



Updated June 29, 2020

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

Summary of Recent Changes

- **Clinical management and treatment:** Updates information about remdesivir, an antiviral agent that is available via the Oregon Health Authority.
- **Recommendation in outpatient settings:** Updates guidance on patient triage and preventive care visits.
- **Universal source control:** Updates facility PPE guidance to reduce the risk of spread from pre-symptomatic or asymptomatic individuals.

The following provisional 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 suspect 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).

Guidance will be updated as needed to reflect current epidemiology, clinical course, and transmission of the virus that causes COVID-19. For the purposes of this guidance, HCP is defined as “all persons, paid and unpaid, working in healthcare settings engaged in patient care activities, including patient assessment for triage, entering examination rooms or patient rooms to provide care or clean and disinfect the environment, obtaining clinical specimens, handling soiled medical supplies or equipment, and coming in contact with potentially contaminated environmental surfaces.” ([Centers for Disease Control and Prevention \[CDC\], 2020](#))

CDC has published [Steps Healthcare Facilities Can Take Now to Prepare for Coronavirus Disease \(COVID-19\)](#) and [Interim Guidance for Healthcare Facilities: Preparing for Community Transmission of COVID-19 in the United States](#). All providers should review these websites frequently, as recommendations may change.

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.

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 the pre-symptomatic period has been documented. Asymptomatic transmission may also occur. 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 or through respiratory droplets produced by coughs and sneezes. The virus can survive on surfaces for hours to days but can be rendered inactive by routine cleaning and disinfection procedures. (See “Disinfection in the Healthcare Setting” Section.) The household secondary attack rate (the portion of a household that becomes infected after a household member is confirmed to have COVID-19), has been estimated at 15%. Children may be just as likely as adults to become infected but are less likely to have severe illness.

An overall case fatality rate of 2.3% has been reported among patients from China, but this is largely from hospitalized patients and is likely to be an overestimate. Older patients and those with chronic medical conditions are at higher risk for severe disease. CDC has provided details on the [clinical presentation of COVID-19](#).

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](#).

No specific treatment for COVID-19 is currently approved by the U.S. Food and Drug Administration (FDA). Clinical management should include prompt infection prevention and control measures and supportive medical care. A National Institute of Allergy and Infectious Diseases (NIAID)-funded study recently [reported](#) that adult hospitalized patients with lower respiratory tract infection who received the broad-spectrum antiviral drug remdesivir recovered 4 days sooner than those who received placebo; FDA has issued an [Emergency Use Authorization \(EUA\)](#) for this drug. This antiviral is available [through the Oregon Health Authority](#).

Treatment guidelines developed by the National Institutes of Health (NIH) are available [here](#).

Recommendations for Outpatient and Urgent-Care Settings (Not Including Emergency Departments)

Outpatient Facilities Triage and Evaluation

Outpatient facilities commonly see patients with the symptoms described above. The Oregon Health Authority offers the following guidance in order to reduce the potential risk of community spread of COVID-19 through outpatient facilities:

For All Patients:

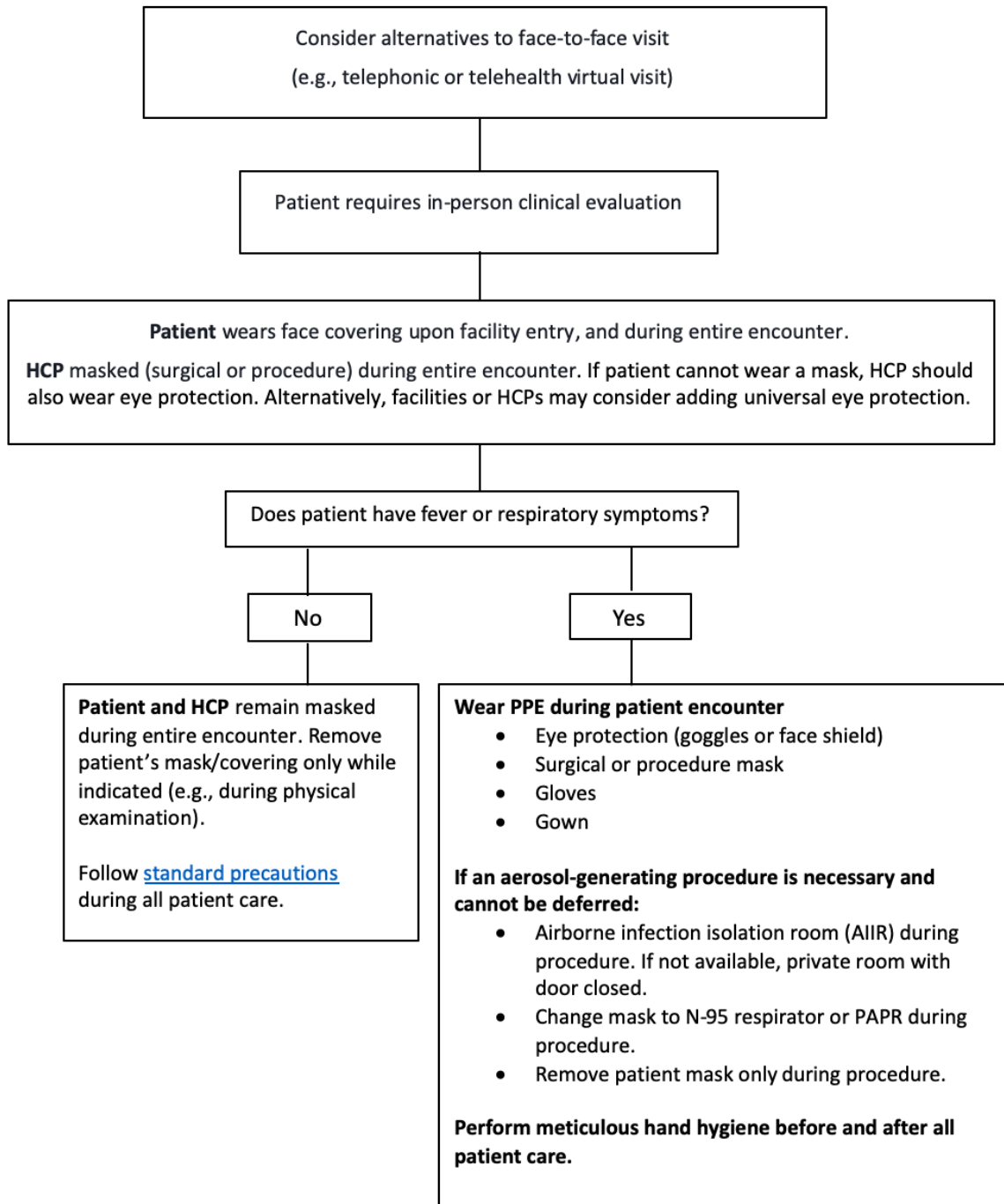
1. When any patient calls to schedule a visit, screen the patient by phone for fever or acute respiratory symptoms. Delay routine or non-urgent visits until symptoms have resolved. See additional guidance below for patients with acute respiratory illness or fever.
2. Primary care practices should use 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. As counties reopen, HCP should identify children and adolescents who have missed well-child visits and/or recommended vaccinations and contact them to schedule in person appointments.

For Patients with Acute Respiratory Illness or Fever (See Figure 1 for additional guidance):

1. Consider using telemedicine to evaluate these patients when available.
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 [“Guidance for Clinicians Regarding COVID-19 Testing.”](#)
3. Providers are encouraged to utilize “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 should wear a mask or face covering during the entire visit. Surgical or procedural masks should be readily available at all entries/exits and clear signage in relevant languages should reinforce their use.

6. Patients should not wait in lobbies or waiting rooms. Immediately place patients in a private room with the door closed. If available, consider use of an airborne infection isolation room (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 should don appropriate personal protective equipment (PPE), see “PPE Requirements for Healthcare Personnel in Outpatient Settings” below.
8. Consider strategies to minimize the number of HCP interacting with patients, e.g., alternative check-in procedures and asking providers to room patients.
9. It is unknown how long SARS-CoV-2 persists in the environment, but contact-based transmission is believed to play a 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.” If medical needs are non-urgent, attempt to schedule those with respiratory illness for the end of the day when possible.

Figure 1. Suggested Approach for HCP Personal Protective Equipment (PPE) While Evaluating Patients with Acute Respiratory Infection in Ambulatory Settings



PPE Requirements for HCP in Outpatient Setting (For All Patients)

Refer to section “General Recommendations for All Healthcare Settings” below

PPE Requirements for HCP in Outpatient Settings (While Caring for Patients with Fever or Respiratory Symptoms)

The virus that causes COVID-19 can spread in healthcare settings. PPE policies should, first and foremost, protect those in the healthcare setting from exposure. PPE supplies should be used responsibly to ensure they are available for patients and procedures for which they are most needed. PPE strategies should be supplemented by source control, including the rapid identification of patients with fever or respiratory symptoms, placement of a regular facemask on symptomatic patients, and isolation in a private room with the door closed. Effective hand hygiene and standard precautions should always be used.

