



## COVID-19

# Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic

Updated Feb. 2, 2022

CDC has updated guidance

- [Isolation and work restriction guidance](#) for healthcare personnel
- [Contingency and crisis management](#) in the setting of significant healthcare worker shortages

## Summary of Recent Changes

Updates as of February 2, 2022



Due to concerns about increased transmissibility of the SARS-CoV-2 [Omicron variant](#), this guidance is being updated to enhance protection for healthcare personnel, patients, and visitors and to address concerns about potential impacts on the healthcare system given a surge in SARS-CoV-2 infections. These updates will be refined as additional information becomes available to inform recommended actions.

- Empiric use of Transmission-Based Precautions (quarantine) is recommended for patients who have had close contact with someone with SARS-CoV-2 infection if they are not [up to date](#) with all recommended COVID-19 vaccine doses.
  - In general, quarantine is not needed for asymptomatic patients who are up to date with all recommended COVID-19 vaccine doses or who have recovered from SARS-CoV-2 infection in the prior 90 days; potential exceptions are described in the guidance. However, some of these patients should still be tested as described in the testing section of the guidance.
- A test-based strategy and (if available) consultation with infectious disease experts is now recommended for determining the duration of Transmission-Based Precautions for patients with SARS-CoV-2 infection who are moderately to severely immunocompromised.
- Included additional examples when universal respirator use could be considered
- Additional updates that will have implications for healthcare facilities were made in the following guidance documents:
  - [Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2 | CDC](#)
  - [Strategies to Mitigate Healthcare Personnel Staffing Shortages | CDC](#)
  - [Interim Infection Prevention and Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes | CDC](#)

## Key Points

- This guidance applies to all U.S. settings where healthcare is delivered, including home health.

## Introduction

This interim guidance has been updated based on currently available information about COVID-19 and the current situation in the United States.

This guidance is applicable to all U.S. settings where healthcare is delivered (including home health). **This guidance is not intended for non-healthcare settings (e.g., restaurants) and not for persons outside of healthcare settings.** CDC's [main landing page](#) for COVID-19 content will help readers navigate to information regarding [modes of transmission](#), clinical management, laboratory settings, COVID-19 vaccines and CDC guidance on other COVID-19-related topics.

Employers should be aware that other local, territorial, tribal, state, and federal requirements may apply, including those promulgated by the Occupational Safety and Health Administration (OSHA).


### Defining Community Transmission of SARS-CoV-2

Several of the IPC measures (e.g., use of source control, screening testing) are influenced by levels of SARS-CoV-2 transmission in the community. Two different indicators in CDC's [COVID-19 Data Tracker](#) are used to determine the level of SARS-CoV-2 transmission for the county where the healthcare facility is located. If the two indicators suggest different transmission levels, the higher level is selected.

## 1. Recommended routine infection prevention and control (IPC) practices during the COVID-19 pandemic

Encourage everyone to remain [up to date](#) with all recommended COVID-19 vaccine doses.

### Establish a Process to Identify and Manage Individuals with Suspected or Confirmed SARS-CoV-2 Infection

- Ensure everyone is aware of recommended IPC practices in the facility.
  - Post [visual alert](#)  (e.g., signs, posters) at the entrance and in strategic places (e.g., waiting areas, elevators, cafeterias) with instructions about current IPC recommendations (e.g., when to use source control and perform hand hygiene). Dating these alerts can help ensure people know that they reflect current recommendations.
- Establish a process to identify anyone entering the facility, regardless of their vaccination status, who has any of the following three criteria so that they can be properly managed:
  - 1) a positive viral test for SARS-CoV-2,
  - 2) [symptoms of COVID-19](#), or
  - 3) close contact with someone with SARS-CoV-2 infection (for patients and visitors) or a [higher-risk exposure \(for healthcare personnel \(HCP\)\)](#).

Options could include (but are not limited to): individual screening on arrival at the facility; or implementing an electronic monitoring system in which individuals can self-report any of the above before entering the facility.

- HCP should report any of the 3 above criteria to occupational health or another point of contact designated by the facility, even if they are up to date with all recommended COVID-19 vaccine doses. Recommendations for evaluation and work restriction of these HCP are in the [Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2](#).
- Even if they have met [community criteria](#) to discontinue isolation or quarantine, visitors **should not visit** if they have any of the following and have not met the same criteria used to discontinue isolation and quarantine for patients (See [Section 2](#))

#### SECTION 2).

- 1) a positive viral test for SARS-CoV-2,
  - 2) [symptoms of COVID-19](#), or
  - 3) close contact with someone with SARS-CoV-2 infection
- Additional information about visitation for [nursing homes](#) [↗](#) and [intermediate care facilities for individuals with intellectual disabilities and psychiatric residential treatment facilities](#) [📄](#) [↗](#) is available from the Centers for Medicare and Medicaid Services (CMS).
  - Patients meeting any of the 3 above criteria should be managed as described in Section 2.
  - HCP, patients and visitors should be [offered resources and counseled](#) about the importance of receiving the COVID-19 vaccine.

