

### Endorsement of: "Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: An American Academy of Sleep Medicine clinical practice guideline" by World Sleep Society



#### **AUTHORS**

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The WSS International Sleep Medicine Guidelines Committee selects, reviews, and publishes guidelines for the prevention and treatment of sleep disorders. These guideline recommendations are written to be applicable to the practice of sleep medicine by the global sleep specialists that comprise WSS membership.

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## **Endorsement of: “Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: An American Academy of Sleep Medicine clinical practice guideline” by World Sleep Society**

Task Force Members, Guidelines Committee Members, on behalf of the Governing Council of World Sleep Society

### **WORLD SLEEP SOCIETY TASK FORCE MEMBERS**

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## **WSS INTERNATIONAL SLEEP MEDICINE GUIDELINES POSITION STATEMENT**

### **TITLE**

**Endorsement of: “Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: An American Academy of Sleep Medicine clinical practice guideline” by World Sleep Society**

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### **INTRODUCTION**

This guideline was selected for review by the World Sleep Society (WSS) Sleep and Breathing Disorder Group A Taskforce and the WSS International Sleep Medicine Guidelines Committee. The scope of this guideline covers clinical practice recommendations for the diagnosis of obstructive sleep apnea in adults. A task force of content experts from the WSS has reviewed this guideline (Kapur VK, Auckley DH, Chowdhuri S, Kuhlmann DC, Mehra R, Ramar K, Harrod CG. Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: an American Academy of Sleep Medicine clinical practice guideline. *J Clin Sleep Med.* 2017; 13(3):479–504) specifically for its relevance and applicability to the practice of sleep medicine by sleep specialists that comprise its membership.

### **METHODS**

Following review of the guideline by the Sleep and Breathing Disorder Group A Taskforce, the task force developed this position statement, which was submitted for review and comment to the WSS International Sleep Medicine Guidelines Committee and then to the WSS Governing Council. The WSS Task Force made significant efforts to check the availability of investigation options described in the guideline within all geographic regions included in the WSS membership. However, if this information from a given geographic region was not accessible or available, this prevented the WSS from listing the specific geographic region in the Recommendations below.

### **RECOMMENDATIONS**

#### **“Good practice statements” from the AASM guideline:**

1. “Diagnostic testing for OSA should be performed in conjunction with a comprehensive sleep evaluation and adequate followup.”
2. “Polysomnography is the standard diagnostic test for the diagnosis of OSA in adult patients in whom there is a concern for OSA based on a comprehensive sleep evaluation.”

#### **3.1. The WSS supports statement 1**

##### **3.1.1. Caveat**

The clinical sleep evaluation should be done by a licensed, suitably trained, and/or experienced medical practitioner for that geographical region.

### **3.2. The WSS supports statement 2**

#### **3.2.1. Caveat**

Sleep testing can either be laboratory polysomnography (Type 1 testing), unattended home polysomnography (Type 2 testing) or cardiorespiratory polygraphy (Type 3 testing), depending on available resources and health care system models. The WSS recommends medical supervision/oversight of the diagnostic and treatment process (not controlled by industry) and understanding that advantages and limitations of home sleep tests and/or limited channel sleep tests need to be clearly understood by the treating clinician. The WSS recommends caution with the use of limited, single channel Type 4 tests (eg oximetry) as a high degree of clinical proficiency is required to determine the appropriate group for testing and for the interpretation of results.

#### **Recommendations from the AASM guideline:**

1. "We recommend that clinical tools, questionnaires and prediction algorithms not be used to diagnose OSA in adults, in the absence of polysomnography or home sleep apnea testing. (STRONG)"

### **3.3. The WSS supports recommendation 1**

#### **3.3.1. Caveat and comments**

OSA screening questionnaires have reasonably good sensitivity, but still not high enough to reliably exclude OSA. Furthermore, they have poor specificity and therefore a high proportion of false positives. Overall, they function poorly as diagnostic tools in all geographical regions. The WSS therefore recommends objective sleep testing to confirm OSA diagnosis.

