

PD SCIENTIFIC EVIDENCE SNAPSHOT

2025 ISSUE #2



Engagement and usability of a mobile health app for peritoneal dialysis patients: A pilot randomized controlled trial.

Cely et al. Peritoneal Dialysis International 2025 (<https://doi.org/10.1177/08968608251339578>)

STUDY OBJECTIVE:

To evaluate the patient engagement and usability of the MyPD app for the care of both Continuous Ambulatory Peritoneal Dialysis (CAPD) and Automated Peritoneal Dialysis (APD) patients.

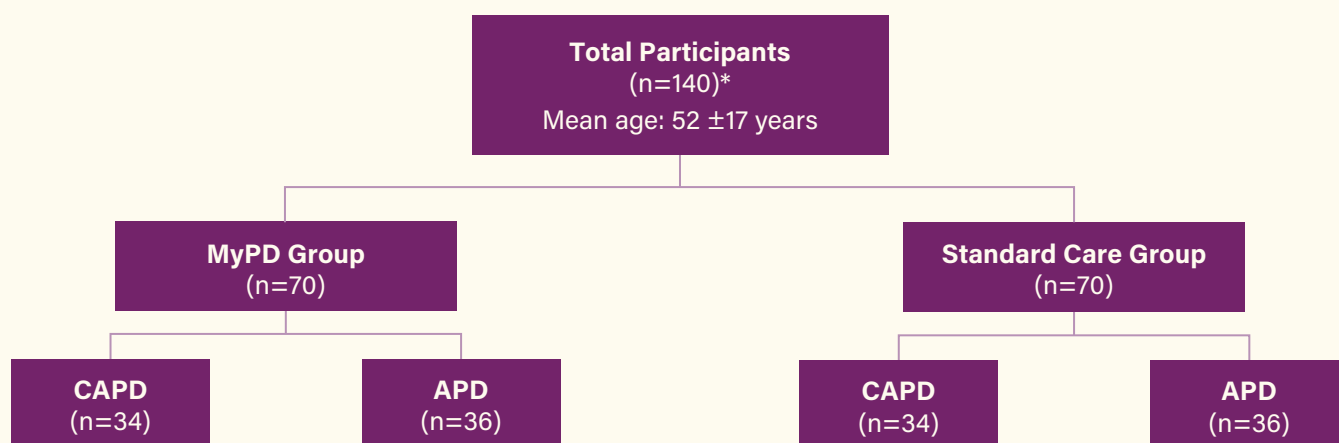
STUDY DESIGN:

Randomized controlled, open-label, parallel-group trial in 6 renal clinics in Colombia conducted between September 2022- Aug 2023. The follow-up was for 6 months. Primary outcomes Engagement measured as:

- ▶ The number of preemptive visits, changes in dialysis prescription.
- ▶ Communications between PD (CAPD and APD) patients and clinical staff using MyPD app.

Secondary outcomes included usability, peritonitis events, number of hospitalizations, emergency room visits and the use of antihypertensive medications.

STUDY PARTICIPANTS:



*Out of the 140 participants, 24% had a maximum education level of elementary school yet they were able to use the app effectively.

RESULTS

PRIMARY OUTCOME: ENGAGEMENT

Clinical Outcomes According to Treatment Group				
Clinical Outcomes	Total (n=140)	MyPD App (n=70)	Standard Care (n=70)	p-value
Number of communications patients to clinics				
Total	0.4 (1.2)	0.5 (1.2)	0.3 (1.0)	0.11
CAPD	0.4 (1.1)	0.6 (1.5)	0.2 (0.4)	<0.01
APD	0.4 (1.2)	0.5 (0.8)	0.6 (1.5)	0.64
Number of communications clinics to patients				
Total	2.8 (4.3)	4.3 (5.2)	1.2(2.3)	<0.01
CAPD	2.5 (4.2)	4.9 (4.9)	0.2 (0.4)	<0.01
APD	3.1 (4.4)	3.9 (5.3)	2.4 (3.1)	<0.01

- ▶ Total Engagement as measured by clinic- to-patient communication is significantly higher (p<0.01) in the MyPD group across both CAPD and APD.
- ▶ The difference in communications from patients to clinic is significantly higher in CAPD but not in APD group using MyPD app likely due to all APD patients already using Sharesource.

SECONDARY OUTCOME: USABILITY

Usability study was measured using the mHealth App Usability Questionnaire (MAUQ), a validated tool assessing 3 domains (18 items) related to ease of use, interface and satisfaction, and usefulness. Patients rated on a 7-point Likert scale.

- ▶ Overall score 6.5 ± 0.7 out of 7 on MAUQ showcasing excellent usability.
- ▶ Regarding ease of use, the mean was 6.6 (SD 0.8), a very high figure given the socio-cultural context of a middle-income country.
- ▶ In relation to usefulness, the mean was 6.1 (SD 1.5).

Domain	Score Mean (SD) N=65
Ease of use (5 items)	6.6 (0.8)
Interface and satisfaction (7 items)	6.8 (0.5)
Usefulness (6 items)	6.1 (1.1)
Overall score	6.5 (0.7)

- ▶ These scores are high compared to other apps in other studies.
- ▶ There were no significant differences for other secondary outcomes.

CONCLUSION

- ▶ The usability of the MyPD app was rated very high by patients, which may allow this application to be used widely as a tool to improve communication and support PD patient care at home
- ▶ The use of MyPD app was associated with increased engagement between PD clinic staff and their patients