### Implement Source Control Measures

[Source control](#) refers to use of respirators or well-fitting facemasks or cloth masks to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing.

Source control options for HCP include:

- A NIOSH-approved N95 or equivalent or higher-level respirator OR
- A respirator approved under standards used in other countries that are similar to NIOSH-approved N95 filtering facepiece respirators (Note: These should not be used instead of a NIOSH-approved respirator when respiratory protection is indicated) OR
- A well-fitting facemask.

When used solely for source control, any of the options listed above could be used for an entire shift unless they become soiled, damaged, or hard to breathe through. If they are used during the care of patient for which a NIOSH-approved respirator or facemask is indicated for personal protective equipment (PPE) (e.g., NIOSH-approved N95 or equivalent or higher-level respirator) during the care of a patient with SARS-CoV-2 infection, facemask during a surgical procedure or during care of a patient on Droplet Precautions, they should be removed and discarded after the patient care encounter and a new one should be donned.

Source control and physical distancing (when physical distancing is feasible and will not interfere with provision of care) are recommended for **everyone in a healthcare setting**. This is particularly important for individuals, regardless of their vaccination status, who live or work in counties with substantial to high community transmission or who have:

- Are not up to date with all recommended COVID-19 vaccine doses; or
- Have suspected or confirmed SARS-CoV-2 infection or other respiratory infection (e.g., those with runny nose, cough, sneeze); or
- Had [close contact](#) (patients and visitors) or a [higher-risk exposure](#) (HCP) with someone with SARS-CoV-2 infection for 10 days after their exposure, including those residing or working in areas of a healthcare facility experiencing SARS-CoV-2 transmission (i.e., outbreak); or
- Have [moderate to severe immunocompromise](#); or
- Have otherwise had source control and physical distancing recommended by public health authorities

While it is generally safest to implement universal use of source control for everyone in a healthcare setting, the following allowances could be considered for **individuals who are up to date with all recommended COVID-19 vaccine doses** (who do not otherwise meet the criteria described above) in healthcare facilities **located in counties with low to moderate community transmission**. These individuals might choose to continue using source control if they or someone in their household is immunocompromised or at [increased risk for severe disease](#), or if someone in their household is not up to date with all recommended COVID-19 vaccine doses.

- **HCP who are up to date with all recommended COVID-19 vaccine doses:**
  - Could choose not to wear source control or physically distance when they are in well-defined areas that are restricted from patient access (e.g., staff meeting rooms, kitchen).

- They **should wear source control** when they are in areas of the healthcare facility where they could encounter patients (e.g., hospital cafeteria, common halls/corridors).
- **Patient Visitation:**
  - **Indoor visitation (in single-person rooms; in multi-person rooms, when roommates are not present; or in designated visitation areas when others are not present):** The safest practice is for patients and visitors to wear source control and physically distance, particularly if either of them are at risk for severe disease or are unvaccinated.
    - If the patient and all their visitor(s) are up to date with all recommended COVID-19 vaccine doses, they can choose not to wear source control and to have physical contact.
    - Visitors should wear source control when around other residents or HCP, regardless of vaccination status.
  - **Outdoor Visitation:** Patients and their visitors should follow the source control and physical distancing recommendations for outdoor settings described on the page addressing [Your Guide to Masks | CDC](#).
- **Residents who are up to date with all recommended COVID-19 vaccine doses in Nursing Homes in Areas of Low to Moderate Transmission:**
  - Nursing homes are healthcare settings, but they also serve as a home for long-stay residents and quality of life should be balanced with risks for transmission. In light of this, consideration could be given to allowing residents who are up to date with all recommended COVID-19 vaccine doses to not use source control when in communal areas of the facility; however, residents at [increased risk for severe disease](#) should still consider continuing to practice physical distancing and use of source control

### Implement Universal Use of Personal Protective Equipment for HCP

If SARS-CoV-2 infection is not suspected in a patient presenting for care (based on symptom and exposure history), HCP should follow [Standard Precautions](#) (and [Transmission-Based Precautions](#) if required based on the suspected diagnosis). Additionally, HCP working in facilities located in [counties](#) with substantial or high transmission should also use PPE as described below:

- NIOSH-approved N95 or equivalent or higher-level respirators should be used for:
  - All aerosol-generating procedures (refer to [Which procedures are considered aerosol generating procedures in healthcare settings?](#))
  - All surgical procedures that might pose higher risk for transmission if the patient has SARS-CoV-2 infection (e.g., that generate potentially infectious aerosols or involving anatomic regions where viral loads might be higher, such as the nose and throat, oropharynx, respiratory tract).
  - NIOSH-approved N95 or equivalent or higher-level respirators can also be used by HCP working in other situations where additional risk factors for transmission are present such as the patient is not up to date with all recommended COVID-19 vaccine doses, unable to use source control, and the area is poorly ventilated. They may also be considered if healthcare-associated SARS-CoV-2 transmission is identified and universal respirator use by HCP working in affected areas is not already in place.
  - To simplify implementation, facilities in counties with substantial or high transmission may consider implementing universal use of NIOSH-approved N95 or equivalent or higher-level respirators for HCP during all patient care encounters or in specific units or areas of the facility at higher risk for SARS-CoV-2 transmission.
- Eye protection (i.e., goggles or a face shield that covers the front and sides of the face) should be worn during all patient care encounters.

