

### *Sleep Health Equity: A Position Statement from the National Sleep Foundation*

**Rationale:** The National Sleep Foundation's (NSF) mission is to improve the health and well-being of the public through sleep education and advocacy. The NSF believes that everyone should have the same opportunity to get the sleep they need to thrive. Understanding the sources of racial/ethnic sleep health disparities and promoting actionable solutions to eliminate them and achieve sleep health equity is critical to the NSF's mission.

**Background:** Sleep is fundamentally necessary for life.<sup>1</sup> Shorter sleep duration and/or poor sleep quality are associated with adverse health outcomes, including cardiovascular disease, diabetes, hypertension, obesity, and mortality.<sup>2</sup> People of color in the U.S. are disproportionately affected by poor sleep health and sleep disorders. This statement focuses on systemic racism and determinants of sleep health disparities among people of color, while acknowledging that other unique systems of structural inequity negatively impact sleep health for additional groups (e.g., socioeconomically disadvantaged individuals, rural populations, LGBTQIA+ communities). Identifying and understanding the impediments to sleep health equity supports efforts to improve lives of underrepresented Americans. Interventions should span individual, community, and system levels, including designing socio-culturally tailored sleep health resources and practices, improving detection and treatment of sleep problems and advocating for policy change. This work will empower individuals, families, schools, healthcare providers, public health officials, and policy makers to optimize sleep health in underserved and underrepresented communities.<sup>3</sup>

**Causes:** Researchers studying racial/ethnic health disparities point to multi-level influences, including policies and social structures such as the healthcare system, educational and occupational opportunities, neighborhood conditions, and exposure to chronic stress, that contribute to the disproportionate burden of poor sleep health among people of color.<sup>4</sup> These influences, in turn, are byproducts of both historic and contemporary sources of systemic racism. Specific examples of potential contributors include:

- **Racial Discrimination:** Studies have uncovered an association between experienced discrimination and poor sleep health.<sup>5</sup>
- **Access to Care:** Disparities in access to care have a broad effect on health outcomes. Evidence suggests that Black individuals are less likely to be diagnosed and treated for conditions like sleep apnea, despite epidemiologic evidence demonstrating that they are at higher risk.<sup>6,7</sup>
- **Financial Distress:** A higher percentage of people of color face unemployment and poverty, both of which can create financial pressure and significant day-to-day stress.<sup>8</sup>
- **Neighborhood Environment:** Neighborhoods with a higher percentage of underserved and underrepresented individuals often have higher levels of pollution, noise, allergens, and other potential stressors that can contribute to poor sleep.<sup>9</sup>
- **Shift Work:** Underrepresented populations are more likely to work night shifts or irregular or extra hours that can alter their sleep schedule and their ability to sync their circadian rhythm with the day-night cycle.<sup>10</sup>
- **Occupational Hazards:** Many people of color report job stress from discrimination in the workplace. Additionally, it is more common for members of these communities to work in jobs with greater safety risks that can create stress or occupational exposures to allergens or irritants that may increase their susceptibility to sleep apnea.<sup>11</sup>

**Position and Recommendations:** The NSF asserts that racial and ethnic disparities in sleep health are a major public health problem and that sleep health equity can be achieved through public investment in resources, education and training, and system and policy level changes. Critical strategic changes include:

**1. Expand evidence-based and culturally-sensitive sleep health resources:**

- a. Develop and promote socio-culturally tailored sleep health resources for underserved and underrepresented communities, informed by insights on attitudes, beliefs and preferred outreach channels.
- b. Integrate perspectives from community-based stakeholders in the development of sleep health awareness campaigns, interventions and programs.

**2. Improve equitable access to clinical sleep healthcare:**

- a. Expand access to affordable care by addressing premiums, co-payments, deductibles, reimbursements and other costs.
- b. Facilitate population-based management and sleep medicine using telemedicine and other digital health capabilities to promote sleep health equity and ensure that telemedicine access is not limited to private payors.

**3. Address sleep health equity across the continuum of sleep healthcare delivery:**

- a. Educate healthcare providers during their training and through continuing medical education on sleep issues impacting people of color and their exacerbating factors, as well as implicit and explicit bias and under-diagnosis of sleep disorders in certain populations.
- b. Educate providers about cultural, racial and ethnic differences in how sleep problems are reported.
- c. Increase the training pipeline of underrepresented racial and ethnic groups in sleep medicine to enhance community trust and acceptance.

