

## EDITORIAL

## Adherence to medical treatment among chronically ill patients: use of positive airway pressure therapy

*Adherencia al tratamiento médico en pacientes crónicos: uso de la terapia de presión positiva en la vía aérea*



Open access

**How to cite:** Escobar-Córdoba F, Liendo C, Sanabria-Rodríguez O. Adherence to medical treatment among chronically ill patients: use of positive airway pressure therapy. *Rev. Fac. Med.* 2022;70(3):e108969. English. doi: <https://doi.org/10.15446/rev-facmed.v70n3.108969>.

**Cómo citar:** Escobar-Córdoba F, Liendo C, Sanabria-Rodríguez O. [Adherencia al tratamiento médico en pacientes crónicos: uso de la terapia de presión positiva en la vía aérea]. *Rev. Fac. Med.* 2022;70(3):e108969. English. doi: <https://doi.org/10.15446/rev-facmed.v70n3.108969>.

**Copyright:** Copyright: ©2022 Universidad Nacional de Colombia. This is an open access article distributed under the terms of the [Creative Commons Attribution License](https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original author and source are credited.



Non-adherence to medical treatment is a chronic and complex issue involving patients of all ages with different types of diseases.

Adherence to medical treatment, which refers to a patient's ability to follow the recommendations prescribed by a physician or health care provider,<sup>1</sup> is key to achieving a full recovery and improving quality of life. However, in many cases it is not effective, and this poses a major problem worldwide, as it is estimated that only 50% of patients follow treatment recommendations consistently.<sup>2,3</sup> This may result in serious health outcomes, such as an increased likelihood of complications, a higher rate of hospitalization, and higher costs of medical care.<sup>3,4</sup>

Non-adherence to medical treatment is attributable to multiple factors, such as the complexity of the treatment and lack of understanding of the treatment by patients; difficulty in accessing medications and/or medical devices; lack of follow-up; and the economic impact of the treatment on the health care system.<sup>4</sup> However, it should be noted that one of the most important factors is inadequate communication between the patient and the health care team.

In this sense, to improve adherence to treatment, it is essential to involve the patient in the decision-making process. In other words, the health care team must work together with the patient to ensure that they understand the treatment (benefits and risks) and how it should be followed. Also, the patient should be regularly monitored to ensure that the indications are being properly observed.

Adherence to medical treatment requires a psychoeducation approach to the patient and their close social environment so that they become involved in the decision-making process, ensuring adequate communication and regular follow-up, as well as family support.<sup>5</sup> Likewise, it is important to remember that adherence to treatment is an ongoing process that requires cooperation between the patient and the health care team,<sup>5</sup> and that IT resources are now available, providing promising results in patient follow-up as data from different types of therapy can be retrieved via the Internet.

Obstructive sleep apnea (OSA) is a breathing disorder characterized by recurrent interruption of breathing during sleep due to upper airway obstruction.<sup>6</sup> The treatment of choice for this disorder is positive airway pressure (PAP) therapy, which provides the patient with continuous airflow through a face mask to keep the airway open.<sup>6</sup>

However, adapting to PAP therapy can be difficult for some patients due to common side effects, which include trouble getting used to wearing the mask, nasal congestion, dry mouth and nose, skin irritation around the mask, difficulty sleeping or maintaining sleep due to the noise of the device, among others. Although these side effects are usually temporary and can be handled with psychoeducational support from the health care team

at the beginning of treatment to improve adherence,<sup>5</sup> there are others, such as headaches, increased anxiety, difficulty concentrating, and lack of cooperation from the patient's bedside companions, that can significantly impact long-term adherence to treatment.

It should be noted that adaptation to PAP therapy is not a linear process, but a progressive one, and it requires constant communication between the patient and the health care provider; in other words, the health care team must work with the patient to adjust therapy and address adherence issues. It is also necessary to involve the patient in the mask selection process since comfort is a determining factor for adaptation and compliance with the treatment. On the other hand, patients who have difficulty adjusting to PAP therapy are recommended to undergo an interdisciplinary assessment that includes psychologists and/or behavioral health specialists that address the psychological and behavioral barriers that affect adherence to treatment.

Several studies have demonstrated the efficacy of educational programs (aimed at patients) to increase adherence to treatment by improving tolerance to positive pressure equipment (CPAP/BPAP), which also increases therapy effectiveness. These programs may be offered by a variety of health professionals (nurses, therapists, medical personnel, etc.)<sup>7-9</sup>

In this issue of the *Revista de la Facultad de Medicina*, Bazarro-Zapata *et al.*<sup>10</sup> have published an article describing the results of a study in which the impact of a standardized adaptation session (SAS) implemented in 40 patients experiencing difficulties in the use of PAP equipment was evaluated. They conclude that the inclusion of educational strategies and the identification and solutions to barriers that hinder the use of PAP devices significantly increase the hours of use and the percentage of days with use >4 hours, particularly in men, the latter finding being quite novel.

