Clinical Care, and Healthcare Infection Prevention and Control Guidance for COVID-19

Summary of recent changes

- Provides clarity that a provider should not deny care to a patient because the patient or the patient’s caregiver is unable to wear a mask or face covering for medical reasons.

- Oregon OSHA adopted a temporary administrative rule (OAR 437-001-0744) addressing COVID-19 Workplace Risks. The requirements in the rule were written with the intent to mitigate COVID-19 in all workplaces in Oregon. It is important to be familiar with OAR 437-001-0744, as several work practices addressed in this guidance are required by provisions in the rule. Language in this document is intended to provide context and direction around infection prevention and control practices in our state and does not exempt from provisions in the rule.

- **Personal protective equipment**: Directs to CDC language regarding use of PPE in healthcare settings. PPE requirements for aerosol-generating procedures adjusted, based on level of community COVID-19 transmission. Provides additional guidance related to the use of PPE in moderate to high-community transmission scenarios.

- **Healthcare personnel identified as contacts**: Clarifies that healthcare personnel identified as close contacts of COVID-19 cases may work during their quarantine period as long as they remain asymptomatic and practice source control. They should observe quarantine outside of work. High-risk exposures are listed to guide work exclusion decision-making.

- **Healthcare personnel identified as cases**: Allows risk assessment to guide notification of contacts of healthcare personnel identified as cases, provided strict criteria are met.

- **Temporary suspension of contact tracing**: Allows healthcare systems to temporarily suspend contact tracing when county COVID-19 risk level is extreme and staffing is insufficient to maintain this work.

Key terms

- **Healthcare personnel (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.
• **Face covering**: Refers to a cloth, paper or disposable face covering that covers the nose or mouth. It would also include medical-grade face masks.

• **Face mask**: Refers to a medical-grade face mask.

**Source control**: Refers to use of a face covering or face mask to cover a person’s mouth and nose to prevent spread of respiratory secretions when they are talking, sneezing, or coughing.

The following guidance has been adopted by Oregon Health Authority (OHA) to:

- Provide information on clinical symptoms, risk factors, management, and treatment of COVID-19;
- Provide guidance on diagnostic testing for COVID-19;
- Prevent healthcare-associated spread of COVID-19;
- Support the safe management of patients with suspected or known COVID-19 in healthcare settings;
- Optimize the use of the personal protective equipment (PPE) and healthcare resources needed to protect healthcare personnel (HCP).

This guidance will be updated as needed to reflect current epidemiology, clinical course, and transmission of the virus that causes COVID-19.

CDC has published:


All providers should review these websites frequently, as recommendations may change.

Nothing in this guidance is intended to supersede any state or federal law requirements that apply to providers.

**Clinical presentation and risk factors**

Symptoms of COVID-19 include fever, cough, shortness of breath, fatigue, myalgia, and headache. Less common symptoms include sore throat, diarrhea, and loss of smell and taste. Fever is likely during the clinical course, but some data indicate that fewer than half of hospitalized COVID-19 patients present with fever. Severity of illness may worsen in the second week of infection. Atypical presentations have been described in older adults and persons with comorbidities. CDC has provided details on the [clinical presentation of COVID-19](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html).

Older patients and those with chronic medical conditions are at higher risk for severe disease. In addition, [the CDC reports](https://www.cdc.gov/coronavirus/2019-ncov/worksites/healthcare-hospitals.html) that among COVID-19 cases, the most common underlying health
conditions were cardiovascular disease (32%), diabetes, (30%), and chronic lung disease (18%). Hospitalizations were six times higher and deaths 12 times higher among those with reported underlying conditions compared with those with none reported. A case fatality rate of 2.3% has been reported.

Children are less likely to have severe illness, compared to adults. However, a rare post-infectious phenomenon, multi-system inflammatory syndrome in children (MIS-C), has been reported (More information: New England Journal of Medicine: Multisystem Inflammatory Syndrome in U.S. Children and Adolescents).

RNA from the virus that causes COVID-19 (SARS-CoV-2) has been identified from patients who never develop symptoms (asymptomatic) and in patients before symptoms develop (pre-symptomatic). Transmission during both the asymptomatic and the pre-symptomatic period has been documented. The degree to which pre-symptomatic and asymptomatic transmission have contributed to the COVID-19 pandemic remains unclear.

