1. **DISEASE REPORTING**

1.1 **Purpose of Reporting and Surveillance**

1. To identify persons with novel coronavirus infection, prevent transmission to others, improve health outcomes where possible, and better understand the epidemiology of this emerging disease.

2. To identify those with risk of exposure to novel coronavirus as described in §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 COVID cases to the local public health authority (LPHA) within 24 hours. They should immediately notify infection control personnel at their healthcare facility. Laboratories are required to report negative results of COVID testing within one local public health working day.

1.3 **Local Public Health Authority Reporting and Follow-up Responsibilities**

**Persons under monitoring (PUMs)**

1. Report all persons under monitoring, as described in §3 below, to the Oregon Public Health Division’s Acute and Communicable Disease Prevention section (ACDP).

2. Enter “Person Under Monitoring” into Orpheus.

3. Follow guidance on monitoring and movement control as described in §3 and §4 below.

4. Educate and consult with local providers and facilities to promote compliance with quarantine, isolation, and infection-control procedures.

5. Enter details of the investigation and contact follow-up into Orpheus.

6. If a PUM develops symptoms compatible with the PUI definition, follow the steps below.

**Persons under investigation (PIUs) and Confirmed cases**

1. Report to ACDP immediately PIUs and confirmed cases of novel coronavirus as described in §3, below.

2. Begin investigation immediately. Enter case in Orpheus as “Coronavirus,” and select subtype “COVID-19”; use the CDC PUI Form, which is linked in Orpheus, for the case interview.
3. Consult with ACDP as needed about patient isolation and protection of contacts, including healthcare personnel, and about strategies for public-health response, testing, and contact investigation.
4. Educate and consult with local providers and facilities to promote compliance with isolation and infection-control procedures.
5. Enter details of the investigation and contact follow-up into Orpheus.
6. Follow up with the submitting provider or laboratory for electronic case reports (eCR) that do not meet criteria and are not approved for testing at OSPHL by ACDP.

1.4 State Public Health Division Responsibilities
1. Update LPHAs on changes to criteria for investigation (e.g., through HAN, multijurisdictional conference calls, etc.).
2. Relay to LPHAs information on PUIs and PUMs received from CDC or other states.
3. Process electronic case reports (eCR) in Orpheus, including creating a case in Orpheus and approving testing for patients that meet testing criteria.
4. Develop and maintain information systems for case and contact surveillance and to ensure adequacy of response activities.
5. Advise LPHA, Tribal, and private-sector health professionals concerning:
   - Quarantine of asymptomatic exposed persons (PUMs);
   - Isolation of symptomatic exposed persons (PUIs) and confirmed cases;
   - Protection of healthcare personnel;
   - Diagnostic evaluation;
   - Required reporting and surveillance activities;
   - Contact identification and follow-up.
6. Coordinate interjurisdictional monitoring plans for PUMs who move out of county or state.
8. Provide surge capacity for contact and case investigation if the scope of response overwhelms LPHA resources.
9. Arrange consultation with infectious disease specialists and CDC as needed.
10. Report PUIs and confirmed cases of COVID-19 to CDC as soon as they are identified.

2. THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Etiologic Agent
Coronaviruses are enveloped, single-stranded RNA viruses. With the exception of SARS-CoV and MERS-CoV, most human coronaviruses typically cause mild upper respiratory illness. This coronavirus causing COVID-19 was first identified in Wuhan, China in December 2019 among patients with severe respiratory illness and pneumonia. Early cases were associated with a large seafood and live animal market. The market was closed January 1, 2020, and person-to-person spread has since been confirmed. Genetic sequencing of isolates demonstrates that the COVID-19 virus is a
Novel Coronavirus (COVID-19)

*betacoronavirus* with roughly 80% genome identity with SARS-CoV and 50% with MERS-CoV.

### 2.2 Description of Illness
Symptoms may include fever, sore throat, dry cough, dyspnea, myalgias, and fatigue. Fever may not be present in the very young, very old, immunosuppressed, or people taking antipyretics. Gastrointestinal symptoms have been reported by some patients prior to developing fever and lower respiratory tract signs and symptoms. Reported complications have included pneumonia, acute respiratory distress syndrome, cardiac events, and death. Published case series indicate that cases tend to have lymphopenia.

