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

Cross references	NSW Health PD2017_013 *Infection Prevention and Control Policy* NSW Health PD2017_026 *Clinical and Related Waste Management for Health Services* NHMRC *Australian Guidelines for the prevention and control of Infection in Healthcare* SGH-TSH CLIN027 *Aseptic Technique - Competency and Education Requirements* SGH CLIN538 *Peritoneal dialysis Catheter (PDC): Poor Flow / No Flow Management* SGH CLIN364 Peritoneal Dialysis Catheter (PDC) – Heparin Lock SGH PD WPI 217 *Continuous Ambulatory Peritoneal Dialysis (CAPD) Freeline Solo Exchange Procedure*
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 (inflow and outflow rate)
- 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
- 0.9% sodium chloride - 10mL ampoule
- Heparin – 5000units/5 ml (only if indicated and to be charted)

2.2.3 Key site

- Abdominal PD catheter

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. Perform hand hygiene
    b. Wear PPE and don gloves as per NSW Health PD2017_013 *Infection Prevention and Control Policy*;
    c. Expose the PD catheter
    d. 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

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 as per SGH CLIN364 Peritoneal Dialysis Catheter (PDC) – Heparin Lock using aseptic technique ensuring all the key parts are protected:

    Note: Heparin lock must be prescribed on eMEDs/medication chart, it is not nurse initiated.

    a. Attach drawing-up needle to 20mL syringe;
    b. Alcohol swab the Heparin and saline ampoules;
    c. Open the 5000units/5mL Heparin ampoule and aspirate all content into the 20mL syringe;
    d. Open normal saline ampoules and aspirate 15mL into the 20mL 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 a new minicap
24. Secure the end part of the PD catheter to the abdomen with micropore tape
25. Discard used equipment as per NSW Health PD2017_026 *Clinical and Related Waste Management for Health Services*
26. Remove gloves and PPE
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 and inform the PD nurses

3. Network file	Renal, Peritoneal Dialysis
4. External references / further reading	Brown, E. A., Blake, P. G., Boudville, N., Davies, S., de Arteaga, J., Dong, J., . . . Warady, B. (2020). International Society for Peritoneal Dialysis practice recommendations: Prescribing high-quality goal-directed peritoneal dialysis. *Perit Dial Int, 40*(3), 244-253. doi:10.1177/0896860819895364 Cho, Y., Boudville, N., Palmer, S. C., Chow, J. S. F., Hawley, C. M., Jose, M. D., . . . Johnson, D. W. (2018). Practice of Peritoneal Dialysis Catheter Flushing in Australia and New Zealand: Multi-Center Cross-Sectional Survey. *38*(2), 98-103. doi:10.3747/pdi.2017.00108

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5. Specialty/department committee approval	Peritoneal Dialysis Committee Dr Franziska Pettit, Staff Specialist Signature: 20.05.20
6. Department head approval	Dr George Mangos, Department Head Renal Services Signature: 20.05.20
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