



National Trends in Pediatric Obstructive Sleep Apnea Diagnosis & Treatment Utilization Among Various Racial Groups

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Introduction

- Racial disparity in the prevalence of sleep-disordered breathing and obstructive sleep apnea (OSA) has been identified as an independent risk factor.
- Most studies focus on either surgical intervention or positive-airway-pressure (PAP) therapy.
- Data on other ethnic groups are limited:
 - Higher reported prevalence of symptoms and measurement of sleep disordered breathing in Hispanic groups,
 - Very little data on Pacific Islanders and American Indians.
 - Asians have similar or lower rates of OSA compared to White populations.
- We hypothesized that **there are different rates of polysomnography (PSG) and surgical/PAP treatment among racial groups in OSA, and that minority groups receive less diagnosis and treatment compared to White populations.**

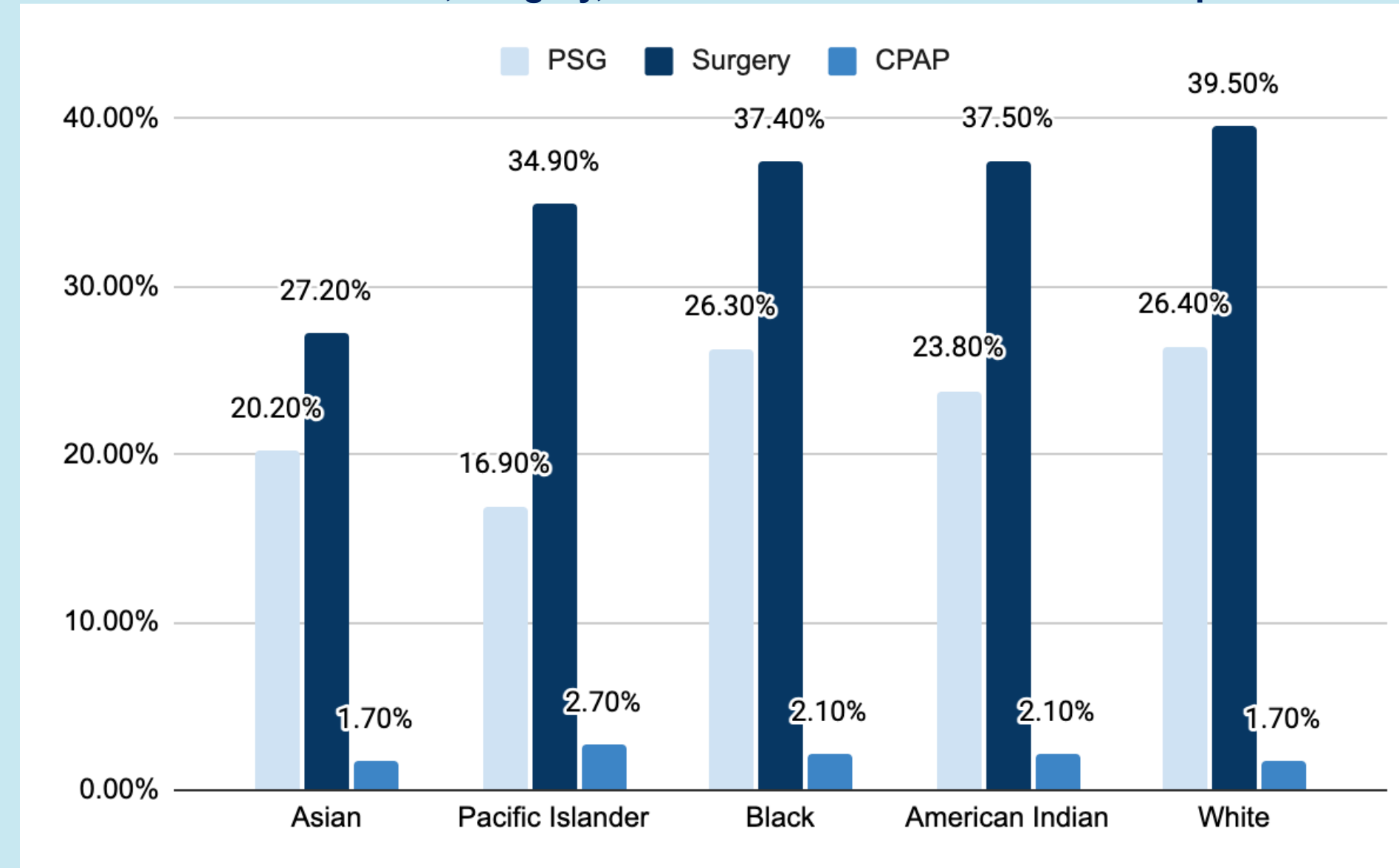
Methods

- We used the TriNetX national database to identify patients under the age of 22 with a diagnosis of OSA using ICD-10 codes.
- Primary endpoints included
 - Rates of PSG
 - Rates of tonsillectomy with and without adenoidectomy
 - Rates of CPAP
- Sub analysis was conducted across both race and ethnicity and controlled for confounders including BMI and other comorbidities.

Conclusion

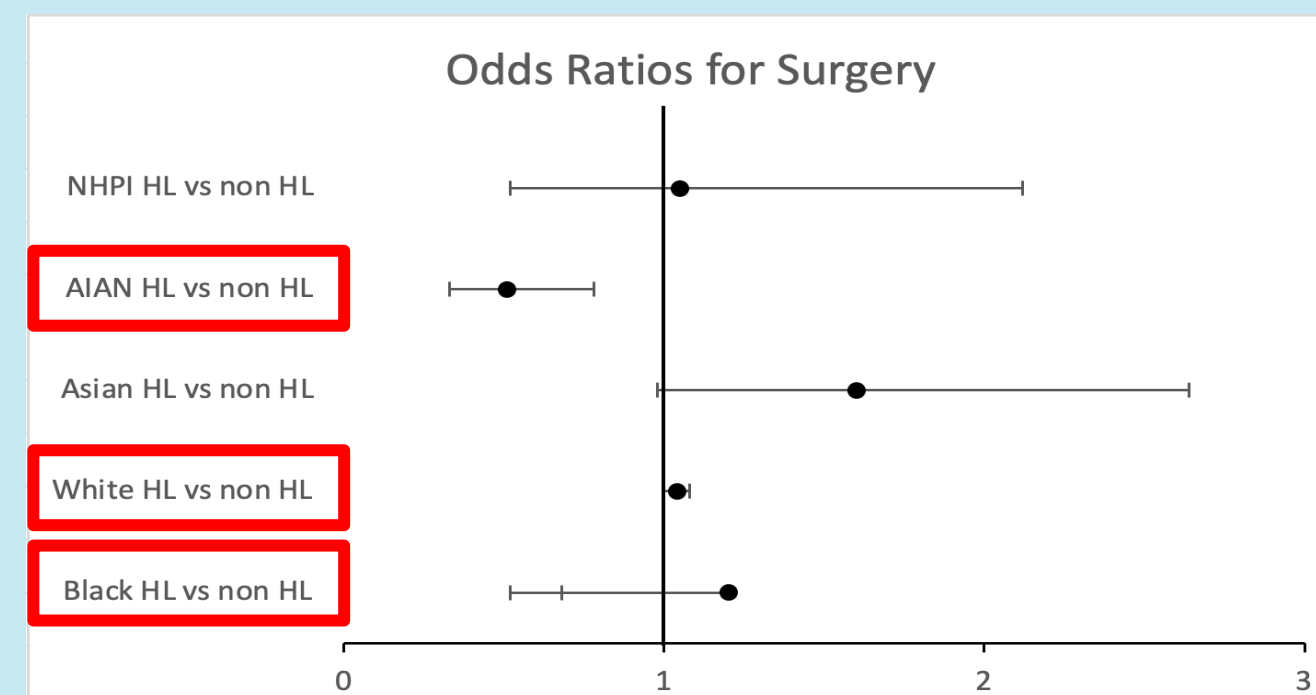
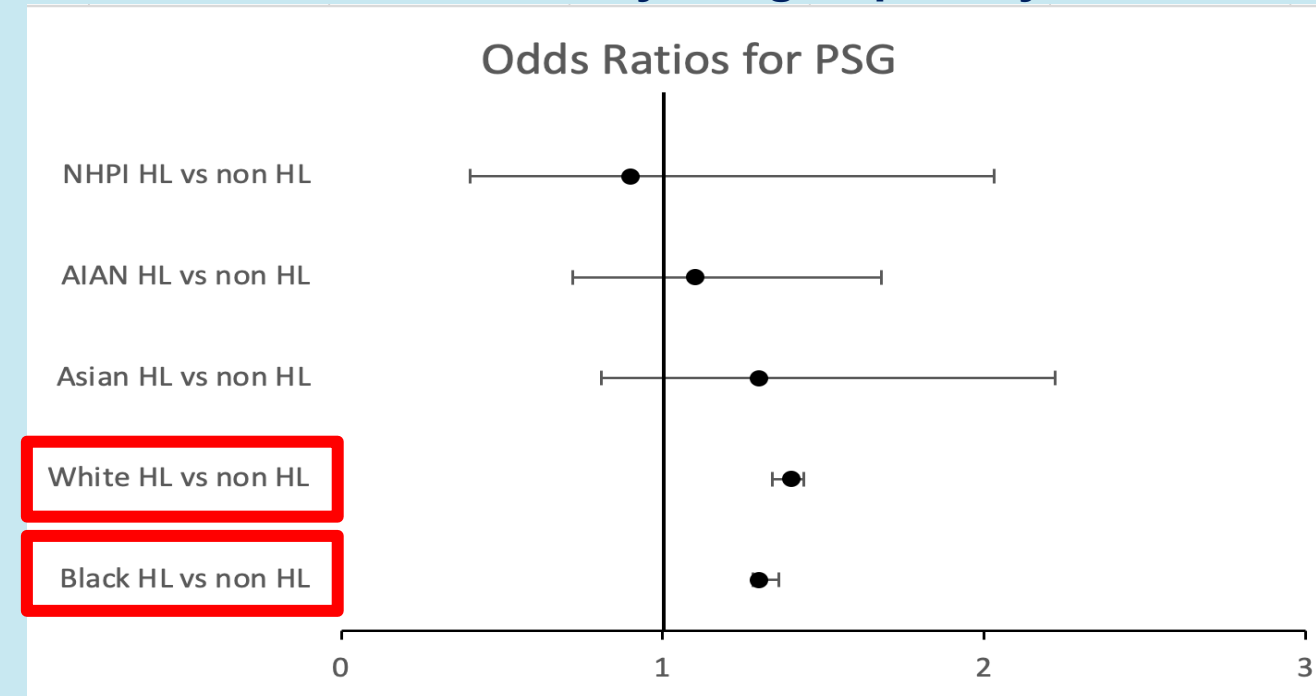
- There are differential rates of PSG and OSA treatment utilization when analyzed by race. Our results suggest a possible disparity in treatment. Given the importance of diagnosing and treating OSA early, more studies should be done to confirm this disparity and investigate the contributing factors.

