



# Prevalence of obesity, obstructive sleep apnea and outcomes in patients with sleep-disordered breathing who presented for polysomnography in a tertiary hospital in Sub-Saharan Africa.

Maseno S<sup>1</sup>, Sokwalla S<sup>2</sup>, Shah J<sup>2</sup>, Bwika J<sup>2</sup>.  
Department of Medicine, Aga Khan University Hospital, Nairobi, Kenya.

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## BACKGROUND

- There is a rising prevalence of obesity and OSA globally and in Africa.
- 1 in 8 people in the world are obese and the global prevalence of OSA is estimated at 1 billion people.
- OSA is an independent risk factor for cardiovascular morbidity and mortality.
- Treatment using CPAP lowers morbidity and mortality rates.

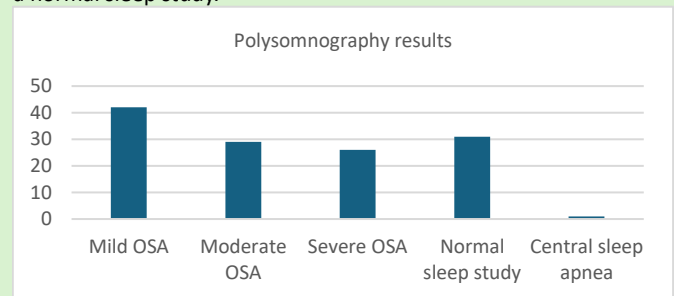
## METHODS

- We carried out a retrospective cross-sectional study of 129 adult patients who presented for polysomnography with symptoms of sleep-disordered breathing at the Aga Khan University Hospital, Nairobi from November 2021 to April 2024.
- Our objective was to assess the prevalence of obesity, obstructive sleep apnea and outcomes in these patients.
- Pregnant patients and those who weighed less than 40kgs were excluded.
- Sample size was calculated as 80 patients based on the prevalence of obesity in Kenya to power the study at 80%.
- Data on variables was obtained from electronic medical records based on the abstraction tool.

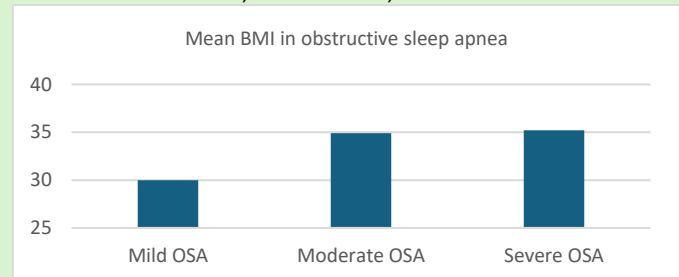
## PRELIMINARY FINDINGS

n=129; 61.2% of patients were male while 38.8% were female. 86% were black; 9.3% were Asian; 4.7% were Caucasian.

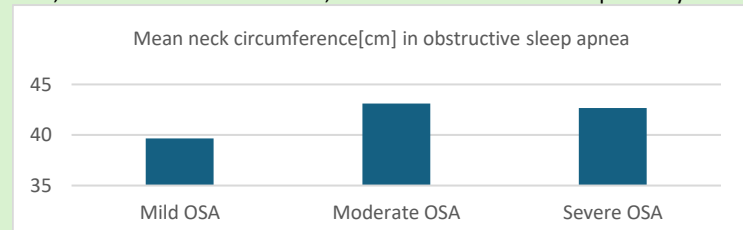
Graph 1: 32.56% of patients had mild OSA; 22.48% of patients had moderate OSA; 20.16% of patients had severe OSA. 24.03% of patients had a normal sleep study.



Graph 2: In patients with mild OSA, the mean BMI was 30; moderate OSA, the mean BMI was 34.9; in severe OSA, the mean BMI was 35.2.



Graph 3: The mean neck circumference was 39.65cm in those with mild OSA, 43.11 cm in moderate OSA, 42.67 cm in severe OSA respectively.



In mild OSA, the average HBAIC was 6.5% and in moderate to severe OSA the average HBAIC was 6.7%. 53.94% of patients with OSA had systemic arterial hypertension and 8.5% had coronary artery disease.

## INTERPRETATION

- Majority of the patients who presented with sleep-disordered breathing were male, black and had OSA.
- There was increasing BMI and neck circumference with increasing severity of OSA.
- Patients with mild OSA were noted to average in the prediabetic range while those with moderate to severe OSA were noted to average in the diabetes mellitus range as per HBAIC.
- More than half of patients with OSA were noted to have systemic arterial hypertension.
- This informs clinicians on the group of patients who should be assessed for OSA and started on CPAP.