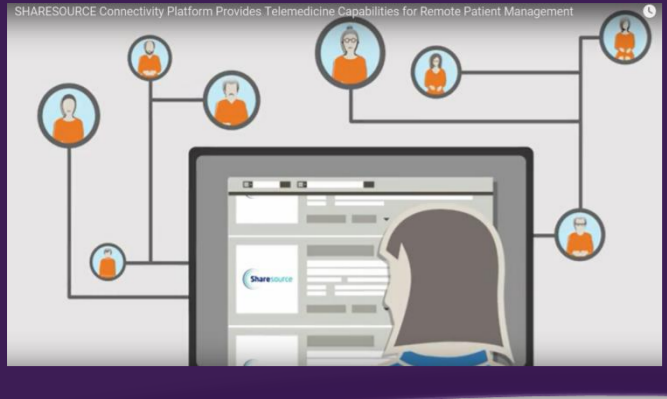


PERITONEAL DIALYSIS IN THE CLOUD. THE USE OF A CLOUD BASED REMOTE MONITORING SYSTEM(RMS) IN PERITONEAL DIALYSIS (PD) THERAPY

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BACKGROUND

- Some of the major challenges encountered in the delivery of peritoneal dialysis service include significant amount of clinical nurse specialist time being spent on travelling to patients' homes, a largely reactive response to dialysis related issues, relying heavily on patients reporting problems to the dialysis team as well as delays in translating prescription changes to changes in treatment.
- SHARESOURCE Remote monitoring System (RMS) is a two-way, cloud based technology platform that allows designated healthcare providers to securely view recently completed dialysis-related treatment data that is automatically collected after each PD session. Healthcare providers can act on this information by securely and remotely adjusting their patients' home device settings without requiring patients to travel to the clinic. This electronic device has the potential of improving the care of patient on PD while saving time and cost.

AIM

- The purpose of the study was to assess the impact of the RMS on the management of patients on PD with emphasis on, time saved, reduction in the incidence of PD related complications and frequency of hospital admissions due to PD related problems

METHODS

- A Single center study of 2 cohorts of patients on PD. The study was in 2 phases. The first phase was to assess the incidence of PD complications and PD related hospital admissions for six months prior to the introduction of RMS.
- The second phase was to assess the impact of RMS on these PD complications. The records of 27 patients who have been on PD prior to the introduction of RMS and 27 patient who have used RMS device for at least 6 months were analysed
- Case notes and clinic letters as well as the nurses' records were analysed.
- Patients who have been on PD for less than 6 months were excluded
- Furthermore, the time spent on phone calls, travel and visiting patients at home for a period of 14 days prior to the introduction of RMS was analysed.

