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Improvement of Inpatient Workflow in Management of Peritoneal Dialysis Patients

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Peritoneal Dialysis Centre, Speciality Nursing, Ward 42 Renal and Ward 64 Renal

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Background of the Problem

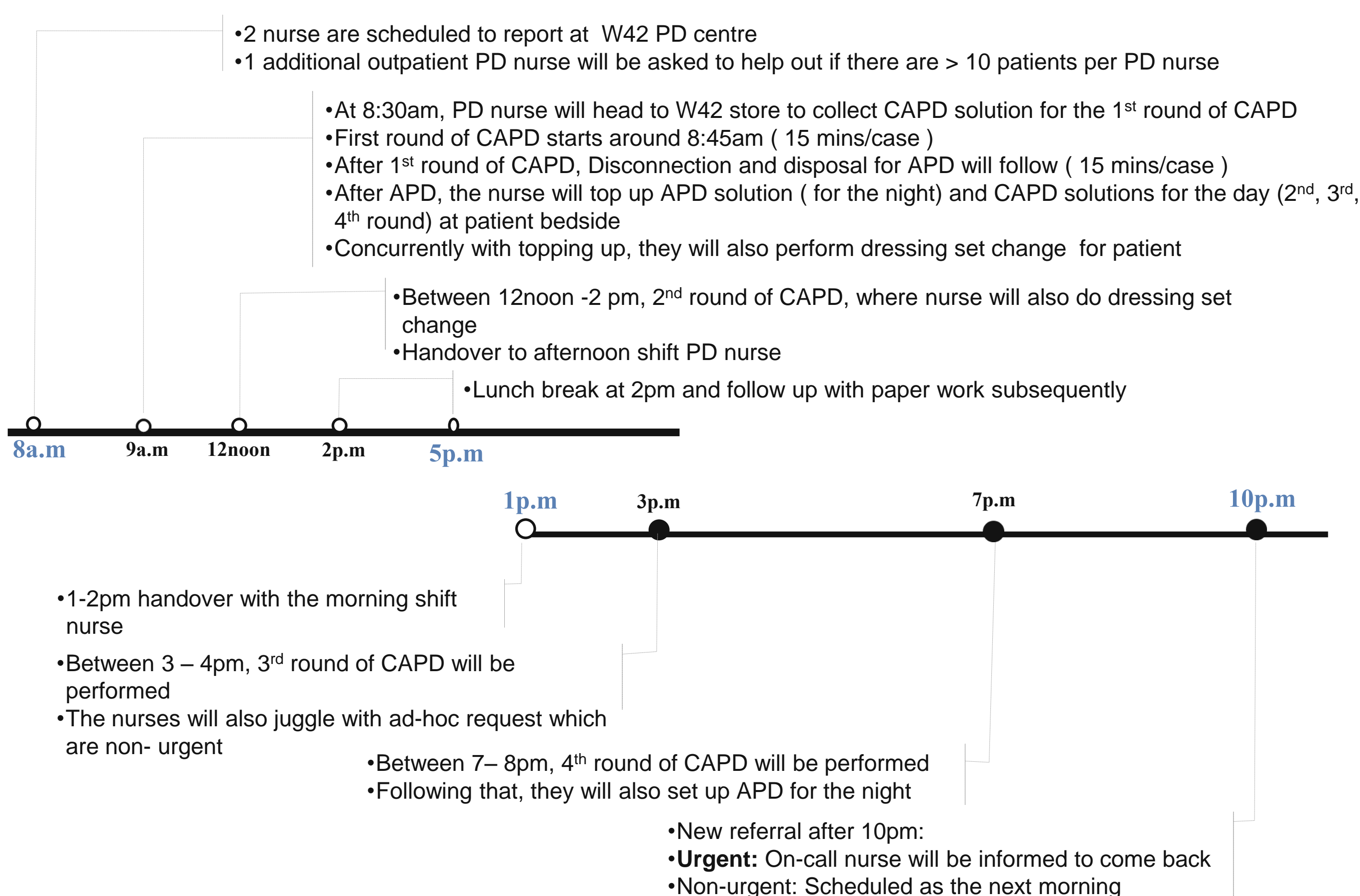
Peritoneal Dialysis (PD) is the only established home based dialysis therapy available in Singapore. In February 2016, MOH has set up the Renal Failure Strategy Working Committee (RFSWC) to drive and promote PD for renal failure patients across the nation. The current SGH-PD programme has approximately 400 patients and these patients are managed by nephrologists, 1 nurse clinician, 11 nurses. Apart from the in-patient and on call service, PD nurses also provide out-patients services which include training new PD patients, assisting walk-in patients with PD-related problems, assisting doctors in running PD clinic, administering intravenous drug and other renal procedures including changing catheter transfer set, changing dressing at catheter exit-site and flushing catheter for new PD patients, and counseling patients and caregivers, tracking and follow up of PD patients at home in outpatient PD clinic. The current practice was flagged up for its continued relevance given that there is increasing workload demand based on current programme's capacity and also organisation efforts on right sizing exercise and management of current resources to continue in improving care, productivity and efficiency.

