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| DATE: | 1/31/2020 |
| TO: | Health Alert Network |
| FROM: | Rachel Levine, MD, Secretary of Health |
| SUBJECT: | 2019 Novel Coronavirus (2019-nCoV) Interim Guidance for Healthcare Professionals |
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This transmission is a “Health Advisory”: provides important information for a specific incident or situation; may not require immediate action.

HOSPITALS: PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, NURSING AND LABORATORY STAFF IN YOUR HOSPITAL; **EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE; **FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE **LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE; **PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP; **LONG-TERM CARE FACILITIES:** PLEASE SHARE WITH ALL MEDICAL, INFECTION CONTROL, AND NURSING STAFF IN YOUR FACILITY

The Pennsylvania Department of Health is releasing updated guidance from the Centers for Disease Control and Prevention (CDC), including criteria for evaluation of travelers from affected areas in China.

- An important change from previous guidance is that **travelers from China elsewhere than Wuhan City** who develop illness need to be evaluated:
 - **Hubei Province**, with fever and signs of lower respiratory illness; or
 - **Mainland China**, with fever and signs of lower respiratory illness requiring hospitalization
- Health care providers should contact the Pennsylvania Department of Health at 1-877-PA-HEALTH or local health department about possible cases of the 2019 novel Coronavirus
- Clinical specimens should be collected from Patients under Investigation (PUIs) for routine testing of respiratory pathogens at either clinical or public health labs
- Testing at the PA DOH Bureau of Laboratories and/or Centers for Disease Control and Prevention (CDC) must be approved by PA DOH Bureau of Epidemiology
- Specimens cannot be sent to CDC until a CDC nCoV ID number has been issued

Interim Guidance for Healthcare Professionals (<https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>)

Limited information is available to characterize the spectrum of clinical illness associated with 2019 novel coronavirus (2019-nCoV). No vaccine or specific treatment for 2019-nCoV infection is available; care is supportive.

The CDC clinical criteria for a 2019-nCoV patient under investigation (PUI) have been developed based on what is known about MERS-CoV and SARS-CoV and are subject to change as additional information becomes available.

Health care providers should obtain a detailed travel history for patients being evaluated with fever and acute respiratory illness. CDC guidance for evaluating and reporting a [PUI for MERS-CoV](#) remains unchanged.

Criteria to Guide Evaluation of Patients Under Investigation (PUI) for 2019-nCoV

Patients in the United States who meet the following criteria should be evaluated as a PUI for 2019-nCoV.

| Clinical Features | & | Epidemiologic Risk |
|---|------------|--|
| Fever ¹ or signs/symptoms of lower respiratory illness (e.g. cough or shortness of breath) | AND | Any person, including health care workers, who has had close contact ² with a laboratory-confirmed ^{3,4} 2019-nCoV patient within 14 days of symptom onset |
| Fever ¹ and signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) | AND | A history of travel from Hubei Province , China within 14 days of symptom onset |
| Fever ¹ and signs/symptoms of a lower respiratory illness (e.g., cough or shortness of breath) requiring hospitalization ⁴ | AND | A history of travel from mainland China within 14 days of symptom onset |

The criteria are intended to serve as guidance for evaluation. Patients should be evaluated and discussed with public health departments on a case-by-case basis if their clinical presentation or exposure history is equivocal (e.g., uncertain travel or exposure).

Interim Clinical Guidance for Management of Patients with Confirmed 2019 Novel Coronavirus (2019-nCoV) Infection, Updated January 30, 2020

(<https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html>)

This interim guidance is for clinicians caring for patients with confirmed 2019 novel coronavirus (2019-nCoV) infection. CDC will update this interim guidance as more information becomes available.