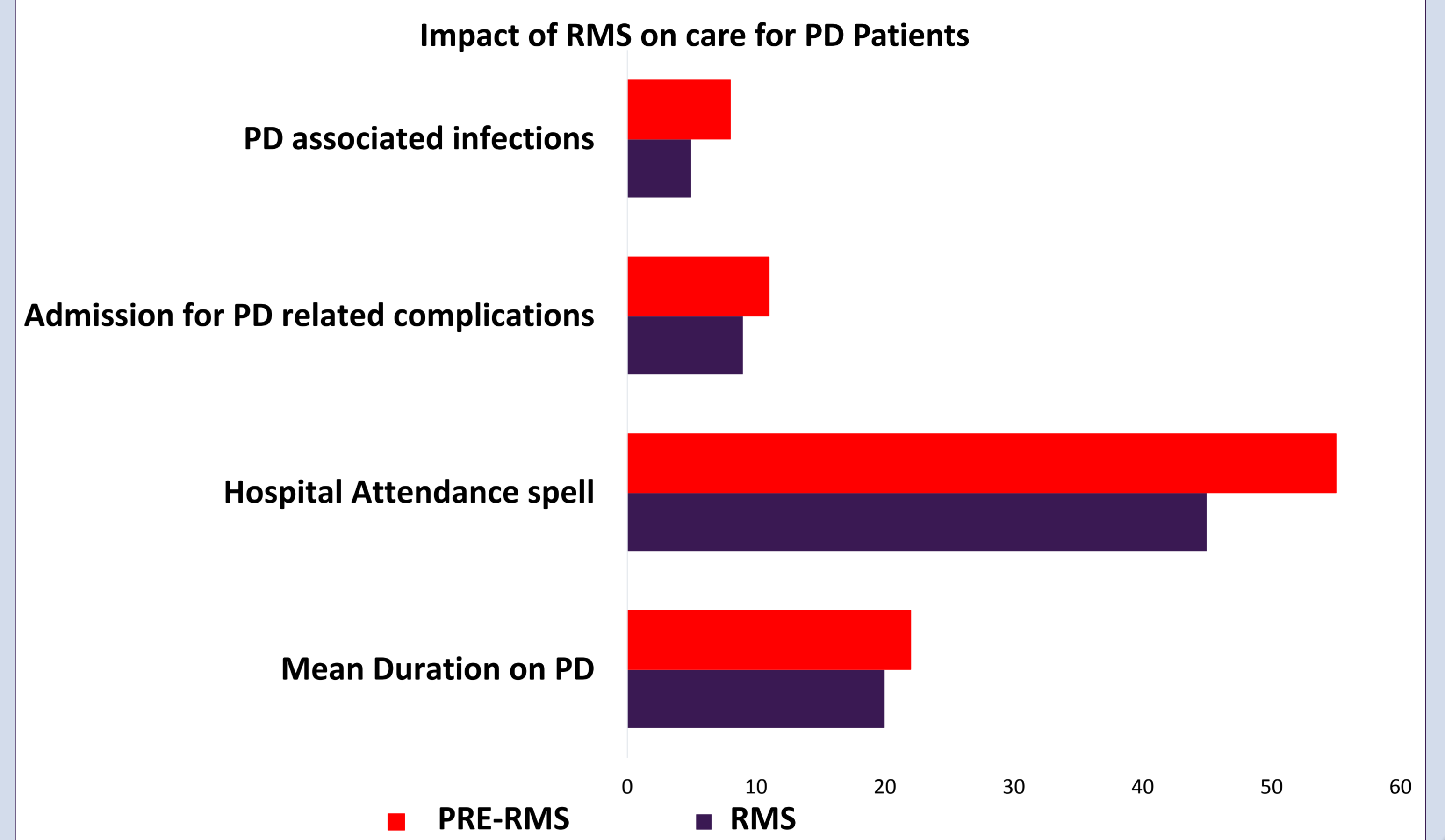
RESULT

- There were 2 cohorts of 27 patients each with a mean age of 62.4 ± 11.5 yrs for the Pre-RMS cohort and 66.6 ± 13.2 for the RMS cohort. Average duration on PD -Pre-RMS cohort - 22.2 ± 14.6 and RMS cohort - 20.1 ± 11.7 months. Over a 6 month period, there was a 37% reduction in incidence of PD peritonitis from 8 to 5 cases, an 18% reduction in the rate of PD related admissions from 11 to 9 and an 18% reduction in the hospital attendance spells from 55 to 45.