Minimum PPE necessary for HCP to evaluate patients with fever or respiratory symptoms:

- Face mask (i.e., surgical or procedural mask)
- Eye protection (face shield or goggles)
- Gown
- Gloves

Some procedures warrant a higher level of protection. See “Aerosol-Generating Procedures in Outpatient Settings.”

Aerosol-Generating Procedures in Outpatient Settings

Aerosol-generating procedures (AGPs) are medical procedures that have been associated with an increased risk of transmission in healthcare settings. (See Appendix I for a non-exhaustive list of AGPs.) In general, AGPs should be avoided for patients with suspect or confirmed COVID-19 in outpatient settings unless necessary for patient care.

If AGPs are necessary for *any* patient, HCP should use gown, gloves, eye protection, and a fit-tested N95 respirator or higher respiratory protection. Only HCP required for the procedure should be present. If available, an airborne infection isolation room should be used.

Collection of Respiratory Specimens in Outpatient Settings

Providers are encouraged to utilize “drive through” dedicated COVID-19 testing sites. Any type of patient care that involves prolonged, close contact or direct contact with respiratory secretions should be minimized. If specimen collection is necessary, nasopharyngeal swabs (NP), nasal swabs, nasopharyngeal washes, or oropharyngeal (OP) swabs can be performed using contact and droplet precautions with surgical mask and eye protection. Institutions may choose to use an N95 respirator based on risk assessment of the patient. Severely ill patients who will be transferred to a higher level of care should not be tested in an outpatient setting; testing should be deferred until the patient is hospitalized.

Recommendations for Hospitals (Includes Emergency Departments [EDs] and Inpatient Settings)

Hospital Triage and Evaluation

Travel screening

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 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 (6) feet from others and to observe respiratory etiquette, including placement of a face mask.

Place signs or posters at entryways, requesting that patients don a mask and apply hand sanitizer if they have fever, cough, or difficulty breathing. Signage is available at the [OHA website](#).

Tracking people who enter patient room

Facilities should be prepared to maintain a log of HCP and visitors who enter the room of any patient with known or suspected COVID-19. Contact information should be collected to facilitate follow up, if needed.

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.)

PPE Requirements for HCP in Hospitals (For All Patients)

Refer to section “General Recommendations for All Healthcare Settings” below

PPE Requirements for HCP in Hospitals (While Caring for Patients with Fever or Respiratory Symptoms)

As in outpatient settings, hospital policies should, first and foremost, protect those in the healthcare setting from exposure. PPE supplies should be used responsibly to ensure they are available for patients and procedures for which they are most needed. PPE strategies should be supplemented by source control, including the rapid identification of patients with fever or

respiratory symptoms, placement of a regular facemask on symptomatic patients, and isolation in a private room with the door closed. Effective hand hygiene and standard precautions should always be used by HCP.

Minimum PPE necessary to evaluate patients with respiratory illness, suspected COVID-19, or confirmed COVID-19:

- Face mask (i.e., surgical or procedural mask)
- Eye protection (face shield or goggles)
- Gown
- Gloves

Some patient care warrants a higher level of protection. See “Aerosol-Generating Procedures in Hospitals.”

Aerosol-Generating Procedures (AGPs) in Hospitals

AGPs (Appendix I) are much more common in ED and hospital settings. When conducting (or assisting with) AGPs for patients with fever or respiratory symptoms, or with known or suspect COVID-19, HCP should utilize standard, contact, and airborne precautions, including:

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

Whenever possible, AGPs should be performed in an AIIR. If a hospital is treating multiple persons under investigation or confirmed cases of COVID-19, AIIRs should be prioritized for those with serious illness.

To minimize risk associated with these procedures, AGPs should be planned and bundled, when possible. Only HCP required for the procedure should be present.

It is unknown how long infectious aerosols remain in the air when a patient remains in the room following an AGP. Continuation of standard, contact, and airborne precautions with eye protection for a period after aerosol-generation has ceased may provide time for contaminant removal. Hospitals should assess room [air changes/hour](#) to inform the duration of this period.

Collection of Respiratory Specimens in Hospitals

See “Testing Considerations” Section below for links to information regarding specimen collection and prioritization for COVID-19 testing.

