

Characterizing Missed Dialysis Sessions in the ESRD Patient Population

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Introduction

- Missed dialysis sessions can have detrimental effects on patient morbidity and mortality, and can increase the risk of hospitalization. 1-3
- Missed sessions can also have a direct impact on facility costs under the current Medicare bundled Prospective Payment System (PPS), introduced in 2011.⁴
- Despite its importance to patient care, the frequency of missed dialysis sessions at a population level has not been well described.

Objective

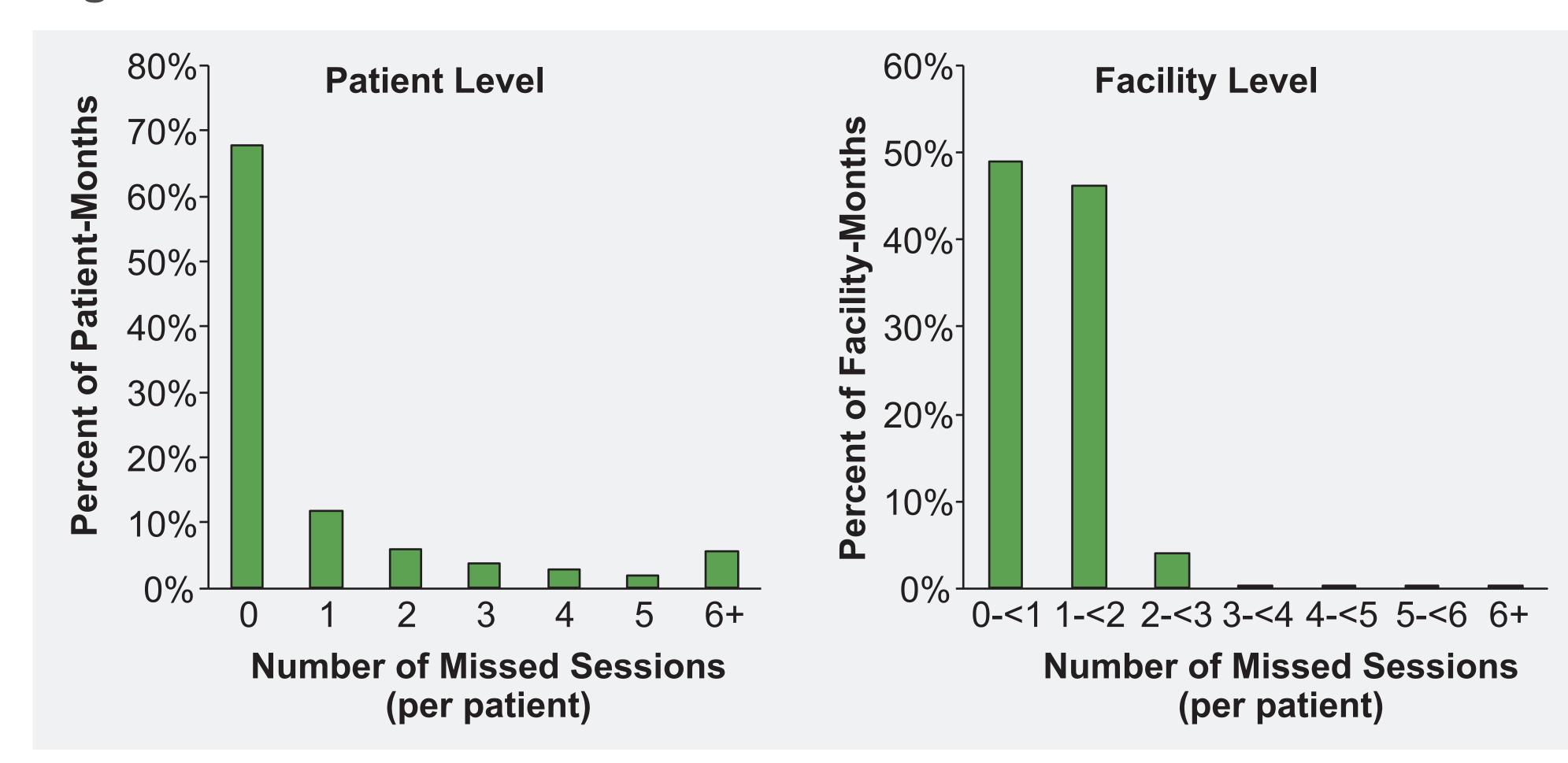
 We have carried out a retrospective database analysis of missed dialysis sessions among end-stage renal disease (ESRD) patients within a large dialysis organization (LDO) in the US.