SARS-CoV-2 is believed to spread mainly between people in close contact through respiratory droplets produced by coughs and sneezes. Under certain circumstances (for example, when people are in enclosed spaces with poor ventilation), COVID-19 can also be spread by airborne transmission. The virus may also spread when a person touches another person (e.g., a handshake) or a surface or an object (e.g., doorknobs, handrails) that has virus on it, and then touches their mouth, nose or eyes with unwashed hands. The virus can survive on surfaces for hours to days but can be rendered inactive by routine cleaning and disinfection procedures. (See “Environmental Infection Control in Healthcare Setting” Section.)

**Clinical management and treatment**

Not all patients with COVID-19 infection require hospital admission. If supportive care at home is considered, clinicians should ensure the patient is medically stable, has appropriate caregivers available and is able to safely self-isolate at home. CDC has provided additional recommendations for home care in Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for Coronavirus Disease 2019 (COVID-19).

COVID-19 EUA treatment information is available via Coronavirus Disease (COVID-19) updates from FDA.

National Institutes of Health (NIH) have also developed NIH COVID-19 Treatment Guidelines.

**General guidance for all healthcare settings**

**Personal protective equipment (PPE) for healthcare personnel**

PPE policies should, first and foremost, protect those in the healthcare setting from exposure. Oregon OHSA Administrative Rule 437-001-0744 addresses PPE requirements in all Oregon workplaces. Section 4 of that rule addresses specific requirements for settings with higher risk of exposure, including healthcare facilities. PPE supplies should be used responsibly to ensure they are available for patients and procedures for which they are most needed. PPE strategies must be supplemented by source control, including placement of a face covering or face mask on patients, rapid identification of patients with symptoms compatible with COVID-19, and
isolation in a private room with the door closed. Effective hand hygiene, masking (for source control) and standard precautions shall always be used by all HCP.

**CDC Infection Control Guidance for Healthcare Professionals about Coronavirus (COVID-19)** recommends the use of N95¹ or higher-level respiratory protection, eye protection (goggles or face shield), gown, and gloves when entering the room of patients with suspected or confirmed COVID-19.

When PPE burn rate exceeds the amount of supply that can be obtained:

- Medical-grade facemasks remain an acceptable alternative when N95 or higher-level respiratory protection is not available for care of a patient that does not involve aerosol generating procedures (See “Recommendations for Aerosol-Generating Procedures”).
- Facilities should implement tiered PPE optimization strategies as outlined in OHA/OR-OSHA Use of PPE by Healthcare Personnel in Resource-Constrained Settings.
- See “Managing PPE Supply Issues” section for emergency supply request processes.

**Guidance for aerosol-generating procedures**

Aerosol-generating procedures (AGPs) have been associated with an increased risk of transmission in healthcare settings. (See Appendix I for a list of AGPs.)

If medically reasonable, AGPs for patients with suspected or confirmed COVID-19 or with known exposure to COVID-19 should be delayed.

When conducting (or assisting with) AGPs for patients with suspected or confirmed COVID-19 or known exposure to COVID-19, HCP should use standard, contact, and airborne precautions, including:

- N95 respirator¹ or higher respiratory protection (includes powered air-purifying respirators [PAPRs])
- Eye protection (face shield or goggles)
- Gown
- Gloves

This aligns with requirements in Oregon OHSA Administrative Rule 437-001-0744. To minimize risk associated with these procedures, AGPs should be planned and bundled, when possible. Only HCP required for the procedure should be present. Whenever possible, AGPs should be performed in an airborne infection isolation room (AIIR). If a hospital is treating multiple suspected or confirmed cases of COVID-19, AIIRs should be prioritized for those with serious illness.

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¹ N95 respirators should be used by HCP that have been medically cleared, trained, and fit-tested in the context of a facility’s Respiratory Protection Program. Additional information regarding N95 respirator use and fit-testing in the context of the COVID-19 pandemic, see Oregon OSHA Enforcement guidance. A user seal check must be performed each time an N95 is put on.
When a moderate or higher level of spread is occurring in the community and COVID-19 status is unknown, broad use of N95 or higher-level respiratory protection and eye protection is recommended for AGPs listed in Appendix I. Of note, Oregon OHSA requires employers to provide PPE for aerosol-generating healthcare or post-mortem procedures in accordance with CDC’s “Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic”. Rule language allows for clinical judgment regarding the need for Transmission-based Precautions during AGPs for patients without suspected COVID-19 infection or exposure when the level of COVID-19 activity in the community is none or minimal. To determine the level of community transmission in your county or area, please refer to the OHA COVID-19 Risk Level webpage.

