PERITONEAL DIALYSIS (PD) – COMMENCEMENT AND MANAGEMENT OF PD PATIENTS AT HOME

Cross references	SGH CLIN 364 *Peritoneal Dialysis Catheter (PDC) – Heparin lock* PD_SGH_WPI_141 – *Break-In Management For Patients Requiring Urgent PD with Newly Inserted PD Catheter* Renal SGH WPI 096 *Dialysis Adequacy Tests (Creatinine Clearance and Kt/V)* Renal SGH WPI 097 *Peritoneal Equilibration Test (PET)* Renal SGH WPI 095 *Transitioning from PD* SGH WPI 053 *Peritoneal Dialysis – 1L Flush on a Peritoneal Dialysis Catheter* Renal SGH WPI 093 *Changing PD Catheter Extension Set* *SGH Renal Department:* Renal SGH WPI Peritoneal Dialysis Catheter post-insertion exit site care Renal SGH WPI Management of Patients Requiring Intermittent Peritoneal Dialysis
1. Purpose	A Workplace Instruction (WPI) to describe the process for the care and management of new and existing peritoneal dialysis patients at home

Background

Patients are fully trained and supported by the PD nurses to manage their own treatment at home for Continuous Ambulatory Peritoneal Dialysis (CAPD) and / or Automated Peritoneal Dialysis (APD).

PD nurse support begins at the time patient is enlisted on the PD pathway and ends after PD is ceased.

PD nurse support is provided during operating hours – Monday to Friday: 0730 to 1600. Patients can contact Baxter Healthcare toll free number 1800 063 093 for afterhours machine related issues and technical support and 4 South (4S) (9113 3458 or 9113 3446) for after hours clinical support.

2. Process

2.1 Pre-PD support - Patients on the PD pathway are scheduled for pre-PD assessment and education prior to PD catheter (PDC) insertion. Assessment result and action plan are forwarded to the nephrologist

2.2 PDC insertion is either surgical or percutaneous

1. Surgical PDC insertion is performed by the Vascular surgeon in the Operating Theatre in the public or private hospital under general anaesthesia
2. Percutaneous PDC insertion is performed by the interventional nephrologist in a procedure room in the public hospital under local anaesthesia

2.3 Upon PDC insertion:

1. Review patient to assess PDC and exit site
2. Flush PDC and change dressing as per *Renal SGH WPI post-insertion exit care* and SGH WPI 053 *Peritoneal Dialysis - 1L Flush on a Peritoneal Dialysis Catheter* if necessary
3. Heparin lock new PDC as per SGH CLIN 364 *Peritoneal Dialysis Catheter (PDC) - Heparin Lock*
4. Schedule patient for weekly PDC exit site dressing change, PDC flush and hepain locks as per *Renal SGH WPI post-insertion exit care,* SGH WPI 053 *Peritoneal Dialysis - 1L Flush on a Peritoneal Dialysis Catheter*, and SGH CLIN 364 *Peritoneal Dialysis Catheter (PDC) - Heparin Lock* for 3 weeks or more while resting PDC.

2.4 For patients requiring urgent dialysis prior to PD training, Renal team is to decide between haemodialysis or PD. If for urgent PD, manage PD as per PD_SGH_WPI_141 – *Break-In Management For Patients Requiring Urgent PD with Newly Inserted PD Catheter* or *Renal SGH WPI Management of Patients Requiring Intermittent Peritoneal Dialysis*

2.5 PD training - Schedule and tailor daily PD training appropriate to the patient's learning needs once patient is stable and PDC is ready for dialysis:

1. APD 0800 to 1400 hours every day Monday to Friday for 2 weeks or more
2. CAPD To come at 0800rs then again at 1400hrs every day Monday to Friday for 1 week or more

Note: Book an interpreter as required

2.6 During PD training:

1. Attend to and document routine observations and weight (including blood sugar level for patients with diabetes)
2. Request for and monitor results of blood tests i.e. FBC, UEC and etc as necessary
3. For patients requiring top-up dialysis, arrange a hospital admission for inpatient IPD as per Renal SGH WPI Management of Patients Requiring Intermittent Peritoneal Dialysis or haemodialysis (HD) sessions in 4 West HD unit if patient was transferred from HD
4. Establish PD prescription for training and for home
5. Discuss the importance of suitable area to dialyse and to store dialysis equipment and supplies:
   a) Dialysis area should have adequate space for PD equipment, close to a sink or basin for hand hygiene, well-ventilated, away from pets and clean.
   b) Dialysis storage area should be away from direct sunlight & moisture, well-insulated, well-ventilated, away from pets and clean
6. Organise for the renal dietitian to educate and review patient during training
7. Provide patient the shopping list to set-up home for PD (refer to Appendix A)
8. Discuss PD stocktake and organise delivery of PD supplies with Baxter Healthcare

