

### 7.11 Prevalence of COPD-OSA Overlap Syndrome in Mayo University Hospital

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**Background:** Overlap Syndrome (OS) describes to co-existence of Obstructive Sleep Apnoea (OSA) and Chronic Obstructive Pulmonary Disease (COPD). Reported prevalence of OS ranges from 10-65% (1-3). Patients often experience more profound nocturnal desaturations compared to those with OSA or COPD alone. The subsequent hypoxia and systemic inflammation increase exacerbation and cardiovascular disease risk, thereby increasing OS-associated mortality (4). Our goal was to determine the prevalence of OS in Mayo University Hospital (MUH) and analyse clinical characteristics associated with OS.

**Methods:** Retrospective data was collected between January 2013 and December 2023. Patients diagnosed with moderate to severe OSA (AHI>15) by limited sleep study (LSS) were included in the analysis. Charts and PFT reports were reviewed to confirm a coexisting diagnosis of COPD. **Results:** In total, 506 patients underwent LSS, 224 confirmed moderate-to-severe OSA. Patient cohort was predominantly male (n=166,74%) with elevated BMI (M=39.5kgs/m<sup>2</sup>, SD=8.4). They were divided into 3 groups; Group1, OS confirmed (n=56,25%), Group2, OS not confirmed (n=130,58%), and Group3, OSA only (n=38,17%). In Group 1, mean FEV<sub>1</sub> was 64.9%, GOLD Stage 2 COPD. Group 2 smokers (n=19) were highlighted as high-risk OS. **Conclusion:** The results show prevalence of 25%, confirmed OS within MUH cohort. It is crucial for clinicians to diligently evaluate high-risk patients for OS as treatment reduces symptoms, exacerbations, and improves quality of life. **Keywords:** COPD-OSA Overlap Syndrome, Obstructive Sleep Apnoea, Chronic Obstructive Pulmonary Disease **Disclosures:** The authors declare that they have no conflict of interest

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