

# Novel Coronavirus Disease 2019 (COVID-19)

## Interim Investigative Guidelines

June 3, 2021

### 1. DISEASE REPORTING

#### 1.1 Purpose of Reporting and Surveillance

1. To identify persons with COVID-19, prevent transmission to others, improve health outcomes and better understand the epidemiology of this disease.
2. To identify those with significant exposure to COVID-19 as described in §3.1 and §3.2, below, and to monitor them for signs of infection.

#### 1.2 Laboratory and Physician Reporting Requirements

Healthcare providers and laboratories are required to report test results indicative of and specific for COVID-19 to the local public health authority ([LPHA](#)) within 24 hours. Laboratories are required to report negative results of COVID-19 testing within one local public health working day.

Healthcare providers are additionally required to report within 1 working day:

- All hospitalizations, defined in §7, among persons with COVID-19, whether or not the case was previously reported
- All deaths, defined in §7, among persons with COVID-19, whether or not the case was previously reported
- All cases of Multiorgan Inflammatory Syndrome in Children (MIS-C) (§3.7)

All of this reporting must be done through an “Online Morbidity Report,” which can be found at [www.healthoregon.org/howtoreport](http://www.healthoregon.org/howtoreport).

#### 1.3 Local Public Health Authority Reporting and Follow-Up Responsibilities

##### ***Close contacts***

1. Follow guidance on monitoring and movement control as described in §4 below, including active monitoring for all identified close contacts.
2. Educate and consult with local providers and facilities to promote compliance with quarantine, isolation, and infection-control procedures.
3. Encourage close contacts of confirmed and presumptive cases of COVID-19 to be tested.
4. If a close contact develops symptoms consistent with the presumptive case definition (§3.4), follow up appropriately (§4.4). See “Suspect COVID-19 cases” (§4.3) regarding close contacts who develop symptoms that do not meet the presumptive case definition.

##### ***Suspect COVID-19 cases***

Suspect cases are created when a symptomatic person who does not meet the confirmed or presumptive case definition is identified. Encourage symptomatic persons who have not been tested to get tested. Otherwise, there is no follow-up for suspect cases.

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### **Confirmed and Presumptive COVID-19 cases**

1. Begin investigation of confirmed and presumptive COVID-19 cases, as defined in §3 below, within 24 hours. All confirmed and presumptive cases require an interview (except for those incarcerated at the time of report).
2. Report all confirmed and presumptive cases within 24 hours by entering them into Opera with disease “Coronavirus” and subtype “COVID-19.”
3. Submit all case data electronically. Complete all elements in the Opera tabs: Labs, Clinical, Treatment, Risks, Follow-up, Epilinks, and Contacts.
4. Investigate outbreaks of COVID-19 among residents and in settings within their jurisdiction; see Appendix 1 for a list of required data elements.
5. Consult with the ODHS/OHA Shared Services COVID-19 Response and Recovery Unit (CRRU) as needed about patient isolation and protection of contacts, including healthcare personnel, and about strategies for public-health response, testing, and contact investigation.
6. Educate and consult with local healthcare providers and facilities to promote compliance with isolation and infection-control procedures.
7. Educate confirmed and presumptive cases on best practices to prevent disease spread, including self-isolating to limit their additional close contacts, and to inform their close contacts about quarantining, monitoring symptoms and seeking care when appropriate.
8. Process ELRs of positive and indeterminate COVID-19 test results.
9. Process electronic case reports (eCRs) in Opera. Make sure to manually update test results, hospitalization status, and death status.

### **Vaccine Breakthrough Cases of COVID-19**

In February 2021, CDC initiated a surveillance project for vaccine breakthrough cases of COVID-19. In addition to collecting routine clinical, laboratory, and vaccination history information for these cases, CDC is interested in obtaining residual respiratory specimens for subsequent sequencing and viral isolation. LPHAs should report all identified vaccine breakthrough cases associated with LTCF outbreaks to their assigned CRRU Regional Epidemiologist for coordination of residual specimen acquisition and facility testing/sequencing through OSPHL. ACDP will be flagging all vaccine breakthrough cases within Opera; therefore, LPHAs do not need to report sporadic vaccine breakthrough cases to OHA. See §3.5 for the definition of a breakthrough case, and §6.4 for LTCF-specific guidance.

### **Surge Condition Guidance**

In response to the November 2020 statewide surge of COVID-19 cases, OHA developed a modified protocol for LPHA use. The [COVID-19 Case Investigation, Contact Tracing, and Outbreak Response under Surge Conditions](#) guidelines should be adopted by LPHA staff when sustained, daily increases in new cases exceed LPHA capacity to conduct timely case investigations and contact notification. The surge guidance outlines methods by which LPHAs may modify workflows for case investigation, contact tracing, and outbreak response, while emphasizing the need to ensure LPHA, Community Based Organization, and OHA resources are focused on serving Oregon’s most vulnerable populations. When incidence of new cases declines to pre-surge levels, LPHAs should resume conducting the full complement of case investigation, contact tracing, and outbreak response activities to suppress transmission.

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### 1.4 State Public Health Division Responsibilities

Note: Much of the COVID-19 work previously managed by ACDP is now managed by CRRU.

1. Update LPHAs on changes to criteria for investigation (e.g., through HAN, multijurisdictional conference calls, etc.).
2. Relay to LPHAs information on suspect, presumptive, and confirmed cases and close contacts received from Oregon Department of Corrections, CDC, or other states.
3. Assist LPHAs in processing eCRs in Opera, including creating cases and approving testing for patients who meet testing criteria, adding hospitalization status, and recording deaths.
4. Support investigation of outbreaks of COVID-19.
5. Assist LPHAs in processing ELRs of COVID-19 test results.
6. Develop and maintain information systems for case and contact surveillance and to ensure adequacy of response activities.
7. Identify close contacts from CDC Division of Global Migration and Quarantine (DGMQ) notifications as appropriate.
8. Advise LPHA, Tribal, and private-sector health professionals concerning:
  - Quarantine of asymptomatic exposed persons (close contacts);
  - Isolation of cases and symptomatic persons;
  - Protection of healthcare personnel;
  - Diagnostic evaluation;
  - Required reporting and surveillance activities;
  - Contact identification and follow-up.
9. Coordinate interjurisdictional monitoring plans for close contacts who move out of county or state.
10. Coordinate multi-jurisdictional responses.
11. As resources allow, provide surge capacity for contact and case investigation if the scope of response overwhelms LPHA resources.
12. Arrange consultation with infectious disease specialists and CDC as needed.
13. Report confirmed and presumptive COVID-19 cases and deaths to CDC.
14. Report breakthrough cases to CDC.

## 2. THE DISEASE AND ITS EPIDEMIOLOGY

### 2.1 Etiologic Agent

Coronaviruses are enveloped, single-stranded RNA viruses. With the notable exceptions of SARS-CoV and MERS-CoV, most human coronaviruses typically cause mild upper respiratory illness. The coronavirus causing COVID-19 was first identified in Wuhan, China in December 2019 among patients with severe respiratory illness and pneumonia and has since spread around the globe through person-to-person transmission. Genetic sequencing of isolates demonstrates that the COVID-19 virus is a *betacoronavirus* with roughly 80% genome identity with SARS-CoV and 50% with MERS-CoV. The virus that causes COVID-19 has been named “SARS-CoV-2.”

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### 2.2 Description of Illness

Symptoms may include fever (defined throughout as a temperature of  $\geq 100.4^{\circ}\text{F}$  or  $38.0^{\circ}\text{C}$ ), sore throat, dry cough, dyspnea, myalgias, fatigue, and loss of smell (anosmia) or taste (ageusia). Fever may not be present in the very young, very old, immunosuppressed, or people taking antipyretics. Pneumonia generally presents with patchy, multilobar infiltrates on chest X-ray. Gastrointestinal symptoms are not uncommon and may include nausea, vomiting and diarrhea. Cases tend to have lymphopenia. Reported complications have included acute respiratory distress syndrome, cardiac events, and death.

Cases of a COVID-19-associated “multisystem inflammatory syndrome in children” (MIS-C), which may resemble Kawasaki Disease, have been reported in children from several jurisdictions. In addition to a positive COVID-19 test, the syndrome includes fever, multisystem involvement (cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic or neurologic), and laboratory evidence of inflammation.

### 2.3 Reservoirs

Members of the coronavirus family are common in many different species of animals, including camels, cattle, cats, and bats. Rarely, animal coronaviruses can infect people and then spread from person to person, as occurred with MERS-CoV and SARS-CoV. The frequency with which the COVID-19 virus is transmitted from its original animal reservoir(s) to humans is unknown, but such transmission is probably rare. The prevalence of animal infection with SARS-CoV-2 is unknown.

### 2.4 Sources and Routes of Transmission

This virus probably originated from an animal source—bats are currently suspected—but extensive person-to-person spread ensued. Person-to-person transmission likely occurs from respiratory droplets produced when an infected person coughs or sneezes, as is the case with influenza and pertussis. Other coronaviruses (e.g., that cause MERS and SARS) have spread between close contacts. It is possible that a person can get COVID-19 by touching a surface or object that has the virus on it and then touching their own mouth, nose, or eyes, but this is not thought to be the main route of transmission. Studies (including preliminary studies of SARS-CoV-2) suggest that coronaviruses may persist on surfaces for up to several days. The degree of airborne transmission is currently unknown, but there is evidence that airborne transmission occurs, particularly in crowded, poorly ventilated spaces. Viral sequence is commonly detectable in feces of infected persons, and replication-competent virus has been demonstrated. While no concrete evidence exists for the fecal-oral spread of SARS-CoV-2, one study has demonstrated probable evidence of fecal-aerosol transmission of SARS-CoV-2. Transmission from blood or other body fluids has not been identified.

### 2.5 Incubation Period

Typically 4–6 (range, 2–14) days.

## 2.6 Period of Communicability

Our understanding is still developing. Some cases are acquired from infected asymptomatic persons, and virus is detectable in some patients for weeks following resolution of symptoms. That said, transmission appears most likely when patients are febrile or coughing. Studies are being conducted and the information is changing quickly. At this time, replication-competent virus is unlikely in most patients more than 9 days after onset of illness. Patients with more severe illness—i.e. hospitalized or severely immunocompromised—have shed replication-competent virus for longer periods of time; they could be contagious for up to 20 days after symptom onset.

## 2.7 Treatment, Prevention, and Limitation of Spread

In December 2020, the Advisory Committee on Immunization Practices (ACIP) recommended use of two mRNA COVID-19 vaccines for which FDA granted Emergency Use Authorizations (EUAs): Pfizer-BioNTech (approved for ages  $\geq 16$  years) and Moderna (approved for ages  $\geq 18$  years). Both products require two doses, spaced at either three weeks (Pfizer-BioNTech) or one month (Moderna) apart. Clinical trials conducted after receipt of the second dose of vaccine for both products showed vaccine efficacy of  $>90\%$  (Pfizer-BioNTech: 95%; Moderna: 94.1%).

In February 2021, ACIP recommended use of the Janssen COVID-19 (Ad.26.COV2.S) vaccine, which is a recombinant, replication-incompetent adenovirus vector vaccine (approved for ages  $\geq 18$  years). The Janssen vaccine is administered in a single dose. Phase III clinical trials of 40,000 vaccine recipients showed vaccine efficacy of approximately 66% for preventing symptomatic infection  $\geq 28$  days following vaccination. On April 13, 2021, FDA and CDC recommended a pause in the administration of the Janssen vaccine following reports of thrombosis with thrombocytopenia syndrome (TTS). Following a review of the risks and benefits associated with use of the Janssen vaccine, ACIP recommended that administration of the vaccine be resumed on April 25, 2021. The [fact sheet](#) for healthcare providers administering vaccine for the Janssen FDA EUA has been updated to include information on the risk of TTS, particularly among women 18-49 years of age.

