases
- Inappropriate time to implement new knowledge and protocols

Recommendations
- Educational video at department-wide educational meeting
- Pre-/Post-test to evaluate baseline and post-educational knowledge
- Department OSA champion

Data Collection:
- Identify patients who should be screened for OSA
- Baseline spot chart audit followed by retrospective chart audits every 2 weeks post-implementation.
- Results displayed in Shewhart charts using data collection tool to show utilization compliance

Discussion
- Literature supports a brief and organized method of disseminating evidence in order to gain use
- A succinct and easy to follow CR algorithm provides clinicians with a step-by-step approach to patient centered management of conditions such as OSA with the same level of rigor as a CPG
- The use of a flow-chart-like algorithm has been shown to improve learning and adherence to evidence-based practice