Testing for evidence of COVID-19 infection is sometimes used to stratify transmission risk in making decisions about timing for elective procedures. It is also sometimes used to make decisions about transmission-based precautions and use of PPE in performing aerosol-generating procedures for asymptomatic patients. In either setting, this practice has limitations due to issues with test sensitivity: A negative test at a single point in time does not ensure absence of COVID-19 infection. Use of nucleic acid amplification tests with higher sensitivity and obtaining specimens as close to the time of the planned procedure may mitigate some of these concerns.

Infectious aerosols may remain in the air following AGPs. Once a patient has been discharged or vacated a room where a high risk AGP was conducted, HCP (includes environmental service personnel) should avoid room entry for a period after aerosol-generation has ceased or continue to wear N95-level or higher respiratory protection and eye protection (goggles or face shield) to provide time for contaminant removal. Facilities can assess room air changes per hour to inform duration of this period by using the CDC Airborne Contaminant Removal Table.

**Discontinuation of transmission-based precautions for hospitalized patients**

Transmission-based precautions are discussed in the previous sections (“Personal Protective Equipment (PPE) for Healthcare Personnel” Section).

OHA has adopted CDC’s guidance for Discontinuation of Transmission-Based Precautions for patients with confirmed COVID-19. Note that the test-based strategy is no longer recommended (exceptions noted below).

**Symptom-based strategy for discontinuing transmission-based precautions.**

*Patients with mild to moderate illness who are not 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

Note: For patients who are *not severely immunocompromised* and who were *asymptomatic* throughout their infection, Transmission-Based Precautions may be
discontinued when at least 10 days have passed since the date of their first positive viral diagnostic test.

Patients with **severe to critical illness** or who are **severely immunocompromised**:

- At least 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

Note: For **severely immunocompromised** patients who were **asymptomatic** throughout their infection, Transmission-Based Precautions may be discontinued when at least 20 days have passed since the date of their first positive viral diagnostic test.

A test-based strategy could be considered for severely immunocompromised patients if there was concern about shedding longer than 20 days. Test-based strategy criteria can be found in CDC’s [Discontinuation of Transmission-Based Precautions](https://www.cdc.gov/coronavirus/2019-ncov/hcp/discontinuation.html) guidance.

**Additional considerations:**

- Meeting criteria for discontinuation of transmission-based precautions is not a prerequisite for discharge.
  - The decision to send the patient home should be made in consultation with the patient’s clinical care team, and local or state public health departments. It should include considerations of the home’s suitability for and patient’s ability to adhere to home isolation recommendations. Guidance on implementing [home care of persons who do not require hospitalization](https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html) and the [discontinuation of home isolation for persons with COVID-19](https://www.cdc.gov/coronavirus/2019-ncov/hcp/discontinuation.html) is available.
  - If a medically stable patient will be discharged to a long-term care facility and transmission-based precautions are still necessary, they should go to a facility with the ability to adhere to infection prevention and control recommendations for care of patients with COVID-19.
- If a patient tests negative for COVID-19, but a higher level of clinical suspicion for COVID-19 exists, consider maintaining transmission-based precautions and repeating the test.

**Universal source control and eye protection**

Fever and symptom screening may not capture all infected individuals due to the range of clinical presentations associated with SARS-CoV-2, which include mild and asymptomatic infections. These individuals, as well as COVID-19 patients during the pre-symptomatic phase, may be able to transmit the virus while unaware that they are infected.

This guidance is not intended to serve as a basis for denying care to a patient when that patient or the patient’s caregiver is unable to wear a face covering or mask for medical reasons. Care should be provided with appropriate precautions for health care providers, other staff and members of the public.
This guidance is not intended to serve as a basis for denying emergency medical care to anyone, regardless of whether the individual is wearing a face covering or mask.

Universal measures to protect those in the healthcare setting include:

- **Source control (i.e., universal masking) for patients and visitors.** Healthcare facilities shall have policies in place requiring all individuals who enter the facility to don a face covering or face mask while in the building. Though a face covering or face mask is preferred, if neither is available or tolerated by a patient, face shields can be used. If a patient cannot tolerate any form of face covering due to a medical condition, strict physical distancing must be observed until the patient can be placed in a room or an area that minimizes risk to others.