Respiratory specimen collection procedures known to generate aerosols (e.g., sputum induction, bronchoscopy, open suctioning) require standard, contact, and airborne precautions with eye protection, as discussed above. For other modes of respiratory specimen collection, HCP should perform a risk assessment of the patient. Severely ill and heavily symptomatic patients may require standard, contact, and airborne precautions with eye protection for specimen collection procedures, including NP specimen collection.

Discontinuation of Transmission-based Precautions for Hospitalized Patients

Transmission-based precautions are discussed in the previous sections (“PPE Requirements for HCP in Hospitals,” “Aerosol-Generating Procedures [AGPs] in Hospitals”).

The decision to discontinue transmission-based precautions should be made using a test-based strategy or a non-test-based strategy. OHA has adopted CDC guidance for Discontinuation of Transmission-Based Precautions, available [here](#).

The test-based strategy is preferred when a patient requires ongoing hospitalization or is being discharged to a setting where they will have close contact with individuals at risk for severe disease, including skilled nursing, assisted-living, residential care facilities, and other congregate settings. It should also be considered for severely immunocompromised individuals (those on immunosuppressive drugs, bone marrow or solid organ transplant recipients, inherited immunodeficiency, poorly controlled HIV). Clinical and commercial laboratories conducting an FDA Emergency Use Authorized COVID-19 molecular assay should be first line options for this testing.

For other clinical scenarios, providers, in consultation with their Infection Control Department, can choose between the test-based strategy and the non-test-based strategy to determine whether to discontinue transmission-based precautions.

Additional considerations:

- Meeting criteria for discontinuation of transmission-based precautions is not a prerequisite for discharge.
 - 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 which is able to adhere to infection prevention and control recommendations for care of patients with COVID-19.
 - If a medically stable patient is discharged to home, healthcare facilities should evaluate the suitability of the residential setting for home care, consulting with local or state public health as needed. Patients should receive instructions on safe home care (CDC guidance available [here](#)). Individuals may discontinue home-based isolation when at least 10 days have passed since illness onset and at least 72 hours have passed since fever has resolved, without use of antipyretics, and COVID-19 symptoms (fever, cough, shortness of breath, and diarrhea) are improving.
- 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.

Visitor Policy Recommendations

On March 19, 2020, Governor Brown issued [Executive Order No. 20-10](#) 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 health care 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-generation.

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](#).

General Recommendations for All Healthcare Settings

Universal Source Control

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.

- Healthcare facilities should have policies in place requiring all individuals who enter the facility to don face coverings while in the building.
- HCP should wear a facemask at all times during all patient care. Medical-grade facemasks should be prioritized for HCP, as they offer both source control and protection for the HCP from potentially infectious droplets, splashes, or sprays.
- HCP should ensure that the mask covers their nose and mouth at all times. HCP should avoid touching the outside (contaminated) surface of the mask. If a HCP must adjust the mask, hand hygiene should be performed immediately after adjustment.
- In addition to universal source control, HCP can also consider the addition of eye protection (goggles or face shield) during all patient care, which provides “universal protection” for HCP for all patient encounters.

Universal source control strategies do not eliminate the need for physical distancing among HCP in the workplace nor do they alter guidance for the care of patients on transmission-based precautions. For care of patients with suspect of confirmed COVID-19, N95 respirators or equivalent respiratory protection should be used when performing (or assisting with) patient care activities and procedures that pose risk of generating infectious aerosols.

CDC Infection Control Guidance provides additional information, available [here](#).

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 for the care of cohorted patients. Extended use refers to wearing the same respiratory (mask or respirator) or eye protection (goggles or face shield) for repeated encounters with several different patients with the same infectious disease, without removing them between encounters. HCP must take care not to touch their eye protection and respirator or facemask until PPE is doffed according to [standard procedures](#).

Additional information about optimizing the use of PPE is available [here](#).

Work Exclusion Determinations

Exclusion of HCP with suspect 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 for COVID-19 by PCR or have any of the following symptoms:

- Measured temperature >100.0° F or subjective fever
- Cough
- Shortness of breath
- Diarrhea

If symptoms develop at work, HCP must withdraw from patient-care activities immediately, don a facemask (if not already wearing), and notify their supervisor or occupational health services prior to leaving work.

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

Exclusion of HCP based on exposure

While there is ongoing community-transmission of COVID-19, the feasibility and benefits of formal contact tracing for exposures in healthcare settings are likely limited.