### Encourage Physical Distancing

- In situations when patients are not up to date with all recommended COVID-19 vaccine doses could be in the same space (e.g., waiting rooms, cafeterias, dialysis treatment room), arrange seating so that patients can sit at least 6 feet apart, especially in counties with substantial or high transmission. This might require scheduling appointments to limit the number of patients in waiting rooms, treatment areas, or participating in group activities.

### Optimize the Use of Engineering Controls and Indoor Air Quality

- Optimize the use of engineering controls to reduce or eliminate exposures by shielding HCP and other patients from infected individuals (e.g., physical barriers at reception / triage locations and dedicated pathways to guide symptomatic

patients through waiting rooms and triage areas).

- Explore options, in consultation with facility engineers, to improve ventilation delivery and indoor air quality in all shared spaces.
  - Guidance on ensuring that ventilation systems are operating properly are available in the following resources:
    - [Guidelines for Environmental Infection Control in Health-Care Facilities](#)
    - [American Society of Heating, Refrigerating and Air-Conditioning Engineers \(ASHRAE\) resources for healthcare facilities](#) [↗](#), which also provides [COVID-19 technical resources for healthcare facilities](#) [↗](#)
    - [Ventilation in Buildings](#), which includes options for non-clinical spaces in healthcare facilities

### Perform SARS-CoV-2 Viral Testing

- [FDA](#) [↗](#) evaluates test characteristics and facilities should be aware of how tests perform for circulating variants.
- Anyone with even mild symptoms of COVID-19, **regardless of vaccination status**, should receive a viral test as soon as possible.
- Asymptomatic patients with close contact with someone with SARS-CoV-2 infection, regardless of vaccination status, should have a series of two viral tests for SARS-CoV-2 infection. In these situations, testing is recommended immediately (but generally not earlier than 24 hours after the exposure) and, if negative, again 5–7 days after the exposure. In general, testing is not necessary for asymptomatic people who have recovered from SARS-CoV-2 infection in the prior 90 days; however, if testing is performed on these individuals an antigen test instead of a nucleic acid amplification test (NAAT) is recommended. This is because some people may remain NAAT positive but not be infectious during this period.
  - Guidance for work restrictions, including recommended testing for HCP with higher-risk exposures are in the [Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2](#).
  - Guidance for use of Transmission-Based Precautions (quarantine) for patients with close contact with someone with SARS-CoV-2 infection are described in Section 2.
- Testing considerations for healthcare facilities with an outbreak of SARS-CoV-2 are described [below](#).
- Expanded screening testing of asymptomatic HCP without known exposures is required in nursing homes and could be considered in other settings.
  - HCP who are up to date with all recommended COVID-19 vaccine doses may be exempt from expanded screening testing.
  - Guidance for expanded screening testing for nursing homes is described in the [Interim Infection Prevention and Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes | CDC](#).
- Performance of pre-procedure or pre-admission viral testing is at the discretion of the facility. The yield of this testing for identifying asymptomatic infection is likely low when performed on vaccinated individuals or those in counties with low or moderate transmission. However, these results might continue to be useful in some situations (e.g., when performing higher risk procedures on people who are not up to date with all recommended COVID-19 vaccine doses) to inform the type of infection control precautions used (e.g., room assignment/cohorting, or PPE used).

### Create a Process to Respond to SARS-CoV-2 Exposures Among HCP and Others

Healthcare facilities should have a plan for how SARS-CoV-2 exposures in a healthcare facility will be investigated and managed and how contact tracing will be performed. Guidance on assessing the risk for exposed patients and HCP is available in the [Healthcare Infection Prevention and Control FAQs for COVID-19](#).

If healthcare-associated transmission is suspected or identified, facilities might consider expanded testing of HCP and patients as determined by the distribution and number of cases throughout the facility and ability to identify close contacts. For example, in an outpatient dialysis facility with an open treatment area, testing should ideally include all patients and HCP. Depending on testing resources available or the likelihood of healthcare-associated transmission, facilities may elect to initially expand testing only to HCP and patients on the affected units or departments, or a particular treatment schedule or shift, as opposed to the entire facility. If an expanded testing approach is taken and testing identifies additional infections, testing should be expanded more broadly. If possible, testing should be repeated every 3-7 days until no new cases are identified for at least 14 days.