As of this writing, only one drug—viz., remdesivir (Veklury®, administered intravenously)—has been *approved* by FDA for treatment of COVID-19; it has been shown to reduce average duration of symptoms from 15 days to 10 or 11 days and is labeled for the treatment of COVID-19 requiring hospitalization in patients  $\geq 12$  years of age and weighing  $\geq 40$  kg. Other treatments have received *Emergency Use Authorizations* for the treatment of COVID-19; for the current list see [www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#coviddrugs](http://www.fda.gov/emergency-preparedness-and-response/mcm-legal-regulatory-and-policy-framework/emergency-use-authorization#coviddrugs).

Until sufficient numbers of Oregonians are vaccinated against COVID-19 such that hospital capacity is no longer threatened, nonpharmaceutical methods such as staying home, physical distancing (see §7), and using a mask, face shield, or face covering when physical distancing cannot be maintained are recommended for all people to limit the spread of disease. People are encouraged to practice good respiratory etiquette and hand hygiene and to disinfect high-touch surfaces regularly.

### 3. CASE DEFINITIONS, DIAGNOSIS, AND LABORATORY SERVICES

See Figure 1 for visual representation of case definitions and Appendix 2 for a grid that explains how to interpret test results.

#### 3.1 Close Contact

A close contact is a person with an epidemiologic exposure to a person with confirmed or presumptive COVID-19. The exposure may be close contact (see §7 for details) with a confirmed or presumptive case—in short, being within 6 feet of a COVID-19 case for  $\geq 15$  minutes\*—or contact with their infectious secretions or clinical specimens; a close contact (e.g., aboard an airline flight) might also be reported to us by CDC.

This definition only applies to persons who have close contact with a confirmed or presumptive case. Persons who have an epidemiologic exposure to a close contact do not meet this definition.

See §4.2 for guidance on classifying, monitoring, and quarantining close contacts.

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### 3.2 Suspect Case

A suspect case is a person with:

- New onset of symptoms consistent with COVID-19, including fever or chills, cough, shortness of breath or difficulty breathing, fatigue, muscle or body aches, headache, new loss of taste or smell, sore throat, congestion or runny nose, nausea or vomiting, or diarrhea  
AND
- No more likely alternative diagnosis  
Note: This includes people who had close contact with a presumptive<sup>†</sup> case and have an acute illness featuring at least two of the following: shortness of breath, cough, fever, new loss of smell or taste, radiographic evidence of viral pneumonia.

OR

- A test result that, in combination with their symptoms, does not meet the definition of a confirmed or presumptive case, including:
  - An indeterminate reverse transcriptase polymerase chain reaction (RT-PCR), other nucleic acid amplification test (NAAT),<sup>‡</sup> or antigen result;
  - A positive COVID-19 test result from an at-home test kit\*\*;
  - A close contact who is getting tested

These criteria are for epidemiologic classification and are not meant to direct clinician testing or clinical care. Healthcare providers can identify individuals they suspect to have COVID-19 and test these patients at clinical laboratories.

Individuals who initially are classified as Suspect may ultimately be re-classified to Confirmed or Presumptive pending additional laboratory testing, development of new or worsening symptoms, or previously unknown evidence of epidemiologic linkage. LPHAs should take care to update the case status for close contacts whose test results are pending once those results are reported to public health. See sections 3.4 and 3.7 for further guidance on managing individuals whose initial test results were obtained from an at-home test kit.

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\* This time is cumulative over a 24-hour period and does not have to be consecutive.

† If a contact of a presumptive case has symptoms consistent with COVID-19 but neither the contact nor the case has tested positive, the contact remains a suspect case.

‡ e.g., a polymerase chain reaction (PCR) test.

\*\*An at-home test kit is defined as a test performed *and* resulted at-home, which is not performed as a point-of-care test under a CLIA waiver of certificate.

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### 3.3 Confirmed Case

A confirmed case is someone who tests positive using a laboratory-based FDA Emergency Use Authorized (EUA) diagnostic test. Any positive result from a laboratory-based RT-PCR, other NAAT, or antigen platform developed under an FDA EUA, even if conducted as asymptomatic screening, is considered a positive result. A follow-up test which is negative does not negate the first positive test.

If a laboratory report has not been received, but a confirmatory laboratory result has been reported verbally by a healthcare provider or by an electronic case report (eCR) that clearly identifies a confirmatory laboratory result, the case will be considered confirmed.

Note: If the eCR does not clearly identify a confirmatory laboratory result, consider the person a suspect case with a pending test. See §4.3 for details.

If a person is diagnosed with MIS-C (see §3.7), create a confirmed Coronavirus case in addition to their MIS-C case. If their only diagnostic test was serology, consider them a confirmed case, but do not initiate contact tracing; offer testing to household members.

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### 3.4 Presumptive Case

A presumptive case is a person without a positive laboratory-based COVID-19 RT-PCR, NAAT, or antigen test result,\* with:

- An acute illness featuring at least two of the following: shortness of breath, cough, fever,† new loss of smell or taste, radiographic evidence of viral pneumonia;  
AND
- No more likely alternative diagnosis;  
AND
- Within the 14 days before illness onset, lived in the same household or congregate setting, had close contact (see §7) with a confirmed case, or is identified as having been exposed in an outbreak.

OR

- A COVID-19-specific ICD-10 code listed as a primary or contributing cause of death on a death certificate.

OR

- A person with a positive test result from an at-home test kit who has at least one of the following:
  - An acute illness featuring at least one of the following: shortness of breath, cough, fever,† new loss of smell or taste, radiographic evidence of viral pneumonia;
  - Within the 14 days before illness onset, lived in the same household or congregate setting, had close contact (see §7) with a confirmed case, or is identified as having been exposed in an outbreak.
  - Within the 14 days before illness onset, a history of out-of-state travel (domestic or international).

If a presumptive case tests positive for COVID-19 by a laboratory-based RT-PCR, NAAT, or antigen test, update the case's status to confirmed. If a presumptive case tests negative for COVID-19 by an RT-PCR, NAAT, or antigen test, the case remains presumptive.

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\* Even with a negative test, a person with an identified epi-link, compatible symptoms, and no more likely diagnosis is still considered a presumptive case.

† Fever can be objective ( $\geq 100.4^{\circ}\text{F}$ ) or subjective.

### 3.5 Vaccine Breakthrough Case

A vaccine breakthrough case is defined as a U.S. resident who has:

- SARS-CoV-2 RNA or antigen detected on respiratory specimen  $\geq 14$  days after completing the primary series of an FDA-authorized COVID-19 vaccine (where date of final vaccine dose is counted as day zero)  
AND
- Has not had SARS-CoV-2 RNA or antigen detected on a respiratory specimen collected  $< 45$  days before the most recent positive test.

### 3.6 Laboratory Testing

#### 1. Testing Guidance for Local Health Departments

Testing through the Oregon State Public Health Laboratory (OSPHL) must be approved by the CRRU testing branch or the CRRU epidemiologist supporting the outbreak.

#### 2. Testing Guidance for Clinicians and Health Systems

Guidance has been established to provide criteria for testing in commercial laboratories versus at OSPHL. Current guidance can be found at [OHA COVID-19 Healthcare Partner Resources](#).

#### 3. Testing at the Oregon State Public Health Laboratory

Testing through the Oregon State Public Health Laboratory must be approved by the CRRU testing branch or the CRRU epidemiologist supporting the outbreak. The [Criteria for COVID-19 Testing at OSPHL](#) provides general information about populations tested by OSPHL. Current guidance for specimen collection, handling, and transport is posted on OSPHL's [Lab Test Menu](#).

OSPHL performs the CDC Influenza/SARS-CoV-2 (Flu SC2) PCR assay. This assay targets the nucleocapsid (N) gene. The assay cannot distinguish between new SARS-CoV-2 variants and the original pandemic virus. OSPHL has implemented the ThermoFisher TaqPath assay as a reflex test to the CDC Flu SC2 assay to help identify variants with certain mutations in the spike protein that result in an S gene “drop out”, which may be indicative of specific variants of concern (e.g., B.1.1.7 or B.1.525). Whole genome sequencing for SARS-CoV-2 is available at OSPHL. Criteria for specimen submission is located [here](#) and provides details on how to make a request, the approvals process, and the preferred specimen types.

For the [CDC Flu SC2 PCR assay](#), specimens from the lower respiratory tract (e.g., bronchial lavage, endotracheal aspirate, sputum) are preferred. Upper respiratory tract specimens are also acceptable for testing. A nasopharyngeal (NP) swab is the preferred upper respiratory specimen. Other acceptable respiratory specimens include combined NP and oropharyngeal (OP) swabs, OP swab alone, nasal mid-turbinate swab, anterior nares specimen, nasopharyngeal wash or nasal aspirate. This platform is best used for hospitalized patients, small-volume specimen collections, and surveillance testing.

Choice of specimen collection may rely upon where the specimen is collected and any clinical considerations. Specimens should be collected as soon as possible after a presumptive or suspect case is identified, regardless of symptom onset date.

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Please share the following information with the facility or laboratory that is packing and shipping the specimens for testing at OSPHL:

- Heed the specimen storage and transport temperatures required for the specimen being collected. All requirements are posted at [www.healthoregon.org/labtests](http://www.healthoregon.org/labtests).
- Ensure the cap of the specimen container is properly threaded and sealed.
- Label each specimen container with two unique patient identifiers (e.g., full name, date of birth, medical record number), unique specimen ID (e.g., laboratory requisition number), specimen type (e.g., NP, OP) and the date the sample was collected.
- Submit one COVID-19 and Flu Test Request Form per specimen (available at [www.bitly.com/phl-forms](http://www.bitly.com/phl-forms)).
- Place the Test Request Form in the outer pocket of the specimen transport bag. Do not put the form in the sealed portion of the bag with the specimen.
- Transport specimens and required forms to OSPHL as soon as possible.

Whenever possible, existing courier systems (e.g., hospital system couriers) or shipping options (e.g., FedEx) should be used for specimen transport. If other transport systems are not available, contact OSPHL (503-693-4100) for help with specimen transport on the next available courier route.

#### 4. *Collecting Specimens*

Specimens should be collected while using proper PPE. See CDC's [healthcare infection control guidance](#).

For specimen collection that involves an aerosol-generating procedures (§7): Using an airborne infection isolation room (AIIR) is ideal, but if one is not available, use a private room and keep the door closed. Mask the patient with a regular facemask during any movement within clinic or facility. See [OHA guidance on infection prevention and control for COVID-19](#).

Many common respiratory infections present with symptoms similar to those of COVID-19. Encourage clinicians to perform in-house diagnostic testing for these more common pathogens as clinically indicated. If a person tests positive for a common respiratory pathogen, it still might be indicated to test for COVID-19, as dual infections occur. See §4.3 for additional information.

### 3.7 **Guidance Regarding Serologic Tests**

Serologic tests are still being evaluated. As we learn more, we will update this guidance. OSPHL also performs serology (IgG) testing. Availability of this test is currently limited to surveillance. Serologic test results do not currently alter case classifications.