### 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 the COVID-19 virus is unknown.

### 2.4 Sources and Routes of Transmission
This virus probably originated from an animal source—bats are currently suspected—but now appears to be spreading from person to person. Person-to-person transmission is probably primarily via respiratory droplets produced when an infected person coughs or sneezes, as is the case with influenza and pertussis. Spread of other coronaviruses (e.g., MERS and SARS) has occurred between close contacts. The possibility of transmission from feces, blood or other body fluids has not been ruled out.

Until the transmission dynamics of this virus are better understood, healthcare personnel should use standard, contact, and airborne precautions.

### 2.5 Incubation Period
Published data from 425 patients found a mean incubation period of 5 days with a 95th percentile of the distribution of 12 days. From this study and what we know of other coronaviruses, we consider the range to be 2–14 days.

### 2.6 Period of Communicability
Our understanding is still developing. Probably like other coronaviruses, viral shedding continues from symptom onset through symptom resolution. There are reports of shedding before symptoms develop.
3. CASE DEFINITIONS, DIAGNOSIS, AND LABORATORY SERVICES

3.1 Person Under Monitoring (PUM)
A PUM is an asymptomatic person with an epidemiologic exposure to the COVID-19 virus. The exposure may be close contact* with a confirmed case or with their respiratory secretions or clinical specimens; or designation as a PUM by CDC.

See §4.1 for guidance on classifying and monitoring PUMs.

3.2 Person Under Investigation (PUI) (Suspect Case)
A PUI is a person with:
- Fever OR signs/symptoms of lower respiratory illness (e.g., cough or shortness of breath) AND has had close contact with a laboratory-confirmed COVID-19 patient within 14 days of symptom onset
- OR
- Fever AND signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) AND a history of travel from an affected geographic area or a high-risk setting (e.g., cruise ship, long-term care facility, or other institutional setting) within 14 days of symptom onset
- OR
- Evidence of viral lower respiratory infection AND a negative influenza test AND has a clinical need for hospital admission.

PUIs will be tested for the COVID-19 virus. If test results are positive at OSPHL or another lab (as defined in §3.3), the PUI will become a presumptive case until confirmed at CDC; if test results are negative and there is no alternative diagnosis, the PUI should remain a suspect case. See §4.2 for testing criteria.

CDC may, at times, refer PUIs based on other epidemiologic exposures.

*Close contact is defined as:
1) Being within 6 feet of a COVID-19 case for a prolonged period of time. Close contact can include caring for, living with, visiting, or sitting within 6 feet of a confirmed novel coronavirus patient in a healthcare waiting area, or on an airplane; or
2) Having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on). If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection), criteria for PUI considerations are met.
These criteria provide a strategy for evaluation but aren’t set in stone. Patients should be evaluated and discussed with ACDP and LPHAs on a case-by-case basis if their clinical presentation or exposure history is equivocal (e.g., uncertain travel or exposure history).

3.3 Presumptive Case
A PUI who has the COVID-19 virus identified at any laboratory that has successfully verified the CDC testing panel under the FDA Emergency Use Authorization.

3.4 Confirmed Case
A case who has COVID-19 laboratory-confirmed at CDC; or someone who is clinically diagnosed outside of the U.S.

3.5 Laboratory Testing
Testing Guidance for Local Health Departments.
Testing through the Oregon State Public Health Laboratory (OSPHL) must be approved by ACDP. Please call ACDP at 971-673-1111 for approval.

Testing Guidance for Health Systems.
National guidance recently expanded the criteria for COVID-19 testing, deferring the testing decision in large part to clinicians. However, OSPHL has limited capacity for testing, so we have established criteria for testing there. Current guidance and the electronic report form to gain approval for such testing can be found here.

Guidance is changing often and may have changed since publication of this guideline. Current guidance for specimen collection, handling, and transport is posted on OSPHL’s Lab Test Menu (www.healthoregon.org/labtests) and in the CDC guidance on specimen collection, storage, and handling: www.cdc.gov/coronavirus/2019-nCoV/lab/guidelines-clinical-specimens.html.

