Early preoperative identification of sleep apnea
- diagnosed: sleep study
- suspected: e.g. STOP-Bang score ≥ 5

Preanesthesia Evaluation: Prediction of Baseline Risk
- severity OSA, and
- severity comorbidities, and
- impact surgery & anesthesia, and
- postoperative opioid requirement

Higher Risk
- Not on sleep apnea treatment
- On sleep apnea treatment
- Preoperative sleep medicine consult

Lower Risk
- Sleep medicine consult, if required, could potentially be done postoperatively

Anesthesia & Postoperative Analgesia:
- potential difficult airway: intubation & extubation
- local/regional anesthesia if possible
- avoid/minimize opioids/sedatives

PACU: Consider Baseline Risk and observe for Postoperative Indicators
- recurrent respiratory events, or
- newly required PAP therapy, or
- respiratory failure, or
- significant risk of myocardial ischemia or dysrhythmia, or
- opioid or sedative requirement not stabilized, or
- pain-sedation mismatch (high pain & sedation scores concurrently)

Higher Risk
- Monitored bed
- resume PAP therapy
- sleep apnea precautions*

Lower Risk
- Ward/Home
1. Monitored bed indicated while patient remains at increased postoperative risk of complications from sleep apnea
   - i.e. continuous oximetry monitoring & possibility of early nursing intervention
     (+ cardiac monitoring if at significant ↑ risk of myocardial ischemia/dysrhythmia)
     - e.g. PACU, SDU, other Critical Care Unit, or remote oximetry by telemetry on surgical ward
   - indications for monitored bed include:
     a. high baseline risk of postoperative complications (severity OSA, severity comorbidities, impact surgery/anesthesia, & postoperative opioid requirement), or
     b. any postoperative indicators of risk
        i. recurrent respiratory events, or
        ii. newly required PAP therapy, or
        iii. respiratory failure, or
        iv. significantly ↑ risk of myocardial ischemia or dysrhythmia, or
        v. opioid or sedative requirement not stabilized, or
        vi. pain-sedation mismatch (high pain & sedation scores concurrently)
   - physician to clear discharge from monitored bed to a routine unit after verifying that:
     - no respiratory interventions were required overnight while resting/sleeping in an unstimulating environment, and
     - no other postoperative indicators present for ongoing observation in a monitored bed

2. Respirology consultation indicated if:
   - PAP therapy newly required postoperatively
   - hypoxemic or hypercarbic respiratory failure

3. Caution with administration of opioids, benzodiazepines, antihistamines, phenothiazines & other sedatives
   - hypersomnolence associated with airway compromise in patients with sleep apnea
   - avoid/minimize opioids/sedatives if possible (avoid basal IV/SQ opioid infusions; ? avoid neuraxial bolus of long acting opioid)
   - opioid sparing techniques include use of NSAIDS &/or continuous infusion of opioid-free regional anesthesia (epidural or continuous peripheral nerve block)
   - if opioids required, consider ↓ usual starting dose by up to 50% in opioid naïve patients
   - PCA for patients at ↑ postoperative risk of complications from sleep apnea should be managed by the Perioperative Pain Service

4. Caution with O2 supplementation
   - may prolong apneas, exacerbate hypercapnea & hinder detection of respiratory deterioration by SpO2
   - O2 supplementation ideally discontinued when patient able to maintain baseline SpO2 on room air

5. Avoid supine position if possible
   - semi-sitting or lateral position preferred

6. Resume PAP therapy
   - if established on CPAP or BiPAP, ensure device applied when resting in bed
   - a monitored bed is required if PAP therapy newly required postoperatively

7. Diagnostic follow-up
   - patients with suspected sleep apnea should be referred for a sleep medicine assessment

8. Discharge instructions
   - all patients with known/suspected sleep apnea should cautioned about the risk, and additive risk, of taking opioids, sedatives and alcohol

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.