

**PERITONEAL DIALYSIS UNIT - RENAL DEPARTMENT
Workplace Instruction (SGH_WPI_053)**

PERITONEAL DIALYSIS (PD) – 1 LITRE FLUSH ON A PERITONEAL DIALYSIS CATHETER

Cross references	NSW Health PD2007_036 - Infection Control Policy SGSHHS CLIN027 - Aseptic Technique - Competency and Education Requirements Renal Department WPI - Continuous Ambulatory Peritoneal Dialysis (CAPD) Freeline Solo Exchange Procedure; Renal Department Flowchart - Management of Poor Flow - No Flow Catheter; SGH CLIN Peritoneal Dialysis Catheter Heparin Lock
1. Purpose	To ensure the process of flushing a PD catheter is performed according to best practice guidelines reducing the risk of infection and ensuring patient safety

2. Process

2.1 Recommendations to perform a 1 Litre PD catheter flush

- Post peritoneal dialysis catheter (PDC) insertion procedure
- Weekly for resting PDC prior to commencement of PD and/or due to: return of renal function, transfer to haemodialysis and etc.
- Note: Newly inserted PDC is to rest for 2 – 3 weeks
- To ascertain PDC function
- To ensure PDC patency

2.2 Devices

2.2.1 Equipment

- Trolley
- Portable IV pole
- Blue clamp
- Micropore tape

2.2.2 Key parts

- Minicap
- Peritoneal dialysis fluid (1.5 % Freeline Solo bag)
- Drawing-up needle (18G)
- 20ml syringe
- Normal saline - 10 ml ampoule
- Heparin – 5000 Units/5 ml (only if indicated)

2.2.3 Key site

- Abdominal PD catheter

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2.3 Procedure

1. Explain procedure to patient and educate on the importance of flushing the PDC
2. Warm the PD fluid (freeline solo bag) on the warmer
Note: PD fluid takes 30 minutes to warm
3. Perform hand hygiene
4. Clean trolley/work surface with detergent
5. Identify and gather equipment for procedure
6. Wash the blue clamp and dry thoroughly
7. Perform hand hygiene
8. Prepare general aseptic field with key parts, blue clamp and micropore tape
9. Use the sharp edge of the blue clamp to open outer pouch of the dialysis bag. **DO NOT USE SCISSORS OR KNIVES**
10. Place the opened bag on top of the clean trolley and ensure the lines are facing up
11. Check the bag strength, volume, expiry, colour and for leakage
12. Prepare the patient:
 - a. Don non-sterile gloves
 - b. Expose the PD catheter
 - c. Keep PD catheter away from clothing
13. Remove gloves and perform hand hygiene
14. Don sterile gloves
15. Perform connection procedure ensuring all key parts/sites are protected
 - a. Remove the coloured cap from the patient line and remove minicap from the catheter
 - b. Use non-touch connection technique to connect catheter to the patient line
 - c. Hang the full bag on an IV pole and place the empty drain bag on the floor
 - d. Ensure all lines are not kinked or pulling from the exit site. Ensure catheter dressing remains intact
 - e. Break the green stick to flush and prime the lines for 5 seconds then clamp the inflow line with a blue clamp
16. Twists open the catheter valve to commence drain. Drain patient until empty.
17. When the drain line is cool, fill the patient:
 - a. Close the blue clamp on the outflow line;
 - b. Remove the blue clamp on the inflow line;
 - c. Run 1000 mL PD fluid into the patient (fill time is approximately 10-15 minutes)
18. When fill is complete, place a blue clamp on the inflow line
19. Prepare to immediately drain out the patient:
 - a. Open the blue clamp on the outflow line
 - b. Record PD effluent quality and volume.
Note: PD effluent is expected to be light blood-stained on initial flush post PDC insertion procedure

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20. If PD effluent is heavily blood stained, perform another 1 Litre PD flush by repeating steps 17-19.
Note: 1 Litre PD flushes will need to be repeated until effluent is light blood stained or clear.
21. After flushing is completed, close the PDC valve
22. For resting PDCs or PDCs with patency issues, perform the PDC heparin lock using aseptic technique ensuring all the key parts are protected:
Note: Heparin lock must be prescribed on a medication chart, it is not nurse initiated.
 - a. Attach drawing-up needle to 20 ml syringe;
 - b. Alcohol swab the Heparin and saline ampoules;
 - c. Open the Heparin ampoules and aspirate all content into the 20 ml syringe;
 - d. Open normal saline ampoules and aspirate 15 mls into the 20 ml syringe;
 - e. Connect the Heparinised saline syringe to end of PDC
 - f. Open the PDC valve
 - g. Push all the Heparinised saline solution into the PD catheter
 - h. Close the PDC valve
23. Disconnect syringe from PDC and apply new minicap
24. Secure the end part of the PD catheter to the abdomen with a micropore tape
25. Discard used equipment in the clinical waste bin
26. Remove gloves
27. Perform hand hygiene
28. Clean trolley after use and perform hand hygiene
29. Document the procedure on patient notes
30. Handover to the next shift

3. Network file	Renal
4. External references / further reading	<p>Firaneq, C. & Guest, S. (2011). Hand Hygiene in Peritoneal Dialysis. <i>Peritoneal Dialysis International</i>. 31(4):399-408</p> <p>Gokal, R., Alexander, S., Ash, S., Chen, T.W., Danielson, A., Holmes, C., Joffe, P., Moncrief, J., Nichols, K., Piraino, B., Prowant, B., Slingeneyer, A., Stegmayr, B., Twardowski, Z., and Vas, S. (1998). Peritoneal catheters and exit-site practices toward optimum peritoneal access: 1998 update. <i>Peritoneal Dialysis International</i>. 18(1), 11-33.</p> <p>Margetts, P. (2009). Heparin And The Peritoneal Membrane. <i>Peritoneal Dialysis International</i>, 29(1), 16-19.</p> <p>Ross, L. A., & Labato, M. A. (2013). Current techniques in peritoneal dialysis. <i>Journal of Veterinary Emergency and Critical Care</i>, 23(2), 230-240. doi: 10.1111/vec.12035</p> <p>Yap, D. Y. H., Chu, W. L., Ng, F., Yip, T. P. S., Lui, S. L., & Lo, W. K. (2012). Risk Factors and Outcome of Contamination in Patients on Peritoneal Dialysis—A Single-Center Experience of 15 Years.</p>

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	<i>Peritoneal Dialysis International</i> , 32(6), 612-616. doi: 10.3747/pdi.2011.00268
5. Specialty/department committee approval	Peritoneal Dialysis Committee
6. Department head approval	Prof Mark Brown, Dept Head Renal Services Date: 19.07.16
7. Executive sponsor approval – Nurse Manager	Kim Lawler, A/ Nurse Manager Medicine Date: 21.07.16

Revision and Approval History

Date published	Revision number	Author (Position)	Date revision due
Aug 2016	0	Anna Claire Cuesta (PD CNC)	Aug 2019

WPI Criteria	Yes	No
Contains ward/unit/department specific instructions only	✓	
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	✓	
Process is free from complex clinical decision making	✓	
Process is free from medications	✓	
Process is free from high risk invasive procedures	✓	
Document will be located on the ward/unit/department dedicated intranet page	✓	
Document will be listed in a local register by custodian responsible for facilitating WPI review every 3 years	✓	
Department head will approve the document and nursing co-director or clinical group manager will be the executive sponsor	✓	
If NO to any of the criteria ↓ NOT a WPI – progress to clinical business rule (CIBR) development		