



## Viral pandemic management (COVID-19)

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### Body system:

Infectious Diseases

The following recommendations should be followed and supplemented by adherence to the most current [Centers for Disease Control and Prevention \(CDC\)](#) and the [Occupational Safety and Health Administration \(OSHA\)](#) guidance references, which have evolved rapidly and continue to be subject to change.

### ODG Criteria

#### **Criteria for employees and employers (CDC, 2020):**

*Please check primary sources since federal, state, and local guidance changes may be frequently updated*

- Employees should notify their supervisor and stay home if they have symptoms (ie, fever, cough, shortness of breath)
- Sick employees should follow CDC recommended steps; Employees should not return to work until criteria to discontinue home isolation are met, in consultation with healthcare providers and state and local health departments
- Employees who are well but who have a sick family member at home with COVID-19 should notify their supervisor and follow CDC recommended precautions
- Employees who appear to have symptoms upon arrival to work or who become sick during the day should immediately be separated from other employees, customers, and visitors, and be promptly sent home
- Older adults and higher risk employees with chronic conditions should minimize face-to-face contact, maintaining a distance of 6 feet from others, and doing telework if possible
- If an employee is confirmed to have COVID-19 infection, employers should inform fellow employees of possible exposure to COVID-19 in the workplace, but maintain confidentiality as required by the Americans with Disabilities Act (ADA); Fellow employees should then self-monitor for symptoms
- Employers should not require a positive COVID-19 test result or a healthcare provider's note for employees who are sick to validate their illness, qualify for sick leave, or to return to work

#### **Isolation Recommendations:**

*CDC COVID-19 recommendations include several options regarding discontinuance of home isolation: (1) Time-since-illness-onset and time-since-recovery (non-test-based) strategy, and (2) Test-based strategy; Time since recovery is defined as resolution of fever without use of fever-reducing medications and improvement of respiratory symptoms (cough and shortness of breath)*

- **Non-test based strategy for employees with symptoms:** For symptoms of acute respiratory illness it is recommended to stay home and not come to work until at least 7 days have passed since symptoms first appeared, and at least 72 hours have followed recovery

- **Test-based strategy for test-positive employees with symptoms:** Contingent on availability of ample testing supplies and laboratory capacity, and convenient access to testing; Protocols have been simplified to require only one nasopharyngeal swab for sampling; Requires resolution of fever and symptoms as described for non-test-based strategy, and negative re-test results from at least two consecutive swab specimens collected at least 24-hours apart

- **Test-based strategy in test-positive employees with no symptoms:** May discontinue home isolation when at least 7 days have passed since first positive diagnostic test and without subsequent illness

**Additional Recommendations:**

- Posters that encourage staying home when sick, cough and sneeze etiquette, and hand hygiene should be placed at the workplace entrance and other visible areas
- Tissues, no-touch disposal receptacles, soap and water, and alcohol-based hand rubs should be readily available; practice social distancing and avoid large gatherings (per local standards)

**Criteria for health care personnel evaluating Patients Under Investigation (PUI):**

- Make every effort to interview PUI by telephone, text monitoring system, or video conferencing
- If health personnel must interview PUI face-to-face, they should wear recommended personal protective equipment (PPE) that completely covers clothing, skin, and mucous membranes, such as gown, gloves, face mask, and eye protection, following standard and airborne precautions
- More stringent criteria and additional recommendations are available for health care workers treating patients, depending on local jurisdictions and supply availability

**Criteria (general) from the Occupational Safety and Health Administration (OSHA, 2020):**

- Frequently wash hands with soap and water for at least 20 seconds; If soap and water are unavailable, use an alcohol-based hand rub with at least 60% alcohol
- Avoid touching face, eyes, nose, or mouth with unwashed hands
- Avoid close contact with people who are sick

**Emerging Treatment:**

*Treatment options have consisted primarily of conventional care, with most antiviral regimens remaining largely experimental, pending quality trials*

- Supportive care, including fluid and respiratory management (eg, oxygen, ventilation)
- Antibiotics may be prescribed empirically for secondary bacterial pneumonia, but continued use should be based on subsequent bacterial culture and sensitivity
- Corticosteroids are only recommended if there is evidence of refractory septic shock; Routine use is not recommended ([Russell, 2020](#))
- Hydroxychloroquine is under investigation in clinical trials for pre-exposure or post-exposure prophylaxis and treatment of mild, moderate, and severe cases, with few randomized controlled trials providing clinical guidance on use, dosing, or duration for prophylaxis ([CDC, 2020](#))
- Remdesivir is an investigational drug, now allowed in the U.S. on an uncontrolled compassionate basis, with an expanded access program by the manufacturer ([Gilead, 2020](#)) ([CDC, 2020](#))
- Antiviral treatment with lopinavir, ritonavir, and/or ribavirin treatment is highly experimental, with ongoing research pending
- Antivirals targeted at influenza virus are not recommended unless there is evidence of positive rapid influenza molecular assay testing ([He, 2020](#)) ([Smith, 2020](#))

