

# ` Quick Review of Model System Research

## Concordance Between Current AASM and CMS Scoring Criteria

## for Obstructive Sleep Apnea in Hospitalized Persons with TBI:

## A VA TBI Model System Study

### What is the study about?

### This study compared obstructive sleep apnea (OSA), demographic, and traumatic brain injury (TBI) characteristics across the American Academy of Sleep Medicine (AASM) and Centers for Medicare (CMS) and Medicare scoring rules, in individuals with moderate to severe TBI receiving inpatient neurorehabilitation. Sleep is critical for neural repair. Early detection and treatment of OSA is important because disordered sleep may slow functional recovery and prolong rehabilitation.

### What did the study find?

This study found that individuals with greater TBI severity, younger age, lower body mass index (MBI), and who are female are at risk for not receiving treatment for OSA, during a time of critical neural repair to improve neurologic outcome. Management of multiple illnesses including sleep has become an increasing focus for improving TBI outcomes. The impact of CMS policy for OSA diagnosis for individuals with chronic disability and young age are significant because chronic illness is common after moderate to severe TBI. The underestimation of sleep apnea using CMS criteria is consistent with prior literature; however, this is the first study to report the impact of the criteria in persons with moderate to severe TBI during a critical stage of neural recovery.

### Who participated in the study?

Individuals enrolled in the TBI Model Systems (TBIMS) multi-center study (n=248) as part of a PCORI-funded clinical trial over a 19-month period.

### How was the study conducted?

This study conducted a secondary analysis from a prospective clinical trial of sleep apnea at six TBI Model System study sites.

###  How can people use the results?

### Individuals with TBI and their families can use the results of this study to better understand how current diagnostic criteria for OSA can affect the ability of individuals with moderate to severe TBI to be properly diagnosed with OSA.

### Reference

Nakase-Richardson, R., Dahdah, M.N., Almeida, E., Ricketti, P., Silva, M.A., Calero, K., Magalang, U., & Schwartz, D.J. (2020). Concordance between current AASM and CMS scoring criteria for obstructive sleep apnea in hospitalized persons with TBI: A VA TBI Model System study. *Journal of Clinical Sleep Medicine*. doi:10.5664/jcsm.8352

**Disclaimer**

The contents of this quick review were developed under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant number 90DP0082). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this quick review do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal Government.