2. "We recommend that polysomnography, or home sleep apnea testing with a technically adequate device, be used for the diagnosis of OSA in uncomplicated adult patients presenting with signs and symptoms that indicate an increased risk of moderate to severe OSA. (STRONG)"

### **3.4. The WSS supports recommendation 2**

#### **3.4.1. Caveats and comments**

Sleep testing can either be laboratory polysomnography (Type 1 testing), unattended home polysomnography (Type 2 testing) or cardiorespiratory polygraphy (Type 3 testing), depending on available resources and health care system models. The WSS recommends medical supervision/oversight of the diagnostic and treatment process (not controlled by industry) and understanding that advantages and limitations of home sleep tests and/or limited channel sleep tests need to be clearly understood by the treating clinician. The WSS recommends caution with the use of limited, single channel Type 4 tests (eg oximetry) as a high degree of clinical proficiency is required to determine the appropriate group for testing and for the interpretation of results.

3. "We recommend that if a single home sleep apnea test is negative, inconclusive, or technically inadequate, polysomnography be performed for the diagnosis of OSA. (STRONG)"

### **3.5. The WSS supports recommendation 3**

#### **3.5.1. Caveats and comments**

The WSS recommends that clinicians re-visit the clinical assessment prior to further testing. Polysomnography should be performed where it is available. In countries where polysomnography is limited or unavailable, a further limited channel test may be necessary but should be a higher level study where possible.

4. "We recommend that polysomnography, rather than home sleep apnea testing, be used for the diagnosis of OSA in patients with significant cardiorespiratory disease, potential respiratory muscle weakness due to neuromuscular condition, awake hypoventilation or suspicion of sleep related hypoventilation, chronic opioid medication use, history of stroke or severe insomnia. (STRONG)"

### 3.6. *The WSS supports recommendation 4*

#### 3.6.1. *Caveats and comments*

Polysomnography should be performed where it is available. If not available, then home sleep apnea testing is better than no testing at all (combined with thorough clinical assessment). The WSS also recommends that (where available) type 2 home polysomnography can be considered along with laboratory polysomnography if sleep testing is required for severe insomnia.

5. “We suggest that, if clinically appropriate, a split-night diagnostic protocol, rather than a full-night diagnostic protocol for polysomnography be used for the diagnosis of OSA. (WEAK)”

### 3.7. *The WSS does not support recommendation 5*

#### 3.7.1. *Caveats and comments*

Split-night polysomnography seems specific to certain countries. Potential disadvantages include inadequate sleep study time for both diagnosis and treatment. Note the widespread availability of AutoPAP devices allowing treatment to commence at home following an adequate diagnostic study. The WSS recommends a full diagnostic study (types 1 to 4 as appropriate and/or available) followed by either CPAP titration polysomnography or home AutoPAP treatment implementation (reviewed in Ahmed O, Parthasarathy S. APAP and Alternative Titration Methods. *Sleep Med Clin.* 2010 Sep 1; 5(3):361–368).

6. We suggest that when the initial polysomnogram is negative and clinical suspicion for OSA remains, a second polysomnogram be considered for the diagnosis of OSA. (WEAK)

### 3.8. *The WSS supports recommendation 6*

#### 3.8.1. *Caveats and comments*

This also applies to home sleep apnea testing where the initial home test was negative and no polysomnography is available. The WSS recommends that clinicians re-visit the clinical assessment prior to further testing. There may also be situations where it is appropriate to repeat the second test at home following negative polysomnography (eg minimal sleep achieved during polysomnography). Note also that some countries have time requirements between repeat testing.

#### **Geographic regions included in these recommendations**

North America, South America, Europe, Asia, Australasia, Africa.

#### **CONCLUSION**

The WSS Governing Council hereby endorses this guideline (Clinical practice guideline for diagnostic testing for adult obstructive sleep apnea: an American Academy of Sleep Medicine clinical practice guideline. *J Clin Sleep Med.* 2017; 13(3):479–504) with caveats described above as relevant and applicable to the sleep medicine practices of its members within the geographic regions listed above.

#### **CONFLICT OF INTEREST**

The ICMJE Uniform Disclosure Form for Potential Conflicts of Interest associated with this article can be viewed by clicking on the following link: <https://doi.org/10.1016/j.sleep.2020.12.044>.