Except where specifically identified, all references in this guide to a “test” or “testing” refer to RT-PCR, NAAT, or antigen tests and not to serology.

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### 3.8 Guidance Regarding At-Home Test Kits

At-home COVID-19 test kits are available by prescription or over-the-counter in pharmacies and retail stores. Because these tests are considered less reliable than molecular and antigen tests conducted in diagnostic laboratories, patients with positive test results should be encouraged to seek confirmatory testing with a laboratory-based FDA EUA approved NAAT or antigen test for COVID-19.

At-home COVID-19 test kits performed by prescription (e.g., Lucira) or as a point-of-care test under a CLIA waiver should be treated as a laboratory-based test. These would have the same reporting requirements as any other laboratory-based test (i.e., a physician or laboratory would be required to report these test results).

### 3.9 Multisystem Inflammatory Syndrome in Children

Multisystem Inflammatory Syndrome in Children (MIS-C) is defined as:

- An individual aged <21 years presenting with fever,\* laboratory evidence of inflammation,<sup>†</sup> and evidence of clinically severe illness requiring hospitalization, with involvement of at least 2 of the following organ systems: cardiac, renal, respiratory, hematologic, gastrointestinal, dermatologic, or neurological;  
AND
- No alternative more likely diagnosis;  
AND
- Evidence for current or recent SARS-CoV-2 infection by RT-PCR, NAAT, serology, or antigen testing; or COVID-19 exposure within the 28 days prior to the onset of symptoms.

Some individuals may fulfill full or partial criteria for Kawasaki disease but should be reported if they meet the case definition for MIS-C. Consider MIS-C in any pediatric death with evidence of SARS-CoV-2 infection.

All MIS-C cases entered in Opera should be classified as suspect; ACDP staff will change the classification to confirmed, as appropriate, once chart review is complete.

## 4. CASE INVESTIGATION

### 4.1 Data Access and Processing

Because of the likelihood that contacts and cases will move or have connections across counties, all counties will have “All View/All Edit” access to cases of Person Under Monitoring and Coronavirus in Opera.

Unless someone meets the criteria for a truly separate case (see §5.2), they should only have one Coronavirus case created for them. For example, if someone was a suspect case and then tests positive by PCR, do not create a separate confirmed case. Update the status of the existing case to the most accurate status.

If an LPHA processes an eCR that is a test result, manually create a laboratory result with the information on the Labs tab for the case. Do not wait for the ELR to arrive.

A web-based platform, known as ARIAS, has been created to support contact tracing. All counties have been onboarded to ARIAS, so all contact tracing must be recorded in that system. Contacts and Persons Under Monitoring should not be tracked in Opera. Training to support contact tracing, including ARIAS training, is available at the [Contact Tracing Resources](#) page. For questions regarding ARIAS, contact [ARIAS.support@dhsosha.state.or.us](mailto:ARIAS.support@dhsosha.state.or.us); or consult the ARIAS guidance documents.

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\* Fever can be objective (> 100.4°F) or subjective.

† Including, but not limited to, one or more of the following: an elevated C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), fibrinogen, procalcitonin, D-dimer, ferritin, lactic acid dehydrogenase (LDH), or interleukin 6 (IL-6), elevated neutrophils, reduced lymphocytes and low albumin.

## 4.2 LPHA Follow-Up with Close Contacts

Persons Under Monitoring and contacts of cases will be exported from Opera to ARIAS once daily. Contact tracing must be recorded in ARIAS.

As a reminder, this only applies to persons who have close contact with a confirmed or presumptive case. It does not apply to persons whose only contact is with a contact or a suspect case without an indeterminate test result.

### 1. Quarantine Guidance for Close Contacts

All close contacts of confirmed and presumptive cases must quarantine during the period in which they are most likely to become infectious. All close contacts must stay home and at least six feet away from everyone, including household members, for the 14 days after their last exposure to a person with COVID-19. Although a 14-day quarantine is the safest option to prevent the spread of COVID-19 to others, the LPHA may consider ending quarantine early for close contacts who have not developed any symptoms:

- After 10 days of quarantine, without any testing, or
- After 7 days, with a negative result by an antigen or PCR test within 48 hours before ending quarantine.

Shortened quarantine has not yet been adopted for residents or patients in these settings:

- Long-term care facilities (LTCFs)
- Adult family/foster homes (AFHs)
- Residential healthcare settings (e.g., behavioral health residential treatment facilities, group homes for people with intellectual or developmental disabilities)
- Inpatient healthcare settings (e.g., hospitals, inpatient hospice)
- Corrections facilities (e.g., jails and prisons)

There is a small but significant chance that a shortened quarantine period may result in post-quarantine transmission; therefore, it is critical that quarantined individuals continue to monitor themselves for symptoms daily during the entire 14 days of quarantine. If symptoms develop, the individual should return to quarantine, notify their local public health authority, and call their healthcare provider to discuss testing.

### 1a. Managing Vaccinated Close Contacts

While mRNA COVID-19 vaccines have demonstrated high efficacy at preventing severe and symptomatic COVID-19, there is currently limited information on how much the vaccines might reduce transmission and how long protection lasts. In addition, the efficacy of the vaccines against emerging SARS-CoV-2 variants is not known. At this time, vaccinated persons should continue to follow [current guidance](#) to protect themselves and others, including wearing a mask, staying at least 6 feet away from others, avoiding crowds, avoiding poorly ventilated spaces, covering coughs and sneezes, washing hands often, following CDC travel guidance, and following any applicable workplace or school guidance, including guidance related to personal protective equipment use or SARS-CoV-2 testing.

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However, vaccinated persons with an exposure to someone with suspected or confirmed COVID-19 are not required to quarantine if they meet the following criteria:

- Are fully vaccinated (i.e.,  $\geq 2$  weeks following receipt of the second dose in a 2-dose series, or  $\geq 2$  weeks following receipt of one dose of a single-dose vaccine)
- Have remained asymptomatic since the current COVID-19 exposure

Testing of fully vaccinated close contacts, in the absence of symptoms, is also not indicated.

Although the risk of SARS-CoV-2 transmission from vaccinated persons to others is still uncertain, vaccination has been demonstrated to prevent symptomatic COVID-19; symptomatic and pre-symptomatic transmission is thought to have a greater role in transmission than purely asymptomatic transmission. Additionally, individual and societal benefits of avoiding unnecessary quarantine may outweigh the potential but unknown risk of transmission and facilitate the direction of public health resources to persons at highest risk for transmitting SARS-CoV-2 to others.

Fully vaccinated persons who do not quarantine should still watch for [symptoms of COVID-19](#) for 14 days following an exposure. If they experience symptoms, they should be clinically evaluated for COVID-19, including SARS-CoV-2 testing, if indicated. For additional considerations regarding quarantine or work restrictions for fully vaccinated healthcare personnel, patients, or residents in healthcare settings, please see section below.

These quarantine recommendations for vaccinated persons will be updated when more data become available and additional COVID-19 vaccines are authorized.

### *1b. Vaccinated Healthcare Workers, Patients, and Residents in Healthcare Settings*

These criteria could also be applied when considering work restrictions for fully vaccinated healthcare personnel with [higher-risk exposures](#), as a strategy to alleviate staffing shortages. Of note, fully vaccinated, exposed healthcare personnel would not be required to quarantine outside of work.

As an exception to the above guidance no longer requiring quarantine for fully vaccinated persons, **vaccinated inpatients and residents in healthcare settings should continue to [quarantine](#) following an exposure** to someone with suspected or confirmed COVID-19. These settings include:

- Long-term care facilities (LTCFs)
- Adult foster homes (AFHs)
- Residential healthcare settings (e.g., behavioral health residential treatment facilities, group homes for people with intellectual or developmental disabilities)
- Inpatient healthcare settings (e.g., hospitals, inpatient hospice)

Outpatients should be cared for using appropriate [Transmission-Based Precautions](#). This exception is due to the unknown vaccine effectiveness in this population, the higher risk of severe disease and death, and challenges with social distancing in healthcare settings. Although not preferred, healthcare facilities could consider waiving quarantine for vaccinated patients and residents as a strategy to mitigate critical issues (e.g., lack of space, staff, or PPE to safely care

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for exposed patients or residents) when other options are unsuccessful or unavailable. These decisions must be made in consultation with state and local public health officials and public health infection control experts.

CDC's [healthcare infection control guidance](#) contains additional considerations regarding the need to protect healthcare personnel, patients, and residents while also alleviating any staffing shortages.

### *2. Notifications from CDC's Division of Global Migration and Quarantine (DGMQ) and other Federal and State Partners*

LPHAs are required to follow up with individuals who are reported by DGMQ as close contacts (e.g., seated within 6 feet) of a confirmed COVID-19 case on a flight, or of passengers on a cruise ship with identified cases. These contacts will be entered into Opera and assigned to the LPHA for follow-up. See Figure 2 for a visual representation of this workflow.

As contacts are identified through investigations in other jurisdictions—for example, if an Oregon resident has close contact with a case in a neighboring state—OHA will create a Person Under Monitoring record for those contacts.

### *3. Persons Identified During Contact Investigations*

LPHA resources should be focused on identifying and monitoring all close contacts of COVID-19 cases (see §7). Close contacts should be educated to quarantine (see § 4.2.1), encouraged to obtain testing, preferably between 3 and 14 days after the last known exposure to a confirmed or presumptive case.

Once you identify a close contact, enter the person into Opera using the Contacts tab. If you find that a contact lives in another jurisdiction, update the contact's address and promptly transfer the contact to that jurisdiction in Opera. When transferring a Person Under Monitoring between jurisdictions, the receiving LHD must update the name in the "LHD Epi" field to that of any Opera user in their jurisdiction. Contacts and Persons Under Monitoring will be exported to ARIAS once per day, and all follow-up will occur in that system. Refer to ARIAS workflow documents for guidance on how to manage those contacts.

Active monitoring is recommended for all close contacts—"Persons Under Monitoring" in Opera or "Contacts" in ARIAS. Provide a Contact Letter (Appendix 3) to the person. LPHAs should coordinate with close contacts to identify a communication plan for daily check-ins. Phone, email, and text are all acceptable methods of communication. Close contacts should measure their temperature twice daily and monitor themselves for symptoms during their quarantine period. The LPHA should record temperature and symptom information in the contact tracing tool. If close contacts report that they have developed fever or other symptoms consistent with COVID-19, they should coordinate with the LPHA to determine a plan to seek care safely and access COVID-19 testing. See Figure 3 for a visual representation of this workflow.

On the last day of their quarantine period, the LPHA should confirm with close contacts that they have remained afebrile and asymptomatic. If they remained asymptomatic, they have

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completed monitoring. If they developed symptoms at any point during their quarantine, evaluate whether they meet the definition of a presumptive case (§3.4) and consider referring them for testing.

If a contact cannot be reached, mail a contact letter (Appendix 3) to the contact's last known address.

#### 4. *When a Close Contact Becomes Symptomatic*

If a close contact who was exposed to a confirmed case develops symptoms consistent with COVID-19, that person may meet the presumptive case definition (see §3.4). This new presumptive case should be entered into Opera, and the case and contact investigations should be initiated. Do not simply change the condition from Person Under Monitoring to Coronavirus; create a new Coronavirus case for that person. Presumptive cases who test positive for COVID-19 will become confirmed cases. Presumptive cases who test negative will remain presumptive cases unless a more likely alternative diagnosis is made (e.g., influenza).