**4. Promote expansion of the evidence base for equity in sleep health:**

- a. Increase research funding to establish benchmarks and metrics for reducing disparities in sleep health.
- b. Expand funding for existing National Institutes of Health (NIH) and Patient-Centered Outcomes Research Institute (PCORI) initiatives on health disparities, with a dedicated component for sleep health.

**5. Support evidence-based policies and legislative actions:**

- a. Advocate for a sleep health component to disparities legislation.
- b. Implement policies to address cultural barriers and social determinants to sleep health in communities, workplaces, educational systems and healthcare systems.

These priorities provide a comprehensive roadmap for helping to eliminate sleep health disparities using a multilevel approach that engages individuals, communities, and systems.<sup>12</sup> As a national leader in sleep health, NSF will continue to promote coordinated efforts to combat systemic racism and achieve actionable solutions for underserved and underrepresented communities.

<sup>1</sup> Rechtschaffen A. Current perspectives on the function of sleep. *Perspect Biol Med.* 1998;41(3):359-390. doi:10.1353/pbm.1998.0051

<sup>2</sup> Itani O, Jike M, Watanabe N, Kaneita, Y. Short sleep duration and health outcomes: a systematic review, meta-analysis, and meta-regression. *Sleep Med.* 2017;32:246-256. doi.org/10.1016/j.sleep.2016.08.006

<sup>3</sup> Egan KJ, Knutson KL, Pereira AC, von Schantz M. The role of race and ethnicity in sleep, circadian rhythms and cardiovascular health. *Sleep Med Rev.* 2017;33:70-78. doi: 10.1016/j.smrv.2016.05.004

<sup>4</sup> Jackson CL, Redline S, Emmons KM. Sleep as a potential fundamental contributor to disparities in cardiovascular health. *Annu Rev Public Health.* 2015; 36:417-440. doi:10.1146/annurev-publhealth-031914-122838

<sup>5</sup> Slopen N, Lewis TT, Williams DR. Discrimination and sleep: a systematic review. *Sleep Med.* 2016; 18:88-95. doi: 10.1016/j.sleep.2015.01.012

<sup>6</sup> Bulatao RA, Anderson NB, National Research Council (US) Panel on Race, Ethnicity, and Health in Later Life, eds. *Understanding Racial and Ethnic Differences in Health in Late Life: A Research Agenda.* Washington (DC): National Academies Press (US); 2004.

<sup>7</sup> Williams NJ, Jean-Louis G, Ravenell J, Seixas A, Islam N, Trinh-Shevrin C, Ogedegbe G. A community-oriented framework to increase screening and treatment of obstructive sleep apnea among blacks. *Sleep Med.* 2016 Feb; 18:82-7. doi: 10.1016/j.sleep.2015.07.019.

<sup>8</sup> Mays VM, Cochran SD, Barnes NW. Race, race-based discrimination, and health outcomes among African Americans. *Annu Rev Psychol.* 2007; 58:201-225. doi: 10.1146/annurev.psych.57.102904.190212.

<sup>9</sup> Simonelli G, Dudley KA, Weng J, et al. Neighborhood Factors as Predictors of Poor Sleep in the Sueño Ancillary Study of the Hispanic Community Health Study/Study of Latinos. *Sleep.* 2017;40(1): zsw025. doi:10.1093/sleep/zsw025

<sup>10</sup> Jackson CL, Redline S, Kawachi I, Williams MA, Hu FB. Racial disparities in short sleep duration by occupation and industry. *Am J Epidemiol.* 2013;178(9):1442-1451. doi:10.1093/aje/kwt159

<sup>11</sup> Jean-Louis G, von Gizycki H, Zizi F, Dharawat A, Lazar JM, Brown CD. Evaluation of sleep apnea in a sample of black patients. *J Clin Sleep Med.* 2008;4(5):421-425.

<sup>12</sup> Williams NJ, Grandner MA, Snipes A, et al. Racial/ethnic disparities in sleep health and health care: importance of the sociocultural context. *Sleep Health.* 2015;1(1):28-35. doi: 10.1016/j.sleh.2014.12.004