SLEEP INSTITUTE
Clinical Insights by Resmed

Obstructive sleep apnea by 2050: Why collaboration across research and policy matters now more than ever

Obstructive sleep apnea (OSA) is already one of the world's most prevalent (and least addressed) chronic health conditions. Nearly one billion people worldwide are affected, and in the United States alone, estimates suggest that 24 to 54 million adults live with OSA, depending on diagnostic criteria.[1] Despite this, up to 80% of moderate-to-severe cases remain undiagnosed,[2] leaving millions untreated and at risk for serious health consequences.

A growing public health crisis

OSA is far more than a sleep disorder and commonly causes excessive daytime sleepiness and fatigue. It can impair cognitive function, reducing quality of life and increasing the risk of workplace accidents and motor vehicle crashes.[3,4,5,6] In addition, OSA is strongly associated with numerous cardiovascular conditions, including hypertension, stroke, heart failure, metabolic syndrome and type 2 diabetes, often worsening these conditions over time.[7,8,9]

The resulting economic toll is enormous. It is estimated that undiagnosed OSA costs the U.S. economy approximately $150 billion annually, including $86.9 billion in lost productivity, $30 billion in increased healthcare utilization, $26.2 billion from motor vehicle crashes and $6.5 billion due to workplace injuries.[10] Even so, OSA still remains largely invisible in national health policy and underprioritized in clinical practice.

Looking ahead: New projections on the prevalence of OSA

Until recently, long-term projections of OSA burden were limited. The first major U.S. analysis to model future prevalence based on sex, age and BMI provides a sobering view of what's to come.

The study, published in The Lancet Respiratory Medicine in August 2025, forecasts a sharp rise in OSA prevalence across all demographics by 2050, driven primarily by obesity, aging and environmental factors. Among its most striking findings:

- Women will experience a 64% increase in OSA prevalence, nearly triple the projected growth among men,[11] a shift that mirrors national obesity trends previously forecast.[12]
- Demographic shifts within adults aged 30–69 years contribute substantially to projected OSA growth, highlighting the need for proactive planning as this population ages into older age groups.[11]
- Environmental and lifestyle factors such as air pollution,[13] smoking[14] and urbanization are emerging as underrecognized contributors to OSA risk.

These projections highlight a troubling paradox: as OSA becomes more widespread, current systems remain ill-equipped to identify, treat or even track it effectively.

Current systems are not prepared

While the science of OSA has advanced, the structure of care has not kept pace.

In clinical practice, screening and diagnosis remain inconsistent, particularly in primary care where time constraints and lack of training often lead to missed cases. Approximately 7,500 board-certified sleep specialists serve the U.S. population, representing a ratio of more than 43,000 individuals per specialist—far too few to meet growing demand.[15] Recognition of OSA in women and older adults continues to lag, due in part to atypical presentations and biases in screening tools developed primarily for men.

At a systems level, payer policy barriers further limit access. Reimbursement for home sleep apnea testing varies widely; PAP therapy coverage is often contingent on strict adherence metrics, and coverage for alternative treatments, including oral appliances and GLP-1 receptor agonists, remains inconsistent. Despite OSA's immense cost burden, screening guidelines and large-scale public health initiatives remain limited, even as organizations such as the American Academy of Sleep Medicine and international groups such as the World Sleep Society continue to advance sleep health awareness and policy efforts.[16,17]

This fragmented landscape treats OSA as an individual clinical problem, rather than the public health challenge it clearly is.

Bridging the gap through collaboration

Reversing the trajectory of OSA requires coordinated action across research, policy and healthcare systems.

- Researchers need sustained investment from public and private funding bodies to accelerate research into sex-specific mechanisms of OSA, the long-term outcomes of untreated disease in older adults and the role of environmental factors in shaping disease expression.
- Clinicians and health systems should integrate routine sleep assessments into standard care and improve coordination between specialties.
- Medical educators need to expand sleep medicine training throughout medical school and residency, ensuring that every future clinician can recognize and manage sleep disorders effectively.
- Payers should evolve reimbursement and health technology assessment frameworks to incorporate real-world evidence alongside randomized controlled trials, supporting more equitable access to effective OSA diagnostics and therapies.
- Policymakers must elevate sleep in national prevention strategies, funding research and interventions at a scale commensurate with its public health impact.
- The public also has a vital role to play by moving beyond wellness trends to demand evidence-based sleep care, supporting awareness efforts that destigmatize diagnosis and treatment, and helping reframe sleep as essential to safe decision-making, productivity and health.