REFERENCES

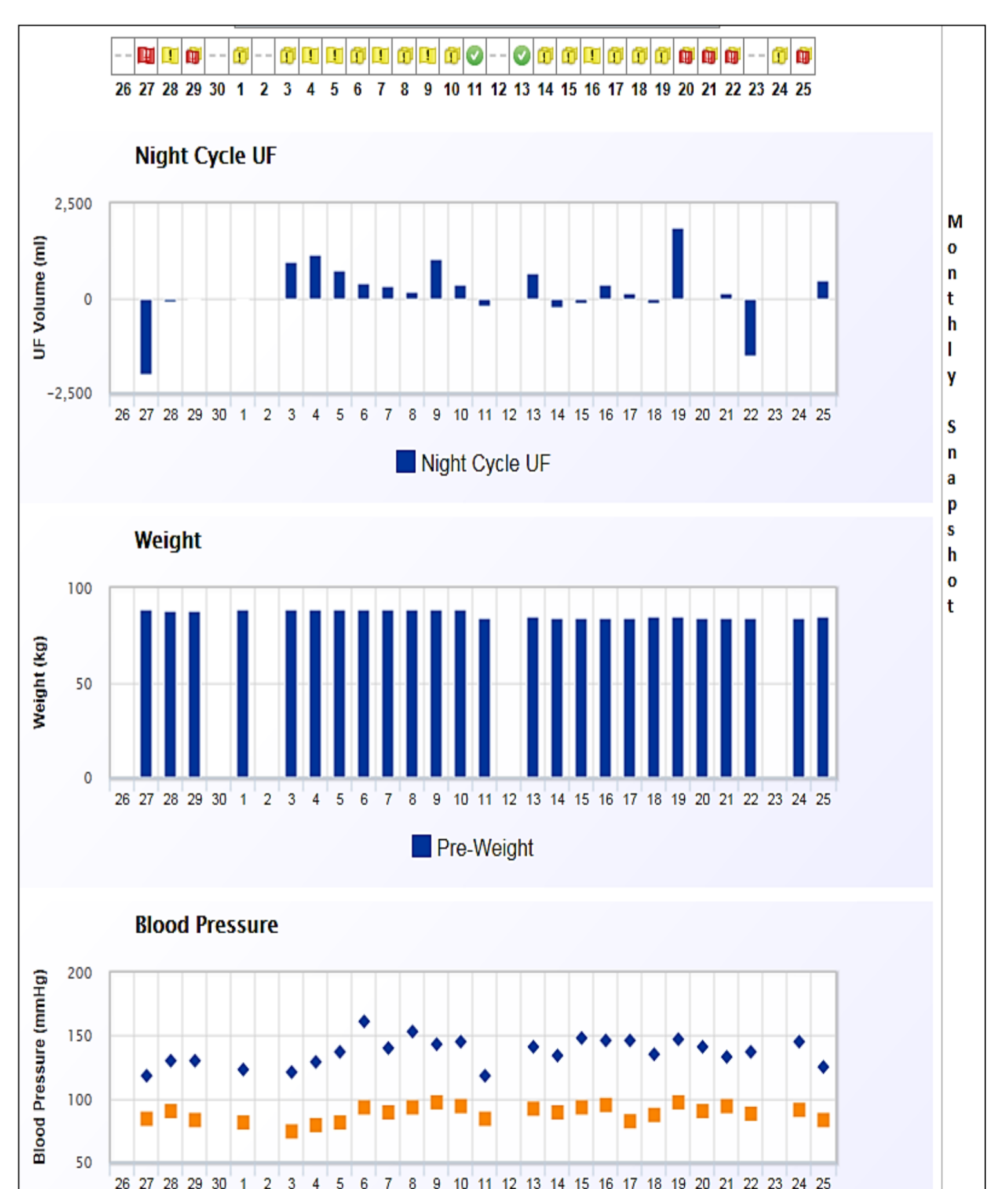
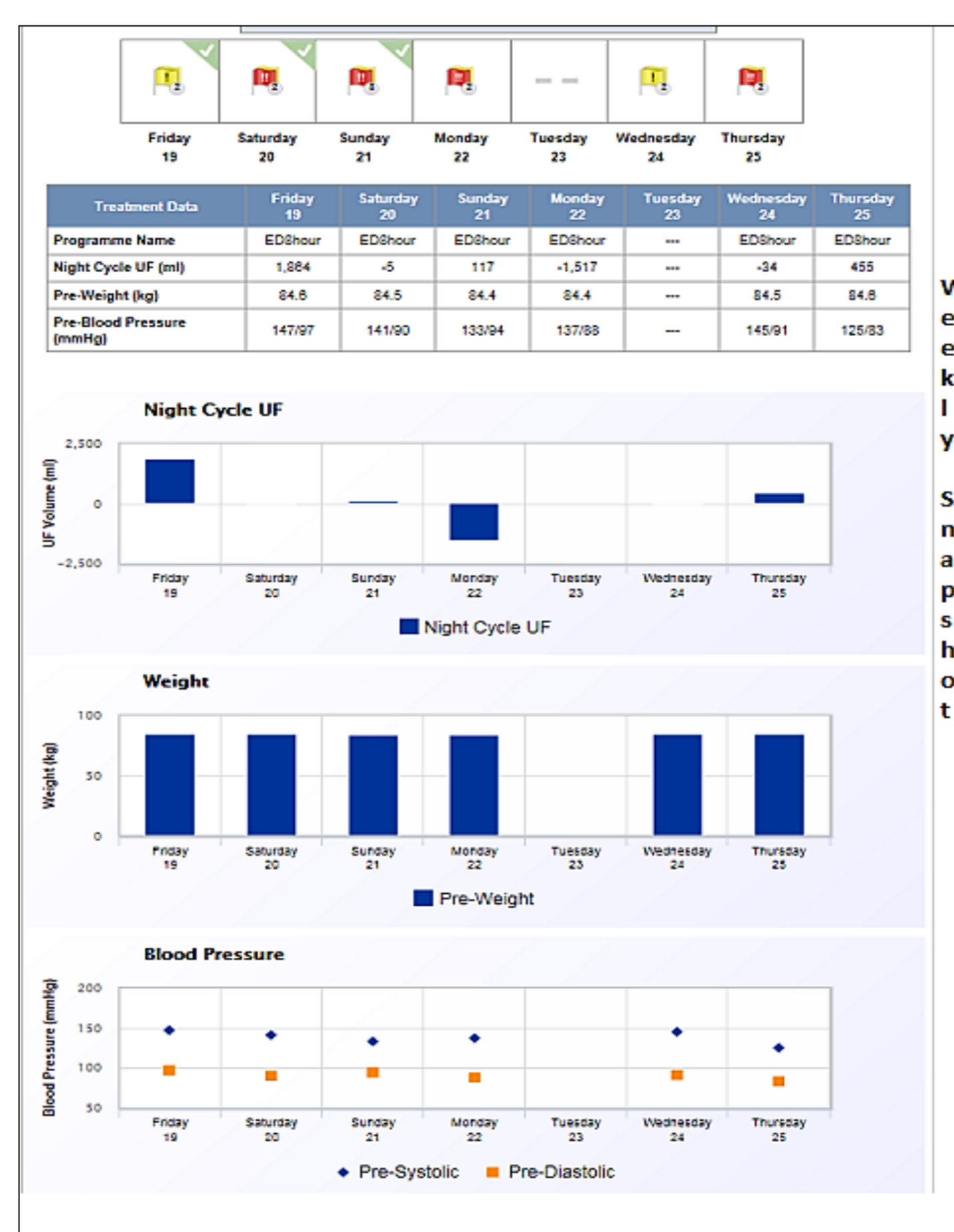
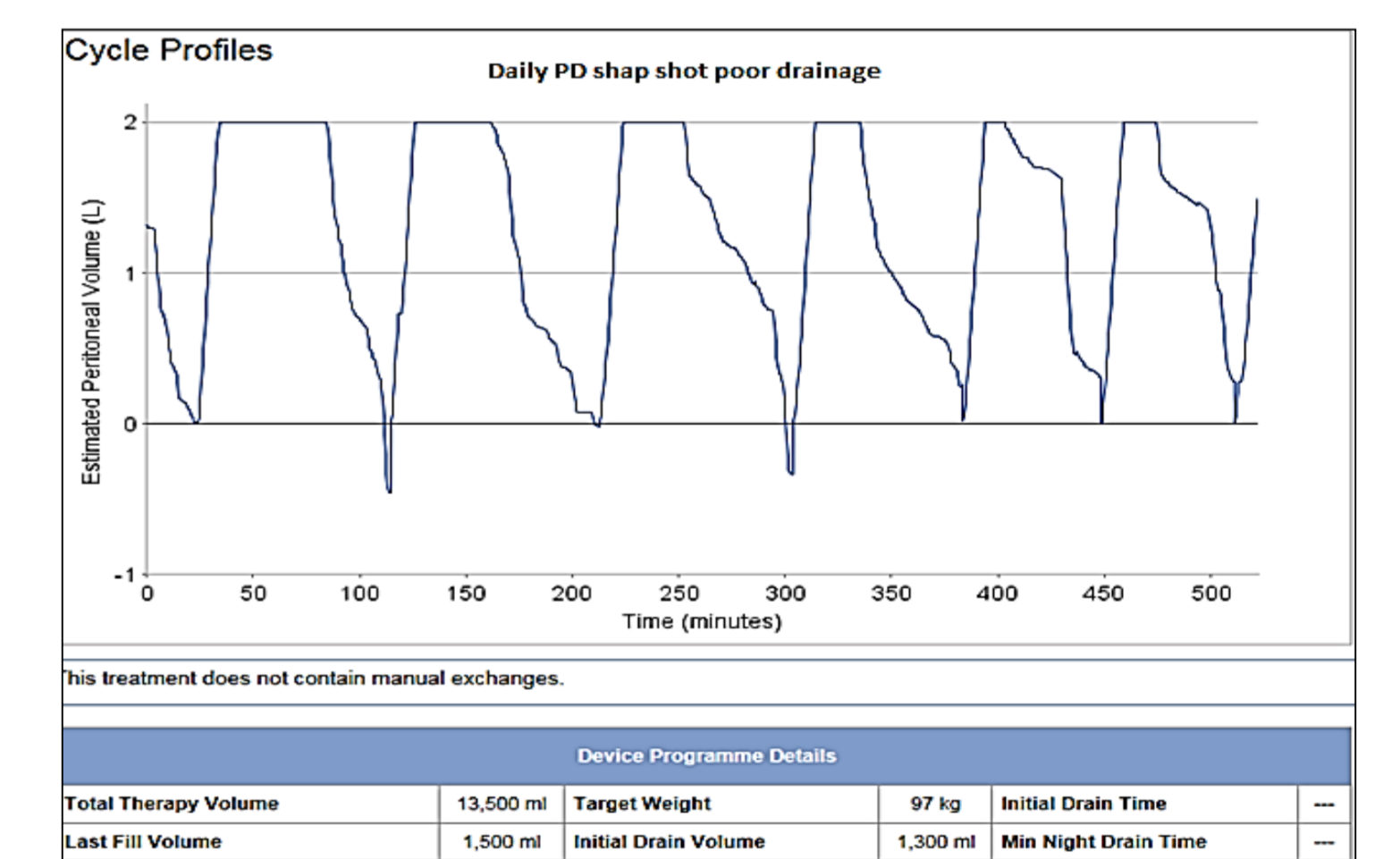
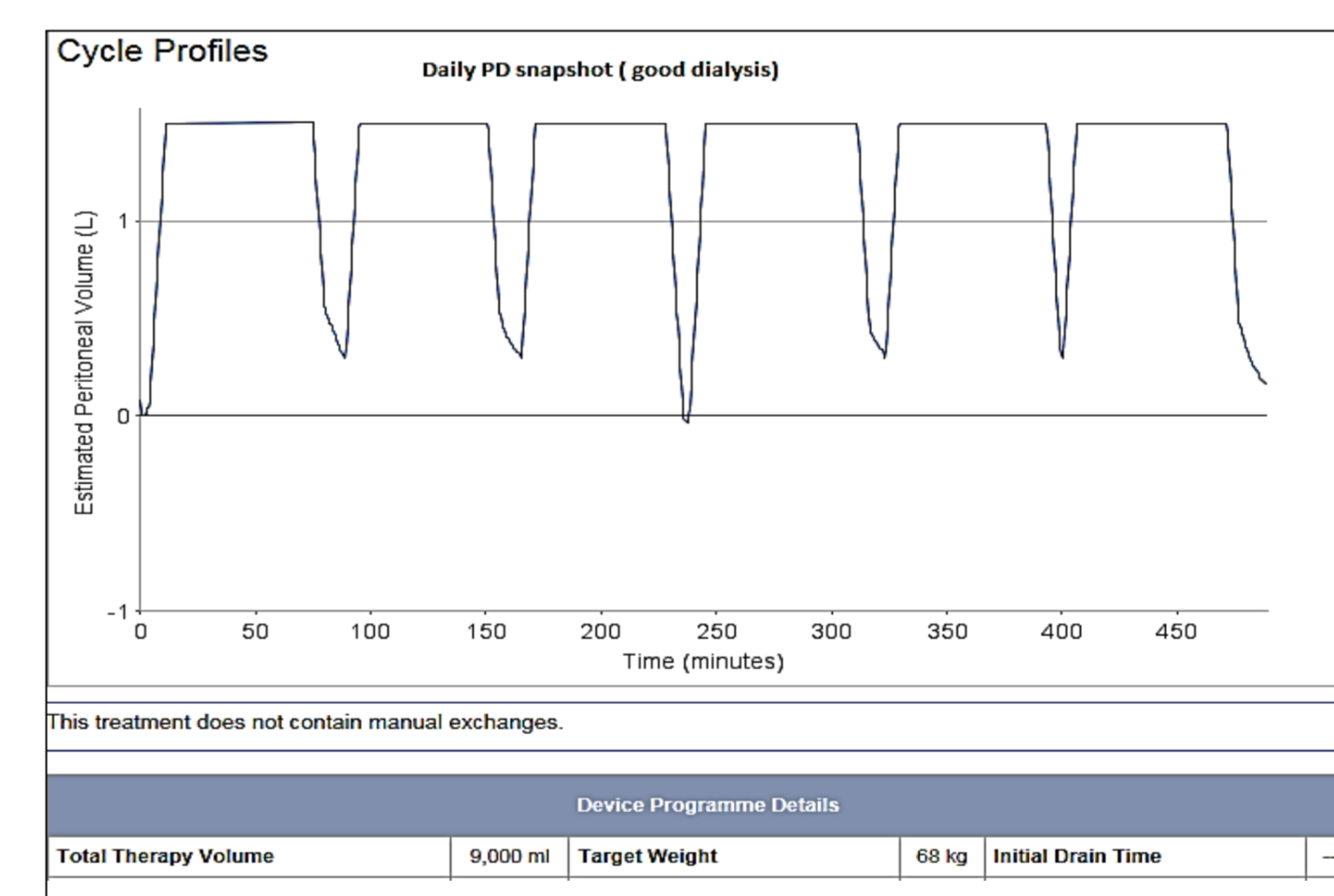
- Baxter (2016). SHARESOURCE connectivity platform get connected to patients on Home Peritoneal Dialysis[online] available at http://innovativedialysisathome.com/wp-content/uploads/2016/02/Sharesource-Brochure-with-Inserts_USMP-MG92-15-0007a-c_FINAL.pdf. Accessed 15/04/17
- Baxter (2016) Baxter's recently Launched SHARESOURCE Telehealth System Has Securely Managed 150000 Home Dialysis Patient Treatments Globally[press release]. Retrieved from http://www.baxter.com/news-media/newsroom/press-releases/2016/10-19-16_sharesource_150k_treatments.page.

	PRE-RMS	RMS
Number of patients	27	27
Mean Age (years) \pm SD	63.4 ± 14.6	66.6 ± 13.2
Mean duration on PD (Months) \pm SD	22.2 ± 14.6	20.1 ± 11.7



KEY BENEFITS

- Greater levels of support & Reassurance
- Help lessen the feelings of isolation
- Avoid reliance on the patient to report concerns
- Less reliance on patients accurately recording data
- Help with reporting and data analysis
- Help prioritising workload and home visits
- Reduce the risk of undetected episodes of fluid overload and inadequate dialysis.



CONCLUSION

- In our study, deployment of RMS device was associated with a reductions in PD associated infection as well as hospital attendance and admissions for PD patients. We believe close monitoring helps the team to intervene early and prevent problems from worsening to the point of requiring admission. There are additional advantages in terms of monitoring the adequacy of therapy, blood pressure and missed or incomplete exchanges.