If a close contact who was exposed to a presumptive case develops symptoms consistent with COVID-19, that person meets the suspect case definition (see §3.2). This new suspect case should be entered into Opera. We do not recommend a full case and contact investigation for suspect cases (see §4.3), but we do recommend that this new suspect case and their source presumptive case be tested for COVID-19.

#### 5. *Monitoring of Persons Identified in Contact Investigations*

Guidance on monitoring and restrictions of contacts differs for healthcare workers (HCW) and non-healthcare workers.

##### A. Healthcare Workers Identified as Contacts

Formal contact tracing for exposures in healthcare settings may be infeasible and of limited benefit when county COVID-19 risk level is extreme and staffing is insufficient to maintain this work. In these scenarios, healthcare facilities should consider forgoing contact tracing for exposures in a healthcare setting in favor of universal source control for both patients and HCW and HCW screening for fever and symptoms of COVID-19 before every shift. Additional infection prevention and control recommendations, including more details about universal source control in healthcare settings, are available from the CDC.

In non-extreme (high, moderate, or minimal) community spread scenarios, healthcare facilities should conduct a risk assessment of exposed HCWs and apply work restriction according to level of risk as outlined in CDC's [Interim Guidance for Risk Assessment and Work Restrictions for Healthcare Personnel](#).

When staffing shortages are present, asymptomatic HCW 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. If not fully vaccinated, they should otherwise observe quarantine outside of work. Other considerations for mitigating staffing shortages are available from the CDC.

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Testing of the HCW is the responsibility of the employer: it may be undertaken at employer discretion and expense. All symptomatic HCW identified as contacts should follow CDC's [Criteria for Return to Work](#). If a symptomatic HCW is identified as a presumptive case, they should follow guidance for isolation of presumptive cases, including staying home from work for a minimum of 10 days from symptom onset (§4.5). If an alternative more likely diagnosis is identified as the cause of the HCW's symptoms, they should isolate until 24 hours after symptoms have resolved.

#### B. Non-Healthcare Workers Identified as Contacts

Non-healthcare workers who are identified as contacts are advised to quarantine themselves for 14 days after their last contact with a confirmed or presumptive case. These persons should be encouraged to seek testing should symptoms develop. See §4.2.1 for details.

Consistent with [OAR 333-019-0014](#), worksite, child care, and school restrictions can be removed by statement of the local public health administrator that the disease is no longer communicable to others or that adequate precautions have been taken to minimize the risk of transmission. That is, if in the judgment of the state health officer or designee, or the local public health administrator or designee, an asymptomatic non-healthcare worker's job is essential\* and the workplace situation provides adequate protections against disease transmission, that worker may, in consultation with their occupational health program or their employer, work during their quarantine period. The worker should still observe quarantine outside of work.

Symptomatic contacts, regardless of their employment, must stay home from work until 24 hours after fever and other symptoms have resolved.

Consult §6.5 and 6.6 for guidance on recommendations for contacts identified during investigation of a workplace outbreak.

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\*A determination of what is an essential service will be made in coordination with state and local authorities with regulatory oversight of that sector.

### 4.3 LPHA Follow-Up with Suspect Cases

Suspect cases are persons as defined in §3.2. Broadly, these are persons who do not meet the presumptive case definition and do not have a positive test for COVID-19; it might be pending or indeterminate. Serology might be the only documented test; except in the case of MIS-C, a positive serologic result is not case-defining (see §3.6 and §3.7).

If a provider calls about a patient with compatible symptoms who has not been tested for COVID-19 or if a close contact is symptomatic but does not meet the presumptive case definition, encourage them to pursue testing.

See Figure 4 for a visual representation of this workflow.

#### 1. *Management in Opera*

For all suspect cases identified by an indeterminate test result, create a new case in Opera with the condition “Coronavirus,” subtype/result “COVID-19/Indeterminate,” status “Suspect.”

For all suspect cases reported by providers, create a new case in Opera with the condition “Coronavirus,” subtype/result “COVID-19/Pending test,” status “Suspect.” If test results are positive, refer to §4.4. All suspect cases should remain isolated while hospitalized or until 24 hours after fever is gone and symptoms are improving, whichever is longer (see §5.1 for details).

#### 2. *Following Up Specific Test Results*

Indeterminate or inconclusive RT-PCR, NAAT, or antigen results require LPHA follow-up.

If the case is created from an indeterminate or inconclusive result, it will be counted a suspect case. LPHAs should investigate to determine why the result was indeterminate and whether a follow-up test will be performed. Indeterminate or inconclusive results can suggest the presence of SARS-CoV2 RNA in quantities insufficient for the RT-PCR, NAAT, or antigen test to be positive. If possible, it is recommended to collect a new specimen and test that on an RT-PCR or NAAT platform. If no additional testing is to be performed or the results are still indeterminate or inconclusive, a contact investigation should be initiated (§4.4.2), though suspect cases with indeterminate test results will not be included in counts of confirmed and presumptive cases. Contact with a suspect, indeterminate case is not enough of an epi-link for a symptomatic person to be considered a presumptive case.

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### 3. Testing Suspect Cases

OSPHL testing is prioritized for high-priority individuals, defined in §7, and in support of outbreak investigations. Testing is generally reserved for symptomatic persons, but testing may be approved for asymptomatic persons in support of outbreak investigations. See [Guidance for providers regarding COVID-19 testing](#) for details.

We expect that healthcare facilities and other employers will take responsibility for any testing needed by their own staff.

LPHAs should contact a CRRU epidemiologist (either the Regional COVID-19 Epidemiologist or the CRRU epidemiologist assigned to the outbreak) or the CRRU testing branch ([ORES8.AOCTestingBranch@dhsosha.state.or.us](mailto:ORES8.AOCTestingBranch@dhsosha.state.or.us)) for pre-approval for any specimens being sent to OSPHL.

Testing at clinical laboratories may be ordered by clinicians at their discretion and does not require CRRU approval.

#### 4.4 LPHA Follow-Up with Confirmed and Presumptive Cases

Presumptive cases who have not been tested should be encouraged to seek testing.

When following up with confirmed cases that do not have an associated lab report (i.e., they have verbal or eCR report of a positive case), LPHAs should endeavor to find the lab report as soon as possible. If a paper or .pdf version is obtained, please attach it to the Opera case and create a manual laboratory report. See Figure 5 for a visual representation of this workflow.

For confirmed MIS-C cases whose only positive test is serology, do not pursue contact tracing. Offer testing to household contacts.

##### 1. Interviewing

LPHAs shall interview all confirmed and presumptive cases to ascertain clinical and epidemiologic details, to try to ascertain source of the infection, and to identify any close contacts. An interview is required for all cases except those incarcerated at the time of report. This can be of the patient, an authorized family member, or the patient's healthcare provider. LPHAs should also provide the Case Letter (Appendix 4) to confirmed cases.

If the confirmed or presumptive case has not already been entered as a suspect coronavirus case in Opera, create a new case in Opera with the condition "Coronavirus," subtype "COVID-19," status "Confirmed" or "Presumptive." If a person who tested positive was already entered as a suspect case, first delete the result field (i.e., negative test, pending test, indeterminate test, etc.) then update the status to "Confirmed." All confirmed and presumptive cases, regardless of symptoms, should remain isolated while hospitalized or until meeting criteria for discontinuation of isolation, whichever is longer (see §5.1 for details).

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### 2. *Contact Investigations*

Obtain the name, address, and telephone number of all persons who have had close contact to the confirmed or presumptive COVID-19 case from 48 hours prior to a case's symptom onset, or for asymptomatic cases prior to the collection of the first specimen that tested positive, to the time the case was placed in isolation.

Enter all close contacts into Opera as Contacts. See §4.2.3 for information on how to manage these contacts.

#### Healthcare Workers Identified as Cases

Contacts of healthcare workers with COVID-19 who are exposed in healthcare settings with rigorous infection prevention protocols are believed to be at low risk of transmission. In cases of healthcare worker exposures of staff or patients in healthcare systems in which a designated individual or team, qualified by education, training, and experience or certification, is responsible for carrying out facility infection prevention and control protocols and is available to serve as primary point of contact for the facility regarding COVID-19 outbreaks, a risk assessment that takes into account presence of symptoms, proximity and duration of encounters, and the use of personal protective equipment may be performed. The healthcare system will take the lead on contact tracing and exposure notifications and will consult their local public health authority as needed. Healthcare systems have some discretion in identifying exposures that are higher risk and warrant notification and quarantine. Risk stratification should be aligned with [CDC guidance](#).

Features of higher-risk exposures:

- Longer duration of exposure
- Healthcare provider close contact with patient airway, e.g., intubation, pharyngeal examination, bronchoscopy, laryngoscopy
- Patient unmasked

Features of lower-risk exposures:

- Shorter duration of exposure
- No close contact with airway or mucous membrane
- Patient masked

Healthcare systems must notify contacts of healthcare providers with COVID-19 if *any* of the following are true: the healthcare provider with COVID-19 did not wear appropriate PPE during the encounter, the healthcare provider worked while febrile (defined as  $\geq 100.4^{\circ}$  F) or actively coughing, or the hospitalized patient will be transferred to a congregate care setting.

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### 3. Isolation of Confirmed and Presumptive Cases

All confirmed and presumptive cases, including asymptomatic cases, should be isolated until they meet criteria for discontinuation of isolation (see §5.1.2 and 5.1.3). In short, cases should avoid contact with other people until at least 10 days since their symptom onset have passed, and they have been afebrile without the use of antipyretics with other symptoms resolving for at least 24 hours. If the person is asymptomatic or discrete onset of symptoms cannot be determined, then cases should isolate for 10 days following the specimen collection date of their positive test.

For those with severe to critical illness—including those who were hospitalized for their COVID-19 illness—or who are severely immunocompromised, the minimum period of isolation is 20 days. That is, these cases should isolate until at least 20 days since symptom onset or first positive test, whichever is earlier, and they have been afebrile without the use of antipyretics with other symptoms resolving for at least 24 hours.

A test-based strategy for discontinuation of isolation is not recommended. Many confirmed cases in Oregon and elsewhere have tested persistently positive by NAAT for many weeks after their first positive test, but they are highly unlikely to be contagious. To meet the criteria for test-based discontinuation of isolation, a confirmed case must have completed their initial period of isolation (10 or 20 days, as appropriate) AND have two negative RT-PCR or NAAT results at least 24 hours apart, after the case has become afebrile without the use of antipyretics, and other symptoms have improved.

#### 4.5 LPHA Follow-Up on Positive Serologic Tests

No follow-up is required in response to a positive serology. If a positive serology report is received, it might be worthwhile to contact the provider to determine why the serology was ordered and whether an RT-PCR, NAAT, or antigen test was also ordered.

#### 4.6 OHA Reporting to CDC

OHA will electronically report all known COVID-19 cases and deaths to CDC through the National Notifiable Diseases Surveillance System (NNDSS). CDC's Emergency Operations Center (EOC) will be notified at 770-488-7100 only if assistance or guidance is needed.

## 5. CONTROLLING FURTHER SPREAD

Below is a description of how to manage isolation of cases and quarantine of contacts. Testing above and beyond this guidance is neither recommended by public health nor should it be required. That is, once a case has met criteria for discontinuation of isolation, or a contact has completed their quarantine period, they should not be required to test negative before return to school or work.