Mission Statement

To optimise the PD inpatient workflow and improve the efficiency of the inpatient PD nurses

Analysis of Problem

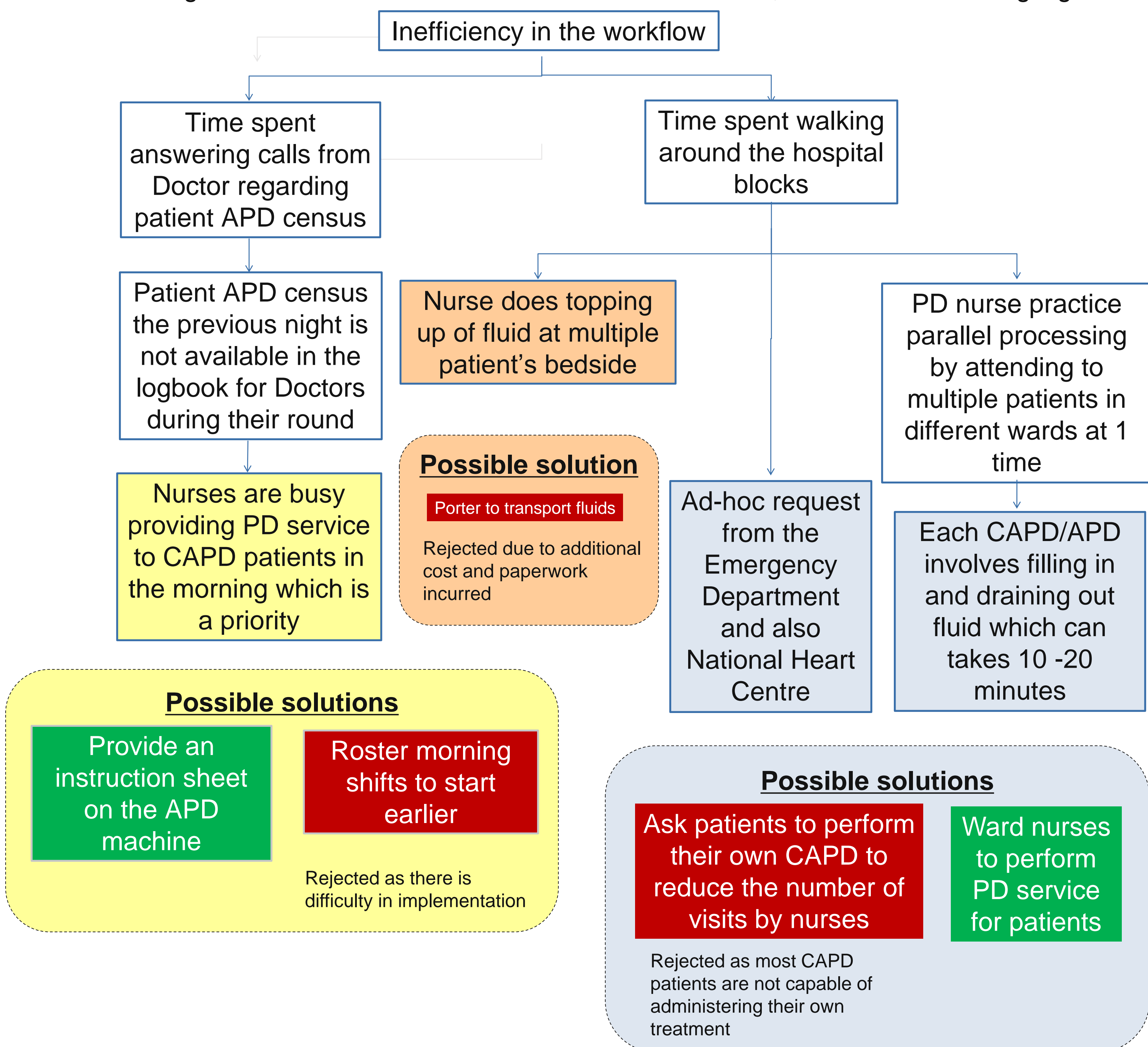
General Timeline of PD Inpatient Nurse Schedule



Other notes:

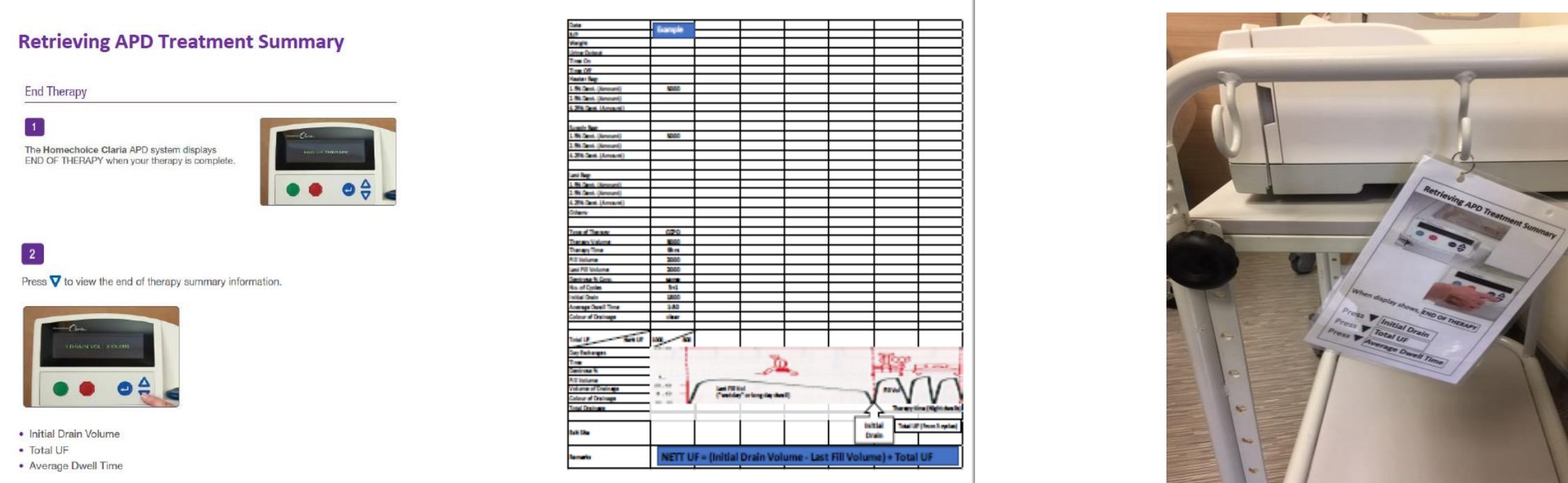
- For new referral, depending on the time patient is admitted, the PD nurse will fit the APD/CAPD treatment to the nearest round.
- Urgent ad-hoc duties (e.g. Body Composition Monitor order) will be attended during the same shift.

Based on on-ground observations and interview with the nurses, these issues was highlighted



Interventions

1) Provide an instruction sheet on how to obtain the results from the APD machines



2) Training of ward nurses to perform PD services for inpatients



Results

Tangible results

a) Number of calls received from doctors regarding patient's APD readings

The instruction sheet on the APD machines has helped to reduce 80% of the number of calls from doctor to the PD nurses per day

b) Total time saved from training of ward nurses to provide PD services

Example of a typical morning shift load for PD nurses:

Before: W42, W45, W47, W53, W55, W58 (9 APD, 3 CAPD)

After Ward 42 nurses have taken over PD duty: W45, W47, W53, W55, W58 (9 APD, 3 CAPD)



Comparing the distance covered in Ward 42 by PD nurse and Ward 42 nurse, there is a savings of 1274 steps (6765-4184-1307) from shuttling between beds, which is equivalent to about 1km. Assuming 15min is required to walk 1km, and 9 earmarked wards (Renal wards-W42/64, Isolation wards-W58/68, DIM wards-46/53/54/63/73) successfully implemented the initiative, there will be a total saving of 98,550 minutes per year (15 mins*2 shifts*365 days*9 wards). This translates to manpower saving of 0.85 FTE (1 FTE = 1940.4hours). With the additional time saved, the PD inpatient nurses can value-add by spending time to care for patients with more complex medical conditions, patient education and staff training.

c) Infection rate of inpatient peritonitis

Based on the 2 months data collected after the ward nurses has taken over the PD service for W42, there has been zero cases of inpatient peritonitis developed.

Intangible results

a) W42 nurses feedback that they have more control over the CAPD intervals and hence are able to plan better based on patient's schedule of the day

b) APD disconnection is done earlier at 5-6am by the night shift nurse instead of 9am by the PD nurse, hence patients are more at ease to move about with their daily activities.

Follow-up Plans

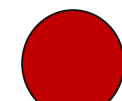
This proposal has provided an opportunity to upskill staff and expand their capabilities hence promotes staff satisfaction as confidence level increases when managing patients of PD therapy

The change in inpatient model of PD care will require buy-in from ground staff. Hence, since July 2015, a PD training programme has been set up by Institute of Advanced Nursing, supported by Renal APN and Speciality nurses. Till date, more than 300 nurses have been trained in SGH and about 150 nurses are working in the renal wards.

This initiative has successfully rolled out in February 2018 and April 2018 in 2 renal wards in SGH and plan is to roll out to the other medical wards and isolation facilities by 2020.



Solutions that are implemented



Solutions that are considered but not implemented