
Preparedness Guidance Document for

Severe Acute Respiratory Syndrome

New York State Department of Health
December 17, 2003

Introduction

The purpose of this guidance document is to assist public health officials and health care providers in preparing for and responding rapidly and decisively to the recurrence of Severe Acute Respiratory Syndrome (SARS) in the local community or a health care facility. The document closely follows the draft SARS Public Health Guidance first issued on October 10, 2003, with subsequent revisions, by the Centers for Disease Control and Prevention (<http://www.cdc.gov/ncidod/sars/sarsprepplan.htm>). The intent is to provide detailed State implementation strategies, consistent with the national guidance. New York State specific procedures, reporting forms, and legal guidance are provided.

As stated in the Executive Summary of the draft CDC Guidance document:

“The basic strategy that controlled SARS outbreaks worldwide was rapid and decisive surveillance and containment. The keys to successful implementation of such a strategy are up-to-date information on local, national, and global SARS activity; rapid and effective institution of control measures; and the resources, organizational and decision-making structure, and trained staff vital to rapid and decisive implementation. This guidance document accounts for two important features of SARS outbreaks: 1) they are neither regional nor national but rather confined to limited geographic – and even institutional – settings, and 2) they are dynamic, meaning that the characteristics of an outbreak can change quickly.”

The New York State guidance document was developed in consultation with local health departments and health care providers in New York State. In the event of a SARS outbreak, it is likely that specific guidance and procedures may change. Therefore, this document is likely to be revised. The document and any revisions will be available on the public website of the New York State Department of Health at <http://www.health.state.ny.us/index.html>.

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1. SARS Surveillance

A. Goals and Key Concepts

The overall goals of Severe Acute Respiratory Syndrome (SARS) surveillance are to:

- Ensure early detection of cases and clusters of respiratory infections that might signal the global re-emergence of SARS.
- If the re-emergence of SARS is confirmed, maintain prompt and complete identification and reporting of potential cases to facilitate control and management of the outbreak.
- Identify and monitor contacts of SARS cases to enable early detection of illness in persons at greatest risk for disease.

The following are key concepts about SARS surveillance:

- The key to recognizing persons with SARS is identifying an epidemiologic link of exposure to another case of SARS or a setting (e.g., hospital) where SARS-associated coronavirus (SARS-CoV) transmission is occurring.
- Screening criteria for epidemiologic linkages need to reflect 1) the status of SARS globally and the risk of exposure from travel, and 2) the status of SARS activity in the community, at the work site, or in other settings where a patient with SARS-like illness may have been.
- In a setting of extensive SARS-CoV transmission, the possibility of SARS should be considered in all persons with a febrile respiratory illness, even if an epidemiologic link cannot be readily established.

B. Plan for Surveillance of SARS Cases in New York State

In April 2003, on an emergency basis, SARS was added to the NYS reportable disease list (Section 2.1 of the New York State Sanitary Code). Physicians should immediately report any potential cases (as defined by the reporting criteria below) to the local health department (LHD). SARS reporting criteria will be based on the level of SARS activity worldwide. The two categories of SARS activity are: (a) absence of known SARS activity and (b) presence of SARS activity anywhere in the world. An overview of the SARS reporting criteria is in Appendix 1A.

1. Case Surveillance

a. No SARS Activity Anywhere in the World.

In the absence of SARS activity worldwide, surveillance is aimed at early detection of cases and clusters of respiratory infections among individuals likely to be first affected by the re-emergence of SARS (e.g., travelers to areas previously affected with SARS; healthcare workers).

Reporting Criteria

Medical providers should ask all patients being admitted to the hospital with radiographic evidence of pneumonia or acute respiratory distress syndrome (ARDS) of unknown etiology about recent travel, employment history and/or exposure to another person who was recently diagnosed with pneumonia.

Providers should immediately report to the LHD any patient who meets the following clinical and at least one epidemiologic criteria:

- Clinical criteria
 - Radiographic evidence of pneumonia or ARDS of unknown etiology, which warrants hospitalization,
- Epidemiologic criteria (at least one of the following)
 - Travel within 10 days of onset to mainland China, Hong Kong, or Taiwan,
OR
 - Within 10 days of onset, close contact with other ill person(s) who recently traveled to mainland China, Hong Kong, or Taiwan,
OR
 - Employment as a healthcare worker with direct patient contact or a worker in a laboratory which contains live SARS-associated coronavirus (SARS-CoV),
OR
 - Within 10 days of onset, close contact with person(s) with radiographic confirmed pneumonia without an alternative diagnosis.

The NYSDOH SARS Screening Form When There is No SARS Activity Worldwide (Appendix 1B) can be used by LHDs to determine if a patient meets the reporting criteria. If a patient does meet the reporting criteria, the NYDOH SARS Case Report Form (Appendix 1C) should be completed. (Appendix 1C also includes a guide on SARS supplemental data entry fields.)

Additional factors that increase the likelihood of SARS-CoV infection

Additional information should be obtained on patients who meet the above reporting criteria to determine if there are factors that would increase the likelihood of SARS-CoV infection, including,

- While traveling, visited a healthcare setting.
- While traveling, had close contact with a person hospitalized for a respiratory infection.
- Part of a cluster of unexplained pneumonia in which one case is linked to travel to a previously SARS-affected area or to an ill healthcare worker.

If a patient has additional factors that increase the index of suspicion for SARS, consideration should be given for more aggressive isolation precautions and clinical evaluation (See Section 2 for details).

Travel to other areas with SARS-CoV transmission in Spring 2003:
(Singapore; Toronto, Canada; Hanoi Vietnam)

In the absence of SARS transmission worldwide, it is felt that the most likely sites of SARS recurrence are mainland China and the neighboring locations of Taiwan and Hong Kong. Hospitalized persons with radiographic confirmed pneumonia who have a travel history to other areas with SARS-CoV transmission in Spring

2003- Singapore; Toronto, Canada; and Hanoi, Vietnam- do not need to be reported unless there are factors that increase the likelihood of SARS-CoV infection (see above section).

Pediatric Populations

Based on the limited information available from the Spring 2003 SARS outbreak, the role of pediatric patients in the transmission of SARS-CoV disease is thought to be much less significant than the role of adults. Thus, in the absence of SARS activity anywhere in the world, the screening of persons requiring hospitalization for radiographic evidence of pneumonia or ARDS of unknown etiology should be limited to adults, unless there are special circumstances that make the clinician and public health personnel consider a child to be of potentially high risk for having SARS-CoV disease.

b. Presence of SARS Activity Anywhere in the World

If the re-emergence of SARS is documented in the United States or abroad, the likelihood that persons with respiratory infections may be infected with SARS will increase significantly. Enhanced surveillance activities should focus on:

- increasing the sensitivity of case detection through use of less specific clinical criteria when screening cases (i.e., expand surveillance to include non-hospitalized persons with fever or respiratory symptoms), and
- evaluating suspicious illnesses regardless of identification of an epidemiologic link (e.g., respiratory illness in healthcare workers; clusters of persons with pneumonia).

Reporting Criteria

Medical providers should ask all patients presenting with fever or respiratory symptoms about recent travel history or exposure to someone who may have SARS. Providers should immediately report to the LHD any patient who meets the following reporting criteria:

- Any patient meeting the reporting criteria listed for when there is no SARS activity (e.g., healthcare workers hospitalized with radiographic confirmed pneumonia; clusters of unexplained pneumonia)

OR

- Any patient meeting the following clinical criteria and epidemiologic criteria

- Clinical criteria (at least one of the following)

- Fever >38°C (100.4°F)

OR

- Lower respiratory infection (e.g., cough, shortness of breath, difficulty breathing)

- Epidemiologic criteria (at least one of the following)

- Travel within 10 days of illness onset to an area with recent local SARS transmission

OR

- Close contact within 10 days of illness onset with a person with known or suspected SARS infection.
- If SARS transmission that is unlinked to other SARS infections (i.e., the source of infection is unclear) has occurred locally, consider SARS in the differential diagnosis and management of all patients with fever or evidence of lower respiratory infection, regardless of whether the patient has SARS risk factors.

Hospital-Based Surveillance

In the presence of SARS anywhere in the world, hospitals should implement the following hospital-based surveillance strategies based upon the level of SARS activity:

Healthcare facility with no SARS patients:

- Ask all patients presenting with fever or respiratory symptoms about recent travel history or exposure to someone who may have SARS.
- Immediately report any patients meeting the above criteria to the LHD.
- Infection control personnel, occupational health officials, and providers should be alert for clusters of severe, febrile respiratory illness among healthcare workers. Any clusters of severe, febrile respiratory illness among healthcare workers with illness onsets within the same 10-day period should be reported immediately to the LHD.

Healthcare facility providing care for SARS patients who acquired infection from the community or from other facilities: no evidence of nosocomially acquired SARS-CoV infections:

- Continue all recommended surveillance plans outlined for the previous category.
- Monitor daily all healthcare workers caring for SARS patients. If the healthcare worker has either fever or respiratory symptoms, begin SARS isolation precautions, notify the LHD and initiate preliminary clinical assessment.
- If SARS-CoV transmission is occurring in the surrounding community, screen **all patients, visitors, and employees** upon entry to the facility for fever, cough, or shortness of breath. Screen symptomatic persons for SARS risk factors. If risk factors are present, the patient should be isolated and evaluated for both alternative respiratory illnesses and SARS-CoV infection.

Healthcare facility treating a large number of SARS patients, or facilities with nosocomially acquired SARS cases with clearly identified sources of infection:

- Continue all recommended surveillance plans outlined for the previous category.
- Monitor **all** healthcare workers daily for fever, cough, or shortness of breath. If present, begin SARS isolation precautions, obtain chest X-ray, and initiate preliminary workup.
- Begin inpatient surveillance; monitor daily for new or worsening fever, cough, or shortness of breath. If one or more of these symptoms are found, exposure to known or suspected SARS patients should be investigated; if there is evidence of exposure, the patient should be isolated and tested for alternative respiratory illnesses and SARS-CoV infection.

Healthcare facility in which nosocomially acquired SARS-CoV infection has occurred and at least some transmission is unlinked to other SARS infections (i.e., source of infection is unclear):

- Continue all recommended surveillance plans outlined for the previous category.
- Expand inpatient surveillance: if new or worsening fever, cough, or shortness of breath is noted, test patient for SARS-CoV regardless of whether an epidemiologic link to another SARS patient is found.
- Consider surveillance for illness and absenteeism among healthcare personnel.

2. Case Reporting Medical Providers

- Providers should report immediately by telephone to the LHD any patient meeting the reporting criteria.
 - If there are difficulties reaching the LHD, the provider should contact the NYSDOH. During business hours, call 518-473-4436; after hours, call 1-866-881-2809.
 - In New York City, contact the New York City Department of Health and Mental Hygiene through the Provider Access Line at 1-866-NYC-DOH1 (1-866-692-3641). At all other times, call the Poison Control Center at 1-212-764-7667.
- The NYDOH SARS Case Report Form (Appendix 1C) should be completed immediately and forwarded to the LHD.
- After consultation with local/state health department, if SARS testing is indicated the required laboratory testing paperwork should be completed and submitted with the clinical specimens to Wadsworth Center. Three forms are required:
 - Wadsworth Center Virus History Form (Section 4, Appendix 4A),
 - Informed Consent for the RT-PCR assay,
 - Informed Consent for the EIA assay.

The RT-PCR and EIA assays have been released by the Food and Drug Administration (FDA) under an Investigational Device Exemption and are IRB-approved. Use of both assays requires completion of two informed consent documents, one each for the RT-PCR and EIA assays.

The forms are available as Appendices 4B and 4C or at the following websites. <http://www.cdc.gov/ncidod/sars/lab/rtpcr/consent.htm> and <http://www.cdc.gov/ncidod/sars/lab/eia/consent.htm>.

Note: If specimens have been collected prior to informed consent being obtained, the Patient Information Form may be completed instead of the RT-PCR and EIA informed consent forms. This form is available as Appendix 4D and at www.cdc.gov/ncidod/sars/lab/rtpcr/participant.htm.

Local Health Departments

- Any patients meeting the reporting criteria should be reported immediately to the NYSDOH Regional Epidemiologist. If the Regional Epidemiologist is not available, call the Bureau of Communicable Disease Control at 518-473-4436 during business hours; after hours, call 1-866-881-2809.
- The NYSDOH SARS Screening Form When there is No SARS Activity Worldwide (Appendix 1B) can be used to determine if the patient meets the reporting criteria. If the patient does meet the reporting criteria, the NYDOH SARS Case Report Form (Appendix 1C) should be completed.
- The report should be initiated on the Health Information Network (HIN) Communicable Disease Electronic Surveillance System (CDESS). If SARS testing is indicated, the HIN identification number generated needs to be included on all paperwork associated with the case, including the lab specimen submission form.

NYSDOH

- If any patients meeting the surveillance criteria are reported by the medical provider directly to NYSDOH, the information will immediately be reported to the appropriate NYSDOH Regional Office and/or LHD.
- If laboratory specimens are received on patients for which there is no HIN ID included with the paperwork, Wadsworth Center will notify NYSDOH BCDC. If the case has not been reported on the HIN, NYSDOH BCDC will notify the appropriate Regional Office and/or LHD for follow-up.
- NYSDOH will report case data to the Centers for Disease Control and Prevention (CDC) through the Secure Digital Network.

3. Case Classification

- **SARS Case Definition**

The SARS case definition distinguishes 1) cases of SARS-CoV disease that may be classified as confirmed (i.e., clinically compatible illness that is laboratory confirmed) or probable (i.e., severe respiratory illness with epidemiologic linkage to a laboratory-confirmed case), from 2) other SARS reports under investigation (patients whose illnesses are less severe or whose exposures to SARS-CoV are not definitive). The SARS case definition is provided in Appendix 1D. A summary of the SARS case definition and classification is provided in Appendix 1E.

SARS case definitions may be modified as more clinical and epidemiologic information is obtained. Up-to-date versions of SARS case definitions are available on the NYSDOH HIN or the CDC web site:

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

Using case classification information provided by the LHDs, a statewide list of the number of probable and confirmed SARS cases, by county, will be maintained and posted on the NYSDOH public website. The site will be updated daily (Monday through Friday) at 4pm.

- **Ruling-out SARS-CoV Infection**

The only conclusive rule-out test for SARS-CoV is a negative antibody result on a serum specimen collected >28 days after onset. Thus obtaining a convalescent specimen >28 days after onset will be critical to classify patients whose acute specimens have been negative for SARS-CoV. LHDs should establish a tracking system of SARS cases under investigation to ensure that appropriately-timed convalescent specimens are obtained and submitted to Wadsworth. In all cases, the Virus Reference and Surveillance Laboratory History form (DOH-1795) should be used and informed consent obtained, per laboratory protocol (See Section 4: Laboratory Diagnosis).

4. Roles and Activities for Surveillance of SARS Cases

Healthcare Providers and Facilities: no SARS activity

- Ask all patients being admitted to the hospital with radiographic evidence of pneumonia or ARDS of unknown etiology about recent travel, employment history and/or exposure to another person who was recently diagnosed with pneumonia.
- Immediately report any patients meeting the reporting criteria to the LHD.
- Infection control personnel, occupational health officials, and providers should be alert for clusters of severe, febrile respiratory illness among healthcare workers. Any clusters of severe, febrile respiratory illness among healthcare workers with illness onsets within the same 10-day period should be reported immediately to the LHD.

Healthcare Providers and Facilities: presence of SARS activity

- Ask all patients presenting with fever or respiratory symptoms about travel history or exposure to someone who may have SARS.
- Immediately report any patients meeting the reporting criteria to the LHD.
- Implement the hospital-based surveillance strategies based upon the level of SARS activity in the community and facility.

Local Health Departments

- Conduct active Emergency Department (ED) surveillance for potential SARS cases as recommended by the NYSDOH (e.g., daily phone calls).
- Receive reports from healthcare providers of potential SARS cases.

- Obtain and review information needed to further assess reported cases to determine if there is increased likelihood of SARS-CoV infection, including:
 - Ill travelers who had contact with healthcare settings or persons hospitalized for a respiratory infection while abroad.
 - Clusters of unexplained pneumonia among any group of persons in which one case is linked to travel to a previously affected area or to an ill healthcare worker.
- Report to the NYSDOH any patient who meets the SARS reporting criteria.
- Review reports of persons who meet the reporting criteria to ensure that adequate testing is done to rule out other infectious causes of pneumonia.
- In conjunction with the NYSDOH, ensure that testing for SARS-CoV infection is ordered only when appropriate.

NYSDOH

- Provide guidance to healthcare providers, hospitals, and LHDs regarding SARS surveillance (e.g., issuing health alerts; maintaining SARS sites on the NYSDOH web site, Health Information Network, and Health Provider Network).
- Receive, review and compile reports from LHDs of active ED surveillance.
- Receive reports from LHDs of potential SARS cases, and provide consultation as needed.
- Develop and maintain electronic reporting systems to facilitate the timely reporting of SARS cases and dissemination of surveillance information.
- In conjunction with LHDs, ensure that testing for SARS-CoV infection is ordered only when appropriate.
- Report appropriate cases under investigation to the CDC.

C. Plan for Surveillance of Contacts of SARS Cases

Surveillance of contacts of SARS cases is essential to SARS control efforts. Through rapid identification, evaluation, and monitoring of exposed contacts of possible or known SARS cases, further transmission of disease may be prevented. Contacts who are found to be clinically ill can be quickly isolated to avoid further SARS-CoV transmission.

Surveillance of contacts will be conducted by LHDs, with assistance from the NYSDOH as needed. Initiate contact tracing on reports/cases as per the SARS Reporting, Case Testing and Follow-up Table (Appendix 1F).

1. Definitions

Close Contact: A person who cared for or lived with a person with SARS or having a high likelihood of direct contact with respiratory secretion and/or body fluids of a person with SARS (during encounters with the patient or through contact with materials contaminated by the patient), either during the period the person was clinically ill or within 10 days of resolution of fever. 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 time.

Infectious Period: Period of time from the onset symptoms to up to 10 days after the resolution of fever and improving respiratory illness.

2. Case Interview

a. Pre-interview Preparation

A successful interviewing session is the product of numerous factors, including thorough preparation. Disease intervention opportunities depend on the Interview and Contact Tracing team (ICCT) knowing and skillfully using pertinent, available facts. Preparation is important for each priority interviewing/counseling session.

Before the original interview/counseling session, the ICCT should review/analyze:

- Existing case report information;
- Other medical information, such as a medical record if available;
- Available historical information pertinent to the current infection;
- Existing case interview and investigative records for evidence of relationships to other known cases.

b. Case Interview Session

Successful disease intervention requires that diagnosed patients are isolated during the infectious period and that all contacts are promptly identified, monitored for signs of infection, and referred for appropriate medical attention if indicated.

- To achieve maximum disease intervention, the ICCT should conduct interviewing sessions without delay after the case comes to program attention.
- In conducting each interview session an ICCT should:
 - Communicate at the patient's level;
 - Confirm known information supplied by the patient:
 - Complete home address and phone number (including cell phone, email address, and fax number if pertinent);
 - Emergency locating information;
 - Work address and phone number;
 - Symptom history including date of onset, type of symptoms, and date of resolution;
 - Likely source of infection (e.g. epidemiologic risk factors).
 - Explain that all work is performed in the strictest confidence.
 - Explain the purpose of the session, which is to assist with management of this infection.
 - Emphasize contact tracing;
 - Persist tactfully to ensure all contacts are identified;
 - Pursue detailed information during the patient's infectious period to identify and locate known individual contacts by:

- Obtaining travel, work and social history relevant to the infectious period (from the date of first symptom onset to 10 days following resolution). If the source of the infection is not known, the interview period should also include the 10 days prior to onset. Information should include dates, times, modes of transportation and supervisor/organizer of the following activities:
 - Work;
 - Social settings (e.g., theater, restaurants, recreational events, etc.);
 - Hospitalizations and/or visits to health care facilities.
- Obtaining for known contacts:
 - Identifying and demographic information:
 - Name(s) (including nicknames);
 - Address (including apartment numbers);
 - Telephone number(s);
 - Employer and work telephone number(s);
 - Age/Race/Sex/Marital Status;
 - Physical description;
 - Other locating information;
 - Information regarding safety and other procedural concerns about the partner's domicile, acquaintances, and demeanor.
 - Nature of contact (i.e., household, health care worker, community);
 - Exposure history
 - First and last date of exposure,
 - Frequency and duration of exposure, and whether the exposure is ongoing;
 - If other than household, determine the approximate distance and details of the contact.
 - Timing relative to infectious period of the index patient.

c. Post-Interview Session and Analysis

- Review and reinforce with case:
 - All components of the monitoring plan and infection control procedures;
 - Commitment to communicate information;
 - Potential need for re-interview.
- Evaluate:
 - Any remaining patient concerns, needs;
 - Compliance regarding isolation of case;
 - Potential difficulties with contact identification and symptom monitoring;
 - Potential for ongoing exposure and risk for household or other contacts.
- Investigative activity should be documented on the SARS Interview Record and SARS Contact Record.

3. Contact Tracing

- All close contacts should be located and contacted within 12 hours of the case/contact report.

- Use work and school contact numbers, telephone directories, voting lists, neighborhood interviews, site visits, etc. to trace contacts when information is unknown or incomplete.
- If having difficulty locating a contact, consult with STD, TB, HIV/AIDS staff who have contact tracing experience.
- If the contact can not be located, other sources of notification, such as the media, may have to be considered.
- If the contact has left the county and/or state, notify the NYSDOH Regional Epidemiologist.

4. Contact Evaluation

- Notify contacts of their potential exposure to SARS.
- Verify exposures.
 - Verify exposure to index case during the period of infectiousness.
 - Verify the type of exposure.
- If initial contact is made through a home or workplace visit, the appropriate personal protective equipment (PPE) should be utilized since the contact's health status is unknown.
- Evaluate contact's health status using the SARS Contact Record Form.
- Identify any additional contacts who may not have been listed by the index case.
- Enter data from the SARS Contact Record Form on the HIN.

5. Ill Contacts

- If the contact is symptomatic with fever and/or respiratory symptoms, make arrangements for a medical evaluation by a healthcare provider.
 - Ensure the facility is prepared to handle a suspect SARS case.
 - Ensure the facility and staff are aware that the patient may have been exposed to SARS.
 - Ensure the contact does not take public transportation, or any other type of transportation that may expose others, enroute to their medical evaluation.
 - Advise the contact to remain at home until they are evaluated by a healthcare provider.
- Ill contacts should be counseled, interviewed, and reported as a suspected SARS case using the appropriate surveillance definitions, SARS Case Report Form, and his/her contacts should be identified.

6. Well Contacts

- Initiate plans for ongoing symptom monitoring for 10 days after their last exposure to a SARS case. Monitoring of contacts may be active (e.g., regular workplace body temperature monitoring) or passive (e.g., contact monitors their own symptoms and is contact by the local health department at least once a day).
 - Determine the time period in which the contact must be monitored (10 days after last exposure or 20 days after that last day of fever in the index case for those contacts with ongoing exposures).
 - Provide thermometers to any contacts who do not have one or would be willing to purchase one.
 - Provide contact with a daily temperature/symptom log.
 - Enter contact monitoring/symptom data on the HIN.
 - A copy of the SARS Contact Daily Temperature Log Tracking Sheet is provided (Appendix 1J) if the information collected cannot be immediately entered on the HIN.
- Develop a plan for locating contacts who are lost to follow-up during the monitoring period.
- Provide information on seeking medical care should the contact develop fever and/or respiratory symptoms while they are being monitored.
 - Seek medical evaluation by a healthcare provider.
 - Notify the local health department.
 - Ensure the facility is equipped to handle a suspect SARS case.
 - Ensure the facility and staff are aware that the patient may have been exposed to SARS.
 - Ensure the contact does not take public transportation, or any other type of transportation that may expose others, enroute to their medical evaluation.
 - Advise the contact to remain at home until they are evaluated by a healthcare provider.
 - Ill contacts should be counseled, interviewed, and reported as a suspected SARS case using the appropriate surveillance definitions, SARS Case Report Form, and his/her contacts should be identified.

7. Healthcare Workers

- Exposed healthcare workers should be located, evaluated, counseled, and educated.
- The healthcare worker's employer should be notified of the SARS exposure.

- Healthcare workers who are ill should be interviewed, and reported as a suspected SARS case using the appropriate surveillance definitions, SARS Case Reporting Form, and his/her contacts should be identified.
- If the healthcare worker had an unprotected high-risk exposure (e.g., the healthcare worker is in the same room as a probable or confirmed SARS case during a high-risk aerosol-generating procedure), they should be excluded from duty for 10 days following the last high-risk exposure.
- Well healthcare workers, who did not have any unprotected high-risk exposures, should be monitored for 10 days after their last exposure.
- Initiate plans for ongoing symptom monitoring:
 - Determine the time period in which the contact must be monitored (10 days after last exposure or 20 days after that last day of fever in the index case for those contacts with ongoing exposures).
 - Daily monitoring of the healthcare worker will be coordinated by the local health department and the healthcare facility.
 - The healthcare worker's employer may wish to institute procedures to evaluate their employee's health each day at the beginning of their shift.
 - Provide them with a daily temperature/symptom log.
 - Update contact monitoring/symptom data on the HIN.
 - A copy of the SARS Contact Daily Temperature Log Tracking Sheet is provided (Appendix 1J) if the information collected cannot be immediately entered on the HIN.
 - Develop a plan for locating contacts who are lost to follow-up during the monitoring period.
- Provide information on seeking medical care should they develop fever and/or respiratory symptoms while they are being monitored.
 - Seek medical evaluation by a healthcare provider.
 - Notify the local health department.
 - Ensure the facility is equipped to handle a suspect SARS case.
 - Ensure the facility and staff are aware that the patient may have been exposed to SARS.
 - Ensure the contact does not take public transportation, or any other type of transportation that may expose others, enroute to their medical evaluation.
 - Advise the contact to remain at home until they are evaluated by a healthcare provider.
 - Ill contacts/healthcare workers should be counseled, interviewed, and reported as a suspected SARS case using the appropriate surveillance

definitions, SARS Case Report Form, and his/her contacts should be identified.

¹ No SARS activity worldwide, providers should immediately report to the local health department:

- a. Any patient that meets the following reporting criteria:
 - ♦ Clinical Criteria:
 - Severe respiratory illness characterized by CXR confirmed pneumonia or acute respiratory distress syndrome (ARDS) of unknown etiology and hospitalization
 - ♦ Epidemiologic Criteria:
 - Employment in an occupation associated with a risk for SARS-CoV exposure (e.g., healthcare worker with direct patient contact; worker in a laboratory that contains live SARS-CoV) **OR**
 - Travel within 10 days of onset of illness to mainland China, Hong Kong or Taiwan **OR**
 - Within 10 days of onset of illness, contact with ill person(s) who recently traveled to mainland China, Hong Kong or Taiwan **OR**
 - Within 10 days of onset of illness, close contact of person(s) with CXR confirmed pneumonia without an alternative diagnosis

² Presence of SARS activity worldwide, providers should report to the local health department:

- a. Any patient meeting the criteria list for no SARS activity **OR**
- b. Any patient meeting the following clinical and epidemiologic criteria:
 - ♦ Clinical Criteria (at least one of the following):
 - Fever **OR**
 - Lower respiratory infection (e.g., cough, shortness of breath, difficulty breathing)
 - ♦ Epidemiologic criteria (at least one of the following)
 - Travel within 10 days of illness onset to an area with recent local SARS transmission **OR**
 - Close contact within 10 days of illness onset with a person with known or suspected SARS infection.

SARS Reporting Criteria New York State Department of Health

Medical Providers should report by telephone any patient meeting the SARS clinical and epidemiologic criteria.^{1,2}

Local Health Department should immediately notify NYSDOH

New York State Department of Health
Regional Office
Bureau of Communicable Disease Control
After Hours Duty Officer (1-866-881-2809)

CDC

SARS SCREENING FORM
Use ONLY IF NO SARS ACTIVITY WORLDWIDE

State ID Number (if any):		
1. Today's Date: ____ / ____ / ____-____ mm dd yyyy		
2. Reporter: Last Name: _____ First Name: _____		
Hospital or Clinic or LHD Name: _____		
Phone: () _____ Pager: () _____ Other: () _____		
3. Patient Information Last Name: _____ First Name: _____		
City of Residence: _____ State of Residence: _____		
Screening Criteria		
4. CXR-confirmed pneumonia or acute respiratory distress syndrome (ARDS) of unknown etiology warranting hospitalization <input type="checkbox"/> Yes (If no, do not complete form)		
5. Do you have a history of recent travel (within 10 days) to a previously SARS-affected area or close contact with ill person(s) who have traveled to these areas? If yes, area of travel:		
a. Travel Area A: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Mainland China <input type="checkbox"/> Hong Kong <input type="checkbox"/> Taiwan	b. Travel Area B: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Singapore <input type="checkbox"/> Hanoi, Vietnam <input type="checkbox"/> Toronto, Canada	
If yes, was the ill traveler: <input type="checkbox"/> Self <input type="checkbox"/> Close contact	If yes, was the ill traveler: <input type="checkbox"/> Self <input type="checkbox"/> Close contact	
If recent travel, did you have contact with a healthcare setting? <input type="checkbox"/> Yes <input type="checkbox"/> No	If recent travel, did you have contact with a healthcare setting? <input type="checkbox"/> Yes <input type="checkbox"/> No	
If recent travel, did you have close contact with a person who was hospitalized with a respiratory illness? <input type="checkbox"/> Yes <input type="checkbox"/> No	If recent travel, did you have close contact with a person who was hospitalized with a respiratory illness? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Date Returned to U.S. ____ / ____ / ____ mm dd yyyy		
6. Are you employed in an occupation associated with a risk of SARS-CoV exposure (e.g., a health care worker with direct patient contact or a worker in a laboratory that contains live SARS Co-V)? <input type="checkbox"/> Yes <input type="checkbox"/> No		
7. Do you have close contacts who have been told they have pneumonia? <input type="checkbox"/> Yes <input type="checkbox"/> No		
8. If "yes" to questions 4 and at least one of 5a, 6, or 7 complete the SARS case intake report form. Patients who answer "yes" to questions 4 and 5b only need to be reported if, while traveling, were exposed to a healthcare setting or had a close contact who was hospitalized.		

Appendix 1B.

Appendix 1C SARS Case Report Form is currently under review.

Council of State and Territorial Epidemiologists Position Statement

The following is an interim position statement adopted by the CSTE Executive Committee on 30 October 2003. (At the June 2003 annual meeting, CSTE modified its process for approval of resolutions. An interim position statement is required to be ratified at the subsequent annual meeting. See <http://www.cste.org/pdffiles/Positionstatementprocess2003table.pdf>.)

Committee: Executive Committee

Title: Revision of the CSTE case definition for Severe Acute Respiratory Syndrome (SARS)

Statement of the problem:

In June 2003, CSTE passed a revised case definition for SARS. This first revised definition divided the working case definition used by the World Health Organization to define and control the original outbreak of SARS into two definitions: a) a sensitive, non-specific case definition for SARS reports under investigation, and b) a more specific case definition for SARS-CoV disease. At the time, CSTE recommended that these definitions be reviewed and changed as needed.

Since June 2003, SARS-associated coronavirus (SARS-CoV) has ceased circulation among humans. In response to this, CDC has convened workgroups which have included CSTE representatives to discuss surveillance to detect newly re-emerging SARS-CoV disease in people and to be able to monitor and control spread of SARS-CoV if and when it re-emerges. During these discussions, it has become apparent that the non-specific case definition for SARS reports under investigation needs to be updated and broken into a number of distinct categories to fully cover reporting needs in the range of epidemiologic situations that may occur. These situations range from surveillance to detect the re-emergence of SARS to surveillance for monitoring and control purposes where there is some activity in some parts of the world to situations where there is already considerable SARS activity in a local community.

Statement of the desired action to be taken:

CSTE recommends that: the existing CSTE case definition for SARS be revised to include a hierarchy of specific categories of reports under investigation.

Goals of surveillance:

1) Rapidly identify illness that could be SARS, to screen for SARS-CoV and monitor and contain the potential for transmission; 2) rapidly recognize SARS-CoV disease outbreaks and geographic areas with increased SARS activity; 3) identify areas of possible SARS transmission to implement appropriate infection control practices in health care settings; 4) identify imported cases that may serve as sentinels for SARS-CoV activity in other regions of the world; 5) improve our current understanding of the epidemiology of this emerging disease; 6) assess the national public health impact of SARS-CoV disease and monitor trends; and 7) demonstrate the need for public health intervention programs and federal resources, and provide data to allocate resources.

Methods for surveillance:

Clinician and laboratory reporting. Core surveillance data for cases meeting the SARS-CoV disease case definition will be reported to the Centers for Disease Control and Prevention's (CDC's) National Notifiable Disease Surveillance Systems (NNDSS, a component of the NPHSS), through the National Electronic Telecommunications System for Surveillance (NETSS). Core records will be the official source of the SARS-CoV disease case count. Selected additional clinical, epidemiologic, and laboratory data will be collected and linked to the core NNDSS data. All surveillance data from persons meeting the definitions for SARS-CoV disease (i.e., core NNDSS and clinical, laboratory, and case investigation data) will be reported to CDC using electronic methods consistent with the NEDSS and Public Health Information Network (PHIN) architecture. In particular, CDC will assure that the following actions be implemented:

- Establishment of a dedicated, secure Web-based data entry system for SARS.

- Inclusion of a SARS module in the NEDSS base system, including electronic transmission of laboratory test results.
- Establishment of an XML schema that states can use to transmit information related to SARS cases to CDC, using the CDC secure data network.

States should be offered the options to choose the reporting method that fits their information system best. CDC will work closely with the states to determine the method(s) and frequency of data reporting.

In addition, CDC will work closely with the states to define a system outside the NPHSS to report SARS cases under investigation and the method(s) and frequency of reporting these data.

Case definitions: See below.

Period of surveillance: Indefinite.

Background and justification:

See CSTE Position statement ID-03-12 and Statement of Problem above.

In the United States, public health officials at state and territorial health departments and CDC collaborate in determining which diseases should be nationally notifiable. CSTE, in conjunction with CDC, makes recommendations annually for additions and deletions to the list of nationally notifiable diseases. As knowledge increases and diagnostic technology improves, some definitions will change to reflect those trends. Thus, future revisions of surveillance case definitions can be expected. In addition, surveillance case definitions are to be used for identifying and classifying cases, both of which are often done retrospectively, for national reporting purposes. For many conditions of public health importance, action to contain disease should be initiated as soon as a problem is identified; in many circumstances, appropriate public health action should be undertaken even though insufficient information is available to determine whether cases meet the case definition. Thus, surveillance case definitions should not be used as sole criteria for public health action.

