

Guidelines for Preparing the CSU for SARS

A. Introduction

As a request from the CSU campuses to develop a guideline to address the medical, environmental, and academic issues surrounding the emergence of SARS in early 2003, the CSU Chancellor's Office has recommended that a task force from the student health centers develop a plan. The following draws heavily on the *American College Health Association Vaccine-Preventable Diseases Task Force Guidelines* July 6, 2003 available at www.acha.org/Sars_Guidelines.pdf. The goal of this publication is to

- Incorporate current epidemiological principles to the identification and medical management of students who may be carrying and/or spreading the SARS virus to the campus community
- Develop environmental health plans for campus housing, classroom space, and other public spaces other to aid in control of the spread of infectious diseases
- Provide a plan for students to postpone or terminate early their educational programs in the event of an infectious health crisis

Severe acute respiratory syndrome (SARS) is a contagious respiratory illness that has been reported in Asia, North America and Europe. A novel member of the coronavirus family, which CDC recently completed genome sequencing, is believed to be responsible for the global epidemic of SARS. Extensive, continuously updated information about SARS is available from the following two organizations:

Centers for Disease Control and Prevention (CDC): www.cdc.gov/ncidod/sars

World Health Organization (WHO): www.who.int/csr/sars/en/www.who.int/csr/sars/en/

In general, illness from SARS begins with a prodrome of fever (>100.4°F [>38.0°C]). Fever often is high, sometimes is associated with chills and rigors, and might be accompanied by other symptoms, including headache, malaise, and myalgia. At the onset of illness, some persons have mild respiratory symptoms. Typically, rash and neurologic or gastrointestinal findings are absent; however, some patients have reported diarrhea during the febrile prodrome. After 3-7 days, a lower respiratory phase begins with the onset of a dry, nonproductive cough or dyspnea, which might be accompanied by or progress to hypoxemia. In 10-20% of cases, the respiratory illness is severe enough to require intubation and mechanical ventilation.

The primary way that SARS appears to be spread is by large-droplet transmission, which usually requires close person-to-person contact. However, the unusually rapid transmission of this disease suggests that airborne transmission through droplet nuclei of < 10 µm in diameter can occur. The virus may also be transmitted through direct contact with infectious droplets. Infection control precautions for this disease therefore involve the use of standard, airborne and contact precautions. For specific information about infection control guidelines for SARS, go to www.cdc.gov/ncidod/sars/ic.htm www.cdc.gov/ncidod/sars/ic.htm. Hand hygiene, in particular, is extremely important in preventing the spread of SARS. For more information about hand hygiene, go to www.cdc.gov/handhygiene/

Most of the U.S. cases of SARS have occurred among travelers returning to the United States from other parts of the world with SARS. SARS is of concern therefore to college and university officials because of the high volume of faculty, students, and visitors traveling to and from

SARS-affected areas and because of the potential for rapid transmission in the highly congregate campus setting. Because of these unique issues, the American College Health Association has drafted guidelines to help college health officials prepare for SARS-related issues. The guidelines are intentionally comprehensive, however, each institution, small or large, will want to consider available university and local resources and modify the guidelines as needed to make them practical and useful. Moreover, it is imperative that each institution seeks guidance and coordination from local and/or state public health department officials. These guidelines are meant to supplement guidelines available through the CDC and WHO. The following recommendations are provided for SARS; however, specific responses to SARS should be a part of a larger plan for control of infectious diseases in college settings.

As campuses develop policies and procedures for dealing with SARS, consideration should be given to establishing a definitive alternative diagnosis in any given patient (e.g., influenza). This may prevent unnecessary hospitalization, allow for targeted treatment with appropriate anti-microbials (i.e., anti-viral drugs within 48 hours of flu symptom onset, antibiotics for pneumonia), and avoid a potential public relations emergency. Simple, rapid, and inexpensive diagnostic testing may be utilized when appropriate to establish a definitive diagnosis other than SARS, although one should keep in mind that co-infection with SARS remains a possibility. Consult CDC guidelines on treatment (www.cdc.gov/ncidod/sars/treatment.htm) for the latest recommendations.

In addition, stigmatization of certain groups of students and visitors is a risk as we deal with this complex issue. Every effort should be made to inform and educate university communities about SARS and that the risks are associated with specific activities such as travel, and not associated with ethnicity or race.

