

COUNTY OF SANTA CLARA
PUBLIC HEALTH DEPARTMENT

3003 Moorpark Avenue
San Jose, California 95128



PUBLIC HEALTH ALERT

DATE: April 1, 2003

TO: All Santa Clara County Physicians
Emergency Department Managers
Infection Control Practitioners
Hospital Council of Northern and Central California
EMS Agency
SCC Medical Examiner/Coroner
SCC Public Health Regional Offices

FROM: Marty Fenstersheib, MD, MPH
Health Officer

RE: Updated SARS Guidelines

This alert is to update you on Severe Acute Respiratory Syndrome (SARS), including:

- change in case definition for reporting suspected SARS
- updated specimen collection guidelines
- updated infection control guidelines for exposed health care workers
- updated guidelines post discharge or during home isolation
- new guidelines for patients with travel history who do not meet clinical case definition
- availability of signage for outpatient clinics, urgent care, and emergency departments

As of today, there have been 1804 reported cases of SARS and 62 deaths reported worldwide. In the United States, 72 suspected cases are under investigation; 55 of which involve people who traveled to affected areas. Two are health care workers and 5 are household contacts; none have died. California is reporting 20 cases of SARS – more than any other state – and 7 of those cases are in Santa Clara County. Because of the large population of Asian residents in California and extensive travel back and forth between large metropolitan areas in Asia and California, we expect to see more cases.

Change in Case Definition

The case definition for suspected SARS has been expanded to include travelers returning from anywhere in mainland China, not just from Guangdong province. In addition, temperature must be measured, not just by patient history. Please report immediately to the Public Health Department any patient meeting the following criteria:

Respiratory illness of unknown etiology with onset since February 1, 2003, and the following criteria:

- Measured temperature >100.4 °F (>38° C)

AND

- One or more clinical findings of respiratory illness (e.g. cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of either pneumonia or acute respiratory distress syndrome)

AND

- Travel within 10 days of onset of symptoms to an area with suspected or documented community transmission of SARS (Peoples' Republic of China, including Hong Kong Special Administrative Region; Hanoi, Vietnam; and Singapore)

OR

- Close contact (e.g. having cared for, having lived with, or having had direct contact with respiratory secretions and /or body fluids of a patient known to be a suspect SARS case) within 10 days of onset of symptoms with either a person with a respiratory illness and travel to a SARS area or a person under investigation or suspected of having SARS.

During business hours, report suspected cases to Disease Prevention and Control at 408-885-4214; after hours and on weekends, report to the Public Health Officer on call by calling County Communications at 408-299-2501.

Laboratory Specimen Collection

The Centers for Disease Control and Prevention (CDC) and the state Department of Health Services (DHS) now recommend that we collect urine and stool samples as well as NP swabs and paired sera. This is because in some of the initial laboratory investigations, a coronavirus was identified in kidney tissue. We recommend that the evaluation of patients presenting with suspected SARS first include a diagnostic work up for other potential etiologies of febrile respiratory illness:

- CBC with differential (SARS patients will frequently show leukopenia and thrombocytopenia)
- CXR
- Routine Sputum gram-stain and culture
- Blood cultures
- If available at the clinical lab:
 - Nasopharyngeal swabs for viral Direct Fluorescent Antibody (DFA) and/or culture, specifically influenza A and B, parainfluenza, and respiratory syncytial virus
 - Sputum for Legionella culture and Direct Fluorescent Antibody (DFA)), and urine for *Legionella pneumophila* serogroup 1 antigen (Ag)

NOTE: all specimens collected from suspected SARS patients should be labeled "suspected SARS patient"; the clinical laboratory should be notified so that they can institute BSL-3 practices when processing these specimens.