Methods

- Data from adult (> 18 years old) hemodialysis (HD) patients receiving in-center dialysis ≥ 3 times/week between January 1, 2010 and December 31, 2010 were assessed.
- A missed session was defined as an expected dialysis session that the patient did not attend and did not make up.
- Expected: 3 sessions/week, 12-14 sessions/month depending on schedule and calendar month
- Each missed session identified in the dataset was assigned a reason, and the frequency of reasons for missed sessions was calculated at both the patient and facility level.
- Misses occurring consecutively without interruption by an attended session were considered part of a missed session "episode."

Results

Figure 1. Distribution of Missed Sessions



• Of 903,179 patient-months analyzed, the mean number of attended sessions was 12.01 ± 2.24 (mean ± SD), or 92.0% of expected sessions per patient-month (Table 1 and Figure 1). There was relatively little variation in the number of missed sessions at the facility level (1.07 ± 0.63 missed sessions per patient per facility-month).

Table 1. Summary Statistics: Missed Sessions

Overall Patient-Month	Mean ± SD	Percent
Attended sessions/patient-month Attended at home facility/patient-month Attended at other facility/patient-month	12.01 ± 2.24 11.95 ± 2.28 0.06 ± 0.44	91.99% 91.53% 0.45%
Missed sessions/pt-month Missed due to other (unknown reason) Missed due to hospitalization Missed due to transfer from LDO Missed due to death Missed due to transplant	1.05 ± 2.20 0.52 ± 1.39 0.41 ± 1.44 0.07 ± 0.73 0.04 ± 0.54 0.01 ± 0.30	8.01% 3.98% 3.14% 0.52% 0.28% 0.09%

Overall Facility-Month	Mean ± SD	Percent
Attended sessions/facility-month Attended at home facility/facility-month Attended at other facility/facility-month	11.98 ± 0.73 11.91 ± 0.76 0.07 ± 0.20	91.74% 91.20% 0.54%
Missed sessions/facility-month	0.07 ± 0.20 1.07 ± 0.63 0.53 ± 0.48	0.54 % 8.26% 4.11%
Missed due to other (unknown reason) Missed due to hospitalization Missed due to transfer from LDO	0.53 ± 0.46 0.41 ± 0.29 0.08 ± 0.22	4.11% 3.17% 0.58%
Missed due to death Missed due to transplant	0.04 ± 0.10 0.01 ± 0.05	0.30% 0.09%