B. Pre-Event Planning

1. Prepare the Student Health Service

- a. Establish an Emergency Response Team (e. g., Acute Communicable Disease Team or SARS Action Committee). Identify individuals and alternates to whom specific responsibilities are assigned.

Suggested team members:

- 1) Team Leader = Medical/Nursing (Clinical) Director
- 2) Administration
- 3) Nursing
- 4) Information Technology (IT)
- 5) Health promotion
- 6) Reception staff
- 7) Mental health professionals
- 8) Local and/or state health department officials

- b. Prepare internal alert mechanism

- 1) Develop notification roster and checklist

- a) Home, cell, and pager numbers of key Student Health Service (SHS) personnel
- b) Personal and work email addresses of key SHS personnel

- 2) Review communication plan with staff

- c. Prepare external alert mechanism

- 1) Develop notification roster and checklist. Identify website addresses, phone numbers, home, cell, and pager numbers, as well as email addresses of key personnel:
 - a) University emergency preparedness team
 - b) Local and/or state health department
 - c) University employee health service
 - d) Closest academic medical center
 - (1) Emergency room
 - (2) Hospital epidemiology
 - (3) Infectious diseases consultant
 - e) Local hospital emergency room
- 2) Review communication plan with staff
- d. Prepare a private evaluation room within the SHS (a negative pressure room is not required but would be desirable if available). For more detailed information about containing the spread of respiratory pathogens in a health care setting, go to *Guidelines for Preventing the Transmission of Mycobacterium Tuberculosis in Health-Care Facilities, 1994* (MMWR, Vol. 43, No. RR13;001,10/28/1994 (www.cdc.gov/mmwr/preview/mmwrhtml/00035909.htm)).
 - 1) It is not known if it is necessary to assure that contaminated air does not recirculate outside the evaluation room. Health centers may want to work with facilities management staff to determine if air handlers or recirculation vents can be easily disengaged or shut off during evaluations.
 - 2) HEPA filter in evaluation room can be considered if available.
 - 3) Evaluation in an outdoor area with appropriate privacy screens is another option.
 - 4) Consider immediate referral to an appropriate evaluation facility (i.e., hospital ED) if an acceptable evaluation room cannot be prepared.
- e. Stock Personal Protective Equipment (PPE). See currently recommended infection control measures for patients with SARS: www.cdc.gov/ncidod/sars/ic.htm
 - 1) N-95 respirators (or higher, e.g., N-99, N-100, P-100, etc.) with appropriate fit-testing- wear for all patient contacts. If respirator is not available, use surgical mask
 - 2) long sleeved isolation gowns
 - 3) gloves
 - 4) face shields or disposable goggles- wear for all patient contacts
 - 5) careful attention to hand hygiene
- f. Post signs at the entrance to the clinic asking patients with fever and/or respiratory symptoms and recent travel to SARS-affected areas or exposure to a SARS patient to apply a mask before entry to the facility and to then self-identify to registration staff immediately. See *Appendix A* for an example of such a notice.
- g. Prepare clinic protocols for evaluating SARS suspects. The intent of the protocols is to determine the likelihood of SARS exposure in the patient while simultaneously minimizing contact of this individual with others until the risk has been fully assessed. The protocols should address actions to be taken if:
 - 1) A SARS suspect phones in

2) A SARS suspect walks in

Appendix B gives example protocols. Protocols should be specific for the health care setting and should reflect current CDC guidelines on triage and evaluation of possible SARS suspects:

www.cdc.gov/ncidod/sars/triage_interim_guidance.htmwww.cdc.gov/ncidod/sars/triage_interim_guidance.htm

www.cdc.gov/ncidod/sars/exposuremanagementframe.htmwww.cdc.gov/ncidod/sars/exposuremanagementframe.htm

<http://www.cdc.gov/ncidod/sars/infectioncontrol.htm>

- h. Train staff. Clinical and administrative staff should be educated about SARS and exposure management, including meticulous hand hygiene (soap and water and alcohol-based hand rubs), personal protective equipment, triage procedures, etc. Clinical staff should be fit-tested for N-95 respirator masks and trained in their use.
- i. Policies should be developed regarding surveillance of exposed healthcare workers for fever and respiratory symptoms (see www.cdc.gov/ncidod/sars/exposureguidance.htm)

