1. Preanesthesia Evaluation: Prediction of Baseline Risk

- **Severity of OSA**
  - OSA screening: high probability of moderate-severe OSA if STOP-BANG score ≥ 5
  - OSA diagnosis: sleep medicine consult - sleep study (polysomnography, or multichannel, or overnight oximetry)
  - AHI ≤ 15: mild
  - AHI 15-30: moderate
  - AHI > 30: severe
  - in context of baseline risk estimation, OSA can be regarded as 1 level “less severe” if compliant with PAP therapy preoperatively, and appliance used consistently postoperatively

- **Severity of Comorbid Disease**
  - Morbid obesity
  - Respiratory failure
  - OLD/RLD
  - Heart failure
  - HD
  - Significant dysrhythmia
  - Refractory systemic HTN
  - Pulmonary HTN
  - CVA or TIA (Pregnancy)

- **Impact of Surgery & Anesthesia**
  - Surgery: airway or major* > peripheral or superficial *e.g. major intracavitary/spine
  - Anesthesia: GA > sedation > no sedation
  - **Higher risk:** more severe OSA severity: AHI or daytime somnolence
  - **Lower risk:** lower severity OSA

- **Postoperative Opioid Requirement**
  - Higher risk: > low dose PO
  - Lower risk: ≤ codeine 30-60 mg PO Q4H, or equivalent

- If a patient is at **baseline risk** of postoperative complications from sleep apnea, and the patient is **not on sleep apnea treatment**, then a preoperative **sleep medicine consultation** is strongly recommended, and deferral of elective surgery may be required.

- **PAP therapy** should be established preoperatively to **chances of postoperative compliance**, and to potentially improve comorbidities secondary to sleep apnea. Patients unable or unwilling to use PAP therapy should be considered for alternative treatment modalities prior to surgery.

2. PACU: Observation for **Postoperative Indicators** of risk

- **recurrent respiratory events** (apneas ≥ 10 s, or bradypneas < 8/min, or desaturations < 90%, or airway obstruction interventions), or
- **newly required PAP therapy**, or
- **respiratory failure** (baseline room air SpO₂ < 90%, or increasing FiO₂ requirement, or PaCO₂ > 50 mmHg), or
- **significant risk of myocardial ischemia or dysrhythmia** (cardiac monitoring indicated), or
- **opiod or sedative requirement not stabilized** (including uncontrolled pain/delirium), or
- **pain-sedation mismatch** (high pain & sedation scores concurrently)

- If a patient with sleep apnea is at **baseline risk** of postoperative complications from sleep apnea, or if there are any **postoperative indicators** of risk, then ongoing care in a **monitored bed** should be considered (i.e. continuous oximetry monitoring & possibility of early nursing intervention), e.g. PACU, SDU, other Critical Care Unit, or remote oximetry by telemetry on surgical ward. Also consider cardiac monitoring if patient at **risk of myocardial ischemia or dysrhythmia**.

- A **Respirology consult** is indicated if **PAP therapy is newly required postoperatively**, or if a patient with sleep apnea is in respiratory failure.

- **Supplemental O₂** may prolong apneas, exacerbate hypercapnia, & hinder detection of respiratory deterioration by SpO₂.

References:

1. ASA Task Force. Updated Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea. Anesthesiology 2014; 120:268-86

Disclaimer: These Clinical Practice Guidelines (the "Guidelines") have been developed by the Vancouver Acute Department of Anesthesia and Perioperative Care. The Guidelines are intended to give an understanding of a clinical problem and outline one or more preferred approaches to the investigation and management of the problem. The Guidelines are not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of clinical problems.