



# Peritoneal Dialysis Intra-Peritoneal Medications - Preparation and Administration Procedure

## 1. Purpose

This procedure will provide WA Country Health Service (WACHS) clinicians with information regarding the preparation and administration of intra-peritoneal (IP) medications for adult peritoneal dialysis (PD) patients. IP medications may be required to treat PD associated peritonitis and/or PD catheter-related infections.

Management and treatment plans for PD patients with PD associated peritonitis and/or PD catheter-related infections can be determined and implemented following the guidelines;

- WACHS [Peritoneal Dialysis Associated Peritonitis - Assessment, Treatment and Management Guideline](#)
- WACHS [Peritoneal Dialysis Catheter Exit Site Care and Management Guideline](#)

Management and treatment plans should be made in consultation with the [Renal Home Therapies \(RHT\) team](#) and Nephrologist/On-call Renal Specialist that provides medical governance and support to each WACHS region. See [WACHS Renal Services Intranet Page](#) for the WACHS regions' tertiary alignments.

## 2. Procedure

Medications administered IP for PD patients can include:

- antibiotics to treat peritonitis and/or PD catheter-related infections – results in a high concentration of antibiotic in the peritoneum, is preferred over intravenous (IV) antibiotic administration
- heparin (if fibrin or clots are evident to reduce inflammation).

There are two procedures for the preparation and administration of IP medications:

1. [Preparation and administration of IP medications for patients admitted to hospital](#)
2. [Preparation of IP medications for patients to administer at home](#)



### ATTENTION

When medication is instilled into PD dialysate it is vital to use aseptic technique to prevent contamination of the needle, syringe, and PD dialysate.

Use only one needle and one syringe for each medication due to risk of incompatibility.

## Equipment

- prescribed PD dialysate bag
- 70% Isopropyl Alcohol in 2% Chlorhexidine swabs
- 21-gauge needles (as required)
- syringes (5 mL or 10 mL as required)
- medication (as prescribed on the Medication Chart)
- compatible ampoules of fluid for injection (as required)

- additive label
- personal protective equipment (i.e., gloves and apron)
- surface cleanser

## 2.1 Preparation and administration of IP medications for patients admitted to hospital

Clinician instilling medications into dialysate for PD exchange for:

- patients admitted to hospital; and/or
- patients requiring PD effluent specimen from same PD exchange as IP medication administration.

Instilling medications into dialysate at the patient's bedside after flushing, prior to filling prevents loss of medications whilst flushing during the PD exchange.

For patients requiring PD effluent specimens from the same PD exchange when IP medications are being administered, instilling medications after flushing, prior to filling will ensure drained PD effluent for sampling is not contaminated with IP medications leading to inaccurate results.

### Steps:

1. Standard precautions and strict aseptic technique to be followed at all times.
2. Ensure hand hygiene is performed in accordance with the five moments throughout procedure.
3. Clean work table using surface cleanser, dispose of gloves if worn, perform hand hygiene.
4. Gather equipment.
5. Perform hand hygiene don apron and non-sterile gloves.
6. Using aseptic technique, open and prepare syringe/s, needle/s, plastic ampoule/s of compatible fluid for injection.
7. Swab medication vials with 70% Isopropyl Alcohol and 2% Chlorhexidine swab, allow to air dry.
8. Reconstitute medications as per [Australian Injectable Drugs Handbook \(AIDH\)](#). Medication product information can also be obtained using [AusDI](#). Additional core medication resources are also available via the [WACHS library page](#).
9. Doff gloves, perform hand hygiene.
10. Doff apron, perform hand hygiene.
11. Take prepared IP medications to patient's bedside.
12. Perform hand hygiene.
13. Patient or clinician to commence PD exchange completing **flush and pausing prior to fill** (i.e., turn dial to first open circle). Refer to [CAPD Fresenius Stay•safe® procedure](#).
14. Perform hand hygiene
15. Prior to commencing fill, swab injection port of the PD dialysate bag with 70% Isopropyl Alcohol and 2% Chlorhexidine swab and allow to air dry.
16. Instil prepared medication into the PD dialysate bag via disinfected injection port of the PD dialysate bag.
  - Ensure needle is completely inserted into injection port and care is taken to not contaminate the needle or pierce the side of injection port.
  - Draw back 2 mL of PD dialysate and inject back into bag (to flush medication out of the injection port).
  - Repeat process for each prepared medication.

17. Squeeze the injection port (to check for leaks) invert the bag several times (to mix medication).
18. Place additive label on outer pouch (refer to WACHS [Medication Prescribing and Administration Policy](#)).
19. Patient or clinician to complete PD exchange including fill (i.e., turn dial to full circle) then proceed with disconnection. Refer to [CAPD Fresenius Stay•safe® procedure](#).
20. Perform hand hygiene.
21. Document procedure in integrated patient notes.

