

PD BUDDY: Using smartphone technology to improve patient care.

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BACKGROUND

Historically, peritoneal dialysis (PD) patients documented vital health information in an exercise book along with loose sheets for appointments, Blood Glucose Levels and medication records. These were often incomplete or forgotten when attending clinic appointments. PD BUDDY, consisting of a smartphone app for patients and a web portal for clinicians, was developed locally in collaboration with the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to help streamline data collection and make information transparent to both patient and clinicians.

OBJECTIVE

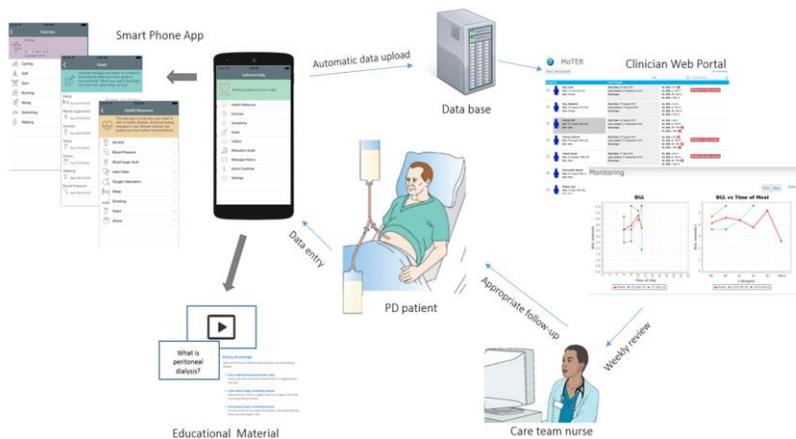
To develop and research the useability and acceptability of PD BUDDY by clinicians and patients. A smartphone app allows patients to record vital information including:

- Prescription
- Weight
- Ultrafiltration
- Digestive health
- Blood pressure
- Symptoms

Other functions of the app include:

- Take and upload photos
- Receive SMS messages
- Store medication lists
- Record exercise
- Set goals
- Educational links

With more accurate records available through the clinician portal, it was hypothesised that we would see more efficient and effective patient clinics, improved peritonitis rates and support for patients to better manage their health in their own environment

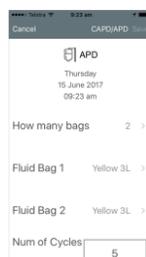


RESULTS

The number of PD-related infections (peritonitis and ESI) was noteworthy lower in the group of patients using the app (0.297 episodes per patient per year) compared to historical data (0.511 per patient per year). These results were not statistically significant due to small sample size, but we believe that in a larger study population these might reach significance

METHODS

PD-Buddy was tested in an open label feasibility study at the Logan Hospital Peritoneal Dialysis Unit, Meadowbrook, Queensland. The study recruited (n=30) patients with a mean age of 51. Primary endpoints were reduction in consultation time by one third without increase in complication rates. Secondary endpoints were user satisfaction evaluated through questionnaire responses.



CONCLUSIONS

Innovation in health care is essential. PD BUDDY streamlines the way patients record and store information, potentially leading to improved health outcomes and extending their adverse event free time on the home-based therapy.

ACKNOWLEDGEMENTS

A/Prof Ken-Soon Tan: Director of Nephrology, Logan Hospital, Metro South Health Service, QLD, Australia

Dr Marlien Varnfield: Australian eHealth Research Centre, Commonwealth Scientific and Industrial Research Organisation, Brisbane QLD, Australia

Dr Manuel Gonzalez-Garcia: The Australian e-Health Research Centre, Health and Biosecurity, CSIRO, Brisbane, Queensland

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