Initial Experience With Home Hemodialysis Using the Tablo Hemodialysis System

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Background

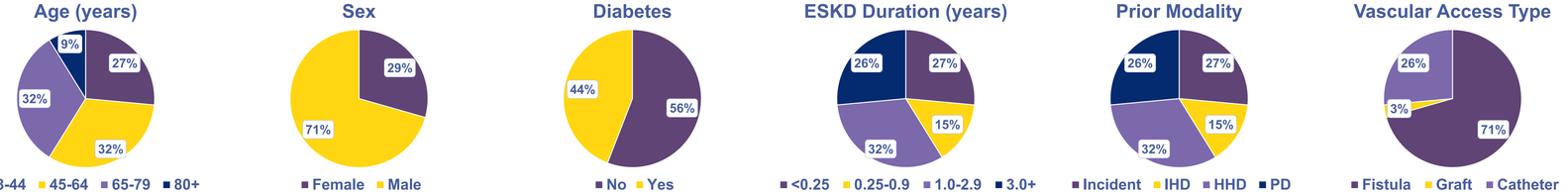
- Despite uninterrupted, year-over-year growth in the number of home hemodialysis (HHD) patients in the United States (US) since 2002, utilization in the United States is only slightly greater than 2% (United States Renal Data System 2021 Annual Data Report).
- HHD offers customizability of therapy, including the potential for increased treatment frequency, but can create stress for patients and care partners.
- New machines that greatly improve the user experience are needed. In particular, easy setup of each treatment would be highly desirable.
- One such device, the Tablo Hemodialysis System, was cleared by the US Food and Drug Administration in early 2020 for use in the home setting.
- We analyzed the evolving clinical experience of HHD with Tablo at Satellite Healthcare (SHC), a dialysis provider organization in which >3% of patients currently utilize HHD.

Methods

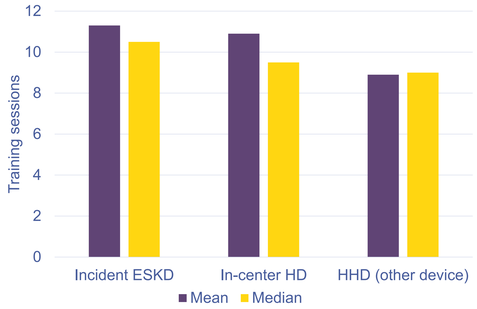
- We identified patients who initiated use of Tablo for HHD in SHC facilities between 1 January 2021 and 30 April 2022.
  - We refer to the date of first use of Tablo for HHD as the *index date*.
- We summarized patient characteristics, including age, sex, duration of end-stage kidney disease upon the index date, modality prior to the index date, and vascular access type on the index date.
- We estimated the mean number of HHD training sessions.
- We also estimated time-integrated distributions of prescribed treatment frequency and cumulative hours per week during all HHD patient-days between the index date and 30 September 2022.
- Using digital flowsheets, we assessed treatment adherence between 1 October 2021 and 30 September 2022.
- Finally, we estimated the cumulative incidence of attrition due to death, conversion to in-center hemodialysis (IHD), or conversion to HHD with an alternative device, with censoring on 30 September 2022.

Results

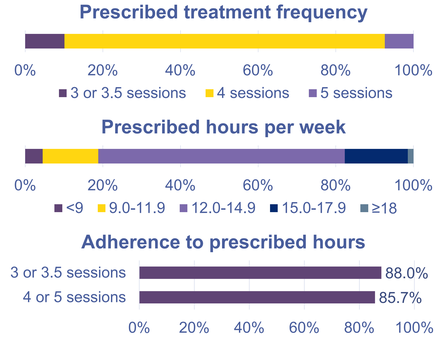
- Patients (N = 34) who have initiated HHD with Tablo have been diverse in demographic and disease history factors. Over 25% have had a catheter.



- Mean and median counts of HHD training sessions have been relatively low, regardless of prior experience with dialysis.
- 10th and 90th percentiles of the number of training sessions have been 5 and 21, respectively.



- Nearly 90% of patients have been prescribed ≥4 sessions per week, typically for ≥12 hours/week.
- Adherence to prescribed treatment hours per week has exceeded 85%.



- Estimates of cause-specific HHD discontinuation at 12 months after first use of Tablo are displayed in the table below.
- 30 (88%) patients have completed training (N = 3 discontinued training, N = 1 received a transplant).

Outcome	Estimate
Follow-up to May 15, 2022 (abstract submission)	
Death	11.4%
Conversion to IHD (among all patients)	12.9%
Conversion to IHD (among training graduates)	4.6%
Conversion to HHD with other device	2.9%
Follow-up to Sep 30, 2022	
Death	8.8%
Conversion to IHD (among all patients)	20.6%
Conversion to IHD (among training graduates)	13.3%
Conversion to HHD with other device	5.9%

Conclusions

- Patients performing HHD with Tablo have been diverse in age, modality history, and vascular access.
- On average, HHD training has been completed in 11 or fewer sessions, regardless of prior modality, and treatment adherence at home has exceeded 85%.
- HHD attrition has been low, thus portending continued growth of the modality with the use of Tablo. Continued surveillance will be necessary.

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