- **Source control (i.e., universal masking) for HCP.** HCP shall wear a face covering or face mask at all times while they are in the healthcare facility. Medical-grade face masks should be prioritized for HCP, as they offer both source control and protection for the HCP from potentially infectious droplets, splashes, or sprays. Cloth face coverings should not be worn instead of a respirator or face mask if more than source control is needed.
  - HCP shall ensure that the mask covers their nose and mouth at all times. HCP should avoid touching the outside (contaminated) surface of the mask. If HCP must adjust the mask, hand hygiene should be performed before and immediately after adjustment.
  - N95s or higher-level respiratory protection should replace face masks for patient care that warrants a higher level of protection (See “PPE for Healthcare Personnel” Section). Filtering facepiece respirators with exhalation valves are not recommended for source control. Risk of COVID-19 transmission to a patient through exhaled breath from an asymptomatic HCP wearing a PAPR or elastomeric respirator when the HCP has had no known exposure to a person with infectious COVID-19 is considered low. Use of a respirator during an AGP is intended to protect the healthcare provider from an aerosol generated from the patient. There is no similar risk of aerosol generation from the healthcare provider, and the benefit of protection to HCP is felt to outweigh the low risk to the patient. Use of powered air-purifying respirators and elastomeric respirators in dental and other healthcare settings is acceptable. Additional mitigating measures (use of hoods with PAPRs or filtering material over exhalation valves of elastomeric respirators) may further decrease the likelihood of transmission. In procedures requiring sterile fields, alternatives to respirators with exhalation valves are recommended.

- **Universal eye protection for HCP.** Wearing eye protection in addition to a face mask or an N95 respirator ensures the eyes, nose, and mouth are all protected from exposure to respiratory secretions during encounters in healthcare settings.
  - Due to the increased risk of spread in long-term care settings and the likelihood for close-contact exposures to residents and coworkers, long-term care facility staff should wear a face mask and eye protection (goggles or face shield) at all times within the facility. (See “Extended Use of Personal Protective Equipment” Section.)
HCP in other settings should consider the addition of eye protection to universal masking, particularly in scenarios where patients are unable to wear a face covering. In scenarios with moderate or higher levels of community spread of COVID-19, eye protection should be worn for all patient care.

Universal use of PPE does not eliminate the need for physical distancing among HCP in the workplace. Special care to maintain physical distancing is needed for encounters between healthcare personnel when universal PPE cannot be worn (e.g., meal breaks, leaving the facility, etc.) as these unprotected scenarios provide an opportunity for transmission.


Extended use of personal protective equipment

Major distributors in the United States have reported shortages of PPE. In the context of limited supply, extended-use protocols for masks and eye protection are recommended. Extended use is best suited to situations wherein multiple patients are infected with the same pathogen and patients are placed together in dedicated areas. Extended use refers to wearing the same mask (face mask or respirator), or eye protection (goggles or face shield), for repeated encounters with several different patients, without removing them between encounters. HCP should take care not to touch their mask and eye protection. If adjustment is needed, they must perform hand hygiene before and immediately after adjustment. Extended use of eye protection can be applied to disposable and reusable devices. Eye protection should be removed and reprocessed if it becomes visibly soiled or difficult to see through. Reprocessing should follow manufacturer instructions (for reusable models) or a method comparable to CDC’s recommendations (for disposable models).

Note that extended use of gowns should be reserved for the serial care of patients within a separate COVID-19 unit. Contaminated gowns should not be worn in common or nursing station areas as this may lead to spread via environmental contamination. It should not be used for care of patients known to be infected or colonized with another pathogen.

Additional information about optimizing the use of PPE is available from the OHA Interim Guidance: Use of Personal Protective Equipment by Health Care Personnel in Resource-Constrained Settings.

Work exclusion determinations

Exclusion of HCP with suspected or confirmed COVID-19

In the context of sustained community transmission of COVID-19, all HCP should self-monitor for illness consistent with COVID-19 and should be screened for fever and symptoms prior to each shift.

HCP should be excluded from the workplace if they test positive via a COVID-19 viral (nucleic acid or antigen) test or have any of the following symptoms:
• Measured temperature >100.0° F or subjective fever
• Cough
• Shortness of breath
• Vomiting or Diarrhea
• Loss of taste or smell

If symptoms develop at work, HCP must withdraw from patient-care activities immediately and notify their supervisor or occupational health services prior to leaving work.

See “HCP Return-To-Work Considerations” Section below.

See “Mitigating Staffing Shortages” Section below.

**Exposures to HCP with suspected or confirmed COVID-19**

Healthcare facilities should have a process for notifying the local public health authority about known or suspected cases of COVID-19 and should establish a plan, in consultation with local public health authorities, for how exposures in a healthcare facility will be investigated and how contact tracing will be performed. Healthcare facilities may take the lead on contact tracing and exposure investigations but should continue to consult with public health as needed.

