

# European Respiratory Society Annual Congress 2013

**Abstract Number:** 2360

**Publication Number:** P2042

**Abstract Group:** 4.2. Sleep and Control of Breathing

**Keyword 1:** Telemedicine **Keyword 2:** Sleep disorders **Keyword 3:** Nursing care

**Title:** Telemonitoring of CPAP therapy saves nursing time

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**Body:** We compared telemonitoring with regular nursing procedure in terms of patient satisfaction, CPAP adherence and nursing time during the habituation phase of the CPAP therapy in OSAS. After CPAP titration at home, patients were randomized to the telemonitoring (TM) or the control group (CTRL). TM used S9 Elite® (ResMed, Australia) fixed pressure CPAP device with wireless, remote monitoring system (ResTraxx Online System®, ResMed, Sydney, Australia), and CTRL similar CPAP devices without telemonitoring. After telemonitoring, first control was scheduled one year ahead at sleep nurse (76%) or within 4 months at doctor's office when needed (24%). CTRL had their first control visit within 4 months at doctor's office after commencing treatment with fixed pressure CPAP device. Both groups were encouraged to call the sleep nurse during the habituation phase, if running into problems with treatment. In TM, 42 patients have completed telemonitoring and in CTRL, 30 patients have had the first control visit. Mean age, BMI, sleepiness, or severity of OSAS did not differ between the groups. Both groups were satisfied with patient education and support and the timing of the first control visit. TM considered less frequently control visit at doctor's office necessary than CTRL (25.0% vs. 84.0%,  $p=0.0019$ ). Hours of nightly CPAP use increased similarly during telemonitoring or regular habituation phase prior to the first control in both groups (26.8 min vs. 24.6 min,  $p=0.923$ ). Median nursing time per patient was 14.8 (range 9.5-143) min in TM vs. 40 (40-100) min in CTRL ( $p<0.0003$ ). Telemonitoring was shown to save nursing resources during the habituation phase of the CPAP therapy. Acknowledgements: ResTraxx Online System® provided by ResMed Finland.