Compelling motivation prompted the creation of the US Preventive Services Task Force (USPSTF) recommendation statement on screening for obstructive sleep apnea (OSA) in adults published in this week’s issue of JAMA.1 The authors, supported by an evidence report and systematic review,2 provide a clue to that motivation in their referencing of the Wisconsin Sleep Cohort Study (WSCS),3 a National Institutes of Health (NIH)-funded epidemiologic research project of the University of Wisconsin’s Specialized Center of Research in Cardiopulmonary Disorders of Sleep. This study enrolled 1522 randomly selected, employed research subjects and observed them for 2 decades. The goal of WSCS was to answer one aspect of a US Congressional mandate to determine the overall public burden of sleep disorders. The WSCS had a surprising finding: mild OSA was seen in 17% of adults, and, most concerning, 6% of adults had moderate to severe OSA.4 The WSCS finding most relevant to the current USPSTF recommendation statement is that only 35% of WSCS participants with moderate OSA and 37% of participants with severe OSA reported excessive daytime sleepiness, the cardinal daytime symptom of OSA. This suggests that there is a significant number of individuals with moderate to severe OSA and that more than half of these patients are either asymptomatic or do not recognize their symptoms. The WSCS adjusted hazard ratio for all-cause mortality in untreated severe OSA vs no OSA was 3.0, and for cardiovascular mortality, including stroke, it was 2.9.4 This hazard ratio was not significantly changed by the presence or absence of excessive daytime sleepiness. The use of continuous positive airway pressure (CPAP) was associated with improved all-cause and cardiovascular mortality, although compliance with therapy was assessed by verbal report or presence or absence of CPAP use.5 Whether the Kaplan–Meier estimates of survival probability in WSCS4 would have been better in patients with severe OSA using CPAP within the expert definitions of compliance cannot be ascertained. In any case, extrapolation of the 6% of WSCS participants with moderate to severe OSA to the general population is a cause for alarm for all clinicians. And considering the association of OSA with obesity and the rising frequency of obesity since the onset of the WSCS in 1988,6 the WSCS findings are even more concerning.

The USPSTF found insufficient evidence on screening for and treatment of OSA in asymptomatic adults and adults with unrecognized symptoms and has issued an “I” statement.7 The
task force was unable to determine the balance of benefits and harms of screening for OSA in this population.

The authors of the USPSTF recommendation statement1 are a volunteer panel of experts in prevention and evidence-based medicine convened and supported by the Agency for Healthcare Research and Quality, itself an agency of the US Department of Health and Human Services. A draft of the recommendation statement is made publically available for comment. Feedback on the draft recommendation is also solicited from relevant specialty societies. The 16 members of the USPSTF are not sleep-medicine clinicians. They review the clinical evidence from the viewpoint of public health and primary care practice. For this recommendation statement, they reviewed existing peer-reviewed evidence and focused on the primary care setting and services for which a primary care clinician delivers or refers, limiting their review to patients 18 years or older. Excluded from the review were published reports of persons who had acute conditions that could trigger the onset of OSA (eg, stroke or pregnancy). The authors focused the recommendations on asymptomatic adults and adults with unrecognized symptoms of OSA.

This is an important distinction, especially for mild OSA. The use of positive airway pressure (PAP) or mandibular advancement devices (MADs) for asymptomatic patients with mild OSA is a carefully considered decision to be made by the clinician and well-informed patient with appreciation for the patient’s personal risk factors, concerns, medical history, and physical examination findings. The hazard ratio for all-cause mortality with mild OSA, accounting for comorbidity, is relatively small at 1.5.4 That said, all clinicians would likely provide PAP or MAD therapy for a patient who requests treatment for mild asymptomatic OSA or if the clinician believed that treatment was medically necessary, regardless of the challenges of insurance coverage or compliance with therapy. The restriction to asymptomatic adults and adults with unrecognized symptoms could not be clearly separated for “treatment outcomes” in all severities of OSA. Most studies dealing with treatment outcomes are conducted in sleep medicine specialty centers, and the participants are symptomatic patients. Evidence is lacking in screened asymptomatic populations.

