Results Of 141 patients, there was a two-thirds male predominance, and half of the patients (56%) above 45 years of age and sleepy at baseline (Epworth Sleepiness Score >10, 48.9%). 114 patients (81%) were diagnosed with moderate or severe OSA. 54 patients (38.3%) achieved good adherence (≥70% of nights with ≥4 hours usage), with an average of 4.7 hours of PAP usage per night used. Patients receiving FTF PAP education had a comparable level of good adherence (38.03% versus 38.57%, p=0.915), and hours per nights used (4.76 versus 4.61 h/night, p=0.711) to remotely educated patients. More severe OSA, lower mask leak, and a nasal mask were associated with achieving good PAP adherence.

Discussion PAP adherence of newly diagnosed individuals with OSA during the COVID-19 pandemic was modest at 38.30%, and not significantly affected by remote PAP education delivery, but rather the effects of the COVID-19 pandemic.

13 THE EFFECT OF CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) ON KEY PLASMA METABOLITES IDENTIFYING OBSTRUCTIVE SLEEP APNOEA HYPOPNOEA SYNDROME (OSAHS)

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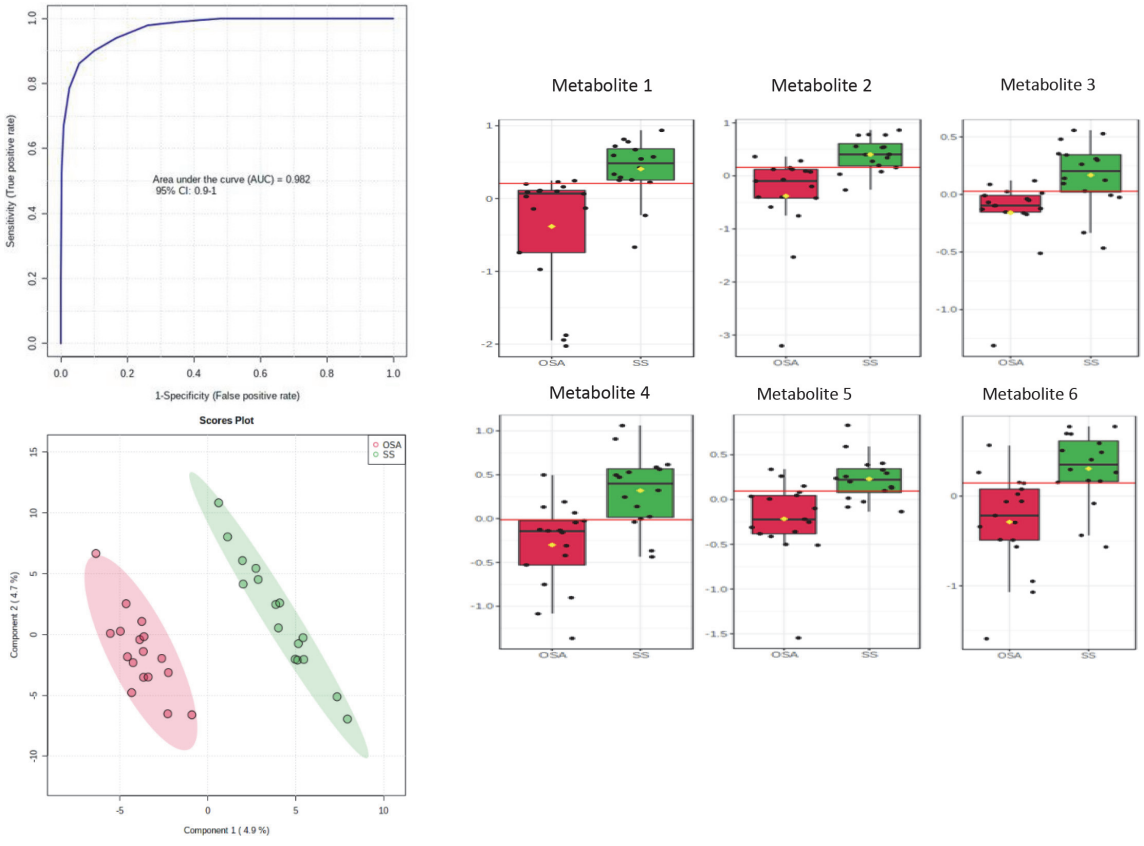
We recently applied untargeted metabolomic profiling on the plasma obtained from consecutive attenders referred for conventional Level 3 home-sleep studies with excessive daytime somnolence, comparing 17 OSAHS patients (AHI≥15, Epworth Score 13.5±4.5) with 16 age, gender, and BMI matched sleepy subjects (sleepy snorers (SS)) with negative home polysomnography tests (AHI<15, Epworth Score 12.1 ±7.0).[1]

