PERITONEAL DIALYSIS CATHETER – POST INSERTION CATHETER CARE, DRESSING AND MANAGEMENT SGH

Cross References (including NSW Health/ SESLHD policy directives)	NSW Health PD2017_013 Infection Prevention and Control Policy NSW Health PD2017_026 Clinical and Related Waste Management for Health Services Aust Government NHMRC ACSQHC Australian Guidelines for the Prevention and Control of Infection in Healthcare (2019) SESLHD/PD146 Wound - Antiseptic Dressing Policy SGH-TSH CLIN027 Aseptic Technique - Competency and Education Requirements SGH CLIN 357 Peritoneal Dialysis Catheter (and Extension set) — Management of Contamination SGH CLIN 433 Peritoneal Dialysis (PD) Catheter Infection — Exit Site and Tunnel Infection Management and Treatment SGH CLIN 442 Peritoneal Dialysis (PD) — Peritonitis Management and Treatment SGH CLIN 402 Peritoneal Dialysis Catheter — Daily Care, dressing and management SGH CLIN 434 Peritoneal Dialysis Catheter (PD) — Nasal Swab and Mupirocin (Nasal Staphylococcus Aureus Eradication Treatment)
1. What it is	A guideline and procedure to protect a newly inserted, replaced or repositioned PD catheter from contamination or infection according to best practice guidelines
2. Risk Rating	Medium
3. Employees it Applies to	Registered Nurses (RN) Enrolled Nurses (RN) Medical Officers (MO)

4. Process

Background

Patients with newly inserted, replaced or repositioned peritoneal dialysis catheters (PDC) are prone to post procedure complications and infections, hence, it is crucial to protect the catheter and exit site to prevent complications and PD-related infection.

4.1 SAFEGUARDS

- Assess PDC and exit site immediately after the insertion, replacement or repositioning procedure. Ensure the occlusive and antimicrobial dressing are covering the exit site and titanium connector and a minicap is securing the tip of the PDC.
- Closely assess and monitor the PDC exit-site and midline wound for excessive bleed, bruising or leak. Document the assessment findings and report to PD, renal and/or surgical team immediately.
- Closely assess, monitor and manage the PDC exit-site and midline wound for signs and symptoms of infection as per SGH CLIN 433 Peritoneal Dialysis (PD) Catheter Infection – Exit Site and Tunnel Infection Management and Treatment

Approved by: SGH & TSH Clinical Governance Documents Committee Trim No. T20/53026

Date: July 2020 Page 1 of 8

- Post insertion care, dressing and management is to be carried out for minimum of 3 weeks from time of PDC insertion, replacement or reposition, longer for slow-healing wounds.
- Newly inserted, replaced or repositioned PD catheters must be immobilised and exit site to be kept dry to promote healing, this is facilitated through:
 - Weekly change of PDC exit site dressing for minimum of 3 weeks from time of PDC insertion, or longer for slow healing wounds
 - Note: Change or reinforce dressing immediately if dressing is displaced or wet. PDC exit site dressing may need to be changed more frequently if exit site or midline wound is bleeding or leaking excessively.
 - No bathing or showering for 3 weeks from time of PDC insertion, longer for slow healing wounds.
 - Always securing and taping down the tip of PDC to abdomen to prevent from dangling
- Accreditation requirement must be complied with prior to dressing procedure (as per Appendix B). Post insertion dressing change can only be carried out by PD accredited RN/EN or RN/EN under the supervision of PD accredited RN.
- Educate and remind patient on the importance of:
 - Not showering and weekly dressing change for minimum of 3 weeks from time of PDC insertion.
 - Monitoring PDC exit site and mid-line wounds for bleed or leak and to report concerns to healthcare team immediately

4.2 DEVICES

4.2.1 Equipment

- Trolley
- Blue Sheet
- Non sterile gloves
- Micropore tape
- PPE as per NSW Health PD2017_013 Infection Prevention and Control Policy and NHMRC Australian Guidelines for the prevention and control of Infection in Healthcare
- Sterile Gloves

