

Please note: Due to rapidly changing information and guidance from the CDC, updates will be provided as new information becomes available.

ASN has received questions about the management of patients with confirmed or suspected COVID-19. The Centers for Disease Control and Prevention has posted guidance for healthcare settings. These FAQs were drafted for dialysis facilities based on current CDC guidance. Our 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 guidance posted **February 28, 2020** and we 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>. At the present time, only limited community transmission has been identified in the United States, but guidance is likely to change as more widespread transmission is identified.

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 to 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 swab) and lower respiratory tract (i.e., sputum). At this point in time, diagnostics are only available at the CDC and some 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 so check here for the current definition. <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>

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

What steps should dialysis facilities take to identify patients with COVID-19?

Ensure rapid triage and isolation of patients with symptoms of suspected COVID-19 or other respiratory infection (e.g., fever, cough). Identify patients **before or immediately upon arrival to the dialysis facility** (e.g., during or before patient triage or registration at the time of patient

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check-in). Ask all patients about fever or symptoms of lower respiratory tract infection, including cough or trouble breathing. Ask all patients about travel to an affected geographic area in the last 14 days OR contact with a patient with known COVID-19 illness.

Provide supplies for respiratory hygiene and cough etiquette, including 60%-95% alcohol-based hand sanitizer (ABHS), tissues, no touch receptacles for disposal, and facemasks at dialysis facility entrances, waiting rooms, patient check-ins, etc. Patients who have respiratory symptoms should wear a surgical mask as part of standard precautions.

If a patient has clinical features and epidemiological risks (see PUI definition to guide this decision making):

- 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. Medically stable patients may opt to wait in personal vehicle or outside the healthcare facility (e.g., at home) where they can be contacted by phone. If this is not an option, place patient and any accompanying visitors in a private room and shut the door. Ideally, the patient should not be placed in any room where room exhaust is recirculated within the building without HEPA filtration.
- Limit individuals entering the room to only necessary clinical staff; limit time in the room.
- All providers and clinical staff who enter the room should wear appropriate PPE including gown, gloves, eye protection, and a fit-tested N-95 mask or higher-level respirator. If N95 masks are not available or healthcare providers have not been fit tested, they should wear a surgical mask and all other appropriate PPE and minimize time in the room.
- Maintain a list of all healthcare personnel entering the room.
- Use dedicated or disposable noncritical 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.

Where should dialysis happen for a PUI for novel coronavirus?

Most dialysis facilities do not have airborne isolation rooms (AIIR). Currently PUIs or individuals with confirmed COVID-19 should not receive dialysis in an outpatient dialysis facility due to inability to perform dialysis in an AIIR. Therefore, if unable to perform home dialysis, these individuals will need to undergo dialysis in an acute care hospital in an AIIR. The decision to transfer care back to the dialysis facility should be determined on a case-by-case basis, in conjunction with local, state, and federal health authorities.

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What do we do after a PUI is discharged home or transferred to the hospital?

Keep the door closed. We do not yet know how long COVID-19 remains infectious in the air. In the interim, it is reasonable to apply a similar time period before entering the room without respiratory protection as used for pathogens spread by the airborne route (e.g., measles, tuberculosis). The appropriate time period depends on the number of air exchanges, as noted here: <https://www.cdc.gov/infectioncontrol/guidelines/environmental/appendix/air.html#tableb1>

If the number of air exchanges is unknown, wait 207 minutes. In addition, the room should undergo appropriate cleaning and surface disinfection after the appropriate time period has elapsed and before it is returned to routine use. 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.

What should the dialysis facility do now, to prepare for spread of COVID-19 in the United States?

- Post signs in the waiting area asking about symptoms and exposures. Examples can be found [here](#).
- Ask patients about their travel and exposure history.
- 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.
 - 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.
- 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.

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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.

What else do practicing nephrologists need to know?

On February 27, 2020, the CDC updated the COVID-19 PUI definition to include a person with fever with severe acute lower respiratory illness (e.g., pneumonia, ARDS) requiring hospitalization and without alternative explanatory diagnosis (e.g., influenza). Maintain a high index of suspicion and contact your health department or hospital's infection prevention team with concerns.