GUIDELINES & PROTOCOLS
ADVISORY COMMITTEE

Assessment and Management of Obstructive Sleep Apnea in Adults

Revised 2000

Scope

This guideline applies to adult patients with suspected Obstructive Sleep Apnea (OSA); i.e., patients with loud snoring and/or witnessed pauses in breathing during sleep.

Recommendation 1:

An accurate patient history, including corroboration from the bed partner, and a physical examination are crucial first steps in the diagnosis of OSA. The Epworth Sleepiness Scale (see insert) should be completed in all patients with suspected OSA to assess daytime sleepiness. Patients with excessive daytime sleepiness should be referred to an appropriate specialist with an interest in sleep disorders.

Recommendation 2:

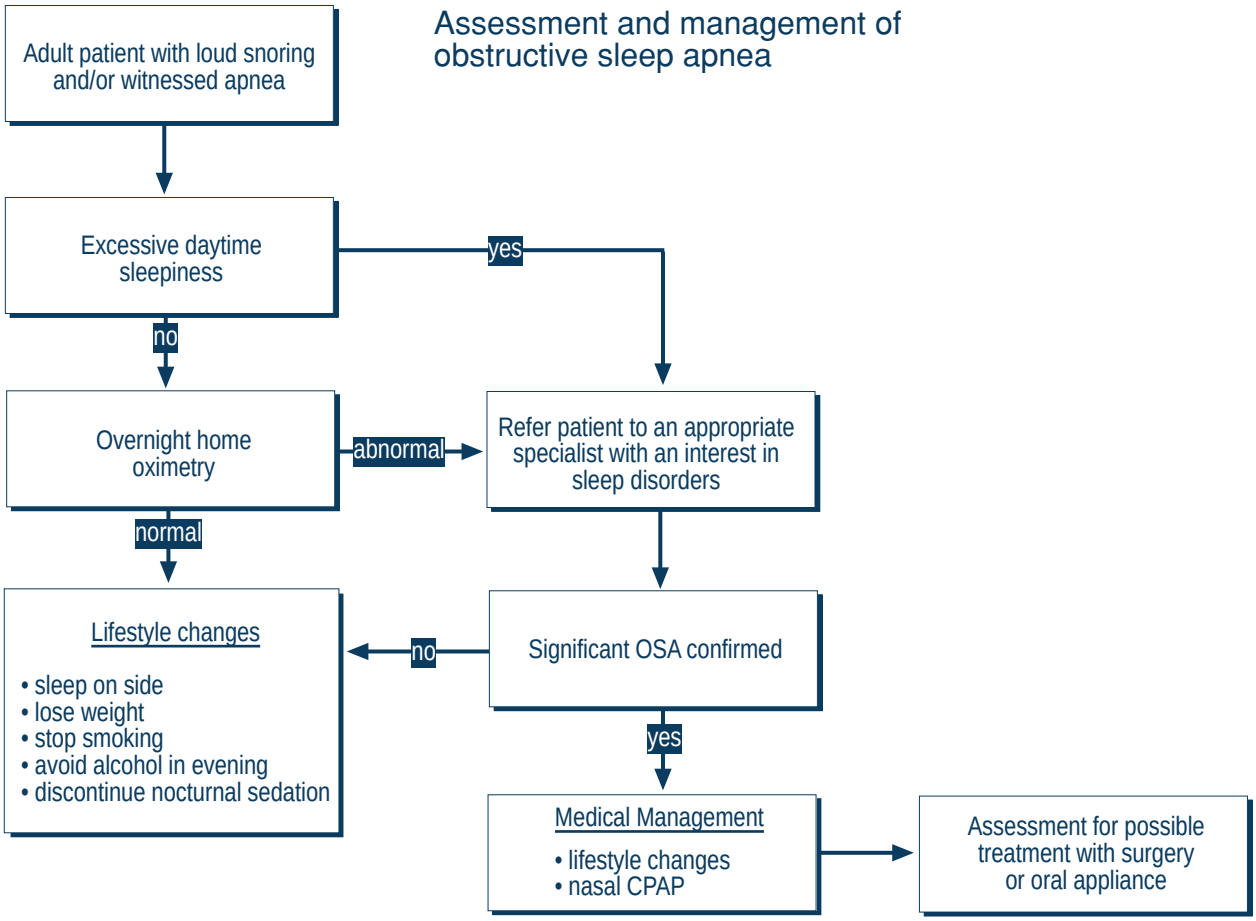
Patients without excessive daytime sleepiness should have overnight home oximetry to exclude clinically important OSA. If overnight home oximetry is normal no further testing is required, however, the patient should be encouraged to consider lifestyle changes and may need to be clinically reevaluated if the problem persists. If overnight home oximetry is abnormal the patient should be referred to an appropriate specialist with an interest in sleep disorders.

Recommendation 3:

Medical management is generally the initial treatment for OSA. This may include lifestyle changes and a trial of nasal continuous positive airway pressure (nasal CPAP) therapy. Patients who cannot or will not use nasal CPAP may be offered surgical treatments or oral appliances.

Recommendation 4:

Uvulopalatopharyngoplasty (UPPP – fee item 02409) will be approved for Medical Services Plan (MSP) payment when recommended by an otolaryngologist, after confirmation that the patient has had a polysomnogram from an accredited service confirming OSA and is unable or unwilling to use nasal CPAP.