2. Prepare the University

- a. Convene workgroup. Workgroup should include members of the University's Emergency Preparedness Team and may include:
 - 1) Workgroup leader = SHS medical/nursing director
 - 2) Local or state health department consultants
 - 3) Academic medical center consultants
 - 4) Local emergency room consultants
 - 5) International Studies Office and American Language Programs (incoming international students from SARS regions)
 - 6) Study abroad programs (students going to SARS regions)
 - 7) Housing, housekeeping, facilities management
 - 8) Information Technology
 - 9) Campus police
 - 10) Counseling and Psychological Services
 - 11) Food service
 - 12) Academic deans and/or advisors
 - 13) President's office
 - 14) Vice president of student affairs
 - 15) Dean of students
 - 16) University relations/communications staff
 - 17) Legal counsel
 - 18) Human resources
 - 19) Enrollment Services (or Admissions and Records)
 - 20) Disabled Student Services
 - 21) Public facilities managers (i.e. arenas)
- b. Educate workgroup about the University's Emergency Preparedness Plan, SARS, the SHS internal alert mechanisms, and SHS' SARS protocols, emphasizing that the primary focus of the health center should be on identification and initial evaluation of suspected SARS cases, and the arrangement of off-campus care. Workgroup may consider preparation of isolation units on campus for students requiring isolation who cannot be

isolated off-campus or at home:

www.cdc.gov/ncidod/sars/isolationquarantine.htmwww.cdc.gov/ncidod/sars/isolationquarantine.htm.

- 1) Isolation units should be identified in consultation with the local or state health department consultants. Campuses should consider establishing isolation units in temporary trailers, although the cost of this will be borne by each campus without assistance from the Chancellor's Office
 - a) contaminated air in unit cannot recirculate to other units
 - b) private bathroom
 - c) food delivery mechanism should be arranged
 - d) phone and Internet service will allow the isolated student to contact help and to maintain some schoolwork capabilities.
 - 2) The student should be transported to the isolation unit with a surgical mask in place to contain respiratory secretions.
 - 3) Identify who will be responsible for monitoring isolation compliance.
 - a) Campus police should work with the local/state health department to enforce isolation compliance.
 - b) Treating clinician and local/state health department should coordinate responsibility for monitoring of the isolated student's signs and symptoms.
 - c) Treating clinician and local/state health department and/or CDC should work together to determine when the 10-day isolation period is no longer indicated.
 - 4) For those students living off-campus, follow CDC Interim Guidance on Infection Control for Patients with Suspected SARS and Close Contacts in Households at <http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm>
 - 4) Prepare academic advisors, faculty and financial aid staff for dealing with student's academic and financial concerns resulting from prolonged class absence (i.e., may need to take leave of absence for semester).
 - a) The University should accommodate late withdrawals for medical reasons.
 - b) The University should develop options to help students postpone enrollment if they are unable to attend due to travel restrictions caused by SARS.
 - 5) Workgroup should develop a support program for students who are quarantined or isolated.
 - a) Establish a system to provide mental health support for students and parents (i.e., mental health counselor to telephone students on a regular basis to see how they are coping).
 - b) Develop a system to help provide students with supplies as needed (i.e., food, toiletries, etc.).
 - c) Implement (i.e., through Disabled Student Services) a note taking program for students while they are in quarantine or isolation
 - d) Provide tutoring to those students after quarantine or isolation
- d. Workgroup should prepare a SARS event communications plan.
- 1) Electronic communications:
 - a) Develop mass email capability to all students, staff, and faculty (assure 24/7 access to IT individual who has access to these lists).

