

## I.1 Interventions to improve CPAP adherence

**Research question:** Which interventions including behavioural interventions are clinically and cost-effective to improve adherence of CPAP in people with OSAHS, OHS and COPD-OSAHS overlap syndrome who have difficulty using CPAP?

### Why this is important

When CPAP is used to overcome upper airway obstruction in people with OSAHS, OHS or COPD-OSAHS overlap syndrome, regular nightly use is essential in order for it to be effective. For patients to adapt to using this physical therapy each time they sleep, they require education from trained sleep professionals, access to support in the early adaptation period and clinical review to optimise aspects such as machine pressure, mask fit and humidification.

For people who continue to find CPAP difficult to use despite this input, there have been no randomised controlled trials to determine an effective universal approach to improve ongoing CPAP use. Current research is limited to all people commencing CPAP and not just those who experience difficulties.

If people stop using CPAP, they are no longer having the optimal therapy for their airway obstruction and this has health and economic impacts.

### Criteria for selecting high-priority research recommendations:

<b>PICO question</b>	Population: Adults with OSAHS (any severity), OHS or COPD-OSAHS overlap syndrome who have been initiated on CPAP therapy but having difficulty with use of CPAP regularly (such as less than 3 hours/night on 5 nights or more in preceding month) Intervention(s): Psychological and/or behavioural intervention Comparison: Usual care Outcome(s): CPAP adherence (hours/night), ESS, quality of life, cost
<b>Importance to patients or the population</b>	This research would establish whether those people who find CPAP difficult to use regularly who are given appropriate support can increase CPAP use and therefore improve their sleep and quality of life. Potentially the numbers of patients giving up CPAP in the short term would decrease, the numbers of people using CPAP long term would increase. The numbers of people seeking alternative treatments for OSAHS, OHS and COPD-OSAHS overlap syndrome instead of CPAP would decrease. Long term health benefits from CPAP would potentially increase.
<b>Relevance to NICE guidance</b>	Future NICE guidance can give specific recommendations regarding which interventions to use to optimise CPAP use and reduce existing uncertainty.
<b>Relevance to the NHS</b>	A clear recommendation for a behavioural or psychological intervention will offer clinicians clear guidance on best care for optimising CPAP adherence. This is likely to be provided by training existing sleep teams in best practice and will therefore not have impact in terms of more equipment being required or more staffing. Service delivery will be affected as it is likely a new intervention would take more time for existing staff.
<b>National priorities</b>	None
<b>Current evidence base</b>	The current evidence is reviewed in Evidence report N the full guideline. Current research is limited to all people with moderate and severe OSAHS commencing CPAP and not just those who experience difficulties and

	there is no research in people with OHS or COPD-OSAHS overlap syndrome commencing CPAP.
<b>Equality</b>	The recommendation is unlikely to impact on equality issues.
<b>Study design</b>	Randomised controlled trial with economic analysis. There should be randomisation with minimisation to allow separate subgroups of people with: OSAHS, OHS, COPD-OSAHS overlap syndrome to be allocated equally across the intervention and control arms and power calculations will determine size of these subgroups to allow comparisons.
<b>Feasibility</b>	The trial is feasible and should be straightforward to carry out. The control group will reflect usual clinical care which is currently given at sleep centres.
<b>Other comments</b>	The trial may attract commercial funding from companies who provide CPAP.
<b>Importance</b>	Medium: the research is relevant to the recommendations in the guideline, but the research recommendations are not key to future updates.