



## Sleep Disorders in Indigenous Communities: Time to Close the Gap

Commentary on Woods et al. Sleep disorders in Aboriginal and Torres Strait Islander people and residents of regional and remote Australia. *J Clin Sleep Med* 2015;11:1263–1271

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Indigenous populations within high-income countries have substantial disparity in health outcomes compared to non-indigenous populations.<sup>1</sup> They have higher rates of chronic diseases such as obesity, type 2 diabetes, cardiovascular disease, and renal disease, and have significantly higher mortality rates.<sup>2-5</sup> Given that indigenous communities have a high prevalence of diseases that are either associated with or risk factors for sleep disordered breathing (SDB), one would predict a high prevalence of SDB, particularly obstructive sleep apnea (OSA). Despite this assumption, there are very few data on the prevalence and consequences of OSA in adult indigenous populations, and also minimal data on the rate of access to sleep diagnostic services and treatments. Young et al. reported in the Sleep Heart Health Study cohort that American Indians were 1.7 times more likely to have an apnea hypopnea index (AHI) > 15/hour than Caucasians.<sup>6</sup> Mihaere et al. reported that New Zealand Maori were more likely than non-Maori to report OSA symptoms and were 4.3 times more likely to have an AHI > 15/hour.<sup>7</sup> In both of these studies, an increased prevalence of OSA was not present once correction was made for body habitus, suggesting that higher rates of obesity, rather than ethnicity *per se* drive the higher OSA prevalence in indigenous populations.

The current study by Woods et al.<sup>8</sup> adds to the data from an Australian context. Although not designed to examine prevalence of OSA in Australia's indigenous population, this retrospective study compared the utilization and outcomes of polysomnography in Aboriginal and Torres Strait Islanders and non-indigenous Australians in two remote areas of Australia—far north Queensland and Central Australia. Compared to the rest of the Australian population, there were less than half the number of sleep studies performed in these remote areas during the period of study, highlighting the difficulties of accessing medical services for remote communities in general. In those diagnosed with OSA, indigenous Australians were more likely than their non-indigenous counterparts to have chronic disease (diabetes, obesity, cardiac, pulmonary, or renal disease) and were more likely to live a long distance from the testing center. OSA severity and recommendation for CPAP treatment (recommended in approximately two-thirds of patients) was the same for indigenous and non-indigenous; however, there was a striking difference in loss to follow-up following diagnosis.

Aboriginal and Torres Strait Islanders were 2.2 times more likely to not attend any further appointments following the diagnostic polysomnography, and this occurred in 38% of all indigenous subjects—a worrying statistic given the severity of OSA in this group (median AHI was 34.4/hour).

What are the underlying causes for this reduced rate of OSA diagnosis and poor engagement with sleep medicine services following initial testing? As the authors note, there is no direct evidence to tell us the reasons for poor follow up in their patient cohort. However, there are clearly multiple candidates such as: remoteness and inability to travel, excessive cost of treatment or travel, competing health priorities, lack of access to electricity, and language and cultural barriers that limit the ability to educate and understand the need for treatment.<sup>9</sup> High rates of mental health disorders such as depression could also impact on the ability of indigenous people to access sleep health services.<sup>10</sup> The challenge of poor engagement with sleep medicine services following diagnosis is exacerbated by poorer adherence with CPAP treatment, even in those who do attend for review.<sup>11,12</sup>

How can we move forward and “close the gap” between indigenous and non-indigenous sleep healthcare? As clinicians and as a profession our challenge is to advocate for the sleep health needs for all in our community—both locally and globally. We need to make healthcare administrators aware of the relevant needs, barriers, and challenges to consider when managing sleep disorders in indigenous populations. We need to consider novel and flexible patient-centric models of care, supported by health service delivery research. We need to advocate for addressing the social issues which impact on indigenous health, such as education, housing, and nutrition. As an example, overcrowding will affect the success of any sleep-related intervention for conditions such as OSA and insomnia. Most importantly, we need to engage with indigenous community leaders and support indigenous participation and control in healthcare delivery to optimize the chance of successful outcomes.

### CITATION

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## SUBMISSION & CORRESPONDENCE INFORMATION

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## DISCLOSURE STATEMENT

The authors have indicated no financial conflicts of interest.