The Centers for Disease Control and Prevention (CDC) released two COVID-19 interim guidance documents, one for providers of dialysis services and one for healthcare personnel in all healthcare settings, on March 10, 2020.

- Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities
- Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings

These FAQs were drafted for dialysis facilities based on current CDC guidance. ASN’s intent is to relay information based on the current state of knowledge, but the global situation is evolving rapidly. The information below is current as of March 13, 2020. ASN will update these FAQs as more information becomes available. However, for the most up-to-date information, visit https://www.cdc.gov/coronavirus/2019-ncov/index.html.

When transmission in the community is identified, the local medical system’s capacity to accept hemodialysis patients for treatment might be exceeded. Public health authorities should refer to pandemic plans to help determine alternatives, which might include the need to dialyze patients with COVID-19 in outpatient hemodialysis facilities.

If a hemodialysis facility is dialyzing more than one patient with suspected or confirmed COVID-19, consideration should be given to cohorting these patients and the healthcare personnel (HCP) caring for them together in the unit and/or on the same shift (e.g., consider the last shift of the day). This tiered approach will be different in each community and will be dependent on the resources available and the number of cases within the community. Facilities are encouraged to work with their local health authorities to develop plans for care. If the etiology of respiratory symptoms is not known, patients with different etiologies should not be cohorted (for example, patients with confirmed influenza and COVID-19 should not be cohorted).

What are symptoms of COVID-19?
Reports to date suggest that patients with COVID-19 can have a spectrum of symptoms, ranging from asymptomatic infection to fever, cough, shortness of breath, severe respiratory illness, and respiratory distress with failure. CDC guidance suggests that symptoms may appear in as few as 2 days or as long as 14 days after exposure.
How is COVID-19 treated?
Currently, treatment is supportive. Potential antiviral candidates are undergoing testing and vaccine candidates are under development. However, it is unknown when these will be available.

How is COVID-19 diagnosed?
Testing includes samples from the upper respiratory tract (i.e. nasopharyngeal and oropharyngeal swab) and lower respiratory tract (i.e., sputum). At this point in time, diagnostics are available at the CDC and some local health departments. Shared decision-making between health departments and clinicians should occur when testing is considered. The “Person Under Investigation” (PUI) definition can be used to help inform testing decisions but reliance on the PUI definition should never impede or override clinical judgment. The PUI definition can change over time as more is learned; consult the CDC website for the current definition.

Dialysis patients who require testing generally will need to be referred to a facility with an airborne isolation room or examination room with a door closed. Samples should be taken by a healthcare provider wearing appropriate PPE (gown, gloves, eye protection, and a fit-tested N-95 mask or higher-level respirator). Notify and discuss with the health department prior to referral to determine appropriate disposition. In addition, notify the receiving facility before referring a patient who meets PUI criteria.

How is PUI defined?
As of March 4, 2020, CDC instructs clinicians to use their judgment to determine if a patient has signs and symptoms compatible with COVID-19 and whether the patient should be tested. Decisions on which patients receive testing should be based on the local epidemiology of COVID-19, as well as the clinical course of illness. Most patients with confirmed COVID-19 have developed fever and/or symptoms of acute respiratory illness (e.g., cough, difficulty breathing). Clinicians are strongly encouraged to test for other causes of respiratory illness, including infections such as influenza.
Epidemiologic factors that may help guide decisions on whether to test include: any persons, including healthcare workers, who have had close contact with a laboratory-confirmed COVID-19 patient within 14 days of symptom onset, or a history of travel from affected geographic areas within 14 days of symptom onset.
Early Recognition of Individuals with Respiratory Infection

- Facilities should implement measures to identify patients with signs and symptoms of respiratory infection (fever, cough) at or prior to arrival at the facility (i.e. before they enter the treatment area).
  - Instruct patients to call ahead to report fever or respiratory symptoms so the facility staff can be prepared for their arrival or triage them to a more appropriate setting (e.g. acute care hospital).
  - Medically stable patients might opt to wait in a personal vehicle or outside the healthcare facility where they can be contacted by mobile phone when it is their turn to be evaluated.
  - Patients should inform staff of fever or respiratory symptoms immediately upon arrival to the facility (e.g. when they check in at the registration desk).
  - Patients with symptoms of a respiratory infection should put on a face mask at check-in and leave it on until they leave the facility.
  - Ensure patients with symptoms of suspected COVID-19 are not allowed to wait among other patients seeking care. Identify a separate, well-ventilated space that allows waiting patients to be separated by 6 or more feet, with easy access to respiratory hygiene supplies.
  - Patients with respiratory symptoms should be brought back to an appropriate treatment area as soon as possible in order to minimize time in waiting areas.

- Facilities should implement sick leave policies that are non-punitive, flexible and consistent with public health policies that allow ill HCP to stay home. HCP should be reminded to not report to work when they are ill.