Agencies for information:

- (1) Mary E. Chamberland, MD, MPH
Deputy Director
Division of Viral and Rickettsial Diseases
National Center for Infectious Disease
Centers for Disease Control and Prevention
1600 Clifton Road, NE
M/S A30
Atlanta, GA 30333
Phone: (404) 639-4350
Email: MChamberland@cdc.gov
- (2) George E. Hardy, MD, MPH
Executive Director
Association of State and Territorial Health Officers
1275 K Street NW, Suite 800
Washington, DC 20005
Phone: (202) 371-9090
Email: Ghardy@astho.org
- (3) Rosemary Humes, MS, MT
Director, Infectious Disease Programs

Association of Public Health Laboratories
2025 M Street, NW, #550
Washington, DC 20036-3320
Phone: (202) 822-5227
Email: Sbecker@aphl.org

- (4) Gregory Wagner MD
Director, Division of Respiratory Disease Studies
CDC NIOSH
1095 Willowdale Rd, H-2900
Morgantown WV 26505
Phone: 304-285-5749
Email: grw3@cdc.gov
- (5) Michael Tapper, MD
President, Society of Healthcare Epidemiology of America
19 Mantua Road
Mt. Royal, NJ 08061
Phone: 856-423-0087
Email: mtapper@lenoxhill.net
- (6) James G. Masland
Executive Director, Association for Professionals in Infection Control and Epidemiology, Inc.
1275 K Street, NW, Suite 1000
Washington, DC 20005-4006
Phone: (202) 789-1890
Email: jmasland@apic.org

Agencies for response:

- (1) James M. Hughes, MD
Director, National Center for Infectious Disease
Centers for Disease Control and Prevention
1600 Clifton Road, NE
M/S C12
Atlanta, GA 30333
Phone: (404) 639-3401
Email: JHughes@cdc.gov
- (2) Sam Groseclose, DVM
Chief, Surveillance Systems Branch
Centers for Disease Control and Prevention
Epidemiology Program Office, MS K-74
1600 Clifton Road, NE
Atlanta, GA 30333
Phone: (770) 488-8359
Email: SGroseclose@cdc.gov

Authors:

- (1) James Hadler, MD, MPH
State Epidemiologist and Director, Infectious Diseases Division
Connecticut Department of Public Health
410 Capitol Ave. MS 11-FDS
P.O. Box 340308

Hartford, CT 06106
Phone: (860) 509-7995
Email: james.hadler@po.state.ct.us

- (2) Umesh Parashar, MD, MPH
Medical Epidemiologist
Division of Viral and Rickettsial Diseases
National Center for Infectious Disease
Centers for Disease Control and Prevention
1600 Clifton Road, NE
M/S G04
Atlanta, GA 30333
Phone: (404) 639-3577
Email: UParashar@cdc.gov

Clinical description:

SARS-CoV disease typically begins with a prodrome, often with fever, chills and rigors, headache, malaise, and myalgias. After 3–7 days, a lower respiratory illness develops in most cases with a dry, nonproductive cough or dyspnea, sometimes with hypoxemia. Diarrhea has been described in ~20% of SARS patients, and has been an early and prominent feature in some. Chest radiographs show evidence of focal or generalized interstitial infiltrates in most patients; cavitation, lymphadenopathy, and pleural effusion are generally absent. Lymphopenia, thrombocytopenia, and elevated lactate dehydrogenase levels are common.

Clinical Criteria***Early illness***

- Presence of two or more of the following features: fever (may be subjective); chills; rigors; myalgia; headache; diarrhea; sore throat; rhinorrhea.

Mild to moderate respiratory illness

- Temperature of >100.4° F (>38° C)¹, and
- One or more clinical findings of lower respiratory illness (e.g., cough, shortness of breath, difficulty breathing).

Severe respiratory illness

- Meets clinical criteria of mild-moderate respiratory illness, and
- One or more of the following:
 - Radiographic evidence of pneumonia, or
 - Acute respiratory distress syndrome, or
 - Autopsy findings consistent with pneumonia or acute respiratory distress syndrome without an identifiable cause.

Epidemiologic Criteria***Possible exposure to SARS-CoV***

One or more of the following exposures in the 10 days before onset of symptoms:

- Travel to a foreign or domestic location with documented or suspected recent local transmission of SARS-CoV³
- Close contact² with a person with mild-moderate or severe respiratory illness and with history of travel in the 10 days before onset of symptoms to a foreign or domestic location with documented or suspected recent local transmission of SARS –CoV³.

Likely exposure to SARS-CoV

One or more of the following exposures in the 10 days before onset of symptoms:

- Close contact² with a confirmed SARS-CoV case.
- Close contact² with a person with mild-moderate or severe respiratory illness for whom a chain of transmission can be linked to a confirmed SARS-CoV case in the 10 days prior to onset of symptoms.

Laboratory Criteria

- Detection of serum antibody to SARS-CoV by a validated test (e.g., [enzyme-linked immunosorbent assay \[ELISA\]](#), or
- Isolation in cell culture of SARS-CoV from a clinical specimen, and PCR confirmation using a test validated by CDC, or
- Detection of SARS-CoV RNA by a [reverse transcription-polymerase chain reaction \(RT-PCR\)](#) test validated by CDC from:
 - One specimen tested on two occasions (different runs) using the original clinical specimen on each occasion, or
 - Two specimens from different sources (e.g., nasopharyngeal and stool), or
 - Two specimens collected from the same source on 2 different days (e.g., 2 nasopharyngeal aspirates).

Exclusion Criteria

A person may be excluded as a Report Under Investigation, including as a CDC-defined probable SARS-CoV case if any of the following apply:

- An alternative diagnosis can fully explain the illness.⁴
- Antibody to SARS-CoV is undetectable in a serum specimen obtained >28 days after onset of illness.⁵
- The case was reported on the basis of contact with a person who was subsequently excluded as a case of SARS-CoV, then the reported case is also excluded, provided other epidemiologic criteria or laboratory criteria are not present.

Case Classification***SARS reports under investigation (RUI):******Reports in persons from areas where SARS is not known to be active***

- RUI-1: Patients with severe illness compatible with SARS-CoV infection in groups likely to be first affected by SARS-CoV⁶ should SARS-CoV be introduced from a person without clear epidemiologic links to known SARS-CoV cases or place with known ongoing transmission of SARS-CoV.

Reports in persons from areas where SARS activity is occurring

- RUI-2: Patients who meet the current clinical criteria for mild-moderate illness and epidemiologic criteria for possible exposure (Spring 2003 CDC definition for suspect cases⁷).
- RUI-3: Patients who meet the current clinical criteria for severe illness and epidemiologic criteria for possible exposure (Spring 2003 CDC definition for probable cases⁷).
- RUI-4: Patients who meet the clinical criteria for early or mild to moderate illness and epidemiologic criteria for likely exposure to SARS-CoV.

SARS-CoV Disease Classification

- Probable SARS-CoV case: a person who meets the clinical criteria for severe respiratory illness and who meets the epidemiologic criteria for likely exposure to SARS-CoV.

- Confirmed SARS-CoV case: a person who has a clinically compatible illness (early, mild, moderate or severe disease) that is laboratory confirmed.

Summary Tables of SARS-CoV Case Classification by Laboratory Testing Status

Reports Prior to Definitive Laboratory Testing

<u>Epi Criteria for Exposure</u>	Clinical Criteria for Degree of Illness		
	<u>Early</u>	<u>Mild-Moderate</u>	<u>Severe</u>
Unknown	-	-	RUI-1
Possible	-	RUI-2	RUI-3
Likely	RUI-4	RUI-4	Probable SARS-CoV case

Classification of Reports Following Definitive Laboratory Testing
Laboratory Testing Results

<u>Initial Reporting Category</u>	<u>Negative*</u> Excluded	<u>Positive</u> Confirmed SARS-CoV case	<u>Not Done</u> Indeterminate
RUI 1-4			
Probable SARS-CoV Case	Excluded	Confirmed SARS-CoV case	Probable SARS-CoV Case

* negative test as defined by a negative antibody titer taken > 28 days after the onset of symptoms. A negative PCR test does not rule out SARS-CoV infection.

Footnotes

1. A measured documented temperature of $>100.4^{\circ}$ F ($>38^{\circ}$ C) is expected. However, clinical judgment may allow a small proportion of patients without a documented fever to meet this criterion. 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. Initial case classification based on reported information may change and reclassification may be required.
2. Close contact is defined as having cared for or lived with a person with SARS or having a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS (during encounters with the patient or through contact with materials contaminated by the patient), either during the period the person was clinically ill or within 10 days of resolution of fever. 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 time.
3. Transit through a foreign airport meets the epidemiologic criteria for possible exposure in a situation with a suspected or documented community transmission of SARS in that location (i.e., when a CDC travel advisory is in effect for that location). The surveillance periods for documented or suspected local transmission of SARS in specific locations are available at <http://www.cdc.gov/ncidod/sars/casedefinition.htm>. Types of locations specified will vary, e.g., country, airport, city, building, or floor of building. The last date a location may be a criterion for exposure for illness onset is 10 days (one incubation period) after removal of that location from CDC travel alert notice. The case-patient's travel should have occurred on or before the last date the travel alert was in place. For assistance in determining appropriate dates, see <http://www.cdc.gov/ncidod/sars/travel.htm>.
4. Factors that may be considered in assigning alternate diagnoses include the strength of the epidemiologic exposure criteria for SARS, the specificity of the alternate diagnostic test, and the compatibility of the clinical presentation and course of illness for the alternative diagnosis.
5. Current data indicate that more than 95% of SARS patients mount an antibody response to SARS-CoV. However, health officials may choose not to exclude a case based on lack of a serologic response if reasonable concern exists that an antibody response could not be mounted.
6. Consensus guidance between CDC and CSTE on which groups are most likely to be first affected by SARS-CoV should it re-emerge is currently in development. In principle, SARS-CoV infection should be considered *at a minimum* in the differential diagnosis in persons hospitalized with pneumonia or ARDS of suspected but unknown infectious cause who are in any of the following groups: a) health care workers who provide direct patient care; 2) travelers to or persons in close contact in the preceding 10 days with other ill persons who recently (within 10 days of their illness) traveled to mainland China, Hong Kong, or Taiwan; 3) persons who are affected by an outbreak of severe, atypical pneumonia. Dynamic guidelines for identification, evaluation and management of these persons are available at <http://www.cdc.gov/ncidod/sars/sarsprepplan.htm>
7. During the original Spring 2003 outbreak of SARS, the CDC case definitions were:
Suspect Case
 - Meets the clinical criteria for mild-moderate respiratory illness and the epidemiologic criteria for *possible* exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria, or
 - Unexplained acute respiratory illness resulting in death in a person on whom an autopsy was not performed and who meets the epidemiologic criteria for possible exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria.

Probable Case

- Meets the clinical criteria for severe respiratory illness and the epidemiologic criteria for *possible* exposure to SARS-CoV, but does not meet any of the laboratory criteria and exclusion criteria.

SUMMARY TABLE FOR SARS CASE CLASSIFICATION

SARS Activity	Epi Criteria	Clinical Criteria for Degree of Illness		
		Early: <u>Two or more of the following:</u> Fever (may be subjective), chills, rigors, myalgia, headache, diarrhea, sore throat, rhinorrhea	Mild-Moderate: Temperature > 100.4°F <u>AND at least one of the following:</u> Cough, shortness of breath, difficulty breathing, hypoxia	Severe: Temperature > 100.4°F <u>AND</u> At least one symptom of mild-moderate respiratory illness <u>AND at least one of the following:</u> X-ray evidence of pneumonia, respiratory distress syndrome (RDS), autopsy findings consistent with RDS without identifiable cause
No activity worldwide	*Healthcare worker <u>OR</u> *Within 10 days prior to symptom onset either: (a) Travel to China, Hong Kong or Taiwan (b) Contact with ill persons who traveled to these areas <u>OR</u> *Close contact with persons with unexplained pneumonia	—	—	For hospitalized cases only Report Under Investigation – 1 (RUI-1)
Activity anywhere in the world	Possible Exposure: Within 10 days prior to symptom onset: * Exposure to location with known SARS transmission <u>OR</u> *Close contact with probable SARS case Probable Exposure: Within 10 days prior to symptom onset: *Close contact with either a confirmed SARS case <u>OR</u> with person with respiratory illness who is epi-linked to a confirmed SARS case	—	RUI - 2	RUI - 3 Probable SARS Co-V case

Reports with Definitive Laboratory Testing

Initial Reporting Category	Laboratory Testing Results		
	Negative*	Positive**	Not Done
RUI 1-4	Excluded	Confirmed SARS-CoV case	Indeterminate
Probable SARS-CoV Disease	Excluded	Confirmed SARS-CoV case	Probable SARS-CoV case

* Antibody to SARS-CoV is undetectable in a serum specimen obtained > 28 days after onset of illness

** Detection of serum antibody to SARS-CoV by a validated test (e.g., enzyme-linked immunosorbent assay [ELISA])

Or

Isolation in cell culture of SARS-CoV from a clinical specimen and PCR confirmation using a test validated by CDC

Or

Detection of SARS-CoV RNA by a reverse transcription-polymerase chain reaction (RT-PCR) test validated by CDC from:

- One specimen tested on two occasions using the original clinical specimen on each occasion
Or
- Two specimens from different sources (e.g., nasopharyngeal and stool)
Or
- Two specimens collected from the same source on two different days (e.g., 2 nasopharyngeal aspirates)

SARS Reporting, Case Testing and Follow-Up

SARS Activity	Clinical Criteria	Epi Criteria	Follow-up*	Lab Testing
No Activity	Severe - hospitalized	(a) Healthcare worker (b) Travel to China, Hong Kong, Taiwan (c) Cluster of unexplained pneumonia	(a) Review facility HCW surveillance (b) At a minimum, Standard Respiratory Precautions after discharge (c) Identify other ill persons, assess for risk factors	**Initiate SARS testing for reported case and for other epi-linked persons with unexplained pneumonia
SARS Activity Identified Anywhere; No Local Activity	Severe	Same as No Activity – travel is not to an area with current or recent activity	Same as No Activity – consider voluntary home isolation	Same as No Activity
	Early, mild-moderate or severe	(a) Travel to or (b) contact with an ill person who traveled to an area with current or recent activity (c) Epi-linked to a confirmed case	Isolate case until 10 days after fever resolution AND Identify and monitor contacts daily	Initiate SARS testing
	Early, mild-moderate or severe AND SARS Co-V +	N/A	Isolate case until 10 days after fever resolution AND Identify and monitor contacts daily	N/A
SARS Activity Identified – Locally	Severe	Same as No Activity – travel is not to an area with current or recent activity	Same as No Activity	Same as No Activity
	Early, mild-moderate or severe	(a) Travel to or contact with an ill person who traveled to an area with current or recent activity (b) HCW at a facility with nosocomial transmission (c) Epi-linked to a confirmed case	Isolate case until 10 days after fever resolution AND Identify and monitor contacts daily (b) and (c) Possible quarantine of contacts	Initiate SARS testing
	Early, mild-moderate or severe AND SARS Co-V +	N/A	Isolate case until 10 days after fever resolution AND Identify and monitor contacts daily AND Possible quarantine of contacts	N/A

* This is a guide to assist with identifying basic activities. Individual case follow-up may require additional consultation with the medical provider, LHD and NYSDOH.

** Based on lab capacity, the CDC recommendation of testing if no alternative diagnosis in 72 hours may be implemented.

Section 1-Surveillance

County: _____

Case Serial No. _____

Source Case Serial No. _____

SARS Case Interview Record**Symptom History:**

Date of Symptom Onset: _____

Date of Fever Resolution: _____

Case Status: _____

CDC Classification: _____

Investigation Close Date: _____

Report Source: _____

Assigned To: _____

Supervisor: _____

Interviewed By: _____

Date: _____

Interview Method: _____

Surrogate Interview? _____ Source of Infection Known? _____

Infectious Period (From 24 hours prior to symptom onset to 10 days after symptom resolution): ____/____/____ to ____/____/____

SARS Case Travel HistoryDepart DateDepart LocationArrive DateArrive LocationTransport Type

1. _____

Transportation Company/Follow up information: _____

2. _____

Transportation Company/Follow up information: _____**SARS Case Activity (Include work, school, large group gatherings, additional travel, etc.)**Activity Description: (including location)Start DateEnd Date

People Present

County

1. _____

Event Organizer/Supervisor/Follow up information: _____

2. _____

Event Organizer/Supervisor/Follow up information: _____

3. _____

Event Organizer/Supervisor/Follow up information: _____**SARS Contact List**NameDates of
ExposureClosest
DistanceFrequencyType Exposure

County

1. _____

Address: _____ Phone: _____

2. _____

Address: _____ Phone: _____

3. _____

Address: _____ Phone: _____

County: _____

Appendix 1H

Source Case Serial No: _____

SARS Contact Record

Name: _____

Sex: _____

DOB: _____

Race/Ethnicity: _____

Pregnant: _____

Underlying Medical Conditions: _____

Contact Information:

Home Address:

Work Address:

Phone: _____

Phone: _____

Cellular Phone: _____

Exposure History:

First Exposure: _____

Last Exposure: _____

Frequency/Duration: _____

Exposure Ongoing? _____

Type of Exposure: _____

If HCW and/or exposed to an aerosol generating procedure, list PPE Used:

Eye Protection: Y / N / Unk

Respiratory

N95: Y / N / Unk

Other mask: Y / N / Unk

Gown: Y / N / Unk

Gloves: Y / N / Unk

Closest Distance: _____

Exposure Timing: _____

If HCW, facility Name: _____

If HCW, exposure to an Aerosol Generating Procedure? Y / N / Unk. If yes, describe: _____

Outcome:

Symptoms Present? Y / N / Unk

If Yes, Date of Onset: _____ Symptoms: _____ Date of Resolution: _____

Medical Exam? _____ If Yes, Date of Exam: _____

MD Name: _____ MD Telephone No. _____

Isolation: Start date: _____ End date: _____

If Contact under Quarantine: Start date: _____ End date: _____

SARS Administrative Data:

Initiating Agency: _____

Investigating Agency: _____

Assigned To: _____

Supervisor: _____

Date Notified: _____

Disposition: _____

Disposition Date: _____

SARS Dx. Y / N / Unk If yes, Dx. Date: _____

HIN Serial #: _____



STATE OF NEW YORK DEPARTMENT OF HEALTH

Appendix 1I.

Page 1

Corning Tower

The Governor Nelson A. Rockefeller Empire State Plaza

Albany, New York 12237

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

SEVERE ACUTE RESPIRATORY DISEASE SYNDROME (SARS) CONTACT DAILY TEMPERATURE LOG

Name: _____ Date of Birth: _____

Since you may have been exposed to severe acute respiratory syndrome (SARS) through either foreign travel or close contact to someone who is ill with SARS, you need to monitor your temperature twice a day. This should be done for the 10 days following your exposure (date of return from travel or date of last close contact with SARS patient). Your local health department will provide you with the exact dates. You have been provided this chart, the recommended infection control precautions for SARS patients and a supply of facial masks.

The attached chart is to record your temperature daily and any respiratory symptoms, should they occur. **If you develop a fever (greater than 100.4) OR any respiratory symptoms, such as cough or shortness of breath:**

- **Notify your health care provider immediately.**
- **If you are able, contact your local health department.**
- **Before leaving your home to seek medical attention, place a mask on your face.**

The local health department will be contacting you daily to monitor your temperature and any symptoms. If you have any questions about monitoring for symptoms, please contact _____ at _____.

You may wish to enter your health care provider's name and telephone below for easy reference should you become ill.

Health Care Provider: _____

Telephone Number: _____

SEVERE ACUTE RESPIRATORY DISEASE SYNDROME (SARS) CONTACT DAILY TEMPERATURE LOG

Name: _____ Date of Birth: _____

Original Patient Serial No. _____

Contact ID No. _____

SEVERE ACUTE RESPIRATORY DISEASE SYNDROME (SARS) CONTACT DAILY TEMPERATURE LOG TRACKING SHEET

Name: _____ Date of Birth: _____ Telephone No. _____

2. Clinical Guidance

- A. General Disease Background
- B. Guidance for Infection Control
 - 1. Background
 - 2. Purpose
 - 3. General Guidance
 - 4. Infection Control Preparedness Planning for the Re-Emergence of SARS
 - 5. Specific Triage Guidance
 - a. No SARS transmission identified worldwide
 - Standard Respiratory Precautions for Healthcare Facilities
 - b. SARS re-emerges in the world without local transmission
 - c. SARS re-emerges in the world with local transmission
 - 6. Specific Infection Control Guidance
 - a. No SARS transmission identified worldwide
 - b. SARS re-emerges in the world without local transmission
 - c. SARS re-emerges in the world with local transmission
 - d. SARS re-emerges in the world without local transmission, with nosocomial transmission
 - e. SARS re-emerges in the world with local transmission, with nosocomial transmission
- C. Clinical Evaluation of Patients
 - 1. General Information
 - 2. Evaluation of Patients
 - a. No SARS identified worldwide
 - b. SARS identified in the world without local transmission
 - c. SARS identified in the world with local transmission
 - d. SARS identified in the world with nosocomial transmission
- D. Employee Health Surveillance and Exposure Follow Up
 - 1. General Information
 - 2. Surveillance of Health Care Workers
 - a. No SARS identified worldwide
 - b. SARS identified worldwide without local transmission
 - c. SARS identified in the local community, not in the facility
 - d. SARS identified in the facility
 - 3. Exposure of Healthcare Workers – Policy and Procedure
 - 4. Mental Health of Healthcare Workers

- E. Visitor Guidance
 - 1. General Information
 - 2. Policy Development/Review
 - 3. Preplanning – Facility Protocols and Procedures Relating to Visitor
 - 4. Visitor Guidance
 - a. Re-emergence of SARS in the world, no local transmission
 - b. Re-emergence of SARS in the world, with local transmission
 - c. Re-emergence of SARS in the world, with nosocomial transmission

Appendices

- 2A. SARS Screening Tool for Healthcare Workers
- 2B. SARS Screening Tool for Visitors to Healthcare Facilities
- 2C. Sample: Daily In-Patient Screening Form
- 2D. Algorithm for Evaluation and Management of Patients Hospitalized with Radiographic Evidence of Pneumonia, in the Absence of Known SARS Activity Worldwide
- 2E. Algorithm for Management of Fever or Respiratory Symptoms in the Presence of SARS Activity Worldwide
- 2F. SARS Patient Contact Log
- 2G. Visitor Notification – SARS
- 2H. Visitor Registration Log
- 2I. Environmental Control Measures

2. Clinical Guidance

A. GENERAL DISEASE BACKGROUND

In mid-February 2003, reports of an outbreak of an atypical pneumonia of unknown etiology referred to as Severe Acute Respiratory Syndrome (SARS) emerged in Asia. Because exposed and infected travelers increase the rate of disease spread, SARS rapidly migrated from its origins in Guangdong Province, China to Singapore, Vietnam, Hong Kong, Taiwan and Toronto, Canada. A smaller number of cases were also reported in the United States and Europe. In April 2003 an unrecognized coronavirus, called SARS-associated coronavirus (SARS-CoV), was identified as the cause of SARS. The syndrome is characterized as a febrile severe lower respiratory illness with symptoms of headache, myalgia, cough, shortness of breath, difficulty breathing and sometimes diarrhea.

In July 2003, SARS cases were no longer being reported, and the SARS outbreaks worldwide were considered contained yet the possibility of SARS re-emerging continues to be of concern. There was one isolated case of SARS confirmed in a laboratory researcher in Singapore in September 2003. It was concluded that the researcher most likely acquired the infection in the laboratory where he had worked.

It is essential that our local and statewide public health efforts continue with its SARS epidemiological surveillance and prevention activities in order to monitor reports of respiratory illness that might be linked to SARS even while there is no SARS activity in the world. The following is a guidance document for the identification, evaluation and prevention of transmission of SARS in the healthcare and community settings.

B. GUIDANCE FOR INFECTION CONTROL

1. Background:

Information from the SARS outbreaks worldwide during the spring of 2003 suggests that SARS is transmitted through close contact with infected persons. SARS is most likely spread by droplet transmission, however, the possibility of airborne transmission and spread through fomites cannot be ruled out. Healthcare procedures that produce aerosols (e.g. nebulized respiratory treatments, intubation/extubation and deep tracheal suctioning) appear to have an impact on the transmissibility of SARS.

The investigations of the SARS outbreaks in Asia and Canada have illustrated the importance of strict adherence to infection control practices. Focused infection control measures for the prevention of transmission of all respiratory infections of unknown etiology is essential to prevent outbreaks of respiratory illnesses, including SARS. In the absence of identified SARS cases in the world, implementing the infection control strategies of Standard and Droplet Precautions for respiratory infections of unknown etiology with the additional incorporation of Standard Respiratory Precautions principles will control transmission without overburdening the healthcare system. Implementation of this strategy will likely impact the transmission of

seasonal circulating infections that are transmitted by respiratory spread (e.g. influenza, adenovirus, respiratory syncytial virus, and *Mycoplasma pneumoniae*).

2. Purpose:

Guidance for infection control and prevention for SARS will be dependant on the emergence of SARS worldwide, nationwide, statewide, and/or locally. Approaching infection control measures according to the level of known SARS activity will enable healthcare facilities to maintain an environment that is safe for the prevention of communicable disease outbreaks, while not overtaxing the healthcare system with intensive isolation procedures and public health notifications. The intention of this document is to assist healthcare facilities in the planning for SARS cases and to provide specific infection control guidance for the following scenarios: no SARS transmission has been identified in the world; SARS transmission identified in the world, but no transmission locally; SARS transmission identified locally; and nosocomial SARS transmission identified. Under conditions where there is no SARS in the world, there is no need for enhanced surveillance of mild respiratory disease. If SARS does re-emerge, subsequent infection control and surveillance guidance follows, according to the level of SARS activity identified.

3. General Guidance:

Early and adequate triage of all patients with respiratory symptoms at all entry points of the healthcare delivery system is a key strategy in preventing outbreaks of respiratory infections. The triage principles for respiratory symptoms should be uniform, regardless of where the patient accesses the system. We appreciate that there are healthcare personnel with varying levels of education that are the first points of contact for patients, depending on the type and size of the facility. Triage of patients with respiratory symptoms utilizing the Standard Respiratory Precautions is integral in preventing the transmission of respiratory infections, including SARS. If the re-emergence of SARS is documented in the United States or abroad, the likelihood that persons with respiratory infections may be infected with SARS will increase significantly. In the presence of SARS worldwide, locally and within healthcare facilities, healthcare facilities must ensure that intake and triage staff are updated regularly on the current status of SARS. Triage and intake staff should be educated to the signs and symptoms of and trained to assess for current risk factors for SARS. At all times intake and triage staff must continue to utilize Standard Respiratory Precautions as described in this document, as it is integral in preventing transmission of respiratory infections, including SARS.

4. Infection Control Preparedness Planning for the Re-emergence of SARS:

a. Develop strategies for triage and admission that minimize the risk of transmission to staff, patients and visitors.

1. Determine how possible SARS patients will be triaged, evaluated, diagnosed, and isolated.
2. Review admission procedures, and determine how the process can be streamlined to limit the number of patient encounters by healthcare personnel.

3. Develop a plan to screen facility employees and visitors before entering the facility, to be implemented, with guidance from NYSDOH and the local health department, if local or nosocomial transmission of SARS was identified.

b. Develop a patient transport plan to safely move SARS patients within the facility.

1. Identify appropriate paths for entry and movement of SARS patients in the facility that are segregated from main traffic routes.
2. Educate transportation staff on the general principles of infection control.

c. Reinforce infection control education and training of healthcare personnel.

1. Determine how training and education will be provided for all hospital personnel that may be affected by SARS.
2. Educate healthcare personnel about the importance of strict adherence to infection control measures, especially hand hygiene, standard and transmission-based precautions, correct sequence of and methods for donning and removing personal protective equipment, and Standard Respiratory Precautions.
3. Educate on the proper use of personal protective equipment (PPE) as per Standard and Transmission-based Precautions, including donning, removing and disposing of PPE (Guidance from CDC in development).
4. Educate personnel on SARS, including the signs and symptoms, epidemiology, and transmission. Include the risks of transmission involved with procedures that produce aerosols (e.g. bronchoscopy, intubation/extubation, nebulized respiratory treatments, and deep tracheal suctioning).
5. Educate healthcare workers on your facility's procedure for reporting employee exposures.
6. Assure respiratory fit-testing program is in compliance with OSHA guidelines and sufficient numbers of staff have been fit-tested and trained in fit-checking before use. Establish methods to easily identify those employees, patients and/or visitors that had contact with a case of unexplained pneumonia.
7. Develop a strategy for regularly updating clinicians and screening/triage staff on the current status of SARS, including changes in the case definition.

5. Specific Triage Guidance

a. No SARS Transmission Identified Worldwide:

1. Initial presentation into the healthcare delivery system:
 - a. The Standard Respiratory Precautions detailed below should be utilized at all points of entry into the healthcare delivery system:
 - emergency departments;
 - outpatient clinics;
 - physician offices.
 - b. Early detection of patients with respiratory symptoms can take place at triage

- areas, reception areas or during the scheduling of appointments.
- c. Health care providers and non-licensed personnel will play an important role in early identification and should all be familiar with and incorporate Standard Respiratory Precautions into their practice.

Standard Respiratory Precautions for Healthcare Facilities

1. Provide surgical masks to all patients with symptoms of a respiratory illness. Provide instructions on the proper use and disposal of masks.
2. For patients who cannot wear a surgical mask, provide tissues and instructions on when to use them (i.e., when coughing, sneezing, or controlling nasal secretions), how and where to dispose of them, and the importance of hand hygiene after handling this material.
3. Provide hand hygiene materials in waiting room areas, and encourage patients with respiratory symptoms to perform hand hygiene.
4. Designate an area in waiting rooms where patients with respiratory symptoms can be segregated (ideally by at least 3 feet) from other patients who do not have respiratory symptoms.
5. Place patients with respiratory symptoms in a private room or cubicle as soon as possible for further evaluation.
6. Implement use of surgical or procedure masks by healthcare personnel during the evaluation of patients with respiratory symptoms.
7. Consider the installation of plexiglass barriers at the point of triage or registration to protect healthcare personnel from contact with respiratory droplets.
8. If no barriers are present, instruct registration and triage staff to remain at least 3 feet from unmasked patients and to consider wearing surgical masks during respiratory infection season.
9. Continue to use droplet precautions to manage patients with respiratory symptoms until it is determined that the cause of symptoms is not an infectious agent that requires precautions beyond standard precautions.

2. Admissions into the healthcare delivery system:

The focus of SARS surveillance in the absence of SARS worldwide is aimed at early detection of cases and clusters of respiratory infections that might signal the re-emergence of SARS. Certain characteristics have been gathered from the epidemiology of SARS, and will signal sentinel events that should be reported to public health. Facilities should anticipate all the varying ways patients are admitted to their hospital (e.g. direct admissions, emergency room, and from other facilities) and target those modes of admission for further screening. All healthcare providers must be trained to utilize the following screening tool to screen all patients hospitalized with pneumonia at all points of entry into the healthcare delivery system:

Screening Tool for Patients Hospitalized with Pneumonia

Screen all patients who require hospitalization for radiographically confirmed pneumonia or acute respiratory distress syndrome without identifiable etiology *and* who have one of the following risk factors in the 10 days before onset of illness:

- *Travel* to mainland China, Hong Kong, or Taiwan, or close contact with an ill person with a history of recent travel to one of these areas, OR
- *Employment* in an occupation associated with a risk for SARS-CoV exposure (e.g. healthcare worker with direct patient contact; worker in a laboratory that contains live SARS-CoV), OR
- Part of a *cluster* of cases of atypical pneumonia without an alternative diagnosis.
-

If the patient answers yes to any of the three screening questions, providers should:

- Continue Droplet Precautions (note: as per Standard Respiratory Precautions, all patients with respiratory infections of unknown etiology should be placed on Droplet Precautions);
- Notify their local health department
- Evaluate according to the Algorithm in Appendix 2D.

Additional factors that increase the likelihood of SARS-CoV infection:

- While traveling, visited a healthcare setting.
- While traveling, had close contact with a person with pneumonia of unknown etiology.
- Part of a cluster of unexplained pneumonia in which one case is linked to a previously SARS-affected area or to an ill healthcare or lab worker.

Risk factors from previously SARS affected areas:

- Although less likely, SARS may re-emerge from Hanoi, Singapore or Toronto.
- If ill travelers from these areas are highly suspected to have SARS, providers should evaluate and report.

Infection Control practitioners and other healthcare personnel should also be alert for clusters of pneumonia among two or more healthcare workers who work in the same facility.

Screening of persons requiring hospitalization for radiographically confirmed pneumonia for risk factors suggesting SARS-CoV exposure should be limited to adults, unless there are special circumstances that make the clinician and public health personnel consider a child to be of potentially high risk for having SARS-CoV disease.

3. Key points for admission:

- a. The Standard Respiratory Precautions is the first line of defense for the prevention of transmission of respiratory infections;
- b. If a physician is admitting a patient directly to a hospital, they should follow Standard Respiratory Precautions, including giving the patient a surgical mask to wear, if they can tolerate;
- c. All healthcare workers can implement Standard Respiratory Precautions for a patient admitted with respiratory symptoms;
- d. If the patient is being admitted with a diagnosis of a respiratory infection of unknown etiology, Droplet Precautions are to be instituted until the infection is deemed non-communicable.

b. SARS Re-emerges in the World without Local Transmission:

1. Continue to utilize Standard Respiratory Precautions as described earlier.
2. Continue to screen as in Section 2 above. In addition, screen all patients presenting to a health care facility (emergency room, outpatient clinic, or physician office) with *a fever or respiratory symptoms* (cough, shortness of breath, difficulty breathing) for SARS risk factors within the 10 days prior to symptom onset. Outpatient clinics and physician offices should screen patients at the time of scheduling appointments and again when they arrive to the clinic/office.

SARS risk factors include:

- A history of foreign travel (or close contact with an ill person with a history of travel) to a location with documented or suspected SARS-CoV, or
- Exposure to a domestic location with documented or suspected SARS-CoV (including a laboratory that contains live SARS-CoV), or close contact with an ill person with such an exposure history.
- Employment as a healthcare worker, or
- Close contact within 10 days of illness onset with a person with confirmed or probable SARS-CoV or SARS-CoV report under investigation.

3. If a patient with a fever or respiratory infection has a SARS risk factor(s):

- a. Place on Airborne and Contact Precautions.
- b. Place the patient in an airborne isolation room (AIIR) or consider cohorting patients if airborne isolation rooms are not available in the facility (*see Infection Control Guidance*).
- c. In outpatient clinics and physician offices where AIIR may not be available, immediately place patient in private exam room, and
- d. Notify your local health department

- e. Persons with such an exposure history should be evaluated for SARS-CoV disease according to the algorithm in Appendix 2E.

c. SARS Re-emerges in the World with Local Transmission:

1. Continue to utilize Standard Respiratory Precautions as described earlier.
2. Screen **ALL patients, visitors and employees** entering the facility for fever or respiratory symptoms (cough, shortness of breath and difficult breathing).
3. If fever or respiratory symptoms are present, screen for SARS risk factors.
4. If a patient with a fever or respiratory symptoms has SARS risk factor(s):
 - a. Keep patient masked as per Standard Respiratory Precautions, and institute Airborne and Contact Precautions
 - b. Place in an airborne isolation room (AIIR) or consider cohorting patients if airborne isolation rooms are not available in the facility (*see Infection Control Guidance*)
 - c. In outpatient clinics and physician offices where AIIRs may not be available, immediately place patient in a private exam room, and
 - d. Notify your local health department for further guidance.
5. If an employee with a fever or respiratory symptoms has SARS risk factors, refer to Employee Health Surveillance Guidance Part D of this document.
6. If a visitor with a fever or respiratory symptoms has SARS risk factors, refer to Visitor Guidance Part E of this document.