Specimens from the lower respiratory tract (e.g., bronchial lavage, endotracheal aspirate, sputum) are preferred. Upper respiratory tract specimens (nasopharyngeal, oropharyngeal) are also acceptable for testing. In consideration of its testing capacity and demand, OSPHL may test only the most preferred specimen of several submitted.

Choice of specimen collection may rely upon the setting where specimen collection occurs. Specimens should be collected as soon as possible after a PUI is identified, regardless of symptom onset date.

Specimens should be collected while using proper PPE (gowns, gloves, N95 or powered air-purifying respirator, and eye protection) and in the proper room. 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.
Please share the following information with the facility or laboratory that is packing and shipping the specimens for testing at OSPHL:

- All specimens should be stored at 2°–8°C and shipped on an ice pack for receipt at OSPHL as soon as possible. If specimens will not arrive at OSPHL within 72 hours of collection, freeze at -70°C or lower and transport on dry ice.
- 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 OSPHL Virology/Immunology Test Request Form per specimen. In the Other/Molecular section, check the “Other” box and write or type in “2019-nCoV” or “COVID-19”.
- Transport specimens and required forms to OSPHL as soon as possible.

Whenever possible, existing courier systems should be used for specimen transport (e.g., hospital system couriers). If other courier systems are not available, contact OSPHL (503-693-4100) for help with specimen transport on the next available courier route. STAT transport of specimens for COVID-19 testing must be approved by ACDP.

Note: 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.

4. CASE INVESTIGATION

4.1 LPHA Interview, Monitoring, and Sharing of Expectations with PUMs

1. Interviewing

Once you are notified of, or identify, a PUM, enter the person into Orpheus, selecting the Disease “Person Under Monitoring.” LPHAs should attempt to contact all PUMs as soon as possible, but no later than 72 hours following notification. LPHAs should make a minimum of three attempts to establish contact by phone or e-mail. If successful communication is not established, the LPHA should mail the Letter to Persons Under Monitoring (4) to the provided address. If successful communication is made, complete the risk questions in Orpheus. The Letter to PUMs also may be used by the PUM to document any fever or other symptoms during their monitoring period. Use the Risk Assessment Flow Charts (Figures 1–4 and Table 1) or the Risk Assessment Tool (go to DUDE and click on the PUM RAT tool button) to determine the risk level, recommended level of monitoring, and requirements of self-quarantine. Enter “Risk Level” in Orpheus (high risk, medium risk – contact, medium risk – travel, low risk, or no risk) based on the risk level you identify. Enter the case status (under monitoring, transferred, or no case) based on the person’s current monitoring status. If communication with the individual is
unsuccessful, the person is still considered to be “under monitoring” for the 14-day period. At the end of the 14-day period, the status should be changed to “completed monitoring”.

LPHAs should establish reliable methods of communication with all PUMs when contact is established. PUMs should be directed to contact the ACDP on-call epidemiologist if the LPHA is unreachable.

2. Monitoring

- Persons under active monitoring (e.g., high-risk) should measure their temperature twice daily and monitor themselves for symptoms. They should report the results to the LPHA at least daily during their 14-day monitoring period. LPHAs should coordinate with PUMs under active monitoring to identify a daily communication plan, and LPHA staff should use the PUM module to log daily temperature and symptom information.

- Persons under self-monitoring with public health supervision should measure their temperature twice daily and monitor themselves for symptoms. If they develop fever >100.4°F, cough or difficulty breathing, they should contact the LPHA immediately to determine a plan to seek care safely. Public health supervision for medium risk-travel PUMs is optional; it is required for medium risk-contact PUMs.

- Those judged to be at low risk for developing disease can do self-observation. However, they should be instructed to remain alert for fever, cough, or difficulty breathing. If they feel feverish or develop cough or difficulty breathing during the self-observation period, they should take their temperature, limit contact with others, and call their LPHA for further guidance.

LPHAs should contact all high-risk or medium risk-contact PUMs on the 14th day after their last exposure to confirm that they’ve remained afebrile and asymptomatic, and to let them know they’ve completed monitoring. Update case status in Orpheus to “Completed Monitoring.”

