

Transition to Expanded Hemodialysis is Associated with Decreasing Incidence of Intradialytic Hypotension

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Introduction and Objective

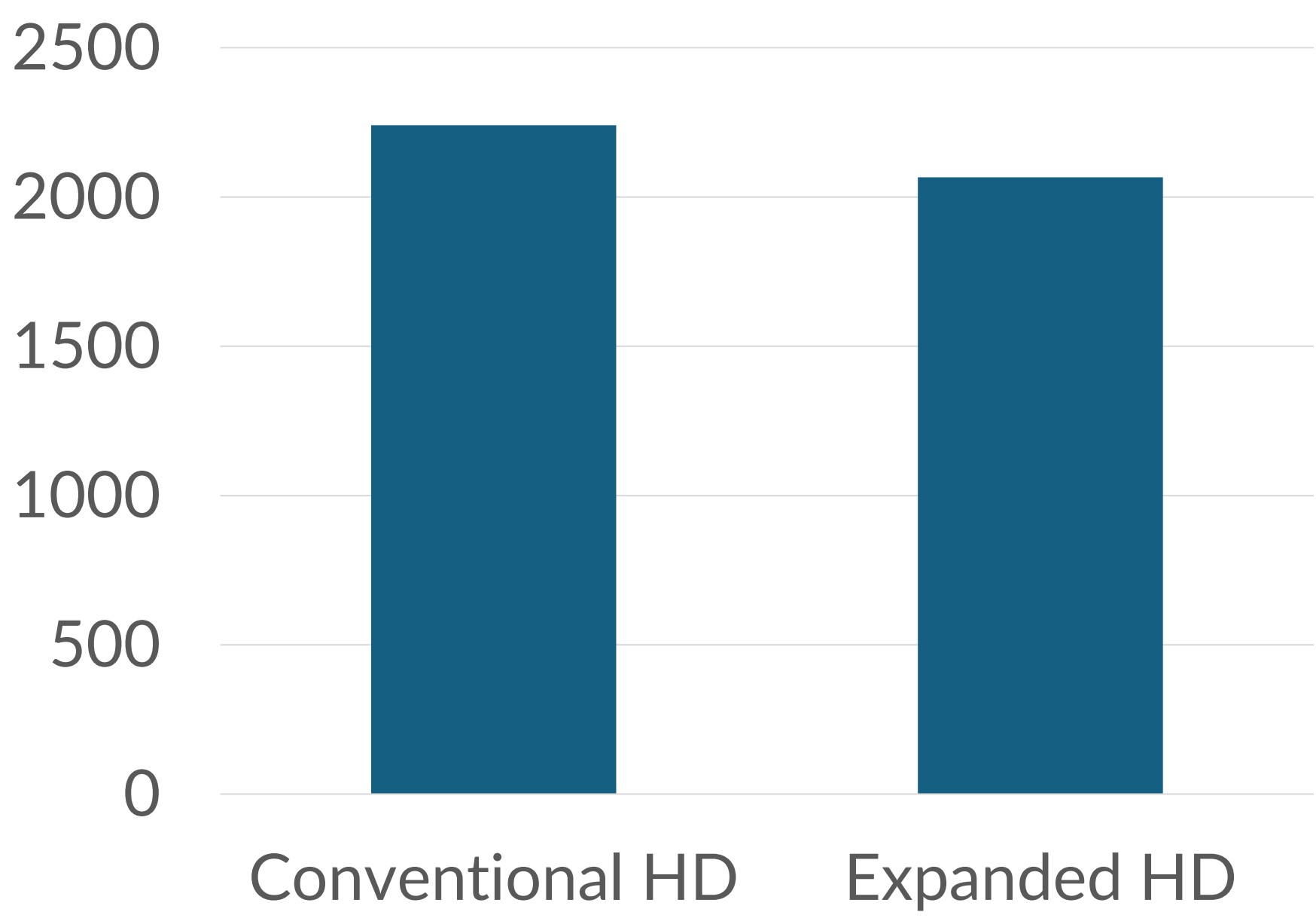
- Intradialytic hypotension (IDH) is a common complication associated with negative patient symptoms and poor clinical outcomes.¹
- Although changes in blood volume during treatment are likely responsible for much of the risk of IDH, the incidence of IDH episodes may also be linked to accumulation of inflammatory cytokines that trigger nitric oxide release and vasodilation.²
- Expanded hemodialysis (HD) with a medium cut off dialyzer improves the clearance of middle and large molecules, potentially reducing the risk of IDH, independent of changes in treatment time and ultrafiltration intensity.
- To test this hypothesis, we compared the frequency of IDH between patients who were receiving conventional dialysis with a high-flux dialyzer, and those converting to expanded HD.

Methods

- In the MODEL initiative, we examined in-center HD patients at 33 clinics that converted from conventional dialysis to expanded HD in October-November 2025 and compared them to 30 similar, co-located clinics.
- We analyzed the incidence of intradialytic hypotension (defined by Flythe's criteria) in patients treated with expanded HD versus conventional HD, using an as-treated approach.¹
- IDH incidence was described as monthly proportions and formally compared using logistic regression, adjusted for age, race, sex, and time since dialysis initiation.