6. Specific Infection Control Guidance

a. No SARS Transmission Identified Worldwide:

1. Follow the Standard Respiratory Precautions described previously for all patients who present with respiratory symptoms of unknown etiology.
2. Reinforce compliance with hand hygiene by:
 - a. Educating on the importance of hand hygiene for the prevention of transmission of infectious agents;
 - b. Providing easy access to hand hygiene products at the point of care.
 - c. See CDC Guideline for Hand Hygiene in Health Care Settings (<http://www.cdc.gov/handhygiene/>) for more details on guidance and suggestions for improving adherence.
3. Assure adequate cleaning of the patient care environment by:
 - a. Assuring the product used for daily routine and discharge cleaning of patient areas is an Environmental Protection Agency (EPA) registered low- or intermediate-level disinfectant and it is used as per the manufacturer's instructions.
 - b. Assessing the protocols used by your facility for daily and discharge cleaning to assure adequacy. They should minimally include:
 - Daily cleaning of:
 - horizontal surfaces (e.g. over-bed table, night stand);
 - frequently touched surfaces (e.g. bed rails, phone);

- lavatory surfaces.
 - Discharge cleaning of:
 - surfaces described above;
 - visibly soiled vertical surfaces (e.g. walls, curtain dividers);
 - frequently touched surfaces such as light switches and door knobs.
 - c. Assess compliance with discharge cleaning by identifying a person in the facility to perform daily rounds to inspect cleanlinessss.
 - d. See CDC *Guideline for Environmental Control in Health-Care Facilities*, 2003 (<http://cdc.gov/ncidod/hip/enviro/guide.htm>) for specific guidance for maintaining a safe environment for patients.
4. Reinforce the Occupational Safety and Health Administration (OSHA) regulation of no eating and drinking in patient care areas.

b. SARS Re-emerges in the World without Local Transmission:

1. Follow the recommendations in Specific Infection Control Guidance – No SARS Transmission Identified Worldwide.
2. Assign a point person to regularly access CDC Website to obtain updated information on the epidemiology of SARS, and to share the up to date case definition with clinicians and screening/triage personnel.
3. Screen all patients at all points of entry to the facility for fever, respiratory symptoms, and SARS risk factors.
4. For Patients meeting the established SARS case definition:
 - a. Utilize Airborne, Contact, and Standard Precautions, including approved eye protection (e.g. face shield or goggles) for all patients who meet the case definition for suspect or probable SARS.
 - b. When possible, admit patients meeting the SARS case definition to airborne infection isolation rooms (AIIR). Perform a smoke test before admitting to the AIIR to assure negative air flow. See CDC *Guideline for Environmental Control in Health-Care Facilities*, 2003 (<http://cdc.gov/ncidod/hip/enviro/guide.htm>) for detailed specifications for AIIR.
 - c. If an AIIR is not available, place the patient in a private room, wear personal protective equipment as per Airborne, Contact and Standard Precautions, and contact your local health department for further guidance on patient placement.
 - d. Patient procedures:
 - Perform high risk procedures that increase aerosolization (nebulized treatments, deep tracheal suctioning, intubation/extubation only if medically necessary);
 - Perform high risk procedures on AIIR only with staff who have been fit-tested for an N95 respirator or higher protection, and with staff that have received enhanced infection control training on the prevention of transmission of SARS;

- Avoid transport out of the patient's room for procedures (except as above). If transport is necessary, choose a route that will come in contact with the minimum numbers of individuals.
5. If the numbers of suspect or probable SARS cases exceed the availability of AIIRs, a SARS unit may be designated:
 - a. Provide enhanced infection control education to direct patient care staff and assure all staff are fit- tested for and utilize an N95 respirator;
 - b. Consider cohorting suspect or probable SARS cases in private rooms on the same unit;
 - c. Consider adapting the airflow of cohorted unit to negative pressure (with guidance from an engineer specialized in air handling);
 - d. If cohorting as above, AIIRs are still preferred for:
 - Patients who are known to have transmitted SARS to other persons;
 - Patients in whom the risk of SARS is being assessed (to avoid placing non-SARS affected patients on a SARS unit).
 6. Environmental Guidance for rooms occupied by SARS cases:
 - a. Airborne and Contact Precautions (including eye protection) are to be maintained during cleaning by environmental services personnel (housekeeping). Provide training on how to appropriately don and remove personal protective equipment (PPE) and perform hand hygiene.
 - b. Frequently touched surfaces are to be wiped down with an Environmental Protection Agency (EPA) registered low – or intermediate- level disinfectant and allowed to dry as per manufacturer's recommendations.
 - c. Inpatient rooms are to be cleaned and disinfected daily and at the time of patient discharge. Surfaces include:
 - Surfaces to be cleaned daily include:
 - Horizontal surfaces (e.g. over-bed table, night stand)
 - Frequently touched surfaces (e.g. bed rails, phone);
 - Lavatory facilities.
 - Surfaces to be cleaned following transfer or discharge include:
 - Surfaces described above;
 - Obviously soiled vertical surfaces;
 - Frequently touched surfaces such as light cords, switches and door knobs;
 - Curtain dividers should be changed and laundered.
 - d. Solutions used for cleaning should be discarded after use. Thoroughly rinse and clean housekeeping equipment after use after use and allow to dry.

c. SARS Re-emerges in the World with Local Transmission:

1. Follow the recommendations above for Specific Infection Control Guidance – No SARS Transmission Identified Worldwide and SARS Re-emerges in the World without Local Transmission.
2. Designate an area as a SARS evaluation area. These areas should be further divided into patients, visitors and employees.

3. Have hand hygiene products available on entrance and instruct all person being screened to de-germ hands.
4. Actively screen all persons entering the facility for fever or respiratory symptoms and epidemiological risk factors (linked transmission) and fill out screening tool (see appendices 2A and 2B).
5. All personnel at patient evaluation areas should wear gloves, gowns, fit-tested N95 respirators, and face shields for evaluation of patients, visitors and staff. Hand Hygiene is to be performed between contacts.
6. All personnel at visitor and employee evaluation areas are to wear fit-tested N95 respirators and to perform hand hygiene between contacts (rationale: minimal direct contact should occur at these check points).
7. For patients with fever or respiratory symptoms:
 - a. Place a surgical mask on the patient;
 - b. Evaluate need for admission to the hospital;
 - c. If patient is being hospitalized, admit to AIIR (or SARS unit as per I.5) on Airborne and Contact Precautions;
 - d. If patient does not meet the criteria for admission, consult your local health department regarding need for home isolation (note: patient may require admission if home isolation is not possible).
8. For employees who present with fever or respiratory symptoms, see Employee Health Surveillance (part D).
9. For visitors who present with fever or respiratory symptoms, see Visitor Guidance (part E).
10. Designate personnel who have received enhanced infection control training to screen/triage patients, visitors and employees and perform direct patient care with SARS cases.
11. Designate specific SARS patient-flow routes that minimize contact with employees, visitors and other patients.

d. SARS Re-emerges in the World without local transmission, with Nosocomial Transmission:

1. Follow the recommendations above for Specific Infection Control Guidance – No SARS Transmission Identified Worldwide and SARS Re-emerges in the World without Local Transmission.
2. Fax an Infection Control Report form DOH 4018 to the NYSDOH Central Office at 518- 474-7381 and call your NYSDOH Regional Epidemiologist.
3. Screen all inpatients for symptoms of SARS (see appendix 2C).
4. Collaborate with NYSDOH and the local health department on specific infection control measures, including cohorting and patient restrictions.
5. Plan cohorting in the following manner:
 - If the nosocomial transmission can be clearly linked, designate the following cohorts:
 - o Cohort known, suspect and probable SARS patients in private rooms on one unit;

- Modify existing rooms to achieve negative pressure (collaborate with facility engineer and NYSDOH);
 - If rooms cannot be modified, have patients wear surgical masks, if tolerated;
 - Designate staff for cohort.
- o Cohort patients exposed to known SARS cases, with febrile or respiratory symptoms in private rooms on one unit.
- If the nosocomial transmission cannot be clearly linked, designate the following cohorts:
 - o Afebrile and asymptomatic patients with no close SARS contact – discharge as soon as medically indicated;
 - o Afebrile and asymptomatic patients with close SARS contact – discharge with contact restrictions and local health department follow-up;
 - o Febrile or symptomatic patients not meeting the case definition;
 - o Patients meeting the case definition.

e. SARS Re-emerges in the World with local transmission, with Nosocomial Transmission:

1. Follow the recommendations above for Specific Infection Control Guidance SARS Re-emerges in the World with Local Transmission (6c.), and 6d.2-5.

C. CLINICAL EVALUATION OF PATIENTS:

1. General Information:

Since Severe Acute Respiratory Syndrome (SARS) emerged during the winter of 2002 through the spring of 2003, the diagnosis of unexplained pneumonia has become an issue. The clinical assessment of the patient with severe pneumonia will now add emphasis on epidemiologic risk factors. The likelihood of a patient being infected with SARS approaches zero unless certain clinical and epidemiologic risk factors are present. However, to date, there are no specific clinical or laboratory findings that can distinguish SARS with certainty. Therefore, approaching all respiratory illness with appropriate respiratory infection control measures from the initial presentation of the patient becomes critically important. This approach has the added benefit of preventing the transmission of other respiratory diseases as well.

2. Evaluation of Patients

a. No SARS Identified Worldwide:

1. The approach to the patient with respiratory illness when there is no documented SARS in the world will focus on patients who require hospitalization for radiographically confirmed pneumonia or acute respiratory distress syndrome without identifiable etiology with the following criteria:

- Suggestive clinical presentation with radiographically confirmed pneumonia or acute respiratory distress syndrome of unknown etiology
 - Fever, cough, dyspnea and infiltrates on CXR

And

- Epidemiologic features suggesting possibility of exposure to SARS-CoV:
 - *Travel* to mainland China, Hong Kong, or Taiwan, or close contact with an ill person with a history of recent travel to one of these areas, OR
 - *Employment* in an occupation associated with a risk for SARS-CoV exposure (e.g. healthcare worker with direct patient contact; worker in a laboratory that contains live SARS-CoV), OR
 - Part of a *cluster* of cases of atypical pneumonia without an alternative diagnosis.

2. When there is no documented SARS in the world, a careful history of the patient hospitalized with severe pneumonia is key. Droplet precautions should become routine when evaluating a patient with pneumonia (see appendix 2D).
3. Utilize the screening tool in the triage section above for patients admitted with pneumonia.
 - a. If the answers to questions in the screening tool are no, continue the evaluation for community-acquired pneumonia and treat clinically.
 - b. If the answer is yes to one of the three questions in the screening tool:
 - o Notify the local health department
and
 - o Consider the following in the work up and diagnosis:
 - CBC with differential
 - Pulse oximetry
 - Blood cultures
 - Sputum Gram's stain and culture
 - Testing for viral respiratory pathogens such as influenza A and B, respiratory syncytial virus
 - Creatine phosphokinase levels, lactate dehydrogenase levels
 - Specimens for legionella culture and urinary antigen
 - Specimen for pneumococcal urinary antigen
 - Transaminase levels
 - aPTT
 - C-reactive protein

4. If the health department and clinician have a high suspicion for SARS, institute Airborne and Contact Precautions and call the New York State Department of Health Regional Epidemiologist for your area.
5. If after seventy-two hours there is an alternative diagnosis, treat as clinically indicated. If there is not an alternative diagnosis, and the patient is part of a cluster of pneumonia or there is a high index of suspicion of SARS, continue treating pneumonia and consult with the local health department for consideration of SARS-CoV testing.

b. SARS Identified in the World without Local Transmission:

If there has been no exposure to settings with current SARS activity, the risk of disease is still very low. A higher index of clinical suspicion occurs with a patient hospitalized with pneumonia with a travel history to a previously SARS-affected area, clustering, or with a healthcare association. However, exposure to settings with documented SARS activity poses a significant risk and a lower threshold for clinical suspicion for SARS should be maintained.

1. Any patient with either fever OR respiratory systems should be asked about:
 - Recent exposure to a SARS-affected area or close contact with ill persons with exposure to such areas (foreign or domestic)
 - Recent exposure to a person suspected of having SARS
 2. SARS should be considered among patients with both:
 - Early clinical features compatible with SARS (i.e. fever OR respiratory symptoms)
- AND
- Evidence suggesting potential exposure to SARS CoV
 - o Exposure to areas currently affected by SARS (foreign or domestic)
 - OR
 - o Close contact to a suspected SARS case
3. When SARS is being considered, institute Airborne and Contact Precautions and notify the Local Health Department.
 4. Diagnostic testing should include the tests previously described in the work up of community-acquired pneumonia (see Appendix 2E). In patients who have radiographic evidence of pneumonia with a possible exposure, initiate SARS-CoV testing.

SARS-CoV testing includes: (See Laboratory Guidelines for guidelines for collection of specimens; review infection control precautions before collection)

- Blood: (Serum or plasma) RT-PCR testing – should be obtained within 1 week of symptom onset for best results; however, may be useful until day 21 post symptom onset
 - NP swab plus OP swab: RT-PCR testing-During the first week of illness and serial specimens thereafter
 - Stool: Begin collecting stool early in the illness but most likely positive after the first week; may be positive as long as 1 month
5. SARS CoV testing must be done in consultation with the Local and State Health Departments. It will be preferable to collect multiple specimens from different sites and at different times during the illness to accurately make a diagnosis.
 6. If there is no radiographic evidence of pneumonia with a possible SARS exposure:
 - a. Begin Airborne and Contact Precautions and follow for 72 hours.
 - b. If no improvement, re-evaluate and consider SARS testing continuing isolation precautions.
 - c. If radiographic evidence of pneumonia, follow procedures as above. (See appendix 2E)
 7. Elderly patients or those with underlying chronic illness may not present in the same manner as other patients. Also the presentation of children may be different. These populations with SARS risk factors must be considered with a high index of suspicion for SARS. Discussion with public health should be initiated early in the evaluation.

c. SARS Identified in the World with Local Transmission:

1. In the midst of local transmission, if occurring in well-defined settings with all cases linked to other cases, continue as above and consider a diagnosis of SARS in all persons with radiographic evidence of pneumonia (even if not hospitalized) if they:
 - a. Have close contact with a person with documented pneumonia, or
 - b. Have had exposure to hospitals or outpatient clinics in the 10 days prior to symptom onset (includes both healthcare workers and non-healthcare workers).
2. In the midst of a community outbreak in which the transmission is widespread and epidemiologic linkages between cases are not well defined, consider SARS in any patient presenting with fever or respiratory illness.

d. SARS Identified in the World with Nosocomial Transmission:

In hospitals known to or suspected of having nosocomial transmission of SARS, clinicians and public health officials must be particularly vigilant about evaluating fever or respiratory symptoms among inpatients.

D. EMPLOYEE HEALTH SURVEILLANCE and EXPOSURE FOLLOW UP:

1. General Information:

The information gained from the study of SARS clusters worldwide clearly illustrates that health care facilities play a major role in the epidemiology of SARS, and that healthcare workers were at increased risk for acquiring the disease. It is important to prepare for possible re-emergence of SARS during the period of time when there are no SARS cases. Containment depends on early identification of cases, and it is healthcare workers that will be the first to both recognize new cases and to be exposed to SARS.

For this reason it is important to conduct surveillance activities among healthcare workers² (HCW) to ensure the rapid identification and treatment of potential SARS cases. The healthcare community must be vigilant in identifying “sentinel” cases. Sentinel cases would include persons from high-risk groups that are hospitalized for unexplained pneumonia. These high-risk groups include healthcare workers, travelers to areas previously affected by SARS, and any cluster of persons with pneumonia of unclear etiology. When SARS has been identified in the world it is important to maintain an increased awareness among healthcare workers.

2. Surveillance of Health Care Workers

a. No SARS identified worldwide:

The purpose of monitoring health care workers would be to identify any cases of unexplained pneumonia, either single cases or clusters that may signify a new suspect case of SARS. Both hospitals and outpatient facilities need to establish systems for monitoring personnel for respiratory illness by instituting the following:

1. Designate those responsible for the monitoring of employee health concerns in regard to respiratory infections. The most appropriate entity would be an employee health service. If such a service is not available, then a medical director, infection control professional, or other appropriate person should be designated.
2. Instruct all healthcare workers to report respiratory infections with pneumonia to their physician and facility designate.
3. Establish a means performing active surveillance of employee infections to identify clusters of unexplained pneumonia.

b. SARS identified worldwide, without local transmission:

Both hospitals and outpatient facilities need to continue activities initiated when there was no SARS in the world.

1. Include the same surveillance activities instituted when there was no SARS in the world, plus
2. Establish a means of performing active surveillance of employee infections to identify any case of unexplained pneumonia.

c. SARS identified in the local community, not in the facility:

Maintain surveillance activities as above, plus the following:

Actively Screen: (see appendix 2A)

1. All HCWs with direct patient contact should be monitored daily for fever and respiratory symptoms. All those with respiratory symptoms and/or fever > 100.4°F should be furloughed and evaluated according to the SARS algorithm (or other finalized document).
2. HCWs should be monitored daily in regard to possible contact with a SARS patient in another healthcare facility or in the community. If an unprotected contact occurs, the worker should be furloughed and monitored daily for possible symptoms.
3. HCW illness and absenteeism should be monitored and evaluated for links to known SARS cases.
4. A sign-in procedure/log book for all HCW who come in contact with SARS cases should be initiated to track contacts. (see appendix 2F)

d. SARS identified in the facility:

Maintain surveillance activities as above, plus the following:

1. All staff, including those that are not HCWs, should be monitored daily for fever and respiratory symptoms. Those with either fever or respiratory symptoms should be furloughed and evaluated according to the SARS algorithm (or other finalized document).
2. Any staff member that has a possible unprotected exposure to a SARS case should be furloughed and evaluated according to the SARS protocol (or other finalized document).
3. All absent employees should be contacted directly and questioned about their symptoms.
4. Consider home/work restriction of movement for all HCWs or for HCWs that have worked in the area of transmission.

3. Exposure of Healthcare workers-Policy and Procedure:

a. Exposure Policy and Procedure:

1. Establish an exposure reporting process that includes methods for identifying exposed personnel (e.g. self-reporting by employees, logs of personnel entering SARS patient rooms).
2. Establish procedures for managing unprotected high-risk exposures. These exposures occur when a healthcare worker is in the same room as a probable SARS patient during an aerosol-generating procedure and infection control measures are either absent or breached. The policy for exposure to high risk procedures should include:

- The HCW is to be furloughed from work for 10 days following the date of last exposure;
 - The HCW need not limit activities outside of the home if asymptomatic;
 - The HCW is to be counseled on the symptoms of SARS and instructed to record symptoms (e.g. temperature/respiratory symptoms twice daily).
 - The HCW is to report to employee health or designate once a day on health status, or immediately at the onset of symptoms
3. Establish procedure for unprotected exposures that are not high risk. This policy should include:
 - Asymptomatic healthcare workers
 - Need not be excluded from duty or limit activities outside the healthcare setting;
 - Should undergo active surveillance for the development of fever and/or respiratory symptoms;
 - Should report daily to employee health or designate
 4. Establish procedures for managing symptomatic healthcare workers. Any healthcare worker who has been exposed to a SARS patient and develops symptoms within 10 days of exposure should immediately:
 - Contact employee health or designate;
 - Report to predetermined location for a clinical evaluation and wear a surgical mask;
 - Contact local health department for further guidance.

4. Mental Health of Healthcare Workers

Mental Health concerns of all healthcare workers needs to be considered in planning for a SARS outbreak. Working with the threat of a highly contagious and dangerous disease can be extremely stressful for all involved. The necessity of working while wearing PPE and the possibility of quarantine also can take a toll. Preparations need to be made for the possibility of rotating staff whenever feasible, of breaks from patient care and PPE, and the availability of counseling when needed. Once SARS is identified in the world staff concerns may be heightened. Psychological support and mental health services must be available for all HCW.

E. VISITOR GUIDANCE:

1. General Guidance:

A visitor is anyone entering a health care facility site to visit a patient or staff member, attend a meeting or event, or accompanying an individual accessing health care treatment, assessment, examination or investigation. Visitors have a responsibility to behave in a manner that does not put others at risk, and to respond to staff's requests and hospital regulations for the protection of themselves and others.

Guidance for the notification, surveillance and/or restriction of visitors is dependant on the level of SARS activity on the world, national, state and local levels. Healthcare facilities should prepare for each level of SARS activity to assure they can have systems in place quickly in the event access to the facility would need to be monitored and/or restricted.

2. Policy Development/Review:

All healthcare facilities should review or develop visitation policies to assure that visitors, patients, healthcare workers and the general public are protected from the transmission of communicable diseases. The following areas should be covered in the aforementioned policy:

- a. Delineation of where visiting is allowed and visiting hours.
- b. Precautions a visitor must take if visiting a patient in a high-risk area, on transmission-based precautions, or if being trained to assist in providing care.
- c. Identification and exclusion of visitors with communicable diseases.
- d. Instructing visitors to practice hand hygiene.
- e. Reinforcing Standard Respiratory Precautions for those visitors with an upper respiratory infection who must enter the facility.
- f. Post signage in strategic locations in the facility and at entrances enforcing key points of your visitor policy (e.g. hand hygiene, Standard Respiratory Precautions, exclusion of visitors with communicable diseases).

3. Preplanning – Facility Protocols and Procedures Relating to Visitors:

The level of intensity for the identification and screening of visitors will be dependant on the SARS activity identified worldwide, nationwide, statewide and/or locally. Facilities will need to proactively devise a plan to both identify visitors who enter the facility, and screen them for symptoms of respiratory infections. Since the organizational and physical structure of each facility varies, facilities will need to devise their own plan. This plan should minimally include the following elements:

- a. Develop a system in which visitors entering the facility can be traced in the event that they need to be contacted due to an exposure. This can be in the form of written or computerized logging. The information recorded should be specific, designating the area or patient visited, to allow for adequate contact tracing.
- b. Identify one area in the facility where visitors can have access in the event active screening of symptoms must take place. Make provisions for security of the area.
- c. Devise a plan to screen all visitors who enter the facility for symptoms in the event the NYSDOH deems this a necessary precaution.

4. Visitor Guidance

a. Re-emergence of SARS in the World, no local Transmission:

1. Place signs (bi or multilingual depending on facility's patient population) at all entrances and strategic locations detailing the symptoms of and any current

epidemiological risk factors for SARS. These signs should designate visitors who have SARS risk factors and symptoms to don a surgical mask and go to a designated screening area (e.g. Urgent Care or Emergency Department).

2. Visitors who are ill should NOT visit the facility and should be directed to seek appropriate care.
3. Facility staff should be on heightened alert for any visitors who may appear ill and should question the visitor to confirm that they have been screened for SARS.

b. Re-emergence of SARS in the World, with local Transmission:

1. Signs alerting visitors to the need for implementing SARS screening should be posted in strategic locations throughout the facility, at entrances, and at the visitor check-in point. Written notification about the need for SARS screening may also be handed out with visitor passes/badges. Signs should also advise visitors to self-screen for a fever or respiratory illness such as a new cough or shortness of breath. (see appendix 2G)
2. The facility should designate entrances that will remain open and those that will be closed.
3. Visitors should be limited (e.g. one per patient per day).
4. All visitors must complete a SARS visitor entry screening tool/questionnaire at a check-in site prior to each entry into the health care facility using the visitor entry-screening tool. (see appendix 2B)
5. Visitors who meet the SARS criteria and are identified as a health risk on SARS screening may be refused entry to the facility and should be given a surgical mask to wear and directed to contact their health care provider immediately or triaged to an area for further evaluation.
6. The facility should have sufficient security to ensure the safety of patients and visitors and be available to respond to any disruptions that may occur due to concerns about the need for SARS screening and the refusal of entry. If they continue to refuse to leave the local police should be called for assistance.
7. Visitors who are asymptomatic after screening, may enter the facility upon registering at the patient's unit (or other designated area). (See appendix 2H)
8. Visitors who are asymptomatic and allowed to visit a suspect or probable SARS patient must have received education about contact and airborne precautions, Standard Respiratory Precautions and hand hygiene, as well as their responsibility for adherence to them by a facility designate responsible for education.
9. Visitors must wear personal protection equipment (i.e. gloves, gown, eye protection and N95 respirator - instructions on donning the N95 respirator will be provided, but fit testing will not be required for visitors). The facility staff will need to assist any visitors with correct removal of personal protection equipment.

c. Re-emergence of SARS in the World, with Nosocomial Transmission:

1. If nosocomial transmission with clearly identified source:
 - a. Visitation should be limited (e.g. one per patient per day);

- b. Maintain a log of visitors to SARS patients to aid in contact tracing (see attachment #8);
 - c. All visitors should have a fever check and perform hand hygiene upon entering and leaving;
 - d. All visitors should be instructed on the use of personal protective equipment to prevent and exposure.
2. If nosocomial transmission without clearly identified source:
 - a. No visitors allowed in the hospital unless necessary (e.g. parents or translators);
 - b. Visitors must receive infection control training

SARS (Severe Acute Respiratory Syndrome) SCREENING TOOL for HEALTHCARE WORKERS

Appendix 2A

STAFF

Principal Work Site/Department: _____

SECTION A:

1. Have you had contact with/cared for a person with SARS in the last 10 days while not wearing protection against SARS? **OR**
2. Within the last 10 days have you been in a health care facility where transmission of SARS has been documented? **OR**

NO

YES

SECTION B: Are you experiencing any of the following symptoms?

Unexplained myalgia (muscle aches) **OR**

Unexplained malaise (severe tiredness or unwell feeling) **OR**

NO

YES

Sever headache (worse than usual) **OR**

Cough (onset within 7 days) **OR**

Shortness of breath (worse than what is normal for you) **OR**

Feeling feverish, had shakes or chills in the last 24 hours

SECTION C: Record the temperature.

Temperature ° F

(Is the temperature above 100.4° ?)

NO

YES

PASS Response is NO to Sections A and B and temperature is normal

FAIL If **only A** is Yes → Notify Public Health for evaluation

If **A** is Yes AND **B or C** is Yes → Emergency Department (or SARS Clinic)- Call ahead.

If **A** is **NO** AND **B AND C** are both Yes → Clinical Evaluation (droplet precautions)

If only **B or C** is Yes → Home for up to 72 hours with self-isolation and twice daily temperature monitoring; contact LHD; follow up with private provider, employee health, or designated evaluation center , if appropriate.

I declare that to the best of my knowledge the information that I have provided for the purpose of completing the SARS Screening Tool is true.

Name: (Print)

Signature:

Date:

SARS Screening Tool for Visitors to Healthcare Facilities

To protect the health of others, please answer the following questions. You will not be permitted to enter the facility unless screening has been completed. This information is necessary to prevent the spread of disease. All of the information collected will be kept confidential and will be disposed of after 45 days.

All visitors with fever or respiratory illness such as a cough or shortness of breath, and/or diarrhea should not enter the facility and should seek appropriate medical care. Do not leave any questions blank.

Name of Visitor _____

Name of Patient _____

Visitor Address: _____

Visitor Telephone No. _____ Cell Phone No. _____

Please put a check as appropriate to the following questions:

Relationship to the patient? family member relative friend

1. Do you have any of the following symptoms?

- Feeling feverish No Yes
 - Cough No Yes
 - Diarrhea No Yes
 - Muscle Aches No Yes
 - Shortness of breath No Yes

2. Have you recently traveled to a foreign country within the last 10 days? No Yes

If YES, where did you travel? _____

3. Have you been in contact with someone diagnosed with SARS within the last 10 days? No Yes

4. Have you been in a health care facility where SARS was documented? No Yes

RECORD TEMPERATURE: _____°F **Is temperature above 100.4°F?** No Yes

Visitor Signature:

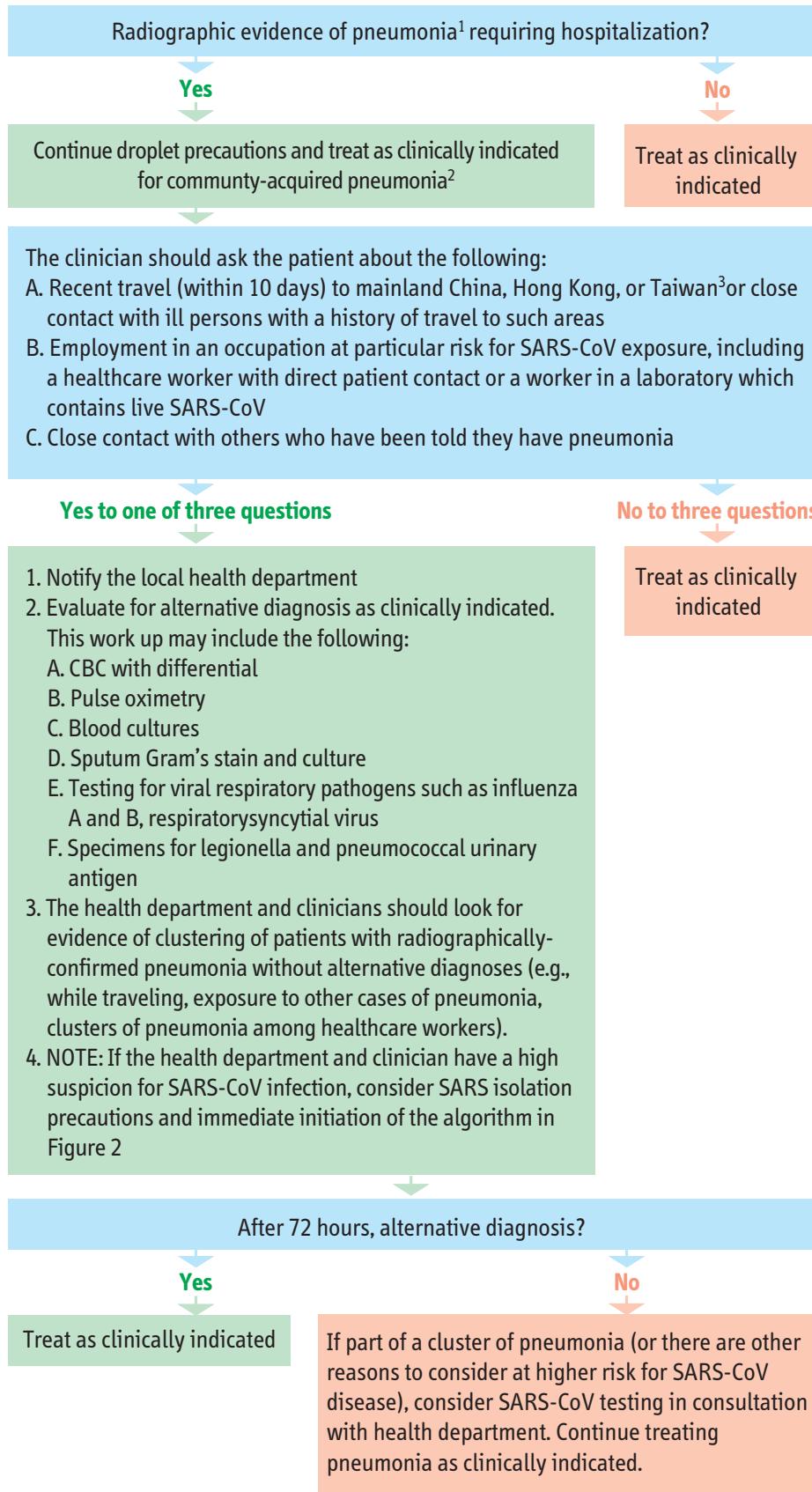
Approved to enter facility? No Yes

Reviewer Signature: _____ **Date:** _____

DAILY INPATIENT SCREENING FORM

Appendix 2C

1 Algorithm for evaluation and management of patients hospitalized with radiographic evidence of pneumonia in the absence of SARS-CoV transmission worldwide

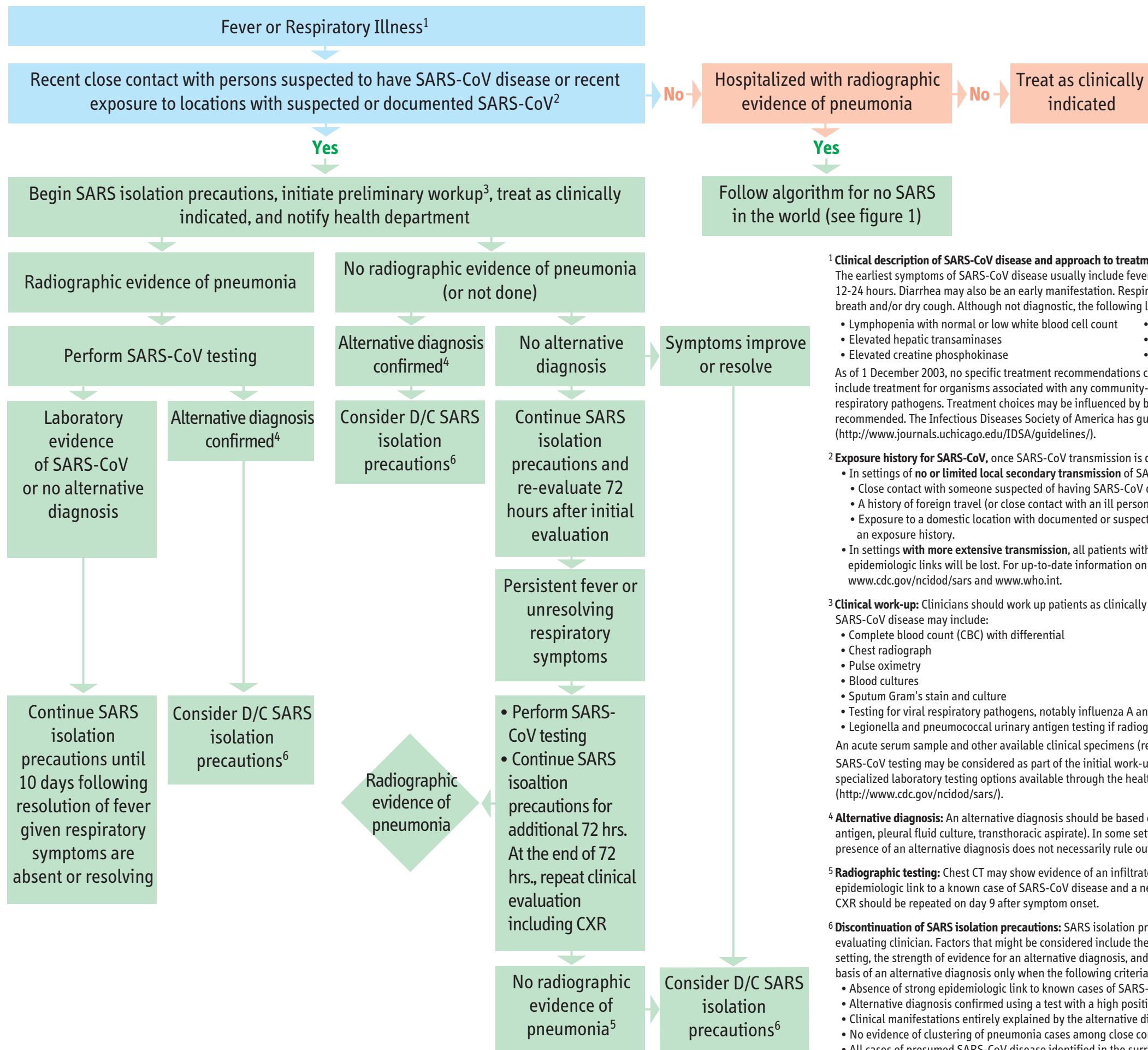


¹ Or Acute Respiratory Distress Syndrome (ARDS) of unknown etiology

² Guidance for the management of community-acquired pneumonia is available from the Infectious Diseases Society of America (IDSA) and can be at <http://www.journals.uchicago.edu/IDSA/guidelines/>.

³ The 2003 SARS-CoV outbreak likely originated in mainland China, and neighboring areas such as Taiwan and Hong Kong are thought to be at higher risk due to the high volume of travelers from mainland China. Although less likely, SARS-CoV may also reappear from other previously affected areas. Therefore, clinicians should obtain a complete travel history. If clinicians have concerns about the possibility of SARS-CoV disease in a patient with a history of travel to other previously affected areas (e.g., while traveling abroad, had close contact with another person with pneumonia of unknown etiology or spent time in a hospital in which patients with acute respiratory disease were treated), they should contact the health department.

