hypersomnia patients were noted to have high variance in transitions, with group means often numerically similar to narcoleptics or “in between” narcoleptics and controls but with high standard deviations.

**Conclusion:** Narcolepsy with and without cataplexy cases appear to have sleep/wake and REM/NREM state stability. High variance in transitions for SOREMP and hypersomnia indicates a spectrum phenotype, some patients with “more” or “less” narcolepsy-like features. These data represent aggregate nightly data, current epoch-by-epoch analyses are ongoing.

**Support (If Any):** Jazz pharmaceuticals.

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**0670**

**REDUCED CENTROPAIRETAL SLOW WAVE ACTIVITY DURING NON-RAPID EYE MOVEMENT SLEEP IN HYPERSONMOLENCE DISORDER: A TRANSDIAGNOSTIC HIGH-DENSITY EEG STUDY**

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**Introduction:** Hypersomnolence disorder is characterized by excessive daytime sleepiness and sleep duration of idiopathic origin. Major depressive disorder (MDD) is frequently associated with hypersomnolence, but it is unclear whether hypersomnolence disorder and hypersomnolence associated with mood disorders are distinct entities, or if they share a common neurobiology. Thus, this study utilized ad libitum high-density (hd) EEG polysomnographic recordings to examine differences in sleep duration and continuity, as well as topographic alterations in SWA, which has been associated with the restorative aspects of sleep, in patients with and without hypersomnolence disorder, as well as with and without MDD, to clarify whether hypersomnolence is associated with transdiagnostic alterations in neurophysiological function.

**Methods:** Eighty-three persons underwent 256-channel hdEEG polysomnography without prescribed wake time. Patients with MDD with (HYP+/MDD+) and without (HYP-/MDD+) comorbid hypersomnolence (n=22 each group), and age- and sex-matched healthy controls (HC; n=22) were recruited from a prospective study of hypersomnolence in mood disorders. Seventeen patients with hypersomnolence disorder without MDD (HYP+/MDD-) were drawn from a clinical sample. Clinical and sleep architecture variables were compared between groups. Topographic patterns of SWA relative to controls were also compared among disordered groups, and correlations between regional alterations in SWA and measures of sleepiness assessed.

**Results:** HYP+/MDD+ and HYP+/MDD- groups had similar sleep efficiency, stage distribution, and subjective sleepiness, and demonstrated similarly increased total sleep time relative to both HC and HYP-/MDD+ groups. HYP+/MDD+ and HYP+/MDD- also demonstrated reduced bilateral centroparietal SWA relative to HC, which was not observed for HYP-/MDD+ relative to HC. Slow wave activity in these regions also significantly negatively correlated with subjective measures of hypersomnolence.

**Conclusion:** Reduced bilateral centroparietal SWA may be a transdiagnostic neurophysiologic finding in patients with unexplained hypersomnolence. Further research is warranted to elucidate the mechanisms through which these cortical changes are related to clinical complaints of daytime sleepiness.

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**0671**

**LISTENING TO THE PATIENT VOICE IN NARCOLEPSY: DIAGNOSTIC DELAY, DISEASE BURDEN AND TREATMENT EFFICACY**

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**Introduction:** Though diagnostic delay in narcolepsy is well-reported, it is unclear what patient factors contribute to this clinical problem. Furthermore, health care providers and researchers tend to focus on assessments of core narcolepsy symptoms to determine treatment efficacy but it is not clear if these are the symptoms of most importance to patients for daily functioning. In this study, patients with narcolepsy completed a survey and report their most concerning symptoms, co-morbidities, functional limitations and treatment responsiveness to medications. We aimed to determine the impact of pediatric onset of narcolepsy symptoms on time to diagnosis of narcolepsy and presence of co-morbid depression.

**Methods:** Cross-sectional survey of 1699 people in the United States with self-reported diagnosis of narcolepsy. We utilized mixed methods data analyses to report study findings.

**Results:** Most participants reported receiving a diagnosis of narcolepsy more than 1 year after symptom onset. We found that the strongest predictor of this delayed diagnosis was pediatric onset of symptoms (OR=2.4, P<0.0005). Depression was the most common co-morbidity but we detected no association with pediatric onset of narcolepsy symptoms. Overall, participants reported that fatigue and cognitive difficulties were their most burdensome symptoms in addition to sleepiness and cataplexy. The majority of participants reported residual daytime fatigue and/or sleepiness despite treatment. Most participants reported they could not perform at work or school as well as they would like because of narcolepsy symptoms.

**Conclusion:** This study provides unique insight into the narcolepsy disease experience. The study quantifies the problem of diagnostic delay for narcolepsy patients in the United States and highlights that symptoms are more likely to be missed if they develop before 18 years of age. These results suggest that narcolepsy awareness efforts should be aimed at parents, pediatric health care providers, school professionals and children/adolescents themselves. Disease burden is high due to problems with fatigue, cognition and persistence of residual symptoms despite treatment.

**Support (If Any):** Wake Up Narcolepsy, Inc.

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**0672**

**IMPROVEMENT IN KNOWLEDGE OF DIAGNOSTIC CRITERIA OF NARCOLEPSY AMONG NEUROLOGISTS FOLLOWING PARTICIPATION IN AN ONLINE MEDICAL EDUCATION ACTIVITY**

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**Introduction:** Narcolepsy remains underrecognized and underdiagnosed despite affecting approximately 1 in every 3000 Americans. A study was undertaken to evaluate the effectiveness of an online educational intervention with the goal of improving neurologists’ knowledge of diagnostic criteria for narcolepsy issued by the American...