



Crumlin | Temple Street | Tallaght | Connolly

## NURSING PRACTICE GUIDELINES ON MANUAL PERITONEAL DIALYSIS

<b>Area of use:</b>	All of organisation <input type="checkbox"/>	CHI at Connolly <input type="checkbox"/>	CHI at Crumlin <input checked="" type="checkbox"/>
		CHI at Tallaght <input type="checkbox"/>	CHI at Temple Street <input checked="" type="checkbox"/>
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<b>Approved by &amp; title:</b>	Nursing Documentation Approval Committee		
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### Version History

Version:	Date approved:	Summary of changes:	Author:
1		New guideline	Lorna Donnellan

**Please note practice variation**

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## 1.0 GUIDELINE STATEMENT

The purpose of this document is to guide health care professionals to care for a child commencing manual peritoneal dialysis. Manual peritoneal dialysis is indicated for fill volumes of less than 60mls. This guideline will provide staff members with the knowledge base required to care for patients commencing manual peritoneal dialysis and ensure the delivery of high quality safe practice to our patients.

## 2.0 PROCEDURE

### Manual Dialysis for fill volumes of less than 60mls

- The Claria homechoice™ machine has a minimum fill volume of 60mls therefore a neonate or child requiring a fill volume of 60mls or less will require dialysis manually using the Dially-nate™ set.
- For example, a 5kg child commencing on peritoneal dialysis will require 10ml/kg fills = 50 ml fills therefore will be unable to use the homechoice machine.
- This patient will need to be nursed 1:1 due to the labour intensive nature of performing manual dialysis. This process must be completed by a PD competent nurse.
- Pre and post-operative care is the same as detailed above. Guidelines on how to set up the Dially-nate™ set and how to perform the dialysis are detailed in appendix 4 and 5.
- As this is a manual technique it is important to troubleshoot problems that would normally result in alarms on the homechoice machine. For example, 'slow flow', 'low drain', 'check lines and bags'.
- Closely observe the patient for signs of increased intraperitoneal pressure. Observe the patient for signs of pain, discomfort, abdominal distension and leaking from the PD exit site.
- Record the time it takes to fill the patient with dialysis fluid and the time taken to drain the patient is important to ensure adequate placement of the PD catheter as delayed drain times may indicate malposition of the PD catheter/blockage of the tube or constipation.

## 3.0 Applicable to

This procedure will be used by staff who have undergone training and who are deemed competent in peritoneal dialysis.

#### 4.0 Stakeholder involvement

NAME	TITLE
Dr Atif Awan	Consultant Nephrologist
Dr Michael Riordan	Consultant Nephrologist
Dr Clodagh Sweeney	Consultant Nephrologist
Dr Maria Stack	Consultant Nephrologist
Dr. Niamh Dolan	Consultant Nephrologist
Marie Beates	Renal CNS
Jennifer Caverly	Renal Pharmacist
Mairead Kinlough	CNM3 Temple Street
Suzanne Kernan	CNM2 Temple Street
Fy Lape	CNM 2 Crumlin
Sandra Geraghty	CNEF Crumlin

#### 5.0 Communication and training

The renal team will ensure education and training in this procedure during orientation/induction and refreshers as required.

#### 6.0 Monitoring and evaluation

The effectiveness of the dialysis will determine the guidelines usefulness. Detail will be reviewed on a 3 yearly basis by subject matter experts.

#### 7.0 Appendix

##### 1. Manual Dialysis set up and connection using Dialy-nate set for fill volumes less than 60mls

##### Equipment:

Silver trolley  
Azowipes  
Drip Stand  
PD fluid heater plate  
Clinell wipes  
Dialynate set  
PD fluid bag  
Connection shield

**\*\*NB PATIENT MUST BE NURSED 1:1 \*\***

##### PROCEDURE

- Decontaminate hands with an antimicrobial handwash and dry thoroughly.
- Open out dialysate bag/s required. If IP additives are required add them here into dialysate bags.

- Hang PD bag onto drip stand and break middle seal of PD Bag if using 2.5 litre bags (ensure fluid is fully mixed into bottom chamber). Ensure PD fluid has been warmed on heater plate for 20 minutes.
- Clean down trolley.
- Decontaminate hands with alcohol hand gel; open out Dialy-nate set ensuring not to uncoil the heating coil (as this can interfere with the flow of fluid). Ensure all clamps closed including the roller clamp.
- Perform a one minute hand wash.
- Connect the bag to the dialy-nate set (if 50:50 mix required attach second bag to the spare prong).
- Hang the PD bag onto drip stand.
- Break the bottom green seal on the PD fluid bag and unclamp the first clamp above the buretrol. Ensure the buretrol is kept upright as wetting the filter can compromise the flow. Fill the buretrol with 100ml fluid then clamp.
- Prime the set by turning the stopcock **OFF** to overflow bag (long end of stopcock reads **OFF**) and open the roller clamp until fluid reaches the end of the patient line then close the roller clamp.
- Prime the remainder of the set by turning stopcock **OFF** to patient and opening the roller clamp allowing fluid to go to the overflow bag until there is 10ml left in the buretrol and close the roller clamp (use the 10ml in the buretrol as your zero mark to prevent air being introduced into the set).
- Clamp all clamps and open connection shield.
- Decontaminate hands with alcohol hand gel.
- Connect patient line of Dialy-nate to patients' tenckhoff and then apply connection shield. Careful monitoring of the connection shield is required as contamination of the navy tip can occur as the connection shield may move.
- Ensure the heater coil is placed on a flat surface, place PD bag on heater and hang overflow bag beneath patient.

## 2. Performing manual dialysis using the Dialy-nate™ set for fill volumes of less than 60mls

**\*\*NB PATIENT MUST BE NURSED 1:1\*\***

- Once patient is connected to the manual set add required fill volume by unclamping the clamp above the buretrol. For e.g. If 40mls fill volume is required add fluid until 50mls is reached in the buretrol as 10mls will act as the zero line to prevent air entry into the set. Close the clamp above the buretrol once fluid is filled to desired fill volume.
- Turn the stopcock **OFF** to overflow bag.
- Open patients twist clamp.
- Release the roller clamp slowly to instill the desired fill over 3-5 minutes (gravity may be necessary here to ensure fluid flows in). Monitor the patient for signs of discomfort, pain or any leaking from the PD site as this may indicate increased intra-peritoneal volume.
- Once the fluid in the buretrol reaches 10ml close the roller clamp and close the patients twist clamp.

- Commence the dwell time that is prescribed on the PD prescription by the Nephrologist. Once fluid is instilled set an alarm.
- To drain the fluid from the peritoneum turn the stopcock **OFF** to fill line and open the patients twist clamp.
- Set an alarm to allow the fluid to drain for a minimum time. This time may be longer than the claria homechoice as there is no pull from the machine and is solely dependent on gravity.
- Once the drain has finished close the twist clamp on the patient line.
- Note the amount of fluid in the overflow bag and document the ultrafiltration/retain on the peritoneal dialysis therapy chart.
- Start from step 1 and repeat the process for as many cycles as prescribed by the Nephrologist.

## 8.0 Key Stakeholders