Guidance for outbreak response in nursing homes is described in the [Interim Infection Prevention and Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes | CDC](#).

Healthcare facilities responding to SARS-CoV-2 transmission within the facility should always notify and follow the recommendations of public health authorities.

## 2. Recommended infection prevention and control (IPC) practices when caring for a patient with suspected or confirmed SARS-CoV-2 infection

The IPC recommendations described below also apply to patients with symptoms of COVID-19 (even before results of diagnostic testing) and asymptomatic patients who have met the criteria for empiric Transmission-Based Precautions (quarantine) based on [close contact](#) with someone with SARS-CoV-2 infection. However, these patients should NOT be cohorted with patients with confirmed SARS-CoV-2 infection unless they are confirmed to have SARS-CoV-2 infection through testing.

Patients placed in empiric Transmission-Based Precautions based on close contact with someone with SARS-CoV-2 infection should be maintained in Transmission-Based Precautions for the following time periods.

- Patients can be removed from Transmission-Based Precautions after day 10 following the exposure (day 0) if they do not develop symptoms. Although the residual risk of infection is low, healthcare providers could consider testing for SARS-CoV-2 within 48 hours before the time of planned discontinuation of Transmission-Based Precautions
- Patients can be removed from Transmission-Based Precautions after day 7 following the exposure (day 0) if a viral test is negative for SARS-CoV-2 and they do not develop symptoms. The specimen should be collected and tested within 48 hours before the time of planned discontinuation of Transmission-Based Precautions

Note: In general, asymptomatic patients who are up to date with all recommended COVID-19 vaccine doses or who have recovered from SARS-CoV-2 infection in the prior 90 days do not require empiric use of [Transmission-Based Precautions](#) (quarantine) for SARS-CoV-2 following [close contact](#) with someone with SARS-CoV-2 infection. However, these patients should still be tested as described in the testing section.

However, there may be circumstances when Transmission-Based Precautions (quarantine) for these patients might be recommended (e.g., patient is moderately to severely immunocompromised). In the event of ongoing transmission within a facility that is not controlled with initial interventions, strong consideration should be given to use of quarantine for patients on affected units and work restriction of HCP with higher-risk exposures, even if they are up to date with all recommended COVID-19 vaccine doses. In addition, there might be other circumstances for which the jurisdiction's public health authority recommends these and additional precautions.

### Patient Placement

- Place a patient with suspected or confirmed SARS-CoV-2 infection in a single-person room. The door should be kept closed (if safe to do so). The patient should have a dedicated bathroom.
- Facilities could consider designating entire units within the facility, with dedicated HCP, to care for patients with SARS-CoV-2 infection. Dedicated means that HCP are assigned to care only for these patients during their shifts.
  - Only patients with the same respiratory pathogen should be housed in the same room.
- Limit transport and movement of the patient outside of the room to medically essential purposes.
- Communicate information about patients with suspected or confirmed SARS-CoV-2 infection to appropriate personnel before transferring them to other departments in the facility (e.g., radiology) and to other healthcare facilities.

### Personal Protective Equipment

- HCP who enter the room of a patient with suspected or confirmed SARS-CoV-2 infection should adhere to [Standard Precautions](#) and use a NIOSH-approved N95 or equivalent or higher-level respirator, gown, gloves, and eye protection (i.e., goggles or a face shield that covers the front and sides of the face).

- Additional information about using PPE is available in [Protecting Healthcare Personnel | HAI | CDC](#)

## Aerosol Generating Procedures (AGPs)

- Procedures that could [generate infectious aerosols](#) should be performed cautiously and avoided if appropriate alternatives exist.
- AGPs should take place in an airborne infection isolation room (AIIR), if possible.
- The number of HCP present during the procedure should be limited to only those essential for patient care and procedure support. Visitors should not be present for the procedure.

## Visitation

- For the safety of the visitor, in general, patients should be encouraged to limit in-person visitation while they are infectious. However, facilities should adhere to local, territorial, tribal, state, and federal regulations related to visitation. Visitation guidance for [nursing homes](#) [🔗](#) and [intermediate care facilities for individuals with intellectual disabilities and psychiatric residential treatment facilities](#) [📄](#) [🔗](#) is available from CMS.
  - Counsel patients and their visitor(s) about the risks of an in-person visit.
  - Encourage use of alternative mechanisms for patient and visitor interactions such as video-call applications on cell phones or tablets, when appropriate.
- Facilities should provide instruction, before visitors enter the patient's room, on hand hygiene, limiting surfaces touched, and use of PPE according to current facility policy.
- Visitors should be instructed to only visit the patient room. They should minimize their time spent in other locations in the facility.