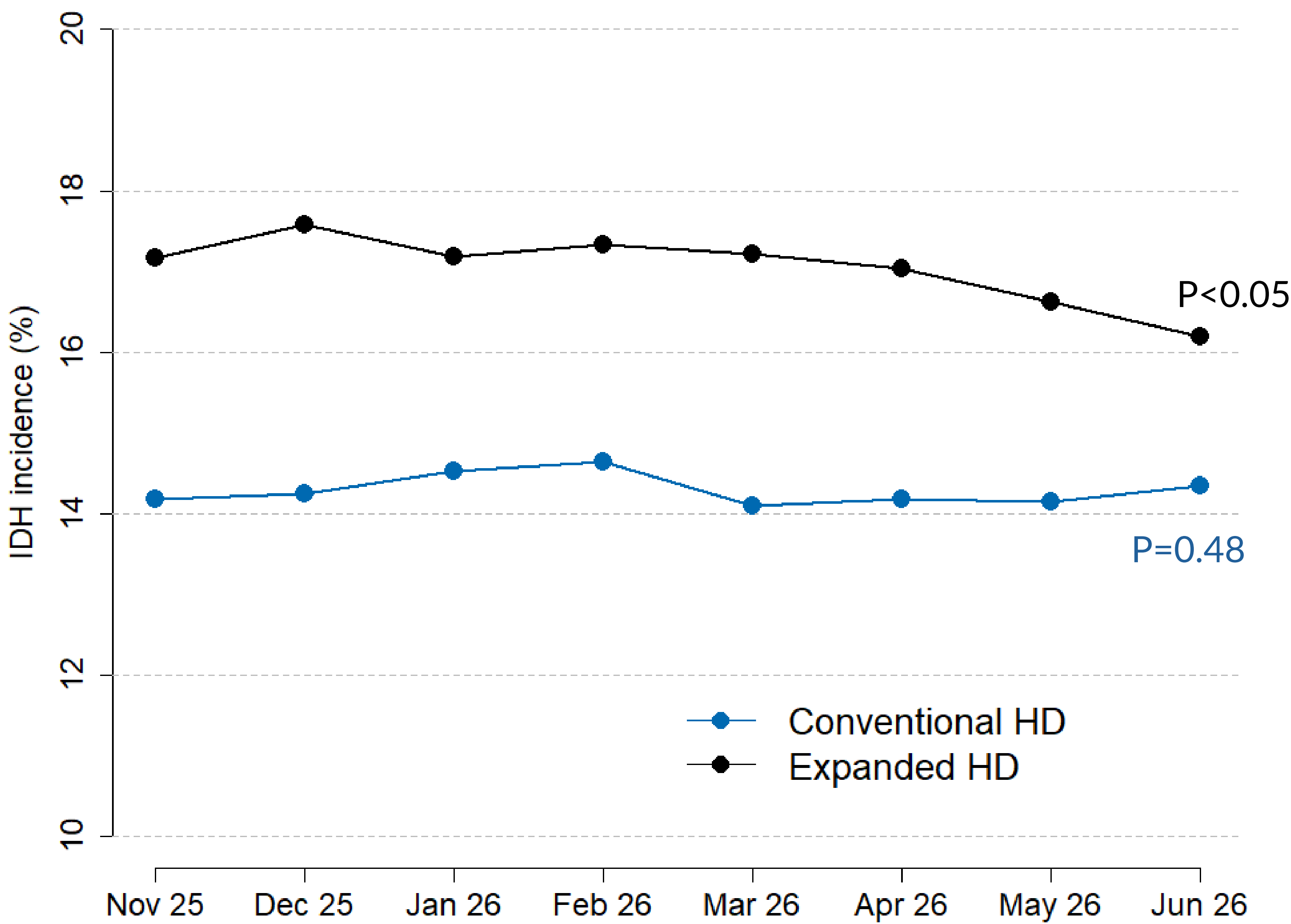
Results

Figure 1: Mean Number of Patients per Group between November 2025 and June 2026



- More than 98% of patients at expanded HD clinics received expanded HD. Zero patients in conventional clinics received expanded HD.
- The incidence of IDH remained constant in the conventional HD group – from 14.2% to 14.4%.
- Meanwhile, the incidence of IDH decreased one percentage point—from 17.2% to 16.2% in the expanded HD group ($p<0.05$) (Figure 2).
- The between-group difference in the slope of monthly incidence of IDH was also statistically significant ($p<0.05$) (Figure 2).

Figure 2: IDH Incidence Rate



Conclusions

These data are consistent with the hypothesis that expanded HD may improve IDH.

References & Acknowledgements

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2. Yu J, Chen X, Li Y, Wang Y, Cao X, Liu Z, Shen B, Zou J, Ding X. Pro-inflammatory cytokines as potential predictors for intradialytic hypotension. Ren Fail. 2021 Dec;43(1):198-205.

We specifically acknowledge Kathryn Husarek of DaVita, Inc. for editorial contributions in preparing this poster.

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Presented at the 40th Annual Meeting of the International Society of Blood Purification (ISBP) in October 2026, Rome, Italy.



40th ANNUAL MEETING OF THE
INTERNATIONAL SOCIETY OF BLOOD
PURIFICATION

