

Algorithm-based validation of sleep apnea treatment lessons from primary care after one year

Clinical improvement was not sufficient to reverse algorithm-based rejection

D. Cugy – UHCC – SUMS CHU Pellegrin – Bordeaux France

WHY THIS MATTERS

Primary care physicians are responsible for interpreting symptoms, evaluating treatment benefit over time, and maintaining continuity of care in complex real-life situations.

When algorithm-based administrative decisions prevail despite documented clinical improvement, clinicians may experience a loss of therapeutic agency and difficulty maintaining patient-centred care.

Delayed or interrupted treatment may particularly affect vulnerable patients with multimorbidity or cognitive impairment.

The distinction between decision-support systems and actual medical decision-making may become unclear in complex clinical situations.

CONTEXT

Since June 2024, sleep apnea treatment prescriptions in France have been validated through a national digital decision-support system based on HAS threshold criteria.

While the algorithm aims to standardize care and control costs, it appears insufficiently adapted to complex real-life situations

General practitioners remain responsible for:

- longitudinal follow-up,
- evaluation of treatment benefit,
- contextual clinical interpretation,
- and patient-centred care.

The screenshot shows a web-based form for sleep apnea treatment prescriptions. It includes sections for 'EXAMEN RÉALISÉ' (Exam performed) with radio buttons for 'Polysomnographie' and 'Polygraphie', 'SYMPTÔMES CLINIQUES ET PATHOLOGIES' (Clinical symptoms and pathologies) with checkboxes for various symptoms and conditions, 'TRAITEMENT PRÉSCRIT' (Prescribed treatment) with radio buttons for 'Traitement par Pression Positive Continue (PPC)' and 'Traitement par Orthèse d'Avancée Mandibulaire (OAM)', and 'JUSTIFICATION DU TRAITEMENT PRÉSCRIT' (Justification of the prescribed treatment).

METHODS

Retrospective review of electronically submitted sleep apnea treatment prescriptions between June 2024 and September 2025 using the French national Ameli-Pro validation system.

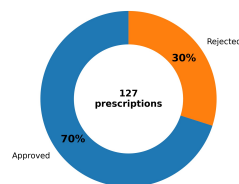
Algorithm-based decisions, clinical profiles, appeal procedures, and administrative outcomes were analysed, with particular attention to complex primary care situations.

RESULTS

127 electronically submitted prescriptions were analysed.

- 89 approved prescriptions (70%)

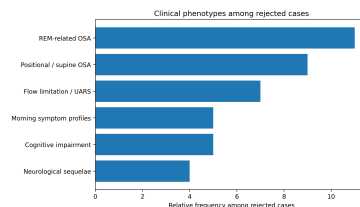
- 38 rejected prescriptions (30%)



Rejected cases frequently involved clinical phenotypes in which global AHI may underestimate disease burden:

- REM-related OSA,
- positional / supine OSA,
- flow limitation syndromes,
- cognitive and neurological phenotypes.

Several rejected patients nevertheless demonstrated clinically meaningful improvement under CPAP treatment.



Appeal procedures relied primarily on the initial algorithm-based assessment and did not integrate longitudinal clinical improvement observed in primary care. No direct clinical reassessment was performed during several appeal procedures.

CLINICAL CASE

CASE 1 - Persistent rejection despite documented clinical improvement

Mme B. 81-year-old woman with cognitive decline

- Daytime sleepiness, morning confusion, cognitive impairment

•Global AHI: 9/h

•REM-related respiratory events: 27/h during REM sleep

•Altered sleep architecture

CPAP treatment was initiated because of clinically significant symptoms and REM-related respiratory events.

Follow-up documented:

- improved attention and verbal fluency,
- reduced daytime sleepiness,
- disappearance of morning confusion.

GP follow-up certificate

"This represents a clear clinical improvement observed during follow-up consultation... It appeared essential for her to continue this treatment."

Administrative outcome

- Reimbursement repeatedly denied
- Appeal rejected
- No direct clinical reassessment performed
- Initial algorithm-based assessment remained determinant

GP follow-up certificate

Extract from the general practitioner follow-up certificate documenting clinical improvement under CPAP treatment.

"This represents a clear clinical improvement observed during follow-up consultation, with better attention and verbal fluency. It appeared essential for her to continue this treatment."

— General practitioner follow-up certificate (Aug 2024)

CASE 2 - Delayed approval in a predominant morning symptom phenotype

M. G 61 years old man

•Severe OSA (AHI >30/h)

•Limited daytime functional complaints

•Predominant morning symptoms profile

Administrative course

- Initial algorithm-based rejection
- Treatment later accepted after reassessment
- No reimbursement during the interim period

Consequences

- Temporary interruption in care continuity
- Delayed therapeutic stabilisation
- Increased medico-administrative burden

Administrative delays may themselves become a source of therapeutic disruption.

DISCUSSION / TAKE HOME MESSAGE

Threshold-based administrative systems may insufficiently reflect:

- clinical complexity,
- longitudinal therapeutic evolution,
- individualised medical assessment.

Complex primary care situations may challenge the distinction between decision-support tools and actual medical decision-making.

Primary care cannot always be reduced to numerical thresholds.

Bibliography :

Mokhlesi B, Punjabi NM. REM Sleep and Obstructive Sleep Apnea: Clinical Implications. *Chest*. 2012;142(6):1679–1686. doi:10.1378/chest.11-3158

Joosten SA, O'Driscoll DM, Berger PJ, Hamilton GS. Supine position related obstructive sleep apnea in adults: pathogenesis and treatment. *Sleep Med Rev*. 2014;18(1):7–17. doi:10.1016/j.smrv.2013.01.005.

Guilleminault C, Chowdhuri S. Upper Airway Resistance Syndrome Is a Distinct Syndrome. *Am J Respir Crit Care Med*. 2000;161(5):1412–1413. doi:10.1164/ajrccm.161.5.16157.

No conflict of interest - No specific funding

30TH WONCA EUROPE CONFERENCE 2026

June 30th - July 3rd 2026 - PARIS, FRANCE