3. Sharing Expectations with PUMs

- Quarantine
  i. PUMs at high risk should remain quarantined at a location that limits contact with others for the duration of their monitoring period. This includes avoiding congregate settings, such as work or school, and public places where close contact with others might occur.
  ii. PUMs at medium risk should remain home or in a comparable setting for the duration of their monitoring period. This includes avoiding congregate settings, such as work or school, and public places where close contact with others might occur.
  iii. PUMs at low risk have no movement restrictions.
• Travel Restriction
  
  i. PUMs at high risk should not use public transportation or otherwise travel in a way that exposes others for the duration of their monitoring period. They should postpone non-essential long-distance travel; and any essential travel should be coordinated with public health to ensure uninterrupted monitoring and how it may be done in a way that doesn't expose others.

  ii. PUMs at medium risk should consider postponing long-distance travel until after the conclusion of their monitoring period; medium-risk PUMs must avoid commercial transit or other modes of transportation that result in close contact with others. PUMs should be counseled that, if they become symptomatic while traveling, they might not be able to return home until the illness resolves.

  If a medium-risk PUM wants to travel across state lines:
    1. They should notify the LPHA prior to traveling. The LPHA should collect the following information from the PUM:
      a. Contact information (name (including parent or guardian if person is <18), phone number, physical address in state of origin and receiving state, email address, contact information for spouse or other personal contacts);
      b. Date of last potential exposure to COVID-19;
      c. Date of arrival in the U.S.;
      d. Date, time, and result of last reported public health contact;
      e. Expected date and time of person's arrival in receiving state; and
      f. Other relevant information
    2. ACDP will submit an Interstate Movement Notification using Epi-X

  iii. PUMs at low risk have no travel restrictions.

  4. A full contact investigation is not required for PUMs.

  Because PUMs are, by definition, asymptomatic and we are only interested in close contacts of symptomatic cases, it is not required to do a contact investigation of each PUM.

4.2 LPHA Interviews with PUIs

1. Interviewing

LPHAs should conduct a PUI contact investigation in three situations:
  1. A PUM develops symptoms consistent with COVID-19
  2. A person who was not under monitoring is identified as a symptomatic contact
  3. CDC or other partners inform ACDP of a PUI in Oregon
For all PUIs, create a new case in Orpheus with the condition “Coronavirus,” subtype “COVID-19/Pending test,” status “Suspect.” Once test results are received, if negative, update subtype to “COVID-19/Negative test”; if positive, change status according to case definitions in §3.2 and §3.3. If this person was a PUM and develops symptoms, create a new Coronavirus case for the person in Orpheus. Consult with ACDP as to whether this PUI should be isolated and if specimens should be collected for testing. Then contact the PUI, complete the CDC PUI Form, and upload it to Orpheus.

The following table explains testing criteria. If a PUI meets any of the three definitions, contact ACDP immediately. Additional testing criteria and considerations in the state of Oregon can be found in the COVID-19 Testing Triage Algorithm.

<table>
<thead>
<tr>
<th>Definition</th>
<th>Clinical Features</th>
<th>Epidemiologic Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Fever* -or-</td>
<td>In the 14 days before symptom onset, close contact** with a laboratory-confirmed COVID-19 patient.</td>
</tr>
<tr>
<td></td>
<td>symptoms of lower respiratory illness (e.g., cough, shortness of breath)</td>
<td>and</td>
</tr>
<tr>
<td>B</td>
<td>Fever* -and-</td>
<td>In the 14 days before symptom onset, a history of travel from affected geographic areas***</td>
</tr>
<tr>
<td></td>
<td>symptoms of lower respiratory illness (e.g., cough, shortness of breath)</td>
<td>and</td>
</tr>
<tr>
<td>C</td>
<td>Fever* with severe acute lower respiratory illness (e.g., pneumonia, ARDS) requiring hospitalization and without alternative explanatory diagnosis (e.g., influenza)</td>
<td>No source of exposure has been identified</td>
</tr>
</tbody>
</table>

