

Multimedia Appendix 6: Summary of Participant Observation Phases 1, 2 and 3

Task	Open screens	Enter body weight with NFC	Enter Blood Pressure	Enter Dialysate	View hydration metrics	Interpret hydration metrics	Clinic communication	User incentives
Phase 1								
Liked	easy, not complicated	-data automatically entered	-data automatically entered	-data automatically entered	- previous data for BP, UF displayed on the main page	<u>Manual</u> - outlier alert of BW (compared to DW), BP	-easy to contact via LINE and telephone	- data in one place - communicates data to the PD team - manual entry helpful if problem with NFC
Disliked	-app opens slowly -app sometimes unstable	- data not displayed on the weight scale - no alert indicating the device is ready to use - long time to transfer data from card - hard to use hold card in position - inaccurate scales - requires too many steps	- unreadable/ inaccurate if numbers and rows of the BP machine are not the same size or low light - have reading does not match actual value sometimes	- same issues as entering daily body weight - not distinguish between CAPD and APD PD systems	- previous hydration metrics not included - every dialysate volume cycle reported as cycle 1, so UF for each cycle calculated for entire day - slow to load program - no home button to navigate back to the main page - restart required to view previous data - graph does not show hydration, dialysis fluid data - font too small	<u>NFC</u> - no interpretation and alert for BW, BP, dialysate volume, BMI <u>Manual</u> - no interpretation of net dialysate gain/loss - no BMI interpretation	- did not receive an instant reply via LINE from PD clinic	- no feedback or reminders for patients to send data - app is sometimes unstable - can't use app in iOS system
Feature rating ^a mean (range)	1.07 (1-2)	1.07 (1-2)	1.07 (1-2)	1.14 (1-2)	1.29 (1-2)	1.07 (1-2)	1 (1)	1.07 (1-2)
Phase 2								
Liked	easy, automatic login, clear, multifunction, optimal detail	easy, data linked automatically, more detailed value (with a decimal point)	- easy to do - data linked automatically	- easy to do -data linked automatically	historical data for BP, PR, dialysate volume displayed on the main page	<u>Manual</u> - interpretation and alert of BMI, PR and BP - can adjust selfcare	- easy to contact via LINE or telephone or in-person - can consult on various issues	- easy, fast - save data in one place - communicate data to the treatment team
Disliked	-takes a long time to open -need to open multiple pages	- data not displayed on the weight scale - no alert indicating that device is ready - takes a long time for information to transfer while touching the card - too many steps - require multiple devices - inaccurate scales	- unreadable/ inaccurate in low light or if screen has other numbers - must repeat because the numbers do not always match the actual value - no memory in device so need to take photos each time	-same as entering daily body weight - can only edit data -inflow and outflow times not recorded - can't use in APD - cycles after midnight counted in the next day	-no previous data for BW, BMI and fluid intake included - hard to read, not displayed as table - dialysate volume: combined cycles for CAPD - graphical sometimes incomplete (no UF) - graph scale incorrect	<u>NFC</u> - no interpretation and alert of BW, PR, BP, dialysate volume, BMI <u>Manual</u> - no comparison BW to and UF - interpretation not on same page - no alert with sound, different color or font	none	none
Feature rating ^a mean (range)	1 (1)	1.2 (1-2)	1.6 (1-3)	1.2 (1-2)	1 (1)	1.2 (1-2)	1(1)	1.2 (1-2)
Phase 3: CKD-PD app								
Liked	-easy -automatic login	- easy - convenient	- easy to enter - easy to fill out - editable - photo is easy to use - easy to use manual	- easy - automatically calculate - editable	-previous data for BP, PR, dialysate volume displayed on the main page -can see anytime	- interpretation and alert of BW, BMI, BP - know how health is - know what to do next - can adjust selfcare	- easy to contact via LINE or telephone or in-person - a group line -easy to consult clinic	- convenient - easy to carry - data saved together - selfcare planning - faster way to

					- can compare with previous readings -easy to read -can see in one place	- good and instant result update		communicate data to the treatment team - solve problems instantly, may not need to visit hospital
Disliked	-take a long time to open especially body weight icon -app freezes often, must close and reopen it -bounce off by itself	<u>Manual</u> -take a long time to open <u>NFC</u> - take a long time -multiple steps -inaccurate data	- taking photo takes longer than manual entry - difficult to take photo - the numbers are incomplete when taking photo	<u>Manual</u> - too many fields - app freezes; must close and reopen - option to adjust time - separate APD & CAPD - not calculating UF - can't delete data <u>NFC</u> -multiple steps	none	- confusing -BMI is interpreted as being overweight. But in the results of the weight interprets as normal weight	none	-need good internet signal -unstable -app freezes often
Feature rating ^a mean (range)	1.6 (1-3)	Manual 1.1 (1-2) NFC 2.3 (1-3)	1.1 (1-2)	Manual 1.1 (1-2) NFC 2.3 (1-3)	1.1 (1-2)	1.1 (1-2)	1 (1)	1.2 (1-3)
Phase 3: Logbook								
Liked	-NA	-easy	- easy - can be inspected and edited	- easy - there are clear fields to fill out	- can see historical data for BP, BW, UF with daily difference -easy to read -doctors can adjust treatment at clinic -can adjust selfcare at home ex. salt restriction, adjust medication	NA	- easy to contact via LINE, phone or in-person - exchange opinions - consult on various issues	- easy to see/read - familiar with it - keep as evidence and memory - do not need internet/cellular - can't be hacked - some suggest using both book and app
Disliked	-NA	- inconvenient when logbook not available or paper runs out - small letters - need to do	-inconvenient	- inconvenient - takes a long time - need to calculate UF - tables provided have unnecessary fields - must record the start & stop times beginning & end of each cycle - must separate cycles and days by yourself	- no interpretation - difficult to read because of the large numbers and multiple fields	NA	-sometimes difficult to contact via telephone because phone is busy -no private group in LINE -have to wait at clinic visit	-inconvenient to carry -want to stop using the book if there's an app that can replace the book -some feel that it's redundant if using both book and app
Feature rating ^a mean (range)	NA	1.4 (1-2)	1.4 (1-3)	1.8 (1-3)	1.7 (1-3)	NA	1.2 (1-3)	1.9 (1-3)

*Feature rating scale: 1= Good, 2=Neutral, 3=Not good

Abbreviations:

BP- blood pressure

BW- body weight

DW- dry weight

DW- dry weight

NA – not applicable

NFC – Near Field Communication

UF- ultrafiltration volume