Clinical Presentation

There are a limited number of reports that describe the clinical presentation of patients with confirmed 2019-nCoV infection, and most are limited to hospitalized patients with pneumonia. The incubation period is estimated at ~5 days (95% confidence interval, 4 to 7 days). Frequently reported signs and symptoms include fever (83–98%), cough (76%–82%), and myalgia or

fatigue (11–44%) at illness onset. Sore throat has also been reported in some patients early in the clinical course. Less commonly reported symptoms include sputum production, headache, hemoptysis, and diarrhea. The fever course among patients with 2019-nCoV infection is not fully understood; it may be prolonged and intermittent. Asymptomatic infection has been described in one child with confirmed 2019-nCoV infection and chest computed tomography (CT) abnormalities.

Risk factors for severe illness are not yet clear, although older patients and those with chronic medical conditions may be at higher risk for severe illness. Nearly all reported cases have occurred in adults (median age 59 years). In one study of 425 patients with pneumonia and confirmed 2019-nCoV infection, 57% were male. Approximately one-third to one-half of reported patients had underlying medical comorbidities, including diabetes, hypertension, and cardiovascular disease.

Clinical Course

Clinical presentation among reported cases of 2019-nCoV infection varies in severity from asymptomatic infection or mild illness to severe or fatal illness. Some reports suggest the potential for clinical deterioration during the second week of illness. In one report, among patients with confirmed 2019-nCoV infection and pneumonia, just over half of patients developed dyspnea a median of 8 days after illness onset (range: 5–13 days).

Acute respiratory distress syndrome (ARDS) developed in 17–29% of hospitalized patients, and secondary infection developed in 10%. Between 23–32% of hospitalized patients with 2019-nCoV infection required intensive care for respiratory support. Some hospitalized patients have required advanced organ support with invasive mechanical ventilation (4–10%), and a small proportion have also required extracorporeal membrane oxygenation (ECMO, 3–5%). Other reported complications include acute cardiac injury (12%) and acute kidney injury (4–7%). Among hospitalized patients with pneumonia, the case fatality proportion has been reported as high as 11–15%. However, as this estimate includes only-hospitalized patients, and therefore is biased upward.

Diagnostic Testing

Currently, confirmation of 2019-nCoV infection is performed at CDC using the CDC real-time RT-PCR assay for 2019-nCoV on respiratory specimens (which can include nasopharyngeal or oropharyngeal aspirates or washes, nasopharyngeal or oropharyngeal swabs, bronchoalveolar lavage, tracheal aspirates, or sputum) and serum. Information on specimen collection, handling, and storage is available at: [Real-Time RT-PCR Panel for Detection 2019-Novel Coronavirus](#). After initial confirmation of 2019-nCoV infection, additional testing of clinical specimens can help inform clinical management, including discharge planning.

Laboratory and Radiographic Findings

The most common laboratory abnormalities reported among hospitalized patients with pneumonia on admission included leukopenia (9–25%), leukocytosis (24–30%), lymphopenia (63%), and elevated alanine aminotransferase and aspartate aminotransferase levels (37%). Most patients had normal serum levels of procalcitonin on admission. Chest CT images have shown bilateral involvement in most patients. Multiple areas of consolidation and ground glass opacities are typical findings reported to date.

2019-nCoV RNA has been detected from upper and lower respiratory tract specimens, and the virus has been isolated from bronchoalveolar lavage fluid. The duration of shedding of 2019-nCoV RNA in the upper and lower respiratory tracts is not yet known but may be several weeks or longer, which has been observed in cases of MERS-CoV or SARS-CoV infection.

Clinical Management and Treatment

No specific treatment for 2019-nCoV infection is currently available. Clinical management includes prompt implementation of recommended infection prevention and control measures and supportive management of complications, including advanced organ support if indicated. Corticosteroids should be avoided unless indicated for other reasons (for example, chronic obstructive pulmonary disease exacerbation or septic shock per [Surviving Sepsis guidelines](#), because of the potential for prolonging viral replication as observed in MERS-CoV patients. For more information, see: [WHO interim guidance on clinical management of severe acute respiratory infection when novel coronavirus \(nCoV\) infection is suspected](#) and [Diagnosis and Treatment of Adults with Community-acquired Pneumonia. An Official Clinical Practice Guideline of the American Thoracic Society and Infectious Diseases Society of America](#).