*Measured to be >100.4° F (38° C) or subjective fever may not be present in some patients, such as the very young, elderly, immunosuppressed, or those taking antipyretics. Clinical judgment should be used to guide testing of patients in such situations.
**Close contact is defined as:
- Being within 6 feet of a COVID-19 case for a prolonged period of time. Close contact can include caring for, living with, visiting, or sitting within 6 feet of a confirmed novel coronavirus patient in a healthcare waiting area, or on an airplane.
- Having direct contact with infectious secretions of a novel coronavirus case (e.g., being coughed on) If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection), criteria for PUI consideration are met.
***Affected geographic areas with widespread or sustained community transmission:
- China
- Iran
- Italy
- Japan
2. Identify Persons Potentially Exposed to PUIs and Cases

Obtain the name, address, and telephone number of all persons who have had significant exposure to a PUI or a case from the onset of symptoms until the PUI or case is in isolation. These include:

- all persons who have been within 6 feet of a PUI or COVID-19 case for a prolonged period of time
- anyone who has cared for, lived with, visited, or sat within 6 feet of a PUI or a confirmed COVID-19 patient in a healthcare waiting area, or on an airplane; and
- anyone who had direct contact with infectious secretions of a PUI or COVID-19 case (e.g., being coughed on)

These people should be tracked as PUMs and should be further evaluated as PUIs if they become symptomatic.

Note: healthcare personnel exposure is defined as the provision of patient care to or prolonged, close contact with a COVID-19 case without appropriate personal protective equipment. Public health generally delegates supervision of employee symptom monitoring and work exclusions to the affected healthcare facility. CDC guidance provides detailed considerations for monitoring and work exclusions after a potential exposure to a COVID-19 case.

3. Symptomatic Persons Who Do Not Meet PUM or PUI Criteria

As guidance continues to change, not all persons will fall clearly into a PUM or PUI category. Individuals who are symptomatic and have an epi-link to a COVID-19 case (but are not close contacts of the case) and have not been approved for testing can be entered in Orpheus as cases with the condition “Coronavirus,” subtype “COVID-19,” status “No case” for tracking purposes. The status can be changed to “Suspect” if the person is approved for testing. For detailed information on classification in Orpheus of persons potentially exposed to COVID-19, please review Table 2.

4.3 OPHD Report of Presumptive Positive PUIs to CDC Emergency Operations Center

ACDP will immediately report all known presumptively laboratory-positive PUIs to CDC’s Emergency Operations Center (EOC) at 770-488-7100. ACPD will send the completed CDC PUI Form to the appropriate contact at CDC as directed by the EOC duty officer.

4.4 Interpreting Test Results for COVID-19 virus

When a PUI tests positive for COVID-19 at a lab other than CDC’s, their case is presumptive, and their case status should be changed accordingly. When a presumptive case of COVID-19 tests positive for COVID-19 through confirmatory testing at CDC, their case is confirmed, and their case status should be changed accordingly.
Confirmed or presumptive PUIs shall remain under home isolation precautions for 7 days OR until 72 hours after fever is gone and symptoms get better, whichever is longer.

5. CONTROLLING FURTHER SPREAD

5.1 Isolation of Cases

1. **Hospitalized Cases**
   Although transmission of the COVID-19 virus is presumed to occur via respiratory droplets, the evidence is not definitive. For now, patients with suspected COVID-19 should be placed under standard, contact and airborne precautions, and healthcare workers should also use eye protection. When possible, patients should be placed in an airborne infection isolation room. Patients not requiring hospitalization should follow the *Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for 2019 Novel Coronavirus (2019-nCoV)*.

   We recognize the disconnect between recommending airborne isolation for hospitalized cases but also saying that home care, where there are no airborne isolation rooms, is an option. With our present understanding of transmission, the more symptomatic someone is, the more likely they are to be able to transmit the disease. This recommendation for home care is an acknowledgment that resources like airborne isolation rooms are not unlimited; and that any hospitalization carries a risk of transmission to vulnerable persons.

   **Discontinuation of Isolation**
   CDC released *Interim Guidance for Discontinuation of Transmission-Based Precautions Among Hospitalized Patients with COVID-19* for when transmission based precautions can be lifted for hospitalized PUIs or COVID-19 cases.

