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# Patient motivation ranked by caregivers at continuous positive airway pressure initiation is predictive of adherence and 1-year therapy termination rate

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## Abstract

### Purpose

In patients diagnosed with obstructive sleep apnea (OSA), continuous positive airway pressure therapy (CPAP) is effective in reducing symptoms and improving quality of life. However, poor mid- to long-term adherence and high termination rates are a problem. We asked whether or not patient motivation at CPAP initiation was associated with 15-day and 1-year CPAP adherence and termination rates.

## Methods

In this nationwide multicenter observational study, individual patient motivation for achieving CPAP adherence was subjectively evaluated at the time of CPAP set-up by the home-care provider's technician on a simple scale (low, average, good, very good). Then, adherence and CPAP termination rates were objectively monitored via the home-care provider's CPAP remote monitoring platform at 15 days and 1 year.

## Results

A total of 10,450 adults with OSA initiating CPAP were included by 36 centers. CPAP adherence at day 15 was significantly different between the low and the very good motivation groups: 5.4 [3.2; 6.9] hours and 6.0 [4.2; 7.3] hours per night respectively. In the 72.0% of patients using CPAP at 1 year, CPAP adherence was 5.2 [3.1; 6.7] and 5.5 [4.0; 7.0] hours per night in the groups with low and very good motivation respectively. Therapy termination rates at 1 year were 14.6% in the low motivation group and 8.0% in the very good motivation group.

## Conclusion

Our study suggests that motivation of patients with OSA estimated by caregivers at CPAP initiation using a simple four-item ranking is associated with CPAP adherence and primary therapy termination rates during the first year of treatment.

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## Data availability

The de-identified data underlying this article will be shared on reasonable request to the corresponding author and the signing of a contract.

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### Contributions

Study conception and design: all authors; data acquisition and analysis: JD and SB; interpretation of results: all authors; article drafting: JLP and JD; manuscript revision: all authors.

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### Ethics declarations

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### Competing interests

C. Mouroux and S. Foury are employees of LVL Medical a national home-care provider in France. J. Duval’s research is in part supported by LVL Medical.

### Consent

All patients signed an informed consent form for reuse of their de-identified data, including remote monitoring data, for research purposes (French data-privacy agency

(CNIL) no. 1167578-v0).

## Ethics

The study conformed to the principals outlined by the Declaration of Helsinki and adhered to French regulations for biomedical research involving humans.

## Ethical approval

Was waived for this observational study in accordance with French law (item L 1123–7 of “Code de la Santé Publique – CSP”), the French “Comités de protection des personnes (CPP),” and Rhône-Alpes–Auvergne inter-region CIC–Ethics committee (IRB no. 5921).

## Additional information

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Jérémy Duval and Clémentine Mouroux are co-first authors who have contributed equally to the manuscript.

Jean-Louis Pépin and Sébastien Bailly are co-senior authors.

## Supplementary Information

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Below is the link to the electronic supplementary material.

[Supplementary file1 \(DOCX 22 KB\)](#)

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