

The Benefits of Remote Monitoring of Patients with Obstructive Sleep Apnoea (OSAS): A “pilot” evaluation of the cost benefits for the patient and clinical service.

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INTRODUCTION: Adherence to Positive Airway Pressure therapy (PAP) remains a clinical issue in the treatment of OSAS. The emergence of remote monitoring (RM) has notably improved existing therapies, although potential benefits of RM compared to standard therapy (FPAP) on patient's quality of life (QoL) and clinical service provision remains unclear. We aim to evaluate benefits on: a) patient QoL and b) clinical service of employing RM to OSAS patients compared to current approaches.

METHODS: 22 new patient (≥ 18 yr, 10 RM), with OSAS ($AHI \geq 15$ events/hr; $ESS > 10$), were prescribed either FPAP or a RM PAP (RemStar Pro CFlex+). Both FPAP and RM had therapeutic pressures defined by Stradling et al¹. Patient benefit was evaluated by PAP adherence and changes QoL measures (SAQLI & EQ5D), with “time-on-task” analysis used to evaluate the service provision after 31 days of treatment. An unbalance ANOVA was used to provide statistical comparisons between RM & FPAP populations.

RESULTS: Baseline measures were comparable between FPAP and RM patients, although the RM group had more SDB events, a raised BMI and neck circumference compared to FPAP. Of QoL measures, changes in social interactions and total SAQLI domains revealed statistical differences, although improvements were evident in all measures. Adherence was higher in FPAP patients, with fewer missed nights, higher average nightly usage and more nights with greater than 4hrs usage. Task analysis revealed more technologist time was spent on telephone calls to RM patients, with more unscheduled clinical reviews, but less time being spent on problem resolution, general administration and fewer non-attended appointments (DNA's) in this group.

CONCLUSIONS: QoL measures were largely equivalent between therapies (RM & FPAP). However, reductions in the number of visits and time spent on clinical reviews will provide some benefit to patients. Benefits to a clinical service may be defined by reductions in procedures/attendance and service efficiencies.

References

- 1) Stradling, JR, Hardinge, M, Paxton, J, et al Relative accuracy of algorithm-based prescription of nasal CPAP in OSA. Respir. Med 2004; 98,152-154