

APPENDIX 1: Excerpt from ASA Practice Guidelines for Periop Management of Patients with OSA

Table 1. Identification and Assessment of OSA: Example

A. Clinical signs and symptoms suggesting the possibility of OSA
1. Predisposing physical characteristics
a. BMI 35 kg/m ² [95 th percentile for age and gender]*
b. Neck circumference 17 inches (men) or 16 inches (women)
c. Craniofacial abnormalities affecting the airway
d. Anatomical nasal obstruction
e. Tonsils nearly touching or touching in the midline
2. History of apparent airway obstruction during sleep (two or more of the following are present; if patient lives alone or sleep is not observed by another person, then only one of the following needs to be present)
a. Snoring (loud enough to be heard through closed door)
b. Frequent snoring
c. Observed pauses in breathing during sleep
d. Awakens from sleep with choking sensation
e. Frequent arousals from sleep
f. [Intermittent vocalization during sleep]*
g. [Parental report of restless sleep, difficulty breathing, or struggling respiratory efforts during sleep]*
3. Somnolence (one or more of the following is present)
a. Frequent somnolence or fatigue despite adequate “sleep”
b. Falls asleep easily in a nonstimulating environment (<i>e.g.</i> , watching TV,

reading, riding in or driving a car) despite adequate “sleep”

c. [Parent or teacher comments that child appears sleepy during the day, is easily distracted, is overly aggressive, or has difficulty concentrating]*

d. [Child often difficult to arouse at usual awakening time]*

If a patient has signs or symptoms in two or more of the above categories, there is a significant probability that he or she has OSA. The severity of OSA may be determined by sleep study (see below). If a sleep study is not available, such patients should be treated as though they have moderate sleep apnea unless one or more of the signs or symptoms above is severely abnormal (*e.g.*, markedly increased BMI or neck circumference, respiratory pauses that are frightening to the observer, patient regularly falls asleep within minutes after being left unstimulated), in which case they should be treated as though they have severe sleep apnea.

B. If a sleep study has been done, the results should be used to determine the perioperative anesthetic management of a patient. However, because sleep laboratories differ in their criteria for detecting episodes of apnea and hypopnea, the Task Force believes that the sleep laboratory’s assessment (none, mild, moderate, or severe,) should take precedence over the actual AHI (the number of episodes of sleep-disordered breathing per hour). If the overall severity is not indicated, it may be determined by using the table below:

Severity of OSA	Adult AHI	Pediatric AHI
None	0-5	0
Mild OSA	6-20	1-5
Moderate OSA	21-40	6-10
Severe OSA	> 40	> 10

*Items in brackets refer to pediatric patients.

AHI = apnea-hypopnea index; BMI = body mass index; OSA = obstructive sleep apnea; TV = television.

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Table 2. OSA Scoring System: Example

	Points
A. Severity of sleep apnea based on sleep study (or clinical indicator if sleep study not available).	
Point score _____ (0-3)*†	
Severity of OSA (table 1)	
None	0
Mild	1
Moderate	2
Severe	3
B. Invasiveness of surgery and anesthesia. Point score _____ (0-3)	
Type of surgery and anesthesia	
Superficial surgery under local or peripheral nerve block anesthesia without sedation	0
Superficial surgery with moderate sedation or general anesthesia	1
Peripheral surgery with spinal or epidural anesthesia (with no more than moderate sedation)	1
Peripheral surgery with general anesthesia	2
Airway surgery with moderate sedation	2
Major surgery, general anesthesia	3
Airway surgery, general anesthesia	3
C. Requirement for postoperative opioids. Point score _____ (0-3)	
Opioid requirement	

None	0
Low-dose oral opioids	1
High-dose oral opioids, parenteral or neuraxial opioids	3
D. Estimation of perioperative risk. Overall score = the score for A plus the greater of the score for either B or C. Point score _____ (0-6)‡	
A scoring system similar to this table may be used to estimate whether a patient is at increased perioperative risk of complications from obstructive sleep apnea (OSA). This example, which has not been clinically validated, is meant only as a guide, and clinical judgment should be used to assess the risk of an individual patient.	
<p>* One point may be subtracted if a patient has been on continuous positive airway pressure (CPAP) or noninvasive positive-pressure ventilation (NIPPV) before surgery and will be using his or her appliance consistently during the postoperative period.</p> <p>† One point should be added if a patient with mild or moderate OSA also has a resting arterial carbon dioxide tension (Paco₂) greater than 50mmHg.</p> <p>‡ Patients with score of 4 may be at increased perioperative risk from OSA; patients with a score of 5 or 6 may be at significantly increased perioperative risk from OSA.</p>	

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