

### 1.0 Practice Standard

The Registered Nurse and the Licensed Practical Nurse who is trained and has demonstrated competency in Peritoneal Dialysis Procedures:

- Will flush the peritoneal catheter using strict aseptic technique per program policy for the reasons listed.

Flushes are performed to:

- Maintain patency of the peritoneal catheter during the healing period post catheter insertion or during cessation of peritoneal dialysis.
- Clear IP blood and fibrin from the catheter and to minimize the chances of omental adhesion.
- Assist in the assessment of catheter functioning such as flow rates and potential catheter complications.
- Minimize abdominal discomfort associated with peritonitis.

Different jurisdictions use different practices in flushing during the break in period post catheter implantation. In considering best practice guidelines for flushes of PD catheters it is important to determine the frequency, volume, type of solution to be used and the solution to use for capping the catheter when it is not in use. Some literature suggests considering weekly flushes post catheter implantation until the patient is ready to initiate PD.

### 2.0 Definitions and Abbreviations

**IP:** intraperitoneal

**Catheter flush:** infusion of heparinized saline or dialysate solution followed by immediate drainage of same to assess and maintain patency of the peritoneal catheter.

**In and out exchange:** twin bag CAPD exchange with zero dwell time.

**Catheter break in:** care of the PD catheter inclusive of catheter flushing during the time period between catheter implantation and the initiation of PD.

### 3.0 Equipment

- 1.5% dialysis solution: 1000cc – 2000cc volume
- Heparin 500u/L - 1000u/L
- Needle
- 3 cc syringe
- Minicap
- Mask
- Red clamps (2)
- Handwash soap
- Hand sanitizer

## 4.0 Procedure and Rationale

PROCEDURE	RATIONALE
1. Prepare patient and self for CAPD procedure per protocol.	
2. Prepare 1 – 2 litre(s) of 1.5% dialysate with heparin 500u/L - 1000u/L.	Volume will be dependent on reason for flush. Heparin is helpful in preventing fibrin plugging of the catheter.
3. Connect dialysis solution to transfer set as per protocol using aseptic technique.	
4. Open twist clamp on transfer set to drain.	
5. If no flow, close twist clamp on transfer set.	<p>Patients will be empty following catheter insertion and may not have any fluid to drain.</p> <p>Attempt all conservative non invasive steps to ensure catheter patency have been completed such as checking for clamps and catheter kinks. Have patient cough, change position and ambulate to assess effect on outflow.</p>
6. Break green seal on fill line and perform flush before fill procedure. Place clamp on drain line.	
7. Open twist clamp on transfer set and commence in and out exchange (zero dwell time) with patient in supine position.	Low volume exchange in supine position minimizes the increase in intra peritoneal pressure and reduces the risks for leaks.
8. When drain is complete, cap transfer set with mini cap as per protocol or capping off procedure.	
9. Assess appearance, color and clarity of drained effluent.	
10. Measure drained effluent.	
<b>FLUSH FOR SANGUINOUS EFFLUENT</b>	
1. Repeat flush procedure per protocol until effluent is clear using patients usual dialysis exchange volume.	<p>1 – 3 flushes may be required.</p> <p>Heparin is useful to prevent the formation of fibrin clots and extension of existing clots.</p> <p>If effluent is extremely sanguinous in appearance, notify the nephrologist before commencing flushes.</p>
<b>FLUSH FOR PERITONITIS</b>	
1. Repeat flush procedure per peritonitis protocol until effluent clears using patients usual dialysis exchange volume.	1 - 6 flushes may be required.

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<b>IF NO INFLOW IS DETECTED <i>during flush</i></b>	
1. Squeeze the hanging dialysis solution bag in an attempt to unblock blockage.	
2. If unsuccessful: prepare to perform catheter irrigation procedure.	See procedure: <i>PD Catheter Irrigation</i>
3. Notify Nephrologist.	
<b>IF NO OUTFLOW IS DETECTED <i>during flush</i></b>	
1. Prepare to perform catheter irrigation procedure.	See procedure: <i>PD Catheter Irrigation</i>
2. Notify Nephrologist.	

## 5.0 Patient Teaching Considerations

<b>PROCEDURE</b>	<b>RATIONALE</b>
1. Educate patient to rationale for catheter flushes and importance of maintaining clinic schedule for weekly flushes if ordered.	

## 6.0 Documentation Considerations

Document:

- Any significant findings that occurred during the flush
- Appearance of drained effluent: color and clarity
- Volume of drained effluent
- Patient tolerance of procedure

## 7.0 Special Considerations: Interventional Guidelines

(does not replace individualized care and clinical expertise)

- *Refer to individual PD program protocols for additional information and step by step instructions associated with catheter inflow and outflow complications.*
- Frequency and duration of flushes are dependent on reason for flush and time to initiation of dialysis. When possible, full volume peritoneal dialysis exchanges are delayed for at least 2 weeks.
- Heparin is generally more useful prophylactically than therapeutically.
- Heparin should be added to the dialysate when ever fibrin strands are noted in the effluent. Heparin helps to prevent the formation of fibrin clots and the extension of existing clots.

## 8.0 References

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## 9.0 Developed By

- BC Renal PD Nursing Group

## 10.0 Reviewed by

- BC Renal PD Medical Director
- BC Renal PD Nursing Group

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