② Algorithm for management of fever or respiratory symptoms when SARS-CoV transmission is occurring in the world



2**Exposure history for SARS:** Once SARS-CoV transmission is documented in the world:

- In settings of no or limited local secondary transmission of SARS-CoV, patients are considered exposed to SARS if, within 10 days of symptom onset, the patient has:
 - Close contact with someone suspected of having SARS, OR
 - A history of foreign travel (or close contact with an ill person with a history of travel) to a location with documented or suspected SARS, OR
 - Close contact to a domestic location with documented or suspected recent transmission of SARS.
- In settings with more extensive transmission, all patients with fever or respiratory symptoms should be evaluated for possible SARS, since the ability to determine epidemiologic links will be lost.

3**Work up:** Initial diagnostic testing for suspected SARS patients may include:

- Chest radiograph
- Pulse oximetry
- Blood cultures
- Sputum Gram's stain and culture
- Testing for viral respiratory pathogens, notably influenza A and B and respiratory syncytial virus (RSV)
- Legionella and pneumococcal urinary antigen testing if radiographic evidence of pneumonia.

An acute serum sample and other available clinical specimens (respiratory, blood, and stool) should be saved for additional testing until a specific diagnosis is made.

SARS testing may be considered as part of the initial workup if there is a high level of suspicion for SARS based upon exposure history. For additional details on specialized laboratory testing options available through the health department and laboratory response network (LRN), see Supplement F.

4**Alternative diagnosis:** An alternative diagnosis should be based only on laboratory tests with high positive predictive (e.g., blood culture, viral culture, Legionella urinary antigen, pleural fluid culture, transthoracic aspirate). The presence of an alternative diagnosis does not necessarily rule out co-infection with SARS-CoV. In some settings, PCR testing for bacterial and viral pathogens can also be used to help establish alternative diagnoses.

5**Radiographic testing:** Chest CT may show evidence of an infiltrate before a chest radiograph (CXR). Therefore, a chest CT should be considered in patients with a strong epidemiologic link to a known SARS case and a negative CXR 6 days following onset of symptoms. Alternatively, the patient should remain in SARS isolation and the CXR should be repeated on day 9 after symptom onset.

6**Discontinuation of SARS isolation precautions:** SARS isolation precautions should be discontinued only after consultation with local public health authorities and the evaluating clinician. Factors that might be considered include the strength of the epidemiologic exposure to SARS, nature of contact with others in the residential or work setting, strength of evidence for an alternative diagnosis, and evidence for clustering of pneumonia among close contacts. Isolation precautions should be discontinued on the basis of an alternative diagnosis only when the following criteria are met:

- Absence of strong epidemiologic link to known cases of SARS
- Alternative diagnosis confirmed using test with high positive predictive value
- Clinical manifestations entirely explained by alternative diagnosis

Appendix 2E

- No evidence of clustering of pneumonia cases among close contacts (unless >1 case in the cluster confirmed to have the same alternative diagnosis)
- All SARS cases identified in surrounding community can be epidemiologically linked to known cases or locations in which transmission is known to have occurred.

SARS Patient Contact Log

Patient Name _____ **Room No.** _____ **Bed No.** _____

Main Activity: direct patient care, respiratory therapy, physical evaluation, laboratory specimen collection for blood, respiratory etc., housekeeping, change bed, assist with feeding, medication administration.

Healthcare/Staff Person: An employee or member of the hospital staff including patient care, housekeeping, ancillary services. Does not include visitor or family/household member of the patient.

Visitor Notification **Severe Acute Respiratory Syndrome (SARS)**

SARS is an unexplained severe respiratory illness that has been identified in the community/facility. This disease has caused outbreaks of illness among close contacts of SARS patients and to persons working in healthcare setting. As a result of the re-emergence of SARS, it is necessary for our Hospital to institute precautionary measures to ensure that our hospitals are as safe as possible for our patients, their family and friends as well as our healthcare workers. For the safety of our visitors as well as our patients and staff, we will be taking the following measures:

Visiting hours will be strictly enforced 7 days a week:

Restriction on visitors

- *Each patient will only be allowed 1 registered visitors;*
- *Children under the age of 12 are generally not allowed into the patient care area;*
- *Pregnant women are strongly discouraged from visiting the hospital;*
- *Visitors are not permitted to visit any patient who is under quarantine or in isolation, unless exceptional circumstances and prior approval has been obtained;*

Exception

- *Exception can be made on compassionate ground, such as immediate family members of critically ill patients, fathers of new born, parents of small children.*

Visitors entrance and exit

- *Please use the designated SARS screening site locate to enter and exit the hospital.*

Visitors screening

i) *Self-screening before visiting hospitals*

Please do not come to visit the hospital if you are not feeling well or have an illness that can be transferred to our patients. If you are not sure, please check with your family doctor;

ii) *Screening before entering the wards*

You are required to complete a vistor's entry screening questionnaire asking if you have fever, cough and diarrhea. Those who answer positively to the above shall not visit the ward and are advised to see medical attendance.

Visitors registration

- *You will be required to sign a vistor's record designed to track patient visit in the hospital .*
- *A visitor pass will be provided from the registration desk and to be returned there following the visit.*

Visitors responsibilities:

- *Observe the visiting hours for the area you are visiting;*
- *Patients are not allowed to leave the ward during the hospital stay unless permitted;*
- *Family and visitors are advised not to gather in groups in hospital premises;*
- *You are asked to stay in the patient or visitor room as much as possible, for the duration of the visit. Please be advised against moving around to other patients and sitting on patient's bed;*
- *You must wash/sanitize your hands upon entry to the hospital, before and after any contact with any patient, and prior to leaving the hospital;*

We thank the visitors and the community in advance for its continued compliance with these precautionary measures.

VISITOR REGISTRATION LOG

Patient Name _____ **Room No.** _____ **Bed No.** _____

Appendix 2H

**New York State Department of Health
Environmental Control Measures for
Airborne Infection Isolation Surge Capacity Planning
in Health Care Facilities for
Smallpox, SARS or Other Infections
Potentially Transmitted via Airborne Droplet Nuclei
December 18, 2003**

This Environmental Control Measures guideline has been developed to assist infection control and plant management/engineering staff in health care facilities prepare for a natural or terrorist event involving an infectious agent capable of being transmitted via airborne droplet nuclei (smallpox, SARS, M. tuberculosis, etc.). Although the epidemiology and transmission of SARS has not been fully elucidated, current CDC recommendations call for airborne infection isolation precautions when caring for suspected SARS cases, in addition to standard and contact precautions, to ensure the greatest degree of safety for patients, healthcare workers and the community.

The control of communicable disease outbreaks (natural or intentional) requires prompt identification, appropriate isolation and treatment of affected individuals, strict adherence to infection control measures, monitoring and evaluation of control measures and ongoing education and training of staff. The focus of this document, environmental control measures, is only one component of the hierarchy of control measures. Therefore, these measures should be integrated into the facility's overall infection control and disaster response plans.

Goals/Objectives

1. Provide environmental control measure guidelines to assist healthcare facilities prepare for a bioterrorist event or naturally occurring outbreak involving a large number of persons requiring airborne infection isolation.
2. Ensure the provision of essential healthcare services while minimizing the risk of transmission to others, especially in acute care facilities where individuals at greatest risk of severe morbidity and mortality receive care.

Definitions of an Airborne Infection Isolation Room and Unit

Throughout this document, an **Airborne Infection Isolation Room (AIIR)** is defined as a patient room meeting the following criteria^{1,2}:

- Private room,
- Negative directional airflow from common areas into the room,
- A minimum of 6-12 air exchanges per hour [supplement with high efficiency particulate air (HEPA) filtration system or ultraviolet germicidal irradiation (UV), if insufficient dilutional ventilation]; and
- Direct exhaust to the outside of the building ≥ 25 feet from an air intake or exhaust through a HEPA filtration system.

An **Airborne Infection Isolation Unit (AII Unit)** is defined as a separate, dedicated area to care for patients suspected or confirmed to have an infection capable of being transmitted via airborne droplet nuclei. See the section entitled **Surge Capacity Planning for Airborne Infection Isolation – Establishment of Airborne Infection Isolation (AII) Unit** for environmental control measures to establish these units.

STEPS ALL FACILITIES SHOULD TAKE IN PREPARING TO RESPOND EFFECTIVELY TO AN AIRBORNE COMMUNICABLE DISEASE CASE OR OUTBREAK

I. Perform a Facility Assessment (Building Survey)³⁻⁵

Assumptions regarding current facility design:

- Most buildings are designed to supply a combination of fresh and recirculated air
- Most buildings have multiple heating, ventilating and air conditioning (HVAC) zones with each zone having an air handler and duct system
- Isolation of zones requires full-height walls or barriers between each zone and its adjacent zones, including hallway/entry doors
- Elevators, stairwells and hallways can affect airflow and dispersion of contaminated air to other zones
- Construction or renovation can affect air flow patterns

1. Assess the current ventilation system(s) of the facility
 - A. Determine and document the number and location of the different HVAC zones and their air handling units
 - B. Determine and document areas served by each zone/system
 - C. Document smoke compartments [based upon physical barriers (e.g., doors) and ventilation (e.g., dampers)]
 - D. Document location of air intakes, exhausts, and switches for each system/zone/compartment
 - E. Determine areas with smoke purge fans and record the location of controls or switches, if applicable
 - F. Ensure all systems are functioning as designed and/or document current functioning of each zone/system including checking the integrity of all ducts
2. Identify all AIIRs throughout the facility [emergency department (ED), inpatient, etc.] and ensure they are functioning properly
 - A. Create and maintain a current list of all AIIRs
 - B. Monitor each room with smoke test (or other visible method) daily when in use for airborne isolation, regardless of the presence of a continuous monitoring system or device
 - C. Monitor monthly with smoke (or other visible method) when not in use for airborne isolation
 - D. Maintain a record of all monitoring

II. Surge Capacity Planning for Airborne Infection Isolation – Establishment of Airborne Infection Isolation (AII) Units

Using the information compiled in the facility assessment, infection control and plant management/engineering should identify an area or areas that can be quickly converted to cohort patients with the same infectious agent. If the infectious agent has the potential to be transmitted by airborne droplet nuclei, the areas for cohorting need to have negative directional airflow relative to other areas and air should be directly exhausted to the outside and not recirculated to other areas. Develop contingency plans for increasing numbers of patients requiring isolation.

1. Identify units, floors, wings or buildings with separate air handling systems, separate HVAC zones, or smoke compartments to create an AII Unit
 - A. Identify areas where air will not recirculate to other parts of the facility
 - B. Identify areas that can be physically separated from other patient care areas
 - 1) Consider smoke compartments that are physically separated with doors or areas in which a temporary barrier can be constructed to minimize the migration of air to other patient areas
 - 2) Select areas with no flow through traffic
 - C. The directional air flow on the units should be able to remain negative relative to other patient care areas or areas with potential exposure to others
 - D. The air from the units should be directly exhausted to outside of the building more than 25 feet from an air intake or pass through a HEPA filtration system and not recirculated to other areas
 - E. If the above criteria cannot be met, consider portable HEPA units, UV units or other mechanisms to achieve supplemental air disinfection
 - F. Ideally, the isolation units would contain all private rooms
2. If there is not a unit, floor, wing or building with a separate air handling system/zone/smoke compartment, evaluate HVAC control options to minimize spread of an infectious agent. Consider the following environmental control measures that can be implemented in the event of a surge in cases requiring airborne infection isolation:
 - A. Decrease supply or increase exhaust to modify directional air flow on unit or in rooms
 - B. Minimize proportion of air that is recirculated
 - C. Increase filter efficiency
 - 1) HEPA filtration – high efficiency particulate air filtration (99.97% @ 0.3 microns) but consider the following concerns with HEPA:
 1. May adversely affect directional air flow due to increased resistance
 2. Increased static resistance can result in increased load on motor/fan units
 3. Increased energy consumption
 4. Increased likelihood of motor/fan failure/burnout
 5. Cost to design or retrofit the entire air handling system
 6. Proper installation, maintenance and monitoring are critical

- 2) Consider filters with higher minimum efficiency reporting value (MERV) rating. [e.g. MERV ≥ 13]
- D. Create a physical separation from other patient units
 - 1) Establish negative air flow on the designated unit
 - 1. Consider use of portable or fixed HEPA units vented to the outside
 - 2. Venting portable HEPA units to the outside through corridor windows may be able to create negative directional air flow from the hallways on the unit to the outside
 - 3. Venting HEPA units to the outside through window/wall in patient rooms may be able to create negative directional air flow in the patient rooms relative to the corridor
 - 4. Use exhaust fans in windows, if HEPA units are not available, and if there is no potential for air re-entry or exposure to persons outside the window
 - 2) Consider effect of stairwells and elevators
 - 1. Weather strips can minimize uncontrolled air infiltration
 - 3) Consider use of facility's smoke-purge systems, if feasible
 - 4) Document optimal HVAC control settings for normal use and the steps necessary to modify the system(s) in the event of an emergency
 - 5) Ensure staff are trained to properly maintain the system(s) under normal conditions and to modify the system(s) in the event of an emergency
 - 6) Document and ensure that there is an effective communication plan between clinical staff, infection control and plant management/engineering to initiate system modifications
 - 7) Hold drills to ensure effective communication and to measure the effects on the AII Unit and other building systems and areas
 - 8) Evaluate building operations after any system modification to ensure there is not a detrimental effect on building systems or the building occupants**

Please note:

NYSDOH Bureau of Architectural and Engineering Facility Planning (BAEFP) will allow temporary modification to existing facilities without prior approval to respond to a biologic event or outbreak. Permanent changes or modifications (renovation and new construction) must comply with the American Institute of Architects/Facility Guideline Institute (AIA/FGI) guidelines as required by NYSDOH code.

III. Emergency Department Guidelines

- 1) Place signs at all entrances to minimize exposure in all outpatient waiting areas
 - a) Provide directions for patients with febrile rash or febrile respiratory conditions to mask and report symptoms immediately to triage staff
 - b) Ensure surgical masks, tissues, and alcohol-based handrubs are readily available for symptomatic patients, including at the entrance near the signs

- i) Mask patients and family members/friends, if symptomatic to prevent aerosolization of infectious particles
 - ii) Have tissues, waste containers and alcohol-based hand rubs available in waiting areas
 - c) Promptly mask and triage patients with febrile rash or febrile respiratory illness and place in pre-designated AIIR or other appropriate room (see below)
 - d) Limit visitors or other persons accompanying the patient
- 2) Registration areas should have barriers (e.g., plexiglass) to separate patients from each other and staff
 - 3) Waiting areas
 - a) Separate persons with febrile rash or febrile respiratory illnesses from others
 - b) Establish air flow patterns that will minimize exposure, if possible
 - i) For example, directional/downward airflow pattern
 - c) Enhance dilutional ventilation (increased air exchanges) while maintaining appropriate directional air flow, if feasible
 - i) Increased air mixing may pose an additional risk if not diluted and directed properly.
 - ii) Do not increase air mixing if it will increase exposure to others
 - d) If air is recirculated, consider supplemental HEPA or enhanced filtration to decrease airborne contaminants (proper installation and maintenance of filtration systems are critical) or supplemental ultraviolet germicidal irradiation for air disinfection (UVGI) (proper installation, maintenance and monitoring are critical for the safe use of UVGI)
 - 4) Triage area
 - a) Have N95 respirators immediately available for staff
 - i) Ensure staff have been fit-tested
 - ii) Ensure appropriate sizes and type of respirators are available
 - b) Have surgical masks, tissues and alcohol-based handrubs immediately available
 - 5) Patient care areas
 - a) Identify AIIR rooms and ensure they are functioning properly
 - i) Establish priority criteria for placement in bonafide AIIRs based on risk of transmission
 - (1) Suspected diagnosis
 - (2) Exposure history
 - (3) Extent/severity of symptoms
 - (4) Aerosol-generating procedures
 - b) Develop plans for overflow/surge in number of patients requiring isolation
 - i) Identify supplemental rooms
 - (1) AIIR on other units
 - (a) Use precautions during transport
 - (b) Notify unit prior to arrival of patient
 - (c) Minimize contact with others during transport
 - (2) Private rooms with doors closed
 - (a) Supplement dilutional ventilation with portable HEPA or UVGI, if available

- (b) If none of the above are available, consider window fans exhausting air to the outside, while ensuring no potential air re-entry or exposure to persons outside
- (3) Pre-identify a separate area near the emergency department or in an alternate setting that can be quickly converted to provide for triage, surge capacity and cohorting of individuals with febrile rash or febrile respiratory conditions
 - (a) Establish a system to initiate cohorting
 - (b) Establish criteria for instituting cohorting
 - (c) **Educate and perform a drill to ensure frontline healthcare providers can implement the system**
- c) Identify areas and procedures for storage, donning, and removal of PPE
 - i) Ensure appropriate PPE is immediately available for staff
 - ii) Ensure PPE can be appropriately discarded after use or if reusable (e.g., power air supplied respirators) protocols are in place to ensure safe decontamination and reprocessing
 - iii) Ensure hand hygiene can be performed immediately after removal of PPE
- d) If aerosol-generating procedures (e.g., sputum induction, intubation, positive pressure oxygen, bronchoscopy, etc.) are medically necessary for patients in the emergency department, perform them in a special booth or hood with local exhaust ventilation or in a room that meets the criteria for airborne infection isolation
- e) Limit patient movement to medically essential procedures only
 - i) Notify unit where procedure is to take place prior to transport
 - ii) Utilize precautions during transfer and during procedure
- f) Ensure appropriate cleaning and disinfection of medical equipment and environmental surfaces in immediate patient vicinity after patient leaves, as well as transport equipment (stretcher or wheelchair)

IV. Guidelines for the Inpatient Setting

1. Identify AIIR rooms on all patient units
 - A. Ensure clinical staff know the location of all AIIRs
 - B. Ensure appropriate staff have the authority to place suspect or confirmed cases on appropriate isolation precautions
2. Establish priority criteria for placement in bonafide AIIRs based on risk of transmission
 - A. Suspected diagnosis
 - B. Exposure history
 - C. Extent/severity of symptoms
 - D. Aerosol-generating procedures
3. Develop plans for overflow/surge in the number of cases requiring airborne infection isolation
 - A. Consider use of AIIRs on other units
 - B. If insufficient AIIRs, consider use private rooms with doors closed
 - 1) Use portable HEPA, if available
 - 2) Use exhaust fan blowing out to achieve negative directional airflow **if** there is not a potential for air re-entry or direct exposure to others (pedestrians etc.)

- C. If the number or location of AIIRs is not sufficient or appropriate, cohort patients with the same infectious agent in a designated unit, floor, wing or building (Dedicated AII Unit)
 - 1) Ensure appropriate administrative and clinical staff have the authority to initiate cohorting and/or establish the AII Unit when needed
 - 2) Ensure policies and procedures are in place to establish the AII Unit
 - 3) Train and drill clinical staff on protocols for establishing the AII Unit
 - 4) Ensure plant management/engineering staff are trained to implement the necessary engineering modifications
- D. Identify areas and procedures for storage, donning, and removal of PPE
 - 1) Ensure appropriate PPE is immediately available for staff
 - 2) Ensure PPE can be appropriately discarded after use or if reusable (e.g., power air supplied respirators) protocols are in place to ensure safe decontamination and reprocessing
 - 3) Ensure hand hygiene can be performed immediately after removal of PPE
- 4. Ensure appropriate environmental conditions for high risk aerosol-generating procedures are available
 - A. Perform in a room that meets the criteria of an AIIR or if AIIR is unavailable, in a special booth or hood with local exhaust ventilation
 - B. Ensure appropriate PPE is available for staff
- 5. Develop admission and discharge policies/procedures for use during mass events
 - A. Discontinue elective admissions
 - B. Establish referral systems for patients depending upon level of care required
 - 1) Establish written memoranda of understanding (MOU) with long term care, homecare or other facilities capable of providing alternate care for patients
 - 2) Coordinate triage plan with local/state health departments, regional resource centers (for facilities outside of New York City) and local emergency managers
- 6. Ensure that systems for prompt reporting to and communication with state and local health department are in place
 - A. During outbreaks of severe, highly contagious diseases, local health departments should be notified when infectious patients are discharged to the community or moved between hospitals, counties, states or other countries
 - B. Collaborate with local and state health departments to improve hospital bioterrorism and outbreak preparedness

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<http://www.cdc.gov/niosh/docs/2003-136/pdfs/2003-136.pdf>

Comments and questions should be directed to:

Rachel L. Stricof

E-mail: rls01@health.state.ny.us

Tel: 518 474-7000

3. Non-hospital Quarantine and Isolation

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Appendices

- 3A. NYSDOH SARS Model Voluntary Home Isolation and Quarantine Agreements
- 3B. DOH General Counsel Opinion No. 03-03: Quarantine Powers of Local Health Officers and Local Boards of Health
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3. Non-hospital Isolation and Quarantine

A. Goals

The goals of community containment measures are to:

- Reduce the risk of exposure to SARS by separating and restricting the movement of persons suspected to have SARS
- Reduce the risk of transmission of SARS-CoV by restricting the movement of contacts who may have been exposed to infectious SARS patients but are not yet ill.
- Reduce the overall risk of transmission of SARS-CoV at the population level by limiting social interactions and preventing inadvertent exposures.

B. Definitions

Isolation is the separation from other persons, in such places, under such conditions, and for such time, as will prevent transmission of the infectoious agent, of persons known to be ill or suspected of being infected (10 NYCRR 2.25(d)).

- Isolation allows for the focused delivery of specialized health care to persons who are ill, and it protects healthy persons from becoming ill.
- Ill persons are usually isolated in a hospital, but they may also be isolated at home or in a designated community-based facility, depending on their medical needs.
- “Isolation” is typically used to refer to actions performed at the level of the individual patient.

Personal quarantine (hereinafter referred to as "quarantine") means restricting household contacts and/or incidental contacts to premises designated by the health officer (10 NYCRR 2.25(f)).

- Persons are usually quarantined in their homes, but they may also be quarantined in community-based facilities.
- Quarantine can be applied to an individual or to a group of persons who are exposed at a large public gathering or to persons believed exposed on a conveyance during to international travel.
- Quarantine can also be applied on a wider population- or geographic-level basis. Examples of this application include the closing of local or community borders or erection of a barrier around a geographic area with strict enforcement to prohibit movement into and out of the area.

The ultimate goal of isolation and quarantine is to separate and restrict the movement or activities of persons who are ill, suspected of being ill, or who have been exposed to infection, for the purpose of preventing transmission of diseases.

C. Planning for isolation and/or quarantine

LHDs should initiate detailed planning and training (including drills) regarding voluntary and involuntary non-hospital isolation and quarantine. Partner organizations that will be needed to support non-hospital isolation and quarantine should be contacted and participate in training. A

planning assumption is that existing LHD staff will manage a small number of SARS cases, but that additional staff should be identified in the event that a moderate or large outbreak occurs.

LHDs should be prepared to educate persons regarding reasons for isolation and quarantine, encouraging voluntary compliance, and to summarize services that will be provided to support the patient and their family, etc. to enhance the likelihood of compliance.

The first factor to consider in implementing non-hospital isolation and quarantine is the person's willingness to be isolated or quarantined. Subsequent considerations, which are presented separately below, are whether a person will be isolated or quarantined, the location where isolation or quarantine will occur, the conditions of the location, services and supplies available at the location, tracking activities during isolation and quarantine, and provision of daily summaries.

D. Willingness of persons to be isolated or quarantined:

During the first outbreak of SARS, most symptomatic and exposed persons willingly accepted isolation and quarantine. We can expect a similar level of cooperation, but should be prepared to impose isolation or quarantine against a person's will. Background information/recommendations have been prepared based upon the person's willingness:

- Person is willing
 - Model voluntary home agreement for home isolation (Appendix 3A)
 - Model voluntary home agreement for quarantine (Appendix 3A)
- Person is not willing
 - DOH General Counsel Opinion No. 03-03: letter regarding quarantine powers of local health officers and boards of health (Appendix 3B).
 - County attorney developed process and legal papers for court order for isolating a case and quarantining a contact.
 - NYS Supreme Court prepared to quickly rule on petition.
 - Law enforcement officials are prepared to assist with enforcing a health officer's and/or court order.

Additional background information regarding NYS laws pertaining to bioterrorism preparedness and response has also been prepared (Appendix 3C).

E. Isolation of a SARS patient at home

During the first outbreak of SARS, many cases not requiring hospital care were isolated at home. The home should be assessed for various conditions that will reduce the risk of person-to-person transmission. LHD staff should be trained to assess key conditions and support services of the home setting. A checklist for determining the suitability of a home for home isolation has been developed (Appendix 3D).

Key conditions for home isolation:

- Primary caregiver is available to provide necessary care that the patient is unable to provide for their self as well as help monitor the person's condition.
- Household members not providing care can be re-located. If relocation of household members is not possible, their contact with the SARS patient should be minimized. Persons at risk of serious SARS complications (e.g., persons with underlying heart or lung disease, persons with diabetes mellitus, elderly persons) should not have contact with the patient.
- Telephone is available.
- A separate bedroom, including floor-to-ceiling walls and a door, is available.
- Under ideal conditions, separate air handling for the patient's room will help reduce the risk of transmission. It is recognized that this feature is not typically available in homes in NYS.

Availability of support services and supplies:

For a home to be suitable for isolation, support services and supplies needs to be available. LHD staff should be trained to assess how these services and supplies will be available at the home. Key supplies and services for non-hospital management of cases and contacts include:

- Surgical masks for the patient to wear (if possible) when caregiver is present
- Assure fit-testing (if practical), training, and availability of PPE for all caregivers and providers that will be entering the home.
- Food and water
- Daily cleaning of patient's room and bathroom, as well as any bodily fluids spilled during the day
- Medicines and medical consultations
- Mental health and psychological support services
- Other supportive services, i.e. day care, etc.
- Transportation to medical treatment, if required

F. Isolation of a SARS patient at an alternate facility:

Facilities will need to be identified for patients not requiring hospital care but who do not have an appropriate home setting, such as travelers, homeless populations, and for persons whose home lacks suitable conditions, and for uncooperative persons that refuse to stay at home. Apartments, schools, dormitories, trailers, or hotels are options that could be considered. NYS Law permits the establishment of isolation facilities, during an emergency, under provisions regarding temporary hospitals as well as communicable disease facilities (Appendix 3E). Establishing a new setting will require identification of appropriate staffing.

Alternate isolation facilities need to be assessed for various conditions that will reduce the risk of person-to-person transmission. LHD staff should be trained to assess key conditions and support services of the facility.

Key conditions of the alternate facility:

- Primary caregivers are present and can provide care as well as monitor the patients' condition.
- Primary caregivers are trained with regard to appropriate infection control precautions, including respirator fit-testing.
- Telephone is available.
- A separate bedroom is available for each patient, including floor-to-ceiling walls and a door, is available.
- Under ideal conditions, separate air handling for the patient's room will help reduce the risk of transmission.
- Accommodations are available for staff.

Availability of support services and supplies:

For an isolation facility to be suitable, support services and supplies needs to be available. LHD staff should be trained to assess how these services and supplies will be available at the facility. Key supplies and services include:

- Patient education regarding ways to reduce the risk of disease transmission, including wearing of surgical masks (if possible) when caregivers are present, hand hygiene, remaining in their room
- Assure fit-testing, training, and availability of PPE for all caregivers and providers that will be entering the facility.
- Food and water
- Daily cleaning of patient's room and bathroom, as well as any bodily fluids spilled during the day
- Medicines and medical consultations
- Mental health and psychological support services
- Other supportive services, i.e. day care, etc.
- Transportation to medical treatment, if required
- Assure patients have a TV, radio, etc.
- Assure adequate care and services for family members in the event that the isolated person is a head of household.

G. Management of contacts to a SARS patient (quarantine):

Apart from special circumstances, quarantine should be limited to persons who have had contact with an actively ill SARS patient in the home or hospital (MMWR 2003;52:1037). In a limited SARS outbreak, contacts of SARS cases may be managed through either active or passive monitoring alone and without any restriction of movement unless they develop symptoms of disease. With an increasing number of SARS cases in a community characterized by uncontrolled, unexplained, on-going transmission or if asymptomatic contacts are determined to pose a risk of infection, restricting the movement of asymptomatic contacts (e.g., home quarantine) may be justified.

Contacts of SARS cases should be contacted daily by the LHD and advised to:

- Be vigilant for fever (i.e., measure temperature twice daily) or respiratory symptoms for a 10-day period after exposure.
- Seek healthcare evaluation immediately if they develop symptoms.
- Inform a healthcare provider in advance of presenting at a healthcare facility that they may have been exposed to SARS.

Types of quarantine:

- Home quarantine -- Quarantine at home is most suitable for contacts who have a home environment in which their basic needs will be met and where protection of unexposed household members is feasible.
- Quarantine in designated facilities -- Contacts who do not have an appropriate home environment for quarantine or contacts who do not wish to be quarantined at home may be quarantined in specific facilities designated for this purpose.
- Work quarantine – This applies to healthcare workers or other essential personnel who have been exposed to SARS patients and who may need to continue working (with appropriate infection control precautions) but who are quarantined either at home or in a designated facility during off-duty hours.

H. Monitoring of cases and contacts:

Both patients and contacts should be closely monitored by LHD staff:

- Cases should be monitored daily for worsening of symptoms and compliance with isolation
- Contacts should be monitored at least daily for fever and onset of respiratory symptoms
 - Refer to medical care if fever or respiratory symptoms develop
 - Contact medical care provider before transporting person

I. Daily summaries

Daily summaries will be needed regarding the number and condition of persons being isolated and quarantined.

J. Additional community containment measures

If a community experiences extensive transmission, steps in addition to isolation and quarantine may be employed to reduce the risk of transmission. These steps will aim to reduce opportunities for person-to-person transmission. Steps may include restrictions on public gatherings and travel. NYS Law also addresses the closure of schools during an emergency (see Appendix 3F).

- Identify key partners and personnel for the implementation of movement restrictions, including quarantine, and provision of essential services and supplies:
 - Law enforcement
 - First responders
 - Other government service workers

- Utilities
- Transportation industry
- Local businesses
- Schools and school boards

K. Contingency plan

A contingency plan should be drafted for mass vaccination and/or prophylaxis in the event that either a vaccine or antiviral therapy is developed for SARS.

**NEW YORK STATE DEPARTMENT OF HEALTH
SEVERE ACUTE RESPIRATORY SYNDROME (SARS)
MODEL VOLUNTARY HOME ISOLATION AND
QUARANTINE AGREEMENTS**

The New York State Department of Health (NYSDOH), Division of Legal Affairs, has developed the Model Voluntary Home Isolation Agreement and the Model Voluntary Home Quarantine Agreement for the local health departments (LHD) to use when asking a suspect or probable SARS patient or contact to submit to voluntary isolation or quarantine. The LHD should provide the appropriate agreement to patients with SARS symptoms or contacts as a means to instruct them on the necessary infection control precautions to be taken to prevent transmission to family members, friends, and other outside contacts. While these agreements are not intended to be legally binding contracts with the patient or contact, they clearly spell out what is expected of the patient or contact and his/her family by the LHD. This document may also be useful as evidence by the LHD in any subsequent court proceeding seeking involuntary isolation or quarantine, as it would show what was expected of the patient or contact and that the patient or contact was informed of these expectations, and that the LHD tried voluntary measures prior to seeking assistance from the court. **These models may be used as is or the LHD may choose to modify them as necessary to meet the needs of the particular situation, especially with regard to quarantine. We encourage the counties to add or remove provisions, or change the language of the agreements as necessary to make them more patient specific.**

CDC guidelines suggest that quarantining persons who were exposed to SARS but who are not symptomatic may be key to preventing a large-scale outbreak. To achieve this end, the LHDs need not implement strict quarantine in the traditional sense (i.e. asking someone to confine themselves to their house and not leave for any reason until the 10 day period is up). Depending on the situation, the LHDs could restrict the movement of the contact by implementing modified quarantine techniques (i.e. allowing the contact to leave the house to go to work but for no other reason). The level of restriction should be proportionate to the type of contact/exposure and the level of SARS activity. The following table is an example of the level of restriction required for certain SARS contacts based upon CDC recommendations. This table is merely an example and the methods that may be applied. Depending on the individual situation the LHDs could require more or less restrictions.

TYPE OF CONTACT/EXPOSURE	QUARANTINE METHODS
Contact has history of travel to affected area but no direct contact w/SARS case.	<ul style="list-style-type: none"> ✓ Require fever monitoring and reporting ✓ Advise proper hand hygiene ✓ Advise avoidance of unnecessary trips out of the home
Health care worker with contact with SARS case (probable or suspect)	<ul style="list-style-type: none"> ✓ Require fever monitoring and reporting ✓ Leave home to go to work only ✓ Advise not to use public transportation ✓ Advise against unnecessary contact with friends and relatives, no visitors. ✓ Advise against going to public gatherings (church, funerals, etc.)
Household member who is primary caregiver for a SARS patient in home isolation	<ul style="list-style-type: none"> ✓ Prohibit leaving the home for any reason ✓ Require fever monitoring and reporting

	<ul style="list-style-type: none">✓ Advise proper hand hygiene and use of protective equipment (masks & gloves)✓ Prohibit contact with visitors
--	--

There is a space at the end of each document for the suspected or probable SARS patient or contact and his or her caretaker or head of household to sign the document, acknowledging that s/he understands the information contained therein. There is also a place for the name and signature of the LHD representative who explained the provisions of the agreement to the suspected or probable SARS patient or contact and the caretaker/head of household. There should be three copies of the document signed by all three parties, one to be left with the patient, a copy for the caretaker/head of household, and the other to be placed in the file maintained by the LHD. In the event that there is no caretaker/head of household present, the LHD need only use two copies and note that there is no third party.

Should either person refuse to sign the document, the LHD representative should still sign each copy, give a copy to the patient, a copy to the caretaker/head of household, and keep the other copy in the LHD file with a note that the patient or caretaker/head of household refused to sign the document. Mere refusal to sign the document is not enough evidence of lack of cooperation on the part of the patient to justify seeking a commissioner's or court order. In addition to refusal to sign the agreement, justification for a commissioner's or court order would typically include evidence of the patient's failure to follow recommendations and demonstration of medical need for isolation or quarantine.

NYSDOH Model SARS Voluntary Home Isolation Agreement

I have been informed that I have been diagnosed as a suspect or probable case of Severe Acute Respiratory Syndrome (SARS), a communicable disease dangerous to the public health, and that unless precautions are taken, others may contract this infection from me. The local health department (LHD) and its commissioner, is required to protect the public from the danger of such communicable diseases by Public Health Law §§ 308 and 324, Public Health Law Art. 21, and 10 NYCRR Part 2. In order to prevent the spread of this virus the LHD has provided me with the following information, advised me of the need to comply with the following instructions and I hereby agree to the following:

- I shall remain in home isolation for a period of 10 days after my fever has resolved and respiratory symptoms (such as cough, shortness of breath, or difficulty breathing) are absent or improving.
- I shall be isolated at the following location which shall hereinafter be referred to as "home":

Street address: _____

City: _____ County: _____ Zip: _____

Telephone: (_____) _____ - _____

- I have been educated about the disease, the reasons for isolation in the home, and the length of time I can expect to be confined to the home.
- I shall limit all activities and interaction with all other persons living outside the home. I shall not go to school, a house of worship, work, out-of-home day care, stores or other public areas.
- I shall not leave the home for any reason unless first authorized to do so by the LHD.
- I understand that only those persons authorized by the LHD may enter my home during the period of my isolation. Those who enter the home without prior authorization from the LHD may be subject to isolation or quarantine themselves. I agree to notify friends and relatives that they shall not visit the home until further notice.
- I shall use a separate bed and, if possible, a separate bedroom.
- I shall wear a surgical mask when in the same room with non-infected persons. If I cannot wear a surgical mask, others in the same room will be asked to wear a surgical mask or respirator.
- If I am not masked I shall cover my nose and mouth with a disposable tissue when coughing or sneezing.
- Household waste, including surgical masks and disposable tissues soiled with respiratory secretions, blood, or other body fluids will be disposed of as normal household waste.

