

Study examines outcomes for treatment of sleep apnea with primary care vs. specialist care

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Among patients who were identified as likely having moderate to severe obstructive sleep apnea, treatment based in primary care was not clinically inferior to treatment at a specialist sleep center for improvement in daytime sleepiness scores, according to a study appearing in the March 13 issue of *JAMA*.

"Obstructive sleep apnea with accompanying daytime sleepiness was estimated during the early 1990s to affect between 2 percent and 4 percent of middle-aged adults. With growing awareness of the public health implications of untreated disease and rising [obesity rates](#) that have increased the prevalence of obstructive sleep apnea, there has been a steady demand for sleep service provision in specialist centers and growing waiting lists for sleep physician consultation and laboratory-based polysomnography (PSG)," according to background information in the article. "One-third of primary care patients report symptoms suggestive of obstructive sleep apnea. With appropriate training and simplified management tools, [primary care physicians](#) and practice nurses might be ideally positioned to take on a greater role in diagnosis and management." However, whether an ambulatory approach would be noninferior (outcome not worse than treatment compared to) in a primary care setting is unknown.

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and colleagues conducted a study to compare the clinical efficacy and within-trial costs of a simplified model of diagnosis and care in primary care relative to that in specialist sleep centers. The randomized, controlled, noninferiority study included 155 patients with obstructive sleep apnea who were treated at primary care practices (n = 81) in metropolitan Adelaide, three rural regions of South Australia or at a university hospital [sleep medicine](#) center in Adelaide, Australia (n = 74), between September 2008 and June 2010. Both interventions (primary care management vs. usual care in a specialist sleep center) included continuous positive airway pressure, mandibular (lower jaw) advancement splints, or conservative measures only. The primary outcome measure was 6-month change in scores on the Epworth Sleepiness Scale (ESS). Secondary outcomes included disease-specific and general quality of life measures, obstructive sleep apnea symptoms, adherence to using continuous positive airway pressure, patient satisfaction, and health care costs.

The researchers found that there were significant improvements in ESS scores from baseline to 6 months in both groups. "The mean [average] ESS for the entire study population was 12.6. The mean ESS scores in the primary care group improved from 12.8 at baseline to 7.0 at 6 months, for an adjusted mean difference of 5.8 and in the specialist group from a baseline mean of 12.5 to 7.0 at 6 months, for an adjusted mean difference of 5.4. After controlling for baseline ESS score and region, the adjusted difference in the mean change in the ESS score was -0.13." The results support noninferiority of primary care management.

There were no differences in secondary outcome measures between groups. Seventeen patients (21 percent) withdrew from the study in the primary care group vs. 6 patients (8 percent) in the specialist group. Adherence to CPAP use among those using it at 6 months was no different between the 2 groups.

Analysis of within-trial sleep-related diagnostic and treatment costs revealed that primary care management of obstructive sleep apnea was approximately 40 percent less expensive than specialist care. The equivalent total average costs per patient were estimated at U.S. \$1,819 in the primary care group and U.S. \$3,068 in the specialist group. Sleep study costs, sleep physician consultations, and travel costs appeared to be the main contributors to the increased within-trial costs in the specialist group.

"In conclusion, in this randomized controlled study, a simplified management strategy for obstructive [sleep apnea](#) based in primary care was not clinically inferior to standard care in a specialist sleep center. It possibly could be delivered at a lower cost. Thus, with adequate training of primary care physicians and practice nurses and with appropriate funding models to support an ambulatory strategy, [primary care](#) management of [obstructive sleep apnea](#) has the potential to improve patient access to [sleep](#) services. This would be particularly beneficial for rural and remote regions, as well as developing nations, where access to specialist services can be limited," the authors write.

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