NYU Langone Health

Institute for Excellence in Health Equity
Policy Brief Series

SLEEP HEALTH EQUITY:
Alzheimer's Disease Prevention

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Key Message:

- **Federal Policy Makers:** Eliminate cost-sharing for sleep studies and CPAP therapy in Medicare/Medicaid for high-risk populations and expand research funding for sleep-AD interventions.
- **State Policy Makers:** Remove prior authorization barriers for sleep testing and treatment in Medicaid managed care plans and integrate sleep health education into aging and dementia prevention programs.

POLICY BRIEF: SLEEP HEALTH EQUITY IN ALZHEIMER'S DISEASE PREVENTION.

Summary

Sleep problems, especially Obstructive Sleep Apnea (OSA), greatly increase Alzheimer's disease (AD) risk, with 15% of AD cases linked to sleep issues.[1,2]

Black and Hispanic patients are at greater risk, with Black patients who have OSA being 2.2 times more likely to develop AD.[3]

Medicare and Medicaid coverage parameters limit access to sleep testing and treatment.[4]

Future policy should focus on increasing coverage for sleep health screening and treatment in public insurance programs.

Introduction

Alzheimer's disease (AD) is a growing health crisis in the U.S., affecting more than 7 million Americans and about 12.7% of New Yorkers aged 65 and older.[5] Sleep problems are a key risk factor; studies show that older adults with untreated sleep disorders experience brain changes linked to AD.[6] These changes include damage to nerve cells that speeds up memory loss, suggesting that better sleep could help protect brain health and prevent or delay AD. This burden is more prevalent in Black and Hispanic populations; Black and Hispanic workers are overrepresented in shift work jobs (26% and 22% respectively), and Black Americans are 50% more likely to live in noisy areas and face 6.5 times more exposure to traffic pollution, all of which disrupt normal sleep patterns and increases sleep disorder and AD risk.[7-9] Black patients are also twice as likely to have sleep problems and 2.2 times more likely to develop AD when they have Obstructive Sleep Apnea (OSA) compared to those without OSA.[3]

Addressing sleep problems presents an opportunity to prevent 15% of AD cases, but requires policies targeting factors disproportionately affecting Black and Hispanic populations.[2] For example, these populations face more barriers to adequate care, with 23% fewer Black patients getting recommended sleep testing despite having higher rates of sleep problems.[3] Barriers include:

- Medicare coverage for sleep studies and continuous positive airway pressure (CPAP) devices requires patients to pay 20% of the costs after their deductible, making it hard for lower-income patients to afford.[4]
- Many Medicaid programs have strict rules for home sleep testing and limited coverage for digital insomnia treatments, with 17 states requiring multiple approvals for sleep testing.[10,11]
- Limited community-based sleep health education and screening programs in low-income areas.[12]

Targeted policies that promote sleep health equity, or fair access to sleep health services (regardless of income or geographic location), could address sleep problems in Black and Hispanic populations, decrease AD rates, and bring significant public health benefits.

Current Policy

National and state level governments recognize the importance of healthy aging, but have not yet addressed the link between sleep disorders and AD. Current policies include:

Federal

- The National Alzheimer's Project Act (NAPA), reauthorized through 2035, is the primary federal initiative addressing AD. While the act doesn't directly address sleep health, it supports research on modifiable risk factors and lays the groundwork for integrating sleep-related interventions into broader AD prevention strategies.[13]
- The Building Our Largest Dementia (BOLD) Infrastructure for Alzheimer's Act, reauthorized through FY2029, directs the Centers for Disease Control and Prevention (CDC) to strengthen the U.S. public health infrastructure to support and promote dementia risk reduction, early detection and diagnosis, prevention of avoidable hospitalizations, and dementia caregiving.[14,15]

New York State

- New York State (NYS) Master Plan for Aging, established in November 2022, is the state's first comprehensive strategy to help older