- I will wash my hands with soap and water after all contact with respiratory secretions from coughing or sneezing, blood, and all other body fluids (e.g. urine, feces, wound drainage, etc.). I will educate and encourage other members of my household to do the same.
- All members of my household will wear gloves on both hands when they have contact with my respiratory secretions (lung or nasal), blood, and all other body fluids (e.g. urine, feces, wound drainage, etc.). Alcohol-based hand hygiene products may be substituted for hand washing with soap and water after removing the gloves, **IF** the hands are not visibly soiled with respiratory secretions, blood, or other body fluids. Gloves shall not be reused and shall be discarded immediately after removal.
- My eating and drinking utensils will be washed with hot water and a household dishwashing detergent.
- Environmental surfaces (e.g. countertops, tables, sinks, etc.) in the kitchen, bathroom, and my bedroom will be cleaned and disinfected with a household disinfectant, such as household bleach or Lysol®, while wearing gloves, at least daily and when soiled with the respiratory secretions, blood, and other body fluids.
- My bed linens, towels, and personal clothing shall not be shared with other members of the household. Clothes and linens will be washed in hot soapy water.
- All members of my household or other close contacts who develop fever or respiratory symptoms will seek medical evaluation.
- I understand that to prevent transmission of SARS, I should advise members of the household who develop SARS symptoms that they shall call the physician's office, clinic, or hospital emergency department where they intend to seek care to alert healthcare workers there prior to seeking treatment.
- I agree to monitor my temperature _____ times a day and report this information to the LHD _____ (daily, in the morning and at night). The number I must call to report this information is (____) ____ - ____.
- The LHD will provide me and members of my household with surgical masks, gloves, and other items necessary to prevent the spread of SARS (i.e. alcohol-based hand wash).
- I understand that the LHD will arrange for the delivery of necessary items to my home, including but not limited to, food, clothing, and supplies, during the period of isolation.
- I agree to adhere to any additional recommendations and instructions from the LHD that may be listed below:

I, or my legal guardian, may contact the following LHD representative to seek relief from, clarification of, or further explanation of the conditions contained in, any part of this agreement.

(Name of LHD contact person)

(_____) - _____
(Daytime telephone #)

The provisions of this agreement have been explained to me by the LHD representative and I fully understand that my failure to follow these guidelines or to voluntarily remain in isolation may result in my being placed in involuntary isolation, or committed to a facility where I may be isolated against my wishes.

(Print name of SARS case/contact)

(Signature)

(Date)

I, the caretaker/head of household, acknowledge that the LHD representative has explained the provisions of this agreement to me as well as the patient in isolation. I fully understand that my failure to follow these guidelines may result in my exposure to SARS and in my being placed in involuntary isolation, or committed to a facility where I may be isolated against my wishes.

(Print name of caretaker/head of household)

(Signature)

(Date)

(Print name of LHD representative)

(Signature)

(Date)

NYSDOH Model Voluntary SARS Quarantine Agreement

I have been informed that I have been determined to be a contact of a suspect or probable case of SARS, a communicable disease dangerous to the public health, and that unless precautions are taken, I could potentially infect others. In order to prevent the spread of this virus, the local health department (LHD), pursuant to Public Health Law §§ 308 and 324, Public Health Law Art. 21, and 10 NYCRR Part 2, has provided me with the following information, and I hereby agree to the following:

- I shall remain in quarantine for 10 days after the date of my exposure and will immediately notify the LHD should I develop SARS symptoms, including but not limited to, a temperature greater than 100.4° F., and/or symptoms of a respiratory infection such as cough.

The LHD has determined that the date of my exposure was _____ and I shall be released from quarantine on or about _____, provided I do not develop SARS symptoms as noted above.

- I shall be quarantined at the following location, which shall be referred to as "home":

Street address: _____

City: _____ County: _____ Zip: _____

Telephone: (____) ____ - ____

- I have been educated about the disease, the reasons for my quarantine, and the length of time I can expect to be restricted from certain activities.
- I shall limit all activities and interaction with all other persons living outside the home.
- I understand that during the quarantine period I may only leave the home to go to _____ (work/school/pharmacy, etc.). I shall not go to a house of worship, out-of-home day care, stores/malls, restaurants, movies, sporting events, or other public areas or events.
- I understand that only those persons authorized by the LHD may enter my home during the quarantine period. Those who enter the home without prior authorization from the LHD may be subject to isolation or quarantine themselves. I agree to notify friends and relatives that they shall not visit the home until further notice.
- I understand that whenever I leave the home I shall avoid close contact (within 3 feet) with others to the best of my ability. This includes, but is not limited to, avoiding the use of public transportation and confining myself to my office as much as possible when I'm at work (if applicable).
- I shall cover my nose and mouth with a disposable tissue when coughing or sneezing.
- Household waste, including surgical masks and disposable tissues soiled with respiratory secretions, blood, or other body fluids will be disposed of as normal household waste.

- I will wash my hands with soap and water after all contact with respiratory secretions from coughing or sneezing, blood, and all other body fluids (e.g. urine, feces, wound drainage, etc.). I will educate and encourage other members of my household to do the same.
- I shall not share food or beverages with members of the household and my eating and drinking utensils will be washed with hot water and a household dishwashing detergent.
- Environmental surfaces (e.g. countertops, tables, sinks, floors, etc.) in the household will be cleaned and disinfected with a household disinfectant, such as household bleach or Lysol®, while wearing gloves, at least daily and when soiled with the respiratory secretions, blood, and other body fluids.
- I agree to monitor my temperature ____ times a day and report this information to the LHD ____ (daily, in the morning and at night). The number I must call to report this information is (____) ____ - ____.
- I will advise all members of my household or other close contacts who develop fever or respiratory symptoms to seek medical evaluation and advise the LHD when such symptoms arise.
- I understand that to prevent transmission of SARS, if I or the members of the household develop SARS symptoms, we shall call the physician's office, clinic, or hospital emergency department to alert healthcare workers prior to seeking treatment.
- I understand that if I develop fever or respiratory symptoms I must adhere to the following additional provisions:
 - I shall use a separate bed and, if possible, a separate bedroom.
 - I shall wear a surgical mask when in the same room with non-infected persons. If I cannot wear a surgical mask, others in the same room will be asked to wear a surgical mask or respirator.
 - My bed linens, towels, and personal clothing shall not be shared with other members of the household. Clothes and linens will be washed in hot soapy water.
 - All members of my household will wear gloves on both hands when they have contact with my respiratory secretions (lung or nasal), blood, and all other body fluids (e.g. urine, feces, wound drainage, etc.). Alcohol-based hand hygiene products may be substituted for hand washing with soap and water after removing the gloves, **IF** the hands are not visibly soiled with respiratory secretions, blood, or other body fluids. Gloves shall not be reused and shall be discarded immediately after removal.
 - The LHD will provide me and members of my household with surgical masks, gloves, and other items necessary to prevent the spread of SARS (i.e. alcohol-based hand wash).
- I understand that the LHD will arrange for the delivery of necessary items to my home, including but not limited to, food, clothing, and supplies, during the quarantine period if I am not authorized to leave the quarantine location in order to obtain these items myself.

- I agree to adhere to any additional recommendations and instructions from the LHD that may be listed below:

I, or my legal guardian, may contact the following LHD representative to seek relief from, clarification of, or further explanation of the conditions contained in, any part of this agreement.

(Name of LHD contact person)

(____) ____ - _____
(Daytime telephone #)

The provisions of this agreement have been explained to me by the LHD representative and I fully understand that my failure to follow these guidelines or to voluntarily remain in quarantine will result in my being placed in involuntary quarantine, or committed to a facility where I may be quarantined against my wishes.

(Print name of SARS contact)

(Signature)

(Date)

(Print name of LHD representative)

(Signature)

(Date)



Corning Tower

The Governor Nelson A. Rockefeller Empire State Plaza

Albany, New York 12237

Antonia C. Novello, M.D., M.P.H., Dr.P.H.
Commissioner

Dennis P. Whalen
Executive Deputy Commissioner

September 2, 2003

Michael Caldwell, M.D., M.P.H.
President
New York State Association of County Health Officials
Dutchess County Dept. of Health
387 Main Street
Poughkeepsie, New York 12601

Re: DOH GC Opinion No.03-03
Quarantine Powers of Local Health
Officers and Local Boards of Health

Dear Dr. Caldwell:

Dennis Whalen, Executive Deputy Commissioner, has asked that I respond to Dr. Lloyd Novick's May 9, 2003 letter, seeking clarification of the authority of local health officials, particularly with regard to the power to isolate and quarantine individuals exposed to or infected with a communicable disease. As indicated below, both local health officers and local boards of health have the power to isolate and quarantine individuals exposed to or infected with a communicable disease designated in the State Sanitary Code. There is considerable variation among counties regarding who exercises the powers of local health officers and local boards of health. Therefore, the general guidance provided in this letter should be supplemented by specific advice from each county's legal advisor.

Brief Summary

A "local health officer" includes a county health commissioner; the health commissioner of a city having a population of 50,000 or more; a public health director; a county health director in counties or cities having populations of less than 150,000 according to the 1970 or subsequent federal census, but without a charter or optional or alternative form of government; and the officer of a city having a population of less than 50,000, town, village, or part-county or consolidated health district who administers and manages public health programs within such jurisdiction. Each can exercise the powers of a local health officer.

A "local board of health" is the board of health of a county, part-county, city, village, town or consolidated health district. In some situations a county legislature may serve as the board of health. In villages the board of health is the board of trustees of the village; in towns the board of health is the town board. Since the Public Health Law provides for either the abolition of certain local health districts or their continuation as a subdivision of the county, or part-county, health district, the activity and authority of town and village boards of health will vary based upon local actions taken. In addition, under Article 9 of the State Constitution and the Municipal Home Rule Law, county charters can reallocate the administrative responsibilities of the agencies of local government among the agencies. As a result, a county charter may give to other county agencies or bodies the powers which the Public Health Law gives to a board of health. Given the variety of local actions that several counties may have undertaken, local health officers should consult with their own legal advisors to confirm what bodies exercise the powers of the local board of health in their jurisdictions. The Department has no central registry of such information.

The Public Health Law requires every local board of health and every local health officer to guard against the introduction of communicable diseases designated in the State Sanitary Code by the exercise of proper and vigilant medical inspection and control of all persons and things infected with or exposed to such diseases. The law authorizes local boards of health and local health officers to provide for the care and isolation of cases of communicable disease in a hospital or elsewhere when necessary for protection of the public health and, subject to the provisions of the State Sanitary Code, to prohibit and prevent all contact and communication with or use of infected premises, places and things, and to require, and if necessary, provide the means for their thorough cleansing before general contact and use is resumed. The law requires health officers to investigate the circumstances and to seek a court order committing non-compliant individuals afflicted with a communicable disease to a hospital or institution established for the care of persons suffering from such communicable disease. Pursuant to these provisions both local health officers and local boards of health have the power and primary responsibility to isolate and quarantine individuals exposed to or infected with a communicable disease designated in the State Sanitary Code.

Discussion

The term “local health officer” is defined in Public Health Law (“PHL”) § 2(j) as the “health officer of a county, part-county, city, village, town, or consolidated health district.” A county commissioner of health has all the powers and duties of a local health officer. See PHL § 352(2). In “unorganized” counties having a population of less than 150,000 according to the 1970 or subsequent federal census, but no charter or optional or alternative form of government, the county legislature may appoint a county health director “who shall have all the powers prescribed in section three hundred fifty-two of [the PHL]” See PHL § 356.) In counties of less than 250,000 population, a public health director acting with appropriate medical consultation may be employed in lieu of a commissioner of health to administer and manage public health functions in a county. See 10 NYCRR §§ 11.180 through 11.182. The terms “health officer” or “local health officer” are defined in 10 NYCRR § 1.1(d) to mean and include “the health officer, or other officer of a municipality, by whatever title he [sic] may be known, having the usual powers and duties of a health officer of a municipality.” The term “local health officer” is more clearly defined in 10 NYCRR § 11.1 to mean (1) the commissioner of health of a county or a city having a population of 50,000 or more and having an established health department; (2) a public health director; (3) a county health director appointed pursuant to PHL § 356 in “unorganized” counties having a population of less than 150,000 according to the 1970 or subsequent federal census, but no charter or optional or alternative form of government; and (4) the officer of a city having a population of less than 50,000, town, village or consolidated health district who administers and manages public health programs within such jurisdiction and who has the general powers and duties specified in the PHL. Each can exercise the powers of a local health officer.

As to local boards of health, as a general proposition, the boards of health of all county and part-county health districts have the same powers and duties. The board of health in a county or part-county health district created under PHL § 340 has the powers set forth in PHL § 347, et seq., including the powers and duties of a local board of health. See PHL § 308. PHL § 356 designates the legislatures of certain small counties (“unorganized” counties having a population of less than 150,000 according to the 1970 or subsequent federal census, but no charter or optional or alternative form of government) as the local board of health and provides that they, too, “shall have all the powers and duties of a board of health of a county or part-county health district.”

A differentiation among powers exercised by county boards of health arises when they respond to local conditions, such as the availability of resources or enactment of charters. PHL § 602(6) permits the State Commissioner of Health to approve a public health services plan in which the county provides reduced services, as long as the services the county does not provide can be provided by the State or through contract. This can result in “partial service” health departments in which state district offices provide some services within a county. Similarly, PHL § 341 provides for either the abolition of certain local health districts or their continuation within a county or part-county health district as a subdivision of the county or part-county health district. Thus, in one county the town

and village boards of health may be active participants in public health while a different county or part-county health district may be more centralized. In villages the board of health is the board of trustees of the village; in towns the board of health is the town board. See PHL § 302. PHL § 356 does not address the relationship between a county board of health created under its terms and pre-existing town and village boards of health. Therefore, such pre-existing town and village boards of health might have greater autonomy in county and part-county health districts governed by PHL § 356 than they would in county and part-county health districts formed under PHL § 340.

In addition, under Article 9 of the State Constitution and the Municipal Home Rule Law, county charters can reallocate the administrative responsibilities of local government agencies. As a result, a charter may give the county legislature or some other local agency powers which the PHL gives to a board of health. The scope and exercise of that power would, of course, be subject to any provisions of the PHL or State Sanitary Code. The Department does not maintain a summary of county charter provisions. Given the variety of possible local actions that several counties may have undertaken, the county commissioners and public health directors should consult with their own legal advisors to confirm what bodies exercise the powers of the local board of health. The Department has no central registry of such information.

With regard to the power to isolate and quarantine, PHL § 2100 states:

1. Every local board of health and every health officer shall guard against the introduction of such communicable diseases as are designated in the sanitary code, by the exercise of proper and vigilant medical inspection and control of all persons and things infected with or exposed to such diseases.
2. Every local board of health and every health officer may:
 - (a) provide for care and isolation of cases of communicable disease in a hospital or elsewhere when necessary for protection of the public health and,
 - (b) subject to the provisions of the sanitary code, prohibit and prevent all intercourse and communication with or use of infected premises, places and things, and require, and if necessary, provide the means for the thorough purification and cleansing of the same before general intercourse with the same or use thereof shall be allowed.

In addition, PHL § 2120 requires health officers, upon receipt of a complaint from a physician that a person is afflicted with a communicable disease and is unable or unwilling to conduct himself and to live in such a manner as not to expose members of his family or household or other persons with whom he may be associated to danger of infection, to investigate the circumstances and to seek a court order committing the individual to a hospital or institution established for the care of persons suffering from such communicable disease. Pursuant to these provisions both local health officers and local boards of health have the power to isolate and quarantine individuals exposed to or infected with a communicable disease designated in the State Sanitary Code. The State Sanitary Code places the primary responsibility for such isolation and quarantine on local health officers, see 10 NYCRR §§ 2.6, 2.25(d), (e) and (f), and 2.29.

I also want to take this opportunity to confirm the New York State Department of Health's position that local health officers and local boards of health may quarantine and isolate only patients infected with or exposed to

communicable diseases determined to be dangerous to the public health by the New York State Public Health Council and listed in 10 NYCRR § 2.1. We understand that local health officers are concerned that they be able to respond quickly to communicable disease threats in their communities. By authorizing the State Commissioner of Health to add diseases to the communicable disease list in 10 NYCRR § 2.1 between its meetings, the Public Health Council has assured that expeditious response will be possible. The Department looks forward to continuing to work effectively and collaboratively with local health officers to meet the challenges of communicable disease control.

Very truly yours,

Donald P. Berens, Jr.
General Counsel

cc: Dennis Whalen
 Dr. Lloyd Novick
 JoAnn Bennison

A GUIDE TO NEW YORK STATE LAWS GOVERNING BIOTERRORISM PREPAREDNESS AND RESPONSE

This compilation of New York State statutory and regulatory authority is intended as a convenient resource for state and local health officials involved in planning for potential bioterrorism and other public health emergencies, including those arising from a radiological source.

I. PLANNING FOR A PUBLIC HEALTH EMERGENCY

A. DISASTER PREPAREDNESS PUBLIC POLICY STATEMENT

Authority: Executive Law 20(1) states that it is the policy of the State that:

- (a) local government and emergency service organizations continue their essential role as the first line of defense in times of disaster, and that the State provide appropriate supportive services to the extent necessary;
- (b) local chief executives take an active and personal role in the development and implementation of disaster preparedness programs and be vested with authority and responsibility in order to assure the success of such programs;
- (c) State and local natural disaster and emergency response functions be coordinated in order to bring the fullest protection and benefit to the people;
- (d) State resources be organized and prepared for immediate effective response to disasters which are beyond the capability of local governments and emergency service organizations; and
- (e) State and local plans, organizational arrangements, and response capability required to execute the provisions of Executive Law Article 2-B (Disaster Preparedness) shall at all times be the most effective that current circumstances and existing resources allow.

B. DISASTER PREPAREDNESS COMMISSION PLAN

Authority: Executive Law 21 provides for the creation of a Disaster Preparedness Commission, which includes the commissioners of the following State agencies: Health, Transportation, Division of Criminal Justice Services, Education, Economic Development, Agriculture and Markets, Housing and Community Renewal, General Services, Labor, Environmental Conservation, Mental Health, State Energy Research and Development Authority, State Police, Insurance, Banking, and State. The Disaster Preparedness Commission also includes the State Fire Administrator, the chair of the Public Service Commission, the Adjutant General, the chairman of the State Thruway Authority, the chief professional officer of the State coordinating chapter of the American Red Cross and other members appointed by the Governor.

Among the Disaster Preparedness Commission's duties set forth at Executive Law 21(3)(c) is the duty to prepare State disaster preparedness plans.

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C. CIVIL DEFENSE DRILLS

Authority: Executive Law 29-b(1) provides that the Governor may, in his discretion, direct the State Civil

Defense Commission to conduct a civil defense drill, under its direction, in which all or any of the civil defense forces of the State may be utilized to perform the duties assigned to them in a civil defense emergency, for the purpose of protecting and preserving human life in a disaster. In such event, civil defense forces in the State shall operate under the direction and command of the State Director of Civil Defense, who is, pursuant to Military Law 11, the Adjutant General.

Executive Law 29-b(2) and (3) respectively set forth provisions governing use of civil defense forces by the chief executives of counties and cities, including provisions relating to drills.

II. REPORTING AND DETECTION

The ability to detect and respond effectively to an unannounced act of bioterrorism may depend significantly upon timely and complete reporting of cases of communicable disease.

1. PRIMARY REPORTERS OF CASES OF COMMUNICABLE DISEASE AND OTHER INDICATORS OF DISEASE OUTBREAK

1. Local Health Officers Outside the City of New York

What is reported: All cases of such communicable diseases as may be required by State Department of Health (DOH)

Report made to: State DOH

Manner of reporting: Original reports or summary reports when authorized by State DOH

When reported: Promptly

Authority: Public Health Law 2103 requires every local health officer to report promptly to the State DOH all cases of communicable diseases as may be required by State DOH. Public Health Law 2110 excepts the provisions of Public Health Law 2103 from applying to the City of New York. See instead New York City Health Code Article 11.

2. County Health Commissioners Outside the City of New York

What is reported: Original reports of communicable disease cases.

Report made to: State DOH.

Manner of reporting: Original reports or summary reports when authorized by State DOH.

When reported: Within 24 hours after receipt by county health commissioner.

Authority: Public Health Law 2104(1) requires the health officer of each city, village, town and consolidated health district included as part of any county or part-county health district, to transmit daily all original reports of communicable disease cases to the county health commissioner. Public Health Law 2104(2) requires the county health commissioner to transmit to State DOH the original reports of communicable disease cases within 24 hours after he or she receives them. Public Health

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Law 2110 excepts the provisions of Public Health Law 2104 from applying to the City of New York. See instead New York City Health Code Article 11.

3. Hospitals

What is reported: “Case”, defined in 10 NYCRR 2.2(b) as a person diagnosed to have a particular disease or condition; “outbreak”, defined in 10 NYCRR 2.2(c) as an increased incidence of disease above its expected baseline level.

Report made to: State DOH and to the city, county or district health officer.

When reported: Not specified.

Manner of reporting: as specified by the Commissioner of Health (10 NYCRR 405.11(c)).

Authority: Public Health Law 201(1)(c) authorizes DOH to supervise the reporting and control of disease. Public Health Law 2803(1)(a) grants the Commissioner of Health the power to inquire into the operation of hospitals. 10 NYCRR 405.11(c), which requires the hospital professional responsible for the hospital-wide infection control program to report to DOH any increased incidence of nosocomial infections, must be read with the 10 NYCRR 2.2(a) definition, which states that “for public health reporting purposes, hospital associated infections include outbreaks or increased incidence of disease due to microbiological agents or their toxic products”. 10 NYCRR 2.1 specifies the infectious, contagious or communicable diseases which must be reported pursuant to various provisions contained within 10 NYCRR Part 2 (Communicable Diseases), which was promulgated pursuant to Public Health Law 225. Nosocomial infections are reportable by hospitals pursuant to 10 NYCRR 405.11(c).

4. Physicians Outside the City of New York

What is reported: The full name, age and address of every person with a suspected or confirmed case of a communicable disease or any outbreak of communicable disease, together with the name of the disease, and any additional information requested by the health officer in the course of a communicable disease investigation.

Report made to: City, county or district health officer within whose jurisdiction the patient is.

When reported: Immediately or within 24 hours from the time the case is first seen by the physician.

Manner of reporting: Telephone, facsimile and other electronic transmission if indicated, and also in writing unless the State Health Commissioner approves waiver of written notice.

Authority: Public Health Law 2101 requires that every physician shall immediately give notice of every case of communicable disease required by State DOH to be reported to it, to the health officer of the local health district where such disease occurs. Existing regulations promulgated pursuant to Public Health Law 225, and set forth at 10 NYCRR 2.10, require every physician to report to the city, county, or district health officer, within whose jurisdiction the patient is, specified information concerning every person with a suspected or confirmed case of a communicable disease or any outbreak of communicable disease, within 24 hours from the time the case is first seen by the physician. Reports shall be made by telephone, facsimile or other electronic transmission if indicated, and shall also be made in writing ,except that the written notice may be omitted with the approval of the State Commissioner of Health. Although direct reporting to State DOH is not currently required, when a communicable disease is reported to a city, county or district health officer, a copy is retained in that office, and another copy of the report must be reported to State DOH, pursuant to 10 NYCRR 2.1(b).

5. Physicians Within the City of New York

Authority: Public Health Law 2110 excepts the City of New York from, among other requirements, the provisions of Public Health Law 2101 described in paragraph 4 above. See instead New York City Health Code Article 11.

6. Nursing homes, diagnostic and treatment centers, other Public Health Law Article 28 facilities

What is reported: Cases of communicable diseases as defined in 10 NYCRR 2.2(b).

Report made to: State DOH and to the city, county or district health officer in whose jurisdiction the institution is located.

When reported: Not specified.

Manner of reporting: Not specified.

Authority: 10 NYCRR 2.10(a) provides that when a case of communicable disease occurs in a facility licensed under Article 28 of the Public Health Law, the person in charge of the facility shall report the case to the State Department of Health and to the city, county or district health officer in whose jurisdiction the institution is located.

7. Clinical Laboratories

What is reported: Identity of person from whom specimen is taken, name of physician sending specimen, other facts pertinent to the examination. Tests performed and such other information as the Department of Health may require to carry out the provisions of Title V, Article 5 of the Public Health Law. Also, such information and data concerning the laboratory's technical operation as may be specified by the Department.

Report made to: Local health official and State DOH.

When reported: Immediately for communicable disease reporting.

Manner of reporting: In a form prescribed by the Department.

Authority: Public Health Law 2102(1) requires that when any laboratory examination discloses evidence of communicable disease, the results of such examination together with all required pertinent facts, shall be immediately reported by the person in charge of the laboratory or the person making such examination to the local or state health official to whom the attending physician is required to report such case. Public Health Law 576(2) authorizes the State DOH to require clinical laboratories and blood banks to submit, in a form prescribed by the Department, periodic reports of tests performed and such other information as the Department may require to carry out the provisions of Title V, Article 5. 10 NYCRR Part 58-1.11(a) states that when requested, a laboratory shall submit reports containing such information and data concerning its technical operation as may be specified by the Department.

8. State Institutions

What is reported: Cases of communicable diseases.

Report made to: State DOH and to city, county or district health officer.

When reported: Not specified.

Manner of reporting: Not specified.

Authority: Public Health Law 2105 requires the director or person in charge of each state institution
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to report immediately an outbreak of a communicable disease in such institution to the State Health Commissioner and as may otherwise be provided in the State Sanitary Code. 10 NYCRR 2.10(a) provides that when a case of communicable disease occurs in a State institution or a facility licensed under Article 28 of the Public Health Law, the person in charge of the institution or facility shall report the case to the State Department of Health and to the city, county or district health officer in whose jurisdiction such institution is located.

9. Public Health Nurses and All Other Persons When No Physician Is In Attendance

What is reported: The name and address of any individual affected with any disease presumably communicable.

Report made to: City, county or district health officer.

When reported: Immediately.

Manner of reporting: Not specified.

Authority: 10 NYCRR 2.12 provides that when no physician is in attendance, it shall be the duty of the head of a private household or the person in charge of any institution, school, boarding house, camp or vessel or any public health nurse or any other person having knowledge of an individual affected with any disease presumably communicable, to report immediately the name and address of such person to the city, county, or district health officer.

10. Coroners, Medical Examiners, Pathologists

What is reported: Case of any individual who at time of death was apparently affected with a communicable disease, based on examination of the corpse or from history of events leading to death.

Report made to: City, county or district health officer.

When reported: Within 24 hours of determination.

Manner of reporting: By telephone, facsimile transmission or other electronic communication if indicated, and also in writing , except that the written notice may be omitted with the approval of the State Health Commissioner.

Authority: 10 NYCRR 2.11 provides that if a pathologist, coroner, medical examiner, or other person determines from examination of a corpse or from history of the events leading to death that at the time of death this individual apparently was affected with a communicable disease, he/she shall report the case within 24 hours to the proper health authority according to the manner indicated in 10 NYCRR 2.10 as if the diagnosis had been established prior to death. Note that the State Department of Health is not a direct recipient of such information pursuant to 10 NYCRR 2.10 but is an indirect recipient pursuant to 10 NYCRR 2.1(b).

B. REGULATION OF LIVE PATHOGENIC MICROORGANISMS OR VIRUSES

Authority: This is an area regulated primarily by the Federal government. It is important because of the potential threat of diversion of dangerous pathogens for bioterrorism. In addition to the State law cited below, see also Title 42 Code of Federal Regulations Part 72, entitled Interstate Shipment of Etiologic Agents, promulgated pursuant to the Antiterrorism Act of 1996, Pub.L. No. 104-132 which, among other things, directed the Federal Centers for Disease Control and Prevention to establish a regulatory scheme to identify biological agents posing a threat to the public health and Section 3-Non-Hospital Quarantine and Isolation

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to regulate their transfer and use through Federal rule. See also the USA Patriot Act of 2001(Pub. Law 107-56, section 817); 18 U.S.C. 175 and 175b.

Public Health Law Article 32 (Live Pathogenic Microorganisms or Viruses) requires that no person other than a licensed practitioner of medicine, dentistry, or veterinary medicine or a person under their direct supervision shall possess or cultivate live pathogenic microorganisms or viruses other than vaccine virus, subject to certain exceptions. Public Health Law 3201(1),(2) requires that no person shall sell or convey any live pathogenic microorganisms or viruses other than vaccine virus to any other person without permission from the State Commissioner of Health, or the New York City Health Department if within that city. However, this requirement does not apply to diseased tissue, exudate, or other specimens which are sent by physicians, dentists or veterinarians to laboratories for examination as an aid to the diagnosis or control of disease.

III. STATE AND LOCAL GOVERNMENT RESPONSE PROVISIONS

1. AT ONSET OF PUBLIC HEALTH EMERGENCY

1. Actions of the Governor

a. Governor May Declare a Disaster Emergency

Authority: Executive Law 28(1),(3) provides that whenever the Governor, on his own initiative or pursuant to a request from one or more chief executives, finds that a disaster has occurred or may be imminent, for which local governments are unable to respond adequately, he shall declare a disaster emergency by executive order, which describes the disaster and affected area, and which remains in effect for a period not to exceed 6 months unless extended by executive order for additional limited periods.

Disaster is defined at Executive Law 20(2)(a) as the occurrence or imminent threat of widespread or severe damage, injury, or loss of life or property resulting from any natural or man-made causes, including, but not limited to, fire, flood, earthquake, hurricane, tornado, high water, landslide, mudslide, wind, storm, wave action, volcanic activity, **epidemic**, air contamination, blight, drought, infestation, explosion, radiological accident, water contamination, bridge failure or bridge collapse.

State disaster emergency is defined at Executive Law 20(2)(b) as a period beginning with a declaration by the Governor that a disaster exists and ending upon its termination.

b. Governor May Invoke the New York State Defense Emergency Act of 1951

Authority: The New York State Defense Emergency Act of 1951 (Chapter 784, Laws of 1951), could be invoked following an “attack”, defined to include any case involving use of bacteriological or biological means, thereby empowering a State Defense Council, chaired by the Governor, to exercise a broad range of extraordinary powers. (See appendices which contain the complete statute).

2. Local Government Actions

a. Chief Executive of a County, City, Town or Village May Proclaim a Local State of Emergency

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Authority: Executive Law 24(1) provides that specified chief executives (defined at Executive Law 20(2)(f)) may proclaim a local state of emergency within any part or all of the territorial limits of such local government under specified circumstances.

Local state of emergency may arise in the event of a disaster, rioting, catastrophe, or similar public emergency within the territorial limits of any county, city, town or village. See Executive Law 24(1).

2. During Public Health Emergency

1. Actions of the Governor

a. Governor May Temporarily Suspend State and Local Laws and Regulations Under Specified Conditions

Authority: Under Executive Law 29-a, the Governor may, by executive order and subject to the State and Federal Constitutions and Federal statutes and regulations, and after seeking the advice of the Disaster Preparedness Commission, temporarily **suspend** specific provisions of any statute, local law, ordinance, or orders, rules or regulations, or parts thereof, of any agency during a state disaster emergency, if compliance with such provisions would prevent, hinder, or delay action necessary to cope with the disaster.

b. Governor Shall Take Specified Actions Following Declaration of Disaster Arising from Radiological Accident

Authority: Executive Law 28(2) requires that upon the Governor's declaration of a disaster arising from a radiological accident, the Governor or his designee, shall direct one or more chief executives and emergency services organizations to: (a) notify the public that an emergency exists; and (b) take appropriate protective actions pursuant to the radiological emergency preparedness plan approved pursuant to sections 22 and 23 of the Executive Law. The Governor or his designee shall also have the authority to direct that other actions be taken by such chief executives pursuant to their authority under Executive Law 24.

c. Governor May Request Federal Assistance

Authority: Executive Law 28(4) provides that whenever the Governor finds that a disaster is of such severity and magnitude that effective response is beyond the capabilities of the State and the affected jurisdictions, he shall make an appropriate request for Federal assistance available under Federal law, and may make available out of any funds provided under the governmental emergency fund or such other funds as may be available, sufficient funds to provide the required State share of grants made under any Federal program for meeting disaster related expenses.

d. Governor May Direct State Agencies to Provide Disaster Emergency Assistance

Authority: Executive Law 29 provides that upon the declaration of a state disaster emergency, the Governor may direct any and all agencies of the state government to provide assistance under the coordination of the Disaster Preparedness Commission. Such State assistance may include: (1) utilizing, lending, or giving to political subdivisions, with or without compensation, equipment, supplies, facilities,

services or state personnel, and other resources, other than the extension of credit; (2) distributing medicine, medical supplies, food and other consumable supplies through any public or private

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agency authorized to distribute such items; (3) performing on public or private lands temporary emergency work essential for the protection of public health and safety, clearing debris and wreckage, making emergency repairs to and temporary replacements of public facilities of political subdivisions damaged or destroyed as a result of such disaster; and (4) making such other use of their facilities, equipment, supplies and personnel as may be necessary to assist in coping with the disaster or any resulting emergency.

e. Governor May Order the Organized Militia into Service of the State

Authority: Military Law 6(1) provides that the Governor shall have power, in case of disaster, to order the organized militia into the active service of the State for such period, to such extent, and in such manner as he may deem necessary. Pursuant to Military Law 9, whenever the organized militia is employed under Military Law 6, the Governor may by proclamation declare the county or city in which the troops are serving to be under *martial rule*, if in the Governor's judgment the maintenance of law and order will thereby be promoted. Martial rule is subject to the Federal and State Constitutions and is governed by the Code of Military Justice. See Military Law Article VII.

f. Governor May Issue Call to the State Police

Authority: Executive Law 223(1) sets forth the duties and powers of the Superintendent and members of the New York State Police. The State Police are subject to the call of the Governor and are empowered to cooperate with any other department of the State or with local authorities. Upon the direction of the Governor or upon the request of the mayor of a city with the approval of the Governor, the State Police may exercise their powers within the limits of any city to suppress rioting and disorder.

g. Governor May Require State Health Commissioner to Examine Nuisances and Order Their Abatement or Removal

Authority: Public Health Law 1301(1) provides that whenever required by the Governor, the State Commissioner of Health shall make an examination concerning nuisances or questions affecting the security of life and health in any locality, and shall report the results to the Governor within the time prescribed by him. The Governor may declare the matters public nuisances and may order them to be changed, abated or removed as he may direct, pursuant to Public Health Law 1301(2). Pursuant to Public Health Law 1301(3), the Governor may, by a precept under his hand and official seal, require the district attorney, sheriff and other officers of the county where such nuisance is maintained, to take all necessary measures to execute such order and cause it to be obeyed.

Application of these provisions to a situation arising from bioterrorism would assume the resulting contamination of property which might be identified and termed a public *nuisance*.

2.State Agency Actions

a. State Health Commissioner and New York State Department of Health Continue to Exercise Powers and Duties Regarding Public Health Matters as Provided by Law

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Authority: Public Health Law 200 provides for the existence of a Department of Health in State government, headed by a Commissioner of Health of the State of New York. Public Health Law 206(1)(a) states the duty of the Commissioner of Health to take cognizance of the interests of public health and exercise functions, powers and duties prescribed by law.

