

Coronavirus Disease Briefing and CDC Resources

The public health community continues to respond to the worldwide outbreak of the novel coronavirus originating from Wuhan City, China. Information about the virus and its associated clinical syndrome is still limited. Much of the Centers for Disease Control and Prevention (CDC) response is drawn from guidance developed in preparation for an influenza pandemic.¹ The virus is being referred to as “SARS-CoV-2,” and the clinical syndrome as “coronavirus disease 2019” (COVID-19).² This document is intended to:

1. Brief clinicians on the status of and recommended public health response to the SARS-CoV-2 outbreak
2. Provide a directory of high-value online CDC information resources that are publicly available and updated daily
3. Encourage clinicians to coordinate with local and state health departments when evaluating or providing care to patients with known or suspected COVID-19

Key Points

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Status and Transmission

At the time of this writing, the CDC is reporting 938 confirmed cases of COVID-19 across 39 jurisdictions, resulting in 29 deaths. Ninety-two cases are travel-related, 75 are the result of person-to-person spread, and 771 are still under investigation.² Much remains to be learned because COVID-19 is a new disease. Our current understanding is largely based on what is known about the transmission pattern of similar coronaviruses.

The following outlines what is known about spread of the virus.³

- **Person-to-person spread is thought to be the predominant route of transmission**
 - Sick patients transmit the virus through airborne droplets to close contacts (within ~ 6 feet).
 - Individuals are believed to be most infectious when they are the sickest
 - Spread may be possible before symptoms arise, but this is not thought to be a major route of transmission
- **Transmission through contact with infected surfaces** This is not believed to be the major route of transmission; however, spread may be possible by touching a contaminated surface or object and then touching the mouth, nose, and possibly eyes.

Clinical Presentation

Early data are emerging, but much remains unknown about the clinical course of COVID-19. Current information suggests that symptoms are likely to manifest 4-7 days after exposure to SARS-CoV-2. Patients are likely to present with a flu-like illness. The most frequently reported clinical features include fever (77-98%), cough (46-82%), myalgias or fatigue (11-52%), and shortness of breath (3-31%). Less common symptoms include sore throat, headache, nausea, and diarrhea. Leukocytosis (24-30%), leukopenia (9-25%), and elevated liver transaminases (37%) are common laboratory abnormalities. Patients with pneumonia frequently demonstrate bilateral lung involvement with ground glass opacities on chest CT.²

Li et al. published a detailed summary of the first 425 cases reported in Wuhan. The authors noted the limitations of their study given the early stage and sample size of their data. However, they reported that older patients appear to be more vulnerable, with higher mortality among the elderly and patients with comorbidities (similar to what is seen in influenza infection). The median age of patients was 59 years, 56% were male, and there were no cases under 15 years of age.⁴ The CDC is reporting that 20-30% of hospitalized patients with pneumonia require intensive care and 30% of hospitalized patients develop acute respiratory distress syndrome. Older individuals and those with comorbidities are at highest risk. Data from 44,000 confirmed cases from China report a mortality rate of 3.6% among patients 60-69 years old, 8% among those 70-79 years old, and 15% among those > 80 years old. Patients with no medical conditions had the lowest mortality (0.9%). However, mortality was much higher among those with CVD (11%), diabetes (7%), chronic lung disease (6%), hypertension (6%), and cancer (6%).¹

Patients with known or suspected COVID-19 should receive supportive care with appropriate isolation and infection control precautions. Coordinate care and monitoring with local and state health departments.

Patients with 1) clinical features consistent with infection, and 2) significant risk factors such as travel to China, Japan, South Korea, Iran, or Italy, within 14 days of symptom onset, or close contact with individuals with high risk of coronavirus exposure should be considered a “**Person Under Investigation**”. Care providers should implement appropriate isolation and infection control precautions as early as possible, while providing supportive care. Care providers should also notify local and state public health departments and on-site infection control personnel.⁵

In preparation for the possibility of a community outbreak with a large number of individuals with potential infection seeking care, practices should review their infection control procedures. They should also begin exploring options for phone-based patient interviewing, triaging, and communication to support identification and care of Persons Under Investigation, without exposing office care teams and other patients to unnecessary risk of infection.

As the availability of the [RT-PCR assay](#) becomes more widespread, the CDC recommends testing for SARS-CoV-2 in symptomatic patients. Clinical judgment should be used to identify patients who should be tested based on the clinical presentation, history of travel to affected areas, potential close contact with someone with COVID-19, and local epidemiology patterns. The CDC strongly encourages testing for other respiratory pathogens (e.g., influenza) along with SARS-CoV-2.⁵

Coronavirus testing is now covered by Medicare.

CMS created a new Healthcare Common Procedure Coding System (HCPCS) code for COVID-19 testing (U0001). It can be submitted after April 1, 2020 for dates of service on or after February 4, 2020.^{6,7} LabCorp has also announced that it is offering a COVID-19 test for ordering by physicians or other authorized healthcare providers anywhere in the U.S.⁸

No specific treatments are available at this time

Early data suggest a wide spectrum of disease severity, with the majority of patients able to recover from COVID-19 with supportive care. The World Health Organization reports a global mortality rate of 3.5%.⁹ Clinical deterioration, if it occurs, tends to occur around the second week of illness. Li et al. reported a mean interval of 9.1-12.5 days between symptom onset and hospitalization.⁴ Reports from China suggest that 20-30% of hospitalized patients with pneumonia require intensive care and 30% of hospitalized patients develop acute respiratory distress syndrome. Unless there is another indication for their use, the CDC recommends avoiding the administration of corticosteroids, given the possibility this may prolong viral replication.¹

Plans for vaccine development and clinical trials are underway, with plans to initiate phase 1 trials by early spring. However, even if a safe and effective approach is identified, the earliest availability for widespread public use might still be at least one year away. Multiple therapies are also being explored including use of antivirals lopinavir-ritonavir and remdesivir, interferon-1 β , and chloroquine.¹⁰ Intravenous hyperimmune globulins from infected individuals who have recovered, may be an option for early intervention.