## 2.2 Preparation of IP medications for patients to administer at home

Clinician instilling medications into dialysate prior to completing PD exchange (i.e., pre-loading bags) for patient to administer at home.

### Steps:

1. Standard precautions and strict aseptic technique to be followed at all times.
2. Ensure hand hygiene is performed in accordance with the five moments throughout procedure.
3. Clean work table using surface cleanser, dispose of gloves if worn, perform hand hygiene
4. Gather equipment.
5. Perform hand hygiene don apron and non-sterile gloves.
6. Place PD dialysate on cleaned work surface and peel back packaging until injection port is exposed ensuring exposed port is for PD dialysate, “not” drainage bag.
7. Using aseptic technique, open and prepare syringe/s, needle/s, plastic ampoule/s of compatible fluid for injection.
8. Swab medication vials with 70% Isopropyl Alcohol and 2% Chlorhexidine swab, allow to air dry.
9. Swab injection port of the PD dialysate bag with 70% Isopropyl Alcohol and 2% Chlorhexidine swab and allow to air dry.
10. Reconstitute medications as per [Australian Injectable Drugs Handbook \(AIDH\)](#). Medication product information can also be obtained using [AusDI](#). Additional core medication resources are also available via the [WACHS library page](#).
11. Instil prepared medication into the PD dialysate bag via disinfected injection port of the PD dialysate bag.
  - Ensure needle is completely inserted into injection port and care is taken to not contaminate the needle or pierce the side of injection port.
  - Draw back 2 mL of PD dialysate and inject back into bag (to flush medication out of the injection port).
  - Repeat process for each prepared medication.
12. Squeeze the injection port (to check for leaks) invert the bag several times (to mix medication).
13. Place additive label on outer pouch (refer to WACHS [Medication Prescribing and Administration Policy](#)).
14. Doff gloves, perform hand hygiene.
15. Doff apron, perform hand hygiene.
16. Provide pre-loaded PD dialysate bag to patient
17. Document procedure in integrated patient notes.
18. Patient to perform PD exchange at home (refer to [CAPD Fresenius Stay•safe® procedure](#)).

### 3. Roles and Responsibilities

WACHS staff are required to work within their identified scope of practice, level of experience and work role.

WACHS clinicians will have varied roles and responsibilities in implementing this guideline dependent on their scope of practice. These include:

The **Nephrologist/On-call Renal Specialist** is responsible for:

- providing medical oversight and support to WACHS medical and nursing clinicians providing care to PD patients with PD associated peritonitis and/or PD catheter-related infection.

The **Medical Officer (MO)** is responsible for:

- follow-up and review of microbiology results
- consultation with Nephrologist/On-call Renal Specialist
- selection and prescribing of medications.

The **Registered nurse (RN)** is responsible for:

- liaising with MO and RHT team to formulate treatment plan
- preparation and administration of prescribed medications

**All staff** are required to comply with the directions in WACHS policies and procedures as per their roles and responsibilities. Guidelines are the recommended course of action for WACHS and staff are expected to use this information to guide practice. If staff are unsure which policies procedures and guidelines apply to their role or scope of practice, and/or are unsure of the application of directions they should consult their manager in the first instance.

### 4. Monitoring and Evaluation

Monitoring of compliance to this procedure is to be undertaken bi-monthly by the WACHS Renal Services Team and WACHS Renal Governance Group through:

- review of patient safety and quality data including clinical incidents and consumer feedback related to PD associated peritonitis and/or PD catheter-related infections.

This procedure will be reviewed as required to determine effectiveness, relevance and currency. At a minimum it will be reviewed every three years by the WACHS Renal Services Team and the WACHS Renal Governance Group.

### 5. References

Australian Capital Territory Government. [Peritoneal Dialysis](#) [Internet]. Canberra Health Services Clinical Procedure CHS23/102. 2023 April 3 [cited 2023 July 10].

Fiona Stanley Fremantle Hospital Group. [Peritonitis Management](#) [Internet]. Government of Western Australia, South Metropolitan Health Service. 2023 March [cited 2023 July 10].

Kam-Tao Li P, Chow KM, Cho Y, Fan S, Figueirido AE, Harris T, Kanjanabuch T, Kim Y-L, Madero M, Malyszko J, Mehrotra R, Okpechi IG, Perl J, Piraino B, Runnegar N, Teitelbaum I, Ka-Wah Wong J, Yu X, Johnson DW. [ISPD peritonitis guideline](#)

[recommendation: 2022 update on prevention and treatment](#). Perit Dial Int [Internet]. 2022 [cited 2023 July 10];42(2):110-153.

New South Wales Government. [Assessment and management of peritoneal dialysis associated peritonitis](#) [Internet]. New South Wales Health, Prince of Wales/Sydney-Sydney Eye Hospitals and Health Services Clinical Business Rule. 2013 October [cited 2023 July 10].

