

Management of Patients with Obstructive Sleep Apnea.¹ However, it is our belief that the document, although flawless from a methodological point of view, fails to convey the intended message to the reader. We found that all the recommendations listed in the document defer from the final decision to the clinicians, leaving “too much room” for individual maneuvers. As a matter of fact, as far as patient’s safety is concerned, the document falls short of the aim of a guideline, which should be able to indicate the best among all possible options. A few points seem more critical than the others:

1. Preoperative evaluation. It is recommended in a general way to consider the possibility of sending a patient suspected of being susceptible to obstructive sleep apnea (OSA) to the sleep physician for further diagnosis and therapy. In the present Guidelines, it is surprising and unjustified, that on the basis of the evidence, authors do not recommend the use of the STOP BANG questionnaire. This simple questionnaire has been shown to identify patients at risk of moderate-to-severe OSA,² with reasonable certainty and can be easily implemented in the clinical setting. More importantly it is able to identify patients with increased risk of perioperative complications, proving to be an excellent tool for triage of surgical patients,³ requiring a limited and predictable amount of time, a crucial issue in the busy setting of daily hospital practice.
2. Assessment of perioperative risk. The suggested scoring system for preoperative risk from OSA, although very practical and interesting from a clinical point of view, has never been validated. The proposed scoring system could potentially work with patients with a polysomnographic diagnosis of OSA severity. Nevertheless, how do we manage a suspected OSA patient where the degree of OSA is merely supposed? Again the STOP BANG questionnaire can be used as a triage tool, providing an estimate of the severity of OSA. Indeed the probability of OSA increases with the increase of the score, with a cut-off of 5 as an optimal compromise to reduce the number of false positives.³
3. Criteria for discharge to unmonitored settings. The Guidelines state that in order to decide if the patient should to be discharged to an unmonitored bed, it is necessary to observe “patients in an unstimulated environment, preferably while asleep.”¹ This is a generic statement (*i.e.* for how long should the observation period last?), equivalent to tossing a coin and awaiting a heads or tails outcome. Patients with OSA are at risk of complications even in the days following surgery.⁴ A decision based on such criteria would expose them to a foreseeable risk.

In conclusion, the evidence that patients with OSA are at increased risk of perioperative complications is well established.⁵ As such, it is imperative to adopt strategies to reduce perioperative risk. The implementation of such strategies requires expenditure, however, this does not justify a lack of clarity. Patient safety requires us to unambiguously inform

anesthesiologists of the best strategies to use in the front line rather than generic suggestions, which leave them navigating in a detrimental sea of uncertainty.

Competing Interests

The authors declare no competing interests.

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References

1. Practice guidelines for the perioperative management of patients with obstructive sleep apnea: An updated report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea. *ANESTHESIOLOGY* 2014; 120:268–86
2. Chung F, Subramanyam R, Liao P, Sasaki E, Shapiro C, Sun Y: High STOP-Bang score indicates a high probability of obstructive sleep apnoea. *Br J Anaesth* 2012; 108:768–75
3. Corso R, Petrini F, Buccioli M, Nanni O, Carretta E, Trolia A, De Nuzzo D, Pigna A, Di Giacinto I, Agnoletti V, Gambale G: Clinical utility of preoperative screening with STOP-Bang questionnaire in elective surgery. *Minerva Anestesiol* 2013 [Epub ahead of print]
4. Chung F, Liao P, Elsaid H, Shapiro CM, Kang W: Factors associated with postoperative exacerbation of sleep-disordered breathing. *ANESTHESIOLOGY* 2014; 120:299–311
5. Memtsoudis SG, Stundner O, Rasul R, Chiu YL, Sun X, Ramachandran SK, Kaw R, Fleischut P, Mazumdar M: The impact of sleep apnea on postoperative utilization of resources and adverse outcomes. *Anesth Analg* 2014; 118:407–18

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Read the Fine Print: Updated Sleep Apnea Guidelines and Risk Stratification

To the Editor:

The recent update of the report “Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea” by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea did not provide any new recommendations.¹ Like its predecessor, the updated version includes “table 2,” a scoring system for perioperative risk for obstructive sleep apnea. This table allows the reader to assign a numerical score for severity of sleep apnea, invasiveness of surgery and anesthesia, and requirement for postoperative opioids. The overall score yields an estimate of perioperative risk. By its very design, the scoring system appears scientific and precise.

