

CANADIAN ASSOCIATION OF PEDIATRIC NEPHROLOGISTS COVID-19 RAPID RESPONSE GUIDELINES

MANAGEMENT OF CHILDREN ON HOME OR
HOSPITAL DIALYSIS FOR CHRONIC KIDNEY DISEASE

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CAPN
Canadian Association
of Paediatric Nephrologists
Association des Néphrologues
Pédiatriques du Canada
ANPC

RAPID GUIDELINES PROCESS

- The leadership of CAPN, which is affiliated with the CSN, solicited a team of clinicians and researchers with expertise in paediatric AKI and acute KRT
- The goal was to adapt the guidelines recently adopted for Canadian adult patients for paediatric-specific settings
- The revised paediatric guidelines were reviewed by a group of clinicians with deep expertise in home and hospital-based dialysis

INTRODUCTION

- While the COVID-19 pandemic has affected children lower than adults, a subset of pediatric patients are severely affected, sometimes resulting in fatalities
- Children who require kidney replacement therapy have been impacted in a variety of ways by COVID-19:
 - Delays for non-urgent surgical procedures (e.g. insertion of a central venous line or peritoneal dialysis catheter)
 - Unavailability of kidney transplantation (particularly living-related)
 - Scarcity of critical reagents (e.g., peritoneal dialysis fluid)

INTRODUCTION

- In-patient dialysis units are a potent source for nosocomial SARS-Cov-2 transmission between patients and clinical staff:
 - Multiple visits per week, each lasting 3-4 hours
 - Suboptimal physical distancing from other patients
 - Close contact with staff required during dialysis access manipulation
- These rapid guidelines have been devised for children requiring any form of chronic, outpatient kidney replacement therapy in a Canadian context during the COVID-19 pandemic

COVID-19 risk levels categorization for Dialysis Patients

	Symptoms +	Symptoms –
Exposure +	P1 = Probable	P3 = High Risk
Exposure –	P2 = Suspected	P4 = Low Risk
Exposure is defined as travel outside of Canada, close contact with a person infected or suspected to have COVID-19, or contact with bodily fluids from a person with or suspected to have COVID-19.		

RECOMMENDATIONS FOR HOME DIALYSIS

- 2.1 Sources of Information
- 2.2 Treatment of COVID-19 for PD patients
- 2.3 Peritoneal dialysis (PD) catheter placement
- 2.4 Training for home dialysis: generalities
- 2.5 Home dialysis management
- 2.6 Home environment management
- 2.7 Personal protective equipment (PPE)
- 2.8 Ensure delivery of a product is conducted in a safe manner
- 2.9 Minimizing in-person contact with health care providers
- 2.10 Assisted PD coverage in the community

2.3 PERITONEAL DIALYSIS (PD) CATHETER PLACEMENT

- PD catheter placement should continue unabated where resources permit and based on clinical indications
- We suggest that home dialysis be preferentially offered to all patients who require chronic dialysis, if the family situation permits, as a means of reducing COVID-19 transmission risk
- We recommend, for eligible candidates, PD over HHD (home hemodialysis) because of the shorter training time

2.4.I TRAINING FOR HOME PD

- *Adult version:* We suggest, for most patients starting PD, that training for chronic ambulatory peritoneal dialysis (CAPD) be preferred to continuous cycler peritoneal dialysis (CCPD) to minimize contact and time spent with healthcare providers.
- *Pediatric version:* We suggest that for children starting PD, either CCPD or CAPD, be chosen based on parents/child's preference, available resources, and local nursing expertise
- We suggest training using a combination of in-person and online modules or videos to reduce training time and maximize the number of patients trained

2.4.2 HOME HEMODIALYSIS

- We recommend continuing to train patients for HHD, provided trained staff are available
- We suggest that for patients with a central venous catheter (CVC) *in situ*, needle training of arteriovenous access be delayed to facilitate faster training in HHD