4.2.2 Key Parts

- AMD Antimicrobial sponge (Excilon)
- Occlusive film dressing (Tegaderm or IV 3000)
- White gauze
- 0.9% sodium chloride
- Betadine solution
- Dressing Pack
- Add the following for suspected exit site infection:
 - Sterile swab stick (for bacterial swab)
 - Mupirocin ointment

4.2.3 Key site

- PD catheter

Approved by: SGH & TSH Clinical Governance Documents Committee Trim No. T20/53026

4.3 PROCEDURE

- 1) Explain procedure to the patient
- 2) Perform hand hygiene
- 3) Wear PPE as per NSW Health PD2017_013 Infection Prevention and Control Policy and NHMRC Australian Guidelines for the prevention and control of Infection in Healthcare
- 4) Don non sterile gloves
- 5) Remove old dressing and review PDC exit site and midline wound condition

Note: If exit site is red or exudate is present, collect a wound swab for MCS, notify the PD and renal team and commence treatment as per SGH CLIN 433 Peritoneal Dialysis (PD) Catheter Infection – Exit Site and Tunnel Infection Management and Treatment

Note: If midline wound is red or exudate present, collect a wound swab for MCS, notify the renal and surgical team. If midline wound is bruised or haematoma present, notify renal and surgical team immediately.

- 6) Perform hand hygiene
- 7) Identify and gather equipment and key parts for procedure
- 8) Clean trolley/work surface with detergent
- 9) Perform hand hygiene
- 10) Set-up general sterile field with equipment and key parts at the bedside
- 11) Perform hand hygiene
- 12) Don sterile gloves
- 13) Clean exit site and change dressing using sterile technique:
 - a. Clean around the exit site with normal saline twice
 - b. Dry exit site thoroughly with gauze
 - c. Apply mupirocin ointment to exit site if indicated
 - d. Cover exit site with Excilon
 - e. Loop the PDC aligning the titanium connector beside the exit site as per Appendix A
 - f. Cover the entire area including the titanium connector with occlusive dressing (Tegaderm, IV 3000 or Mepore film) as per Appendix A
- 14) Clean midline wound and change dressing using sterile technique
 - a. Clean around the midline wound with betadine solution twice
 - b. Dry midline wound thoroughly with gauze
 - c. If required, cover midline wound with gauze and occlusive dressing
- 15) Immobilise tip of PDC with micropore tape
- 16) Discard all equipment as per SESLHD SESLHDPD/140 Waste management
- 17) Document the procedure in eMR/clinical notes
- 18) Handover to the next shift
- 19) Inform the PD nurses

5. Keywords	Peritoneal dialysis, PD Catheter, Dressing
6. Functional Group	Renal, Peritoneal Dialysis

Approved by: SGH & TSH Clinical Governance Documents Committee

Trim No. T20/53026

7. External References

Campbell, D. J., Johnson, D. W., Mudge, D. W., Gallagher, M. P., & Craig, J. C. (2014). Prevention of peritoneal dialysis-related infections. *Nephrology Dialysis Transplantation*. doi: 10.1093/ndt/gfu313

Cho, Y., & Johnson, D. W. (2014). Peritoneal Dialysis—Related Peritonitis: Towards Improving Evidence, Practices, and Outcomes. *American Journal of Kidney Diseases*, *64*(2), 278-289. doi:

http://dx.doi.org/10.1053/j.ajkd.2014.02.025

Figueiredo, A. E., de Mattos, C., Saraiva, C., Olandoski, M., Barretti, P., Pecoits Filho, R., . . . all, B. I. I. I. (2017). Comparison between types of dressing following catheter insertion and early exit-site infection in peritoneal dialysis. *J Clin Nurs*, 26(21-22), 3658-3663. doi:10.1111/jocn.13738

Figueiredo, A., Goh, B.-L., Jenkins, S., Johnson, D. W., Mactier, R., Ramalakshmi, S., . . . Wilkie, M. (2010). Clinical Practice Guidelines for Peritoneal Access. *Peritoneal Dialysis International*, *30*(4), 424-429. doi: 10.3747/pdi.2010.00087