Specimens to be collected for transport to the Santa Clara County Public Health Laboratory, who will then process and forward to the CDC laboratories:

- At least two nasopharyngeal swabs (NP) in Viral Transport Medium. NOTE: use only sterile dacron or rayon swabs with plastic shafts. Do NOT use calcium alginate swabs or swabs with wooden sticks, as they may contain substances that inactivate some viruses and inhibit PCR testing.
- Endotracheal Tube aspirate (if intubated)
- Urine - 50 cc of first void morning urine, collected during the acute phase of illness. The county public health laboratory will centrifuge the urine and re-suspend the sediment.
- Stool – collect 10-50 cc in a stool cup or urine container, cap securely.
- Serum – 4-6 ml in red or tiger top tube. Collect within 7 days of symptom onset.
- Whole blood – 8 ml whole blood in CPT-citrate (Becton Dickinson) tube.
- If the clinical laboratory cannot perform viral DFA and culture, or Legionella studies, these specimens can also be sent to the Santa Clara County Public Health Lab – we do not recommend sending these specimens to outside reference laboratories to minimize the chance of lab worker exposure.

Updated Infection Control Guidelines for exposed healthcare workers

Several healthcare workers have been reported to have developed Severe Acute Respiratory Syndrome (SARS) after caring for patients with SARS. Although the infectivity and etiology of SARS are currently unknown, transmission to healthcare 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 healthcare workers to prevent transmission of SARS in healthcare settings (see <http://www.cdc.gov/ncidod/sars/ic.htm>). More general information on infection control in healthcare workers is available at <http://www.cdc.gov/ncidod/hip/GUIDE/infectcont98.htm>.

CDC, in collaboration with state and local health departments, is developing a systematic approach for surveillance of SARS exposures and infection in healthcare workers for use by healthcare facilities. Additional information on surveillance materials will be forthcoming. Given the currently available information on the epidemiology of SARS in the United States, the following outlines interim guidance for the management of exposures to SARS in a healthcare facility.

1. Exclusion from duty is recommended for a healthcare worker if fever or respiratory symptoms develop during the 10 days following an unprotected exposure to a SARS patient. Exclusion from duty should be continued for 10 days after the resolution of fever and respiratory symptoms. During this period, infected workers should avoid contact with persons both in the facility and in the community (see <http://www.cdc.gov/ncidod/sars/ic.htm>)
2. Exclusion from duty is not recommended for an exposed healthcare worker if they do not have either fever or respiratory symptoms; however, the worker should report any unprotected exposure to SARS patients to the appropriate facility point of contact (e.g., infection control or occupational health) immediately.

3. Active surveillance for fever and respiratory symptoms (e.g., daily screening) should be conducted on healthcare workers with unprotected exposure, and the worker should be vigilant for onset of illness. Workers with unprotected exposure developing such symptoms should not report for duty, but should stay home and report symptoms to the appropriate facility point of contact immediately. Recommendations for appropriate infection control for SARS patients in the home or residential setting are available at <http://www.cdc.gov/ncidod/sars/ic.htm>
4. Passive surveillance (e.g., review of occupational health or other sick leave records) should be conducted among all healthcare workers in a facility with a SARS patient, and all healthcare facility workers should be educated concerning the symptoms of SARS.
5. 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 healthcare 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. Healthcare facilities should educate all visitors about use of infection control precautions when visiting SARS patients and their responsibility for adherence to them.

Other Institutional Settings

To date, all patients with SARS reported to CDC in the United States have been either persons with a history of foreign travel to countries with SARS transmission or close contacts (e.g., family members or healthcare workers) to other SARS cases. Transmission has not been reported at schools, other institutions, or public gatherings in the United States. However, these recommendations concerning management of exposed healthcare workers could be adapted and applied to other settings, including schools and other institutional settings, as deemed appropriate.

Instructions for suspected SARS cases post hospital discharge or during home isolation (never hospitalized)

Patients with SARS pose a risk of transmission to close household contacts and health care personnel. The duration of time before or after onset of symptoms during which a patient with SARS can transmit the disease to others is unknown. The following infection control measures are recommended for patients with suspected SARS in households or residential settings. These recommendations may be revised as more information becomes available.