2. **Cases not requiring hospitalization**
   PUIs or COVID-19 cases who do not require hospitalization should isolate themselves at home except to receive medical care. When possible, PUIs or COVID-19 cases should take care to not handle pets or other animals while sick. Refer to the *Interim Guidance for Preventing the Spread of Coronavirus 2019 (COVID-19) in Homes and Residential Communities* for comprehensive guidance.

   **Discontinuation of isolation**
   Confirmed or presumptive PUIs shall remain under home isolation precautions for 7 days OR until 72 hours after fever is gone and symptoms get better, whichever is longer.

5.2 Case Follow-Up

   More details as they are determined.
5.3 Protection of Contacts
Contacts of cases should be identified and monitored as PUMs starting from the date of first close contact and continuing for 14 days after their last contact with the case. See §4.1 for guidance on how to manage PUMs.

6. MANAGING SPECIAL SITUATIONS

6.1 Healthcare Facility Infection Control
Key considerations for infection control can be found in the Interim Infection Control Guidance for COVID-19 (5).

6.2 Pregnant Persons
There is currently not enough information to determine if pregnant persons are more susceptible to COVID-19, nor is there information on how having COVID-19 might affect pregnancy outcomes. Pregnant persons should engage in usual preventive actions to avoid infections, including frequent hand washing and avoiding people who are sick.

There is limited information about vertical transmission of COVID-19. In a recent case series, no infants born to persons with COVID-19 tested positive for the COVID-19 virus. The virus was not detected in amniotic fluid or the breast milk of persons with COVID-19. Transmission after birth via close contact is a concern.

6.3 Transportation by EMS
If a presumptive positive case is transported by EMS, the state public health division will identify the relevant EMS entities and transmit details to the LPHA for follow up.

REFERENCES
UPDATE LOG


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)


January 2020. First draft. (Nicole West, Amanda Faulkner, Steve Rekant)
Figure 1.

A potential PUM is identified. Follow all of the flowcharts that apply.

- Was this a personal contact exposure?
- Was this a healthcare worker exposure?
- Was this an airplane contact exposure?
- Was this a geographic (mainland China) exposure?

Complete the Personal Contact Exposure flowchart.
Complete the Healthcare Worker Exposure flowchart.
Complete the Airplane Contact Exposure flowchart.
Complete the Geographic Travel Exposure flowchart.

Identify the **HIGHEST** risk. This is the risk for the person in question.
Figure 2. Evaluating risk from close contact.

* Case is defined as a symptomatic, confirmed case. Confirmation can happen by testing (U.S.) or clinical diagnosis (not U.S.)
** Being within 6 feet of a COVID-19 case for a prolonged period of time. Close contact can include caring for, living with, visiting, or sitting within 6 feet of a confirmed novel coronavirus patient in a healthcare waiting area, or on an airplane; or having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on). If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection).
*** Precautions are defined as routinely washing your hands, avoiding sharing personal items, isolating the sick person, and ensuring the sick person wore a mask while you were around.

LPHA is made aware of a contact of a case* of 2019-nCoV

Were you in the same indoor environment as a case for a prolonged period?

Yes

Did you have close contact** with the case?

Yes

Was this a household contact?

Yes

Did you consistently follow all of the precautions*** the whole time?

Yes

Medium risk due to contact

No

Low risk

No

No identifiable risk

No

Medium risk due to contact

No

High risk

No

Yes
Figure 3. Evaluating risk for healthcare workers.

- Case is defined as a symptomatic, confirmed case. Confirmation can happen by testing (U.S.) or clinical diagnosis (not U.S.)
- ** Being within 6 feet of a COVID-19 case for a prolonged period of time. Close contact can include caring for, living with, visiting, or sitting within 6 feet of a confirmed novel coronavirus patient in a healthcare waiting area, or on an airplane; or having direct contact with infectious secretions of a COVID-19 case (e.g., being coughed on). If such contact occurs while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection).
- *** Full PPE is defined as gloves, a gown, respiratory protection (PAPR or N95), and eye protection.

1. LPHA is made aware of a contact of a confirmed case* of 2019-nCoV
2. Were you in the same indoor environment as a case for a prolonged period?
   - Yes: Did you have close contact** with the case?
     - Yes: Did you consistently use full PPE*** the whole time?
       - Yes: Medium risk due to contact
       - No: High risk
     - No: Low risk
   - No: No identifiable risk

Figure 4. Evaluating risk contact with a case on an airplane.

