**CAC, Ambulatory centers**

OBSTRUCTIVE SLEEP APNEA (OSA) PROTOCOL:

Pre-Operative Preparation / Cancellation of Surgery:

A. Adult patients undergoing elective procedures under anesthesia will be screened for OSA, unless they are already diagnosed with OSA, using the STOP-BANG questionnaire.

***S****noring: (Loader than talking, load enough to hear through closed doors)?*

***T****ired: Do you often feel tired, fatigued, or sleepy during the day?*

***O****bserved: Has anyone observed that you stop breathing during your sleep?*

***P****ressure: Blood Pressure: Do you have or are you being treated for high blood pressure?*

***B****MI more than 35?*

***A****ge over 50 years?*

***N****eck circumference (measured by staff) > 40 cm or Collar size of shirt: XL?*

***G****ender, male?*

*High risk of obstructive sleep apnea = answering “yes” to 5 or more questions   
Low risk of obstructive sleep apnea = answering “yes” to less than 3 questions*

B. Positive screen, indicating high risk for OSA, is defined as having answered YES to 5 or more of the STOP-BANG questions.   
C. It is suggested that OSA screening be initiated long enough before the day of surgery to allow optimization and preparation of a perioperative management plan. Primary care medical/surgical team or anesthesia care team can perform screening any time before the surgical procedure.   
D. Patients with known or suspected OSA will be identified as such and managed according to specific unit-procedures throughout their stay.   
E. Patients with established OSA and on home positive airway pressure (PAP) therapy are encouraged to bring their respiratory equipment to the center on the day of surgical procedure.   
F. If, due to sleep apnea, the risk for anesthesia outweighs the urgency for surgery and adequate alterations to the anesthetic plan cannot be made, then the anesthesiologist in conjunction with the attending surgeon may postpone the surgery to allow formal diagnosis and treatment of these patients. These patients can be referred to primary care physician or sleep center to facilitate further evaluation and treatment. 

Intraoperative Management:

1. The Attending Anesthesiologist makes specific recommendations and modifications of the anesthetic plan necessary for patients with OSA or at high risk for OSA.
2. Because of their propensity for airway collapse and sleep deprivation, patients at increased perioperative risk from OSA are especially susceptible to the respiratory depressant and airway effects of sedatives, opioids, and inhaled anesthetics; therefore, the potential for postoperative respiratory compromise should be considered in selecting intraoperative medications.
3. For superficial procedures, consider the use of local anesthesia or peripheral nerve blocks, with or without moderate sedation.
4. If moderate sedation is used, ventilation should be continuously monitored by capnography or another automated method if feasible because of the increased risk of undetected airway obstruction in these patients.
5. Consider administering CPAP or using an oral appliance during sedation to patients previously treated with these modalities.
6. General anesthesia with a secure airway is preferable to deep sedation without a secure airway, particularly for procedures that may mechanically compromise the airway.
7. Major conduction anesthesia (spinal / epidural / nerve blocks) should be considered for peripheral procedures to reduce or eliminate the requirement for systemic opioids postoperatively. If neuroaxial analgesia is planned, weigh the benefits of using opioid-local anesthetic mixture vs. local anesthetic alone.
8. Unless there is a medical or surgical contraindication, patients at increased perioperative risk from OSA should be extubated while awake.
9. Full reversal of neuromuscular block should be verified before extubation.
10. When possible, extubation and recovery should be carried out in the lateral, semiupright, or other non-supine position.

Postoperative Management:

A. Anesthesiology is responsible for decision-making and management of post-operative patients with OSA while in the PACU.   
B. The monitoring alarm for O2 saturation will be decreased to 85% during the room air trial so that the alarm sounds do not interfere with the duration of apneic periods. Patients with OSA should have the head of bed elevated to 30 degrees. The supine position should be avoided whenever possible. In order to establish if adequate oxygen saturation can be maintained while breathing room air, patients should be observed in a non-stimulating environment, preferably while asleep.   
C. At any time after a patient passes their one-hour room air trial, they may be discharged from PACU.   
D. Patients who fail the room air trial, should be placed on their Non-invasive Positive Pressure Ventilation (NPPV) therapy for one-hour. The one hour room air trial will then be repeated after the use of NPPV therapy.   
E. Patients who do not pass the one-hour room air trial, even after NPPV therapy or cannot wear CPAP/BiPAP devices for any reason should be considered for a level of care that can provide continuous pulse oximetry and supplemental O2 therapy   
F. Providers should evaluate postoperative narcotic requirements. Adjunct analgesia should be added as much as possible (NSAIDS, acetaminophen, and if feasible postoperative nerve blocks). Transition to oral narcotics as soon as possible is advised.   
G. Discharge and Transfer from PACU: Patients at increased perioperative risk from OSA should not be discharged from the recovery area to an unmonitored setting (i.e., home) until they are no longer at risk for postoperative respiratory depression.

Because of their propensity to develop airway obstruction or central respiratory depression, this may require a longer stay as compared with non-OSA patients undergoing similar procedures.