Given that viral nucleic acid or antigen is not reliably detectable throughout the course of SARS-CoV-2 infection, it is difficult to glean actionable information from negative test results. As such, negative test results do not influence case definitions or duration of isolation or quarantine.

## 5.1 Isolation of Cases

### 1. Hospitalized Cases

HCW who enter the room of a patient with suspected or confirmed SARS-CoV-2 infection should adhere to standard precautions and use an N95 or higher-level respirator (or a facemask if respirator is not available), gown, gloves, and eye protection. Performing or assisting with an aerosol-generating procedure warrants airborne precautions, including an N95 or higher-level respiratory protection. Any necessary aerosol-generating procedures (§7) should be undertaken in an airborne infection isolation room, if available. Additional PPE considerations are provided in [Clinical Care and Healthcare Infection Prevention and Control for COVID-19](#). Transmission-based precautions should continue to be followed until discontinuation of isolation criteria are met.

### 2. Cases not requiring hospitalization

COVID-19 cases who do not require hospitalization should isolate themselves at home except to receive medical care; this means that, during their period of isolation, workers should not report to work, and students should not attend in-person school. Cases should follow the [Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for Coronavirus Disease 2019 \(COVID-19\)](#). When possible, COVID-19 cases should take care to not handle pets or other animals while sick. Refer to CDC's guidance on what to do [If You Are Sick or Caring for Someone](#) for comprehensive guidance.

### 3. Discontinuation of isolation

Confirmed and presumptive COVID-19 cases should remain under home isolation for at least 10 days after illness onset and until 24 hours after fever is gone, without use of antipyretics, and COVID-19 symptoms (cough and shortness of breath) are improving. If a confirmed case is asymptomatic or discrete onset of symptoms cannot be determined, they should isolate for 10 days after the collection date of the specimen that tested positive. If an asymptomatic case develops symptoms compatible with COVID-19 (e.g., fever, cough, diarrhea, new loss of taste or smell, or shortness of breath) before the end of their initial isolation period, the 10-day isolation period should be re-started on the date of symptom onset. Subsequent positive tests in the 90 days after the earlier of first positive test or symptom onset do not affect the recommended period of isolation.

For cases with severe to critical illness—including cases hospitalized for their COVID-19 illness—or who are severely immunocompromised, the period of isolation is 20 days.

As described in the [CDC Decision Memo](#), an estimated 95% of severely or critically ill patients, including some who are severely immunocompromised, no longer had replication-competent virus 15 days after onset of symptoms; no patients had replication-competent virus more than 20 days after onset of symptoms.

Based on this research, it is recommended to use symptom-based release from isolation rather than the test-based strategy.

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### 4. Rare Exemptions for HCW to Work During Isolation

There is no blanket exception for confirmed and presumptive cases who are HCW to work during their isolation period. When *crisis*-level staffing shortages are identified, asymptomatic cases or cases well enough to work may return to work, if willing, during their isolation period at the discretion of the local public health administrator, consistent with OAR [333-019-0014](#). They should still isolate outside of work. The following criteria must be met to implement this strategy:

1. Local and regional staffing options have been exhausted and there remain insufficient staff to provide safe patient care or essential services.
2. Cases will not have contact with or provide care or services to populations susceptible to COVID-19.
  - Facility or employer must have a plan to prevent contact between COVID-19 positive and negative individuals.
3. The facility or employer has informed staff about use of this strategy, the associated risks, and the steps being taken to reduce the risk.
4. The facility or employer has provided education to COVID-19 positive staff that they may transmit disease to others, even without symptoms, and that they should otherwise observe home-isolation instructions given by the LPHA.
  - This includes limiting contact while traveling to and from work.
5. All individuals should be masked while in the facility. Staff should be monitored carefully to ensure that they are appropriately wearing masks:
  - Masks should cover nose and mouth.
  - Staff should avoid touching the mask. If readjustment is necessary, they should immediately perform hand hygiene.
  - If mask needs to be removed (e.g. for meals), they should observe strict physical distancing and disinfect areas before leaving.

Once confirmed and presumptive cases meet the criteria for discontinuation of isolation, they may return to their regular lives. As discussed above, additional testing or isolation is not recommended.

## 5.2 Managing Cases After Discontinuation of Isolation

### 1. Quarantine within 90 days after their original case

If a confirmed or presumptive case achieves discontinuation of isolation and is later exposed to another case, we do not recommend quarantine and monitoring if the exposure happened within 90 days of symptom onset or first positive test, whichever is earlier, for their original case. If they develop symptoms during this period, they should isolate until they have been afebrile without the use of antipyretics and have improving cough, shortness of breath, or diarrhea for 24 hours.

### 2. Becoming a case after 90 days have passed since onset of the original case

If a previously confirmed or presumptive case meets the confirmed or presumptive case definition more than 90 days after symptom onset or first positive test for their original case, create a new, separate case for them in Opera. Investigate this case, including isolating the case and tracing and quarantining contacts, as described in §4.4.

### 5.3 Managing Outbreaks

When two or more confirmed or presumptive cases in different households are identified with an epi-link, obtain an outbreak number. Investigate the [Respiratory Disease Outbreak](#) including attaching the outbreak number to each confirmed and presumptive case in the Opera case record. If 28 days have elapsed since the last onset of a confirmed or presumptive case, the outbreak will be considered closed. For the following situations, the threshold to obtain an outbreak number is lower:

- One case who lives or works in a congregate residential setting
- One case who works in a food-processing or agricultural setting
- One case who attends, works at, or volunteers at a school

Use the epi-link type for all cases, regardless of their proximity to an outbreak, to indicate the type of exposure. When linking cases to an outbreak, include the outbreak number for all first- and second-generation cases associated with the outbreak. These terms describe a case's proximity to the place of exposure. First-generation cases are those that have the shared exposure; for example, these are workers at a worksite outbreak, or children and staff at a daycare that has an outbreak, even if those cases have onsets spread over time. Second-generation cases do not share the original exposure but have close contact to a first-generation case. Cases beyond the second generation should not have the outbreak number added to their case.

LPHAs must disclose the identity of cases who are employees, contractors, or volunteers to employers when there is an outbreak, as they will have information necessary to assist in identifying individuals who may have been exposed. For purposes of this disclosure requirement, an outbreak includes one case who lives or works in a congregate setting, a workplace with two or more cases in workers, one case who works in a food-processing or agricultural setting, one case who attends, works at or volunteers at a school, and two cases who attend, work at, or volunteer at a childcare setting. When disclosing information to an employer it is a best practice to share the information with a person in the Human Resources or Employee or Occupational Health department or, if no such department exists, someone in management.

An LPHA must provide a school with the name of a case if during a case investigation it is determined that the case attends (in person or virtually), works at, or volunteers at a school that is providing any degree of in-person services (e.g. instruction, after school care, counseling, athletics, activities). Such disclosure is necessary for the school to ensure the individual is excluded from being physically present at the school. When disclosing information to a school it is a best practice to share the information with a school or school district nurse, human resources staff, or someone in school administration. An LPHA can contact the school district's Office of the Superintendent to determine the best point of contact for the school.

See §6 for how to manage outbreaks in special situations, including congregate residential facilities (§6.4), workplaces (§6.5), and agricultural production operations (§6.6).

#### 5.4 Assessing the Potential for Worksite Outbreaks

Worksites have been a major setting of outbreaks. It is important to ask cases and contacts about their place of employment. Opera has fields for Industry and Occupation that can help guide this conversation. It is helpful to ask about factors like the density of workers and patrons, the frequency of handling shared items or equipment, whether masks are required, and how easily and frequently touched surfaces are decontaminated.

### MANAGING SPECIAL SITUATIONS

#### 6.1 Healthcare Facility Infection Control

Key considerations for infection control can be found in the OHA provisional guidance document: [Clinical Care and Healthcare Infection Prevention and Control for COVID-19](#).

#### 6.2 Pregnant Persons

Information is currently insufficient to determine whether pregnant persons are more susceptible than others to COVID-19. Limited information suggests that women infected during pregnancy are more likely to deliver prematurely. Pregnant persons should engage in usual preventive actions to avoid infections, including frequent hand washing and avoiding people who are sick. Information about vertical transmission of COVID-19 is also limited. The virus could presumably be transmitted to a newborn via close contact. Testing is recommended for all neonates born to women with confirmed or presumptive COVID-19, regardless of whether there are signs of infection in the neonate. See the CDC guidance [Evaluation and Management Considerations for Neonates At Risk for COVID-19](#) for details.

#### 6.3 Transportation by EMS

If a confirmed case is transported by EMS, LPHAs should inform the EMS agency about the case for the purpose of contact tracing and risk assessment by the agency. Additionally, LPHAs should inform EMS agencies in their jurisdiction if a confirmed case is identified at a long-term health care facility such as a nursing home so that EMS may take appropriate precautions when responding to additional calls from these locations. Complete risk questions in Opera to indicate whether a patient arrived at a healthcare facility “by ambulance.”

#### 6.4 Investigating Outbreaks of COVID-19-like Illness (CLI) in Congregate Residential Settings

COVID-19 can present with a broad range of symptoms (see §3.2), making identification of outbreaks difficult. LPHAs should have a low threshold for investigation when there is a cluster of illnesses in a congregate residential setting. Because COVID-19 and influenza-like illness (ILI: fever, along with cough or sore throat) are similar, it is a priority to investigate any CLI or ILI in LTCFs and other congregate settings because they may indicate an outbreak of either; see §6.7 for guidance specific to outbreaks in correctional facilities. Respiratory specimens should be collected from all ill persons in such outbreaks to be tested for COVID-19; and, during influenza season, for influenza; and perhaps for other pathogens.

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When a case is identified in a resident or staff member of a congregate setting, provide the facility with [the COVID-19 case log for LTCFs](#) and appropriate infection control recommendations (see LTCF COVID-19 Response Toolkit at the [COVID-19 Healthcare Partners](#) page).

### 1. Identifying outbreaks

If the confirmed or presumptive case is identified in a resident or staff member of a congregate setting, LPHA should create an outbreak in the Opera Outbreaks database to facilitate tracking and linking to other residents or staff who become symptomatic or get tested. Often, identification of a single case has led to the recognition of other cases and prompt institution of control measures. If no more cases are identified within 14 days of the single case, the outbreak will be closed.

LPHAs are encouraged to establish relationships with their Community Developmental Disabilities Programs to support investigations in congregate settings of people with intellectual and developmental disabilities.

Please remember that while influenza itself is not reportable, ILI *outbreaks* are reportable. If an ILI outbreak is identified, call the regular ACDP line (971-673-1111) to report the outbreak.

### 2. Identifying vaccine breakthrough cases in LTCFs

For LTCFs (skilled nursing facilities, assisted living facilities, and residential care facilities), LPHA should collect vaccination uptake rates for residents and staff. If the facility is not already tracking COVID-19 vaccination status for all residents and staff, send the OHA-developed vaccine tracking tools to the facility, which will assist the facility to monitor both individual- and facility-level vaccine status information. The Resident Tracking Tool can be found [here](#), and the Staff Tracking Tool [here](#).

All confirmed cases identified in a resident or staff member of a LTCF should be investigated to determine if they meet the vaccine breakthrough case definition (See §3.5).

If a vaccine breakthrough case is identified in a LTCF, LPHA should:

- Notify the CRRU Regional Epidemiologist by email within one business day;
- Request an infection control consultation from the Healthcare-Associated Infections Program by completing this [form](#) when a consult has not already been initiated or completed for the current outbreak.