Lin, J., Ye, H., Li, J., Qiu, Y., Wu, H., Yi, C., . . . Yang, X. (2020). Prevalence and risk factors of exit-site infection in incident peritoneal dialysis patients. *Perit Dial Int, 40*(2), 164-170. doi:10.1177/0896860819886965

Li, P. K.-T., Szeto, C. C., Piraino, B., de Arteaga, J., Fan, S., Figueiredo, A. E., . . . Johnson, D. W. (2016). ISPD Peritonitis Recommendations: 2016 Update on Prevention and Treatment. *Peritoneal Dialysis International, 36*(5), 481-508. doi: 10.3747/pdi.2016.00078

Li, P. K., Szeto, C., Piraino, B., Bernardini, J., Figueiredo, A., Gupta, A., Johnson, D., Kuijper, E., Lye, W., Salzer, W., Shaefer, F., and Struijk, D. G. (2010). Peritoneal Dialysis – Related Infections Recommendations 2010 Update. *Peritoneal Dialysis International*, 30(4), 393-423. doi: 10.3747/pdi.2010.00049

Perl, J., Fuller, D. S., Bieber, B. A., Boudville, N., Kanjanabuch, T., Ito, Y., . . . Johnson, D. W. (2020). Peritoneal Dialysis-Related Infection Rates and Outcomes: Results From the Peritoneal Dialysis Outcomes and Practice Patterns Study (PDOPPS). *Am J Kidney Dis.* doi:10.1053/j.ajkd.2019.09.016

Piraino, B. M. (2019). Putting Peritoneal Dialysis Catheter Infections Into Perspective. *Am J Kidney Dis, 74*(5), 705-707. doi:10.1053/j.ajkd.2019.07.004

Piraino B., Baile, G., Bernardini, J. and et al. (2005) ISPD Guidelines/Recommendations Peritoneal Dialysis Related Infections Recommendations: 2005 Update. *Peritoneal Dialysis International* 25: 107-131, 2005

Piraino, B., Bernardini, J., Brown, E., Figueiredo, A., Johnson, D. W., Lye, W.-C., . . . Szeto, C.-C. (2011). ISPD Position Statement on Reducing the Risks of Peritoneal Dialysis—Related Infections. *Peritoneal Dialysis International, 31*(6), 614-630. doi: 10.3747/pdi.2011.00057

Sahlawi, M. A., Wilson, G., Stallard, B., Manera, K. E., Tong, A., Pisoni, R. L., . . . Perl, J. (2020). Peritoneal dialysis-associated peritonitis outcomes reported in trials and observational studies: A systematic review. *Perit Dial Int, 40*(2), 132-140. doi:10.1177/0896860819893810

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

Tsai, C. C., Yang, P. S., Liu, C. L., Wu, C. J., Hsu, Y. C., & Cheng, S. P. (2018). Comparison of topical mupirocin and gentamicin in the prevention of peritoneal dialysis-related infections: A systematic review and meta-analysis. *Am J Surg*, *215*(1), 179-185. doi:10.1016/j.amjsurg.2017.03.005

Approved by: SGH & TSH Clinical Governance Documents Committee

Trim No. T20/53026

8. Consumer Advisory Group (CAG) approval of patient information brochure (or related material)	Not applicable		
9. Implementation and Evaluation Plan Including education, training, clinical notes audit, knowledge evaluation audit etc	nservices Publication on SGSHHS CIBR intranet page		
10. Knowledge Evaluation	 Q1: What must be checked and monitored after a new PD catheter is inserted? A: Ensure appropriate occlusive and antimicrobial dressing are insitu and tip of PDC is secured with a minicap. Monitor wounds for signs of bruising, excessive bleed, infection or leak. Q2: Who can attend to post insertion PDC exit site dressing change? A: PD accredited RN/EN or RN/EN under the supervision of PD accredited RN. Q3: How long is the post insertion period and care? A: Minimum of 3 weeks and longer for slow healing wounds Q4: How often is post insertion exit site dressing changed? A: Weekly for wounds without excessive bleed or leak. Immediate change for displaced or wet dressings or more frequent dressing change for bleeding or leaking exit site. 		
11. Who is Responsible	Director of St George and Sutherland Renal Service Nursing Unit Manager, Dialysis Unit		