Supervision of local boards of health and health officers — Public Health Law 206(1)(b) states the duty of the Commissioner of Health to exercise general supervision over the work of all local boards of health and health officers, unless provided otherwise.

Promulgation of regulations by Public Health Council --- Public Health Law 225(4) and 225(5)(a) provide that the Public Health Council, which exists within the Department of Health, shall have the power to establish, amend and repeal regulations known as the State Sanitary Code, which may deal with any matters affecting the security of life or health or the preservation and improvement of public health in the State of New York and with any matters as to which the jurisdiction is conferred upon the Public Health Council.

Supervision of reporting and control of disease --- Public Health Law 206(1)(d) states the duty of the Commissioner to investigate the causes of disease, epidemics, the sources of mortality and the effect of various factors on public health. Public Health Law 201(1)(c) states that the Department of Health shall, as provided by law, supervise the reporting and control of disease.

Supervision of nuisance abatement — Public Health Law 201(1)(n) requires the Department to exercise control over and supervise the abatement of nuisances affecting or likely to affect public health. Public Health Law 1300 confers on the Commissioner of Health all necessary powers to make investigations and examinations into nuisances, or questions affecting the security of life and health in any locality. Pursuant to Public Health Law 1303(4) and 10 NYCRR 8.5, the Commissioner of Health may mandate that local boards of health outside of New York City convene and take directed action necessary for the public good, including the abatement of the spread of disease.

Deputization of local health officers --- Pursuant to Public Health Law 206(9), the Commissioner of Health may deputize in writing any local health officer to do or perform in her place and stead those duties set forth at Public Health Law 206(1)(d) pertaining to the investigation of the causes of disease, epidemics, the sources of mortality, and the effect of localities, employments and other conditions, upon the public health.

Modification of local board of health orders --- Pursuant to Public Health Law 206(4)(b), the Commissioner of Health may annul or modify an order, regulation, by-law or ordinance of a local board of health concerning a matter which in her judgment affects the public health beyond the territory over which such local board of health has jurisdiction.

Access to facilities and property--- Pursuant to Public Health Law 206(2), the Commissioner of Health or designee may, without fee or hindrance, enter, examine and survey all grounds, erections, vehicles, structures, apartments, buildings and places.

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Expenditure of funds--- Public Health Law 201(1)(p) provides that the Department of Health shall receive and expend funds for public health purposes as provided by law.

Distribution of products --- Public Health Law 201(1)(e) requires the Department of Health to produce, standardize and distribute diagnostic, prophylactic and therapeutic products as provided by law.

Regulation of public health aspects of radiation — Public Health Law 201(1)(r) requires the Department of Health to supervise and regulate the public health aspects of ionizing radiation and non-ionizing electromagnetic radiation.

Promotion of disease education --- Public Health Law 201(1)(g) requires the Department of Health to promote education in the prevention and control of disease as provided by law.

b. State Health Commissioner May Take Summary Action to Protect Public Health

Authority: Public Health Law 16 provides that whenever the Commissioner, after investigation, is of the opinion that any person is causing, engaging in or maintaining a condition or activity which in her opinion constitutes danger to the health of the people, and that it therefore appears to be prejudicial to the interests of the people to delay action for 15 days until an opportunity for a hearing can be provided in accordance with the provisions of Public Health Law section 12-a, the Commissioner shall order the person, including any State agency or political subdivision having jurisdiction, by written notice to discontinue such dangerous condition or activity or take certain action immediately or within a specified period of less than 15 days. As promptly as possible thereafter, within not to exceed 15 days, the Commissioner shall provide the person an opportunity to be heard and to present any proof that such condition or activity does not constitute a danger to the health of the people.

c. Commissioner of General Services May Authorize State Agency Emergency Procurements

Authority: State Finance Law 163(10)(b) provides that procurements made to meet emergencies arising from unforeseen causes may be made without a formal competitive process and shall only be made under unusual circumstances and shall include a determination by the Commissioner of General Services or the State agency that the specifications or requirements for the purchase have been designed in a fair and equitable manner. The purchasing agency is required to document in the procurement record the nature of the emergency giving rise to the procurement.

Emergency is defined at State Finance Law 163(1)(b) as an urgent and unexpected requirement where health and public safety or the conservation of public resources is at risk.

3. Local Government Actions

a. Local Boards of Health and Health Officers Have the Duty and Authority to Control Infectious Diseases by Means that Include Isolation and Quarantine

Authority: Public Health Law 2100 (1) requires every local board of health and every health officer to guard against the introduction of such communicable diseases as are designated in the State Sanitary Code, by the proper and vigilant medical inspection and control of all persons and things
Section 3-Non-Hospital Quarantine and Isolation

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infected with or exposed to such diseases. Public Health Law 2100(2) places a legal duty upon local boards of health and health officers to: (a) provide for care and isolation of cases of communicable disease in a hospital or elsewhere when necessary for protection of the public health and (b) subject to the provisions of the State Sanitary Code, prohibit and prevent all intercourse and communication with or use of infected premises, places, and things, and require, and if necessary provide the means for their thorough purification and cleansing before resumption of their use. Pursuant to Public Health Law 2110, New York City is exempt from the requirements contained in Public Health Law 2100. See New York City Health Code Article 11.

Isolation is defined at 10 NYCRR 2.25(d) as consisting of the separation from other persons, in such places, under such conditions, and for such time, as will prevent transmission of the infectious agent, of persons known to be ill or suspected of being infected.

Quarantine of premises is defined at 10 NYCRR 2.25(e) to consist of (1) prohibition of entrance into or exit from the premises, as designated by the health officer, where a case of communicable disease exists of any person other than medical attendants and such others as may be authorized by the health officer; (2) prohibition, without permission and instruction from the health officer, of the removal from such premises of any article liable to contamination with infective material through contact with the patient or with his secretions or excretions, unless such article has been disinfected.

Pursuant to 10 NYCRR 2.29, whenever a case of a highly communicable disease (as defined in 10 NYCRR 2.1) comes to the attention of the city, county or district health officer, he or she shall isolate such patients as in his or her judgment are deemed necessary. Pending official action by the health officer, it is the legal duty of every attending physician, upon discovering a case of a highly communicable disease (as defined in 10 NYCRR 2.1) to immediately isolate the patient. 10 NYCRR 2.33 restricts the removal of persons affected with any highly communicable disease (as defined in 10 NYCRR 2.1) from one health district into another.

Under case law, including *Crayton v. Larabee* (1917) 220 N.Y. 493, isolation and quarantine must not be arbitrary, unreasonable or oppressive, and due process protections must be afforded to persons subject to isolation and quarantine orders of public health officers.

b. Local Boards of Health and Health Officers Have Duty to Investigate, Suppress and Remove Nuisances and Conditions Detrimental to Life and Health

Authority: Public Health Law 1303 provides that every local board of health and local health officer shall

receive and examine into all complaints concerning nuisances, or causes of danger or injury to life and health within the health district. Every local board of health shall order the suppression and removal of all such nuisances and conditions.

Application of this provision to a situation arising from bioterrorism would assume the resulting contamination of property which might be identified and termed a *nuisance*.

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c. City Commissioner of Health (or Health Officer in Cities with Population of Less than 175,000) May Exercise Extraordinary Powers in Case of Great and Imminent Peril to the Public Health

Authority: Public Health Law 370(1) provides that in case of great and imminent peril to the public health of the city, it shall be the duty of the city health commissioner, or health officer in cities having a population of less than 175,000, with the approval and consent of the legislative authority if it is practicable to convene such authority for prompt action, or if not, when approved by the board of estimate or similar authority, to take such measures and to do, order or cause to be done such acts and to make such extraordinary expenditures, in excess of the sum appropriated to the city department of health, as provided by law, for the preservation and protection of the public health of such city as he or she may deem necessary and proper.

d. Chief Executive of County, City, Town or Village May Promulgate Emergency Orders Following Proclamation of a Local State of Emergency

Authority: Executive Law 24(1) provides that following the proclamation of a local state of emergency and during its continuance, the chief executive may promulgate local emergency orders to protect life and property or to bring the emergency situation under control.

Control of roads and public areas — As illustration, such orders may, within any part or all or the territorial limits of such local government provide for: the establishment of a curfew and the prohibition and control of pedestrian and vehicular traffic, except essential emergency vehicles and personnel; the prohibition and control of the presence of persons on public streets and places.

Designation of emergency facilities— Such orders may also provide for the establishment or designation of emergency medical shelters.

e. Chief Executive of County, City, Town or Village May Suspend Local Law Under Specified Conditions

Authority: Pursuant to Executive Law 24(1)(g), a local emergency order may provide for the **suspension** within any part or all of its territorial limits of any of its local laws, ordinances or regulations, or parts thereof, subject to Federal and State constitutional, statutory and regulatory limitations, which may prevent, hinder, or delay necessary action in coping with a disaster or recovery from a disaster. This extraordinary power is first subject to two conditions: (1) a request has been made by the appropriate chief executive of the county or city to the Governor in accordance with Executive Law 24(7); or (2) the Governor has

declared a state of disaster emergency pursuant to Executive Law 28. Also, such suspension of any local law, ordinance or regulation is subject to specified standards and limits:

- (i) no suspension shall be made for a period in excess of 5 days, provided, however, that upon reconsideration of all the relevant facts and circumstances, a suspension may be extended for additional periods not to exceed 5 days each during the pendency of the state of emergency;
- (ii) no suspension shall be made which does not safeguard the health and welfare of the public and which is not reasonably necessary to the disaster effort;
- (iii) any such suspension order shall specify the local law, ordinance or regulation, or part thereof,

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suspended and the terms and conditions of the suspension;

(iv) the order may provide for such suspension only under particular circumstances, and may provide for the alteration or modification of the requirements of such local law, ordinance or regulation suspended, and may include other terms and conditions;

(v) any such suspension order shall provide for the minimum deviation from the requirements of the local law, ordinance or regulation suspended consistent with the disaster action deemed necessary; and

(vi) when practicable, specialists shall be assigned to assist with the related emergency actions to avoid adverse effects resulting from the suspension.

f. Chief Executive of County and Certain Chief Executives of Cities May Request Governor to Provide Assistance Following Declaration of Local State of Emergency Involving Disaster Beyond Capability of Local Government to Meet

Authority: Executive Law 24(7) provides that whenever a local state of emergency has been declared pursuant to this section, the chief executive of the county in which the local state of emergency has been declared, or where a county is wholly contained within a city, the chief executive of the city, may request the Governor to provide assistance under the Executive Law, provided that such chief executive determines that the disaster is beyond the capacity of local government to meet adequately and State assistance is necessary to supplement local efforts to save lives and to protect property, public health and safety, or to avert or lessen the threat of a disaster.

IV. PROVISIONS GOVERNING CRITICAL AREAS

A. SAFE DISPOSAL OF INFECTIOUS WASTE

Authority: See Public Health Law Article 13, Title XIII, entitled Storage, Treatment, and Disposal of Regulated Medical Waste. Included are the following definitions:

Regulated medical waste – 1389-aa(1)

Infectious agents – 1389-aa(5)

Cultures and stocks – 1389-aa(1)(a)

Human pathological waste – 1389-aa(1)(b)

Sharps – 1389-aa(1)(d)

In addition, see 6 NYCRR 364.9, which establishes a program for tracking and managing medical waste shipments pursuant to the Environmental Conservation Law.

B. SAFE DISPOSAL OF HUMAN REMAINS

Authority: See generally Public Health Law Article 41, Title IV (Registration of Deaths: Burial Permits); and Public Health Law Article 42 (Cadavers). Public Health Law 4140 requires that in the case of a death occurring from a disease which is designated in the State Sanitary Code as a communicable disease, no permit for the removal or other disposition of the body shall be issued by the registrar, except to a funeral director or undertaker licensed in accordance with Public Health Law Article 34 (Funeral Directing), under such conditions as may be prescribed in the State Sanitary Code.

C. DESTRUCTION OF PROPERTY

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Authority: Public Health Law 2100 (2)(b) provides that every local board of health and every health officer may, subject to the provisions of the State Sanitary Code, prohibit and prevent all contact with or use of infected premises, places and things, and require, and if necessary, provide the means for their thorough purification and cleansing before contact may be resumed. According to an 1894 Opinion of the Attorney General, it was within the power of a local board of health to destroy clothing which had become infected with infectious or contagious disease germs.

D. LICENSING AND APPOINTMENT OF HEALTH PERSONNEL

1. Coroner, Coroner's Physician and Medical Examiner

Authority: Outside of New York City, County Law Article 17-A applies and describes their duties and manner of investigating deaths within their jurisdiction.

2. Physicians

Authority: Education Law Article 131 (Medicine); Education Law Article 131-A (definitions of professional misconduct applicable to physicians); Public Health Law 230 et seq.(Professional Medical Conduct); Public Health Law Article 33 (Controlled Substances)

3. Physician's Assistants

Authority: Education Law Article 131-B (Physician Assistants and Special Assistants); Education Law Article 131-A (definitions of professional misconduct applicable to physician's assistants and special assistants); Public Health Law Article 33 (Controlled Substances)

4. Nurses

Authority: Education Law Article 139 (Nursing); Public Health Law Article 33 (Controlled Substances)

5. Pharmacists

Authority: Education Law Article 137 (Pharmacy); Public Health Law Article 33 (Controlled Substances)

6. Veterinarians

Authority: Education Law Article 135 (veterinary medicine)

7. Emergency Medical Technicians

Authority: Public Health Law Article 30 (Emergency Medical Services); 10 NYCRR Part 800 (State Emergency Medical Services Code)

8. Funeral Directors

Authority: Public Health Law Article 34 (Funeral Directing)

E. COLLECTION OF LABORATORY SPECIMENS: CHAIN OF CUSTODY

Physical evidence of an act of bioterrorism may take the form of a biohazard specimen. Whenever such a specimen is to be appropriately collected by members of the health service system or law Section 3-Non-Hospital Quarantine and Isolation

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enforcement agencies and transported to an appropriate laboratory for testing (e.g. Wadsworth Center for Laboratories and Research), material submitted as physical evidence must comply with policies that ensure its integrity and safe handling.

Authority: Executive Law 995-b(1) requires the Commission on Forensic Science to develop minimum standards for all forensic laboratories in New York State. See also 9 NYCRR Part 6190 (New York State Accreditation Program for Forensic Laboratories).

F. ACCESS TO AND DISCLOSURE OF PROTECTED HEALTH INFORMATION

Authority: In addition to State law cited below, recently enacted Federal law must also be considered. See especially the Federal Health Insurance Portability and Accountability Act (HIPAA). Accompanying regulations are not yet effective. However, the relevant privacy regulations implementing HIPAA are scheduled to take effect and require compliance on April 14, 2003.

Hospitals licensed under Public Health Law Article 28 are required to ensure the confidentiality of patient records. Original medical records, information from or copies of records shall be released only to hospital staff involved in treating the patient and individuals as permitted by Federal and State laws. (10 NYCRR 405.10 (a)(5)).

Nursing homes must keep confidential all information contained in the residents' records except when release is required by the resident or by law. (10 NYCRR 415.22 (d)).

Confidential HIV related information is defined at Public Health Law 2780(7). No person who obtains such information in the course of providing any health or social services pursuant to a release of confidential HIV related information may disclose or be compelled to disclose such information except as provided in Public Health Law 2782 and Article 27-F.

Release of patient medical records procedures are provided for in Public Health Law 17 upon the written request of the patient to an examining, consulting or treating physician or hospital.

Access to patient information is governed generally by Public Health Law 18.

V. ENFORCEMENT

Authority:

A. Criminal penalties — Public Health Law 12-b(2) provides that a person who wilfully violates any provision of the Public Health Law or any regulation lawfully made or established by any public officer or board under authority of the Public Health Law, the punishment for violating which is not otherwise prescribed by the Public Health Law or any other law, is punishable by imprisonment not exceeding one year, or by a fine not exceeding \$2000 or by both.

B. Physician discipline — A physician may be charged via the disciplinary processes of Public Health Law 230 with professional misconduct pursuant to Education Law 6530(16) for a wilful or grossly negligent failure to make a communicable disease report required under 10 NYCRR 2.10.

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C. Civil penalties --- Pursuant to Public Health Law 12 and 206, any person, including health facilities licensed under Public Health Law Article 28, who violates any provision of the Public Health Law or regulations made pursuant to it shall be liable for a civil penalty of not to exceed \$2000 for every such violation. A health facility licensed under Public Health Law Article 28 may subject its operating certificate to revocation, pursuant to Public Health Law 2806(1) for violation of the Public Health Law or applicable regulations, including communicable disease reporting requirements.

D. Obstruction or interference with State health inspector — No person shall interfere with or obstruct the inspection or examination of any occupant of any house, building, vessel or other premises by the State Commissioner of Health in the discharge of her official duties.(10 NYCRR 1.11).

Home Isolation for Severe Acute Respiratory Syndrome (SARS) Patients Assessment Checklist - Draft

Date:

Tracking ID/Bar Code

- Patient Name: Last _____ First: _____
- Address: _____

- Telephone #: _____
- Primary Caregiver Name: Last _____ First: _____
- Telephone #: _____
- Inspectors Name: Last _____ First: _____
- Type of Home
 - Single Family/Single Unit
 - Single Family/Multiple Unit
 - Single Family/Apartment
 - Other _____
- Number of Occupants in home _____
- Residence Description
 - Number of Bedrooms
 - Number of Bathrooms
 - Central Air Conditioning
 - Carpeted
 - Number of Window Air Conditioning Units

Home Isolation for Severe Acute Respiratory Syndrome (SARS) Patients

Assessment Checklist - Draft - Page 2

Date:	Tracking ID/Bar Code	
Item	Yes	No
Is a household member available to be the patients primary caregiver?		
Is there a separate bedroom available to be used only by the SARS patient during the isolation period?		
Does the bedroom have an openable window?		
Is the bedroom physically separated by walls from adjacent rooms?		
Does the bedroom have a door which can be kept closed?		
Does the residence have a designated bathroom for the SARS patient		
Does the residence have electricity and running water?		
Does the residence have a functioning telephone?		
Does the residence have a central air conditioning unit that services the SARS patient's room?		
Does the residence have a window air conditioning unit that services the SARS patient's room?		
If a central air conditioning unit is in place, has the system been modified to prevent air from the SARS patient's room from circulating throughout the residence?		
If a wall air conditioning unit is in place, is the condensate drain hard-plumbed to the sewer system?*		
Is a sign posted on the patient's door restricting access only to the Caregiver?		
Have other occupants been relocated (if possible)?		
Has a contingency for emergencies been developed (e.g., who to notify)?		
Has the Caregiver and patient been instructed on the proper procedures for disposing of waste materials and laundering?		
Have procedures and supplies for disposing of waste material been developed and obtained?		
Has the Caregiver been instructed on how to clean/disinfect the SARS patient's room?		
Are sufficient gloves, surgical masks, and disinfectant available at the residence?		
Has the patient been instructed to restrict his mobility and take precautions (e.g. surgical mask).		

*Cooling is accomplished by removing moisture from the air and the condensate liquid may contain infectious material and should be handled accordingly.

NYS Laws Regarding Temporary Hospitals and Communicable Disease Facilities

1. Exceeding hospital capacity:

"The medical facility shall control admission and discharge of patients or" residents to assure that occupancy shall not exceed the bed capacity specified in the operating certificate, except that a hospital may temporarily exceed such capacity in an emergency." 10 NYCRR § 401.2(a)

Contact the New York State Department of Health Regional Office if exceeding hospital capacity becomes necessary.

2. Temporarily using unlicensed facilities or sites as hospitals.

If licensed facility is overwhelmed or in danger of being overwhelmed and diversion to another licensed facility is not advisable the State Commissioner of Health can order use of other facilities.

"Whenever the commissioner, after investigation, is of the opinion that any person is causing, engaging in or maintaining a condition or activity which in her opinion constitutes danger to the health of the people, and that it therefore appears to be prejudicial to the interests of the people to delay action for 15 days until an opportunity for a hearing can be provided in accordance with the provisions of [Public Health Law section 12-a], the commissioner shall order the person, including any State agency or political subdivision having jurisdiction, by written notice to discontinue such dangerous condition or activity or take certain action immediately or within a specified period of less than fifteen days. As promptly as possible thereafter, within not to exceed fifteen days, the commissioner shall provide the person an opportunity to be heard and to present any proof that such condition or activity does not constitute a danger to the health of the people." PHL § 16.

PHL § 307(1) provides that in case of **great and imminent peril** to the public health of the city, it is the duty of the city health commissioner or health officer, with the approval of the local legislative authority, to take such measures and to do, order or cause to be done such acts for the preservation and protection of the public health of such city as he or she may deem necessary and proper.

In addition, Executive Law § 24(1) provides that following the proclamation of a local state of emergency, the chief executive may promulgate local emergency orders to protect life and property or to bring the emergency under control. These orders may provide for the establishment or designation of emergency medical shelters.

Contact the New York State Department of Health Regional Office if use of

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unlicensed facilities or sites is being contemplated, as these statutory authorities may only be available during a declared emergency.

3. Permanent establishment of facilities for communicable disease.

"The commissioner shall from time to time submit to the authorities of the several municipalities or counties of the state such recommendations as he may consider necessary as to the establishment of hospitals for communicable diseases, indicating the disease for which in his judgment provision should be made and the extent of such provision." PHL § 2109(1).

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NYS Education Law Regarding School Closure During an Emergency

Schools are required to develop school emergency management plans. 18 NYCRR 155.17. Generally the school board or the school superintendent by delegation from the school board has authority to close a school to ensure the health of the students and staff. If a school superintendent refuses or fails to act the State Commissioner of Education can override and order the school closed.

"The Commissioner of Education or his or her designee may order emergency response actions by individual school districts in the event that the local officials are unable or unwilling to take action deemed to be appropriate by State and/or county emergency personnel in accordance with county or State emergency preparedness plans or directives. 18 NYCRR 155.17(m).

The State Commissioner of Education can be reached through the local (BOCES) District Superintendent, except in the cities of Buffalo, Rochester, Syracuse, Yonkers and New York. If the school is in those cities contacts should be made directly with the Commissioner's office.

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Information Sheet for SARS Patients

SARS

This fact sheet gives information about the illness and important instructions for preventing the spread of severe acute respiratory syndrome (SARS). SARS is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003.

The 2003 SARS outbreak

According to the World Health Organization, during the SARS outbreak of 2003, a total of 8,098 people worldwide became sick with SARS; of these, 774 died. In the United States, there were 192 cases of SARS, none of which were fatal. Most of the U.S. SARS cases were among travelers returning from other parts of the world with SARS. There were very few U.S. cases among close contacts of travelers, including health-care workers and family members. SARS did not spread more widely in the community in the United States.

Symptoms of SARS

In general, SARS begins with a high fever (temperature greater than 100.4°F [$>38.0^{\circ}\text{C}$]). Other symptoms may include headache, an overall feeling of discomfort, and body aches. Some people also have mild respiratory symptoms at the outset. About 10 percent to 20 percent of patients have diarrhea. After 2 to 7 days, SARS patients may develop a dry cough. Most patients develop pneumonia.

How SARS spreads

The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets produced when an infected person coughs or sneezes. Droplets from the cough or sneeze are propelled a short distance (generally up to 3 feet) through the air and may be deposited on the mouth, nose, or eyes of persons who are nearby. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eye(s). In addition, it is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not now known.

Steps to protect yourself and the people around you

If you have SARS follow these instructions:

If you have SARS, you should:

- Cover your mouth and nose with tissue when coughing or sneezing. If you have a surgical mask, wear it during close contact with other people. A mask can reduce the number of droplets coughed into the air.
- Follow the instructions given by your health-care provider.

If you have SARS and are being cared for at home, in order to help prevent your close contacts from getting sick, you must follow the instructions below while you have symptoms and for 10 days after your fever has disappeared and your respiratory symptoms (cough, shortness of breath, or difficulty breathing) have improved.

- **You must not leave your home (go to work, school, out-of-home childcare, or other public places) for 10 days after your fever has disappeared and respiratory symptoms have improved.** One exception is if you need to see your doctor (see next bullet).
- If you need to go to the doctor's office, be sure to contact your doctor before you visit and tell the doctor you have been diagnosed with SARS. Wear a surgical face mask on the way to see your doctor.

- **Do not have visitors** to your household for 10 days after your fever has disappeared and respiratory symptoms improved.
- While at home, limit your contact with household members. If possible, sleep in separate rooms or at least a separate bed. Avoid close contact such as kissing.
- If possible, wear a surgical mask when around other people in your home. If you can't wear a mask, the members of your household should wear one when they are around you.
- Wash your hands frequently with soap and water, particularly after contact with body fluids (coughing/sneezing/blowing your nose, going to the bathroom). An alcohol-based hand rub is also acceptable.
- Cover your mouth and nose with tissue when you sneeze or cough. Put used tissues in the garbage and wash your hands immediately with soap and water or use an alcohol-based hand rub.
- Don't share silverware, towels, or bedding with anyone in your home until these items have been washed with soap and hot water. Do not share toothbrushes, drinks, or cigarettes.
- Clean surfaces (counter or tabletops, door knobs, bathroom fixtures, etc.) that have been contaminated by body fluids (sweat, saliva, mucous, or even vomit or urine) from the SARS patient with a household disinfectant used according to the manufacturer's instructions. Wear disposable gloves during all cleaning activities. Throw these out when you are done. Do not reuse them.
- Maintain contact with the local health department regarding your symptoms.

Please contact _____ at _____ if you have any questions or concerns or if you are feeling worse and require medical care.

YOU MUST FOLLOW THESE INSTRUCTIONS TO PREVENT OTHERS FROM BECOMING ILL.

Appendix 3-H

Information Sheet for Close Contacts of SARS Patients

SARS

This fact sheet gives information about the illness and important instructions for close contacts of SARS patients to prevent the spread of severe acute respiratory syndrome (SARS). SARS is a viral respiratory illness caused by a coronavirus, called SARS-associated coronavirus (SARS-CoV). SARS was first reported in Asia in February 2003.

What does “close contact” mean?

In the context of SARS, close contact means caring for or living with someone with SARS or having direct contact with respiratory secretions or body fluids of a patient with SARS. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking to someone within 3 feet, and touching someone directly. Close contact does not include activities like walking by a person or sitting across a waiting room or office for a brief time.

How SARS spreads

The main way that SARS seems to spread is by close person-to-person contact. The virus that causes SARS is thought to be transmitted most readily by respiratory droplets produced when an infected person coughs or sneezes. Droplets from the cough or sneeze are propelled a short distance (generally up to 3 feet) through the air and may be deposited on the mouth, nose, or eyes of persons who are nearby. The virus also can spread when a person touches a surface or object contaminated with infectious droplets and then touches his or her mouth, nose, or eye(s). In addition, it is possible that the SARS virus might spread more broadly through the air (airborne spread) or by other ways that are not known.

If you have had close contact with or are caring for someone at home who has SARS, you should:

- Be sure that the person with SARS has seen a health-care provider.
- Be sure that all household members of the person with SARS are washing their hands frequently with soap and hot water or using alcohol-based hand wash.
- Wear disposable gloves if you have direct contact with body fluids of a SARS patient. However, the wearing of gloves is not a substitute for good hand hygiene. After contact with body fluids of a SARS patient, remove the gloves, throw them out, and wash your hands. Do not wash or reuse the gloves.
- Household members should encourage the person with SARS to cover their mouth and nose with a tissue when coughing or sneezing.
- If possible, the person with SARS should wear a surgical mask during close contact with other people in the home. If the person with SARS cannot wear a

surgical mask, other members of the household should wear one when in the room with that person.

- Do not use silverware, towels, bedding, clothing, or other items that have been used by the person with SARS until these items have been washed with soap and hot water.
- Clean surfaces (counter or tabletops, door knobs, bathroom fixtures, etc.) that have been contaminated by body fluids (sweat, saliva, mucous, or even vomit or urine) with a household disinfectant used according to the manufacturer's instructions. Wear disposable gloves during all cleaning activities. Throw these out when done. Do not reuse them.
- Follow these instructions for 10 days after the last contact with the person with SARS or 10 days after fever has gone away and respiratory symptoms are improving.
- If you develop a fever or respiratory symptoms, contact your health care provider and the local health department immediately and tell them that you have had close contact with a SARS patient.

YOU MUST FOLLOW THESE INSTRUCTIONS TO PREVENT OTHERS FROM BECOMING ILL.

4. Laboratory Diagnosis of SARS

- A. Goals and key concepts
- B. NYSDOH Wadsworth Center Guidance Document:
Laboratory Diagnosis of SARS
 - 1. Tests that will be performed at Wadsworth Center
 - 2. Samples that will not be tested
 - 3. Description of SARS tests and how they should be interpreted
 - 4. Process to initiate testing
 - 5. Method and timing of specimen collection
 - 6. Forms to be submitted with specimens sent to Wadsworth Center
 - 7. Safety precautions when collecting and handling specimens
 - 8. How to ship specimens to Wadsworth Center
 - 9. When to ship specimens to Wadsworth Center
 - 10. Reporting of results
 - 11. Contacts for Additional information
- C. Roles and Activities for Laboratory Diagnosis of SARS

Appendices

- 4A. Virus Reference and Surveillance Laboratory History form
DOH-1795
- 4B. Informed Consent for EIA
- 4C. Informed Consent for RT-PCR
- 4D. Patient Information Form (if samples taken prior to consent)
- 4E. Recommended Specimens For SARS Co-V Testing

Note: Appendices B-D are being revised by CDC. Updated versions will be forwarded when they become available.

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4. Laboratory Diagnosis of SARS

A. Goals and Key Concepts

The overall goals of SARS laboratory diagnostics are to:

- Provide the public health community with ready access to high-quality SARS diagnostics.
- Ensure that SARS laboratory diagnostics are used safely and appropriately and that results are interpreted appropriately.

The following are key concepts about SARS laboratory diagnosis:

- Specific laboratory diagnostic assays must be used to distinguish SARS from other common respiratory pathogens.
- Most patients in the early stages of SARS illness have a low titer of virus in respiratory and other secretions and require time to mount an antibody response.
- It is preferable to collect multiple specimens from different sites and at different times during illness.
- The possibility of false-positive and false-negative results with both PCR and serologic assays should always be considered when interpreting results.

B. NYSDOH Wadsworth Center Guidance Document: Laboratory Diagnosis of SARS

1. Tests that will be performed at Wadsworth Center

Tests for the SARS Coronavirus

For patients who meet the case definition and whose case history has been reviewed by the local health department (LHD) and the NYSDOH Bureau of Communicable Disease Control (BCDC), the Wadsworth Center laboratory will test for infection with the SARS coronavirus (SARS CoV) using both a reverse-transcriptase PCR (RT-PCR assay) and an enzyme-linked immunoassay (EIA). These tests have been developed by the CDC.

Tests for other viruses

The majority of SARS-like illnesses will be caused by other respiratory pathogens. Diagnosis of these infections will often make it easier to manage community anxiety about SARS. Once the presence of the SARS coronavirus has been ruled out in a clinical sample, the Wadsworth Center laboratory will perform both rapid diagnostic testing and viral culture for respiratory pathogens including influenza A and B, respiratory syncytial virus, para-influenza virus, enterovirus and adenovirus. These results will be reported to the submitting physician and, through the Bureau of Communicable Disease Control, to the LHD.

2. Samples that will not be tested

If the patient does NOT meet the case definition, testing for the SARS coronavirus will not be performed. Testing for respiratory pathogens in these patients should be performed using the normal laboratory services. If the case history has not been reviewed by staff of the Bureau of Communicable Disease Control, the LHD will be requested to follow-up

with the medical provider to determine if the patient meets the case criteria for SARS testing. Samples that are improperly labeled will not be tested until the required information is obtained. Samples with insufficient volume cannot be tested. Samples that are leaking present a safety hazard to laboratory staff and will not be tested. Samples shipped at room temperature will not be tested because of the potential for false-negative results.

3. Description of SARS tests and how they should be interpreted

The CDC has developed and validated an enzyme immunoassay (EIA) for detection of serum antibody to SARS-CoV, and a reverse transcription-polymerase chain reaction (RT-PCR) assay, for detection of SARS-CoV RNA. Both the EIA and RT-PCR tests are sensitive and highly specific for SARS-CoV. The ability to diagnose SARS-CoV infection in the patient, however, is often limited by either the low concentration of virus in most clinical specimens (RT-PCR assays) or by the time it takes a person to mount a measurable antibody response to SARS (serologic assays). The likelihood of detecting infection is increased if multiple specimens, e.g. stool, serum, and respiratory tract specimens, are collected at several times during the course of illness.

- **What does it mean if a patient with SARS has a positive test result for SARS-CoV?**

Laboratory test results should always be considered together with clinical observations and epidemiologic data in making a final diagnosis. A positive PCR result should be confirmed by a qualified second laboratory to ensure that this result is not an artifact of laboratory contamination. A positive serologic result is less likely to result from a laboratory artifact, but should also be subjected to confirmatory testing. If the results are confirmed, then a positive RT-PCR or serologic test result indicates that the patient has been recently infected with SARS-CoV (unless they have a previous history of SARS).

- **How is a SARS-CoV test confirmed?**

Positive antibody tests will be confirmed by retesting the specimens in an independent laboratory. Positive RT-PCR results will be confirmed by repeat testing of the original specimen AND by testing of the same specimen in an independent lab using a validated assay.

- **What does it mean if a patient with SARS has a negative test result for SARS-CoV?**

The only conclusive rule out test for SARS-CoV is a negative antibody result on a serum specimen collected >28 days after onset of illness. A negative antibody result on serum specimens collected \leq 28 days after onset of illness or a negative RT-PCR test does not rule out SARS-CoV infection. Clinical specimens do not always have sufficient virus to be detected by RT-PCR and an antibody response may not be detected in some patients until >28 days after onset of illness. With the exception of a >28 day antibody test, a negative test result should not affect patient management or infection control decisions. If SARS continues to be a diagnostic concern, additional specimens should be collected and tested.

- What does it mean if the test results are positive for other respiratory diseases?**
A positive test result for another respiratory pathogen does not rule out SARS-CoV infection. SARS patients can be co-infected with SARS-CoV and other respiratory pathogens. Thus, detection of another respiratory pathogen does not eliminate the possibility of SARS-CoV infection. In some circumstances, however, detection of another respiratory pathogen may help rule out SARS-CoV infection, e.g. the other pathogen is detected in multiple patients in a cluster of cases and can fully explain the severity of illness.
- Should a patient with SARS who has a negative SARS-CoV test result continue to be held using isolation precautions recommended by CDC and other public health authorities?**

As noted above, the interpretation of negative SARS-CoV test results varies depending on the type of specimen, timing of specimen collection, and the test performed. With the exception of a >28 day negative serologic test result, a negative SARS-CoV test result should not affect patient isolation or management decisions. The clinical features of the illness and the type and risk of exposure are the keys to making patient management and isolation decisions.

4. Process to initiate testing

The first point of contact for a clinician who has a high suspicion for SARS in a patient is the LHD. The LHD will contact the NYSDOH Regional Epidemiologist for the area. If the LHD cannot be reached, call the NYSDOH Bureau of Communicable Disease Control at 518-473-4436 during working hours or the Duty Officer after-hours at 1-866-881-2809.

5. Method and timing of specimen collection

The CDC believes that we will maximize our ability to detect the SARS-CoV if multiple specimens are collected at different times during the illness. The following table indicates priority specimens to be collected during the course of illness. The priority is based on the likelihood that the specimen will be positive in a SARS-CoV-infected person.