All LTCFs are now 14 days or more past their second vaccination clinic and should follow the testing guidance in 6.4.4 below.

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### 3. Testing guidance

Please be aware of [Oregon Administrative Rules, Chapter 411, Division 60](#) regarding COVID-19 testing in licensed assisted living facilities, nursing facilities, and residential care facilities. Copying from the rule:

- Facility must implement COVID-19 testing of all Residents, Facility Staff and Associated Staff within 72 hours of identification of a new case of COVID-19 in either a Resident, Facility Staff or Associated Staff. A testing strategy should be developed with the Facility's Local Public Health Authority as new cases are identified.

As resources allow, facilities should conduct weekly serial testing on all residents and staff who have previously tested negative until two consecutive weeks with no new positive cases in either staff or residents.

### 4. Testing guidance for LTCFs when 14 or more days have passed since the facility's second COVID-19 vaccination clinic

- If the first case(s) were identified by POC Ag testing:
  - Facility to collect respiratory specimen within 48 hours (ideally same day as positive Ag test) for PCR testing at OSPHL
  - The preferred transport media is viral or universal transport media (VTM or UTM); the ideal transport media is VTM supplied by the OSPHL. This collection will allow for sequencing and viral isolation.
  - Facility may use test kits it has on hand if securing VTM test kits from OSPHL results in delayed specimen collection.
- If the first case(s) were identified by molecular testing at a laboratory other than OSPHL:
  - Coordinate with the CRRU Regional Epidemiologist to retrieve residual specimens
  - Given typical laboratory test turnaround times, specimen re-collection is unlikely to yield a positive result with Ct value  $\leq 28$  based on preliminary data and is not recommended.

Coordinate with facility and the CRRU Regional Epidemiologist to schedule outbreak-associated testing of staff and residents at the OSPHL. Once outbreak-associated testing has been completed, routine screening of staff for COVID-19 should return to the facility's contracted commercial laboratory. If assistance with specimen collection is needed, CRRU Regional Epidemiologists can coordinate new specimen collection in collaboration with CRRU Testing Team staff. Coordination of this task is not expected to occur outside of regular business hours

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### 5. *Discontinuation of isolation*

Confirmed and presumptive COVID-19 cases should remain under home isolation for at least 10 days after illness onset and until 24 hours after fever is gone, without use of antipyretics, and COVID-19 symptoms (cough, shortness of breath, and diarrhea) are improving. If a confirmed case is asymptomatic or only has symptoms other than fever, cough, shortness of breath, and diarrhea, they should be isolated for 10 days after the collection date of the specimen that tested positive. If an asymptomatic case develops symptoms compatible with COVID-19 (e.g., fever, cough, diarrhea, new loss of taste or smell, or shortness of breath) before the end of their initial isolation period, the 10-day isolation period should be re-started on the date of symptom onset. Subsequent positive tests do not affect the recommended period of isolation.

For cases with severe to critical illness—including cases hospitalized for their COVID-19 illness—or who are severely immunocompromised, the period of isolation is 20 days. If a case lives in a congregate setting but does not have severe to critical illness or is not severely immunocompromised, the recommended period of isolation is 10 days.

Based on current research, it is recommended to use symptom-based release from isolation rather than the test-based strategy.

### 6.5 **Workplace Outbreak Recommendations for COVID-19 Testing**

In general, workplace outbreaks of two or more people are situations that may warrant testing of some of the employees who work in the affected facility. Each situation is different, and this decision should be made in collaboration between the affected facility and the LPHA. The facility and the LPHA should coordinate on logistics of collecting and shipping the specimens. Initial testing should focus on high-risk workers, including those with respiratory symptoms and coworkers potentially exposed to known cases.

### 6.6 **Investigating Outbreaks of COVID-19-like illness in food-processing or agricultural settings**

It is a priority to investigate any cases of COVID-19 in these settings, because the identification of a single case has often led to the recognition of many other cases and represents an opportunity to enact control measures promptly. CRRU will coordinate communication with other state agencies and inform regulatory partners, including ODA and OR-OSHA as appropriate. Consult the [Playbook for Joint Timely Response Protocol for COVID-19 Outbreak in Food Processing Establishments](#) for details of interagency coordination.

To support early identification and investigation of outbreaks, response to a single confirmed or presumptive case in these settings should include the following:

- Creating an outbreak in the Opera Outbreaks database to facilitate tracking. (If a single case is used to initiate an investigation, and no other cases are identified after 14 days, the outbreak will be closed.)
- Excluding cases and contacts of COVID-19 from work until they have been released from isolation. As appropriate, the LPHA may contact employers to facilitate the exclusion of cases and contacts.
- Collecting respiratory specimens from all ill persons to be tested for COVID-19.
- Providing the facility with appropriate infection-control recommendations.

## 6.7 Managing cases associated with the Oregon Department of Corrections

When there is a case of COVID-19 in an Oregon Department of Corrections (ODOC) facility, ODOC will perform a contact investigation within the facility, including a preliminary case interview to identify basic information about the case and contact tracing. Upon release, LPHAs can use this information to support their efforts (§6.7.2 below). While the case is incarcerated, set the institution of residence to the ODOC facility.

When ODOC knows that a case or contact will be released soon, they will contact CRRU with the pertinent information. ODOC will also contact Community Corrections with contact information and the person's status. LPHAs are encouraged to establish relationships with their local Community Corrections office.

If a case is identified in a local correctional facility not under ODOC jurisdiction, the LPHA should work with Community Corrections to investigate the case.

### 1. *Counting and reporting of cases in Corrections*

Cases are counted in the county in which they are diagnosed. ODOC might move adults in custody between ODOC facilities for case management purposes, but these cases do not transfer jurisdictions for reporting purposes.

### 2. *Managing and investigating cases and contacts*

CRRU will create confirmed and presumptive cases based on ODOC information that is reported through the Oregon COVID-19 Reporting Portal (OCRCP). If any close contacts are going to be released during their quarantine period, CRRU will create a Person Under Monitoring case in Opera. Consult ARIAS workflow documents for guidance on how to ensure that Persons Under Monitoring are properly exported from Opera on the appropriate date.

Cases among adults in custody that are reported via ELR should be processed by the LPHA where the corrections facility is located. While the case is incarcerated, the LPHA should set the institution of residence to the corrections facility by clicking the "Set" button in the 'Address' pop-up window in Opera and selecting the corrections facility from the list.

LPHAs are encouraged to coordinate with Community Corrections ahead of the release of a case or contact from the ODOC facility to establish a plan to connect with the case or contact upon release.

Upon release, LPHAs should establish contact with cases and contacts and follow the relevant guidance in §4. Any close contacts the case encounters during their isolation period should be added to Opera as Contacts, and they will be actively monitored in Opera or ARIAS like any other contact.

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### 6.8 Cases who fly or travel across state lines

If a confirmed or presumptive case is determined to have flown during their transmissible period (see §7), collect details about the travel, including the dates and times of the flight or flights, departure and arrival airports, the airlines, the flight numbers, and the case's seat numbers. Include all of this in the Travel section of the Risks tab in Opera. Create a to-do in the Notes section for that case and assign it to Karuna Bollam who will relay the information to CDC's DGMQ.

Similarly, if a confirmed or presumptive case travels to another state, create a to-do in the Notes section for that case with the details of the case's travel and assign it to Karuna Bollam.

## GLOSSARY OF TERMS

### Aerosol-generating procedures:

Include, but are not limited to:

- Intubation, extubation, and related procedures such as manual ventilation and open suctioning
- Cardiopulmonary resuscitation
- Tracheotomy and 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) [i.e., oxygen delivered through high-flow nasal cannula (HFNC) at  $\geq 15\text{L/min}$ ].
- Induction of sputum
- Medication administration via continuous nebulizer

### Close contact:

- Being within 6 feet of a COVID-19 case during their period of transmissibility (see below) for  $\geq 15$  minutes; this time is cumulative over a 24-hour period and does not have to be consecutive. Close contact can include caring for, living with, visiting, or sitting within 6 feet of a confirmed COVID-19 patient; or
- Having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on).

NOTE: See §4.2, paragraph 2, regarding assessment of close contacts of infected health care workers.

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**COVID-19-related death:** A death is considered to be related to COVID-19 in any of the following circumstances:

- death of a confirmed or probable COVID-19 case within 60 days of the earliest available date among exposure to a confirmed case, onset of symptoms, or date of specimen collection for the first positive test;
- death from any cause in a hospitalized person during admission or in the 60 days following discharge AND a COVID-19-positive laboratory diagnostic test at any time since 14 days prior to hospitalization; or
- death of someone with a COVID-19-specific ICD-10 code listed as a primary or contributing cause of death on a death certificate, regardless of the dates of diagnosis or death.

**COVID-19-related hospitalization:** If the patient is admitted to an acute care facility following an ER or outpatient visit, then the patient has been hospitalized. A case would not be considered hospitalized if admitted for a <24-hour observation period only. A case would be considered hospitalized if admitted for ≥24 hours in an observation unit or ER. A COVID-19-related hospitalization is defined as:

- Any confirmed case hospitalized within 14 days of any positive test or who tests positive during their hospitalization; or
- Any presumptive case hospitalized within 14 days of their illness onset.

**Discontinuation of isolation:** Discontinuation of isolation can be assessed in two ways:

**Symptom-based discontinuation of isolation:** Someone who was symptomatic is considered no longer contagious when it has been 10 days from their symptom onset, and they have been afebrile without use of antipyretics and have had improving cough, shortness of breath, or diarrhea for 24 hours. If the person was never symptomatic, they are released from isolation 10 days after the first specimen that tested positive was collected. If an asymptomatic case develops symptoms compatible with COVID-19 (e.g., fever, cough, diarrhea, new loss of taste or smell, or shortness of breath) before the end of their initial isolation period, the 10-day isolation period should be re-started on the date of symptom onset. For those with severe to critical illness—including those who were hospitalized for their COVID-19 illness—or who are severely immunocompromised, the recommended period of isolation is 20 days.

**Test-based discontinuation of isolation:** Someone is considered no longer contagious when they have completed their initial isolation period (10 or 20 days, as appropriate), have been afebrile without use of antipyretics, their other symptoms have improved, and they have had two consecutive RT-PCR or NAAT results with specimens collected at least 24 hours apart. Test-based discontinuation of isolation is not recommended.

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**Health care worker (HCW):** Any paid or unpaid person serving in a healthcare setting who has 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; or contaminated environmental surfaces. HCWs may include, but are not limited to, emergency medical service personnel, nurses, nursing assistants, physicians, technicians, therapists, personal support workers, home care workers, phlebotomists, pharmacists, students and trainees, veterinarians, dentists, contractual staff not employed by the health care facility, and persons (e.g., clerical, dietary, environmental services, laundry, security, maintenance, engineering and facilities management, administrative, billing, and volunteer personnel) not directly involved in patient care but potentially exposed to infectious agents that can be transmitted between HCWs and patients.

### High-Priority Individuals

People with symptoms in the groups listed below should be prioritized for testing.