Patients with known or suspected COVID-19 should remain in voluntary isolation until the risk of transmission is low

Persons under investigation who do not require hospitalization should adhere to isolation precautions until the risk of transmission is low (still to be defined; perhaps 14 days). Residential, home-based care can be appropriate if 1) the patient is sufficiently stable, 2) there is adequate caregiver support, 3) caregivers have access to protective equipment and [information about preventing spread](#), 4) food and other necessary resources are available in the home, 5) there is dedicated space (e.g., a private bedroom) for the patient to recover, and 6) the household is free of patients at high-risk of complications from COVID-19 (e.g., elderly, infants, pregnant women, immunocompromised persons). Coordination with local public health authorities is recommended to manage discontinuation of isolation precautions.¹¹

Hospitalized patients with known or suspected COVID-19 should be managed under strict respiratory isolation precautions.

Hospitalized patients with known or suspected COVID-19 should be cared for with strict infection control measures, including airborne infection isolation, hand hygiene, and contact precautions. Personal protective equipment should be worn at all times including: 1) clean, non-sterile gloves, 2) isolation gowns, 3) respirators at least as effective as fit-tested N95 masks, and 4) eye protection. All personnel should be trained on the proper use of protective equipment and maintain good hand hygiene practices. The decision to discontinue isolation precautions should be made on a case-by-case basis and consider all of the following:¹²

1. Spontaneous resolution of fever (without antipyretic medications)
2. Global improvement in signs and symptoms
3. A total of four negative [RT-PCR results](#) from ≥ 2 consecutive sets of specimens collected ≥ 24 hours apart

CDC Information Resources Directory

There is a rapidly developing situation that is changing daily. The CDC is continually updating its guidance and this information can be accessed online, including:

Information for clinicians

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/index.html>

Information for patients

<https://www.cdc.gov/coronavirus/2019-ncov/about/index.html>

Evaluating and Reporting Persons Under Investigation (PUI)

<https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>

Interim Infection Prevention and Control Recommendations for Patients with Confirmed Coronavirus Disease 2019 (COVID-19) or Persons Under Investigation for COVID-19 in Healthcare Settings

<https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html>

Interim Clinical Guidance for Management of Patients with Confirmed Coronavirus Disease 2019 (COVID-19)

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

What Healthcare Personnel Should Know about Caring for Patients with Confirmed or Possible COVID-19 Infection

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/caring-for-patients.html>

Interim U.S. Guidance for Risk Assessment and Public Health Management of Healthcare Personnel with Potential Exposure in a Healthcare Setting to Patients with Coronavirus Disease 2019 (COVID-19)

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html>

Interim Guidance for Implementing Home Care of People Not Requiring Hospitalization for 2019 Novel Coronavirus (2019-nCoV)

<https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-home-care.html>

References

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- ² Coronavirus Disease 2019 (COVID-19) in the U.S. Centers for Disease Control and Prevention website. <https://www.cdc.gov/coronavirus/2019-ncov/cases-in-us.html> Updated: March 11, 2020.
- ³ How COVID-19 Spreads. Centers for Disease Control and Prevention website. <https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html>. Updated: March 4, 2020.
- ⁴ Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. *N Engl J Med*. 2020 Jan 29; Epub ahead of print. DOI: 10.1056/NEJMoa2001316
- ⁵ Coronavirus disease 2019 (COVID-19)—Evaluating and Reporting PUI. Centers for Disease Control and Prevention website. <https://www.cdc.gov/coronavirus/2019-nCoV/hcp/clinical-criteria.html>. Updated: March 4, 2020.
- ⁶ Medicare now covers coronavirus testing. Medicare website. <https://www.medicare.gov/blog/medicare-now-covers-coronavirus-testing>. Published: March 3, 2020.
- ⁷ Public Health News Alert: CMS Develops New Code for Coronavirus Lab Test. Centers for Medicare and Medicaid Services. <https://www.cms.gov/newsroom/press-releases/public-health-news-alert-cms-develops-new-code-coronavirus-lab-test>. Published: February 13, 2020.
- ⁸ Information from LabCorp about Coronavirus Disease 2019 (COVID-19). LabCorp website. <https://www.labcorp.com/information-labcorp-about-coronavirus-disease-2019-covid-19>. Published: March 5, 2020.
- ⁹ Coronavirus disease 2019 (COVID-19): situation report — 49. World Health Organization website. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200309-sitrep-49-covid-19.pdf?sfvrsn=70dabe61_4. Published: March 9, 2020.
- ¹⁰ WHO R&D blueprint: Informal consultation on prioritization of candidate therapeutic agents for use in novel coronavirus 2019 infection. World Health Organization website. <https://apps.who.int/iris/bitstream/handle/10665/330680/WHO-HEO-RDBlueprint%28nCoV%29-2020.1-eng.pdf>. Published: January 24, 2020.
- ¹¹ Coronavirus disease 2019 (COVID-19)—Implementing Home Care. Centers for Disease Control and Prevention website: https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-home-care.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fguidance-home-care.html. Updated: March 7, 2020.
- ¹² Coronavirus disease 2019 (COVID-19)— Interim Guidance for Discontinuation of Transmission-Based Precautions and Disposition of Hospitalized Patients with COVID-19. Centers for Disease Control and Prevention website. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/disposition-hospitalized-patients.html>. Updated: February 16, 2020.