11.02 Implementing SleepHalo as a clinical decision support system (CDSS) for non-compliant complex Continuous positive Airway Pressure (CPAP) therapy cases.

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Background: Patients reject CPAP due to difficulty tolerating the treatment and other complex reasons. SleepHalo is a commercially available CDSS used with any CPAP device. We investigated the use of the SleepHalo service as an interventional tool in five complex patients attending the CPAP review clinic at Connolly hospital.

Methods: Patients (2F:3M) with poor compliance were included. Multiple interventions over 6 months by CPAP suppliers and clinical physiologists failed to improve compliance. SleepHalo devices attached to CPAP devices facilitated data transmission accessible to the clinic. The SleepHalo patient service provided continuous support; patient home visit, nasal assessment, standardised CPAP settings, re-titration period followed by recommendations on therapy and personalised settings to increase individuals comfort on therapy. SleepHalo data is standardised to correct for cpap software bias, also provides unique environmental data and patient self-management via text/phone support.

Results:

Compliance	Main changes
1/5 no improvement 3/5 fully compliant 1/5 increased compliance (0% to 47%)	Mask change 5/5 Humidity correction 5/5 Room temperature issues 2/5 Pressure optimisation 3/5

Conclusion: Access to detailed therapy data and timely intervention tailored to the patient is critical to success. Mask fit, humidity, bedroom temperature, pressure optimisation are key factors identified as contributors to improving CPAP compliance.

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