PERITONEAL DIALYSIS CATHETER (PDC) – BREAK-IN MANAGEMENT FOR PATIENTS REQUIRING URGENT PERITONEAL DIALYSIS WITH NEWLY INSERTED PDC

Cross references	SGH CLIN 345 Peritoneal Dialysis – Inpatient Management Renal SGH WPI APD Set-up and Connection Procedure – HomeChoice Dialysis Machine SGH CLIN379 Intraperitoneal Actilyse (Alteplase) Administration SGH CLIN380 Intraperitoneal Heparin Administration SGH CLIN381 Intraperitoneal Potassium Administration Renal SGH WPI Peritoneal Dialysis Catheter post-insertion exit site care Renal SGH WPI Peritoneal Dialysis – Small Flush on a Peritoneal Dialysis Catheter Renal Flowchart Peritoneal Dialysis Catheter: Management of Poor Flow/No Flow Renal SGH WPI APD Disconnection with Opticap Procedure Renal SGH WPI APD End of Therapy and Disconnection Procedure – HomeChoice Dialysis Machine Renal SGH Clin364 PDC – Heparin lock SGH Renal Department; https://stgrenal.org.au/dialysis
1. Purpose	To ensure the break-in management of newly inserted PDCs is performed according to best practice guidelines reducing the risk of post-insertion complications or infection and ensuring patient safety

Background
Newly-inserted PDCs are rested for 2-3 weeks due to risks of PDC related complications (i.e. bleeding, blockage or leakage) and infection. However, some patients require dialysis urgently post insertion.

Low fill volume is the recommended break-in peritoneal dialysis (PD) regimen for new PDCs to reduce post-insertion complications and infection:

Therapy:	CCPD/IPD
Total Volume:	24000mls

Fill volume:	1000mls
Last fill:	0ml
Therapy time:	24 to 48 hours

2. Process

2.1 Patient is to be admitted or transferred and should remain in 4South for the break-in PD therapy for close monitoring

2.2 Upon admission in 4S, ward nurse should attend to and document routine observations and weight
Note: Weight should be attended before every dialysis bag change or replacement

2.3 Ward nurse to notify the renal and PD team upon patient's arrival to the ward

2.4 Renal team to complete admission documentation (if necessary), fluid assessment and predialysis bloods i.e. FBC, UEC including serum potassium

2.5 PD nurse and renal team to complete the PD order form specifying dialysis strength, fluid removal and additives required

2.6 Ward nurse to attend to inpatient care and dialysis as per SGH CLIN 345 Peritoneal Dialysis – Inpatient Management

2.7 Commence break-in PD therapy immediately as per Renal SGH WPI APD Set-up and Connection Procedure – HomeChoice Dialysis Machine

2.8 Administer intraperitoneal potassium as per SGH CLIN381 Intraperitoneal Potassium Administration

2.9 Administer intraperitoneal heparin as per SGH CLIN380 Intraperitoneal Heparin Administration

2.10 Ward nurse to monitor:

1. Midline abdominal wound and PDC exit site for signs of bleeding and leakage whilst on dialysis
2. Bowel movement. Give laxative or aperients to relieve constipation i.e. lactulose, bisacodyl and/or coloxyl with senna
3. Fluid balance. Ascertain current fluid restriction and target fluid removal

2.11 For break-in PD therapy **without** complications: Continue break-in PD regimen for 72 hours then titrate to higher fill volumes until 2 Litre fill volume is achieved.

2.12 For break-in PD therapy with complications:

1. **For leaking PDC exit site** – stop dialysis, notify the PD team and renal team, change dressing as per Renal SGH WPI PDC post-insertion exit site care, rest PDC for 24-48 hours then resume same break-in PD regimen
2. **For persistently leaking PDC exit site** – stop dialysis, notify the vascular surgeon, PD team and renal team, change dressing as per Renal SGH WPI PDC post-insertion exit site care, rest PDC for 2 – 3 weeks with weekly small flushes as per Renal SGH WPI PD – Small Flush on a PDC
3. **For bleeding PDC exit site** – stop dialysis, change dressing as per Renal SGH WPI PDC post-insertion exit site care, notify the vascular surgeon, PD team and renal team to decide duration of PDC rest
4. **For presence of fibrin** – notify the PD team and renal team administer intraperitoneal (IP) heparin as per SGH CLIN380 PD – IP Heparin administration

