

Interim Infection Prevention Guidance for Inpatient Hemodialysis in the Setting of Confirmed or Suspected COVID-19

Adapted for use at Beaumont Health

The following guidance is compiled from recommendations given by the CDC and American Society of Nephrology

Early recognition and isolation of individuals with respiratory infection:

- Facilities should implement sick leave policies that are non-punitive, flexible and consistent with public health policies that allow ill healthcare personnel (HCP) to stay home. HCP should be reminded to not report to work when they are ill. For questions, contact your local site leadership (e.g., emergency operations center) or contact Employee Health Services.
- Patients should be instructed to wear a surgical mask at all times, which is particularly important for source control if they have signs or symptoms of respiratory illness.
- Patients with confirmed or suspected COVID-19 should have dialysis performed at bedside using appropriate PPE (see below).
- When possible, exposure to patients with confirmed or suspected COVID-19 should be limited as much as possible:
 - In ICUs where ICU nurses are all trained and competent on the use of CRRT, hemodialysis nurses do not need to have direct contact with patients, thereby limiting healthcare staff exposure.
 - In institutions where the hemodialysis nurses set up the CRRT machine and/or trouble shoots while the ICU nurses run the machine, the dialysis nurse should bring and set up the CRRT machine outside the patient room (or outside the dedicated biocontainment/isolation ICU). Then, the ICU nurse will take the machine into the room and connect the patient in the room in order to minimize exposure, and limit use of PPE.
 - Consider video monitoring and telehealth capabilities when available, or consider monitoring the patient from outside the room (e.g., through a window) in lieu of remaining in the patient's room
 - If intermittent dialysis (IHD) is used, the dialysis nurse should connect the patient and initiate dialysis, leave the room and observe the patient via window or video monitoring, and reenter the room only to disconnect the patient after completion of dialysis, or if patient becomes unstable during the treatment.
 - Efforts should be made to conserve PPE while providing best protection for HCPs: facemask/N95 and eye protection, gown and gloves should be removed upon exiting the room, particularly if there was direct patient contact. N95 and eye protection can be reused according to Beaumont's interim infection prevention guidance.
 - If it is not possible for the HCP to leave the room while dialysis is occurring, HCPs should take efforts to maximize the distance between themselves and the patient to limit exposure

Patient placement:

- All COVID positive or COVID suspected patients should be dialyzed in a separate room with the door closed.

Personal protective equipment:

- HCP caring for patients with suspected or confirmed COVID should follow Standard, Contact, and Droplet Precautions with N95 and eye protection. This includes the use of:
 - Gloves
 - Facemask/N95
 - Eye protection (e.g., goggles, a disposable face shield that covers the front and sides of the face). Personal glasses and contact lenses are NOT considered adequate eye protection.
 - Isolation gown
 - The isolation gown should be worn over or instead of the cover gown (i.e., laboratory coat, gown, or apron with incorporate sleeves) that is normally worn by hemodialysis personnel. If there are shortages of gowns, they should be prioritized for initiating and terminating dialysis treatment, manipulating access needles or catheters, helping the patient into and out of the station, and cleaning and disinfection of patient care equipment and the dialysis station.
- When gowns are removed, place the gown in a dedicated container for waste or linen before leaving the dialysis station. Disposable gowns should be discarded after use. Cloth gowns should be laundered after each use.

Patient Care

- Nephrologists, intensivists, dialysis and ICU staff will follow the recommended PPE and safety guidelines during their interactions with the patient.
- Nephrologists should consider minimizing/avoiding daily patient contact by collaborating with the ICU team and relying on ICU personnel assessment to convey relevant physical exam and ultrasound findings, such as volume status. Each institution may have their own guidelines to reduce exposure to healthcare providers. Tele-medicine, if available, should be used to reduce provider exposure to COVID-19.
- If patients develop indications to start RRT (or if an ESRD patient needs a dialysis catheter for vascular access), this will be placed by an ICU provider, surgeon, interventional radiologist, or nephrologist with significant expertise in placement of central venous catheters.

Cleaning and Disinfection:

- Routine cleaning and disinfection are appropriate for COVID-19 in dialysis settings. Any surface, supplies, or equipment (e.g., dialysis machine) located within 6 feet of symptomatic patients should be disinfected or discarded.
- Products with EPA-approved emerging viral pathogens claims are recommended for use against COVID-19.
- CRRT filter changes can be performed every 72 hours or at longer intervals per institution protocols.
- All disposable RRT machine equipment (tubing/filter sets, CRRT solutions bags, etc.) should be discarded as directed by hospital infection control & policy
- Further guidance regarding RRT Machine disinfection AND approved disinfection cleaning products for COVID-19 can be found at the CDC and EPA (List N) websites noted below:

- <https://www.cdc.gov/coronavirus/2019-ncov/healthcare-facilities/dialysis.html>
- <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>

References:

[CDC Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities](#)

[ASN Recommendations on the Care of Hospitalized Patients with COVID-19 and Kidney Failure Requiring Renal Replacement Therapy](#)