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## Coronavirus Disease 2019 (COVID-19) 2020 Interim Case Definition, Approved April 5, 2020

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**NOTE:** A surveillance case definition is a set of uniform criteria used to define a disease for public health surveillance. Surveillance case definitions enable public health officials to classify and count cases consistently across reporting jurisdictions. Surveillance case definitions are not intended to be used by healthcare providers for making a clinical diagnosis or determining how to meet an individual patient's health needs.

### CSTE Position Statement(s)

Interim-20-ID-01

### Background

In late December 2019, investigation of a cluster of pneumonia cases of unknown origin in Wuhan, China resulted in identification of a novel coronavirus. The virus is distinct from both severe acute respiratory syndrome coronavirus (SARS-CoV) and Middle East respiratory syndrome coronavirus (MERS-CoV), although closely related. Early epidemiologic findings indicate COVID-19 may be less severe<sup>1</sup> than SARS or MERS, but evidence suggests that the virus is more contagious than its predecessors. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is a newly identified pathogen and it is assumed there is no existing human immunity to the virus. Everyone is assumed to be susceptible, although there may be risk factors that increase an individual's illness severity.

Based on epidemiologic reports of the outbreak in China, those at highest risk for severe disease and death include people aged over 60 years and those with underlying conditions such as hypertension, diabetes, cardiovascular disease, chronic respiratory disease, and cancer. Disease in children appears to be relatively mild, and growing evidence that a significant proportion of infections across all age groups are asymptomatic.

Cases of COVID-19 in China and the initial U.S. cases in early March 2020 have been clustered. Most cases in China occurred in households and in Washington, for example, a significant cluster was associated with a long-term care facility. However, cases have been reported in the United States with no direct epidemiologic link to confirmed cases. Ongoing surveillance of illness, risk factors, and epidemiologic linkage is needed to characterize the disease transmission in the United States, and to inform intervention and mitigation strategies.

Epidemiological reports from the field are demonstrating a growing importance of presymptomatic and asymptomatic infections from two lines of evidence: the serial interval of COVID-19 appears to be close to or shorter than its median incubation period and clusters linked to presymptomatic and asymptomatic index cases<sup>2,3</sup>. CSTE realizes that field investigations will involve evaluations of persons with no symptoms and these individuals will need to be counted as cases.

## Clinical Criteria

At least two of the following symptoms: fever (measured or subjective), chills, rigors, myalgia, headache, sore throat, new olfactory and taste disorder(s)

**OR**

At least one of the following symptoms: cough, shortness of breath, or difficulty breathing

**OR**

Severe respiratory illness with at least one of the following:

- Clinical or radiographic evidence of pneumonia, **OR**
- Acute respiratory distress syndrome (ARDS).

**AND**

No alternative more likely diagnosis

## Laboratory Criteria

Laboratory evidence using a method approved or authorized by the U.S. Food and Drug Administration (FDA) or designated authority:

*Confirmatory laboratory evidence:*

- Detection of severe acute respiratory syndrome coronavirus 2 ribonucleic acid (SARS-CoV-2 RNA) in a clinical specimen using a molecular amplification detection test

*Presumptive laboratory evidence:*

- Detection of specific antigen in a clinical specimen
- Detection of specific antibody in serum, plasma, or whole blood indicative of a new or recent infection\*

*\*Serologic methods for diagnosis are currently being defined.*

## Epidemiologic Linkage

One or more of the following exposures in the 14 days before onset of symptoms:

- Close contact\*\* with a confirmed or probable case of COVID-19 disease; **OR**
- Close contact\*\* with a person with:
  - clinically compatible illness **AND**

- linkage to a confirmed case of COVID-19 disease.
- Travel to or residence in an area with sustained, ongoing community transmission of SARS-CoV-2.
- Member of a risk cohort as defined by public health authorities during an outbreak.

*\*\*Close contact is defined as being within 6 feet for at least a period of 10 minutes to 30 minutes or more depending upon the exposure. In healthcare settings, this may be defined as exposures of greater than a few minutes or more. Data are insufficient to precisely define the duration of exposure that constitutes prolonged exposure and thus a close contact.*

## Criteria to Distinguish a New Case from an Existing Case

Not applicable (N/A) until more virologic data are available.

## Case Classification

### Probable

- Meets clinical criteria **AND** epidemiologic evidence with no confirmatory laboratory testing performed for COVID-19.
- Meets presumptive laboratory evidence **AND** either clinical criteria **OR** epidemiologic evidence.
- Meets vital records criteria with no confirmatory laboratory testing performed for COVID-19.

### Confirmed

- Meets confirmatory laboratory evidence.

## Other Criteria

### Vital Records Criteria

- A death certificate that lists COVID-19 disease or SARS-CoV-2 as a cause of death or a significant condition contributing to death.

## Reference(s)

1. The Novel Coronavirus Pneumonia Emergency Response Epidemiology Team. The Epidemiological Characteristics of an Outbreak of 2019 Novel Coronavirus Diseases (COVID-19) in China. Zhonghua Liu Xing Bing Xue Za Zhi. 2020;41(2):145–151. DOI:10.3760/cma.j.issn.0254-6450.2020.02.003.
2. Serial interval of novel coronavirus (COVID-19) infections. Hiroshi Nishiura, Natalie M. Linton, Andrei R. Akhmetzhanov PII: S1201-9712(20)30119-3 DOI: <https://doi.org/10.1016/j.ijid.2020.02.060> Reference: IJID 4006 To appear in: International Journal of Infectious Diseases, Accepted Date: 27 February 2020
3. Presymptomatic Transmission of SARS-CoV-2 – Singapore, January 23–March 16, 2020. Morbidity and Mortality Weekly Report Early Release / Vol. 69 April 1, 2020 U.S. Department of Health and Human

Services Centers for Disease Control and Prevention. Wycliffe E. Wei; Zongbin Li; Calvin J. Chiew; Sarah E. Yong; Matthias P. Toh; Vernon J. Lee

## Related Case Definition(s)

- Coronavirus Disease 2019 (COVID-19) | 2020 Interim Case Definition, Approved August 5, 2020 (<https://wwwn.cdc.gov/nndss/conditions/coronavirus-disease-2019-covid-19/case-definition/2020/08/05/>)

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Content source: Centers for Disease Control and Prevention (<http://www.cdc.gov/>)

Office of Public Health Scientific Services (OPHSS) (<http://www.cdc.gov/ophss/>)

Center for Surveillance, Epidemiology, and Laboratory Services (CSELS) (<http://www.cdc.gov/ophss/csels/>)

Division of Health Informatics and Surveillance (DHIS) (<http://www.cdc.gov/ophss/csels/dhis/>)

National Notifiable Diseases Surveillance System (NNDSS) (<http://www.cdc.gov/nndss/>)