



SEVERE ACUTE RESPIRATORY SYNDROME

Updated Interim U.S. Case Definition for Severe Acute Respiratory Syndrome (SARS)

The previous CDC SARS case definition (published July 16, 2003) has been updated as follows:

- The Exclusion Criteria have been revised to allow exclusion of cases with a convalescent-phase serum sample (i.e., collected >28 days after symptom onset) that is negative for antibody to SARS-associated coronavirus (SARS-CoV). Testing results from serum previously collected between 22 and 28 days after symptom onset are acceptable and will not require collection of an additional sample >28 days after symptom onset.
- The Case Classification has been revised to exclude probable and suspect SARS cases with convalescent-phase serum samples that are negative for antibody to SARS-CoV.

Clinical Criteria

- Asymptomatic or mild respiratory illness
- Moderate respiratory illness
 - Temperature of >100.4°F (>38°C)*, and
 - One or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia).
- Severe respiratory illness
 - Temperature of >100.4°F (>38°C)*, and
 - One or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia), and
 - radiographic evidence of pneumonia, or
 - respiratory distress syndrome, or
 - autopsy findings consistent with pneumonia or respiratory distress syndrome without an identifiable cause.

Epidemiologic Criteria

- Travel (including transit in an airport) within 10 days of onset of symptoms to an area with current or previously documented or suspected community transmission of SARS (see Table below), or
- Close contact§ within 10 days of onset of symptoms with a person known or suspected to have SARS.

Table. Travel criteria for suspect or probable U.S. cases of SARS

Area	First date of illness onset for inclusion as reported case‡	Last date of illness onset for inclusion as reported case†
China (Mainland)	November 1, 2002	July 13, 2003
Hong Kong	February 1, 2003	July 11, 2003
Hanoi, Vietnam	February 1, 2003	May 25, 2003
Singapore	February 1, 2003	June 14, 2003
Toronto, Canada	April 1, 2003	July 18, 2003
Taiwan	May 1, 2003	July 25, 2003

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Beijing, China	November 1, 2002	July 21, 2003
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The last date for illness onset is 10 days (i.e., one incubation period) after removal of a CDC travel alert. The case patient's travel should have occurred on or before the last date the travel alert was in place.

Laboratory Criteria¶

- Confirmed
 - Detection of antibody to SARS-associated coronavirus (SARS-CoV) in a serum sample, or
 - Detection of SARS-CoV RNA by RT-PCR confirmed by a second PCR assay, by using a second aliquot of the specimen and a different set of PCR primers, or
 - Isolation of SARS-CoV.
- Negative
 - Absence of antibody to SARS-CoV in a convalescent-phase serum sample obtained >28 days after symptom onset.**
- Undetermined
 - Laboratory testing either not performed or incomplete.

Case Classification***

- Probable case: meets the clinical criteria for severe respiratory illness of unknown etiology and epidemiologic criteria for exposure; laboratory criteria confirmed or undetermined.
- Suspect case: meets the clinical criteria for moderate respiratory illness of unknown etiology, and epidemiologic criteria for exposure; laboratory criteria confirmed or undetermined.

Exclusion Criteria

A case may be excluded as a suspect or probable SARS case if:

- An alternative diagnosis can fully explain the illness.****
- The case has a convalescent-phase serum sample (i.e., obtained >28 days after symptom onset) for which is negative for antibody to SARS-CoV.**
- The case was reported on the basis of contact with an index case that was subsequently excluded as a case of SARS, provided other possible epidemiologic exposure criteria are not present.

*A measured documented temperature of >100.4°F (>38°C) is preferred. However, clinical judgment should be used when evaluating patients for whom a measured temperature of >100.4°F (>38°C) has not been documented. Factors that might be considered include patient self-report of fever, use of antipyretics, presence of immunocompromising conditions or therapies, lack of access to health care, or inability to obtain a measured temperature. Reporting authorities should consider these factors when classifying patients who do not strictly meet the clinical criteria for this case definition.

§Close contact is defined as having cared for or lived with a person known to have SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a patient known to have SARS. Examples of close contact include kissing or embracing, sharing eating or drinking utensils, close conversation (<3 feet), physical examination, and any other direct physical contact between persons. Close contact does not include activities such as walking by a person or sitting across a waiting room or office for a brief period of time.

‡ The WHO has specified that the surveillance period for China should begin on November 1; the first recognized cases in Hong Kong, Singapore and Hanoi (Vietnam) had onset in February 2003. The date for Toronto is linked to the occurrence of a laboratory confirmed case of SARS in a U.S. resident who had traveled to Toronto; the date for Taiwan is linked to CDC's issuance of travel recommendations.

†The last date for illness onset is 10 days (i.e., one incubation period) after removal of a CDC travel alert. The case patient's travel should have occurred on or before the last date the travel alert was in place.

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¶ Assays for the laboratory diagnosis of SARS-CoV infection include enzyme-linked immunosorbent assay, indirect fluorescent-antibody assay, and reverse transcription polymerase chain reaction (RT-PCR) assays of appropriately collected clinical specimens (Source: CDC. Guidelines for collection of specimens from potential cases of SARS. Available at www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm). Absence of SARS-CoV antibody from serum obtained <28 days after illness onset, ** a negative PCR test, or a negative viral culture does not exclude SARS-CoV infection and is not considered a definitive laboratory result. In these instances, a convalescent serum sample obtained >28 days after illness is needed to determine infection with SARS-CoV. ** All SARS diagnostic assays are under evaluation.

** Does not apply to serum samples collected before July 11, 2003. Testing results from serum samples collected before July 11, 2003 and between 22 and 28 days after symptom onset are acceptable and will not require collection of an additional sample >28 days after symptom onset.

*** Asymptomatic SARS-CoV infection or clinical manifestations other than respiratory illness might be identified as more is learned about SARS-CoV infection.

**** Factors that may be considered in assigning alternate diagnoses include the strength of the epidemiologic exposure criteria for SARS, the specificity of the diagnostic test, and the compatibility of the clinical presentation and course of illness for the alternative diagnosis.

For more information, visit www.cdc.gov/ncidod/sars or call the CDC public response hotline at (888) 246-2675 (English), (888) 246-2857 (Español), or (866) 874-2646 (TTY)

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