## Duration of Transmission-Based Precautions

The following are criteria to determine when Transmission-Based Precautions could be discontinued for patients with SARS-CoV-2 infection. These patients should self-monitor and seek re-evaluation if symptoms recur or worsen. In general, patients who are hospitalized for SARS-CoV-2 infection should be maintained in Transmission-Based Precautions for the time period described for patients with severe to critical illness.

Information about antigen tests and NAAT is available in [Testing | CDC](#). Some people may be beyond the period of expected infectiousness but remain NAAT positive for an extended period. Antigen tests typically have a more rapid turnaround time but are often less sensitive than NAAT.

In general, patients should continue to wear source control until symptoms resolve or, for those who never developed symptoms, until they meet the criteria to end isolation below. Then they should revert to usual facility source control policies for patients.

### Patients with [mild to moderate illness](#) who are *not moderately to severely immunocompromised*:

- At least 10 days have passed *since symptoms first appeared* and
- At least 24 hours have passed *since last fever* without the use of fever-reducing medications and
- Symptoms (e.g., cough, shortness of breath) have improved

### Patients who were asymptomatic throughout their infection and are *not moderately to severely immunocompromised*:

- At least 10 days have passed since the date of their first positive viral test.

### Patients with [severe to critical illness](#) and who are *not moderately to severely immunocompromised*:

- At least 10 days and up to 20 days have passed *since symptoms first appeared* and
- At least 24 hours have passed *since last fever* without the use of fever-reducing medications and
- Symptoms (e.g., cough, shortness of breath) have improved

- The test-based strategy as described for moderately to severely immunocompromised patients below can be used to inform the duration of isolation.

The exact criteria that determine which patients will shed replication-competent virus for longer periods are not known. Disease severity factors and the presence of immunocompromising conditions should be considered when determining the appropriate duration for specific patients. For a summary of the literature, refer to [Ending Isolation and Precautions for People with COVID-19: Interim Guidance \(cdc.gov\)](#)

**Patients who are moderately to severely immunocompromised:** may produce replication-competent virus beyond 20 days after symptom onset or, for those who were asymptomatic throughout their infection, the date of their first positive viral test.

- Use of a test-based strategy and (if available) consultation with an infectious disease specialist is recommended to determine when Transmission-Based Precautions could be discontinued for these patients.

The criteria for the test-based strategy are:

#### **Patients who are symptomatic:**

- Resolution of fever without the use of fever-reducing medications **and**
- Symptoms (e.g., cough, shortness of breath) have improved, **and**
- Results are negative from at least two consecutive respiratory specimens collected  $\geq 24$  hours apart (total of two negative specimens) tested using an antigen test or NAAT (see [Testing | CDC](#)).

#### **Patients who are not symptomatic:**

- Results are negative from at least two consecutive respiratory specimens collected  $\geq 24$  hours apart (total of two negative specimens) tested using an antigen test or NAAT (see [Testing | CDC](#)).

The decision to discontinue empiric [Transmission-Based Precautions](#) by excluding the diagnosis of current SARS-CoV-2 infection for a patient with suspected SARS-CoV-2 infection can be made based upon having negative results from at least one respiratory specimen tested using an FDA-authorized [COVID-19 viral test](#).

- If a higher level of clinical suspicion for SARS-CoV-2 infection exists, consider maintaining Transmission-Based Precautions and performing a second test for SARS-CoV-2 RNA.
- If a patient suspected of having SARS-CoV-2 infection is never tested, the decision to discontinue Transmission-Based Precautions can be made based on time from symptom onset as described above.

Ultimately, clinical judgement and suspicion of SARS-CoV-2 infection determine whether to continue or discontinue empiric Transmission-Based Precautions.

#### **Environmental Infection Control**

- Dedicated medical equipment should be used when caring for a patient with suspected or confirmed SARS-CoV-2 infection.
  - All non-dedicated, non-disposable medical equipment used for that patient should be cleaned and disinfected according to manufacturer's instructions and facility policies before use on another patient.
- Routine cleaning and disinfection procedures (e.g., using cleaners and water to pre-clean surfaces prior to applying an EPA-registered, hospital-grade disinfectant to frequently touched surfaces or objects for appropriate contact times as indicated on the product's label) are appropriate for SARS-CoV-2 in healthcare settings, including those patient-care areas in which AGPs are performed.
  - Refer to [List N](#) [↗](#) on the EPA website for EPA-registered disinfectants that kill SARS-CoV-2.
- Management of laundry, food service utensils, and medical waste should be performed in accordance with routine procedures.
- Once the patient has been discharged or transferred, HCP, including environmental services personnel, should refrain from entering the vacated room until sufficient time has elapsed for enough air changes to remove potentially infectious particles [more information (to include important footnotes on its application) on [clearance rates under differing](#)



[ventilation conditions](#) is available]. After this time has elapsed, the room should undergo appropriate cleaning and surface disinfection before it is returned to routine use.

### 3. Setting-specific considerations

In addition to the recommendations described in the guidance above, here are additional considerations for the settings listed below.