9. Provide appropriate phone numbers and advise patient to call if any dialysis problems occur:
   a) PD unit ph 9113 3770 for clinical and technical support during business hours Monday to Friday, 0730 – 1600 hours
   b) 4 South (9113 3458 or 9113 3446) for after hours clinical support
   c) Baxter Healthcare toll free number 1800 063 093 for 24 hours a day, 7 days a week technical support and 1800 229 837 for stocktake and delivery during business hours Monday to Friday, 0800 – 1630 hours
10. Provide PD problem-solving guide and technical troubleshooting education

    For patients with diabetes:
   a) Monitor blood sugar level (BSL) during training
   b) Advise patients to consult and update their Endocrinologist
   c) Refer to and organise a diabetes education centre appointment
   d) Advise patients to continue to monitor their BSL at home and after PD training

2.7 Upon completion of training:

1. Educate and provide patient the PD prescription for home
2. Schedule an initial home visit to assist patient with home set-up for PD on the day or day after completion
3. Book a renal clinic appointment for Nephrologist to review patient within 2 – 6 weeks
4. Provide a pathology request form for a blood tests (i.e. FBC, UEC, LFT, hepatitis serology and etc) prior to renal clinic appointment
5. Schedule peritoneal equilibration and dialysis adequacy tests in 4 to 8 weeks as per Renal SGH WPI 096 *Dialysis Adequacy Tests (Creatinine Clearance and Kt/V)* and Renal SGH WPI 097 *Peritoneal Equilibration Test (PET)*
6. Complete PD training summary form (Appendix B) and send to Nephrologist

2.8 For data collection and outcome monitoring, new PD patients' clinical and dialysis details are entered into:

- Renal database (RISC),
- Renal folder (RISCDOC),
- National registry (ANZDATA),
- PD spreadsheets (Patient Flow, Infection Rates, Biochem Main, PDC insertion, Consultant numbers, Postcodes, Admission Workbook and PD regimen)
- ANZDATA Acceptance Main Worksheet

2.9 PD at home support:

1. Phone follow-up and home visits to continue as required including clinical and technical troubleshooting over the phone from PD nurses, Baxter or 4 South (afterhours)
2. Nephrologist and PD nurses to review patient in renal clinic every 8-12 weeks or as required

3. Provide pathology request forms and reminder for routine blood tests (refer to Appendix B):
   a) Quarterly CMP, FBC, UEC, LFT, Urate, Iron studies and PTH screening for all PD patients
   b) Quarterly HbA1C for patients with diabetes
   c) 6-monthly Troponin T and serology screening for all PD patients
   d) 6-monthly fasting lipids screening for patients with history of cerebro-vascular, cardio-vascular and/or peripheral vascular disease.
4. Schedule repeat dialysis adequacy testing every year or as required as per Renal SGH WPI 096 Dialysis Adequacy Tests (Creatinine Clearance and Kt/V)
5. Schedule PD catheter extension set change every year or as required as per Renal SGH WPI 093 Changing PD Catheter Extension Set
6. Schedule peritoneal equilibration testing as needed or as requested by nephrologist as per Renal SGH WPI 097 Peritoneal Equilibration Test (PET)
7. Renal dietitian to review patient every 6 months or as required

2.10 Prolonged PD at home (≥2years):

Patients who have been on PD for 2 years or over are to be categorised, reviewed and supported as per PD risk assessment and management pathway and flowchart in Renal SGH WPI 095 Transitioning from PD