A footnote to the table states: “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.” Many readers may miss this subtle point, and confuse the table with a reliable means for stratifying risk for postoperative respiratory complications, as well as the need for postoperative respiratory monitoring. Risk stratification for opioid-induced respiratory depression is by no means an exact science, and failure to rescue remains a significant source of human suffering and healthcare expense. The Anesthesia Patient Safety Foundation recognizes this fact, and has stated “...risk stratification for increased postoperative electronic monitoring would potentially miss a large population of patients that is at increased risk for opioid-induced respiratory depression.”² Not surprisingly, the Anesthesia Patient Safety Foundation has advocated for continuous respiratory monitoring for *all* postoperative patients receiving parenteral opioids.

By all means, practice guidelines should help providers make sound clinical decisions when solid scientific evidence is lacking. The inclusion of an untested numerical risk assessment scale, however, has no place in such a document, even if there is a disclaimer in the fine print.

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References

1. American Society of Anesthesiologists: Practice guidelines for the perioperative management of patients with obstructive sleep apnea: An updated report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea. *ANESTHESIOLOGY* 2014; 120:268–86
2. Weinger M, Lee L. No patient shall be harmed by opioid-induced respiratory depression. *Anesth Patient Saf Found Newslett* 2011; 26:21–8

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Postoperative Continuous Positive Airway Pressure Treatment in Surgical Patients with Obstructive Sleep Apnea

To the Editor:

With the increasing incidence of patients with obstructive sleep apnea (OSA) presenting for surgery and the associated risks for perioperative complications in these patients,¹ evidence-based recommendations for the appropriate management are of great importance for healthcare providers.

The authors of the updated “Practice Guidelines for the Perioperative Management of Patients with Obstructive Sleep Apnea” have given such recommendations in regard to the pre-, intra-, and postoperative management based on the limited evidence (scientific or opinion-based) available.²

Concerning the important question of oxygenation as part of the postoperative management, the authors of these Guidelines relate to a trial by Neligan et al.,³ stating that this study indicated “improved ventilatory function for OSA patients when postoperative CPAP [continuous positive airway pressure] is compared with no postoperative CPAP.”

In my opinion, this is an incorrect description and interpretation of the cited study, which measured spirometric lung functions in morbidly obese patients with known OSA before and after laparoscopic bariatric surgery.

In fact, postoperative CPAP therapy was given to ALL subjects in this study (initiated 30 min after extubation in the postanesthesia care unit *via* identical noninvasive ventilators and continued for a minimum of 8 h). However, patients in this study were randomly assigned to receive either early CPAP *via* the so-called Boussignac system (Boussignac group) or supplemental oxygen (standard care group) IMMEDIATELY after extubation and ONLY UNTIL the commencement of postoperative CPAP therapy in both groups, resulting in better maintained lung functions in the Boussignac group.

While the study by Neligan et al. may be indicative of a potential benefit of an early *versus* delayed begin of CPAP therapy, it may not be utilized regarding the value of postoperative CPAP let alone oxygenation *per se*. Well-controlled studies demonstrating a beneficial effects of CPAP for patients with OSA in the postoperative period are still lacking.

In conclusion, clearly more data is needed to strengthen the scientific basis of the important practice guidelines for the perioperative management of patients with OSA.

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References

1. Vasu TS, Grewal R, Doghramji K: Obstructive sleep apnea syndrome and perioperative complications: A systematic review of the literature. *J Clin Sleep Med* 2012; 8:199–207
2. Practice guidelines for the perioperative management of patients with obstructive sleep apnea: An updated report by the American Society of Anesthesiologists Task Force on Perioperative Management of Patients with Obstructive Sleep Apnea. *ANESTHESIOLOGY* 2014; 120:268–86
3. Neligan PJ, Malhotra G, Fraser M, Williams N, Greenblatt EP, Cereda M, Ochroch EA: Continuous positive airway pressure *via* the Boussignac system immediately after extubation improves lung function in morbidly obese patients with obstructive sleep apnea undergoing laparoscopic bariatric surgery. *ANESTHESIOLOGY* 2009; 110:878–84

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