

COVID-19: Infection Prevention and Control Measures for Hemodialysis Units

INTERIM RECOMMENDATIONS

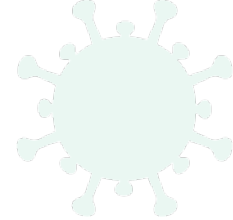
August 26, 2020 – Version 2.0 : changes made in yellow

Question

In the context of the community transmission of SARS-CoV-2 and the presence of residents of seniors' residential and long-term care centres (CHSLDs) in hemodialysis clinics, what are the recommendations to apply when managing dialysis users in ambulatory hemodialysis units?

Context

- ▶ This information is provided to clarify the recommendations for preventing and controlling COVID-19 infections specifically in ambulatory hemodialysis centres.
- ▶ Although the initial question concerns clients from CHSLDs, the recommendations herein apply to all clients who receive care in hemodialysis units, regardless of their origin.
- ▶ This information complements, but does not replace, the general recommendations regarding COVID-19. This advice is based on the information currently available. These recommendations will be refined and updated when more information becomes available.
- ▶ These recommendations apply to the assessment and management of users in ambulatory hemodialysis units during the COVID-19 pandemic.
- ▶ It is crucial to prevent the introduction and spread of COVID-19 in the hemodialysis unit.
- ▶ Some of the literature appears to demonstrate that dialysis users may show few symptoms.
- ▶ Hemodialysis in particular does not allow for modified treatment plans like other hospital activities (appointment postponement, telemedicine, etc.). For certain facilities, it may be impossible to modify treatment schedules.
- ▶ Refer to the ministerial directives and this documents: *Port du masque de procédure en milieux de soins lors d'une transmission communautaire soutenue* et *Port de la protection oculaire en milieux de soins lors d'une transmission communautaire soutenue* for recommendations related to wearing a mask and eye protection : <https://www.inspq.qc.ca/publications/2968-port-masque-procedure-milieux-soins-transmission-communautaire-soutenue-covid-19> et <https://www.inspq.qc.ca/publications/3020-port-protection-oculaire-milieux-soins-covid19> [in French only].



Units concerned

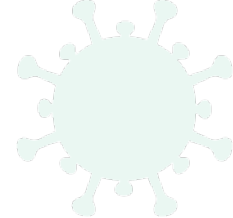
All ambulatory hemodialysis units (ambulatory clinics in acute care or other environments, mobile clinics and other non-conventional dialysis units). The risks and benefits should be assessed by the hemodialysis and infection prevention and control services to determine the measures to implement.

For users with a suspected or confirmed case of COVID-19 who require intermittent hemodialysis in an acute healthcare setting, this procedure should be carried out in the user's room.

Recommendations

General information

- ▶ Users presenting signs and symptoms compatible with COVID-19 **must be identified before entering the treatment area**. The priority is to recognize such users and quickly apply the required additional precautions.
- ▶ Modify the treatment schedules to have confirmed and suspected COVID cases on the same days or during the same shifts, or schedule them for the end of the day when possible.
- ▶ Advise users to call in advance to report any presence of symptoms compatible with COVID-19 so that the facility can be prepared for their arrival. If this is not done, the user must inform the personnel of their symptoms as soon as they arrive at the facility. The facility can also call users the day before each visit to assess their situation by completing a questionnaire.
- ▶ If the user is coming from another facility (CHSLD, seniors' residence, etc.), the facility must inform the hemodialysis unit if the person is a COVID-19 case, under investigation, presenting symptoms compatible with COVID-19, a contact of a confirmed case or from somewhere where there is an outbreak.
- ▶ From the point of arrival at the facility, there must be visible posters clearly indicating when and how to practice hand hygiene and providing information on hygiene and respiratory etiquette.
- ▶ Upon arrival, the users must go directly to the hemodialysis unit. Ideally, have a reserved entrance.
- ▶ Before entering the treatment area, all users must go to triage (questionnaire) on arrival, **at each visit**. This will direct the user to the cold zone, warm zone or hot zone, depending on how they respond to the questionnaire.
- ▶ For the waiting and treatment areas, it is recommended to set up three containment zones as follows:
 - ▶ Cold zone: absence of COVID signs/symptoms
 - ▶ Warm zone: suspected COVID
 - ▶ Hot zone: users with confirmed COVID-19
- ▶ In the waiting and treatment areas, implement 2-metre spacing between users.
- ▶ Following the medical assessment, carry out testing on users directed to the warm zone according to the indications, if required.
- ▶ Users who are being tested or who are under investigation are considered unconfirmed COVID-19 cases until proven otherwise. They will be treated in the warm zone.
- ▶ Users with confirmed COVID-19, who are under investigation, who are presenting symptoms compatible with COVID-19 or who are at risk of having contracted COVID-19 (via contact, area of outbreak, etc.) must wear a procedural mask from the moment they arrive until they leave the facility.



