



PERITONEAL DIALYSIS (PD) – MANAGEMENT OF PATIENTS REQUIRING INTERMITTENT PERITONEAL DIALYSIS (IPD)

1. Purpose	To ensure the intermittent peritoneal dialysis procedure is performed according to best practice guidelines reducing the risk of infection and ensuring patient safety
2. Employees it Applies to	Clinical Staff accredited or trained on Peritoneal Dialysis

3. PROCESS

3.1 BACKGROUND

- IPD is another form of peritoneal dialysis using the dialysis machine, continuously dialysing patient for 24 – 48 hours at least twice per week in the hospital setting.
- PD patients manage their own treatment at home for Continuous Ambulatory Peritoneal Dialysis (CAPD) and / or Automated Peritoneal Dialysis (APD). However, some patients may require longer or more dialysis through Intermittent Peritoneal Dialysis (IPD) due to:
 - Inadequate solute clearance from home PD
 - Inadequate fluid removal from home PD
 - As part of a procedural or surgical preparation
- Other indications for IPD are:
 - Whilst waiting for PD training
 - Low volume IPD for newly inserted PD catheters

3.2 HOSPITAL ADMISSION

Note: Patients requiring IPD must be admitted to the hospital, preferably in 4South (4S) renal ward for ongoing dialysis monitoring and treatment.

1. Arrange to admit patient directly or through emergency department (ED), whichever is applicable
2. Contact the bed manager and request for a 4S admission
3. If the patient is at home waiting for the direct admission, provide patient with 4S contact details and advise to call 4S Nurse Unit Manager (NUM) or Team Leader (TL) or In - Charge (IC) RN at a specified time to confirm bed availability.

Note: For planned arrivals after 2200 hours or when main entrance is closed, advise patient to access 4S via the Emergency Department (ED). Patient must inform the ED Clerical staff of their appointment, security will then be contacted to escort patient to 4S.

4. When the patient presents to 4S, ward RN must:
 - a. Attend to patient’s COVID – 19 screening and management as per most recent COVID guidelines and recommendation for SGH
 - b. Inform the renal team and PD team of patient’s ward arrival during business hours (Monday to Friday, 0730 – 1600 hours except public holidays) or inform the AHNM, Bed Manager, after-hours 4th Floor RMO and renal consultant on – call for after – hours arrival.
 - c. Attend to and document routine patient observations including weight

Note: Weight should be attended before every dialysis bag change or replacement



**PERITONEAL DIALYSIS / RENAL DEPARTMENT
SGH WPI 144 Workplace Instruction**

- Renal team or after-hours 4th Floor RMO to complete admission documentation, fluid assessment and pre-dialysis bloods i.e. FBC, UEC including serum potassium
- Renal consultant on – call (after hours) or PD nurse and renal team (during business hours) to provide the PD order specifying IPD therapy regimen, dialysis strength, fluid removal and additives required
- Ward nurse to attend to inpatient care and dialysis as per [SGH CLIN 345 Peritoneal Dialysis – Inpatient Management](#)
- Commence IPD immediately as per [PD SGH WPI 216 Automated Peritoneal Dialysis \(APD\) Connection And Disconnection Procedure - Claria Dialysis Machine](#)
- Select and use Patient Activation Code (PAC) from table below for most suitable IPD therapy regimen based on renal consultant/team or PD nurse’s order:

PATIENT ACTIVATION CODEs (PAC) to be used for after hours IPD, change of program, new patients and patients from other hospitals				
1L-IPD-24L 183-3624-545 <i>Use this PAC for newly inserted PDC for patient requiring IPD after office hours</i>	4S INPATIENT BREAK-IN		CCPD Dwell Time 0:47 Cycles 24	Total Volume 24,000 ml Fill Volume 1,000 ml Therapy Time 24 hr Last Fill 0
1L-IPD-TIDAL 364 6784 458 <i>Use this PAC for newly inserted PDC for patient requiring IPD after office hours</i>	4S Inpatient		TIDAL Dwell Time 1:08 Cycles 15	Total Volume 14,000 ml Fill Volume 1,000 ml Therapy Time 24 hr Last Fill 0 Tidal 80% Total UF 100 ml Full Drains Every 4th
1.5L-IPD 083-7012-376 <i>Use this PAC for newly inserted PDC for patient approved for 1.5L fill volume requiring IPD</i>	4S Inpatient		Dwell Time 1:24 Cycles 14	Total Volume 21,000 ml Fill Volume 1,500 ml Therapy Time 24 hrs Last Fill 0
1.5L-IPD-TIDAL 457 3052 323 <i>Use this PAC for newly inserted PDC for patient approved for 1.5L fill volume requiring IPD</i>	4S Inpatient		Dwell Time 1:19 Cycles 15	Total Volume 20,000 ml Fill Volume 1,500 ml Therapy Time 24 hrs Last Fill 0 ml Tidal 80% Full drains Every 4th Total UF: 100
2L-IPD 439-8708-729 <i>Use this PAC for patient requiring 2L IPD program after office hours</i>	4S Inpatient		CCPD Dwell Time 1:17 Cycles 14	Total Volume 28,000 ml Fill Volume 2,000 ml Therapy Time 24 hr Last Fill 0
2L-IPD-TIDAL 082 0434 355 <i>Use this PAC for patient requiring 2L IPD program</i>	4S Inpatient		TIDAL Dwell Time 1:08 Cycles 16	Total Volume 28,000 ml Fill Volume 2,000 ml Therapy Time 24 hr Last Fill 0 Tidal 80% Total UF 200 ml Full Drains Every 4th



