



An effective approach to overcoming barriers to hemodialysis: Common sense solutions

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Dear Editor,

The annual incidence and growth rate of End-Stage Renal Disease (ESRD) are increasing globally, with a higher prevalence in developing countries. This disease is the final, permanent stage, where kidney function has deteriorated to the point that these organs can no longer function on their own. Hemodialysis is a common treatment that improves quality-of-life domains and survival, but it also presents challenges that come with this kind of procedure (1).

This process can result in a variety of distressing factors, including low health literacy, changes in endocrine and metabolic function, shifts in body image perception, and necessary lifestyle modifications. These factors are seen as obstacles to following the recommended treatment plan. Failure to adhere to hemodialysis treatment, medication, dietary guidelines, and fluid restrictions can result in serious outcomes such as metabolic disorders, bone loss, pulmonary edema, cardiovascular issues, and even death. Moreover, this process is linked to a higher risk of mortality, reduced mental and physical well-being, and difficulties in self-management and self-care (2).

Additionally, low adherence to therapy increases healthcare expenses and negatively affects patient outcomes, and adds to the workload of the hemodialysis department. The highlighted barriers for adherence may include restrictions resulting from the treatment, disturbance experienced during hemodialysis sessions, long distances to the hemodialysis ward, deficits in knowledge, and difficulties with transportation. Treatment-related complications and poverty may be other main identified barriers (3).

Healthcare professionals play a critical role in solving the problem of overcoming barriers to adherence and successfully managing patients' conditions. By offering

comprehensive education, personalized guidance, and ongoing support, they empower patients to make informed decisions and actively participate in their care. This collaborative approach is key in helping patients navigate the challenges associated with hemodialysis and ultimately improve their clinical conditions and quality of life (4).

Therefore, health care professionals and patients should take responsibility for managing chronic diseases by improving adherence. This approach may include identifying behavioral and biochemical markers of low adherence to therapy, such as missed refills, lack of response to medication, missed treatments, and excessive inter-dialytic weight gain. Assessing the patient's ability to follow the regimen and establishing support systems, as well as encouraging the use of support systems such as patient assistance programs, are other recommended strategies (5).

Policymakers should support patient-centered care frameworks that prioritize adherence to treatment regimens to improve hemodialysis patient compliance. This shift involves moving away from standard protocols towards personalized care plans that cater to the specific needs and preferences of each patient. Effective strategies include simplifying complex medication schedules, utilizing reminder systems, and providing clear, patient-focused educational materials (6). Furthermore, establishing a supportive environment where healthcare providers actively listen, offer nonjudgmental feedback, and encourage patients to ask questions is crucial in empowering patients and fostering the collaborative relationships needed for successful treatment and care (7).

Conclusion

Low adherence to treatment in hemodialysis patients



remains a challenging problem that requires proactive and system-wide approaches to address. Healthcare professionals should conduct regular adherence screenings and utilize patient-centered communication styles, such as motivational interviewing, to understand individual barriers. At the same time, policymakers should improve reimbursement models to prioritize value-based care, incentivize positive outcomes, and allocate funding for integrated support services, including mental health and nutrition. Only through a commitment to interpersonal partnerships can we develop effective and personalized interventions needed to improve hemodialysis adherence and alleviate the pressing healthcare issues at hand.

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Competing Interests

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References

1. Aghakhani N, Samadzadeh S, Mafi TM, Rahbar N. The impact of education on nutrition on the quality of life in patients on hemodialysis: a comparative study from teaching hospitals. *Saudi J Kidney Dis Transpl* 2012;23(1):26–30.
2. Ozen N, Cinar FI, Askin D, Mut D, Turker T. Nonadherence in Hemodialysis Patients and Related Factors: A Multicenter Study. *J Nurs Res* 2019;27(4):e36. doi:10.1097/jnr.000000000000309
3. Sultan BO, Fouad AM, Zaki HM. Adherence to hemodialysis and medical regimens among patients with end-stage renal disease during COVID-19 pandemic: a cross-sectional study. *BMC Nephrol* 2022;23(1):138. doi:10.1186/s12882-022-02756-0
4. Cervantes L, Hasnain-Wynia R, Steiner JF, Chonchol M, Fischer S. Patient Navigation: Addressing Social Challenges in Dialysis Patients. *Am J Kidney Dis* 2020;76(1):121–9. doi:10.1053/j.ajkd.2019.06.007
5. Bellier-Teichmann T, Antonini M, Delmas P. Assessing Resources in a Population of Hemodialysis Patients: A New Approach to Improve Quality of Care. *J Contemp Psychother* 2022;52(1):67–77. doi:10.1007/s10879-021-09524-5
6. Yazdinejad T, Karamoozian A, Alsadat Mousavi M, Banseshi MR, Borhaninejad VR, Iranpour A. Health literacy and its related factors in dialysis patients: a cross-sectional study in Iran. *Journal of Kerman University of Medical Sciences*. 2022;29(5):484-489. doi:10.34172/jkmu.2022.59
7. Woodward EN, Castillo AIM, True G, Willging C, Kirchner JE. Challenges and promising solutions to engaging patients in healthcare implementation in the United States: an environmental scan. *BMC Health Serv Res* 2024;24(1):29. doi:10.1186/s12913-023-10315-y