Facilities *may* elect to exclude or furlough asymptomatic exposed HCP who have significant contact with patients at high risk of complications or reassign the HCP to non-patient care duties during the monitoring period (14 days since last exposure).

The following list describes the types of patient contact that would be considered high-risk exposures to a patient with confirmed COVID-19:

- Providing patient care that included aerosol-generating procedures without all required elements of full PPE (respirator, eye protection, gown, and gloves).
- Providing patient care that did not include aerosol-generating procedures without a regular facemask or respirator and eye protection (goggles or face shield), even if patient was masked.

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. HCPs face tremendous challenges during a crisis like the COVID-19 pandemic. A recent [study](#) documented high levels of depression, anxiety, and insomnia 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 HCPs 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 the HCP will do if they become symptomatic: Points of contact should be established for HCPs 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 Return-to-Work guidance for HCP with suspect or confirmed COVID, available [here](#).

This guidance includes a symptom-based strategy as well as a test-based strategy. See CDC guidance for details. The choice between symptom- or test-based strategy is at the discretion of the healthcare facility, but should consider:

- HCP access to repeat testing (i.e., does facility have a plan to conduct or facilitate testing of HCP?)
- Safety of repeat testing (e.g., supply of all recommended PPE, strategy to test HCP without exposing others in the healthcare setting)

For symptomatic HCP, symptom- and test-based strategies both require a resolution of fever without the use of fever-reducing medications and *improvement in respiratory symptoms*. Clinical discretion should be used to determine whether respiratory symptoms have improved. This should include, at a minimum, lessening of cough and resolution of shortness of breath.

Note that for test-based strategies, there have been reports of prolonged detection of SARS-CoV-2 RNA without direct correlation to viral culture. The clinical and epidemiologic relevance of prolonged shedding is unclear, and studies in small numbers of patients have shown that even when RNA is detectable by PCR, culturable virus wanes and is typically gone by day 9 after symptom onset. Consider consultation with local or state public health as needed.

Key practices for HCP returning to work include:

- Wear a facemask for source control at all times while in the healthcare facility (see “Universal Source Control” 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.

In a **crisis scenario**, the usual standard of care requiring furlough for symptomatic HCP may not be able to be followed due to critical HCP staffing shortages. In accordance with the [Oregon Crisis Care Guidance](#), 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, in collaboration with public health officials, *may* determine that HCP with mildly symptomatic or 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.

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:
 - a. CDC’s [Interim Infection Prevention and Control Recommendations for Patients with Suspected or Confirmed Coronavirus Disease](#). *Includes prioritization strategies for gown use and extended-use considerations for masks and eye protection.*
 - b. CDC’s [Healthcare Supply of Personal Protective Equipment](#) resources. *Includes optimization strategies for N95 respirators, PPE FAQ’s, 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.
3. Determine whether other PPE vendors can be utilized and review current contract specifications.

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.

Environmental Infection Control in Healthcare Settings

Dedicated medical equipment should be used for patients with suspect or known COVID-19. Routine cleaning and disinfection procedures (i.e., 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 COVID-19 in healthcare settings. A list of EPA-registered, hospital-grade disinfectants with known effectiveness against coronaviruses can be found [here](#).

Testing Guidance

Updated OHA [testing guidance](#) for health systems is available at OHA website and is updated regularly to reflect changes in testing capacity and priorities.

Resources for Specialized Healthcare Providers and Settings

Long-Term Care Facilities (LTCFs)

- See previous section for detailed guidance for all healthcare settings regarding:
 - Universal Source Control
 - Extended Use of Personal Protective Equipment
 - Work Exclusion Determinations
 - Return-to-Work Considerations
 - Managing PPE supply
 - Environmental Infection Control
 - Testing Guidance links
- See [OHA website](#) for LTCF-specific updates regarding COVID-19 and the LTCF COVID-19 Response Toolkit.
- CDC guidance for long-term care and nursing homes is available [here](#).
- Updated Centers for Medicare & Medicaid Services (CMS) guidance regarding restriction of visitors available [here](#).

Outpatient Hemodialysis Facilities

- See previous section for detailed guidance for all healthcare settings regarding:
 - Universal Source Control
 - Extended Use of Personal Protective Equipment
 - Work Exclusion Determinations
 - Return-to-Work Considerations
 - Managing PPE supply
 - Environmental Infection Control
 - Testing Guidance links

- CDC guidance for dialysis facilities available [here](#).
- CMS guidance for dialysis facilities available [here](#).

