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Understanding the Factors Influencing Patient Adherence to Hemodialysis: Implications for Improved Care

Jack Meltzer, Ryan Heidish, Christopher Payette

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For patients with chronic kidney failure, hemodialysis may be required to survive. While hemodialysis is life-saving, it can be very burdensome on a patient. Sessions typically last four hours each and are required three times a week. Regular attendance to scheduled hemodialysis sessions is crucial for patients to maintain stable health conditions and mitigate potential risks. Even a single missed session significantly [elevates the risk of hospitalization and mortality in the subsequent 30 days](#). Furthermore, studies show that in the six months [following a missed session](#), patients may continue to experience higher risks of hospitalization, mortality, and lower hemoglobin levels than patients who do not miss sessions. For patients who miss their hemodialysis sessions, they may need to come to the Emergency Department (ED) to receive care. Unfortunately, a patient presenting to the ED for hemodialysis is a common occurrence.

Overall, hemodialysis patients present [8.5 times more frequently](#) to the ED than the general population, and oftentimes patients are admitted due to a missed outpatient hemodialysis session. The non-medical risk factors for why a hemodialysis patient presents to the ED are not well understood, but studies are underway to investigate the factors influencing patient adherence to hemodialysis, providing insights into how to help people receive this life-saving care. Reducing the number of unnecessary ED visits for hemodialysis will promote more efficient allocation of resources across the health system and improve the well-being of patients with chronic renal failure.

[One study](#) at Davita Clinical Research in Minneapolis aimed to investigate the reasons behind missed hemodialysis treatments. This retrospective study of patients on hemodialysis found that more than half of missed sessions were due to reasons that were not strictly medical reasons but possibly due to psychosocial risk factors. In addition, a [survey conducted across 79 US dialysis centers](#) revealed that transportation problems were the most common cause of missed sessions. Other risk factors for missed hemodialysis include [younger patients](#) and living in certain [regions](#) of the country. Missed treatments were significantly lower in the Northeast US, which might be explained by the presence of larger urban centers with better transportation access compared to other regions in the US. In addition, patients who receive hemodialysis at larger centers with more than 100 patients were much more likely to miss a session than patients who attended smaller centers with fewer than 50 patients. This seems to indicate the importance of a low patient-to-provider ratio in dialysis centers and perhaps underlines the necessity of addressing psychosocial factors underlying missed dialysis sessions. Black, Latino, and Native American patients are much [more likely to miss sessions](#) than corresponding White and Asian patients. This may be impacted by socioeconomic status, transportation access, and less trust in the healthcare system due to historic oppression.

The time-intensive and physically demanding nature of hemodialysis sessions, combined with potential side effects and discomfort, poses a considerable burden on patients. Any reluctance to attend sessions regularly may be exacerbated by the challenges faced by patients and ultimately contribute to more missed sessions. Addressing the barriers to regular attendance and implementing [targeted interventions and support systems](#) might improve patient adherence to hemodialysis. Further research is needed to better understand how targeted resources, social

support, and behavioral interventions can assist patients who repeatedly present to the ED after missed hemodialysis and mitigate the adverse effects associated with missed sessions.

The author has no conflicts to report