

Endocrinology Practice Adherence to American Thoracic Society Guidelines: Unveiling Gaps in Obesity Hypoventilation Syndrome Screening

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BACKGROUND

The prevalence of obesity continues to rise, further increasing the risk of sleep-disordered breathing. To better diagnose and manage sleep-disordered breathing, the American Thoracic Society (ATS) released a clinical practice guideline in 2019. Although this guideline was published in 2019, it is unclear how often physicians follow or are aware of these recommendations.

METHODS

- 1. Collected patient EHR data from an outpatient endocrinology clinic
- 2. Enrolled adult patients between July 2018 -2023, with a BMI >40kg/m²
- 3. Statistical analyses included chi-square, t-test, and regression

RESULTS

- Out of the group with bicarbonate levels ≥27 mmol/L, 37.8% were referred to either sleep medicine or pulmonary services, while among those with bicarbonate levels <27 mmol/L, the referral rate was 33.0%.
- There were no significant differences in the frequency of referral to sleep medicine or pulmonary medicine, the completion of sleep studies, apnea/hypopnea index >5/hour or >10/hour, diabetes, or hypertension between subjects with bicarbonate levels ≥27 or <27 mmol/L.

DISCUSSION

Our results underscore a significant lack of awareness regarding the ATS recommendations within endocrinology practices.

We observed no statistical difference in referral frequency for sleep studies between individuals with elevated serum bicarbonate levels and those without. Furthermore, none of the patients underwent ABG testing in accordance with ATS guidelines.

	Bicarbonate ≥27 mmol/L	Bicarbonate <27 mmol/L	Chi-square	p
Referral				
No	813	640	3.36	NS
Sleep medicine	208	131		
Pulmonary	54	51		
Both	45	29		
Sleep study				
yes	86	60	0.57	NS
no	727	580		
AHI >5/hour				
yes	40	1		NS*
no	27	5		
AHI >10/hour				
yes	37	4		NS*
no	21	11		
Diabetes				
yes	389	281	2.24	NS
no	424	359		
Hypertension				
yes	381	270	3.17	NS
no	432	370		
*Fisher exact test. AHI = apnea/hypopnea index.				



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Aim: The objective of this study was to determine if individuals with severe obesity (BMI >40), who were referred to outpatient endocrinology and had a serum bicarbonate level ≥27 mmol/L, were correctly identified and directed to either pulmonary medicine or sleep medicine in accordance with ATS guidelines. Additionally, a secondary aim was to examine the percentage of obstructive sleep apnea (OSA) among patients undergoing sleep evaluation.

1,453 subjects referred to outpatient endocrinology between July 2018 – July 2023

813 had bicarbonate levels ≥27 mmol/L and 640 had bicarbonate levels <27 mmol/L

None had ABG testing in accordance with ATS guidelines.

Of those that received sleep studies, 95.8% were identified to have OSA.

We also observed a minor yet highly significant elevation in bicarbonate levels with increasing age (correlation coefficient 0.208, p < 0.0000001).