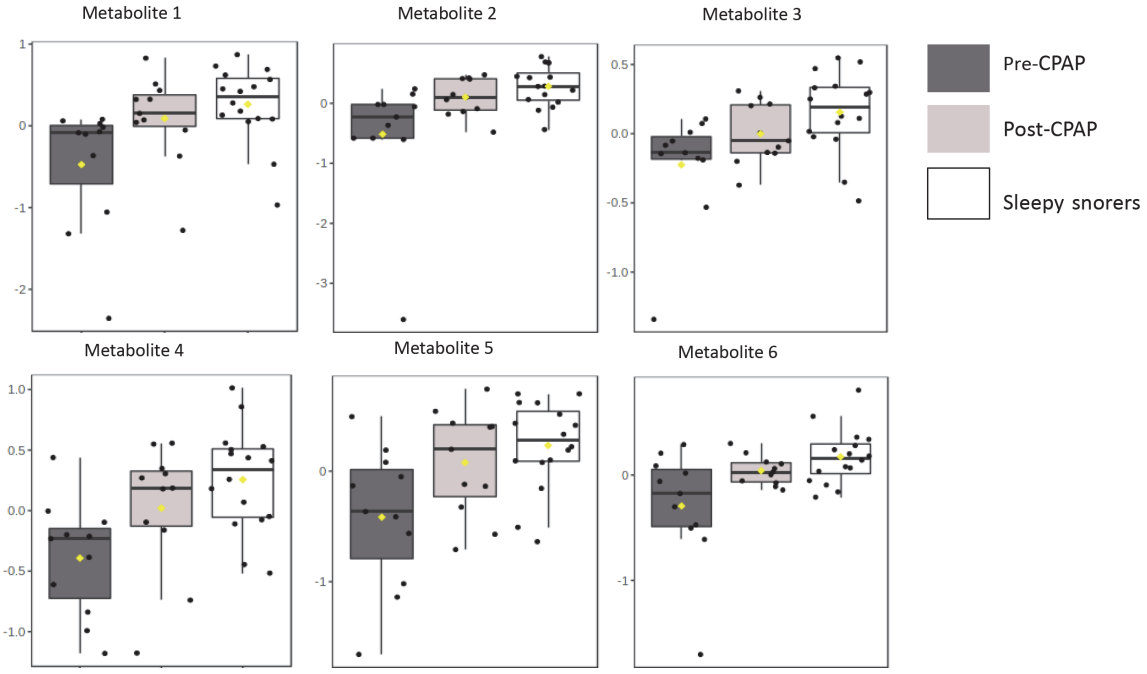
We reported 6 biologically plausible plasma metabolites that can differentiate OSAHS from SS of similar phenotype with an AUC of 0.982 (95% CI: 0.9-1.0) (figure 1), with these key metabolites being essential lipids involved in protein synthesis and the formation of antioxidative, antiglycating, and free radical scavenging dipeptides. We now report early changes in these biomarkers following CPAP in those with OSAHS.

