



# SEVERE ACUTE RESPIRATORY SYNDROME

## GUIDELINES AND RECOMMENDATIONS

### Interim Domestic Guidance for Management of Exposures to Severe Acute Respiratory Syndrome (SARS) for Health-Care Settings

Worldwide, several health-care workers have been reported to develop Severe Acute Respiratory Syndrome (SARS) after caring for patients with SARS. Transmission to health-care workers appears to have occurred after close contact with symptomatic individuals (e.g., persons with fever or respiratory symptoms) before recommended infection control precautions for SARS were implemented (i.e., unprotected exposures). Personal protective equipment appropriate for standard, contact, and airborne precautions (e.g., hand hygiene, gown, gloves, and N95 respirator) in addition to eye protection, have been recommended for health-care workers to prevent transmission of SARS in health-care settings (see the infection control page at [www.cdc.gov/ncidod/sars/ic.htm](http://www.cdc.gov/ncidod/sars/ic.htm)). More general information on infection control in health-care workers is available at [www.cdc.gov/ncidod/hip/guide/infectcont98.htm](http://www.cdc.gov/ncidod/hip/guide/infectcont98.htm).

Given the currently available information on the epidemiology of SARS, the following outlines interim guidance for the management of exposures to SARS in a health-care facility.

#### Surveillance of Health-Care Personnel

Surveillance of health-care personnel is necessary to ensure that workers who are ill receive appropriate care and are isolated to prevent transmission. Health-care facilities that care for SARS patients should implement surveillance of health-care workers who have any contact with SARS patients or their environment of care. Recommendations for surveillance include:

- Develop and maintain a listing of all personnel who enter the rooms of SARS patients, or who are involved in the patient's care in other parts of the hospital.
- Instruct personnel who have contact with SARS patients or their environment of care to notify occupational health, infection control or their designee if they have unprotected exposure to a SARS patient or if they develop any fever or respiratory symptoms
- Monitor employee absenteeism for increases that may suggest emerging respiratory illness in the workforce. Notify local and state health authorities of clusters or unusual increases in respiratory illness, including atypical pneumonia

#### Management of Asymptomatic, Exposed Health-Care Workers

1. To date, there is no evidence to suggest that SARS is transmitted from asymptomatic individuals. However, according to recent reports health-care workers who developed SARS may have been a source of transmission within health-care facilities during the early phases of illness when symptoms were mild and not recognized as SARS. To minimize the risk of transmission from unrecognized SARS infections among health-care workers, health-care workers who have **unprotected high-risk exposures** to SARS should be excluded from duty (e.g. administrative leave) for 10 days following the exposure. Unprotected high-risk exposure is defined as presence in the same room as a probable SARS patient ([www.cdc.gov/ncidod/sars/casedefinition.htm](http://www.cdc.gov/ncidod/sars/casedefinition.htm)) during a high-risk aerosol-generating procedure or event and where recommended infection control

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precautions are either absent or breached ([www.cdc.gov/ncidod/sars/aerosolinfectioncontrol.htm](http://www.cdc.gov/ncidod/sars/aerosolinfectioncontrol.htm)). Aerosol-generating procedures or events include aerosolized medication treatments, diagnostic sputum induction, bronchoscopy, endotracheal intubation, airway suctioning, positive pressure ventilation via facemask (e.g., BiPAP, CPAP), during which air may be forced out around the facemask, high frequency oscillatory ventilation (HFOV), and close facial contact during a coughing paroxysm. Health-care workers who are excluded from duty should limit interactions outside the home, and should not go to work, school, church, or other public areas.