A call to action

The projections for OSA by 2050 align with what the sleep community has long understood and emphasize the need for broader engagement across policy, payment and healthcare delivery. Without sufficient resources to support the field of sleep medicine, OSA will continue to rise faster than healthcare systems can respond, leaving millions of patients to experience preventable harm.

Collaboration between the research community, healthcare systems and policy leaders has never been more urgent. Together, we can close the gap between science and care, ensuring that every patient, regardless of gender, age or socioeconomic status, has access to effective, evidence-based treatment.

The Sleep Institute is committed to serving as a catalyst for this collaboration, uniting researchers, clinicians, policymakers and payers around a shared goal: transforming how sleep health is understood and prioritized. To learn more, visit www.resmedsleepinstitute.com

References:

1. Benjafield AV, Ayas NT, Eastwood PR, et al. Estimating the global burden of obstructive sleep apnoea: a literature-based analysis. Lancet Respir Med. 2019;7(8):687-698. doi:10.1016/S2213-2600(19)30198-5
2. Young T, Evans L, Finn L, Palta M. Estimation of the clinically diagnosed proportion of sleep apnea syndrome in middle-aged men and women. Sleep. 1997;20(9):705-706.
3. Kapur VK, Auckley DH, Chowdhuri S, et al. 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. doi:10.5664/jcsm.6506
4. Garbarino S, Guglielmi O, Sanna A, Mancardi GL, Magnavita N. Risk of occupational accidents in workers with obstructive sleep apnea: systematic review and meta-analysis. Sleep. 2016;39(6):1211-1218. doi:10.5665/sleep.5834
5. Tregear S, Reston J, Schoelles K, Phillips B. Obstructive sleep apnea and risk of motor vehicle crash: systematic review and meta-analysis. J Clin Sleep Med. 2009;5(6):573-581. doi:10.5664/jcsm.27662
6. Tanellari O, Koci B, Baruti Papa E, Balcos C, Armencia AO, Panaite T, Zetu I. Study on quality of life of patients with obstructive sleep apnea: pilot study. Medicina (Kaunas). 2025;61(7):1234. doi:10.3390/medicina61071234
7. Yeghiazarians Y, Jneid H, Tietjens JR, et al. Obstructive sleep apnea and cardiovascular disease: a scientific statement from the American Heart Association. Circulation. 2021;144(3):e56-e67. doi:10.1161/CIR.0000000000000988
8. Reutrakul S, Mokhlesi B. Obstructive sleep apnea and diabetes: a state of the art review. Chest. 2017;152(5):1070-1086. doi:10.1016/j.chest.2017.05.009
9. Foster GD, Sanders MH, Millman R, et al. Obstructive sleep apnea among obese patients with type 2 diabetes. Diabetes Care. 2009;32(6):1017-1019. doi:10.2337/dc08-1776
10. Frost & Sullivan. The economic burden of obstructive sleep apnea in the U.S. American Academy of Sleep Medicine; 2016.
11. Boers E, Barrett M, Benjafield V. Projecting the 30-year burden of obstructive sleep apnoea in the USA: a prospective modelling study. Lancet Respir Med. Published August 26, 2025. doi:10.1016/S2213-2600(25)00243-7
12. Ward ZJ, Bleich SN, Cradock AL, et al. Projected US state-level prevalence of adult obesity and severe obesity. N Engl J Med. 2019;381(25):2440-2450. doi:10.1056/NEJMsa1909301
13. Billings ME, Gold D, Szpiro A, et al. The association of ambient air pollution with sleep apnea: the Multi-Ethnic Study of Atherosclerosis. Ann Am Thorac Soc. 2019;16(3):363-370. doi:10.1513/AnnalsATS.201810-697OC
14. Krishan J, Patel AD, Malhotra A. The effects of smoking on sleep-disordered breathing and cardiovascular risks. Chest. 2014;146(3):684-692. doi:10.1378/chest.13-3136
15. American Academy of Sleep Medicine. Telemedicine in sleep medicine. Accessed January 14, 2026. https://aasm.org/advocacy/initiatives/telemedicine/
16. American Academy of Sleep Medicine. Advocacy. Accessed February 7, 2026. https://aasm.org/advocacy/
17. Lim DC, Najafi A, Afifi L, et al. The need to promote sleep health in public health agendas across the globe. Lancet Public Health. 2023;8(10):e820-e826. doi:10.1016/S2468-2667(23)00182-2