11 OSAHS patients with AHI≥15 (63.6% male, Age 54.4 ±6.9, BMI 34.2±4.0, AHI 47.6±25.6, Epworth 13.7±4.8) were commenced on standard auto-adjustment CPAP devices (Phillips DreamStation set at 4 to 18 cm H2O). Mean use of CPAP was 6.6±1.4 hours and average residual AHI was 6.9 ±6.0. Plasma was sampled pre and post treatment (42-70 days treatment), and metabolomically assessed using the Q Exactive Hybrid Quadrupole-Orbitrap mass spectrometry platform. 16 sleepy snorers with AHI<15 (75.0% male, Age 46.1 ±12.5, BMI 34.6±5.9, AHI 6.8±4.4, Epworth 12.1±7.0) were sampled at baseline only.

Our previously reported biomarkers associated with processes such as oxidative stress, inflammation, and dysregulation of energy homeostasis improve with short-term treatment with CPAP towards the level of sleepy snorers of similar age, phenotype, and no OSAHS (figure 2). We feel these metabolites have significant potential in the future care pathways of



Abstract 13 Figure 1 Metabolomic discrimination between the plasma of OSAHS and SS patients



Abstract 13 Figure 2 Changes in key metabolites after period of CPAP

OSAHS, and could reflect the cardiometabolic risk associated with OSAHS better than current diagnostic modalities.

REFERENCE

1. O'Rourke, et al. Plasma metabolomics identifies OSAHS. ERS Congress 2021.

14 NON-INTERVENTIONAL, QUALITATIVE STUDY ASSESSING PATIENT PERSPECTIVES OF THE BURDEN OF EXCESSIVE DAYTIME SLEEPINESS IN OBSTRUCTIVE SLEEP APNOEA

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Introduction Many patients with obstructive sleep apnoea (OSA) experience excessive daytime sleepiness (EDS) despite primary airway therapy. This study aimed to understand the burden of EDS in European adults with OSA who received primary airway therapy.

Methods Non-interventional, qualitative study in patients with EDS in OSA, from the UK, Germany, and Spain. Post-IRB approval, patients with self-reported OSA were recruited via patient panels. Eligible patients had Epworth Sleepiness Scale (ESS) score ≥10, self-reported adequate nightly sleep, current/past primary airway therapy, and no other self-reported EDS-associated conditions. Patients completed a quantitative pre-interview questionnaire and a qualitative, semi-structured telephone interview.

Results Fifteen patients (n=5/country; 60% female; mean age, 48.7 years; mean years since OSA diagnosis, 7.7) were included. Six of 8 current positive airway pressure (PAP) users were compliant (≥4 h, 7 nights/wk); 6 of 7 non-PAP users had prior airway surgery. Mean ESS score was 14.5; 60% of those without an EDS diagnosis reported discussing EDS with their doctor. Patients experienced broadly consistent negative impacts from EDS, including physical functioning (n=15), daily life activities (n=15), work/study habits (n=14), emotional (n=15), social life (n=14), and cognition (n=13). No between-country differences were observed.

Discussion Findings demonstrate the patient-perceived burden of residual EDS in OSA. Forty percent of patients without an EDS diagnosis did not discuss EDS with their doctor despite daily impacts.

15 A REAL-WORLD STUDY ASSESSING THE RELATIONSHIP BETWEEN POSITIVE AIRWAY PRESSURE TREATMENT, EXCESSIVE DAYTIME SLEEPINESS, AND PATIENT SATISFACTION IN OBSTRUCTIVE SLEEP APNOEA

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Introduction Excessive daytime sleepiness (EDS) persists in some positive airway pressure (PAP)-treated patients with obstructive sleep apnoea (OSA). This study examined prevalence and severity of EDS in a real-world population with OSA to understand how EDS, PAP adherence, and patient satisfaction with care relate.

Methods US-resident adults (self-reported clinician OSA diagnosis [1/1/2015-31/3/2020]) were surveyed (Epworth Sleepiness Scale [ESS], PAP usage, and patient satisfaction) in Evidation Health's Achievement app. Self-reported PAP use was categorised: nonuse, nonadherent (<4 h/night or <5 d/wk), intermediate (4-6 h/night, ≥5 d/wk), or highly adherent (≥6 h/night, ≥5 d/wk). ESS>10 defined EDS. In PAP users, a linear model tested whether PAP use and ESS score relate; logistic regression models tested how PAP use (nonadherence=0,