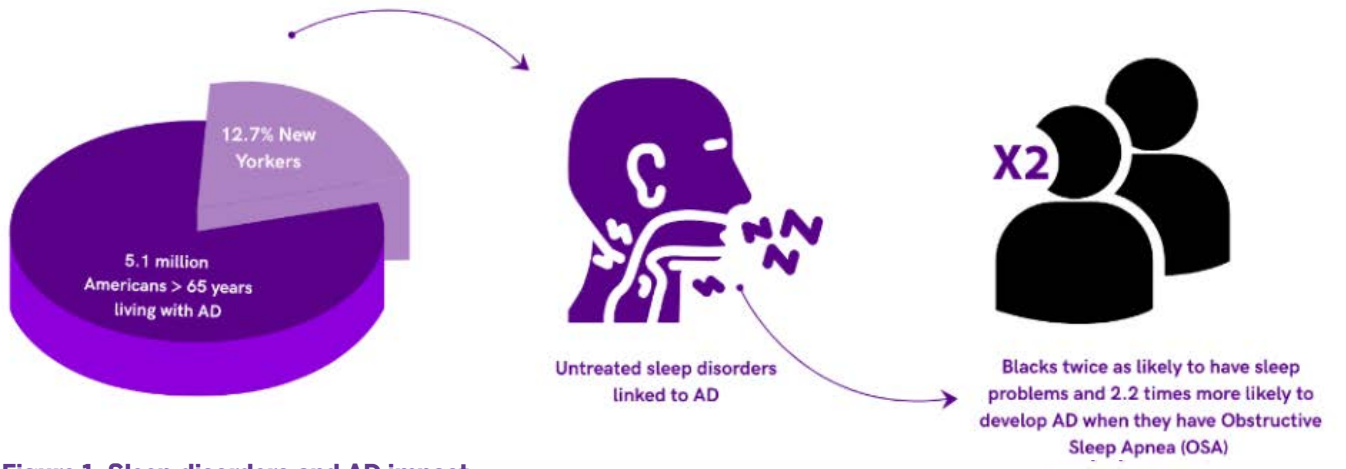

Figure 1. Sleep disorders and AD impact.

adults age with dignity and independence. Its initiatives improve the detection, diagnosis, and management of cognitive impairment, while also supporting prevention efforts. The plan includes significant measures for AD and dementia care training for nursing home and assisted living staff.[16] While sleep health is not addressed, the plan's focus on cognitive health and dementia provides an ideal framework for incorporating sleep-related measures.

- Effective October 1, 2024, the NYS Medicaid fee-for-service program will reimburse Home Sleep Tests (HST) for members with mobility issues who would have difficulty traveling to a sleep lab. HSTs can help diagnose sleep disordered breathing conditions, such as OSA, in the home-setting.[17]

Recommendations for Policymakers

Effective policy should expand access to sleep testing and treatments to address the higher impact of sleep disorders on AD risk in Black, Hispanic, and low-income populations.

Federal-level recommendations

- Remove financial and logistical barriers to diagnosis and treatment of OSA for low-income patients by eliminating cost sharing in public insurance programs for sleep studies and treatment devices.[4] The U.S. Department of Health and Human Services should direct the Centers for Medicare & Medicaid Services (CMS) to classify sleep studies and CPAP therapy as preventive services for high-risk populations, including Black and Hispanic patients with OSA. This would allow zero-cost sharing under Medicare Part B, which covers preventive screenings.[18]
- Expand coverage and reduce burdensome approval processes for CPAP therapy for OSA. CMS should guide states to remove prior authorization for CPAP therapy, when prescribed after a qualifying sleep study, and automatically approve renewals for documented use.[19]
- Amend NAPA to include sleep health as a modifiable risk factor.
- Empower primary care providers in community-based settings by providing grants for participation in structured education programs that expand their knowledge of prevention, detection, diagnosis, care, and treatment of AD and dementia.[20]
- Invest in AD research during the annual appropriations process, including research on sleep interventions as part of AD prevention. Allocate annual research funding at the National Institutes of Health and continue funding the BOLD Infrastructure for Alzheimer's Act at the CDC.[21]