- b) Develop website announcement capability including timed updates and FAQs. Excellent examples of this are at the UC Berkeley web site: uhs.berkeley.edu/Updates/sars.htm
 - c) Develop designated email address for questions from university community (as well as parents).
 - 2) Phone communications:
 - a) Plan hotline with appropriate staffing.
 - b) Plan answering machine messages to include timed updates.
 - 3) Written communications. Identify individual to write and plan the printing of:
 - a) patient education handouts
 - b) flyers and posters
 - c) student newspaper announcement
 - 4) Spokesperson communications. Identify individual(s) to do presentations and answer questions in the following settings:
 - a) residence halls
 - b) classrooms
 - c) “town meeting”
 - d) employee work site
 - 5) Plan media relations communication based on existing communication plans for emergency situations.
 - a) Identify university spokesperson
 - b) Funnel all media requests through designated spokesperson
- e. Promote influenza immunization to campus
 - 1) Although flu and SARS symptoms may overlap, reducing the number of campus flu cases should decrease the burden of the health center’s evaluation of febrile respiratory illnesses
 - 2) At no point should a history of influenza immunization preclude evaluation of a patient with a possible SARS exposure

C. Planning related to hosting arrivals to campus from SARS affected area.

1. The CDC, in consultation with ACHA, has developed guidelines for institutions that host students, scholars, and other visitors from SARS affected areas. The guidelines are available at

www.cdc.gov/ncidod/sars/hostingarrivals.htm

Key points in the guidelines are as follows:

- a) CDC is confident that comprehensive activities taking place to prevent importation and spread of SARS from inbound passengers will limit the spread and importation of the disease.
- b) Individuals arriving from SARS affected areas who have no symptoms should be permitted to engage in normal activities in the host communities and institutions.
- c) At this time, CDC does not recommend quarantine of persons arriving from areas with SARS. CDC’s Infection Control 72-hour rule and procedures should be consulted regarding persons with symptoms (See CDC’s “Interim Domestic Guidance on Persons Who May Have Been Exposed to Patients with Suspected Severe Acute Respiratory Syndrome (SARS)” at www.cdc.gov/ncidod/sars/exposuremanagement.htm)
- d) As per CDC’s Interim Domestic Guidance for Health Departments in the Management of School Students Exposed to Severe Acute Respiratory Syndrome

(www.cdc.gov/ncidod/sars/exposurestudents.htm), if a university or college official becomes aware of an individual from a SARS affected area who has developed a fever or respiratory symptoms, the institution should exclude the patient from normal activities. See Appendix C for a flow chart on management of persons who may have been exposed to SARS for more details. In addition, the institution should assure that appropriate health care personnel are alerted that an individual from a SARS affected area requires evaluation. Advance preparations can be made to implement infection control procedures to prevent transmission during transport and in the health-care setting. In the case that the campus Health Services is closed, the student should be transported to a local emergency department. Notification of appropriate state or local health officials should occur if SARS is suspected.

- e) Additional optional steps can be taken by institutions through their international programs to inform arriving students, scholars, and visitors from SARS affected areas about symptoms of SARS as well as prevention activities. CDC's web site (www.cdc.gov/ncidod/sars/) contains materials in Traditional and Simplified Chinese, Spanish, French, Japanese, Korean, and Vietnamese. UC Berkeley has developed a handout for returning students and visitors at uhs.berkeley.edu/Updates/pdf/visitors.pdf
2. The CSU recommends that institutional health insurance policies be made readily available to students and scholars upon arrival on campus to assure resources are available to care for suspected SARS cases.
3. The CSU also recommends that information regarding SARS issues be made available to arriving students and scholars in admission materials and/or pre-entrance health forms, orientation sessions, on-campus websites, and in health education materials available in student health centers.

D. Planning for university students, faculty, or staff who will be traveling to SARS affected countries.

1. The CDC has developed guidelines for travelers to SARS affected countries. The CDC has issued travel advisories for countries where active out-breaks of SARS are on-going and the risk of exposure is high. Non-essential travel to these countries is discouraged. Travel advisories change frequently, so ACHA advises all travelers to get the most updated information on the following web sites:
http://www.cdc.gov/ncidod/sars/travel_alertadvisory.htm
www.cdc.gov/ncidod/sars/travel_advice.htm
2. Precautions should be taken by university students, faculty, or staff who will be functioning as health care providers in SARS affected countries. Detailed information for health care providers can be found at the following website:
www.cdc.gov/ncidod/sars/ic.htm#healthcare
3. The Chancellor's Office should establish institutional policies or advisory statements for CSU employees and students who travel abroad to SARS affected areas.
 - a) Travel restriction notices should be based upon CDC travel advisories (which recommend curtailment of non-essential travel to particular areas) and alerts (which notify about potential outbreaks and methods to reduce risk to travelers)
 - b) Notices should be sent to campus presidents for distribution to student health centers, study abroad programs, and other affected academic units
 - c) Notices should also be posted on the Chancellor's web site with links from each campus's home page

- d) Students should be informed about the financial and academic implications of the policy
4. The CSU encourages anyone traveling outside the United States to assure appropriate immunizations are up to date.