## 6. Definitions

Term	Definition
<b>Clinician</b>	A qualified healthcare professional who provides direct patient care e.g. medical officers (MO) and registered nurses (RN).
<b>Dialysate</b>	An electrolyte, buffer and dextrose solution used to draw waste products and extra fluid out of the blood. Can be referred to as PD fluid.
<b>Effluent</b>	The drained dialysate fluid that has dwelled in the patient. It contains waste products and excess fluid from the patient.
<b>Nephrologist</b>	Senior physician specialised in renal medicine providing diagnosis and management of kidney disease.
<b>On-call Renal Specialist</b>	Senior medical officer (registrar or advanced trainee) specialised in renal medicine providing out-of-hours medical oversight and governance of renal patients.
<b>Peritoneal Dialysis</b>	Peritoneal Dialysis (PD) is a treatment option for patients with ESKD which uses the peritoneum as a semipermeable membrane to remove excess toxins and fluid from the patient's blood.
<b>Peritonitis</b>	An infection of the peritoneal membrane lining the peritoneal cavity. It is a serious complication of peritoneal dialysis (PD) which occurs when bacteria enter the peritoneal cavity.
<b>PD catheter-related infection</b>	An infection of the PD catheter exit site and/or tunnel. Exit site and tunnel infections may lead to peritonitis and subsequent catheter loss (i.e. removal).
<b>Renal Home Therapies</b>	Renal home therapies include Home Haemodialysis (HHD), Continuous Ambulatory Peritoneal Dialysis (CAPD), Automated Peritoneal Dialysis (APD) and Community Supported Home Haemodialysis (CSHD).
<b>Renal Home Therapies team</b>	Renal Home Therapies (RHT) team are renal clinicians from an external provider contracted by WACHS to provide renal home therapies including training to the patient and their carer, equipment, consumables, technical and clinical support.

## 7. Document Summary

<b>Coverage</b>	WACHS wide
<b>Audience</b>	Any WACHS clinician providing direct patient care to PD patients presenting to WACHS health facilities
<b>Records Management</b>	Clinical: <a href="#">Health Record Management Policy</a>
<b>Related Legislation</b>	<a href="#">Health Services Act 2016</a> (WA)
<b>Related Mandatory Policies / Frameworks</b>	<ul style="list-style-type: none"> <li>• MP 0131/20 <a href="#">High Risk Medication Policy</a></li> <li>• MP 0078/18 <a href="#">Medication Chart Policy</a></li> <li>• MP 0104/19 <a href="#">Medication Review Policy</a></li> <li>• <a href="#">Clinical Governance, Safety and Quality Policy Framework</a></li> </ul>
<b>Related WACHS Policy Documents</b>	<ul style="list-style-type: none"> <li>• <a href="#">Aseptic Technique Policy</a></li> <li>• <a href="#">Hand Hygiene Policy</a></li> <li>• <a href="#">High Risk Medications Procedure</a></li> <li>• <a href="#">Medication Prescribing and Administration Policy</a></li> <li>• <a href="#">Peritoneal Dialysis Associated Peritonitis - Assessment, Treatment and Management Guideline</a></li> <li>• <a href="#">Peritoneal Dialysis Catheter Exit Site Care and Management Guideline</a></li> </ul>
<b>Other Related Documents</b>	<ul style="list-style-type: none"> <li>• <a href="#">CAPD Fresenius Stay•safe® procedure</a></li> </ul>
<b>Related Forms</b>	<ul style="list-style-type: none"> <li>• <a href="#">MR170A WA Hospital Medication Chart – Short Stay</a></li> </ul>
<b>Related Training</b>	<ul style="list-style-type: none"> <li>• Nil</li> </ul>
<b>Aboriginal Health Impact Statement Declaration (ISD)</b>	ISD Record ID: 3498
<b><a href="#">National Safety and Quality Health Service (NSQHS) Standards</a></b>	2.06; 2.07; 3.05; 3.10; 3.11; 3.12; 3.14; 3.18; 4.04; 6.09
<b><a href="#">Aged Care Quality Standards</a></b>	Nil
<b><a href="#">Chief Psychiatrist's Standards for Clinical Care</a></b>	Nil
<b>Other Standards</b>	Nil

## 8. Document Control

Version	Published date	Current from	Summary of changes
1.00	19 November 2024	19 November 2024	New procedure

## 9. Approval

<b>Policy Owner</b>	Executive Director of Clinical Excellence
<b>Co-approver</b>	Executive Director Nursing and Midwifery Services
<b>Contact</b>	Clinical Nurse Consultant – Renal
<b>Business Unit</b>	Population Health
<b>EDRMS #</b>	ED-CO-24-327411
<p><i>Copyright to this material is vested in the State of Western Australia unless otherwise indicated. Apart from any fair dealing for the purposes of private study, research, criticism or review, as permitted under the provisions of the Copyright Act 1968, no part may be reproduced or re-used for any purposes whatsoever without written permission of the State of Western Australia.</i></p>	

**This document can be made available in alternative formats on request.**