5. **For blocked or poor flowing PDC** – stop dialysis, notify the vascular surgeon, PD team and renal team, and manage PDC issue as per PDC: Management of Poor Flow/No Flow flowchart and/or SGH CLIN379 Intraperitoneal Actilyse (Alteplase) Administration

2.13 Adjustment of fill volume and break-in PD regimen will be decided between the vascular surgeon, PD team and renal team based on patient's clinical condition

2.14 Disconnect patient during break-in PD therapy as per Renal SGH WPI APD Disconnection with Opticap Procedure

2.15 Upon completion of break-in PD therapy, disconnect patient from dialysis machine as per Renal SGH WPI APD End of Therapy and Disconnection Procedure – HomeChoice Dialysis Machine

2.16 After disconnection, heparin lock new PDC to maintain patency as per Renal SGH Clin364 PDC – Heparin lock

2.17 On discharge, PD nurses will review patient to schedule ongoing outpatient follow-up and PD training

3. Network file	Renal, Peritoneal Dialysis http://seslhnweb/sgshhs/Business_Rules/Clinical/Peritoneal/default.asp https://stgrenal.org.au/dialysis
4. External references / further reading	Alkatheeri, A. M. A., Blake, P. G., Gray, D., & Jain, A. K. (2016). Success of Urgent-Start Peritoneal Dialysis in a Large Canadian Renal Program. *Peritoneal Dialysis International, 36*(2), 171-176. doi: 10.3747/pdi.2014.00148 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 Casaretto, A., Rosario, R., Kotzker, W. R., Pagan-Rosario, Y., Groenhoff, C., & Guest, S. (2012). Urgent-start peritoneal dialysis: report from a U.S. private nephrology practice. *Adv Perit Dial, 28*, 102-105. Cullis, B., Abdelraheem, M., Abrahams, G., Balbi, A., Cruz, D. N., Frishberg, Y., . . . Finkelstein, F. O. (2014). Peritoneal Dialysis for Acute Kidney Injury. *Peritoneal Dialysis International, 34*(5), 494-517. doi: 10.3747/pdi.2013.00222 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., Majirsky, J., & Guest, S. (2014). Urgent-start peritoneal dialysis: nursing aspects. *Nephrology nursing journal : journal of the American Nephrology Nurses' Association, 41*(4), 347-352; quiz 353.

	Jo, Y.-I., Shin, S. K., Lee, J.-H., Song, J.-O., & Park, J.-H. (2007). IMMEDIATE INITIATION OF CAPD FOLLOWING PERCUTANEOUS CATHETER PLACEMENT WITHOUT BREAK-IN PROCEDURE. *Peritoneal Dialysis International, 27*(2), 179-183. Szeto, C.-C., Li, P. K.-T., Johnson, D. W., Bernardini, J., Dong, J., Figueiredo, A. E., . . . Brown, E. A. (2017). ISPD Catheter-Related Infection Recommendations: 2017 Update. *Peritoneal Dialysis International, 37*(2), 141-154. doi: 10.3747/pdi.2016.00120
5. Specialty/department committee approval	Peritoneal Dialysis Committee
6. Department head approval	Mark Brown or Franziska Pettit, Department Head Renal Services
7. Executive sponsor approval – Nurse Manager	Christine Day, Nurse Manager Medicine

Revision and Approval History

Date published	Revision number	Author (Position)	Date revision due
June 2017	1	Anna Claire Cuesta (PD CNC)	June 2020

WPI Criteria	**Yes**	**No**
Contains ward/unit/department specific instructions only	**Y**	
Description of process is straight forward and without variables. **NOT a WPI** if dependent on various decision making pathways **e.g.** if something is A do B and if C do D	**Y**	
Process is free from complex clinical decision making	**Y**	
Process is free from medications	**Y**	
Process is free from high risk invasive procedures	**Y**	
Document will be located on the ward/unit/department dedicated intranet page	**Y**	
Document will be listed in a local register by custodian responsible for facilitating WPI review every 3 years	**Y**	
Department head will approve the document and nursing co-director or clinical group manager will be the executive sponsor	**Y**	
If **NO** to any of the criteria ↓ **NOT a WPI** – progress to clinical business rule (CIBR) development		