**PERITONEAL DIALYSIS / RENAL DEPARTMENT
SGH WPI 144 Workplace Instruction**

Note: Program the Claria machine manually if ordered IPD therapy is not listed on this table.

10. For newly inserted PD catheter, manage IPD as per [SGH PD WPI 141 Break-In Management For Patients Requiring Urgent PD with Newly Inserted PD Catheter](#)
11. Administer intraperitoneal potassium as required and as per [SGH CLIN381 Intraperitoneal Potassium Administration](#)
12. Administer intraperitoneal heparin as required and as per [SGH CLIN380 Intraperitoneal Heparin Administration](#)
13. Ward nurse to monitor:
 - a. Bowel movement. Commence bowel chart and notify PD/renal team for signs of constipation as patient may require aperients/laxative.
 - b. Fluid balance. Ascertain current fluid restriction and target fluid removal. Commence fluid balance chart.
14. Disconnect patient during IPD therapy if needed or requested as per [SGH PD WPI 218 Automated Peritoneal Dialysis \(APD\) Disconnection With 'FlexiCap' \(previously known as Opticap\) Procedure](#)
15. Upon completion of IPD, disconnect patient from dialysis machine as per [PD SGH WPI 216 Automated Peritoneal Dialysis \(APD\) Connection And Disconnection Procedure - Claria Dialysis Machine](#)
16. After disconnection, heparin lock new or resting PD catheter to maintain patency as per [SGH CLIN 364 Peritoneal Dialysis Catheter \(PDC\) – Heparin lock](#), or patient would continue with usual PD regimen either at home or as inpatient as per renal and/or PD team advice
17. Document in eMR
18. Notify the PD unit via voicemail ext 33770/33775
19. Once discharged from hospital, PD nurses will provide ongoing outpatient follow-up and review

<p>4. Cross References</p>	<p>SGH CLIN345 Peritoneal Dialysis – Inpatient Management SGH CLIN364 Peritoneal Dialysis Catheter (PDC) – Heparin lock SGH CLIN380 Intraperitoneal Heparin Administration SGH CLIN381 Intraperitoneal Potassium Administration SGH PD WPI 141 Break-In Management For Patients Requiring Urgent PD with Newly Inserted PD Catheter PD SGH WPI 216 Automated Peritoneal Dialysis (APD) Connection And Disconnection Procedure - Claria Dialysis Machine SGH PD WPI 218 Automated Peritoneal Dialysis (APD) Disconnection With 'FlexiCap' (previously known as Opticap) Procedure</p>
<p>5. Keywords</p>	<p>Peritoneal dialysis, Intermittent, IPD</p>
<p>6. Document Location</p>	<p>SGH-TSH Business Rule Webpage</p>
<p>7. External References</p>	<ol style="list-style-type: none"> 1. Alkathoori, A. M. A., Blake, P. G., Gray, D., & Jain, A. K. (2016). Success of Urgent-Start Peritoneal Dialysis in a Large Canadian Renal Program. <i>Peritoneal Dialysis International</i>, 36(2), 171-176. doi:10.3747/pdi.2014.00148 2. Amirmokri, P., Morgan, P., & Bastani, B. (2007). Intra-peritoneal



