

Severe Acute Respiratory Syndrome (SARS)

Interim Information and Recommendations for Health Care Providers

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The Centers for Disease Control and Prevention (CDC) and the World Health Organization have received reports of patients with severe acute respiratory syndrome (SARS) from Canada, China, Hong Kong Special Administrative Region of China, Indonesia, Philippines, Singapore, Thailand, and Vietnam. The cause of these illnesses is unknown and is being investigated. Early manifestations in these patients have included influenza-like symptoms such as fever, myalgias, headache, sore throat, dry cough, shortness of breath, or difficulty breathing. In some cases these symptoms are followed by hypoxia, pneumonia, and occasionally acute respiratory distress requiring mechanical ventilation and death. Laboratory findings may include thrombocytopenia and leukopenia. Some close contacts, including healthcare workers, have developed similar illnesses. In response to these developments, CDC is initiating surveillance for cases of SARS among recent travelers or their close contacts.

Case Finding

The case definition for suspected SARS is subject to change, particularly concerning travel history as transmission is reported in other geographic areas; the most current definition is:

Persons with respiratory illness of unknown etiology with onset since February 1, 2003.

Suspect Case:

- A person presenting with one or more signs or symptoms of respiratory illness including cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of pneumonia or acute respiratory distress syndrome

AND

- Fever ($>38^{\circ}\text{C}$ [100.4°F])

AND

One or more of the following:

- Close contact* within 10 days of onset of symptoms with a person under investigation or suspected of having SARS
- Travel within 10 days of onset of symptoms to an area with documented transmission of SARS (see list below).

Note: Suspect cases with either radiographic evidence of pneumonia or respiratory distress syndrome; or evidence of unexplained respiratory distress syndrome by autopsy are designated "probable" cases by the WHO case definition.

* Close contact is defined as having cared for, having lived with or having had direct contact with respiratory secretions and/or body fluids of a patient suspected of having SARS.

List of areas with transmission of SARS: Hong Kong Special Administrative Region and Guangdong province, Peoples' Republic of China; Hanoi, Vietnam; Singapore; and Toronto, Canada.

Diagnostic Evaluation

Initial diagnostic testing should include chest radiograph, pulse oximetry, blood cultures, sputum Gram's stain and culture, and testing for viral respiratory pathogens, notably influenza A and B and respiratory

syncytial virus. Clinicians should save any available clinical specimens (respiratory, blood, and serum) for additional testing until a specific diagnosis is made. Clinicians should evaluate persons meeting the above description and, if indicated, admit them to the hospital. Close contacts and healthcare workers should seek medical care for symptoms of respiratory illness.

Infection Control

If the patient is admitted to the hospital, clinicians should notify infection control personnel immediately. Until the etiology and route of transmission are known, in addition to standard precautions(1), infection control measures for inpatients should include:

- Airborne precautions (including an isolation room with negative pressure relative to the surrounding area and use of an N-95 respirator for persons entering the room)
- Contact precautions (including use of gown and gloves for contact with the patient or their environment)

Standard precautions routinely include careful attention to hand hygiene. When caring for patients with SARS, clinicians should wear eye protection for all patient contact.

To minimize the potential of transmission outside the hospital, case patients as described above should limit interactions outside the home until the epidemiology of illness transmission is better understood. Placing a surgical mask on case patients in ambulatory healthcare settings, during transport, and during contact with others at home is prudent.

Treatment

Because the etiology of these illnesses has not yet been determined, no specific treatment recommendations can be made at this time. Empiric therapy should include coverage for organisms associated with any community-acquired pneumonia of unclear etiology, including agents with activity against both typical and atypical respiratory pathogens (2). Treatment choices may be influenced by severity of the illness. Infectious disease consultation is recommended.

Reporting

Healthcare providers and public health personnel should report cases of SARS as described above to their state or local health departments.

References

1. Garner JS, Hospital Infection Control Practices Advisory Committee. Guideline for isolation precautions in hospitals. *Infect Control Hosp Epidemiol* 1996;17:53-80, and *Am J Infect Control* 1996;24:24-52.
<http://www.cdc.gov/ncidod/hip/ISOLAT/Isolat.htm>
2. Bartlett JG, Dowell SF, Mandell LA, File Jr, TM, Musher DM, and Fine MJ. Practice Guidelines for the Management of Community-Acquired Pneumonia in Adults. *Clin Infect Dis* 2000;31:347-82.
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