Appendix A

SARS

To all our patients and visitors:

Due to the recent outbreak of Severe Acute Respiratory Syndrome (SARS) in certain parts of the world, we need to know:

Have you been in close contact with someone known to have SARS? OR Have you been in any of the following countries or cities in the past two weeks?

Peoples' Republic of China, including
Mainland China and Hong Kong
Taiwan?
Toronto, Canada?

NOTE: Travel advisories and alerts change frequently and updated information is available at the following websites:

www.cdc.gov/ncidod/sars/travel_alertadvisory.htm
www.cdc.gov/ncidod/sars/travel_alertadvisory.htm

www.cdc.gov/ncidod/sars/travel_advice.htm

If you answered "YES," to either of the above questions, do you have any of the following symptoms?

Fever
Cough
Shortness of breath
Difficulty breathing
Diarrhea

If you answered "YES," before you go to other areas, please immediately take and put on a facemask and see the registration staff.

Appendix B

Sample Protocols

Note: It is important to remember that establishing a definitive alternative diagnosis in a given patient (e.g., influenza, streptococcal pharyngitis, or infectious mononucleosis) can prevent unnecessary hospitalization, consumption of limited healthcare and university resources, as well as a potential public relations emergency. Simple, rapid, and inexpensive diagnostic testing available in many student health centers should be utilized when appropriate to establish a definitive diagnosis other than SARS.

1. If the patient phones in:

- a) If the patient complains of fever, flu-like illness, or respiratory symptoms, ask about recent travel to a SARS-affected country and/or exposure to a SARS patient.
 - 1) If yes, the patient should be diverted to a medical facility where evaluation can take place in a setting, which minimizes the potential for transmission of SARS. The patient should be instructed to not use public transportation. Family members, EMS, or university staff should be utilized to transport patients.
 - a) If patient is determined to be high risk, activate the internal alert mechanism.
 - 2) If no, triage the patient as usual.

2. If the patient walks in:

- a) Receptionist: If a student self-identifies as having possible SARS exposure:
 - 1) Hand the student a surgical mask to put on.
 - 2) Place the student in the SARS evaluation room.
 - 3) Patient should use hand hygiene products or wash hands with soap and water.
 - 3) Close the door and post an "Isolation" sign on the door.
 - 4) Call the medical provider who will do the SARS evaluation.
 - 5) Complete an exposure log for anyone (staff, students in the lobby) who may have had contact with the patient in the SHS. Exposure log should include name, ID number, and all contact information (phone, cell, email address).
- b) Medical provider assigned to do SARS evaluation:
 - 1) Activate the internal alert mechanism.
 - 2) Don PPE (N-95 respirator, gown, gloves, faceshield or disposable goggles).
 - 3) Clinical evaluation as appropriate.

To meet the suspect case definition of SARS, the patient must meet both epidemiologic criteria AND symptom criteria:

a) epidemiologic criteria:

i. travel from an area with documented or suspected community transmission of SARS,