#### Dialysis Facilities


##### Considerations for Patient Placement

- Patients on dialysis with suspected or confirmed SARS-CoV-2 infection or who have reported close contact should be dialyzed in a separate room with the door closed.
  - Hepatitis B isolation rooms can be used 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, patients with confirmed SARS-CoV-2 infection should be cohorted to a specific well-ventilated unit or shift (e.g., consider the last shift of the day). Only patients with confirmed SARS-CoV-2 infection should be cohorted together:
  - In the context of an outbreak or an increase in the number of confirmed SARS-CoV-2 infections at the facility, if a separate shift or unit is not initially available, efforts should be made to create specific shifts or units for patients with confirmed SARS-CoV-2 infection to separate them from patients without SARS-CoV-2 infection.

##### Additional Guidance for Use of Isolation Gowns


- When caring for patients with suspected or confirmed SARS-CoV-2 infection, gowns should be worn over or instead of the cover gown (e.g., laboratory coat, gown, or apron with incorporate sleeves) that is normally worn by hemodialysis personnel.

##### Cleaning and Disinfecting Dialysis Stations

- [Current procedures for routine cleaning and disinfection of dialysis stations](#)  are appropriate for patients with SARS-CoV-2 infection.
- Internal disinfection of dialysis machines is not required immediately after use unless otherwise indicated (e.g., post-blood leak). It should be done according to the dialysis machine manufacturer's instructions (e.g., at the end of the day).

#### Emergency Medical Services

##### Considerations for vehicle configuration when transporting a patient with suspected or confirmed SARS-CoV-2 infection

- Isolate the ambulance driver from the patient compartment and keep pass-through doors and windows tightly shut.
- When possible, use vehicles that have isolated driver and patient compartments that can provide separate ventilation to each area.
  - Before entering the isolated driver's compartment, the driver (if they were involved in direct patient care) should remove and dispose of PPE and perform hand hygiene to avoid soiling the compartment.
  - Close the door/window between these compartments before bringing the patient on board.
  - During transport, vehicle ventilation in both compartments should be on non-recirculated mode to maximize air changes that reduce potentially infectious particles in the vehicle.
  - If the vehicle has a rear exhaust fan, use it to draw air away from the cab, toward the patient-care area, and out the back end of the vehicle.
  - Some vehicles are equipped with a supplemental recirculating ventilation unit that passes air through high-efficiency particulate air (HEPA) filters before returning it to the vehicle. Such a unit can be used to increase the number of air changes per hour (ACH) [Health Hazard Evaluation Report 95-0031-2601 pdf icon](#)  [1.52 MB, 10 Pages].

- After patient unloading, allowing a few minutes with ambulance module doors open will rapidly dilute airborne viral particles.
- If a vehicle without an isolated driver compartment must be used, open the outside air vents in the driver area and turn on the rear exhaust ventilation fans to the highest setting to create a pressure gradient toward the patient area.
  - Before entering the driver's compartment, the driver (if they were involved in direct patient care) should remove their gown, gloves and eye protection and perform hand hygiene to avoid soiling the compartment. They should continue to wear their NIOSH-approved N95 or equivalent or higher-level respirator.

Additional considerations when performing AGPs on patients with suspected or confirms SARS-CoV-2 infection:

- If possible, consult with medical control before performing AGPs for specific guidance.
- Bag valve masks (BVMs) and other ventilatory equipment should be equipped with HEPA filtration to filter expired air.
- EMS systems should consult their ventilator equipment manufacturer to confirm appropriate filtration capability and the effect of filtration on positive-pressure ventilation.
- If possible, the rear doors of the stationary transport vehicle should be opened and the HVAC system should be activated during AGPs. This should be done away from pedestrian traffic.
- If possible, discontinue AGPs prior to entering the destination facility or communicate with receiving personnel that AGPs are being implemented.