In scenarios where patients may have been exposed to HCP with COVID-19, a risk assessment should be carried out by a facility-designated individual or team that is:

1) Qualified by education, training, and experience or certification;
2) Responsible for carrying out facility infection prevention and control protocols;
3) Available to serve as primary point of contact for the facility regarding COVID-19 outbreaks.

The risk assessment should align with [CDC guidance](https://www.cdc.gov/coronavirus/2019-ncov/community/contact-tracing.html) and take into account:

- presence of HCP symptoms; and
- proximity and duration of encounters; and
- use of personal protective equipment by the HCP and patient masking.

Features of higher risk exposures:

- Longer duration of exposure (> 15 min)
- HCP close contact with patient airway, e.g., intubation, pharyngeal examination, bronchoscopy, or laryngoscopy
- Patient unmasked

Features of lower risk exposures:

- Shorter duration of exposure (< 15 min)
• No close contact with airway or mucous membrane
• Patient masked

Facilities must notify contacts of HCPs with COVID-19 if any of the following are true:
• The HCP with COVID-19 did not wear appropriate PPE or perform appropriate infection control (e.g., hand hygiene) during the encounter
• The HCP worked while febrile (defined as ≥ 100° F) or actively coughing
• The patient resides in or will be transferred to a congregate care setting

**HCP identified as contacts**

Facilities may elect to exclude or furlough asymptomatic exposed HCP with known exposure to COVID-19 patients or coworkers. Asymptomatic HCP identified as contacts who have not tested positive for COVID-19 may, in consultation with their occupational health program, work during their quarantine period. The decision to work during quarantine should consider the risk of the identified exposure. HCP should otherwise observe quarantine outside of work. The following list describes the types of patient contact that would be considered high-risk exposures to a patient with COVID-19:

• Providing patient care that included AGPs without all required elements of full PPE (respirator, eye protection, gown, and gloves).
• Providing non-AGP care to an unmasked patient without a face mask or respirator and eye protection (goggles or face shield).
• Providing non-AGP care to a masked patient without a face mask or respirator.
• Household exposure to a person with confirmed or presumptive COVID-19. This should be prioritized as a high-risk exposure that warrants work exclusion and quarantine as these exposures typically involve prolonged, unprotected, and close-proximity contacts. Note that quarantine at home and work exclusion are recommended for 14 days following the last exposure to the infected individual.


See “Mitigating Staffing Shortages” Section below.

**HCP education**

The following are topic areas to guide education for HCP regarding COVID-19 exposure and work exclusion:

**Provide HCP resources for self-care.** HCP face tremendous challenges during a crisis like the COVID-19 pandemic. Depression, anxiety, and insomnia have been documented among HCP potentially exposed to COVID-19. Educate HCP about mental health and self-care resources. Examples:

• CDC Guidance for Stress and Coping
• **Disaster Distress Helpline**
• **American Medical Association Managing Mental Health During COVID-19**
• **American Psychiatric Nurses Association Guidance for Managing Stress and Self-Care**
• **Physician Support Line**

**Educate all HCP about the need to monitor themselves for symptoms.** Given the potential for community-based exposures or unrecognized exposures in the healthcare system, all HCP should be instructed to monitor for fever and other symptoms of COVID-19.

**Develop plan for what HCP will do if they become symptomatic.** Points of contact should be established for HCP if they become ill. Educate HCP to self-isolate in their home should they become symptomatic, unless they need to seek medical care. Provide instructions for testing.

**Discuss why these steps are being taken.** If work exclusion is necessary, convey using non-punitive language why work exclusions are essential to prevent healthcare-associated infections.

**Discuss when it would be appropriate to return to work.** See “HCP Return-to-Work Considerations” Section.

**HCP return-to-work considerations**

OHA has adopted CDC’s [Return-to-Work guidance for HCP with suspected or confirmed COVID](https://www.cdc.gov/). Note that the test-based strategy is no longer recommended for routine return-to-work criteria.

**Symptom-based strategy**

HCP with **mild to moderate illness** who are not **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

**Note:** HCP who are **not severely immunocompromised** and were **asymptomatic** throughout their infection may return to work when at least 10 days have passed since the date of their first positive viral diagnostic test.