Healthcare personnel should care for patients in an Airborne Infection Isolation Room (AIIM). Standard Precautions, Contact Precautions, and Airborne Precautions and eye protection should be used when caring for the patient. See [Interim Health Care Infection Prevention and Control Recommendations for Patients Under Investigation for 2019 Novel Coronavirus](#).

Patients with a mild clinical presentation may not initially require hospitalization. However, clinical signs and symptoms may worsen with progression to lower respiratory tract disease in the second week of illness; all patients should be monitored closely. Possible risk factors for progressing to severe illness may include, but are not limited to, older age, and underlying chronic medical conditions such as lung disease, cancer, heart failure, cerebrovascular disease, renal disease, liver disease, diabetes, immunocompromising conditions, and pregnancy. The decision to monitor a patient in the inpatient or outpatient setting should be made on a case-by-case basis. This decision will depend not only on the clinical presentation, but also on the patient's ability to engage in monitoring and the risk of transmission in the patient's home environment. For more information, see [Criteria to Guide Evaluation of Patients Under Investigation \(PUI\) for 2019-nCoV](#).

Additional resources:

- [Interim Guidance for Healthcare Professionals](#).
- [Resources for Hospitals and Healthcare Professionals Preparing for Patients with Suspected or Confirmed 2019-nCoV](#)
- [Interim Health Care Infection Prevention and Control Recommendations for Patients Under Investigation for 2019 Novel Coronavirus](#)
- [World Health Organization. Interim Guidance on Clinical management of severe acute respiratory infection when novel coronavirus \(nCoV\) infection is suspected](#)
- [American Thoracic Society and Infectious Diseases Society of America Clinical Practice Guidelines. Diagnosis and treatment of adults with community-acquired pneumonia](#)
- [Surviving Sepsis Campaign: International Guidelines for Management of Sepsis and Septic Shock: 2016](#)
- [Clinical Practice Guidelines by the Infectious Diseases Society of America: 2018 Update on Diagnosis, Treatment, Chemoprophylaxis, and Institutional Outbreak Management of Seasonal Influenza](#)

References

Available at <https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html>.

Footnotes

¹Fever may be subjective or confirmed

²Close contact is defined as—

- a) being within approximately 6 feet (2 meters), or within the room or care area, of a 2019-nCoV case for a prolonged period of time while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection); close contact can include caring for, living with, visiting, or sharing a health care waiting area or room with a 2019-nCoV case – or –
- b) having direct contact with infectious secretions of a 2019-nCoV case (e.g., being coughed on) while not wearing recommended personal protective equipment.

See CDC's updated [Interim Healthcare Infection Prevention and Control Recommendations for Patients Under Investigation for 2019 Novel Coronavirus](#).

Data to inform the definition of close contact are limited. Considerations when assessing close contact include the duration of exposure (e.g., longer exposure time likely increases exposure risk) and the clinical symptoms of the person with 2019-nCoV (e.g., coughing likely increases exposure risk as does exposure to a severely ill patient). Special consideration should be given to those exposed in health care settings.

³Documentation of laboratory-confirmation of 2019-nCoV may not be possible for travelers or persons caring for patients in other countries.

⁴Category also includes any member of a cluster of patients with severe acute lower respiratory illness (e.g., pneumonia, ARDS) of unknown etiology in which 2019-nCoV is being considered that requires hospitalization. Such persons should be evaluated in consultation with state and local health departments regardless of travel history.

Please report any suspected cases of the **2019 novel Coronavirus** by calling DOH at 1-877-PA-HEALTH (1-877-724-3258) or your local health department.

Categories of Health Alert messages:

Health Alert: conveys the highest level of importance; warrants immediate action or attention.

Health Advisory: provides important information for a specific incident or situation; may not require immediate action.

Health Update: provides updated information regarding an incident or situation; unlikely to require immediate action.

This information is current as of January 31, 2020, but may be modified in the future. We will continue to post updated information regarding the most common questions about this subject.