- Healthcare workers and first responders (EMS, public safety workers)
- Residents, staff, children, or other people in a congregate setting (e.g., healthcare facility, residential care facility, school, agricultural workers, food-packing plants, childcare, corrections, shelters, etc.)
- Workers who provide direct care or service in multiple group facilities or who provide in-home services (e.g. hospice care workers, physical or occupational therapists, in-home personal care workers, etc.)
- Essential front-line service workers who have regular contact with large numbers of people (e.g., those working in grocery stores, pharmacies, food service, transportation, delivery, and other critical infrastructure services)
- People 65 years of age or older
- People with underlying medical conditions, including, but not limited to hypertension, diabetes, cardiovascular disease, lung disease, and immunocompromising conditions
- People who identify as Black, African-American, Latino, Latina, Latinx, American Indian/Alaska Native, Asian, Asian-American, or Pacific Islander
- People who identify as having a disability
- People whose first language is not English
- Pregnant women
- People whose condition requires hospitalization
- People who within 14 days of their symptom onset had close contact with a person with laboratory-confirmed COVID-19 or a person determined by a public health authority to be a presumptive case

**Period of transmissibility:** This is the time when cases can transmit disease to others. For symptomatic cases, this begins 48 hours prior to symptom onset. For asymptomatic cases, this begins 48 hours prior to the collection of the first specimen that tested positive. The period of transmissibility extends until the case has met criteria for discontinuation of isolation.

**Physical distancing:** Remaining out of congregate settings, avoiding mass gatherings, and maintaining distance (approximately 6 feet) from others to the greatest extent possible. Physical distancing measures reduce opportunities for person-to-person virus transmission and can help slow the spread of the disease, as well as save lives.

## Novel Coronavirus (COVID-19)

### REFERENCES

1. OHA main page for COVID-19: <https://govstatus.egov.com/OR-OHA-COVID-19>
2. CDC main page for COVID-19: [www.cdc.gov/coronavirus/2019-ncov/index.html](http://www.cdc.gov/coronavirus/2019-ncov/index.html)
3. COVID-19 Resource Centre at *The Lancet*: [www.thelancet.com/coronavirus](http://www.thelancet.com/coronavirus)
4. 2019 Novel Coronavirus (COVID-19) at the *New England Journal of Medicine*: [www.nejm.org/coronavirus](http://www.nejm.org/coronavirus)
5. ODE and OHA, Planning for COVID-19 Scenarios in Schools: [www.oregon.gov/ode/students-and-family/healthsafety/Documents/Planning%20and%20Responding%20to%20COVID-19%20Scenarios%20in%20Schools%20August%202020.pdf](http://www.oregon.gov/ode/students-and-family/healthsafety/Documents/Planning%20and%20Responding%20to%20COVID-19%20Scenarios%20in%20Schools%20August%202020.pdf)
6. ODE and OHA, Ready Schools, Safe Learners: [www.oregon.gov/ode/students-and-family/healthsafety/documents/ready%20schools%20safe%20learners%202020-21%20guidance.pdf](http://www.oregon.gov/ode/students-and-family/healthsafety/documents/ready%20schools%20safe%20learners%202020-21%20guidance.pdf)

### UPDATE LOG

- June 3, 2021. Updated quarantine guidelines to allow local public health to adopt shortened quarantine periods of 10 or 7 days with a negative test among the general population with exceptions in certain high-risk settings. (Amanda Faulkner)
- April 29, 2021. Updated duration of quarantine to 14 days for all unvaccinated close contacts; updated surge conditions guidance section. Added detail to vaccination/treatment section. (Amanda Faulkner).
- March 22, 2021. Added clarification surrounding vaccine breakthrough case surveillance follow-up; clarified use of test-based discontinuation of isolation; provided language regarding upcoming OSPHL whole genome sequencing capacity; clarified at-home test kits. (Amanda Faulkner).
- February 17, 2021. Added Surge Conditions Guidance section; refined new quarantine guidance for fully-immunized close contacts in health care settings to match CDC's; updated infection control language to align with OHA Clinical and Infection Control Guidance, added breakthrough case surveillance project information. (Amanda Faulkner, Rebecca Pierce).
- January 20, 2021. Updated treatment, prevention and limitation of spread section; provided new quarantine guidance for fully-immunized close contacts; clarified timing of isolation period for asymptomatic cases who subsequently develop symptoms. (Amanda Faulkner).
- December 9, 2020. Removed language regarding creation of suspect cases based on negative test results; added options for shorter quarantine, adopting CDC options in part (Amanda Faulkner, Melissa Sutton, Paul Cieslak).
- November 25, 2020. Added clarification for assessment and notification regarding persons exposed to cases among healthcare workers, removed test-based discontinuation of

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isolation, modified close contact definition to include '24-hour' time frame in line with CDC, included direction for sharing case information with schools, directed LPHA to classify MIS-C cases as Suspect until chart review is complete. (Kristen Hollywood, Melissa Sutton, Amanda Faulkner).

September 18, 2020. Clarified the recommended isolation period for cases who live in congregate settings, updated language to reflect that all jurisdictions are on ARIAS, defined first- and second-generation in the context of linking cases to outbreaks, added required data elements for outbreak reporting, added the definition of COVID-19-related hospitalization, sundry edits (Steve Rekant).

July 23, 2020. Changed all mentions of Orpheus to Opera, updated discontinuation of isolation criteria for symptoms from 72 hours to 24 hours, deemphasized test-based discontinuation of isolation and added the longer minimum period for specific groups, included new testing rules and guidance, added positive antigen tests to the confirmed case definition and added language about any test developed under an FDA EUA, added description of criteria for possible work exemptions for quarantine and isolation, sundry edits (Steve Rekant)

July 2, 2020. Clarified language around using test-based discontinuation of isolation in LTCFs, added requirement for LPHAs to share information with employers (Steve Rekant)

June 24, 2020. Added details about investigating outbreaks, added references to ARIAS, clarified definition of suspect and presumptive cases including information about antigen testing, added MIS-C, disentangled discontinuation of isolation and assessment of recovery, harmonized language across sections, sundry edits (Steve Rekant)

May 1, 2020. Added presumptive case definition and revised recommended follow-up with contacts, defined recovery and clarified release from isolation, defined COVID-19-related deaths, clarified language around testing, added required follow-up for close contacts. (Steve Rekant, Kelly Cogswell)

April 1, 2020. Added language for emergency rule regarding reporting deaths and hospitalizations; reduced expectations for follow-up of potentially exposed persons; clarified language regarding testing in clusters; removed negative influenza test as a requirement for automatic testing approval at OSPHL; modified exposure period per new CDC guidance; added revised flowcharts. (Steve Rekant, Madeline LeVasseur, Amanda Faulkner, Rebecca Pierce)

March 23, 2020. Changed requirements for LPHA follow-up and investigation of PUMs, suspect cases, and confirmed cases. Updated guidance on monitoring and restrictions of exposed persons. Updated criteria for testing at OSPHL and overall testing prioritization recommendations. Changed language from PUI to suspect case and changed suspect and confirmed case definitions (Madeline LeVasseur, Steve Rekant, Amanda Faulkner, Orion McCotter)

March 12, 2020. Added information about other laboratories. Sundry edits. (Steve Rekant)

March 8, 2020. Edited testing criteria, PUM, PUI definitions. Updated guidance for discontinuation of isolation. Sundry edits. (Kelly Cogswell, Alexia Zhang)

March 3, 2020. Clarified contact tracing requirements. Added case classification table. Added definition of a presumptive case. Sundry edits. (Tasha Poissant, Madeline

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LeVasseur)

February 28, 2020. Updated PUI case definition and testing criteria. Updated testing availability at the OSPHL. Added current list of geographic areas with widespread or sustained community transmission. (Tasha Poissant, Madeline LeVasseur)

February 20, 2020. Provided guidance on discontinuation of isolation for PUIs or COVID-19 cases and pregnant persons, and revised figures. (Alexia Zhang, Madeline LeVasseur, Steve Rekant)

February 12, 2020. Clarified expectations of LPHAs regarding contacting PUMs, provided guidance on interpreting testing, and revised figures. (Amanda Faulkner, Steve Rekant, Alexia Zhang)

February 7, 2020. Provided minor clarifications to date of PUM guidance implementation, DGMQ PUM forms, and Figures. (Amanda Faulkner, Steve Rekant)

February 6, 2020. Modification of PUM criteria, monitoring, and self-quarantine guidance. Updated §2.5 *Incubation Period*. Minor edits for clarity. (Amanda Faulkner, Steve Rekant, Alexia Zhang)

January 2020. First draft. (Nicole West, Amanda Faulkner, Steve Rekant)

### Appendix 1: Required outbreak reporting elements

- Basics tab
  - Etiology
  - Case counts
  - First and last onset date (for asymptomatic cases, onset date should be the first specimen collection date)
  
  - Location details
    - Exposure locations (i.e., location of outbreak)
    - Residence locations (i.e., location of exposed people)
    - Contact information for outbreak site
    - Number of employees or persons in a facility
    - Exposure sites (i.e., type of location)
  - Brief overview
- Etiology tab
  - Etiology = Coronavirus
  - Type of testing performed
  - Any comments
- Cases tab
  - All the Opera cases linked with the outbreak number
  - If used, a case log should also be completed
  - Confirmed and presumptive case counts
  - Age
  - Sex
  - Deaths
- Methods tab

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- Check all that apply
- Be sure to identify if a HAI investigation was performed
  - Note by whom: facility, LPHA, OHA HAI
- Documentation tab
  - Provide a basic timeline of the outbreak and investigative communications or pertinent notes. The more information provided in this field, the better as we are trying to be as thorough as possible with documentation.
  - Attach any relevant records such as provider notifications, press releases
  - Attach external investigation documents like epi curves and inspection reports

## Appendix 2 Revised: Interpreting test results

Test type	Result	Epi-link to a confirmed case	Clinical signs	Opera Subtype/Result	Opera Status	Investigate	Isolate
RT-PCR or NAAT*	Positive	n/a	n/a	COVID-19	Confirmed	<b>YES</b>	<b>YES</b>
RT-PCR or NAAT	Indeterminate or Inconclusive	n/a	n/a	COVID-19/Indeterminate	Suspect	<b>YES</b>	<b>YES</b>
RT-PCR or NAAT	Negative	n/a	n/a	COVID-19/Negative	Suspect	<b>NO</b>	<b>NO</b>
Antigen	Positive	n/a	n/a	COVID-19	Confirmed	<b>YES</b>	<b>YES</b>
Antigen	Indeterminate or Inconclusive	n/a	n/a	COVID-19/Indeterminate	Suspect	<b>YES</b>	<b>YES</b>
Antigen	Negative	n/a	n/a	COVID-19/Negative	Suspect	<b>NO</b>	<b>NO</b>
n/a	n/a	YES	At least two of: shortness of breath, cough, fever, new loss of smell or taste, radiographic evidence of viral pneumonia	COVID-19	Presumptive	<b>YES</b>	<b>YES</b>
Serology	Positive	n/a	n/a	COVID-19/Positive serology	Suspect	<b>NO</b>	<b>NO</b>
Serology	Equivocal	n/a	n/a	COVID-19/Testing not done <sup>†</sup>	Suspect	<b>NO</b>	<b>NO</b>
Serology	Negative	n/a	n/a	COVID-19/Testing not done	Suspect	<b>NO</b>	<b>NO</b>

### Notes:

- This assumes the patient does not meet the presumptive case definition with symptoms and epi-link (§3.4).
- Any person with any COVID-19 symptoms, regardless of test results should remain isolated until 24 hours after fever is gone and symptoms are resolving. If they are a confirmed or presumptive case, see §5.1.3.

### Appendices 3 & 4: Contact and Case Letters

Letter templates are available on our [COVID-19 Healthcare Partner page](http://healthoregon.org/coronavirushcp) (<http://healthoregon.org/coronavirushcp>) in the section for Local Public Health Authorities and Tribes.