HCP with **severe to critical illness** or who are **severely immunocompromised**:

- At least 20 days have passed *since symptoms first appeared*
- 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
Note: HCP who are severely immunocompromised but who were asymptomatic throughout their infection may return to work when at least 20 days have passed since the date of their first positive viral diagnostic test.

Key practices for HCP returning to work include:

- Wear a face mask for source control at all times while in the healthcare facility. (See “Universal Use of PPE” Section.)
- Adhere to hand hygiene, respiratory hygiene, and cough etiquette in CDC’s interim infection control guidance (e.g., cover nose and mouth when coughing or sneezing, dispose of tissues in waste receptacles)
- Self-monitor for symptoms and seek re-evaluation from occupational health or healthcare provider if respiratory symptoms recur or worsen.

A test-based strategy could be considered to allow HCP to return to work earlier than if the symptom-based strategy was used. It could also be considered for severely immunocompromised HCP if there was concern about viral shedding longer than 20 days. Test-based strategy criteria and additional information about Return-to-Work can be found in CDC Return-to-Work Criteria guidance.

**Mitigating staffing shortages**

In a **crisis scenario only**, the usual standard of care for return-to-work for asymptomatic HCP with COVID-19 may not be able to be followed due to critical HCP staffing shortages. If available staffing, despite all other available accommodations (use of SERV-OR or Medical Reserve Corps volunteers, hiring from staffing agencies, etc.), is insufficient to provide needed patient care, healthcare facilities, with approval from local public health officials, may determine that HCP with asymptomatic, laboratory-confirmed COVID-19 infections could potentially return to work earlier than specified above, as long as they follow all recommended return-to-work practices.

When county COVID-19 risk level is **extreme**, healthcare facilities can consider temporarily forgoing contact tracing for exposures in a healthcare setting in favor of universal source control for asymptomatic HCW, IPC education and PPE donning/doffing training, screening for fever and symptoms of COVID-19 before every shift, and broad testing efforts.


**Managing PPE supply issues**

Healthcare facilities should develop processes to facilitate ongoing PPE inventory, ensuring that facility supply-chain managers and infection prevention staff are in communication about PPE shipment or order delays as well as increased PPE needs to support training, fit testing, and patient care. Should a potential PPE shortage be identified, the following steps should be taken:
1) Review guidance on PPE supply optimization and implement conservation strategies as appropriate. See the following guidance:


   b. CDC’s [Optimizing Supply of Personal Protective Equipment and Other Equipment During Shortages](https://www.cdc.gov/coronavirus/2019-ncov/healthcare-providers/protective-equipment-supplies-strategy.html) resources. Includes optimization strategies for N95 respirators, PPE FAQs, and contingency and crisis scenario PPE considerations.

2) Define severity of the shortage. Note when interruptions in clinical operations would occur if the shortage were to persist.


4) Leverage mutual-aid agreements and memoranda of understanding (MOUs) to obtain PPE supply from healthcare partners.

5) If all internal and partner-based options to obtain sufficient PPE supply have been exhausted, contact your local public health authority.

   Note: Oregon OHSA Administrative Rule 437-001-0744 further requires that the infection control plan include “The procedures the employer will use to ensure that there is an adequate supply of masks, face coverings, or face shields and personal protective equipment (including respirators) necessary to minimize employee exposure to COVID-19.”

### Environmental infection control in healthcare settings

Dedicated medical equipment should be used for patients with suspected or known COVID-19. Routine cleaning and disinfection procedures (i.e. pre-cleaning of 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 COVID-19 in healthcare settings. [EPA’s list of products for use against SARS-CoV-2](https://www.epa.gov/noswas/disinfectants) is available to support appropriate disinfectant selection. Oregon OHSA Administrative Rule 437-001-0744 requires employers in all workplaces to clean or sanitize surfaces at certain frequencies. The rule further requires employers in healthcare settings to develop procedures for routine cleaning and disinfection that are appropriate for SARS-CoV-2 and follow standard practices for disinfection and sterilization of medical devices contaminated with SARS-CoV-2, as described in CDC’s [Guideline for Disinfection and Sterilization in Healthcare Facilities, 2008](https://www.cdc.gov/ncidod/dhqp/pdf/guideline/disinfctn.pdf).

