Abstract 52 Table 1 CPAP compliance (% of usage >4 hours per night) and average hours of CPAP use per night in both study groups

|                          | Pre-COVID group | Post-COVID group | P value |
|--------------------------|-----------------|------------------|---------|
| Number of patients       | 110             | 98               |         |
| Median                   | 38.50           | 37.00            | 0.141   |
| IQR                      | 69              | 85               |         |
| Average CPAP use (in hours) | 3.02           | 4.46             | 0.034   |

Abstract 52 Table 2 CPAP compliance (% of CPAP usage >4 hours/night) across the categories

|                          | Pre-COVID group | Post-COVID group |
|--------------------------|-----------------|------------------|
| Gender                   |                 |                  |
| Male                     | 36.0, 61        | 55.0, 84         | 0.99    |
| Female                   | 30.0, 77        | 70.0, 87         |         |
| Ethnicity                |                 |                  |
| British white            | 47.0, 70        | 63.0, 77         | 0.347   |
| East Asian               | 36.5, 99        | 74.5, 74         |         |
| Other white              | 35.0, 92        | 80, 80           |         |
| Not stated               | 15.0, 32        | 35.0, 92         |         |
| Anti-depressant          |                 |                  |
| Not on antidepressants   | 33.0, 63        | 55.0, 85         | 0.94    |
| On antidepressants       | 69.0, 71        | 63.0, 76         |         |
| Daytime sleepiness       |                 |                  |
| ESS ≤ 10                 | 27.5, 51        | 63.0, 81         | 0.722   |
| ESS > 10                 | 51.0, 74        | 42.0, 90         |         |
| OSA severity             |                 |                  |
| Mild OSA                 | 22.0, 60        | 78.0, 97         | 0.24    |
| Moderate OSA             | 27.0, 63        | 37.0, 92         |         |
| Severe OSA               | 35.5, 76        | 31.0, 71         |         |

Abstract 53 Figure 1

This study aims to add to previous evidence that SMA type II patients have respiratory events (we defined them as ‘pseudo-obstruction’ which do not conform to the current AASM guidelines for obstructive or central events. They are the result of paradoxical breathing and REM-related shallow breathing.

Methods Respiratory events were defined as either ‘obstructive apnoea’ (OA), ‘central apnoea’ (CA), ‘central hypopnoea’ (CH), ‘obstructive hypopnoea’ (OH) as per AASM guidelines. We additionally defined the criteria for ‘pseudo-obstruction’ (PO) based on previous publications (figure 1).1

Trained sleep physiologists were provided 8 ‘test’ epochs randomly chosen from either SMA II or other patients. Physiologists were asked to designate the respiratory events they deemed most appropriate for each epoch, blind to diagnosis of the patient. Interscorer reliability tests were performed against the gold standard for each event. Results The average concordance with the gold standard was 73% overall. It was mildly reduced to 67% when looking specifically at POs.

We are currently evaluating whether disease progression is associated with an increase in POs by looking at subsequent yearly sleep studies of 10 SMA II and 1 SMA I patient, self-ventilating in room air, across a 3-year period. Discussion Future efforts will aim to look more closely at inter scorer reliability. Recognising these pseudo-obstructive events may influence treatment.2 Additionally, if these events correlate along the motor and respiratory deterioration, they can be used as markers of response to overnight ventilation and, more importantly, to new available treatments.

REFERENCES
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Abstract 54

SLEEP SPINDLES AS A BIOMARKER FOR ALPHA-SYNUCLEINOPATHIES IN RAPID EYE MOVEMENT (REM) BEHAVIOUR DISORDER (RBD)

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Introduction Idiopathic rapid eye movement behaviour disorder (iRBD) is a strong predictor for the development of alpha-synucleinopathies. Electroencephalographic (EEG) oscillations known as sleep spindles are found during non-rapid eye movement sleep. These bursts of neural oscillatory activity are