3. Network file	Renal, Peritoneal Dialysis
4. External references / further reading	https://stgrenal.org.au/dialysis Arramreddy, R., Zheng, S., Saxena, A. B., Liebman, S. E., & Wong, L. (2014). Urgent-Start Peritoneal Dialysis: A Chance for a New Beginning. *Am J Kidney Dis, 63*(3), 390-395. doi: 10.1053/j.ajkd.2013.09.018 Bento, C., Fuerbringer, R., Tabisz, A., & Riella, M. (2016). Live or let die: when intermittent peritoneal dialysis is the only plausible solution for survival. *Minerva Urol Nefrol, 68*(1), 45-46. Blake, P. G., Bargman, J. M., Brimble, K. S., Davison, S. N., Hirsch, D., McCormick, B. B., . . . Tonelli, M. (2011). Clinical Practice Guidelines and Recommendations on Peritoneal Dialysis Adequacy 2011. Perit Dial Int, 31(2), 218-239. doi: 10.3747/pdi.2011.00026 Figueiredo, A. E., Bernardini, J., Bowes, E., Hiramatsu, M., Price, V., Su, C., . . . Brunier, G. (2016). A Syllabus for Teaching Peritoneal Dialysis to Patients and Caregivers. Peritoneal Dialysis International, 36(6), 592-605. doi: 10.3747/pdi.2015.00277 Ghaffari, A. (2012). Urgent-start peritoneal dialysis: a quality improvement report. *Am J Kidney Dis, 59*(3), 400-408. doi: 10.1053/j.ajkd.2011.08.034 Groenhoff, C., Delgado, E., McClernon, M., Davis, A., Malone, L.,

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5. Specialty/department committee approval	Peritoneal Dialysis Committee
6. Department head approval	Dr Mark Brown or Dr Franziska Pettit, Department Head Renal Services Date: 25.07.17
7. Executive sponsor approval – Nurse Manager	Sarah Massey, A/Nurse Manager Medicine 1 Date: 02.08.17

Revision and Approval History

Date published	Revision number	Author (Position)	Date revision due
Aug 2017	0	Anna Claire Cuesta, CNC Peritoneal Dialysis SGH	Aug 2020

Appendix A

Shopping List: To set-up your home for Peritoneal Dialysis

Ongoing purchase:

1. Paper towel (preferably with dispenser or holder)
2. Antibacterial soap in a pump bottle (*Do not refill pump bottle)
3. 1 bottle Methylated Spirit
   (Mix one part of Methylated Spirit to 4 parts of water in the spray bottle)

One-off purchase:

1. Spray bottle or container
2. 20 Litre white bucket with lid (for APD patients)
3. Trolley for bucket
4. Coat hook or hook stand (for CAPD patients)
5. Digital weigh scale
6. Work tray (plastic or stainless)
7. Appropriate table (glass-top, glossed or stainless table) to perform dialysis and to fit the APD machine

Appendix B

ROUTINE BLOODS for Peritoneal Dialysis Patients

JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
UEC	UEC	UEC	UEC	UEC	UEC	UEC	UEC	UEC	UEC	UEC	UEC
Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg	Ca, PO4, Mg
FBC	FBC	FBC	FBC	FBC	FBC	FBC	FBC	FBC	FBC	FBC	FBC
LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's	LFT's
Urate	Urate	Urate	Urate	Urate	Urate	Urate	Urate	Urate	Urate	Urate	Urate
			HBsAg (yearly if core positive) Anti-HBs						HepCAb HBsAg (yearly if core positive) Anti-HBs		
Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*	Tissue Typing*
Troponin T*						Troponin T*					
Fe studies*			Fe studies*			Fe studies*			Fe studies*		
PTH			PTH			PTH			PTH		
HbA1c (only diabetic patients)			HbA1c (only diabetic patients)			HbA1c (only diabetic patients)			HbA1c (only diabetic patients)		
			Fasting lipids - Total Cholesterol, HDL, LDL & Triglycerides* only in high risk patients						Fasting lipids - Total Cholesterol, HDL, LDL & Triglycerides* only in high risk patients		
Tissue typing for patients on transplant list. Performed before 20th of each month and repeated 2 weeks after a blood transfusion.											
Fe studies performed 2 weeks after completing a course of IV Fe.											
HIV tesing is performed at commencement of dialysis.											
Fasting Lipids only for patients with a history of, or at risk of, CAD, CVD, PVD or diabetes.											
Troponin T : Twice per year											
Hepatitis B testing - refer to protocol. Core positive patients only require yearly antigen testing											
Blood Borne Viruses: Initial testing for HIV, Anti-HCV, HBsAg, Anti-HBs, Anti-HBc (informed consent required)											
Hepatitis B surface antibody (Anti-HBs) level 4-8 weeks post vaccination course											
Dialysis Adequacy (Kt/V and Ccl) - Annual tests											