### Testing guidance

Updated OHA [COVID-19 Testing Guidance for Health Care Providers](https://www.oregon.gov/OHA/Oregon-OSHA/OSH驯/PR驯/2020-train/covidtesting-guidance-for-health-care-providers-0.shtml) is available at OHA website and is updated regularly to reflect changes in testing capacity and priorities.
Guidance for outpatient and urgent-care settings (not including emergency departments)

Outpatient facilities triage and evaluation

Outpatient facilities commonly see patients with COVID-19-like symptoms. OHA offers the following guidance in order to reduce the potential risk of community spread of COVID-19 through outpatient facilities:

For all patients:

1) **Screening**: When any patient calls to schedule a visit, screen the patient by phone for (1) fever or acute respiratory symptoms, (2) domestic or international travel within the last 14 days to areas with high prevalence of COVID-19, (3) cruise ship travel within the past 30 days, and (4) contact with someone with known or suspected COVID-19 or ill with respiratory symptoms. Delay routine or non-urgent visits until symptoms have resolved. See additional guidance below for patients with acute respiratory illness or fever.

2) **Separating well from ill patients**: Primary care practices should use strategies to separate well visits from sick visits. This could include:
   a. Scheduling sick visits and preventive care visits during different times of the day
   b. Reducing crowding in waiting rooms, by asking patients to remain outside (e.g., stay in their vehicles until called into the facility for their appointment, or setting up outdoor triage screening)
   c. For multi-facility practices, consider identifying separate locations for preventive visits only

3) **Immunizations**: As counties reopen, HCP should identify children and adolescents who have missed well-child visits or recommended vaccinations and contact them to schedule immunizations. Providers may consider creating “drive up” immunization delivery systems (e.g., in-car parking lot vaccinations) for patients who are due for routine immunizations.

For patients with acute respiratory illness or fever (See figure 1 for additional guidance):

1) Consider using telemedicine to evaluate these patients when appropriate.

2) In general, any patient with symptoms consistent with COVID-19 should be tested. For detailed testing guidance, including priority groups if resources are limited, please see COVID-19 Testing Guidance for Health Care Providers.

3) Providers are encouraged to use “drive-through” dedicated COVID-19 testing sites.

4) For patients requiring in-person clinical evaluation, consider alternative routes of entry/exit and alternative waiting areas in order to minimize interaction with other patients and healthcare workers.
5) Implement respiratory hygiene and cough etiquette. Patients shall wear a face covering or face mask during their visit. (See “Universal Source Control and PPE" Section.) Masks should be readily available at all entries/exits and clear signage in relevant languages should reinforce their use.

6) Patients shall not wait in lobbies or waiting rooms. Immediately place patients in a private room with the door closed. If available, consider use of an AIIR, prioritizing AIIR use for those with severe respiratory illness. Ideally, the patient should not be placed in any room where room exhaust is recirculated within the building without HEPA filtration.

7) HCP evaluating patients suspected to have COVID-19 shall don appropriate personal protective equipment (PPE). See “Personal Protective Equipment for Healthcare Personnel" Section.

8) Consider strategies to minimize the number of HCP interacting with patients, e.g., alternative check-in procedures and asking providers to room patients directly.

9) It is unknown how long SARS-CoV-2 persists in various environments, but contact-based transmission is believed to play some role in the spread of the virus. The patient room must be appropriately cleaned and disinfected between patients. See “Environmental Infection Control in Healthcare Settings" Section. If medical needs are non-urgent, attempt to schedule those with respiratory illness for the end of the day when possible.

**Guidance for hospitals** *(includes emergency departments [EDs] and inpatient settings)*

**Hospital triage and evaluation**

**Symptom, travel, and exposure screening**
All patients should be screened for (1) fever or acute respiratory symptoms, (2) domestic or international travel within the last 14 days to areas with high prevalence of COVID-19, (3) cruise ship travel within the past 30 days, and (4) contact with someone with known or suspected COVID-19 or ill with respiratory symptoms.

Though travel to geographic areas with sustained transmission is no longer the primary mode of exposure to the virus that causes COVID-19, we recommend continued implementation of a travel screen that identifies those with international travel in the last 14 days (30 days is also a reasonable time frame). This will facilitate identification of travel-associated cases and those at risk for other serious travel-associated infections; and support ongoing high-impact pathogen preparedness in the healthcare setting.

**Rapid triage**
When possible, instruct patients to call ahead and inform clinic or hospital staff when they have respiratory symptoms. Remind patients to adhere to respiratory etiquette and to don a cloth face covering or face mask upon entry to the facility. Ensure PPE and an appropriate room are available to minimize exposure to other patients and providers. Identify a separate, well-ventilated space. (Prioritize AIIR use for those with severe respiratory illness.) Instruct patients to remain at least six feet from others and to observe respiratory etiquette, including placement of a face covering.
Place signs or posters at entryways, requesting that patients don a cloth face covering or face mask and apply hand sanitizer if they have fever, cough, or difficulty breathing.