SARS patients should limit interactions outside the home and should not go to work, school, out-of-home childcare, or other public areas until ten days after resolution of fever and respiratory symptoms. During this time, infection control precautions should be used to minimize the potential for transmission:

- All members of a household with a SARS patient should carefully follow recommendations for hand hygiene (e.g., frequent hand washing or use of alcohol-based hand rubs), particularly after contact with body fluids (e.g., respiratory secretions, urine, or feces).
- Use disposable gloves for any direct contact with body fluids of a SARS patient. However, gloves are not intended to replace proper hand hygiene. Immediately after

activities involving contact with body fluids, gloves should be removed and discarded and hands should be cleaned. Gloves must never be washed or reused.

- SARS patients should wear a surgical mask during contact with uninfected persons to prevent spread of infectious droplets. When a SARS patient is unable to wear a surgical mask, household members should wear surgical masks when in the same room with the patient.
- Sharing of eating utensils, towels, and bedding between SARS patients and others should be avoided, although such items can be used by others after routine cleaning (e.g., washing with soap and hot water). Environmental surfaces soiled by body fluids should be cleaned with a household disinfectant according to manufacturer's instructions; gloves should be worn during this activity.
- Household waste soiled with body fluids of SARS patients, including facial tissues and surgical masks, may be discarded as normal waste.
- Household members or other close contacts of SARS patients who develop fever or respiratory symptoms should seek healthcare evaluation. When possible, in advance of the evaluation, healthcare providers should be informed that the individual is a close contact of a SARS patient. Household members or other close contacts with symptoms of SARS should follow the same precautions recommended for SARS patients.

At this time, in the absence of fever or respiratory symptoms, household members or other close contacts of SARS patients need not limit their activities outside the home.

Guidelines for patients with travel history who do not meet clinical case definition - "pre-suspect SARS" cases

Two of the seven suspected SARS cases in Santa Clara County first sought medical care before they met the case definition for SARS. Both had a history of travel to Hong Kong, but lacked either fever or respiratory symptoms. Later, both developed additional symptoms and met the case definition; in the meantime they had potentially exposed co-workers and household members. Because of this experience and the rapid spread of this infection in many parts of the world, we are issuing the following guidance. This is summarized in an attached flow diagram.

If a patient (1) has traveled within the last 10 days to an area with documented community transmission, or has had close contact with a person with suspected SARS, and (2) has either fever OR findings of respiratory illness (e.g. cough, shortness of breath, difficulty breathing, hypoxia, or radiographic findings of pneumonia or acute respiratory distress syndrome), they should be considered "pre-suspect SARS" and should receive instructions and follow-up as outlined here:

- 1) Strongly recommend that the patient limit interactions outside the home and not go to work, school, out-of-home childcare, or other public area until 48 hours after resolution of symptoms, or 7 days, whichever is longer.
- 2) Advise the patient to take their temperature at least once (and preferably twice) each day and record.

- 3) Advise the patient to wash hands frequently, particularly after any contact with body fluids.
- 4) Give patient a mask to take home and wear if respiratory symptoms present.
- 5) Advise patient to contact their physician if additional symptoms develop.
- 6) Advise the patient that the Public Health Department will be contacting them at home on the following work day to check on their symptoms.
- 7) Complete the attached form for reporting pre-suspect SARS patients to the Public Health Department, so that we have adequate information to follow the patient at home. Pre-suspect SARS patients do not need to be reported by telephone.

If the patient has a positive travel history or history of contact to a person with suspected SARS, but no symptoms, advise them to self monitor their temperature and respiratory symptoms for 10 days after the exposure. This subset of patients does not need to be reported to the Public Health Department.

Signage for outpatient clinics, urgent care and emergency departments

We recommend that all clinical areas that initially register patients be posted with SARS Health Alert signs to facilitate triage and isolation of patients who may be infectious. Attached please find an example of a Health Alert for your use or adaptation. Signs can also be downloaded from the Public Health Department's website: www.sccphd.org.