



TITLE: Retesting of Patients with Sleep Disorders: Cost-Effectiveness and Guidelines

DATE: 10 August 2016

RESEARCH QUESTIONS

1. What is the cost-effectiveness of retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation?
2. What are the evidence-based guidelines regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation?

KEY FINDINGS

Four evidence-based guidelines were identified regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation.

METHODS

A limited literature search was conducted on key resources including PubMed, The Cochrane Library, University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. Where possible, retrieval was limited to the human population. The search was also limited to English language documents published between January 1, 2011 and August 2, 2016. Internet links were provided, where available.

The summary of findings was prepared from the abstracts of the relevant information. Please note that data contained in abstracts may not always be an accurate reflection of the data contained within the full article.

SELECTION CRITERIA

One reviewer screened citations and selected studies based on the inclusion criteria presented in Table 1.

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Table 1: Selection Criteria

Population	Patients, any age, with sleep disorders (e.g., central sleep apnea, obstructive sleep apnea, other sleep disorders requiring oxygen or positive airway pressure device therapy)
Intervention	Retesting or reassessing patients with sleep disorders after initial diagnosis and therapy initiation (e.g., PAP device, nocturnal oxygen, PAP plus oxygen)
Comparator	No reassessment or retesting
Outcomes	Q1: cost-effectiveness (e.g., budget impact, QALY, cost savings) Q2: guidelines and recommendations regarding retesting and reassessing patients with sleep apnea for treatment, after the initial diagnosis (e.g., should patients be retested, how frequently should they be retested, issues around adherence and compliance to therapy, implementation issues)
Study Designs	Health technology assessments, systematic reviews, economic evaluations, evidence-based guidelines

PAP = positive airway pressure; QALY = quality-adjusted life year.

RESULTS

Rapid Response reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by economic evaluations, and evidence-based guidelines.

Four evidence-based guidelines were identified regarding retesting patients with sleep disorders who use home oxygen or positive airway pressure devices after diagnosis and treatment initiation. No relevant health technology assessments, systematic reviews, meta-analyses, or economic evaluations were identified.

Additional references of potential interest are provided in the appendix.

OVERALL SUMMARY OF FINDINGS

Two guidelines^{1,4} were identified addressing the reassessment of pediatric patients with obstructive sleep apnea (OSA). The American Academy of Pediatrics recommends clinicians reassess patients with OSA to identify any signs or symptoms remaining after initial treatment.⁴ The American Academy of Sleep Medicine recommends pediatric patients be reassessed within 12 months of diagnosis and documentation of adherence to positive airway pressure device should be obtained.¹

The American Academy of Sleep Medicine and American Academy of Dental Sleep Medicine recommend that adult patients who are fitted with an oral appliance for OSA undergo follow-up sleep testing and attend periodic office visits with sleep physicians or dentists to confirm the effectiveness of the treatment or to inform the improvement of the treatment.² A guideline from AIM Specialty Health recommends that bi-level positive airway pressure device compliance be demonstrated every 90 days for the first year of treatment and annually in the following years.³

REFERENCES SUMMARIZED

Health Technology Assessments

No literature identified.

Systematic Reviews and Meta-analyses

No literature identified.

Economic Evaluations

No literature identified.

Guidelines and Recommendations

1. Kothare SV, Rosen CL, Lloyd RM, Paruthi S, Thomas SM, Troester MM, et al. Quality measures for the care of pediatric patients with obstructive sleep apnea. *J Clin Sleep Med* [Internet]. 2015 Mar 15 [cited 2016 Aug 9];11(3):385-404. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4346656>
[PubMed: PM25700879](#)
2. Ramar K, Dort LC, Katz SG, Lettieri CJ, Harrod CG, Thomas SM, et al. Clinical practice guideline for the treatment of obstructive sleep apnea and snoring with oral appliance therapy: An update for 2015. *J Clin Sleep Med* [Internet]. 2015 Jul [cited 2016 Aug 9];11(7):773-827. Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4481062>
[PubMed: PM26094920](#)
3. National Guideline Clearinghouse [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); [1997] - . Guideline summary: Bi-level positive airway pressure (BPAP) devices; 2014 [cited 2016 Aug 9]. Available from: <https://www.guideline.gov/summaries/summary/48270/bilevel-positive-airway-pressure-bpap-devices>
See: Ongoing Treatment with BPAP
4. National Guideline Clearinghouse [Internet]. Rockville (MD): Agency for Healthcare Research and Quality (AHRQ); [1997] - . Guideline summary: Diagnosis and management of childhood obstructive sleep apnea syndrome. 2002 [cited 2016 Aug 9; revised 2012]. Available from: <https://www.guideline.gov/summaries/summary/38415/diagnosis-and-management-of-childhood-obstructive-sleep-apnea-syndrome>
See: Key Action Statement 5A: Reevaluation

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APPENDIX – FURTHER INFORMATION:

Previous CADTH Reports

5. Retesting patients with sleep apnea: Guidelines and recommendations [Internet]. Ottawa (ON): CADTH; 2013 May 24. (Rapid response report: summary of abstracts). [cited 2016 Aug 9]. Available from: <https://www.cadth.ca/retesting-patients-sleep-apnea-guidelines-and-recommendations>