- ▶ For cold zone users, the facility may determine whether the user should continuously wear a mask according to the risk assessment and epidemiological situation. Many of these users must already wear a mask during the opening of the catheter.
- ▶ Minimize the time spent in the waiting areas. Medically stable users can choose to wait in their personal vehicle or outside the healthcare facility, where they will be contacted at the time of their treatment.
- ▶ Medical and professional teams that visit users during their treatment must make their rounds in the following order: cold zone, warm zone, then hot zone.
- ▶ At the end of their treatment, users must leave the hemodialysis unit only when their transportation is ready to pick them up. They must not wait in the common areas at the facility's entrance.
- ▶ Have separate transport for users with confirmed COVID as well as for those with suspected COVID. These two cases must not be transported together.

Treatment zones

- ▶ Have a buffer zone between the cold, warm and hot zones.
- ▶ Ideally, have dedicated staff for each zone.
- ▶ The following materials must be placed near each chair and hemodialysis machine to ensure that hand hygiene and respiratory hygiene and etiquette measures are respected: tissues, a garbage bin and a hydroalcoholic solution.

Hot zone: For all confirmed COVID-19 cases

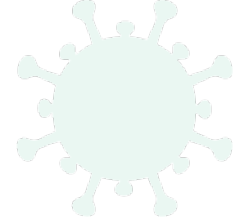
- ▶ Opt for a separate room with a toilet reserved for each case. Users with COVID-19 must be prioritized over other users who normally require additional precautions (without the COVID-19 pandemic) unless additional airborne precautions are required.
- ▶ If unavailable:
 - ▶ Maintain a 2-metre distance between users with COVID-19 and other users (in all directions) during the hemodialysis treatment. If a 2-metre distance is not possible, install a physical barrier (screen or curtain).
 - ▶ Select a hemodialysis station at the end of a row, away from the main area of circulation.

Warm zone: For all suspected COVID-19 cases

- ▶ If possible, treat each individual in a separate room.
- ▶ If unavailable:
 - ▶ Maintain a 2-metre distance between users with COVID-19 and other users (in all directions) during the hemodialysis treatment. If a 2-metre distance is not possible, install a physical barrier (screen or curtain).
 - ▶ Select a hemodialysis station at the end of a row, away from the main area of circulation.

Cold zone:

- ▶ The usual treatment method.



Additional precautions and infection prevention and control measures (warm and hot zones)

- ▶ Apply additional precautions for droplet/contact transmission with eye protection unless the diagnosis requires additional precautions, e.g., tuberculosis.
- ▶ Ensure that personal protective equipment (PPE) is available at all times.
- ▶ Bring only the required materials and equipment into the user's treatment zone.
- ▶ Do not touch the eyes, nose or mouth with potentially contaminated hands.

Personal protective equipment required (warm and hot zones)

Droplet/contact with eye protection:

- ▶ Procedural mask
- ▶ Eye protection (face shield or safety goggles or a mask with built-in visor). Prescription eyeglasses are not considered adequate protection.
- ▶ Long-sleeved, non-sterile, single-use, disposable gown. The use of a washable gown (one-time usage) can be considered if disposable gowns are temporarily unavailable. Have a waterproof gown if there is risk of contact with bodily fluids, e.g., vomit.
- ▶ Single-use, non-sterile gloves that are well adjusted and cover the wrists

In the context of COVID-19 and in the presence of a real or perceived shortage of personal protective equipment, prolonged use or reuse of gowns, masks and eye protection may be considered. Refer to the documents available on the INSPQ website.

<https://www.inspq.qc.ca/publications/2957-mesures-exceptionnelles-protection-individuelle-covid19>,

<https://www.inspq.qc.ca/publications/2918-reutilisation-respirateurs-n95-covid19>,

<https://www.inspq.qc.ca/publications/2955-desinfection-protection-oculaire-covid19> [in French only].

Hygiene and cleanliness

- ▶ Refer to the protocols of the facility or those of the **MSSS** available at:
<https://www.msss.gouv.qc.ca/professionnels/covid-19/directives-cliniques-aux-professionnels-et-au-reseau/prevention-et-contrôle-des-infections/> [in French only].
- ▶ Disinfect with a product approved for hospital use that is recognized as effective (virucide for the coronavirus) and registered (with a drug identification number [DIN]) by Health Canada (usual product or chlorine solution). The product must also be effective for blood-borne pathogens.