- Case is defined as a symptomatic, confirmed case. Confirmation can happen by testing (U.S.) or clinical diagnosis (not U.S.)
- ** Use the CDC figure to determine risk areas.
- *** If you are not certain, default to the higher risk category.

DGMQ is made aware of a contact of a case* of 2019-nCoV who had traveled on an airplane

DGMQ notifies OHA that an Oregon resident was seated on the plane in an area of possible risk**, including seat of the case and the Oregon resident

- Is the flight and seat information correct?
  - Yes
    - Were you sitting within two rows of the case?
      - Yes
        - Were you sitting within 6 feet*** of the case?
          - Yes
            - Medium risk due to contact
          - No
            - Low risk
        - No
          - No identifiable risk
      - No
        - Contact OHA
  - No
    - No identifiable risk

* indicates a case that meets the World Health Organization (WHO) criteria of a probable or possible COVID-19 case.

** Indicates that the Oregon Health Authority (OHA) is tracking the case.

*** Indicates that the CDC considers exposure to be medium risk if the contact is within 6 feet of the case for 15 minutes or longer.
Figure 5. Evaluating risk from travel to China.

1. LPHA is made aware of a person with recent travel to China.
2. Did you travel to mainland China, including Hubei in the past 14 days?
   - Yes: Did you travel to Hubei Province?
     - Yes: High risk
     - No: Medium risk due to travel
   - No: No risk
<table>
<thead>
<tr>
<th>Risk level (1 = high, 5 = low)</th>
<th>Risk description</th>
<th>Movement restrictions and public activities</th>
<th>Monitoring recommendations</th>
<th>Travel recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High risk</td>
<td>Remain quarantined (voluntary or under public health orders on a case-by-case basis) in a location to be determined by public health authorities. No public activities.</td>
<td>Daily active monitoring</td>
<td>Controlled</td>
</tr>
<tr>
<td>2</td>
<td>Medium risk due to contact</td>
<td>To the extent possible, remain at home or in a comparable setting. Avoid congregate settings, limit public activities, and practice social distancing.</td>
<td>Active monitoring</td>
<td>Recommendation to postpone additional long-distance travel after they reach their final destination. People who intend to travel should be advised that they might not be able to return if they become symptomatic during travel.</td>
</tr>
<tr>
<td>3</td>
<td>Medium risk due to travel</td>
<td>To the extent possible, remain at home or in a comparable setting. Avoid congregate settings, limit public activities, and practice social distancing.</td>
<td>Self-monitoring with public health supervision</td>
<td>Recommendation to postpone additional long-distance travel after they reach their final destination. People who intend to travel should be advised that they might not be able to return if they become symptomatic during travel.</td>
</tr>
<tr>
<td>4</td>
<td>Low risk</td>
<td>No restriction</td>
<td>Self-observation</td>
<td>No restriction</td>
</tr>
<tr>
<td>5</td>
<td>No risk</td>
<td>No restriction</td>
<td>None</td>
<td>No restriction</td>
</tr>
</tbody>
</table>
Table 2. Reporting PUMs, PUIs, and Cases in Orpheus