Rates of PSG, Surgery, and CPAP Use Across Racial Groups



All p-values <0.0001

Effect of Ethnicity Subgroup Analyses



Results

- N=143,111 patients under the age of 22 years with OSA
- Similar rates of PSG and surgical treatment between Black and White patients.
- Pacific Islanders and American Indians had low PSG rates but highest rates of CPAP use.
- Fewer PSG and less treatment in Asians.
- Higher rates of PSG and lower rates of surgical treatment or CPAP use in Hispanic groups.
- Among Hispanic groups,
 - Black patients who also identified as Hispanic were 1.3 times more likely than non-Hispanic patients to receive PSG (p<0.001, 95%CI 1.28-1.36) and 1.2 times more likely than non-Hispanic patients to receive surgical treatment (p=0.004, 95%CI 1.06-1.36)
 - White patients who identified as Hispanic were 1.4 times more likely than non-Hispanic patients to receive PSG (p<0.001, 95%CI 1.34-1.44)
- Median time from diagnosis was significantly different among racial groups for those who received surgery (p<0.001) but not for CPAP initiation (p=0.17)

Time from Diagnosis to Treatment

	Age at PSG (Years)		Surgery (Months)		CPAP (Months)	
	Median	Range	Median	Range	Median	Range
American Indian	8.0	0-21	2.0	0-56.8	2.5	0-103.6
Asian	7.4	0-21	1.6	0-87.7	5.3	0-60.3
Black	7.5	0-21	1.5	0-125.3	2.9	0-120.2
Caucasian	7.6	0-21	1.3	0-160.7	3.6	0-134.7
Pacific Islander	7.2	0-20	1.0	0-48.3	6.4	0-48.6