2. Health-care workers who have other unprotected exposures to patients with SARS need not be excluded from duty, but should undergo active surveillance for symptoms, including measurement of body temperature at least twice daily for 10 days following the exposure. Prior to reporting for duty each day, the health-care worker should be interviewed regarding respiratory symptoms and have their temperature measured by employee health or other designee.
3. Health-care workers who have cared for or otherwise been exposed to SARS patients while adhering to recommended infection control precautions should be instructed to be vigilant for fever and respiratory symptoms, including measurement of body temperature at least twice daily for 10 days following the last exposure to a SARS patient. These health-care workers should be contacted by occupational health, infection control or their designee regularly over the 10 day period following exposure to inquire about fever or respiratory symptoms.

### Management of Symptomatic, Exposed Health-Care Workers

1. Any health-care worker who has cared for or been exposed to a SARS patient who develops fever OR respiratory symptoms within 10 days following exposure should not report for duty, but should stay home and report symptoms to the appropriate facility point of contact immediately. If the symptoms begin while at work, the health-care worker should be instructed to immediately apply a surgical mask and leave the patient care area. Symptomatic health-care workers should use infection control precautions to minimize the potential for transmission ([www.cdc.gov/ncidod/sars/ic-closecontacts.htm](http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm)) and should seek health-care evaluation. **In advance of clinical evaluation health-care providers should be informed that the individual may have been exposed to SARS so arrangements can be made, as necessary, to prevent transmission to others in the health-care setting.**
2. If symptoms improve or resolve within 72 hours after first symptom onset, the person may be allowed after consultation with infection control and local public health authorities to return to duty and infection control precautions can be discontinued.
3. For persons who meet or progress to meet the case definition for SARS (e.g., develop fever and respiratory symptoms), infection control precautions should be continued until 10 days after the resolution of fever, provided respiratory symptoms are absent or improving.
4. If the illness does not progress to meet the case definition, but the individual has persistent fever\* or unresolving respiratory symptoms, infection control precautions should be continued for an additional 72 hours, at the end of which time a clinical evaluation should be performed. If the illness progresses to meet the case definition, infection control precautions should be continued as described above. If case definition criteria are not met, infection control precautions can be discontinued after consultation with local public health authorities and the evaluating clinician (see figure). Factors that might be considered include the nature of the potential exposure to SARS,

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\* 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 might consider these factors when determining whether infection control precautions should be continued.

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nature of contact with others in the residential or work setting, and evidence for an alternative diagnosis.

5. Persons who meet or progress to meet the case definition for suspected SARS (e.g., develop fever and respiratory symptoms) or whose illness does not meet the case definition, but who have persistent fever or unresolving respiratory symptoms over the 72 hours following onset of symptoms, should be tested for SARS coronavirus infection. Collection of appropriate specimens for laboratory testing ([www.cdc.gov/ncidod/sars/specimen\\_collection\\_sars2.htm](http://www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm)) should be coordinated with and guided by local/state public health authorities and consultation with CDC.

### **Prevention of Unprotected Exposures**

Prevention of unprotected exposures will limit the need for exclusion from duty. Health-care facilities should address the following:

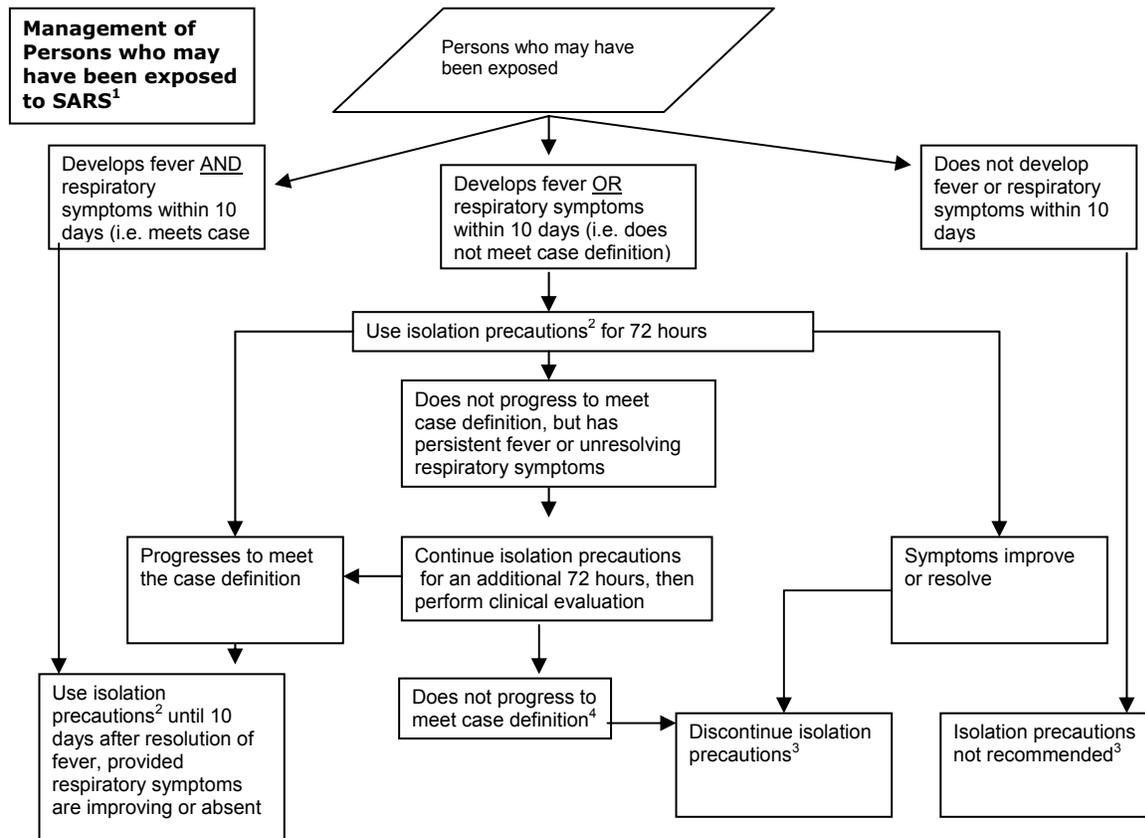
- Review current procedures for early detection and isolation of suspect SARS patients
- Educate all health-care personnel on signs and symptoms of SARS and recommended infection control practices
- Review use of personal protective equipment with health-care personnel, including physicians, who may care for SARS patients
- Follow current CDC recommendation for aerosol-generating procedures in suspected or probable SARS patients

### **Management of Symptomatic, Exposed Visitors**

Close contacts (e.g., family members) of SARS patients are at risk for infection. Close contacts with either fever or respiratory symptoms should not be allowed to enter the health-care facility as visitors and should be educated about this policy. A system for screening SARS close contacts who are visitors to the facility for fever or respiratory symptoms should be in place. Health-care facilities should educate all visitors about use of infection control precautions when visiting SARS patients and their responsibility for adherence to them.

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<sup>1</sup>Exposure includes travel from areas with documented or suspected community transmission of SARS ([www.cdc.gov/ncidod/sars/casedefinition.htm](http://www.cdc.gov/ncidod/sars/casedefinition.htm)) or close contact with persons who have SARS; 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.

<sup>2</sup>Isolation precautions include limiting patient’s interactions with others outside the home (e.g. should not go to work, school, out of home day care, church or other public areas), and following infection control guidelines for the home or residential setting ([www.cdc.gov/ncidod/sars/ic-closecontacts.htm](http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm)) if not admitted to hospital for care.

<sup>3</sup>Persons need not limit interactions outside of home (e.g., need not be excluded from work, school, out of home day care, church or other public areas).

<sup>4</sup>Discontinuation of isolation precautions for patients who have not met the case definition 6 days following onset of symptoms, but who have persistent fever or respiratory symptoms should be done only after consultation with local public health authorities and the evaluating clinician. Factors that might be considered include the nature of the potential exposure to SARS, nature of contact with others in the residential or work setting, and evidence for an alternative diagnosis.

For more information, visit [www.cdc.gov/ncidod/sars](http://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)