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Signs/Symptoms</th>
<th>Testing Approval</th>
<th>Testing Results</th>
<th>Orpheus Disease Name</th>
<th>Orpheus Status</th>
<th>Orpheus Subtype / Risk Level**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report as PUM via DGMQ, but person reports no travel or contact.</td>
<td>Asymptomatic</td>
<td>No</td>
<td>N/A</td>
<td>Person Under Monitoring</td>
<td>No Case</td>
<td>No risk</td>
</tr>
<tr>
<td>Travel to mainland China in the past 14 days</td>
<td>Asymptomatic</td>
<td>No</td>
<td>N/A</td>
<td>Person Under Monitoring</td>
<td>Under Monitoring, Completed Monitoring, or Transferred</td>
<td>High risk or Medium risk – travel</td>
</tr>
<tr>
<td>Travel to mainland China in the past 14 days</td>
<td>Fever and signs/symptoms of a lower respiratory illness NOT requiring hospitalization</td>
<td>No</td>
<td>N/A</td>
<td>Person Under Monitoring</td>
<td>Under Monitoring, Completed Monitoring, or Transferred</td>
<td>High risk or Medium risk – travel</td>
</tr>
<tr>
<td>Travel to mainland China in the past 14 days</td>
<td>Fever and signs/symptoms of a lower respiratory illness requiring hospitalization</td>
<td>Yes</td>
<td>Positive</td>
<td>Coronavirus</td>
<td>Presumptive or Confirmed</td>
<td>COVID-19</td>
</tr>
<tr>
<td>Travel to mainland China in the past 14 days</td>
<td>Fever and signs/symptoms of a lower respiratory illness requiring hospitalization</td>
<td>Yes</td>
<td>Negative or Pending</td>
<td>Coronavirus</td>
<td>Suspect</td>
<td>COVID-19/Negative test or COVID-19/Pending test</td>
</tr>
<tr>
<td>Travel to another affected geographic area* in the past 14 days</td>
<td>Asymptomatic</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Travel to another affected geographic area* within 14 days of symptom onset</td>
<td>Fever and signs/symptoms of a lower respiratory illness NOT requiring hospitalization</td>
<td>No</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note: If an individual is identified as being at risk for COVID-19 when they are already symptomatic, only a coronavirus record in Orpheus needs to be created. No Person Under Monitoring record is required. Person Under Monitoring records are created for asymptomatic persons at risk for COVID-19.
## Novel Coronavirus (COVID-19)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Symptoms</th>
<th>Test Result</th>
<th>Diagnosis</th>
<th>Risk Level</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Travel to another affected geographic area* within 14 days of symptom on set</td>
<td>Fever and signs/symptoms of a lower respiratory illness requiring hospitalization</td>
<td>Yes</td>
<td>Positive Coronavirus</td>
<td>Presumptive or Confirmed</td>
<td>COVID-19</td>
</tr>
<tr>
<td>Travel to another affected geographic area* within 14 days of symptom on set</td>
<td>Fever and signs/symptoms of a lower respiratory illness requiring hospitalization</td>
<td>Yes</td>
<td>Negative or Pending</td>
<td>Suspect</td>
<td>COVID-19/Negative test or COVID-19/Pending test</td>
</tr>
<tr>
<td>Contact with COVID-19 case or secretions</td>
<td>Asymptomatic</td>
<td>No</td>
<td>N/A</td>
<td>Person Under Monitoring</td>
<td>Under Monitoring, Completed Monitoring, or Transferred</td>
</tr>
<tr>
<td>Close contact with a lab-confirmed COVID-19 patient within 14 days of symptom on set</td>
<td>Fever or signs/symptoms of lower respiratory illness</td>
<td>Yes</td>
<td>Positive Coronavirus</td>
<td>Presumptive or Confirmed</td>
<td>COVID-19</td>
</tr>
<tr>
<td>Close contact with a lab-confirmed COVID-19 patient within 14 days of symptom on set</td>
<td>Fever or signs/symptoms of lower respiratory illness</td>
<td>Yes</td>
<td>Negative or Pending</td>
<td>Suspect</td>
<td>COVID-19/Negative test or COVID-19/Pending test</td>
</tr>
<tr>
<td>No known exposure</td>
<td>Evidence of viral lower respiratory pneumonia AND negative influenza test AND need for hospital admission</td>
<td>Submitted via eMemento Morbi; final review by ACDP</td>
<td>Positive</td>
<td>Coronavirus</td>
<td>Presumptive or Confirmed</td>
</tr>
<tr>
<td>No known exposure</td>
<td>Evidence of viral lower respiratory pneumonia AND negative influenza test AND need for hospital admission</td>
<td>Submitted via eMemento Morbi; final review by ACDP</td>
<td>Negative or Pending</td>
<td>Coronavirus</td>
<td>Suspect</td>
</tr>
</tbody>
</table>

*As of March 3, 2020, CDC recognizes the following geographic areas as having sustained transmission (community or widespread):
  - Iran
  - Italy
  - Japan
  - South Korea
  - Cruise Ships

**For Persons Under Monitoring (PUMs), complete the risk module to assign appropriate risk level.