**Communication plans**

Develop an internal communication plan to alert key internal staff (e.g., hospital epidemiologists, infection preventionists, frontline staff, occupational health, laboratory, nursing supervisors, leadership, etc.) promptly about known or suspected cases of COVID-19.

A confirmed case of COVID-19 must be reported to the local public health authority (LPHA) within 24 hours. (See LPHA contact information in Appendix II.)

**Visitor policy recommendations**

On March 19, 2020, Governor Brown issued Executive Order No. 20-22 which directed the Oregon Health Authority (OHA) to provide guidance on visitation and screening at hospitals in order to ensure the safety of patients and healthcare workers and to slow the spread of COVID-19. COVID-19 Guidance for Entry into Acute Health Care Facilities is available here.

**Guidance for collection and submission of postmortem specimens**

Autopsy procedures should be performed with standard, contact, and airborne precautions with eye protection (goggles or a face shield) due to the likelihood for aerosol precautions.

For specimen collection, infection control, and biosafety considerations for a deceased person under investigation, see CDC’s Interim Guidance for Collection and Submission of Postmortem Specimens from Deceased Persons Under Investigation for COVID-19. Oregon OHSA requires employers to provide PPE for potentially aerosol-generating post-mortem procedures in accordance with CDC’s Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic.

**Resources for specialized healthcare providers and settings**

**Long-Term Care Facilities (LTCFs)**

- See previous sections for detailed guidance for all healthcare settings regarding:
  - Personal Protective Equipment (PPE)
  - Discontinuation of Transmission-Based Precautions
  - Universal Source Control and Eye Protection
  - Extended Use of PPE
  - Work Exclusion Determinations
  - Return-to-Work Considerations
  - Managing PPE supply
  - Environmental Infection Control

CDC resources:
- Preparing for COVID-19 in Nursing Homes
- Responding to Coronavirus (COVID-19) in Nursing Homes
- Testing Guidelines for Nursing Homes
- Interim Guidance on Testing Healthcare Personnel for SARS-CoV-2
- Considerations for Memory Care Units in Long-term Care Facilities
- Considerations for Preventing Spread of COVID-19 in Assisted Living Facilities
- Infection Prevention and Control Assessment Tool for Nursing Homes Preparing for COVID-19

Outpatient hemodialysis facilities
- See previous sections for detailed guidance for all healthcare settings regarding:
  - Personal Protective Equipment (PPE)
  - Universal Source Control and Eye Protection
  - Extended Use of PPE
  - Work Exclusion Determinations
  - Return-to-Work Considerations
  - Managing PPE supply
  - Environmental Infection Control

CDC resources:
- Infection Prevention and Control for Outpatient Hemodialysis Facilities
- Coronavirus Disease 2019 (COVID-19) Outpatient Dialysis Facility Preparedness Checklist

CMS guidance for dialysis facilities

First responders
See OHA COVID-19 Healthcare Partner Resources webpage for COVID-19 updates specific to emergency medical services (EMS), law enforcement and public safety answering points (PSAPs).

See CDC guidance for first responders, including emergency medical services (EMS), law enforcement, and emergency management officials.
Appendix I

High-risk aerosol-generating procedures\(^2\) include:

- Intubation, extubation, and related procedures such as manual ventilation and open suctioning
- Cardiopulmonary resuscitation
- Tracheotomy/tracheostomy procedures (insertion/open suctioning/removal)
- Bronchoscopy
- Surgery and post-mortem procedures involving high-speed devices if involves the respiratory tract or paranasal sinuses
- Some dental procedures (such as high-speed drilling)
- Non-invasive ventilation (NIV) such as bi-level positive airway pressure (BiPAP) and continuous positive airway pressure ventilation (CPAP)
- High-frequency oscillating ventilation (HFOV)
- High-flow nasal oxygen (HFNO), also called high-flow nasal cannula
- Induction of sputum
- Medication administration via continuous nebulizer

\(^2\) Note: Currently, there is insufficient evidence to produce a comprehensive list of aerosol-generating procedures. This list is provisional and will continue to be updated with the evidence base.
### Appendix II

**Local public health authority contact numbers**

(Updated Feb 2020)

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*Operated jointly as North Central Public Health District

[www.healthoregon.org/lhddirectory](http://www.healthoregon.org/lhddirectory)

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