Rationale

Obstructive sleep apnea (OSA) is a disorder characterized by partial or complete obstruction of breathing during sleep associated with recurrent arousals and awakenings, consequent daytime sleepiness, and impaired vigilance and memory.

The most common symptom of OSA is excessive daytime sleepiness, which can be assessed using the Epworth Sleepiness Scale. A score of 10 or higher suggests clinically significant daytime sleepiness although a lower score does not exclude it. Other symptoms and signs of OSA are listed in the table below. Associated risk factors are obesity with a large neck size, and craniofacial abnormalities. Systemic hypertension, nocturnal arrhythmias and right heart failure are all more common in patients with OSA.

Symptoms and signs of obstructive sleep apnea

Symptoms	Signs
Loud snoring Excessive daytime sleepiness Choking/gasping during sleep Recurrent nocturnal awakening Unrefreshing sleep Daytime fatigue Impaired concentration Family history of obstructive sleep apnea	Obesity (particularly upper body) Mandibular/maxillary hypoplasia (receding chin) Crowding of the oropharynx Large tonsils or tongue Nasal and nasopharyngeal obstruction

An accurate history, including corroboration from the bed partner, and a physical examination are crucial first steps in the diagnosis of OSA. In patients whose only symptoms are loud snoring and/or witnessed pauses in breathing during sleep, overnight home oximetry can be used to exclude clinically important OSA. If the overnight home oximetry test is normal, further testing is usually not required. Reevaluation is needed if the problem persists. These patients should be encouraged to sleep on their side, lose weight, stop smoking and reduce alcohol consumption especially within four hours of bedtime and avoid unnecessary sedating medications. Patients need to be assessed clinically for the presence of upper airway obstruction and an otolaryngological opinion may be indicated to exclude significant disorders of the upper airway.

If overnight home oximetry is abnormal or when other symptoms suggest OSA, the patient should be referred to an appropriate specialist with an interest in sleep disorders.

Once OSA has been diagnosed and its severity has been assessed, treatment options are considered. Medical management is generally the first approach and includes lifestyle changes and nasal CPAP. Nasal CPAP consists of a blower providing pressurized airflow via a nasal mask. It is effective in preventing OSA when set at the correct pressure. It is tolerated by most patients on a long-term basis. Surgical treatments and oral appliances may be useful for patients with OSA who cannot tolerate nasal CPAP.

Surgical treatments can be reviewed by an otolaryngologist with a special interest in OSA. Oral appliance treatment can be reviewed by a dental practitioner with a special interest in oral appliance therapy.

Once the diagnosis of OSA is established periodic long-term follow-up is important to monitor the patient's symptoms and response to and compliance with treatment. Patients with OSA may be prone to drowsiness while driving. Physicians caring for these patients should be familiar with the British Columbia Medical Association's *Guide for Physicians in Determining Fitness to Drive a Motor Vehicle.*

References

1. Canadian Coordinating Office for Health Technology Assessment. The Treatment of Obstructive Sleep Apnea: An Overview. Technology Brief. Issue 8.0, December 1995.
2. Chesson AL Jr, Ferber RA, Fry JM, Grigg Damberger M, Hartse KM, Hurwitz TD, et al. The indications for polysomnography and related procedures. Sleep 1997;20:423-87.
3. Indications and standards for use of nasal continuous positive airway pressure (CPAP) in sleep apnea syndromes. American Thoracic Society. Official statement adopted March 1994. [published erratum appears in Am J Respir Crit Care Med 1995;151(2 Pt 1):578]. Am J Respir Crit Care Med 1994;150(6 Pt 1):1738-45.
4. Practice parameters for the indications for polysomnography and related procedures. Polysomnography Task Force, American Sleep Disorders Association Standards of Practice Committee. Sleep 1997;20:406-22.
5. Practice parameters for the treatment of snoring and obstructive sleep apnea with oral appliances. American Sleep Disorders Association. Sleep 1995;18:511-3.

Sponsors

This guideline was developed by the Guidelines and Protocols Advisory Committee. It was approved by the British Columbia Medical Association and adopted by the Medical Services Commission.

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- to encourage appropriate responses to common medical situations
- to recommend actions that are sufficient and efficient, neither excessive nor deficient
- to permit exceptions when justified by clinical circumstances.

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Epworth Sleepiness Scale

How likely are you to doze off or fall asleep in the situations described in the box below, in contrast to feeling just tired? This refers to your usual way of life in recent times. If you haven't done some of these things recently, try to work out how they would have affected you.

Use the following scale to choose the **most appropriate number** for each situation:

0 = would **never** doze
1 = **slight** chance of dozing
2 = **moderate** chance of dozing
3 = **high** chance of dozing

Situation	Chance of Dozing
Sitting and reading	
Watching TV	
Sitting, inactive in a public place (e.g., a theatre or a meeting)	
As a passenger in a car for an hour without a break	
Lying down to rest in the afternoon when circumstances permit	
Sitting and talking to someone	
Sitting quietly after a lunch without alcohol	
In a car, while stopped for a few minutes in traffic	

Total Score =