First Responders

See [OHA website](#) for COVID-19 updates specific to emergency medical services (EMS), law enforcement and public safety answering points (PSAPs).

CDC guidance for all first responders, including emergency medical services (EMS), law enforcement, and emergency management officials is available [here](#).

Appendix I

Aerosol-generating procedures¹ include, but are not limited to:

- 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
- 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

¹ Note: this list is not exhaustive. Please discuss activities not described with your Infection Control Department.

Appendix II

Local Public Health Authority Contact Numbers



LOCAL PUBLIC HEALTH AUTHORITY NUMBERS IN OREGON

(updated Feb 2020)

County	General	CD Nurse	CD Fax	Env Health	Animal Bites	After Hours CD
Baker	541-523-8211	General	541-523-8242	General	General	541-523-6415
Benton	541-766-6835	General	541-766-6197	541-766-6841	EH	541-766-6835
Clackamas	503-655-8411	503-655-8411	503-742-5389	503-655-8411	CD	503-655-8411
Clatsop	503-325-8500	General	503-325-8678	General	General	503-791-6646
Columbia	503-397-7247	971-757-4003	503-893-3121	503-397-7247	EH	503-397-7247
Coos	541-266-6700	541-266-6700	541-888-8726	541-266-6720	541-266-6720	541-266-6700
Crook	541-447-5165	General	541-447-3093	541-447-8155	General	541-447-5165
Curry	541-425-7545	541-373-8118	541-425-5557	541-251-7074	EH	541-425-7545
Deschutes	541-322-7400	541-322-7418	541-322-7618	541-388-6566	EH	541-322-7400
Douglas	541-440-3571	541-440-3684	541-464-3914	541-317-3114	EH	541-440-3571
Gilliam*	541-506-2600	General	541-506-2601	541-506-2603	General	541-506-2600
Grant	541-575-0429	General	541-575-3604	General	General	541-575-0429
Harney	541-573-2271	541-573-2271	541-573-8388	541-575-0429	EH	541-573-2271
Hood River	541-386-1115	541-387-7110	541-386-9181	541-387-6885	541-387-7110	541-386-1115
Jackson	541-774-8209	General	541-774-7954	541-774-8206	General	541-774-8209
Jefferson	541-475-4456	General	541-475-0132	General	General	541-475-4456
Josephine	541-474-5325	General	541-474-5353	General	General	541-474-5325
Klamath	541-882-8846	541-882-8846	541-850-5392	541-882-8846	General	541-891-2015
Lake	541-947-6045	General	541-947-4563	General	General	541-947-6045
Lane	541-682-4041	General	541-682-2455	541-682-4480	EH	541-682-4041
Lincoln	541-265-4112	General	541-265-4191	541-265-4127	EH	541-265-4112
Linn	541-967-3888	541-967-3888 x2488	541-924-6911	541-967-3821	EH	541-967-3888
Malheur	541-889-7279	541-889-7279	541-889-8468	541-473-5186	EH	541-889-7279
Marion	503-588-5342	503-588-5621	503-566-2920	503-588-5346	EH	503-588-5342
Morrow	541-676-5421	General	541-676-5652	541-278-6394	General	541-676-5421
Multnomah	503-988-3674	503-988-3406	503-988-3407	503-988-3400	CD	503-988-3406
Polk	503-623-8175	General	503-831-3499	503-623-9237 x1442	EH	503-932-4686
Sherman*	541-506-2600	General	541-506-2601	541-506-2603	General	541-506-2600
Tillamook	503-842-3900	503-842-3912	503-842-3983	503-842-3902	EH	503-842-3900
Umatilla	541-278-5432	General	541-278-5433	General	General	541-314-1634
Union	541-962-8800	541-910-7209	541-963-0520	General	541-910-7209	541-962-8800
Wallowa	971-673-1111	971-673-1111	971-673-1100	971-673-0440	541-426-3131	971-673-1111
Wasco*	541-506-2600	General	541-506-2601	971-673-0440	General	541-506-2600
Washington	503-846-3594	503-846-3594	503-846-3644	503-846-8722	503-846-3594	503-412-2442
Wheeler	541-763-2725	General	541-763-2850	General	General	541-763-2725
Yamhill	503-434-7525	503-434-4715	503-434-7549	General	CD	503-434-7525

*operated jointly as North Central Public Health District

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