**PERITONEAL DIALYSIS / RENAL DEPARTMENT
SGH WPI 144 Workplace Instruction**

- administration of potassium and magnesium: a practical method to supplement these electrolytes in peritoneal dialysis patients. *Renal Failure*, 29(5):603-5. PMID: 17654324
3. Arramreddy, R., Zheng, S., Saxena, A. B., Liebman, S. E., & Wong, L. (2014). Urgent-Start Peritoneal Dialysis: A Chance for a New Beginning. *Am J Kidney Dis*, 63(3), 390-395. doi:10.1053/j.ajkd.2013.09.018
 4. Bento, C., Fuerbringer, R., Tabisz, A., & Riella, M. (2016). Live or let die: when intermittent peritoneal dialysis is the only plausible solution or survival. *Minerva Urol Nefrol*, 68(1), 45-46.
 5. Boudville, N., & de Moraes, T. P. (2020). 2005 Guidelines on targets for solute and fluid removal in adults being treated with chronic peritoneal dialysis: 2019 Update of the literature and revision of recommendations. *Peritoneal dialysis international : journal of the International Society for Peritoneal Dialysis*, 40(3), 254–260. <https://doi.org/10.1177/0896860819898307>
 6. Brown, E. A., Blake, P. G., Boudville, N., Davies, S., de Arteaga, J., Dong, J., Finkelstein, F., Foo, M., Hurst, H., Johnson, D. W., Johnson, M., Liew, A., Moraes, T., Perl, J., Shroff, R., Teitelbaum, I., Wang, A. Y., & Warady, B. (2020). International Society for Peritoneal Dialysis practice recommendations: Prescribing high-quality goal-directed peritoneal dialysis. *Peritoneal dialysis international : journal of the International Society for Peritoneal Dialysis*, 40(3), 244–253. <https://doi.org/10.1177/0896860819895364>
 7. Casaretto, A., Rosario, R., Kotzker, W. R., Pagan-Rosario, Y., Groenhoff, C., & Guest, S. (2012). Urgent-start peritoneal dialysis: report from a U.S. private nephrology practice. *Adv Perit Dial*, 28, 102 – 105.
 8. Cullis, B., Al-Hwiesh, A., Kilonzo, K., McCulloch, M., Niang, A., Nourse, P., Parapiboon, W., Ponce, D., & Finkelstein, F. O. (2021). ISPD guidelines for peritoneal dialysis in acute kidney injury: 2020 update (adults). *Peritoneal dialysis international : journal of the International Society for Peritoneal Dialysis*, 41(1), 15–31. <https://doi.org/10.1177/0896860820970834>
 9. Ghaffari, A. (2012). Urgent-start peritoneal dialysis: a quality improvement report. *Am J Kidney Dis*, 59(3), 400-408. doi:10.1053/j.ajkd.2011.08.034
 10. Groenhoff, C., Delgado, E., McClernon, M., Davis, A., Malone, L., Majirsky, J., & Guest, S. (2014). Urgent-start peritoneal dialysis: nursing aspects. *Nephrology nursing journal : journal of the American Nephrology Nurses' Association*, 41(4), 347-352; quiz 353.
 11. Morelle, J., Stachowska-Pietka, J., Öberg, C., Gadola, L., La Milia, V., Yu, Z., Lambie, M., Mehrotra, R., de Arteaga, J., & Davies, S. (2021). ISPD recommendations for the evaluation of peritoneal membrane dysfunction in adults: Classification, measurement, interpretation and rationale for intervention. *Peritoneal dialysis international : journal of the International Society for Peritoneal Dialysis*, 41(4), 352–372. <https://doi.org/10.1177/0896860820982218>
 12. 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
 13. Wang, C., Fu, X., Yang, Y., Deng, J., Zhang, H., Deng, H., . . . Liu, Y. (2017). A Comparison between Intermittent Peritoneal Dialysis and Automatic Peritoneal Dialysis on Urgent Peritoneal Dialysis. *American Journal of Nephrology*, 45(6), 540-548.



**PERITONEAL DIALYSIS / RENAL DEPARTMENT
SGH WPI 144 Workplace Instruction**

	<p>14. Xu, Q., Xu, F., Fan, L., Xiong, L., Li, H., & et al. (2014) Serum Potassium Levels and Its Variability in Incident Peritoneal Dialysis Patients: Associations with Mortality. PLoS ONE 9(1): e86750. doi:10.1371/journal.pone.0086750</p> <p>15. Zanger, R. (2010). Hyponatremia and hypokalemia in patients on peritoneal dialysis, <i>Seminars in Dialysis</i>, 23(6): 575 – 580.</p>
--	--

Approval for: PD – MANAGEMENT OF PATIENTS REQUIRING IPD	
Specialty/Department Committee	Committee: Peritoneal Dialysis Committee Chairperson: Franziska Pettit, Staff Specialist Date: 12.05.2022
Department head approval	George Mangos, Department Head Renal Services Date: 12.05.2022
Executive Sponsor – Nurse Manager	Christine Day, Medicine and Cancer Divisional Director Date: 19.05.2022
Contributors to WPI	Andrea Matisan, 4S Clinical Nurse Educator

Revision and Approval History				
Revision Date	Revision number	Reason	Coordinator/Author (Position)	Revision Due
Jun 2017	0	New	(Anna) Claire Cuesta, CNC Peritoneal Dialysis	Jun 2020
May 2022	1	Review – amended to Claria machine plus inclusion of Patient Activation Codes for Claria machine, admission process modified to include direct or through ED admissions, updated to eMR documentation and inclusion of COVID-19 screening and management	(Anna) Claire Cuesta, CNC Peritoneal Dialysis	May 2027