2.5 HOME DIALYSIS MANAGEMENT

- We suggest that patients have a minimum of two weeks of PD or HHD supplies and medications, in case they require self-isolation, or there is a disruption in delivery of supplies
- We recommend that if a health care worker must go into the home, that this be used as an opportunity to bring supplies to the patient that they might otherwise have had to pick up in person at the home dialysis unit (e.g., dressings, specialized tape, or thrombolytics)

2.7.3 PPE FOR HHD AND PD

- We suggest that masks are not needed in routine PD exchanges, and that it is acceptable to instruct asymptomatic patients not to use masks
- Masks are only required during connecting the PD catheter to the machine and during the dressing changes

2.10 ASSISTED PD COVERAGE IN THE COMMUNITY

- We suggest that assisted PD coverage continue to be offered to patients already in the program to reduce conversion to in-center hemodialysis and prevent visits to the hospital
- If there is no caregiver available to manage PD, the nephrology team should be contacted immediately. If possible, urgent training may be provided to an alternate caregiver, and if this is not possible patients may require hospitalization until a trained caregiver is available.

RECOMMENDATIONS FOR IN-CENTER HEMODIALYSIS

- 3.1 Identification of Patients With COVID-19 In The Dialysis Unit
- 3.2 Resuscitation of hemodialysis patients with confirmed, probable or suspected COVID-19
- 3.3 Hemodialysis of patients with confirmed COVID-19
- 3.4 Hemodialysis Of Patients Not Yet Known To Have COVID-19
- 3.5 Routine hemodialysis care
- 3.6 Strategies to Deal with Anticipated Limited Resource
- 3.7 Shortage of nursing staff with expertise in pediatric hemodialysis

3. RECOMMENDATIONS FOR IN-CENTER HEMODIALYSIS

- Adult version
 - “If infected, patients managed with maintenance dialysis have a high risk of death because of their compromised immune system.”
 - True in adults, not really in children
- Proposed revised version
 - “If infected, asymptomatic pediatric patients managed with maintenance dialysis have a high risk of transmitting SARS-COV-2 to other patients and dialysis staffs (single center study, based on seroconversion of immunoglobulins.”
 - Hains, D. S. et al. Asymptomatic Seroconversion of Immunoglobulins to SARS-CoV-2 in a Pediatric Dialysis Unit. *JAMA*. **323**, 2424-2425 (2020).

3.3.5 MASKS AND HAND HYGIENE

- We recommend that all dialysis patients wear a mask from the moment they leave their house, until they return home, **if this is age appropriate.**

3.3.6 COUNSELLING ON HOME ISOLATION

- Dialysis patients and their parents should be provided with a standardized pamphlet from the provincial public health agency on how to practice home isolation, if such a pamphlet exists in their own **language**.

Province or Terr	Bilingual or multilingual	Website
Canada	Multilingual	https://www.canada.ca/en/immigr
Alberta	Multilingual	https://www.albertahealthservices.
British Columbia:	Multilingual	https://www.healthlinkbc.ca/service
Manitoba	Multilingual	https://www.gov.mb.ca/covid19/up
New Brunswick	Bilingual	https://www2.gnb.ca/content/gnb/
Newfoundland and	Multilingual	https://www.gov.nl.ca/covid-19/tra
Nova Scotia	Bilingual	https://novascotia.ca/coronavirus/re
Nunavut	Multilingual	https://www.gov.nu.ca/health/infor
Ontario	Multilingual	https://www.publichealthontario.ca
Ontario	Multilingual	https://www.peelregion.ca/coronav
Ontario	Multilingual	https://www.ottawapublichealth.ca
Prince Edward Islar	Bilingual	https://www.princeedwardisland.ca
Québec	Multilingual	https://www.quebec.ca/en/health/l
Saskatchewan	Multilingual	https://swissask.ca/translated-covic
Yukon	Bilingual	https://yukon.ca/en/health-and-wel

3.3.8 VISITORS TO THE DIALYSIS UNIT

- We suggest that only **one visitor** should be permitted for pediatric patients with confirmed COVID-19
 - caregiver/guardian/parent?