## Dental Facilities

- Dental healthcare personnel (DHCP) should regularly consult their [state dental boards](#) and [state or local health departments](#) for current information and recommendations and requirements specific to their jurisdictions, which might change based on [level of community transmission in the county where their healthcare facility is located](#).
- Postpone all non-urgent dental treatment for: 1) patients with suspected or confirmed SARS-CoV-2 infection until they meet criteria to discontinue Transmission-Based Precautions and 2) patients who meet criteria for quarantine until they complete quarantine as described for healthcare settings above.
  - Dental care for these patients should only be provided if medically necessary. Follow all recommendations for care and placement for patients with suspected or confirmed SARS-CoV-2 infection.
  - If a patient has a fever strongly associated with a dental diagnosis (e.g., pulpal and periapical dental pain and intraoral swelling are present) but no other symptoms consistent with COVID-19 are present, dental care can be provided following the practices recommended for routine health care during the pandemic.
- When performing aerosol generating procedures on patients who are not suspected or confirmed to have SARS-CoV-2 infection, ensure that DHCP correctly wear the recommended PPE (including a NIOSH-approved N95 or equivalent or higher-level respirator in counties with substantial or high levels of transmission) and use mitigation methods such as four-handed dentistry, high evacuation suction, and dental dams to minimize droplet spatter and aerosols.
  - Commonly used dental equipment known to create aerosols and airborne contamination include ultrasonic scaler, high-speed dental handpiece, air/water syringe, air polishing, and air abrasion.
- Dental treatment should be provided in individual patient rooms whenever possible.
- For dental facilities with open floor plans, to prevent the spread of pathogens there should be:
  - At least 6 feet of space between patient chairs.
  - Physical barriers between patient chairs. Easy-to-clean floor-to-ceiling barriers will enhance effectiveness of portable HEPA air filtration systems (check to make sure that extending barriers to the ceiling will not interfere with fire sprinkler systems).
  - Operatories should be oriented parallel to the direction of airflow if possible.
  - Where feasible, consider patient orientation carefully, placing the patient's head near the return air vents, away from pedestrian corridors, and toward the rear wall when using vestibule-type office layouts.
  - Ensure to account for the time required to clean and disinfect operatories between patients when calculating your daily patient volume.

## Nursing Homes

Additional considerations for nursing homes are available in this [Interim Infection Prevention and Control Recommendations to Prevent SARS-CoV-2 Spread in Nursing Homes | CDC](#)

## Assisted Living Communities

In general, assisted living communities should follow recommendations for retirement communities or other non-healthcare congregate settings. Residents should also be counseled about [strategies to protect themselves and others](#); CDC has a [number of resources for older adults](#). However, in circumstances when healthcare is being delivered (e.g., by home health agency, staff providing care for a resident with SARS-CoV-2 infection), assisted living communities should follow the IPC recommendations in this guidance.

## Definitions:

**Healthcare Personnel (HCP):** HCP refers to all paid and unpaid persons serving in healthcare settings who have the potential for direct or indirect exposure to patients or infectious materials, including body substances (e.g., blood, tissue, and specific body fluids); contaminated medical supplies, devices, and equipment; contaminated environmental surfaces; or contaminated air. HCP include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, home healthcare personnel, physicians, technicians, therapists, phlebotomists, pharmacists, dental healthcare personnel, students and trainees, contractual staff not employed by the healthcare facility, and persons not directly involved in patient care, but who could be exposed to infectious agents that can be transmitted in the healthcare setting (e.g., clerical, dietary, environmental services, laundry, security, engineering and facilities management, administrative, billing, and volunteer personnel).

**Healthcare settings** refers to places where healthcare is delivered and includes, but is not limited to, acute care facilities, long-term acute-care facilities, inpatient rehabilitation facilities, nursing homes, home healthcare, vehicles where healthcare is delivered (e.g., mobile clinics), and outpatient facilities, such as dialysis centers, physician offices, dental offices, and others.

**Source control:** Use of respirators, well-fitting facemasks, or well-fitting cloth masks to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing. Source control devices should not be placed on children under age 2, anyone who cannot wear one safely, such as someone who has a disability or an underlying medical condition that precludes wearing one safely, or anyone who is unconscious, incapacitated, or otherwise unable to remove their source control device without assistance. Face shields alone are not recommended for source control.

**Cloth mask:** Textile (cloth) covers that are intended primarily for source control in the community. **They are not personal protective equipment (PPE) appropriate for use by healthcare personnel.** Guidance on design, use, and maintenance of cloth masks is [available](#).

**Facemask:** OSHA defines facemasks as "a surgical, medical procedure, dental, or isolation mask that is FDA-cleared, authorized by an FDA EUA, or offered or distributed as described in an FDA enforcement policy. Facemasks may also be referred to as 'medical procedure masks.'" Facemasks should be used according to product labeling and local, state, and federal requirements. FDA-cleared surgical masks are designed to protect against splashes and sprays and are prioritized for use when such exposures are anticipated, including surgical procedures. Other facemasks, such as some procedure masks, which are typically used for isolation purposes, may not provide protection against splashes and sprays.

**Respirator:** A respirator is a personal protective device that is worn on the face, covers at least the nose and mouth, and is used to reduce the wearer's risk of inhaling hazardous airborne particles (including dust particles and infectious agents), gases, or vapors. Respirators are certified by CDC/NIOSH, including those intended for use in healthcare.

## Airborne Infection Isolation Rooms (AIIRs):


- AIIRs are single-patient rooms at negative pressure relative to the surrounding areas, and with a minimum of 12 ACH (6 ACH are allowed for AIIRs last renovated or constructed prior to 1997).
- Air from these rooms should be exhausted directly to the outside or be filtered through a HEPA filter directly before recirculation.
- Room doors should be kept closed except when entering or leaving the room, and entry and exit should be minimized.
- Facilities should monitor and document the proper negative-pressure function of these rooms.