Patient Placement

- Facilities should maintain at least 6 feet of separation between masked, symptomatic patients and other patients during dialysis treatment. Ideally, symptomatic patients would be dialyzed in a separate room (if available) with the door closed.
- Hepatitis B isolation rooms should only be used for patients with symptoms of respiratory infection if: 1) the patient is hepatitis B surface antigen positive or 2) the facility has no patients on the census with hepatitis B infection who would require treatment in the isolation room.
- If a separate room is not available, the masked patient should be treated at a corner or end-of-row station, away from the main flow of traffic (if available). The patient should be separated by at least 6 feet from the nearest patient (in all directions).
• Limit individuals entering the room to only necessary clinical staff; limit time in the room.
• Maintain a list of all healthcare personnel entering the room.
• Use dedicated or disposable non-critical patient-care equipment (e.g., blood pressure cuffs). If equipment must be used for more than one patient, clean and disinfect such equipment before use on another patient according to manufacturer’s instructions.
• Contact your local health department for additional instructions.

Facility Preparation
• Post signs at entrances and in the waiting area with instructions to patients with fever or symptoms of respiratory infection to alert facility staff so appropriate precautions can be implemented. A sample sign can be found [here](#).
• Ask patients about their travel and exposure history.
• Facilities should provide patients and HCPs with instructions (in appropriate languages) about hand hygiene, respiratory hygiene, and cough etiquette.
  o Instructions should include how to use facemasks or tissues to cover nose and mouth when coughing or sneezing, to dispose of tissues and contaminated items in waste receptacles, and how and when to perform hand hygiene.
• Facilities should have supplies positioned close to dialysis chairs and nursing stations to ensure adherence to hand and respiratory hygiene and cough etiquette. These supplies include tissues, no-touch receptacles for disposal of tissues, and hand hygiene supplies (e.g., alcohol-based hand sanitizer).
• Identify your chain of command at the dialysis facility. Who will be notified if a patient is suspected of meeting PUI criteria? Know the phone number for local health authorities who will help you decide if a patient meets PUI criteria.
• Assess available supplies of personal protective equipment, including surgical masks and eye protection. Eye protection can include a surgical mask with an eye shield or goggles. Remember that eye protection should be worn as a part of standard precautions whenever there is a risk of splashing or sprays of body fluid and should be readily available in the dialysis facility.
• Identify a room in the facility that could be used to isolate a PUI patient for further assessment and while awaiting transfer.
• Review plan with all staff in the facility.
Personal Protective Equipment

In general, HCP caring for patients with undiagnosed respiratory infections should follow Standard, Contact, and Droplet Precautions with eye protection unless the suspected diagnosis requires Airborne Precautions (e.g., tuberculosis). This includes the use of:

- **Isolation gown**
  - The isolation gown should be worn over or instead of the laboratory coat 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.

- **Gloves**

- **Facemask**
  - Based on local and regional situational analysis of PPE supplies, facemasks are an acceptable alternative when the supply chain of respirators cannot meet the demand. During this time, available respirators should be prioritized for procedures that are likely to generate respiratory aerosols and which would pose the highest exposure risk to HCP.
    - Facemasks protect the wearer from splashes and sprays.
    - Respirators, which filter inspired air, offer respiratory protection.
  - When the supply chain is restored, facilities with a respiratory protection program should return to use of respirators for patients with known or suspected COVID-19. Facilities that do not currently have a respiratory protection program, but care for patients infected with pathogens for which a respirator is recommended, should implement a respiratory protection program.

- **Eye protection** (e.g., goggles or a disposable face shield that covers the front and sides of the face). Personal glasses and contact lenses are NOT considered adequate eye protection.
  - Reusable eye protection (e.g., goggles) must be cleaned and disinfected according to manufacturer’s reprocessing instructions prior to re-use. Disposable eye protection should be discarded after use.
What do we do when COVID-19 is suspected or confirmed in a patient receiving hemodialysis at the facility?

- Notify the health department about the patient.
- Follow CDC Guidance:
  - Interim Additional Guidance for Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed COVID-19 in Outpatient Hemodialysis Facilities
  - Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings.
- Per current CDC guidance, an airborne infection isolation room (AIIR) is not required for the evaluation or care of patients with suspected or confirmed COVID-19. If available, AIIRs should be prioritized for patients who are critically ill or receiving aerosol-generating procedures. As of March 10, 2020, the CDC recommends use of an N-95 mask, in addition to gown, gloves, and eye protection, for the care of a COVID-19 patient. However, in communities with widespread transmission, this may not be possible. Use of surgical masks for the care of the COVID-19 patient in the dialysis center may be recommended in consultation with public health authorities.

Environmental 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. Refer to List N on the EPA website for EPA-registered disinfectants that have qualified under EPA's emerging viral pathogens program from use against SARS-CoV-2.
- Personnel who perform the terminal clean should wear a gown and gloves. A facemask and eye protection should be added if splashes or sprays during cleaning and disinfection activities are anticipated or otherwise required based on the selected cleaning products.
How should we advise our patients to protect themselves against COVID-19 and other respiratory illnesses?

CDC advises that people follow these tips to help prevent respiratory illnesses:

- Receive influenza vaccine annually
- Wash your hands often with soap and water for at least 20 seconds. If soap and water are not available, use an alcohol-based hand sanitizer.
- Avoid touching your eyes, nose, and mouth with unwashed hands.
- Avoid close contact with people who are sick with respiratory symptoms.
- Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
- Clean and disinfect frequently touched objects and surfaces.