The study by Bazarro-Zapata *et al.*<sup>10</sup> found that the population evaluated consisted mainly of patients with moderate and severe OSA, that the focus group included family members, who may be aware of the patient's nocturnal limitations when using PAP therapy, and that despite the impact of the SAS on adherence to this therapy, a significant number of patients are unable to adapt. Moreover, these authors group the causes of non-adherence into four categories: Masks and leaks, Humidifiers, Devices, and Education.

However, this study did not report the use of the Epworth Sleepiness Scale or the FOSQ-SV questionnaire before and after the intervention, which could provide relevant information on functional improvement. Likewise, due to the small sample size, no conclusions could be drawn regarding the use of different types of masks, PAP devices, and residual hourly apnea-hypopnea index depending on the sex of the patient.

**Franklin Escobar-Córdoba**

<https://orcid.org/0000-0002-0561-4883>

Tenured Professor, Department of Psychiatry,  
Faculty of Medicine, Universidad Nacional de Colombia, Bogotá D.C., Colombia.

Research, Development and Innovation Director,  
Fundación Sueño Vigilia Colombiana, Bogotá D.C., Colombia.  
Hospital Universitario Nacional de Colombia, Bogotá D.C., Colombia.

Editor, *Revista de la Facultad de Medicina*,  
Universidad Nacional de Colombia, Bogotá D.C., Colombia.

[feescobar@unal.edu.co](mailto:feescobar@unal.edu.co)

**César Liendo**<https://orcid.org/0009-0005-3152-7432>

Board Certified in Internal Medicine, Neurology, Critical Care Medicine, Pulmonary Disease and Sleep Medicine FACCP FAASM, Shreveport, Louisiana, USA.

[tacna96@gmail.com](mailto:tacna96@gmail.com)**Oscar Sanabria-Rodríguez**<https://orcid.org/0000-0001-9668-6788>

Internist Pulmonologist Intensivist, Intensive Care Unit,  
Hospital Universitario San Ignacio, Bogotá D.C., Colombia

Associate Instructor, Pontificia Universidad Javeriana, Bogotá D.C., Colombia  
Medical Director, Fundación Sueño Vigilia Colombiana, Bogotá D.C., Colombia.

[osanabria@javeriana.edu.co](mailto:osanabria@javeriana.edu.co)

## References

1. Colombia. Ministerio de la Protección Social (Minprotección). Mejorar la seguridad en la utilización de medicamentos. Paquetes instruccionales. Guía técnica “Buenas prácticas para la seguridad del paciente en la atención en salud.” Versión 2.0. Bogotá D.C.: Minprotección; 2010.
2. Brown MT, Bussell J, Dutta S, Davis K, Strong S, Mathew S. Medication Adherence: Truth and Consequences. *Am J Med Sci.* 2016;351(4):387-99. <https://doi.org/f826bs>.
3. Nogueira JF, Poyares D, Simonelli G, Leiva S, Carrillo-Alduenda JL, Bazarro MA, *et al.* Accessibility and adherence to positive airway pressure treatment in patients with obstructive sleep apnea: a multicenter study in Latin America. *Sleep Breath.* 2020;24(2):455-64. <https://doi.org/gk5mmr>.
4. Bazarro MA, Herrera K, Vargas L, Dueñas E, González-García M. Factores subjetivos asociados a la no adherencia a la CPAP en pacientes con síndrome de apnea hipopnea de sueño. *Acta Med Colomb.* 2013;38(2):71-5.
5. Escobar-Córdoba F, Echeverry-Chabur J. Psicoeducación en el síndrome de apnea-hipopnea obstructiva del sueño (SAHOS). *Rev. Fac. Med.* 2017;65(Suppl 1):S105-7. <https://doi.org/j22t>.
6. Parejo-Gallardo KJ. Definition of obstructive sleep apnea-hypopnea syndrome (OSAHS). *Rev. Fac. Med.* 2017;65(Suppl 1):S9-10. <https://doi.org/j22v>.
7. Lettieri CJ, Walter RJ. Impact of group education on continuous positive airway pressure adherence. *J Clin Sleep Med.* 2013;9(6):537-41. <https://doi.org/gbc83c>.
8. Chen X, Chen W, Hu W, Huang K, Huang J, Zhou Y. Nurse-led intensive interventions improve adherence to continuous positive airway pressure therapy and quality of life in obstructive sleep apnea patients. *Patient Prefer Adherence.* 2015;9:1707-13. <https://doi.org/gndtqc>.
9. Smith I, Nadig V, Lasserson TJ. Educational, supportive and behavioural interventions to improve usage of continuous positive airway pressure machines in adults with obstructive sleep apnoea. *Cochrane Database Syst Rev.* 2009;15(2):CD007736. <https://doi.org/fmk69f>.
10. Bazarro-Zapata MA, Valderrama F, Fernández F, González-García M. Sex differences regarding the impact of a standardized adaptation session in Colombian patients with obstructive sleep apnea and poor adherence to positive airway pressure devices. *Rev. Fac. Med.* 2022;70(3):e92729. <https://doi.org/j22w>.