It has long been an abiding belief among sleep clinicians and investigators, supported by evidence, clinical experience, and rationale, that only a small minority of adults with moderate to severe OSA are currently being effectively or optimally treated. Some patients have been unable to tolerate PAP or MAD treatment, and others remain either undiscovered or ineffectively treated, producing a myriad of putative and established secondary pathologies. Treatment with PAP, while effective,4,7 is intrusive into the lives of those affected, felt by some patients to be cosmetically unseemly, and viewed by some patients with suspicion and/or resignation. The natural history and complication risks of OSA are becoming clearer, but many questions remain, especially in the minds of patients. The sleep deprivation of moderate to severe OSA steals vitality from those affected, making prospective patients apathetic to the pursuit of effective management. Adding to the quandary, on average there is only 1 sleep specialist for every 30 000 people. Medical school and residency training curriculum in sleep pathologies is sparse. Primary care clinicians leave medical education and training unprepared for the current management of OSA. There are a number of relevant published reports from investigators, clinicians, and commercial interests, almost all with smaller study groups and more limited follow-up than the WSCS.3 The USPSTF has reviewed these, but again with a narrow focus. The USPSTF sought to examine the evidence that screening in primary care practices of asymptomatic patients and/or patients with unrecognized symptoms was beneficial or harmful or could accurately detect persons who should receive further testing and treatment of subsequently diagnosed OSA to improve health outcomes.1

It is not my purpose to review all of the findings of thorough and painstaking effort of the USPSTF.3 For that please read this excellent article in its entirety. I do seek to add insights into why this task has been so difficult. Obstructive sleep apnea is a disorder better defined in the minds of the general populace by its treatment (PAP) than its long-term complications. Compliance with PAP therapy is by expert opinion defined as effective use of PAP for greater than 4 hours per night, for 5 nights per week, or 70% of the nights.5 It is widely believed by sleep medicine clinicians that this degree of compliance is necessary to achieve improved health outcomes. At present, the most common determinants behind compliance to PAP therapy for OSA are male sex, younger age, increased Epworth sleepiness scale scores, higher apnea hypopnea index values, higher body mass index, and lower CPAP pressure, in addition to, a history of loud snoring, witnessed apneic episodes, and drowsy driving.8 What is clear from this list is that improvements in current quality of life (or symptoms) most determine compliance to therapy. In addition, no clinician should discount the impact of improved marital or partner relations secondary to reduction in loud and disruptive snoring and an increase in daytime vitality. Undeniably important, especially in asymptomatic OSA, is the relationship of the patient with the clinician. Compliance increases when patients understand that their clinician will download the objective information from their PAP machine at every routine appointment. Receiving praise for good (objective) compliance and questions or expressions of disappointment for poor compliance are powerful tools. The complications of moderate to severe OSA (eg, an increase in the risks of systemic hypertension, pulmonary hypertension, all-cause mortality, congestive heart failure and cardiovascular disease, atrial fibrillation, stroke, and increased risk of accidents) are important considerations for informed patients, but especially so when clearly communicated by a concerned clinician with whom the patient has a continuing relationship. However, even personal concern for long-term adverse complications is not as powerful as the alleviation of presenting symptoms. The treatment of asymptomatic patients, whether truly asymptomatic or with unrecognized symptoms or symptom denial, represents an especially difficult challenge for the treating clinician.

In summary, the USPSTF seeks to set future research needs to address the public health threat of untreated OSA in the gen-
eral population and develop accurate and reliable tools for primary care to identify asymptomatic individuals or individuals with unrecognized symptoms who would benefit from further evaluation and intervention to improve health outcomes. This is a goal worthy of the support of all clinicians, but it will be challenging.

ARTICLE INFORMATION

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REFERENCES