Figure 2. Cause of Not Attending Sessions at "Home" Facility

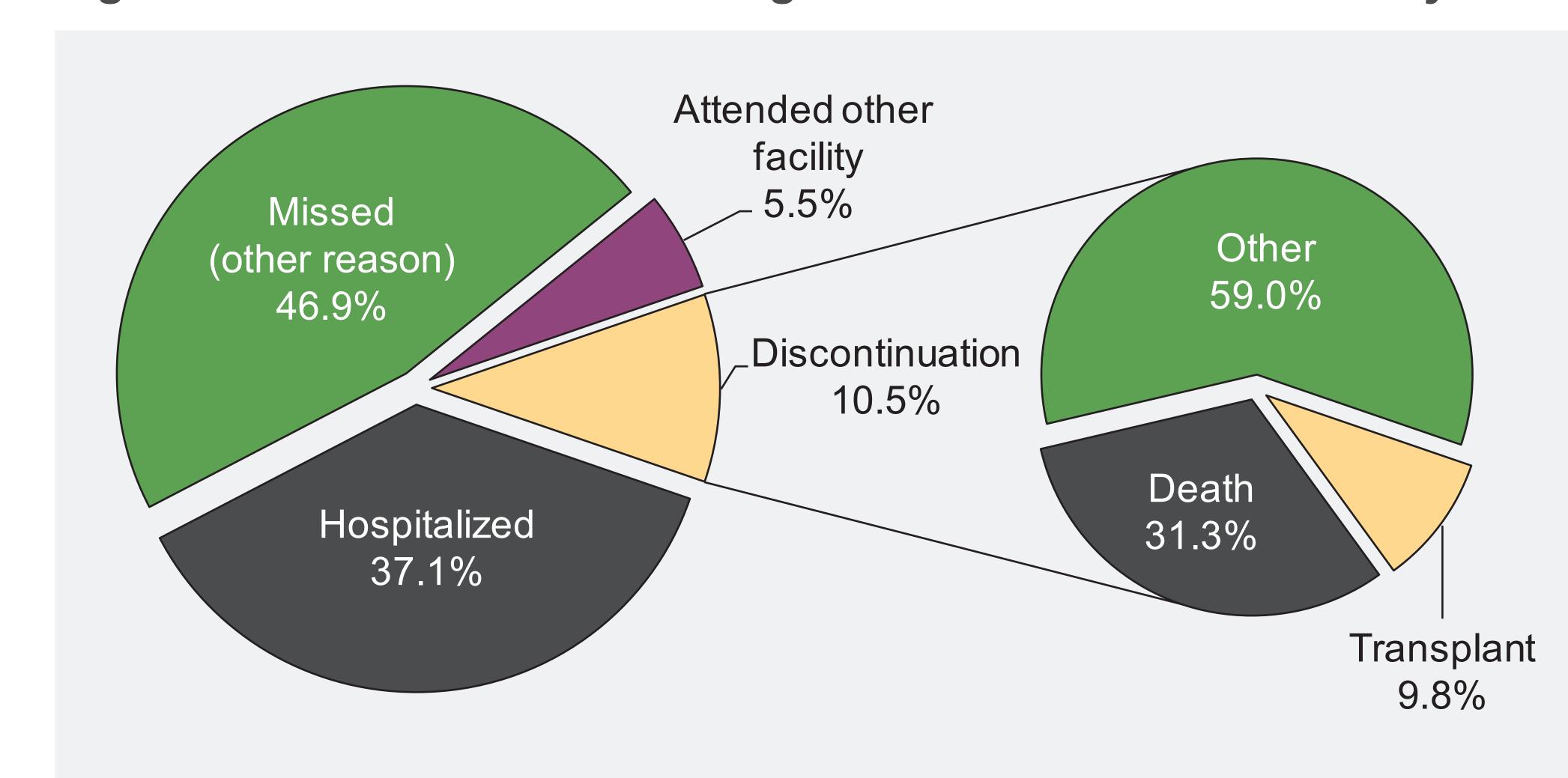
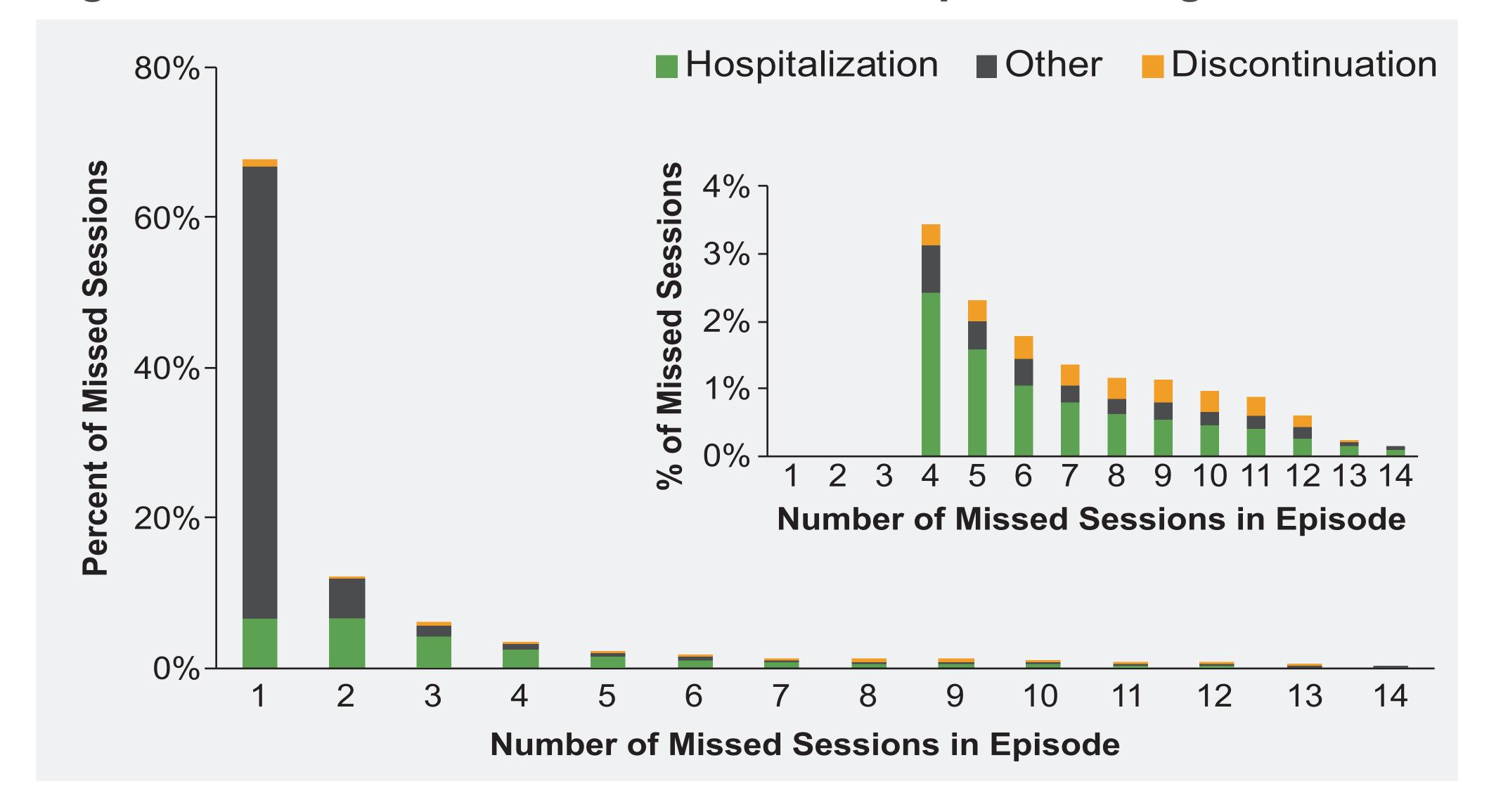


Figure 3. Distribution of Missed Session Episode Lengths



- Of these 12.01 sessions, 11.95 were attended at patients "home" facilities and 0.06 were attended at other facilities (Table 1 and Figure 2).
- The mean number of missed sessions was 1.05 ± 2.20 (8.0% of expected sessions) per patient-month, with 0.41 (3.1%) missed due to hospitalization, 0.12 (0.89%) missed due to discontinuation (due to death, transplant, or transfer from LDO), and 0.52 (4.0%) missed due to other (unknown) reasons (Table 1 and Figure 2).
- Missed sessions episodes averaged 2.07 ± 2.25 sessions in length.
- Hospitalization was a major cause of missed sessions. Missed session episodes
 of greater than 3 sessions in length were primarily attributable to hospitalizations
 and discontinuations (Figure 3).

Conclusions

- Most expected dialysis sessions were attended, and occurred at the patients' "home" facility, suggesting that missed sessions are relatively infrequent in the ESRD population.
- The average missed session episode was 2.07 ± 2.25 sessions in length.
- Hospitalization was a major cause of missed sessions, particularly in the case of missed session episodes greater than 3 sessions in length.

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