## Evidence Summary



**Background:** A worldwide outbreak of respiratory disease caused by a novel (new) coronavirus was first detected in Wuhan, China, with the virus initially being named “SARS-CoV-2” or “2019-nCoV, and the disease named “coronavirus disease 2019” (abbreviated “COVID-19”), although COVID-19 has since also been applied to the virus. Coronaviruses are a large family of viruses that are common in humans and many different species of animals, although animal coronaviruses can rarely cross-infect people with subsequent spread, as has previously occurred with Severe Acute Respiratory Syndrome (SARS-CoV) and Middle East Respiratory Syndrome (MERS-CoV). While early data suggested that most COVID-19 illness is mild, reports from China have indicated that serious illness may occur in up to 16% of cases, with older people and/or those with severe underlying health conditions being at significantly higher risk. The CDC stated, as of Mar 7, 2020: “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, home isolation, and the risk of transmission in the patient’s home environment.” Protocols for release from isolation now involve “non-test-based” and “test-based” strategies, requiring only a single nasopharyngeal swab per test. Either strategy requires resolution of fever without use of fever-reducing medications, improvement in respiratory symptoms, and passage of at least 7 days since onset of symptoms. ([CDC, 2020](#))

**Epidemiology:** COVID-19 has been associated with much more rapid and wider spread than SARS or MERS, although it appears to be considerably less virulent. The fatality rate from COVID-19 has been reported to be as high as 3% and low as 1%, which compares favorably to fatality rates of 11% and 35% for SARS and MERS, respectively. Best estimates from China have indicated mean incubation periods for both COVID-19 and SARS of 5 days (range 2-14 days), with 97.5% developing symptoms within 11.5 days. ([Lauer, 2020](#)) Death rates have been higher in males (ratio of male to female deaths 3.25:1), while the disease may progress faster in the elderly (age 60 and older). ([Sun, 2020](#)) Recommendations for the length of quarantine or active monitoring of persons potentially exposed to SARS-CoV-2 has been largely on a case-by-case basis worldwide, while longer monitoring periods may be justified in some cases. Among infected individuals who will eventually develop symptoms, it is expected that only 1% will do so after the end of a 14-day monitoring period. ([Meo, 2020](#))

**Transmission and diagnosis:** SARS-CoV-2 (COVID-19) usually spreads from close person-to-person contact through respiratory droplets from coughing and sneezing, although tiny droplets can remain airborne after the viral carrier has left. Recommended precautions include (1) frequent hand washing with soap and water for at least 20 seconds, or alcohol-based hand sanitizer when washing is unavailable; (2) coughing or sneezing into a tissue or flexed elbow; (3) not touching the face with unwashed hands; (4) avoiding contact with others showing symptoms; (5) staying home when ill; (6) cleaning and disinfecting high-touch surfaces; and (7) using a face mask only when respiratory symptoms are present or when caring for someone with symptoms. COVID-19 can only be diagnosed with a laboratory test. ([Johns Hopkins, 2020](#)) Human coronaviruses, including SARS, MERS, or endemic human coronaviruses (HCoV) can persist on inanimate surfaces like metal, glass, or plastic for up to 9 days, but can be efficiently inactivated by surface disinfection with 62-71% ethanol, 0.5% hydrogen peroxide, or 0.1% sodium hypochlorite within 1 minute. Other biocidal agents such as 0.05-0.2% benzalkonium chloride or 0.02% chlorhexidine digluconate have been less effective. ([Kampf, 2020](#))



***Clinical manifestations:*** In symptomatic individuals, clinical signs usually begin within a week. The major clinical findings in coronavirus infections SARS-CoV-2, MERS-CoV, and SARS-CoV are fever (90% to 95%), cough (70%), shortness of breath (55%), and fatigue and muscle pain (44%). Sore throat, sputum production, headaches, diarrhea, and confusion occur in smaller percentages. Chest computed tomography (CT) abnormalities have been reported in 75% to 100% of patients, consisting of bilateral areas of “grinding-glass” and consolidation. Mild disease, with no or mild pneumonia, has been reported in approximately 80% of patients, while asymptomatic infection of unknown frequency may also be associated with lung CT changes. Pneumonia may develop during the second to the third week of symptomatic infection, being severe (> 50% lung involvement over 24-48 hours) in about 15% of patients and critical in another 5%. The most common complications include acute respiratory distress syndrome, followed by anemia, acute heart injury, and secondary infections. ([Velavan, 2020](#)) ([Sun, 2020](#)) ([Hu, 2020](#)) The American College of Radiology, noting that the findings on chest imaging are not specific, has recommended that “CT should not be used to screen for or as a first-line test to diagnose COVID-19” and “CT should be used sparingly and reserved for hospitalized, symptomatic patients with specific clinical indications for CT.” ([ACR, 2020](#))

***Coding:*** New ICD-10 emergency codes have been added through an emergency session of the WHO Family of International Classifications (WHOFIC) Network Classification and Statistics Advisory Committee (CSAC), creating a new chapter, XXII (U00-U99), including U07.1 (COVID-19, virus identified, CDC adopted) and U07.2 (COVID-19, virus not identified-probable or suspected, not CDC adopted); new codes replace code B97.29 (other coronavirus as the cause of diseases classified elsewhere). ([WHO, 2020](#)) Supplement codes have been created by CDC (effective April 1, 2020) related to COVID-19 for pneumonia (J12.89), acute bronchitis (J20.8), lower respiratory infection (J22), ARDS (J80), and other related conditions. ([CDC, 2020](#)) The American Medical Association provides additional coding guidance surrounding COVID-19 care, accounting for different circumstances. ([AMA, 2020](#))

Last review/update date: Apr 3, 2020 (use online version for updates)

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ODG provides unbiased, evidence-based guidelines that unite payers, providers, and employers in the effort to confidently and effectively return employees to health.

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