Specimen	< 1 week post symptom onset	1-3 weeks post symptom onset	>3 weeks post symptom onset
Serum (serum separator tube)	++	++	++*
Blood (EDTA/purple top tube)	++	+	-
Respiratory (deep cough sputum is preferred)	++	++	+
Stool	+	++	++

* To rule out SARS serologically, it is important to collect the serum >28 days post onset

++ Priority specimen

- Not recommended

Thus, based on the chart above, the following specimens are recommended:

- Less than 1 week post-onset: collect serum, blood, respiratory secretions and stool.
- 1-3 weeks post-onset: collect serum, respiratory secretions and stool
- More than three weeks post-onset: collect serum, respiratory secretions and stool.

Key points

- It is preferable to collect multiple specimens from different sites and at different times during illness.
- Each sample should be labeled with patient's name, ID number when available, specimen type and date collected.
- The most useful respiratory specimen may be deep cough sputum.
- Nasal aspirates and lower respiratory specimens should be collected with strict attention to airborne and contact precautions, and in an airborne infection isolation room. Before collecting specimens, review infection control precautions at:
<http://www.cdc.gov/ncidod/sars/infectioncontrol.htm> and
<http://www.cdc.gov/ncidod/sars/aerosolinfectioncontrol.htm>.
- If patient is deceased, autopsy specimens can be submitted.
- Further guidance on specimen collection can be obtained at
http://www.cdc.gov/ncidod/sars/specimen_collection_sars2.htm.

Respiratory Tract Specimens

Respiratory specimens should be collected as soon as possible in the course of the illness for most respiratory pathogens. The likelihood of recovering most viruses diminishes markedly >72 hours after symptom onset. In contrast, for SARS-CoV, the amount of virus may increase later in the course of the illness. Seven types of respiratory specimens may be collected for viral and/or bacterial diagnostics. These are: 1) nasopharyngeal wash/aspirates; 2) nasopharyngeal swabs; 3) oropharyngeal swabs; 4) bronchoalveolar lavage; 5) tracheal aspirate 6) pleural tap or 7) sputum. Deep cough sputum is preferred for detection of SARS-CoV. Nasopharyngeal wash/aspirates are the specimen of choice for detection of most respiratory viruses other than SARS-CoV and are the preferred collection method among children aged <2 years.

Upper Respiratory Tract

Collection of nasopharyngeal wash/aspirate

Collect 1-2 ml from each nostril in sterile vials using non-bacteriostatic saline. Ship with cold packs to keep sample at 4°C.

Collection of nasopharyngeal or oropharyngeal swabs

Use only sterile dacron or rayon swabs with plastic shafts. Do NOT use calcium alginate swabs or swabs with wooden sticks.

- **Nasopharyngeal swabs** - Insert swab into nostril parallel to the palate and leave in place for a few seconds to absorb secretions.
- **Oropharyngeal swabs** - Swab both posterior pharynx and tonsillar areas, avoiding the tongue.

Place both swabs immediately into same sterile vial containing 2 ml of viral transport media. Break applicator sticks off near the tip to permit tightening of the cap. Ship with cold packs to keep sample at 4°C.

Lower Respiratory Tract

Collection of bronchoalveolar lavage, tracheal aspirate, pleural tap

Collect available fluid (at least 2ml) in sterile vials with external caps and internal O-ring seals. If there are no internal O-ring seals, then seal tightly with the available cap and secure with Parafilm®. Ship with cold packs to keep sample at 4°C.

Collection of sputum

Educate the patient about the difference between sputum and spit. Have the patient rinse the mouth with water then expectorate deep cough sputum directly into a sterile screw-cap sputum collection cup or sterile dry container. Ship with cold packs to keep sample at 4°C.

Blood Components

Collection of serum for antibody or RT-PCR testing

Acute serum specimens should be collected and submitted as soon as possible. If the patient meets the case definition, convalescent specimens should be collected > 28 days after the onset of illness.

Collect 5-10 ml of whole blood in a serum separator tube. Allow blood to clot, centrifuge briefly and collect all resulting sera in vials with external caps and internal O-ring seals. If there are no internal O-ring seals, then seal tightly with the available cap and secure with Parafilm®. Label vials as containing serum with patient name, ID number and date collected. A minimum of 800 microliters of serum is preferred for each test. Ship with cold packs to keep sample at 4°C.

Pediatric patients: a minimum of 1cc of whole blood is needed for testing. If possible, collect 1cc in both an EDTA and serum separator tube. However, if only 1cc can be obtained, please use a serum separator tube for collection, spin and remove serum prior to shipping.

Collection of EDTA blood/plasma for RT-PCR

Collect 5-10 ml of blood in an EDTA (purple-top) tube. Centrifuge briefly and collect all resulting plasma in vials with external caps and internal O-ring seals. If there are no internal O-ring seals, then seal tightly with the available cap and secure with Parafilm®. Label vials as containing plasma with patient name, ID number and date collected. Ship with cold packs to keep sample at 4°C.

In order to provide the best quality specimen it is highly preferable to spin blood and remove serum or plasma prior to shipping. If it is not possible to spin blood specimens prior to shipping, ship in original collection tube sealed with Parafilm®. Blood specimens should be stored and shipped with cold packs to keep sample at 4°C. Do NOT freeze.

Collection of stool for PCR

Begin collecting stool specimens as soon as possible in the course of the illness. Although collecting earlier specimens is ideal, SARS-CoV has been detected in stool as late as one month post symptom onset. Place 10-50ml stool specimen, in a leak-proof tightly sealed stool cup or urine container. Patients may drape plastic kitchen wrap across the back half of the toilet, under the toilet seat, to facilitate collection of stool specimens. Refrigerate tubes after specimens are placed in them and ship immediately. Ship with cold packs to keep sample at 4°C.

Collection of tissue from surgical or autopsy specimens

As well as specimens described above, the CDC recommends collection of formalin fixed or paraffin embedded tissue from all major organs (lung, heart spleen, liver, brain, kidney and adrenals) and fresh frozen tissue from the lung and upper airway. Frozen tissue should be shipped on dry ice.

6. Forms to be submitted with specimens sent to Wadsworth Center

Three forms are required:

1. Wadsworth Center Virus History Form must be completed. The form is available as Attachment A.
2. Informed Consent for the RT-PCR assay.
3. Informed Consent for the EIA assay.

The RT-PCR and EIA assays have been released by the Food and Drug Administration (FDA) under an Investigational Device Exemption and are IRB-approved. Use of both assays requires completion of two informed consent documents, one each for the RT-PCR and EIA assays. The forms are available as Attachments B and C or at the following websites.

<http://www.cdc.gov/ncidod/sars/lab/rtpcr/consent.htm> and

<http://www.cdc.gov/ncidod/sars/lab/eia/consent.htm>.

Note: If specimens have been collected prior to informed consent being obtained, the Patient Information Form may be completed instead of the RT-PCR and EIA informed consent forms. This form is available as Attachment D and at www.cdc.gov/ncidod/sars/lab/rtpcr/participant.htm.

The completed forms MUST be shipped with the samples. Place the completed forms in a plastic bag on top of the outer shipping container but inside the outer cardboard box before sealing.

7. Safety precautions when collecting and handling specimens

Key points

- Laboratories performing routine hematology and clinical chemistry studies should handle potential SARS specimens similarly to specimens containing other bloodborne pathogens (e.g. hepatitis or HIV, see specific biosafety guidelines at <http://www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4s7f.htm>).
- Laboratories performing serology or RT-PCR testing should handle potential

- SARS specimens using Standard Precautions (previously Universal Precautions). Further guidance can be obtained at <http://www.cdc.gov/ncidod/sars/sarslabguide.htm>
- Further safety guidance for safe handling of human remains of SARS patients can be found at <http://www.cdc.gov/ncidod/sars/autopsy.htm>
 - A detailed description of recommended facilities, practices, and protective equipment for the various laboratory biosafety levels (BSLs) can be found in the CDC/NIH Biosafety in Microbiological and Biomedical Laboratories Manual at www.cdc.gov/od/ohs/biosfty/bmbl4/bmbl4s3.htm.

It is estimated that several thousand diagnostic specimens from patients with SARS have been processed in routine clinical laboratories throughout the world and to date there has been no reported cases of SARS illness among laboratory workers performing diagnostic assays; however, there has been one reported case in a research laboratory setting where the SARS-CoV was being propagated. Until more information about the transmission of the SARS agent in the laboratory setting is known, precautions should be taken in handling these specimens. Effective and timely communication between clinical and laboratory staff is essential in minimizing the risk incurred in handling specimens from patients in whom SARS is suspected. Specimens from patients who may have SARS should be labeled accordingly and the laboratory should be alerted to insure proper specimen handling. Listed below are biosafety guidelines for handling these specimens.

Guidance for handling blood specimens (blood, serum, plasma)

These specimens may be handled using Standard Precautions (previously Universal Precautions). Careful attention should be given to hand hygiene after removal of gloves and especially before touching the eyes or mucosal surfaces.

Any procedure with the potential to generate fine particulate aerosols (e.g. vortexing or sonication of specimens in an open tube) should be performed in a biological safety cabinet (BSC). The use of sealed centrifuge rotors or sample cups, if available, should be employed for centrifugation. Ideally, these rotors or cups should be loaded and unloaded in a BSC. Procedures performed outside of a BSC should be performed in a manner that minimizes the risk of exposure to an inadvertent sample release.

Work surfaces and equipment should be decontaminated after specimens are processed. Standard decontamination agents that are effective against lipid-enveloped viruses should be sufficient.

Guidance for handling other specimens (e.g., respiratory secretions, stool, urine, tissue)

The following activities should be performed in BSL-2 facilities with standard BSL-2 work practices:

1. Pathologic examination and processing of formalin-fixed or otherwise inactivated tissues.

2. Molecular analysis of extracted nucleic acid preparations.
3. Electron microscopic studies with glutaraldehyde-fixed grids.
4. Routine examination of bacterial and mycotic cultures.
5. Routine staining and microscopic analysis of fixed smears.
6. Final packaging of specimens for transport to diagnostic laboratories for additional testing. Specimens should already be in a sealed, decontaminated primary container.

The following activities involving manipulation of untreated specimens should be performed in BSL-2 facilities and in a Class II biological safety cabinet:

1. Aliquoting and/or diluting specimens.
2. Inoculation of bacterial or mycological culture media.
3. Performing diagnostic tests that don't involve propagation of viral agents in vitro or in vivo.
4. Nucleic acid extraction procedures involving untreated specimens.
5. Preparation and chemical- or heat-fixing of smears for microscopic analysis.

Laboratory workers should wear protective equipment including disposable gloves and solid front gowns with cuffed sleeves. Work surfaces should be decontaminated on completion of work with appropriate disinfectants and all disposable waste autoclaved.

Any procedure or process that cannot be conducted within a biological safety cabinet requires use of the appropriate combinations of personal protective equipment (e.g., respirators, face shields) and physical containment devices (e.g., centrifuge safety cups or sealed rotors). Acceptable methods of respiratory protection include a properly fit tested NIOSH approved filter respirator (N95 or higher); or powered air-purifying respirators (PAPRs) equipped with high efficiency particulate air (HEPA) filters. Accurate fit testing is a key component of effective respirator use. Personnel who cannot wear fitted respirators because of facial hair or other fit-limitations should wear loose fitting hooded or helmeted PAPRs. Centrifugation should be carried out using sealed centrifuge cups or rotors that are unloaded in a biological safety cabinet.

The following activities require BSL-3 facilities and BSL-3 work practices:

- SARS-CoV propagation in cell culture.
- Initial characterization of viral agents recovered in cultures of SARS specimens.

When a procedure or process cannot be conducted within a biological safety cabinet, then appropriate combinations of personal protective equipment (e.g., respirators, face shields) and physical containment devices (e.g., centrifuge safety cups or sealed rotors) must be used.

The following activities require Animal BSL-3 facilities and BSL-3 work practices:

- Inoculation of animals for potential recovery of the agent from SARS samples.
- Protocols involving animal inoculation for characterization of putative SARS agents.

Safety procedures for safe handling of human remains of SARS patients

Postmortem procedures require adherence to standard precautions with use of appropriate personal protective equipment and facilities with appropriate safety features.

- Protective garments should include: surgical scrub suit, surgical cap, impervious gown or apron with full sleeve coverage, eye protection (goggles or face shield), shoe covers and double surgical gloves with an interposed layer of cut-proof synthetic mesh gloves.
- Respiratory protection: N-95 or N-100 respirators; or powered air-purifying respirators (PAPR) equipped with HEPA filter. Use of a PAPR is recommended for any procedures that result in mechanical generation of aerosols.

Further guidance can be obtained at <http://www.cdc.gov/ncidod/sars/autopsy/htm>

8. How to ship specimens to Wadsworth Center

Key points

Packaging, shipping and transport of specimens from suspect and probable SARS cases must follow the current edition of the International Air Transport Association (IATA) Dangerous Goods Regulations at <http://www.iata.org/dangerousgoods/index> and US DOT 49 CFR Parts 171-180 (<http://hazmat.dot.gov/rules.htm>)

Please note that it is the shipper's responsibility – not the transport company's - to provide the appropriate packaging materials and documentation that complies with the IATA regulations. The Wadsworth Center does not provide shipping materials.

It is essential that SARS specimens be sent to the Wadsworth Center as soon as possible after collection. If shipped within two days of collection, ship with cold packs to keep sample at 4°C. Do not use wet ice. If shipment is delayed >2 days, then the specimens should be shipped on dry ice. Note: Whole Blood should never be sent on dry ice. All original paperwork (Attachments A-D) must be complete and accompany each specimen.

- All SARS specimens must be shipped in accordance with IATA packing instructions 650 as a "Diagnostic Specimen". Appropriate UN/IATA certified shipping materials must be used. Diagnostic specimens transported under the IATA Regulations are assigned to UN Identification number 3373. Follow the step-by-step packaging guidelines given in "Packing Diagnostic Specimens for Transport: Summary Instructions" at <http://www.cdc.gov/ncidod/sars/pdf/packingspecimens-sars.pdf>.
- All specimens must be sent at 4°C or, for tissue specimens, frozen on dry ice with appropriate UN certified shipping materials. If shipped within two days of collection, ship with cold packs to keep sample at 4°C. Note: Whole Blood should never be sent on dry ice.
- All specimens must be shipped "Priority Overnight" and received within 24 hours via chosen carrier. Confirm that the selected carrier guarantees next day, morning delivery for diagnostic specimens.

- Specimens should ONLY be shipped Sunday - Thursday so that appropriate laboratory personnel can be present to accept and accession specimens Monday - Friday. Samples should not be sent to arrive on a public holiday.
- The Wadsworth Center, NYSDOH, Viral Reference and Surveillance Laboratory must be contacted via telephone or email prior to shipment. Please notify one of the following that you are shipping SARS specimens and provide patient initials and sample identification number.

Dr. Jill Taylor 518-862-4320, jxt07@health.state.ny.us

Dr. Norma Tavakoli 518-862-4323, npt02@health.state.ny.us

Mr. Ryan Bennett 518-869-4551, rtc03@health.state.ny.us

Samples should be shipped to:

Shipping address: Wadsworth Center, NYSDOH
 Griffin Laboratory
 Virus Reference and Surveillance Laboratory
 5668 State Farm Road (Route 155)
 Slingerlands, NY 12159

9. When to ship specimens to Wadsworth Center

At this time the Wadsworth Center laboratory will perform SARS testing only during regular working hours Monday to Friday. Specimens should therefore ONLY be shipped Sunday - Thursday so that appropriate laboratory personnel can be present to accept and accession specimens. Samples should not be shipped to arrive on a public holiday.

10. Reporting of results

SARS test information will be reported through the NYSDOH Electronic Clinical Laboratory Reporting System (ECLRS) to the LHD and a paper report sent to submitters.

Receipt of specimens

- When specimens for SARS testing are received at the Wadsworth Center, the specimen will be accessioned and entered into the clinical laboratory information management system (CLIMS).
- Once accessioned, the record will be uploaded to ECLRS by 8:00 a.m. daily. A 24/7 alert will then be generated by ECLRS to notify the NYSDOH Bureau of Communicable Disease Control (BCDC) and the LHD that a specimen for SARS testing has been received.
- If the specimen submission form does not have a Health Information Network (HIN/CDESS) ID number for the patient, NYSDOH BCDC will be notified. BCDC will contact the NYSDOH Regional Office and/or LHD for follow-up.

Test results

- Results will be uploaded to ECLRS by 8:00 a.m. each day.
- Negative results will be uploaded to ECLRS and sent to the submitter at the same time.
- Positive test results will not be uploaded to ECLRS until confirmed.
 - A 24/7 alert will be generated by ECLRS

- Preliminary positive test results
 - The initial positive test result(s) in a county will be telephoned to the NYSDOH BCDC, who will notify the NYSDOH Regional Office and LHD.

If community-transmission of SARS is documented, telephone reporting of preliminary results may need to be discontinued.

11. Contacts for additional information

Dr. Jill Taylor 518-862-4320, jxt07@health.state.ny.us
Dr. Norma Tavakoli 518-862-4323, npt02@health.state.ny.us
Mr. Ryan Bennett 518-869-4551, rtc03@health.state.ny.us

C. Roles and Activities for Laboratory Diagnosis of SARS

Clinical Laboratories and Healthcare Providers

- Report all potential SARS cases to the LHD to determine if the patient meets the surveillance case definition prior to shipping specimens to Wadsworth Center.
- Collect, handle and ship SARS specimens correctly, according to guidelines and regulations.
- Complete all appropriate forms and send to Wadsworth with the sample.
- Follow biosafety guidance to ensure that SARS specimens and SARS-CoV-infected materials are handled safely.
- Interpret SARS test results in consultation with state and/or local health department officials and with consideration of data on the clinical and epidemiologic features of the illness and the type and timing of specimen collection.

Local Health Departments

- Provide the medical provider with the case HIN ID number, guidance on specimen submission and the appropriate paperwork (Attachments A-D)
- Communicate/coordinate with the medical provider the appropriate specimen collection and submission throughout the course of the illness, including the convalescent serology.
- Educate and consult with clinicians on the interpretation of SARS diagnostics.

NYSDOH

- Conduct testing for SARS and other respiratory pathogens on specimens from patients who meet the reporting criteria.
- Ensure all positive SARS PCR test results are appropriately confirmed.
- Educate and consult with clinicians on the interpretation of SARS diagnostics.



SEVERE ACUTE RESPIRATORY SYNDROME

FORM

Consent Form (SARS Laboratory Testing Public Health Response): Coronavirus Antibody Testing

Information regarding SARS laboratory testing may change. For the most current information and up-to-date version of this document, see www.cdc.gov/ncidod/sars/diagnosis.htm.

Background

Severe Acute Respiratory Syndrome, or SARS, is a respiratory illness caused by a virus. It can start as fever and cough. It may go on to pneumonia in some people and can be serious. SARS may spread easily from person to person. The Centers for Disease Control and Prevention (CDC) and state and public health laboratories are using an experimental laboratory test to help detect people who have been infected with the SARS virus. This test is one tool in a public health response to the SARS outbreak to try to limit spread of this illness. The Food and Drug Administration (FDA) has not approved this test. We don't know for sure if this test can detect all people who may get sick with SARS. There are no proven tests that quickly find the virus.

Who Is Being Tested?

We are asking you (or your child) to be tested for the SARS-related virus because you (or your child):

- Have symptoms that are like the symptoms of SARS, and/or
- Had traveled 10 days before start of symptoms to an area that had reported SARS cases, and/or
- Have cared for, lived with, or had direct contact with a patient with suspected SARS.

Procedures

To do this test, we need a minimum of ¼ teaspoon of blood from children and 1 to 2 teaspoons of blood from adults. This blood may be taken using a needle put into a vein in your (or your child's) arm. This test may also be done on blood that is left over after other tests for your (your child's) care are done.

We may also ask for a second blood sample more than 21 days after you (your child) became sick. We may ask for this second sample in order to test for SARS. This is because this test looks for evidence that the body is fighting the infection (antibodies), and sometimes it takes time for the body to make antibodies to fight the virus.

Are There Any Benefits?

There may be no direct benefits to you (or your child) from having this test done. This test may help to show whether you (your child) have SARS. If people with the SARS virus limit contact with other people, this can prevent others from getting sick. By having this test done, you could lower the chance of spreading the virus from you (your child) to your family or others. It could also help us learn more about this virus to help stop the spread of illness.

Are There Any Risks?

When we take you (your child's) blood, the needle poke may pinch or sting or cause a bruise.

There is a small chance that this test may give a positive result for the SARS virus when the virus is not present (false positive). If your (your child's) result from this test is positive:

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Consent Form (SARS Laboratory Testing Public Health Response): Coronavirus Antibody Testing

(continued from previous page)

1. You (your child) could be asked to limit contact outside the home by not going to work, school, out-of-home childcare, church, or other public areas. You may also be asked to use a mask at home to limit the risk of spread of the virus. If you (your child) have had symptoms of SARS, you might be asked to follow these limits because of these symptoms and not because of the test results. However, if your (your child's) samples tested positive, there is a small chance that you (your child) may be asked to follow these limits even if you (your child) has no symptoms.
2. Based on the testing results, your (or your child's) doctor may choose to change how your care will be managed.

This test may give a negative result when you (or your child) actually have the virus (false negative). A false negative result should not have an effect on your (or your child's) care. CDC has told doctors that a negative test does not prove that a person does or does not have the SARS virus. No changes in your medical care or how you interact with people around you should be based on a negative result.

Your (or your child's) doctor will use other information along with this test to decide what is best for you (your child).

Are There Other Choices?

You may refuse to be tested or to have your child tested. There are several other tests for the SARS virus, but they are all experimental and we don't know which tests work the best.

What About Privacy?

We will keep all facts about you (your child) as private as the law allows. CDC, FDA the Local/State Health Department staff, and the person(s) who ordered your test (such as your doctor) may see your/your child's results. When we present or publish papers about these tests, neither you (nor your child) will be identified.

What Are the Costs?

The test will be done by CDC or your health department at no cost. You, your insurer, Medicare or Medicaid will need to pay for other costs related to the testing, such as doctor's visits.

What Happens If You (Your Child) Are Harmed?

If you (your child) are harmed as a result of taking the samples, CDC will not pay the costs for hospital and medical care. You, your insurer, Medicare or Medicaid will need to pay those costs. You (or your child) do not give up any legal rights that otherwise would be available to you (or your child).

Right to Refuse

This testing is voluntary. It is your choice to have this testing done on you (your child). If you refuse to have the testing done, then you (or your child) will not lose the right to get health care because of not having results from these tests. Your doctor will take care of you (your child) in the same way they would take care of you (your child) if this test were not available.

Whom to Call If You Have Questions

Please call your doctor if you have any questions about this testing. If you have questions about your (or your child's) rights as a participant in this testing program or if you feel you have been harmed or injured by taking part in the program, please call the CDC Associate Director for Science at 1-800-584-8814.

Consent Form (SARS Laboratory Testing Public Health Response): Coronavirus Antibody Testing

(continued from previous page)

Leave a message including your (or your child's) name, phone number and that the protocol # is 3918. Someone will call you back as soon as possible.

Consent Statement

I agree that this investigational laboratory testing can be done on samples collected from me (my child).

I have read the above and have had my questions answered by _____.

Print Patient's Name: _____

Patient's/Parent's Signature: _____ Date: _____

Witness to signature: _____ Date: _____

Physician witness to signature: _____ Date: _____

Consent for Sample Storage

Thank you for agreeing for you (or your child) to be in this program. We are asking for your consent to store any remainders of your (your child's) samples used for SARS virus testing at CDC for future SARS-related research. If the results of any future tests are important for your medical care we will make every effort to notify your physician.

We will not do human genetic testing or HIV testing unless we contact you and ask for your consent. If you agree to storage and change your mind later please fax Suzette Bartley at 404-639-0590.

- Yes, I agree to long-term storage of my (my child's) samples for future testing
 No, I do not agree to long-term storage of my (my child's) samples for future testing

Print Patient's Name: _____

Patient's/Parent's Signature: _____ Date: _____

NOTE: PLEASE RETURN OR FAX A SIGNED COPY OF THIS FORM TO

Suzette Bartley
Centers for Disease Control and Prevention
1600 Clifton Rd. Mailstop L02
Atlanta, Ga. 30333
FAX: 404-639-0590

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)

Information regarding SARS laboratory testing may change. For the most current information, see www.cdc.gov/ncidod/sars/clinicians.htm

CONSENT FORM (SARS Laboratory Testing Public Health Response)

The Centers for Disease Control and Prevention (CDC) and public health laboratories are using an experimental laboratory test as one tool in a public health response to the “severe acute respiratory syndrome” (SARS) outbreak. The Food and Drug Administration (FDA) has not approved this test. We don’t know for sure if this test can detect all people who may get sick with SARS. There are no proven tests that quickly find the virus.

Your State Health Department and/or CDC are using this test as one tool to help us find out if people are infected. We are using this test to respond to the SARS outbreak and limit spread of this illness.

BACKGROUND

SARS is a respiratory illness that can start as fever and cough. It may go on to pneumonia in some people. SARS seems to be spread by close person to person contact. SARS may also spread by touching the skin of other people or objects with infected droplets and then touching your eye(s), nose, or mouth. This can occur when someone who is sick with SARS coughs or sneezes droplets onto themselves, other people, or nearby surfaces. It also is possible that SARS can be spread through the air or by other ways that we don’t yet know about.

WHY SHOULD MY (MY CHILD’S) SAMPLE BE TESTED

We are asking you (or your child) to be tested for the SARS-related virus because you (or your child):

Have symptoms that resemble those of SARS, and/or

- Had traveled 10 days before start of symptoms to an area that had reported SARS cases, and/or
- Have cared for, lived with, or had direct contact with a patient with suspected SARS.

ARE THERE ANY BENEFITS?

There may be no direct benefits to you (or your child) from having this test done. This test may help to find the virus in people who do not yet have all the signs of SARS. If people with the SARS virus limit contact with other people, this can prevent others from getting sick. By having this test done, you could lower the chance of spreading the virus from you (your child) to your family or others. Use of this test could also help us to know more about this virus to help stop the spread of this illness. Some or all of these may benefit you (your child).

ARE THERE ANY RISKS?

There is a small chance that this test may give a positive result for the SARS virus when the virus is not present (false positive). If your (your child’s) result from this test is positive:

1. You (your child) could be asked to limit contact outside the home by not going to work, school, out-of-home childcare, church, or other public areas. You may also be asked to use a mask at home to limit the risk of spread of the virus. If you (your child) have had symptoms of SARS, you might be asked to follow these limits because of these symptoms and not because of the test results. However, if your (your child’s) samples tested positive, there is a small chance that you (your child) may be asked to follow these limits even if you (your child) have no symptoms.
2. There is no proven treatment for SARS at this time. If you (your child) your child is very ill, in rare cases, you (your child) may be advised to take an antiviral drug. You can refuse such treatments, but if you take them, they might cause side effects.
3. Based on the testing results, your (or your child’s) doctor may choose to change how your care will be managed.

This test may give a negative result when you (or your child) actually have the virus (false negative).

A false negative result should not have an effect on your (or your child's) care. CDC has told doctors that a negative test does not prove that a person does or does not have the SARS virus. No changes in your medical care or how you interact with people around you should be based on a negative result.

Your (or your child's) doctor will use other information along with this test to decide what is best for you (your child).

To do this test, extra samples may be collected that are like samples that are normally taken for laboratory testing when you are sick. These samples may include nasal swab or aspirate, or throat swab. The swabs are taken by placing one small Dacron swab into the back of your (or your child's) nose and one into the back of your (or your child's) throat for 5 seconds each. A nasal aspirate may also be done by placing and then, after a few seconds, removing 1-2 cc (less than $\frac{1}{2}$ teaspoon) of salt water into each side of your (or your child's) nose. These tests don't hurt, but may cause a little discomfort. Occasionally they make people gag, cough or get a bloody nose.

ARE THERE OTHER CHOICES?

There are no other rapid laboratory tests approved by FDA that can be used to tell whether you (or your child) have the virus believed to be causing SARS.

WHAT ABOUT PRIVACY?

We will keep all facts about you (your child) as private as the law allows. CDC, FDA, the Local/State Health Department staff and the person(s) who ordered your test (such as your Doctor) may see your/your child's results. When we present or publish papers about these tests, neither you (nor your child) will be identified.

WHAT ARE THE COSTS?

The test will be done by CDC or your health department at no cost. You, your insurer, Medicare or Medicaid will need to pay for other costs related to the testing, such as Doctor's visits.

WHAT HAPPENS IF YOU (YOUR CHILD) ARE HARMED?

If you (your child) are harmed as a result of taking the samples, CDC will not pay the costs for hospital and medical care. You, your insurer, Medicare or Medicaid will need to pay those costs. You (or your child) do not give up any legal rights that otherwise would be available to you (or your child).

RIGHT TO REFUSE

This testing is voluntary. It is your choice to have this testing done on you (your child). If you refuse to have the testing done, then you (or your child) will not lose the right to get other health care because of not having results from these tests. Your doctor will take care of you (your child) in the same way they would take care of you (your child) if this test were not available.

WHO TO CALL IF YOU HAVE QUESTIONS

Please call your doctor if you have any questions about this testing. If you have questions about your (or your child's) rights as a participant in this testing program, please call the CDC Associate Director for Science at 1-800-584-8814. Leave a message including your (or your child's) name, phone number and that the protocol # is 3911. Someone will call you back as soon as possible.

CONSENT STATEMENT

I agree that this investigational laboratory testing can be done on samples collected from me (my child).

I have read the above and have had my questions answered by _____

Print Patients Name:_____

Patient's/Parent's Signature:_____ Date:_____

Witness to signature:_____ Date:_____

Physician witness to signature:_____ Date:_____

CONSENT FOR SAMPLE STORAGE:

Thank you for agreeing for you (or your child) to be in this program. We are asking for your consent to store any remainders of your (your child's) samples used for SARS virus testing at CDC for future SARS-related research. If the results of any future tests are important for your medical care we will make every effort to notify your physician.

We will not do human genetic testing or HIV testing unless we contact you and ask for your consent. If you agree to storage and change your mind later please call Suzette Bartley, Phone: 770 488 7837 (FAX: 404 639 0590)

- Yes, I agree to long-term storage of my (my child's) samples for future testing
- No, I do not agree to long-term storage of my (my child's) samples for future testing

Print Patient's Name:_____

Patient's/Parent's Signature:_____ Date:_____

NOTE: PLEASE RETURN OR FAX A SIGNED COPY OF THIS FORM TO:

Suzette Bartley
Centers for Disease Control and Prevention
1600 Clifton Rd. Mailstop L02
Atlanta, Ga. 30333
FAX: 404 639 0590
Phone: 770 488 7837

Information regarding SARS laboratory testing may change. For the most current information, see www.cdc.gov/ncidod/sars/clinicians.htm

PATIENT INFORMATION (SARS Laboratory Testing)

The Centers for Disease Control and Prevention (CDC) and public health laboratories are using an experimental laboratory test as one tool in a public health response to the “severe acute respiratory syndrome” (SARS) outbreak. The Food and Drug Administration (FDA) has not approved this test. We don’t know for sure if this test can detect all people who may get sick with SARS. There are no proven tests that quickly find the virus.

Your State Health Department and/or CDC are using this test as one tool to help us find out if people are infected. We are using this test to respond to the SARS outbreak and limit spread of this illness.

Because SARS can be a serious illness, your State Health Dept and/or CDC have used this test on samples from you (your child).

BACKGROUND

SARS is a respiratory illness that can start as fever and cough. It may go on to pneumonia in some people. SARS seems to be spread by close person to person contact. SARS may also spread by touching the skin of other people or objects with infected droplets and then touching your eye(s), nose, or mouth. This can occur when someone who is sick with SARS coughs or sneezes droplets onto themselves, other people, or nearby surfaces. It also is possible that SARS can be spread through the air or by other ways that we don’t yet know about.

WHY WAS I (MY CHILD) TESTED?

You (your child) were tested for the SARS-related virus because you (your child):

- Had symptoms that resemble those of SARS, and/or
- Had traveled 10 days before start of symptoms to an area that had reported SARS cases, and/or
- Had cared for, lived with, or had direct contact with a patient with suspected SARS.

The samples used to do this laboratory test may have come from extra nasal swab or aspirate, or throat swab samples, taken from you (or your child) to do this test. These samples may have been taken as part of your routine care to find out what illness you (or your child) have.

WHAT ABOUT PRIVACY?

We will keep all facts about you (your child) as private as the law allows. CDC, FDA, the Local/State Health Department staff and the person(s) who ordered your test (such as your Doctor) may see your/your child’s results. When we present or publish papers about these tests, neither you (nor your child) will be identified.

WHAT ARE THE COSTS?

The test was done by CDC or your health department at no cost. You, your insurer, Medicare or Medicaid will need to pay for other costs related to the testing, such as Doctor’s visits.

WHAT HAPPENS IF YOU (YOUR CHILD) ARE HARMED?

- If you (your child) were harmed as a result of taking the samples, CDC will not pay the costs for hospital and medical care. You, your insurer, Medicare or Medicaid will need to pay those costs. You (or your child) do not give up any legal rights that otherwise would be available to you (or your child).

ARE THERE ANY RISKS?

There is a small chance that this test may give a positive result for the SARS virus when the virus is not present (false positive). If your (your child's) result from this test is positive:

1. You (your child) could be asked to limit contact outside the home by not going to work, school, out-of-home childcare, church, or other public areas. You may also be asked to use a mask at home to limit the risk of spread of the virus. If you (your child) have had symptoms of SARS, you might be asked to follow these limits because of these symptoms and not because of the test results. However, if your (your child's) samples tested positive, there is a small chance that you (your child) may be asked to follow these limits even if you (your child) have no symptoms.
2. There is no proven treatment for SARS at this time. If you (your child) your child is very ill, in rare cases, you (your child) may be advised to take an antiviral drug. You can refuse such treatments, but if you take them, they might cause side effects.
3. Based on the testing results, your (or your child's) doctor may choose to change how your care will be managed.

This test may give a negative result when you (or your child) actually have the virus (false negative).

A false negative result should not have an effect on your (or your child's) care. CDC has told doctors that a negative test does not prove that a person does or does not have the SARS virus. No changes in your medical care or how you interact with people around you should be based on a negative result. Your (or your child's) doctor will use this other information along with this test to decide what is best for you (your child).

Your (or your child's) doctor will use other information along with this test to decide what is best for you (your child). You and your doctor should discuss the result of this test and decisions about your (your child's) care.

WHO TO CALL IF YOU HAVE QUESTIONS:

Please call your doctor if you have any questions about this testing. If you have questions about your (or your child's) rights as a participant in this testing program, please call the CDC Associate Director for Science at 1-800-584-8814. Leave a message including your (or your child's) name, phone number and that the protocol # is 3911. Someone will call you back as soon as possible.

CONSENT FOR SAMPLE STORAGE:

We are asking for your consent to store any remainders of your (your child's) samples used for SARS virus testing at CDC for future SARS-related research. If the results of any future tests are important for your medical care we will make every effort to notify your physician.

We will not do human genetic testing or HIV testing unless we contact you and ask for your consent. If you agree to storage and change your mind later please call Suzette Bartley, Phone: 770 488 7837 (FAX: 404 639 0590)

- Yes, I agree to long-term storage of my (my child's) samples for future testing
- No, I do not agree to long-term storage of my (my child's) samples for future testing

SIGNATURE

I have been provided with the above information about my (my child's) test results.

I have stated whether or not I agree to long term specimen storage.