Healthcare equipment

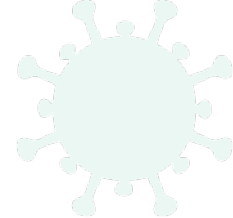
- ▶ Disinfect healthcare equipment between each user with a product approved for hospital use that is recognized as effective (virucide for the coronavirus) and registered (with a drug identification number [DIN]) by Health Canada (usual product or chlorine solution). The product must also be effective for blood-borne pathogens.

Visitors or other accompanying persons

No visitors or accompanying persons in the treatment area unless on compassionate grounds.

If essential:

- ▶ Only one person during the treatment.
- ▶ Triage the person so as to ensure that they are not presenting symptoms compatible with COVID-19. If presenting symptoms, the person may not accompany the user.



- ▶ The person must go directly to the user's chair and remain with the user at all times. When the treatment requires that the person leave their side, they must go to the cold zone waiting room.
- ▶ If additional precautions are required for the user, the person must also apply these measures.

Lifting measures for confirmed cases

Users with mild or moderate illness:

- ▶ Isolation for 10 days after the onset of symptoms (or date of the test if asymptomatic) AND
- ▶ No fever for 48 hours (without taking antipyretics) AND
- ▶ Resolution of acute symptoms for 24 hours (excluding cough, residual anosmia or ageusia)

Note: It is not necessary to make or take into account the results of the control PCR to lift isolation measures.

Users with immunosuppression (according to the INESSS definition available at https://www.inesss.qc.ca/fileadmin/doc/INESSS/COVID-19/COVID-19_Immunosuppression.pdf) [in French only].

- ▶ Isolation for 28 days after the onset of symptoms (or date of the test if asymptomatic) AND
- ▶ No fever for 48 hours (without taking antipyretics) AND
- ▶ Resolution of acute symptoms for 24 hours (excluding cough, anosmia or residual ageusia)

Note: It is not necessary to make or take into account the results of control PCR to lift the isolation measures after 28 days. However, the isolation measures could be stopped if the user have two negative PCR results between day 21 and 28.

Justification

The development of knowledge for the transmission and duration of contagiousness of COVID-19 brings changes to our recommendations. PCR is not a good indicator of contagiousness to lift measures. The duration of isolation of 10 days was adopted for a non-immunosuppressed case. These articles support these recommendations:

- ▶ The probability of finding live or replicable virus decreases after the onset of symptoms and it has not been found in users with mild or moderate illness after 10 days following the onset of symptoms (Wolfel, 2020; Arons, 2020; Bullard, 2020; Lu, 2020; CDC, 2020).
- ▶ A study that presents contact tracing of the first 100 confirmed COVID-19 cases in Taiwan showed no secondary cases among the 852 contacts exposed six days and more after the onset of symptoms in index cases (Cheng et al , 2020).
- ▶ Although SARS-CoV-2 RNA remains present in the respiratory tract for several weeks, studies show that the virus could not be replicated in culture beyond 10 days (Wolfel, 2020; Li et al, 2020; Xiao et al, 2020; CDC, 2020).
- ▶ The detection of live virus has been documented between 10 and 20 days after the onset of symptoms in users with severe disease and in some cases in immunosuppressed (van Kampen et al, 2020).

All of the following factors must be taken into consideration before making a decision to lift the additional precautions:

- ▶ A period of at least 14 days has elapsed since the start of the acute illness.
- ▶ There has been an absence of fever for 48 hours (without having taken antipyretics).
- ▶ There has been an absence of acute symptoms for 24 hours (with the exception of a residual cough which can persist).

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COVID-19: Infection Prevention and Control Measures for Hemodialysis Units

AUTHOR

Comité sur les infections nosocomiales du Québec [Québec Committee on Nosocomial Infections]

WRITER

Suzanne Leroux, Nursing Advisor
Direction des risques biologiques et de la santé au travail

LAYOUT

Murielle St-Onge, Administrative Officer
Direction des risques biologiques et de la santé au travail

TRANSLATION

Emily Wilson

The French version is entitled *COVID-19 : Mesures de prévention et contrôle des infections pour les unités d'hémodialyse* is also available on the website of the Institut national de santé publique du Québec at: www.inspq.qc.ca/publications/2980-pci-hemodialyse-covid19

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