\* e.g., a polymerase chain reaction (PCR) test.

† This status refers to RT-PCR, NAAT, or antigen testing.

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Figure 1: Case Definitions

<p><b>C</b> Confirmed case</p>	<p><b>P</b> Presumptive case</p>	<p><b>S</b> Suspect case Someone who does not meet the confirmed or presumptive case definition who has any of the following:</p>
<p> Positive RT-PCR or NAAT test</p> <p><b>OR</b></p> <p> Positive antigen test</p> <p><b>OR</b></p> <p>Diagnosis of MIS-C</p>	<p> Specific COVID-19 symptoms</p> <p><b>AND</b></p> <p> Epi-linked to confirmed case</p>	<p> Any COVID-19 symptoms</p> <p><b>AND</b></p> <p> No test</p> <p><b>OR</b></p> <p> Negative or indeterminate NAAT or antigen test</p> <hr/> <p> Any antibody test</p> <p><b>OR</b></p> <p> Epi-linked to confirmed or presumptive case</p> <p><b>AND</b></p> <p> Test is pending</p>

Figure 2: Flowchart: DGMQ notifications

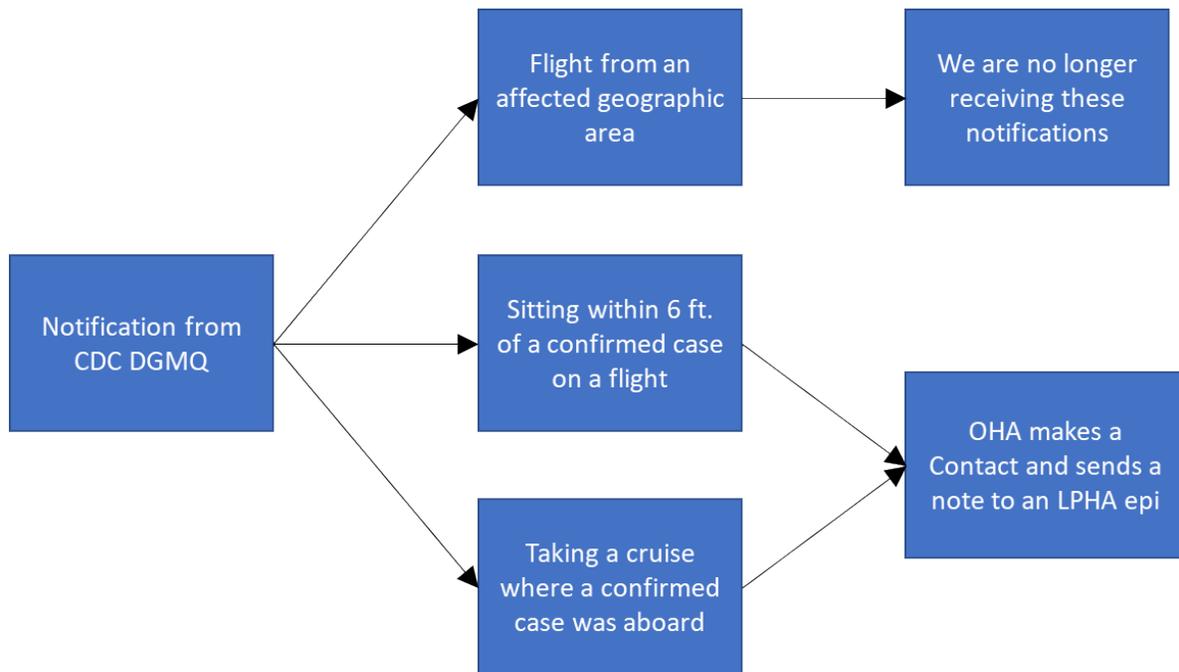


Figure 3: Flowchart: Symptom checks for close contacts of Confirmed and Presumptive cases

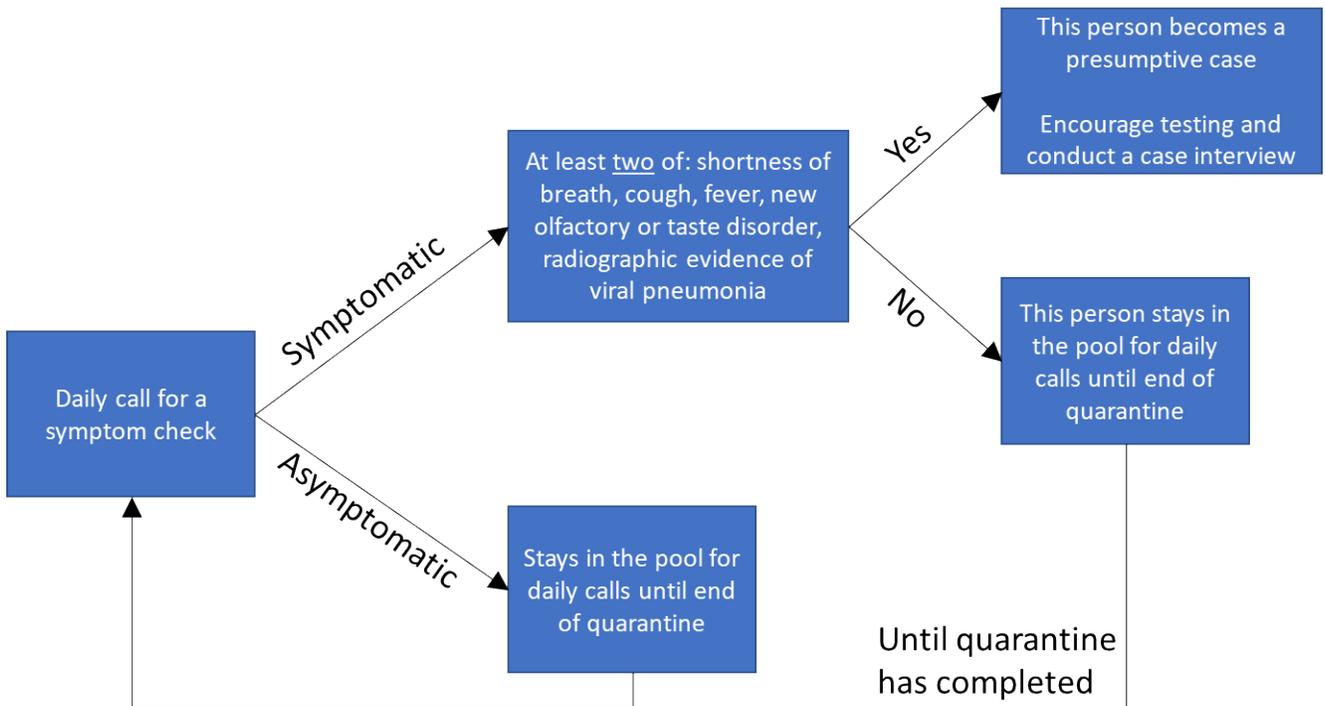


Figure 4: Flowchart: Negative test results for people not identified in contact tracing

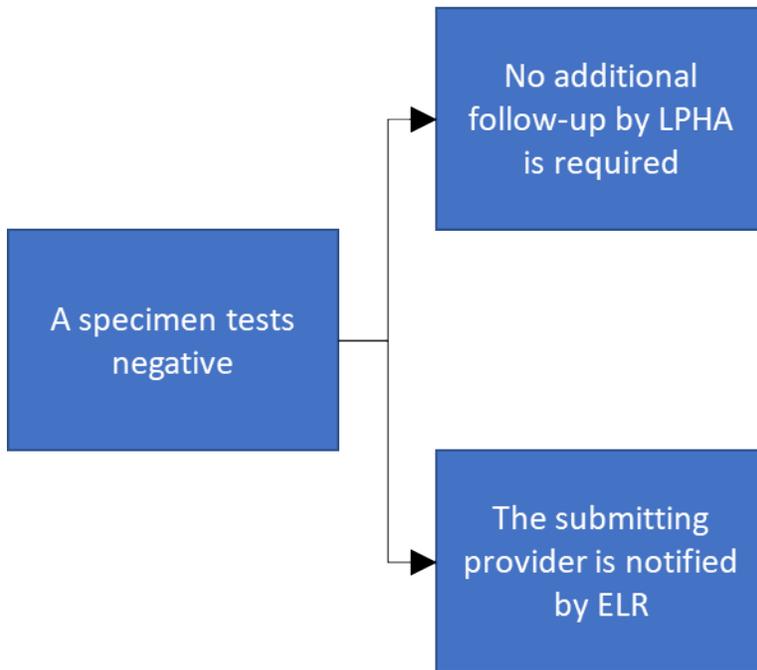
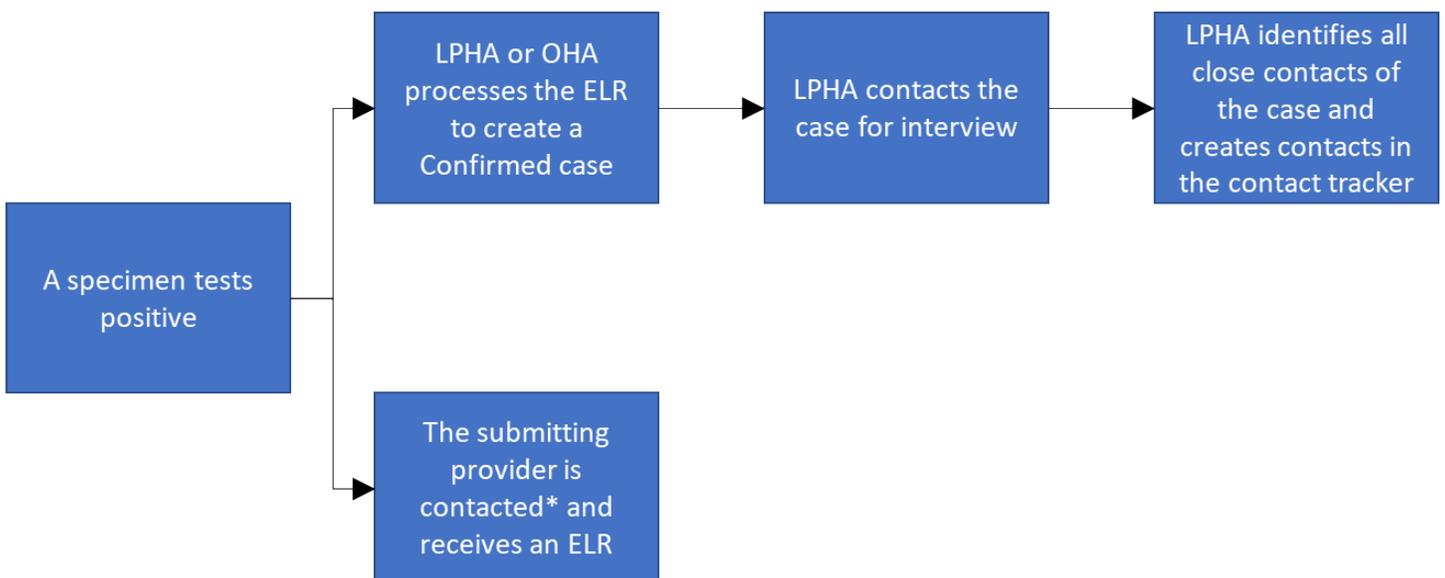


Figure 5: Flowchart: Positive test results



\* The method of contact (phone call, fax, electronic report) varies by laboratory.