Factors that influence perioperative outcome after ambulatory surgery include the patients' coexisting medical conditions, the surgical procedure (e.g., invasiveness of the procedure, surgeon's experience, and operating time), and the anesthetic technique.

Patient-related factors that influence perioperative outcome: age >50 years, BMI >50 kg/m², coexisting medical conditions (ASA Physical Status >3, poor exercise tolerance [inability to walk >200 feet], OSA, dialysis, risk of venous thromboembolism, history of bleeding disorder).

Preoperative Considerations
• All surgical patients should be screened for OSA using a screening tool (e.g., STOP-Bang questionnaire).

  **STOP-Bang Questionnaire used to screen patients to determine the risk of OSA**
  - S = Snoring. Do you snore loudly (louder than talking or loud enough to be heard through closed doors)?
  - T = Tiredness. Do you often feel tired, fatigued, or sleepy during daytime?
  - O = Observed Apnea. Has anyone observed you stop breathing during your sleep?
  - P = Pressure. Do you or are you being treated for high blood pressure?
  - B = BMI > 35 kg/m²
  - A = Age > 50 years
  - N = Neck circumference > 40 cm
  - G = Male Gender

  **Five of eight questions positive = high probability of moderate-to-severe OSA**

• Assess for comorbid conditions including hypertension, coronary artery disease, arrhythmias, heart failure, cerebrovascular disease, pulmonary hypertension, obesity-related hypoventilation syndrome, and metabolic syndrome).

• If OSA is suspected during the preoperative evaluation, one could proceed with a presumptive diagnosis of OSA, albeit with caution.

• In patients with preoperative diagnosis of OSA (based on a sleep study), assess and encourage adherence to CPAP.

• Improve communication between anesthesiologists, surgeons, and nurses (preoperative, OR, PACU, DSU).

• Education of patient and patients' family regarding the potential concerns including use of non-opioid analgesics and avoidance of opioids and sleep propped-up, if possible.

• Use the algorithm below to determine appropriateness for ambulatory surgery.
Anesthetic Considerations

- Use regional/local anesthetic techniques, whenever possible.
- For GA, use a technique that allows early emergence.
- Minimize opioid use (use non-opioid analgesics: regional analgesia techniques, wound infiltration with local anesthetics, acetaminophen, NSAIDs, and dexamethasone [if no contraindications]).
- Use shorter-acting opioids (remifentanil, with longer-acting opioids (e.g., morphine and hydromorphone) titrated to effect postoperatively in more controlled manner.
- Use prophylactic antiemetics: ondansetron (4 mg) and dexamethasone (4 mg, if no contraindication).
- Tracheal extubation performed “awake.”

Postoperative Considerations

- Maintain patient in a 25-30° head-up position, if no contraindications.
- Monitor for apneic episodes. Exercise caution in OSA patients who develop prolonged and frequent severe respiratory events (e.g., sedation analgesic mismatch, desaturation, and apneic episodes). If $\text{SaO}_2 \leq 85\%$ on 2-3 L/min, use CPAP or BiPAP early.
- Pain control
  - Use non-opioids (acetaminophen 1 gm, po and ibuprofen 800 mg, po, if no contraindication).
  - Field/peripheral nerve blocks can be placed postoperatively.
  - Titrate morphine or hydromorphone to effect (i.e., attempt to make patient comfortable, not to achieve a particular pain score). Balance degree of pain with concerns of sedation and respiratory depression.
- Monitor in PACU until completely awake (Ramsay sedation score 1 or 2), maintains $\text{SaO}_2$ at baseline, and pain is controlled (most adverse events occur within 2 hours after surgery).

Postdischarge Considerations

- Patients who are placed on OSA protocol based on clinical indicators should receive a letter for follow-up with their primary physician for possible sleep study.
- Patients on preoperative CPAP should be instructed that it is imperative that they use CPAP when sleeping, daytime or nighttime.
- Patients should be instructed to avoid opioids, if possible, and not to take sedatives and/or muscle relaxants.