Approval for Peritoneal Dialysis Catheter – Post Insertion Catheter Care, Dressing and Management			
Specialty/Department Committee	Committee title: Peritoneal Dialysis Committee Chairperson name/position: Franziska Pettit, Staff Specialist Date: 01.06.20		
Nurse Manager	Name/position Christine Day, Nurse Manager Medicine Date: 02.07.20		
Medical Head of Department	Name /position: George Mangos, Department Head Renal Services Date: 29.06.20		
Contributors to CIBR development			
e.g. CNC, Medical Officers (names and position title/specialty)			

Approved by: SGH & TSH Clinical Governance Documents Committee Trim No. T20/53026

SGH CLIN414 Clinical Business Rule

Revision and Approval History

Date	Revision number	Reason	Author (Position)	Revision due
Aug 2017	1	New	Anna Claire Cuesta (PD CNC)	Aug 2020
Jul 2020	2	Review	Anna Claire Cuesta (PD CNC)	Jul 2023

General Manager's Ratification		
Name: Paul Darcy (SGH)	Date: 29.07.20	

Appendix A





SGH CLIN414 Clinical Business Rule

Appendix B

Peritoneal Dialysis Catheter (PDC) Exit Site Dressing Assessment Form

Limitations for Practice:

Enrolled Nurse Clinical Nurse Educator
Registered Nurse Nurse Educator
Clinical Nurse Specialist Clinical Nurse Consultant

Objective:

To ensure PDC exit site dressing procedure is performed according to best practice guidelines reducing the risk of infection and ensuring patient safety.

Background:

- Competency assessment and training is compulsory for 4 south (4S) and emergency department (ED) nursing staff prior to attending to PDC exit site dressing assessment.
- Nursing staff with no exposure to PDC exit site dressing must must undergo competency training and practice under the supervision of PDC exit site dressing competent nurse
- Competency assessment and training is to be carried out by a PDC exit site dressing competent nurse
- Assessor may determine the number of practice sessions required prior to competency
 assessment
- 5. Simulated PDC exit site dressing practice sessions are acceptable
- Competency assessment is to be performed on a patient with new, replaced or repositioned PD catheter.
- Repeat competency assessment and training every SBR or WPI update and/or every 5
 years

Note:

- 1. Keep the original copy of your completed assessment form for your record.
- 2. Forward a copy of the completed assessment form to the CNE and PD unit.

SGH Renal Department Page 1 of 2 Revised 2020

	Peritoneal E	Pialysis Catheter (PDC) Exi Assessment Form	t Site Dressing
Name:_			Pay No:

	Please initial appropriate box						
Action		P1	P2	Р3	P4	P5	C
1.	Ascertains type of PDC exit site dressing to do: Post-op or Regular Daily						Г
2.	Refers and follows the appropriate exit site care PD CBRs/WPIs						
3.	Cleans trolley and collects equipments						
4.	Performs handwash						
5.	Prepares equipment and sets-up sterile field						
6.	Secures end of catheter with tape						
7.	Performs handwash						
8.	Wear PPE if necessary						Г
9.	Removes old dressing						
10.	Reviews condition of exit site. Swabs as necessary and informs PD and renal team						
11.	Performs surgical handwash						
12.	Dons sterile gloves						
13.	Cleans exit site as per appropriate PD CBRs/WPIs						
14.	Waits for exit site to dry. Applies topical antibiotics.						Г
15.	Applies appropriate dressing. Ensures exit site and titanium are covered						Г
16.	Secures PD catheter with tape						
17.	Discards all equipments						
18.	Documents the procedure						
19.	Hands over to the next shift						Г
	Practice 1 (P1) Assessor's name & initial	Dat	e				
	Practice 2 (P2) Assessor's name & initial	Dat	e			_	

SGH Renal Department Page 2 of 2 Revised 2020