**Immunocompromised:** For the purposes of this guidance, moderate to severely immunocompromising conditions include, but might not be limited to, those defined in the [Interim Clinical Considerations for Use of COVID-19 Vaccines | CDC](#)

- Other factors, such as end-stage renal disease, may pose a lower degree of immunocompromise. However, people in this category should still consider continuing to practice physical distancing and use of source control while in a healthcare facility, even if they are up to date with all recommended COVID-19 vaccine doses.
- Ultimately, the degree of immunocompromise for the patient is determined by the treating provider, and preventive actions are tailored to each individual and situation.

**Close contact:** Being within 6 feet for a cumulative total of 15 minutes or more over a 24-hour period with someone with SARS-CoV-2 infection.

#### **SARS-CoV-2 Illness Severity Criteria** (adapted from the NIH COVID-19 Treatment Guidelines)

The studies used to inform this guidance did not clearly define “severe” or “critical” illness. This guidance has taken a conservative approach to define these categories. Although not developed to inform decisions about duration of Transmission-Based Precautions, the definitions in the [National Institutes of Health \(NIH\) COVID-19 Treatment Guideline](#)  are one option for defining severity of illness categories. The highest level of illness severity experienced by the patient at any point in their clinical course should be used when determining the duration of Transmission-Based Precautions. Clinical judgement regarding the contribution of SARS-CoV-2 to clinical severity might also be necessary when applying these criteria to inform infection control decisions.

**Mild Illness:** Individuals who have any of the various signs and symptoms of COVID-19 (e.g., fever, cough, sore throat, malaise, headache, muscle pain) without shortness of breath, dyspnea, or abnormal chest imaging.

**Moderate Illness:** Individuals who have evidence of lower respiratory disease by clinical assessment or imaging, and a saturation of oxygen (SpO<sub>2</sub>) ≥94% on room air at sea level.

**Severe Illness:** Individuals who have respiratory frequency >30 breaths per minute, SpO<sub>2</sub> <94% on room air at sea level (or, for patients with chronic hypoxemia, a decrease from baseline of >3%), ratio of arterial partial pressure of oxygen to fraction of inspired oxygen (PaO<sub>2</sub>/FiO<sub>2</sub>) <300 mmHg, or lung infiltrates >50%.

**Critical Illness:** Individuals who have respiratory failure, septic shock, and/or multiple organ dysfunction.

In pediatric patients, radiographic abnormalities are common and, for the most part, should not be used as the sole criteria to define COVID-19 illness category. Normal values for respiratory rate also vary with age in children, thus hypoxia should be the primary criterion to define severe illness, especially in younger children.

## Previous Updates

### Updates as of September 10, 2021

- Updated source control recommendations to address limited situations for healthcare facilities in counties with low to moderate community transmission where select fully vaccinated individuals could choose not to wear source control. However, in general, the safest practice is for everyone in a healthcare setting to wear source control.
- Updated quarantine recommendations for fully vaccinated patients who have had close contact with someone with SARS-CoV-2 infection to more closely align with recommendations for the community.
- Clarified the recommended intervals for testing asymptomatic HCP with a [higher-risk exposure](#) and patients with [close contact](#) with someone with SARS-CoV-2 infection.
- Added content from previously posted CDC guidance addressing:
  - Recommendations for fully vaccinated HCP, patients, and visitors
  - SARS-CoV-2 testing
  - Duration of Transmission-Based Precautions for patients with SARS-CoV-2 infection

- Specialized healthcare settings (e.g., dental, dialysis, EMS)

#### As of February 10, 2021

- Updated the Implement Universal Use of Personal Protective Equipment section to expand options for source control and patient care activities in areas of moderate to substantial transmission and describe strategies for improving fit of facemasks. Definitions of source control are included at the end of this document.
- Included a reference to [Optimizing Personal Protective Equipment \(PPE\) Supplies](#) that include a hierarchy of strategies to implement when PPE are in short supply or unavailable.

#### As of December 14, 2020

- Added links to Frequently Asked Questions addressing Environmental Cleaning and Disinfection and assessing risks to patients and others exposed to healthcare personnel who worked while infected with SARS-CoV-2
- Described recommended IPC practices when caring for patients who have met **criteria for a 14-day quarantine based on prolonged close contact with someone with SARS-CoV-2 infection.**
- **Added reminders that:**
  - Double gloving is not recommended when providing care to patients with suspected or confirmed SARS-CoV-2 infection
  - In general, HCP caring for patients with suspected or confirmed SARS-CoV-2 infection should not wear more than one isolation gown at a time.

#### As of November 4, 2020

- Provided different options for screening individuals (healthcare personnel, patients, visitors) prior to their entry into a healthcare facility
- Provided information on factors that could impact thermometer readings
- Provided resources for evaluating and managing ventilation systems in healthcare facilities
- Added link to Frequently Asked Questions about use of Personal Protective Equipment