OR

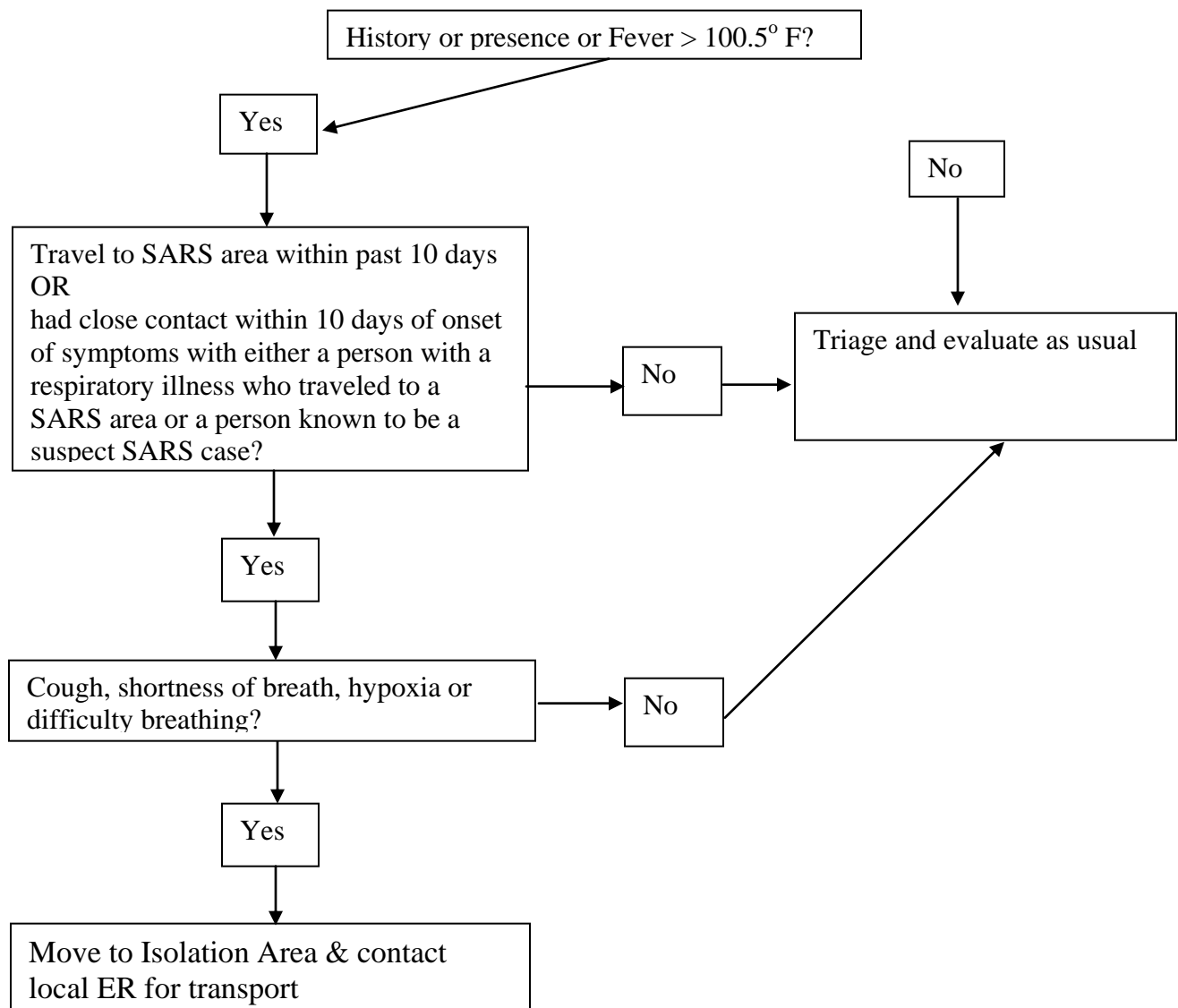
ii. close contact with a person who has SARS

(www.cdc.gov/ncidod/sars/exposuremanagementframe.htm)

AND

b) symptom criteria:

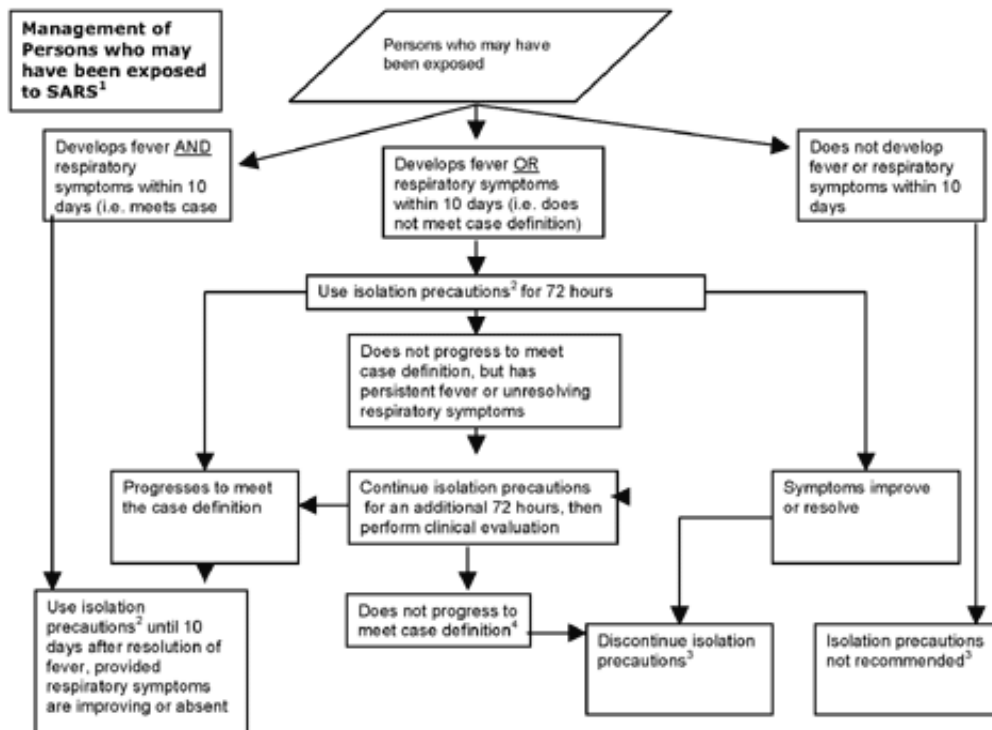
- i. fever (temperature $> 100.4^{\circ}\text{F}$ ($>38^{\circ}\text{C}$.) and one or more clinical findings of respiratory illness (e.g., cough, shortness of breath, difficulty breathing, or hypoxia)³. If the patient meets the suspect case definition and alternative diagnosis cannot be established (www.cdc.gov/ncidod/sars/casedefinition.htm), the medical provider:
- contacts a medical facility (e.g., emergency room or health department clinic) where appropriate diagnostics can take place in a safe environment.
 - In conjunction with the local health department develop a list of contacts of patient to include close contacts, close casual contacts, classroom and other contacts. Contacts are advised to follow CDC guidelines: www.cdc.gov/ncidod/sars/exposurestudents.htm and www.cdc.gov/ncidod/sars/exposuremanagement.htm
 - activates external alert mechanism.
 - arranges for transport of patient to appropriate medical facility.
 - properly disposes of used PPE and washes hands or disinfects hands with an alcohol-based hand rub immediately after removal of gloves.



4. Transport of high-risk patients:
 - a) Transport of high-risk patients within the hospital complex should take place in accordance with hospital protocols.
 - b) Transport of high-risk patients from outside the hospital complex: call 911, alerting the responders that they will be transporting a possible SARS patient. CDC |Updated Interim Guidance: Pre-Hospital Emergency Medical Care and Ground Transport of Suspected Severe Acute Respiratory Syndrome Patients:
www.cdc.gov/ncidod/sars/emtguidance.htm

5. Cleaning of SARS evaluation room should take place according to the following guidelines: CDC Recommendations for Cleaning & Disinfection of the SARS Patient Environment - Severe Acute Respiratory Syndrome (SARS):
www.cdc.gov/ncidod/sars/cleaningpatientenviro.htm
www.cdc.gov/ncidod/sars/cleaningpatientenviro.htm

6. If the patient meets epidemiologic criteria has (fever OR cough), the patient should be isolated for 72 hours and monitored (coordinate monitoring with the local health department) according to CDC Interim Domestic Guidance for Health Departments in the Management of School Students Exposed to SARS at <http://www.cdc.gov/ncidod/sars/exposurestudents.htm>A flow chart is appended below. The patient should be masked during transport to isolation housing. If a symptomatic exposed student lives in a residence where appropriate infection control precautions cannot be implemented and maintained (e.g., crowded dormitory setting), alternative housing arrangements should be made. If there is no such alternative, the student should be hospitalized, or housed in a designated residential facility for convalescing SARS patients, where infection control precautions can be followed. For those students living off-campus, follow CDC Interim Guidance on Infection Control for Patients with Suspected SARS and Close Contacts in Households at <http://www.cdc.gov/ncidod/sars/ic-closecontacts.htm>



¹Exposure includes travel from areas with documented or suspected community transmission of SARS (link to case definition) 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.

²Isolation 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 (link) if not admitted to hospital for care.

³Persons 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).

⁴Discontinuation 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.