New York State-level recommendations

- The NYS Department of Health, through the Office of Health Insurance Programs, should require all Medicaid Managed Care plans to eliminate prior authorization for CPAP therapy and HST to diagnose sleep disordered breathing conditions.[19] Additionally, extend coverage for HSTs to all Medicaid members when medically appropriate.
- Amend the New York Elder Law to establish an AD outreach and public education program about the relationship between sleep disorders and AD, with a focus on reaching Black and Hispanic communities.[22]

Recommendations for Healthcare Providers and Researchers

- Expand the sleep medicine workforce in areas with provider shortages. The significant shortage of sleep specialists in low-income

communities severely limits care access.[23] Healthcare systems should implement targeted recruitment and incentive programs for sleep medicine specialists and develop programs to increase diversity within the specialty, as provider diversity improves patient outcomes.[24] Provider education programs should emphasize culturally appropriate sleep interventions tailored to the needs of diverse communities.[25]

- Implement system-level sleep health interventions. Healthcare systems should adopt the SLEEPE protocol (Sleep education, Light exposure management, Exercise engagement, Environmental modifications, Person-centered care, and Evidence-based therapies), which improves sleep quality scores by 42% in diverse older adult populations.[26] Health systems should integrate sleep disorder screening into routine primary care using culturally validated tools such as the Sleep Apnea Clinical Score-Modified for Diverse Populations (SACS-MDP).[27] They should prioritize data collection on sleep health disparities and AD outcomes to track intervention effectiveness and enable continuous improvement.[24]
- Address social determinants of health. Healthcare providers should implement comprehensive health-related social needs screening for all patients with suspected AD or sleep disorders. The validated Sleep-Health Equity Assessment Tool (S-HEAT) identifies barriers to healthy sleep related to housing, neighborhood environment, and work conditions, with screening followed by referral to appropriate community resources.[28] Community health worker interventions targeting sleep health disparities increase sleep treatment adherence by 37% in Black and Hispanic patients.[23]

How NYULH is Expanding Sleep Health Research

The ARISE-DP lab at NYU Langone Health implements evidence-based, interventions that address individual, provider, and healthcare system barriers to sleep medicine. Our Culturally Adapted Recruitment Efforts and Strategies (CARES) method effectively engages understudied and low-income communities through outreach, stakeholder partnerships, and tailored communication. From September 2023 to January 2024, CARES achieved a 100% increase in engagement, reaching 616 individuals and enrolling 74 participants, meeting 59% of recruitment goals in just 3 months.[29]

Beyond recruitment, ARISE-DP provides no-cost enrollment, removing healthcare insurance barriers that limit access to sleep health services. Our coordinated care systems integrate provider training, patient-provider language concordance services, patient educational support, and real-time treatment adherence monitoring. This comprehensive approach has produced significant improvements in patient knowledge on sleep and brain health, treatment adherence, overall sleep quality, and health outcomes.

ARISE-DP is also expanding the sleep health and neuroscience workforce through training infrastructure that creates a diverse pipeline of scholars from high school to junior faculty levels. Our program provides effective mentoring for junior faculty members, and trains lab interns pursuing medical school and PhD programs. Many are achieving great feats in science and research while being a voice of advocacy for sleep health and prevention of AD. This diverse, multidisciplinary team of scientists demonstrates that targeted investment in workforce development produces measurable outcomes in addressing sleep health disparities.

The success of these implementation efforts validates that the recommended policy changes are not only feasible but produce demonstrable improvements in sleep health equity. Sustainable infrastructure remains essential for scaling these community-based programs, including physical space, technology, and staff training.[30]

Conclusion

Expanding Medicare and Medicaid coverage for sleep health services represents a key opportunity to reduce AD risk, particularly in Black and Hispanic populations. By implementing targeted policy changes that address access barriers, we can reduce the unequal burden of AD and advance health equity.[1,3] This approach aligns with New York's commitment to reducing health disparities and creating coordinated systems for healthy aging. The ARISE-DP Program stands ready to partner with policymakers to implement these evidence-based recommendations and continue advancing sleep health equity research.

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