I have read the above and have had my questions answered by _____

Print Patient's Name: _____

Patient's/Parent's Signature: _____ Date: _____

Physician's witness to signature: _____ Date: _____

NOTE: PLEASE RETURN OR FAX A SIGNED COPY OF THIS FORM TO:

Suzette Bartley
Centers for Disease Control and Prevention
1600 Clifton Rd. Mailstop L02
Atlanta, Ga. 30333
FAX: 404 639 0590
Phone: 770 488 7837

Recommended Specimens For SARS Co-V Testing

Specimen Source	Outpatient/Inpatient	Fatal Case
Upper Respiratory	<ol style="list-style-type: none"> 1. Nasopharyngeal wash/aspirate 2. Nasopharyngeal AND Oropharyngeal swabs 	<ol style="list-style-type: none"> 1. Nasopharyngeal wash/aspirate 2. Nasopharyngeal AND Oropharyngeal swabs
Lower Respiratory	<ol style="list-style-type: none"> 1. Sputum 2. Bronchoalveolar lavage (BAL), tracheal aspirate or pleural tap (Inpatient only) 	<ol style="list-style-type: none"> 1. Bronchoalveolar lavage (BAL), tracheal aspirate or pleural tap
Blood	<ol style="list-style-type: none"> 1. Serum – Acute AND convalescent (> 28 days post onset) 2. Blood/plasma 	—
Stool	1. Stool	—
Tissue	N/A	<ol style="list-style-type: none"> 1. Fixed tissue from all major organs (e.g., lung, heart, spleen, liver, brain, kidney, adrenals) 2. Frozen tissue from lung and upper airway (e.g., trachea, bronchus)

5. Communication

- A. Rationale and goals
- B. Lessons learned
- C. Key messages
- D. Preparing for a communication response
- E. Communication activities in the presence of SARS
- F. Comments on appendices in Supplement G of the CDC Plan

Appendix

- 5A. CDC SARS Guidance Supplement G: Communication

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5. Communication

Goals

New York State's goals in promoting effective communication about SARS are similar to those articulated in the CDC plan.

Key concepts

New York State's SARS communication plan echoes the key concepts described in CDC's plan.

Priority activities

In addition to the CDC-delineated priority activities, New York State Department of Health will:

- Build upon successful strategies for communicating emerging disease issues such as West Nile virus and anthrax.
- Maximize relationships with existing “key communication partners” and identify new partners to broaden communication channels.
- Ensure that key messages are delivered to special audiences, as well as the general public.

The CDC plan calls for the provision of a location where state, local, federal and emergency response personnel can work cooperatively to develop communication strategies. Should it become necessary, we would ask the NYS Emergency Management Office to establish a Joint News Center operation.

The following sections provide comments and New York State-specific details to supplement the CDC plan:

A. Rationale and Goals:

New York State's rational and goals are similar to those described in the CDC plan. Our primary goal will be to instill and maintain public confidence in the State and local public health response and the state's health care system.

B. Lessons Learned:

New York State's plan agrees with the precepts discussed in CDC's plan, with the following caveat: While speculation is generally not a prudent communication strategy, health officials may wish to speculate under certain conditions:

- When failure to do so will result in false reassurance.
- To enhance accurate risk assessment when public perception/expectation of what *could* happen is far worse than the actual “worst case scenario.”

C. Key Messages:

New York State's key messages in advance of evidence of SARS are similar to those in the CDC plan. However, some minor changes in wording should be noted:

- We have learned a great deal about SARS that is helping us prepare for the possibility that it will return.
- Obtaining a history of exposure to a patient with SARS or to a setting in which SARS transmission is occurring is key in assessing the likelihood of SARS in persons presenting with respiratory illness.
- Most exposures to SARS occur in healthcare facilities and households. Community transmission outside of these settings have been reported, but these occurred rarely, under special circumstances, and with few exceptions, after close contact with ill persons. Persons at risk in healthcare facilities include healthcare workers, patients, and visitors. In households, the greatest risk is to family members of SARS patients.
- In most instances, SARS outbreaks were localized to specific communities and often to specific locations or facilities in a community. For example, in Canada, most SARS cases occurred in Toronto, and in Toronto, most cases were acquired in hospitals.
- SARS can be controlled by rapid, appropriate public health action that includes surveillance, identification and isolations of SARS cases, infection control, intense contract tracing, and, in some circumstances, quarantine of persons who may have been exposed to SARS. These measures can be a temporary hardship to those involved but are essential for containing SARS outbreaks.
- New York State is preparing for the possible reappearance of SARS by: 1) educating healthcare workers about SARS diagnosis and reporting, 2) developing SARS surveillance systems to determine if and where SARS has re-emerged, 3) developing guidelines for preventing transmission in different settings, and 4) improving laboratory tests for SARS
- At this time, there is no evidence of ongoing transmission of SARS anywhere in the world. In the absence of SARS transmission, there is no need for concern about travel or other activities.

D. Preparing for a Communications Response:

CDC's communication plan articulates Objectives and Activities under this section that are in line with New York State's plan. It should be noted, however, that the guidance regarding requesting and utilizing federal assistance for the provision of public information is revised as follows:

- *At the direction of the Governor's office*, be prepared to make use of available federal assistance.

E. Communications Activities in the Presence of SARS:

Objective 1: Coordinate local/state and national communication efforts related to SARS.

While New York State will make every effort to work closely with CDC's Office of Communication, our health information dissemination will be conducted under the

direction of the New York State Health Commissioner. The decision to participate in a Joint Information Center/Joint News Center will be made in consultation with the Governor's office.

F. Comments on Appendices in Supplement G of the CDC plan:

Appendix G1—Joint Information Center:

While New York's State's plan does not rule out the possibility of establishing a Joint Information Center/Joint News Center, the following statement will introduce the JIC/JNC discussion contained in Appendix G1:

The decision to establish a Joint Information Center/Joint News Center will be made in consultation with the Governor's office. A JIC will be coordinated by the New York State Emergency Management Office with the participation of NYSDOH and other state and local agencies, as appropriate. The purpose of a JNC will be to facilitate a one-voice response; serve as the clearinghouse for accurate, timely information; and enhance the dissemination of health information essential to an effective SARS response.

Appendix G2—Media relations:

The following introductory statement is added to the media relations annex in the CDC plan:

New York State's plan generally agrees with the Media Relations strategies described in the CDC plan. However, the decision to establish a Joint Information Center will be made in consultation with the Governor's office. If a JIC is activated, regular briefings should take place. The precise briefing schedule will be determined as appropriate; however, ideally, JIC briefings should occur at least once a day.

Appendix G-3—Community relations/outreach

New York State's plan is similar to that in the CDC plan. New York State's community outreach strategies are as follows:

Outreach to persons who may have special needs or issues that distinguish them from the general public during an outbreak of SARS will be especially important. First responders and their families, health care providers and medical/hospital support personnel, and transportation officials will all have special needs for information – either to be able to perform their jobs or to ensure that their own concerns about exposure and protection are being addressed.

Local communications staff will need to establish a daily routine for coordinating and communicating with partner organizations regarding community education and outreach

activities and needs, with briefings arranged as needed. Cooperation and understanding among all the involved agencies will greatly enhance the success of the community outreach/community relations operation. It will be important to work closely with local health departments' education and community outreach staff members, who can offer valuable insights into issues that are relevant to the community.

Communication staff should make sure of the resources of the ECS and JIC to facilitate coordination and management of community relations activities.

- Develop and maintain a contact list of key community partners, and provide key messages regularly. Include members of health care organizations and transportation officials involved in the response.
- Establish a public response line to respond to the questions and concerns of state and local healthcare providers, pharmacists, transportation personnel, persons under isolations or quarantine, and other special populations as appropriate. Work with partners to implement a resources and referral list for phone line staff.
- Work with local partners and response personnel to coordinate communication and health education activities by identifying needs and reporting on activities that have been planned and executed. Activities may include: a) information campaigns for affected groups, b) education campaigns and activities for healthcare providers, including first responders; c) education and communication with state and community personnel involved in meeting community needs or community actions designed to prevent the spread of the disease, and d) activities to ensure that persons under isolation or quarantine have access to needed supplies or services.
- Tailor communication and education services and messages to affected communities.
- In coordination with epidemiologic and medical personnel, obtain and track information daily on the numbers and location of new cases, new quarantined persons, and hospitals with SARS cases. Use these reports to determine priorities among community outreach and education efforts.
- Provide feedback to and coordinate with the JIC for distribution of information and identification of information needs.

PUBLIC HEALTH GUIDANCE FOR COMMUNITY-LEVEL PREPAREDNESS AND
RESPONSE TO SEVERE ACUTE RESPIRATORY SYNDROME (SARS)

SUPPLEMENT G: COMMUNICATION

Goals

- Instill and maintain public confidence in the nation's public health system and its ability to respond to and manage the reappearance of SARS.
- Contribute to the maintenance of order, minimization of public panic and fear, and facilitation of public protection through the provision of accurate, rapid, and complete information before, during, and after a SARS outbreak.
- Provide accurate, consistent, and comprehensive information about SARS.
- Address rumors, inaccuracies, and misperceptions as quickly as possible, and prevent stigmatization of affected groups.

Key concepts

- Timely dissemination of accurate and science-based information on what is known and not known about SARS and the progress of the response effort builds public trust and confidence.
- Coordination of messages and release of information among federal, state, and local health officials and affected institutions are critical to avoiding contradictions and confusion that can undermine public trust and impede containment measures.
- Information should be technically correct and sufficiently complete to support policies and actions without being patronizing.
- Guidance to community members on actions needed to protect themselves and their family members and colleagues is essential for crisis management.
- Information presented during an outbreak should be limited to specific data and results; messages should omit speculation, over-interpretation of data, overly confident assessments of investigations and control measures, and comments related to other jurisdictions.
- Rumors, misinformation, misperceptions, and stigmatization of specific groups must be addressed promptly and definitively.
- Education and training of healthcare workers and public health staff on appropriate strategies to recognize SARS and implement control measures is key to containing a SARS outbreak.

Priority activities

- Identify key messages about SARS for specific audiences and the most effective methods to deliver these messages.
- Issue local public health announcements and updated information on the outbreak and response.
- Provide a location for state, local, and federal communication and emergency response personnel to meet and work side-by-side in developing key messages and handling media inquiries.
- Respond to frequently occurring media questions by preparing fact sheets, talking points (key messages), and question-and-answer documents.
- Coordinate requests for spokespersons and subject matter experts.

I. Rationale and Goals

During the 2003 SARS response, health communications figured prominently among the tools used to contain the outbreak. The response to outbreaks and the threat of outbreaks necessitated extensive communications activities. Experience showed that, although a media/communications plan cannot alleviate the threat of SARS or solve associated public health problems, good communication can guide the public, the media, and healthcare providers in responding appropriately and complying with exposure-control measures as required.

This document describes the communication plans and activities that are suggested to prepare for a possible recurrence of SARS and activities that would be needed to respond to a SARS outbreak. This plan identifies information necessary for major planning, preparedness, and communication response activities of state and local health departments and provides guidance for coordinating efforts with CDC and other entities. The goals of this Supplement are to provide local and state communications specialists with suggestions and guidance to:

- Instill and maintain public confidence in the nation's public health system and its ability to respond to and manage a SARS outbreak
- Contribute to the maintenance of order, minimization of public panic and fear, and facilitation of public protection through the provision of accurate, rapid, and complete information
- Provide accurate, consistent, and comprehensive information about SARS
- Address rumors, inaccuracies, and misperceptions as quickly as possible, and prevent stigmatization of affected groups

II. Lessons Learned

After the SARS response of 2003, federal, state, and local public health colleagues conducted internal debriefings to prepare for a future SARS occurrence. At CDC, communications officers, in consultation with state and local partners, identified the following as "lessons learned" for the next SARS response:

- Timely dissemination of accurate and science-based information on what is known and not known about SARS and the progress of the response effort builds public trust and confidence.
- Coordination of messages and release of information among federal, state, and local health officials and affected institutions are critical to avoiding contradictions and confusion that can undermine public trust and impede containment measures.
- Information should be technically correct and sufficiently complete to support policies and actions without being patronizing.
- Guidance to community members on actions needed to protect themselves and their family members and colleagues is essential for crisis management.
- Information presented during an outbreak should be limited to specific data and results; messages should omit speculation, over-interpretation of data, overly confident assessments of investigations and control measures, and comments related to other jurisdictions.
- Rumors, misinformation, misperceptions, and stigmatization of affected groups must be addressed promptly and definitively.

- Education and training of healthcare workers and public health staff on appropriate strategies to recognize SARS and implement control measures is key to containing a SARS outbreak.

III. Key Messages

Lessons learned from the Spring 2003 experience will help local, state, and national communications specialists refine their communications planning to facilitate appropriate and decisive actions in response to a re-emergence. The foundation for effective communication is a set of key messages that can be used consistently to highlight and reinforce the lessons learned and generate an appropriate response to SARS that minimizes risk while ensuring a strong and rapid response. These messages should be developed with the input of all decision-makers in the SARS response, and all communication messages should emanate from these central points. The following are examples for consideration:

- We have learned a great deal about SARS that is helping us prepare for the possibility that it will return.
- A SARS diagnosis is guided by a history of exposure to SARS or to a setting in which transmission is occurring.
- Most exposures to SARS occur in healthcare facilities and households. Community exposures outside of these settings have been reported, but these occurred rarely, under special circumstances, and, with few exceptions, after close contact with ill persons. Persons at risk in healthcare facilities include healthcare workers, patients, and visitors. In households, the greatest risk is to family members of SARS patients.
- In most instances, SARS outbreaks were localized to specific communities and often to specific locations or facilities in a community. For example, in Canada, most SARS cases occurred in Toronto, and in Toronto, most cases occurred in hospitals.
- SARS can be controlled by rapid, appropriate public health action that includes surveillance, identification and isolation of SARS cases, infection control, intense contact tracing, and quarantine of persons who may have been exposed to SARS. These measures can be a temporary inconvenience to those involved but are essential for containing SARS outbreaks.
- The United States is preparing for a possible reappearance of SARS by: 1) educating healthcare workers about SARS diagnosis, 2) developing SARS surveillance systems to determine if and where SARS has re-emerged, 3) developing guidelines for preventing transmission in different settings, 4) improving laboratory tests for SARS, and 5) developing better guidance for treating SARS patients.
- At this time, there is no evidence of ongoing transmission of SARS anywhere in the world. In the absence of SARS transmission, there is no need for concern about travel or other activities. Up-to-date information on SARS is available on CDC's SARS website (www.cdc.gov/ncidod/SARS).

IV. Preparing for a Communications Response

In the absence of SARS, states and localities need to prepare and disseminate messages to encourage vigilance for the possible reappearance of SARS-CoV and to specify activities to prevent its spread. Communications personnel need to assess communication needs and capacity, develop criteria and procedures for requesting

CDC communications assistance, and develop mechanisms for coordinating the activities of on-site CDC communications experts with local/state communication resources. If SARS-CoV transmission is confirmed, the community will look to state and local health departments as an information resource. Public information officers and communications specialists should be prepared for the surge of requests and inquiries generated by reports of SARS activity. The following suggestions should be considered for optimal preparedness.

Objective 1: Assess the readiness of the jurisdiction to meet communication needs during a SARS outbreak.

Activities

- Assess the information needs of healthcare providers. Most healthcare providers lack experience with SARS and will need information on how to diagnose, report, and manage possible cases. Communications specialists should have an understanding of healthcare provider's knowledge about surveillance and reporting, diagnostics, transmission, exposure management, and issues such as concern for self-protection and possible use of quarantine and isolation.
- Assess the information needs of the general public. Public perceptions about SARS may reflect misunderstandings and inaccuracies that can exacerbate fears and may impede containment efforts. Assessment of public knowledge and beliefs should guide the preparation of risk communication messages and strategies. Information strategies may include surveys, focus groups, and consultation with professional and civic groups.
- Consider logistical considerations that can influence the effectiveness of health communications. Consideration may include:
 - Adequacy of printing/graphic design contracts and resources to meet emergency needs
 - Availability of tools (cell phones, email equipment, laptops) needed by communications staff at the time of deployment. A "Go-Kit" to enable staff to set up operations wherever necessary is optimal.
 - Capacity of hotlines and web servers to accommodate increased usage
 - Availability of emergency personnel to staff hotlines and communication centers for extended hours and days
 - Adequacy of training in risk communication, media relations, and SARS epidemiology, clinical features, diagnostics, and surveillance.

Objective 2: In the absence of known SARS activity worldwide, make preparations for a rapid and appropriate communications response to a global recurrence or introduction into the United States.

Activities

- Prepare to manage media demands. The first jurisdiction(s) with possible or confirmed cases of SARS can expect a deluge of media attention. Local communications personnel will need to determine capacity and develop procedures for addressing demands. This may include requesting CDC communications assistance and coordinating the activities of on-site CDC communications experts with local/state communication resources.

- Increase the range and type of educational materials that will be available during an outbreak. As possible, coordinate efforts with other agencies and organizations to avoid duplication.
 - Develop a portfolio of communication, information, and education sources and materials on topics including: clinical and laboratory diagnostics, infection control, isolation and quarantine, stigmatization management, travel control authority, legal issues, and agencies' roles and responsibilities.
 - Develop and present formal educational curricula and materials in multiple formats for professional audiences.
 - Coordinate with partner agencies to prepare and establish appropriate public, healthcare provider, policy maker, and media responses to a case or outbreak of SARS, including an understanding of how the public health system will respond, roles and responsibilities of the different sectors involved, and reasonable expectations regarding the scope and effect of public health actions.
 - Establish protocols to communicate the data that will need to be reported daily after confirmation of SARS activity (e.g., morbidity and mortality figures; geographic location of cases; number of persons affected; number of persons hospitalized). As appropriate, coordinate with the CDC Director's Emergency Operations Center (DEOC) and CDC's Emergency Communications System (see below).
- Establish a mechanism in advance for reviewing and clearing SARS-related messages and materials.
- Identify a spokesperson and subject matter experts who will be available during an outbreak. The spokesperson will require training in media relations and risk communication.
- Develop websites to help manage information requests. Materials may be developed in advance and stored on a server. Health departments may choose to use or adapt materials posted on CDC's SARS website (<http://www.cdc.gov/ncidod/sars>).
- Consider establishing a toll-free public information hotline. Although a CDC information hotline will be available during an outbreak, state and local health departments may also wish to provide this service for local residents. Hotline staff should be trained in advance and will need access to an evolving database of frequently asked questions.
- In coordination with other emergency response personnel, identify an algorithm or specific events that will activate emergency operations activities.
- Be prepared to make use of available federal assistance. If requested, CDC communication experts can be dispatched immediately to a community that has a confirmed case of SARS. These persons can help coordinate communication and media relations' activities in the field and assist in the coordination of communication with public and private healthcare providers and other agencies responsible for the outbreak response.

Objective 3: Increase knowledge and awareness of SARS, and enhance understanding of preparations for its reappearance and the appropriate response to a global recurrence or introduction into the United States.

Activities

- Initiate the preparation and some dissemination of messages and materials to increase the knowledge of the public, healthcare professionals, policymakers, media, and others about SARS, travelers' advisories and alerts, infection control measures, patient management strategies, community containment measures including quarantine, and laboratory diagnostics. Public understanding of measures such as isolation and quarantine will facilitate acceptance of these approaches if needed.
- Use of a variety of approaches (e.g., increasing information available through websites and the media; collaboration with professional and civic organizations) to increase the level of knowledge about SARS. Target information to healthcare providers, public health officials, policy makers, media, and other local partners.
- Be prepared to immediately address questions related to the initial case(s) and to provide guidance to the public regarding disease susceptibility, diagnosis, and management. Case counts will need to be continually placed in context.
- Be prepared to address more complex questions. As is the case with most newly emerging microbial agents, most healthcare providers have never seen a case of SARS and will be relying on state/local health departments to provide needed information rapidly.
- Ensure the availability of communications products in multiple languages, based on the demographics of the jurisdiction. Key to this requirement is the prior establishment of CDC's capacity to translate materials into relevant languages.

V. Communications Activities in the Presence of SARS

Objective 1: Coordinate local/state and national communications efforts related to SARS.

Activities

- Make every effort to work in close consultation with CDC communications colleagues to ensure a consistent and accurate communications response.
- In the event of a widespread SARS outbreak in the United States, it may be necessary to establish a Joint Information Center (JIC) in field locations where outbreak(s) are occurring. Most state and local jurisdictions currently have plans in place to facilitate such an installation if necessary. The JIC will become operational at the beginning of an HHS-wide federal response to the outbreak and will consist of representatives from all local, state, and federal agencies involved in the outbreak response. States and localities will coordinate all communication activities through the JIC or through an emergency communications center if the JIC has not been activated. The CDC Director's Emergency Operations Center (DEOC) will coordinate CDC's interface with the JIC. Additional information on the JIC is provided in Appendix G1.
- Interact, as appropriate, with CDC's Emergency Communication System (ECS). Once SARS activity is confirmed, CDC will activate the ECS to serve as a resource to state and local communications personnel and coordinate the federal public health communication response. ECS will direct all CDC SARS-related communication activities, including communication strategy development, key message development, CDC

website management, materials development and dissemination, national media relations, media monitoring, and all other national communication components. Some ECS staff will be designated to focus on national level issues, whereas others will coordinate field personnel. The ECS will fully support JIC activities.

- Interact, as appropriate, with federal communication liaisons. To better understand and to encourage a reciprocal relationship between state and local communication officials, it is important to understand the roles of the federal communication liaisons in relation to the communications portion of the SARS response plan. Additional information can be found in Appendix G2.
- Harmonize messages used at the national and local levels (see Key Messages above).

Objective 2: Keep communications staff informed and ready with accurate, up-to-date information that is relevant to the situation in the jurisdiction.

Activities

- Develop a "library" of SARS-related material for reference. Local and state health departments should develop a listing of SARS resources and references that can be readily available to communications and public information officers. Although information on SARS is available from multiple sources, CDC's website offers the most up-to-date official information. Local and state health departments should visit the CDC website at <http://www.cdc.gov/ncidod/sars/> for updated guidance, protocols, press releases, travel advisories, and educational materials in other languages.
- Equip all communications staff with a resource booklet identifying websites relating to SARS. Have the information technology department bookmark these links on staff members' workstations.
- Maintain a library of relevant articles and publications in hard copy for use during field operations.
- Know the community. Ensure that communication materials address the language needs and cultural aspects of the affected community.
- Know your hotlines. Hotlines can provide ongoing guidance on new messages and materials that need to be developed to respond to public inquiries and concerns.
- Coordinate and maintain communication with local partners, such as:
 - Public affairs directors and information officers from local and state health departments
 - City and state government public affairs offices
 - Local congressional delegation and offices
 - Local police and fire departments and emergency management officials
 - Regional HHS health officers and regional Office of Emergency Preparedness
 - Local hospital public relations/affairs departments
 - State and local Emergency Operations Center coordinators
 - Federal Emergency Operations Centers

Objective 3: Communicate key messages, and provide up-to-date information on global and domestic SARS activity.

Activities

- Participate in and make available federal agency telebriefings and satellite broadcasts on SARS.
- Provide web-accessible materials on SARS.
- Be aware of local resources. The local chapters of the American Lung Association and other organizations are helpful in disseminating educational messages to the community.
- Use websites as a central component in managing information requests from the public. Strategically designed websites can be used to organize and quickly provide information, updates, fact sheets, responses to frequently asked questions, healthcare provider resources, and media materials to a range of audiences.
- Provide information for travelers. SARS activity anywhere in the world will prompt immediate attention to travelers' movements to and from affected areas and will likely result in travelers' alert messages and surveillance at relevant ports of entry.

Appendix G1
Fact Sheet: Joint Information Center

What does it mean to a communications specialist when a JIC is operational?

Once a Joint Information Center (JIC) is operational, all media contacts and information should be handled through this center to ensure the distribution of consistent and accurate information. The JIC will:

- Issue local public health announcements and updated information on the outbreak and the response
- Disseminate information about SARS, its management, and the possible need for travel restrictions and isolation and quarantine
- Establish a “news desk operation” to coordinate and manage media relations activities
- Provide a location for state, local, and federal communication and emergency response personnel to meet and work side-by-side in developing key messages, handling media inquiries, writing media advisories and briefing documents
- Respond to frequently occurring questions by developing fact sheets, talking points (key messages), and question-and-answer documents
- Coordinate requests for spokespersons and subject matter experts
- Issue media credentials
- Address other local/regional information requests related to the outbreak that require distribution to the media and the general public
- Develop, coordinate, and manage local websites, as required

What activities should be carried out once a decision to activate a JIC has been made?

- Once widespread SARS has been verified, activate full-scale communication activities according to the state or local risk communications plan. This may include deployment of field team(s) and assessment of staffing needs for extended hours/days at the command center. Designated staff will immediately report to the communications command center.
- Ensure that the communications command center has sufficient telephone lines to permit immediate access by field deployment teams.
- Activate or enhance a toll-free hotline, if available, and add sufficient personnel to answer incoming calls. Provide telephone response staff with resources (e.g., state or CDC website address), and direct them to provide feedback on needs for development, enhancement, or revision of current materials to meet emerging information demand. To reduce the burden on local resources, callers may be directed to the CDC information hotline if necessary. Also consider implementing a dedicated line for healthcare providers.
- Create and disseminate a media advisory that provides information on the situation, major actions taken, information about SARS, public guidance, and local resources. It will be imperative to issue information updates immediately and, as possible, to correct errors and misperceptions.

- If developed, activate the local emergency SARS website, provide links to other state government web servers, and disseminate this information widely through the media. If a website has not been developed, a link can be made available to CDC's SARS website (<http://www.cdc.gov/ncidod/sars/>). All media and public materials should be posted to the website, and all SARS-related information should provide a website address. The website should be used heavily for media updates.
- Provide local and external partners (e.g., medical professional associations, community leaders, community groups) with information/materials that will enable them to respond to public or healthcare provider inquiries, as necessary. Arrange to hold periodic briefings with these partners.

Appendix G2 **Media Relations**

One person cannot handle all aspects of media relations in the event of a widespread SARS outbreak. A JIC is the best way to coordinate and manage media relations activities. Public information officers from a range of federal, state, and local agencies will need to work side-by-side handling media inquiries, writing releases, and providing information on their agencies and other duties as appropriate. If a JIC is not activated, the various participants of a JIC and the ECS should establish a daily briefing among participants for coordination and communication on media briefings and media materials.

The role of the state and local health department should be made clear in all contacts with the media and in other public communications (e.g., press briefings, interviews, teleconferences). Cooperation and understanding among all the involved agencies will greatly enhance the success of the media operation. It will be important that federal health personnel (CDC), local and state health departments, and transportation agencies work together closely. Together, these groups will create and manage the flow of information to the media. It will also be important to work closely with mayoral, governor, and congressional media and communication staff. Key messages should be used consistently to convey the priorities of state and local health departments and their actions. Public information officers at state and local health departments can offer valuable insights into important issues in the state and local community, as well as guidance in dealing with local media. In addition, they can provide information about media contacts, outlets, directories, and telephone and fax numbers to facilitate distribution of information to the media. State and local personnel may be able to locate facilities and infrastructure for briefings. Media offices at local hospital should not be overlooked; they generally have good relationships with the media, as does the local fire department public information officer. In most communities, fire departments deal on a daily basis with the local media and can be valuable resources.

Public health spokespersons should answer questions concerning SARS and the actions being taken to control and respond to the outbreak. Personnel dealing with the media should be trained on the type of questions they should answer and those that should be directed elsewhere. They should also be trained in strategies for emphasizing key message in all responses. Adhering to key messages will allow communication to be consistent over time. Key messages must be science-based, reflect current knowledge, and based on good public health practice.

Communication personnel should identify and create new messages and materials that address emerging questions and concerns of the media, public, healthcare providers, policy makers, and others. As appropriate and feasible, field team communication staff should tailor SARS education and communication materials to community needs, with a special emphasis on subgroups who are most directly affected by SARS and who may be subject to stigmatization.

The ECS or Joint Information Center should implement daily routines for informing, and responding to inquiries from the media, healthcare providers, and the public:

- Establish daily or twice-daily press briefings. Once routine briefings are established, they will be invaluable in terms of relaying rapidly changing

- messages. As necessary and possible, without compromising the work commitments of subject matter experts, daily activities can be extended,
- ‘In-person’ press briefings are best for major public health announcements.
 - Ideally, the same experts will conduct the media briefings to ensure continuity of messages. Experts should be reassuring about the ability of the public health authorities to respond to a crisis but should not minimize the severity of the situation in a way that could invalidate public concern.
 - Limit media briefings to 30 to 45 minutes.
 - The state or local public information officer or CDC field communication media liaison should moderate, begin, and end the briefing. The moderator should: 1) set ground rules, 2) announce times of future briefings, 3) make administrative announcements, and 3) briefly introduce each panel member
 - Each panel member should speak for 3 to 5 minutes on issues related to his/her area of expertise. Questions should be held until all panel members have spoken. Questions should be directed to the moderator, who will either answer the question or refer it to the appropriate panel member.
 - All spokespersons should leave at the end of the briefing and avoid participating in individual media interviews.
 - The state or local public information officer (or lead communication staff person) and the CDC field liaison should be notified immediately of any potential issues (e.g. inaccurate information, reports of rumors in the community, unanswered questions) that were identified during the briefing and need to be addressed.

Appendix G3 **Community Relations/Outreach**

Outreach to persons who may have special needs or issues that distinguish them from the general public during an outbreak of SARS will be especially important. First responders and their families, healthcare providers and medical/hospital support personnel, and transportation officials will all have special needs for information – either to be able to perform their jobs or to ensure that their own concerns about exposure and protection are being addressed.

Local communications staff will need to establish a daily routine for coordinating and communicating with partner organizations regarding community education and outreach activities and needs, with briefings arranged as needed. Cooperation and understanding among all the involved agencies will greatly enhance the success of the community outreach/community relations operation. It will be important to work closely with local health departments' education and community outreach staff members, who can offer valuable insights into issues that are relevant to the community.

Communication staff should make use of the resources of the ECS and JIC to facilitate coordination and management of community relations activities. Community outreach staff, health education, and public health information officers from a wide range of federal, state, and local agencies will need to work side-by-side to appropriately handle community information needs. Suggested community relations activities include the following:

- Develop and maintain a contact list of key community partners, and establish regular briefings, ideally on a daily basis. Include members of healthcare organizations and transportation officials involved in the response.
- Work with healthcare providers and other affected workers (e.g., transportation personnel) to identify and address relevant issues. Staff members are much more likely to feel confident in carrying out their duties if they feel that their risks, and the risks to their families, are being addressed and minimized.
- Establish a community telephone line to respond to the questions and concerns of state and local healthcare providers, pharmacists, transportation personnel, persons under isolation or quarantine, and other special populations as appropriate. Work with partners to implement a resource and referral list for phone line staff.
- Work with local partners and response personnel to coordinate communication and health education activities by identifying needs and reporting on activities that have been planned and executed. Activities may include: a) information campaigns for affected groups, b) education campaigns and activities for healthcare providers, including first responders; c) education and communication with state and community personnel involved in meeting community needs or community actions designed to prevent the spread of the disease, and d) activities to ensure that persons under isolation or quarantine have access to needed supplies or services.
- Tailor communication and education services and messages to affected communities. This may include meeting with community partners to identify specific community resources that can be utilized and secured.
- Develop a list of healthcare facilities in the community that can be used for information dissemination and health education activities. Coordinate with CDC

- staff in initiating contact with healthcare providers. Cross-train key partners to assist in education and outreach efforts.
- In coordination with epidemiologic and medical personnel, obtain and track information daily on the numbers and location of new cases, new quarantined persons, and hospitals with SARS cases. Use these reports to determine priorities among community outreach and education efforts
- Provide feedback to and coordinate with the JIC for distribution of information and identification of information needs.

Appendix G4
CDC Field communications liaisons

The CDC response to a major SARS outbreak will take place through CDC's centralized Emergency Communications System (ECS) and through the deployment of field communication personnel. The responsibilities of CDC field personnel are to: 1) inform and advise federal efforts about the local situation and developments, 2) coordinate federal activities in such a manner that they do not contradict or otherwise impede local efforts, and 3) support state and local communication efforts, as necessary. To facilitate this coordination between state and local health department personnel and CDC communication personnel, CDC has designated two critical positions -- Field Communication Media Liaison and Field Communication Community Liaison (described below). These two roles correspond to the media relations and community relations/outreach response functions described above.

CDC Field Communication Media Liaison (FCML)

Among the activities of the CDC Field Communication Media Liaison are to:

- Work with state and local officials to facilitate the effective management of local communication efforts and the on-site communications center
- Support state/local officials in facilitating the provision and management of accurate, timely, and relevant information to the public and media (and timely and appropriate responses to errors and misinformation)
- Help enhance state and local communication efforts (e.g., obtain or verify information, prepare and debrief subject matter experts)
- Provide information to the federal (CDC and HHS) communication centers regarding local issues and developments, and coordinate federal and state/local communication.
- Serve as the principal CDC media advisor in the field, and assist the CDC ECS Leadership Team by serving as a media spokesperson when appropriate
- Assist state and local officials in preparing statements and materials to inform the public about a possible or known case of SARS in the jurisdiction, explain that health officials are working with CDC to confirm or rule-out the diagnosis (or to prevent further transmission), and inform the public about measures underway to prevent the spread of infection.
- Work with the lead CDC Center for SARS (NCID) to determine the most appropriate messages and timing for the notification of the news media and general public and to ensure proper clearance of messages and materials
- Act as CDC representative for coordination with the JIC for factual and consistent distribution of information and identification of information needs
- As necessary, help locate authorized public health spokespersons, and assist in directing local media to previously identified reliable state and local subject matter experts on SARS (e.g., local health officers and infectious disease physicians)
- Assist state and local officials in preparing for media interviews, developing media materials, and scheduling and managing media interviews. This includes assisting with logistics and working with local, state, and local officials to lease space as needed for briefings and other communications activities.
- Provide regular updates to CDC's ECS regarding local developments, concerns, and issues.

CDC Field Communication Community Liaison (FCCL)

CDC's communication plans include a Field Communication Community Liaison to serve as a CDC community relations advisor in the field. This person can assist local/state health department officials and the CDC SARS Response Team Leader in serving as a contact point to local hospitals and infectious disease specialists. The liaison can play an important role in assisting with communication tasks relevant to the implementation of control measures (e.g., use of personal protective equipment, isolation and quarantine). The liaison will attend all CDC response team meetings and provide updates to the team leader and media liaison regarding community outreach and education activities.

As many community relations activities are state and local responsibilities, the liaison should coordinate with state and local officials to assess the need for assistance. Among the activities of the CDC Field Communication Community Liaison are to:

- Assist in identifying key community partners, developing and maintaining a contact list of these partners, and scheduling and participate in daily briefings
- Assist in the management of the Joint Information Center
- Assist in the management of community outreach staff
- Assist in coordination and management of training and education outreach activities for healthcare professionals
- Assist with communication and educational activities for quarantined persons
- Participate in daily staff meetings held by the CDC field team leader.
- Send a daily community outreach activity report to the CDC team leader and to CDC's DEOC
- Request the DEOC to send new materials as updated and to provide information on new and emerging questions and issues identified from hotlines and other sources
- In coordination with local authorities, maintain a daily log of community information activities to facilitate the subsequent evaluation of the outbreak response
- In coordination with local authorities, write, edit, approve, and initiate clearance procedures for customized community outreach materials. To avoid confusing or contradictory messages, materials should be cleared by the JIC, program or content expert, state/local health departments, CDC Atlanta, and HHS.
- Assist HHS, CDC, and state and local officials in working with state and community groups.

SARS Planning

NYSACHO Meeting
November 6, 2003

New York State Preparing for SARS

Objectives:

- To minimize morbidity and mortality from SARS
- To minimize disruptions to public health from a SARS recurrence
- To minimize disruptions to New York's health care delivery system

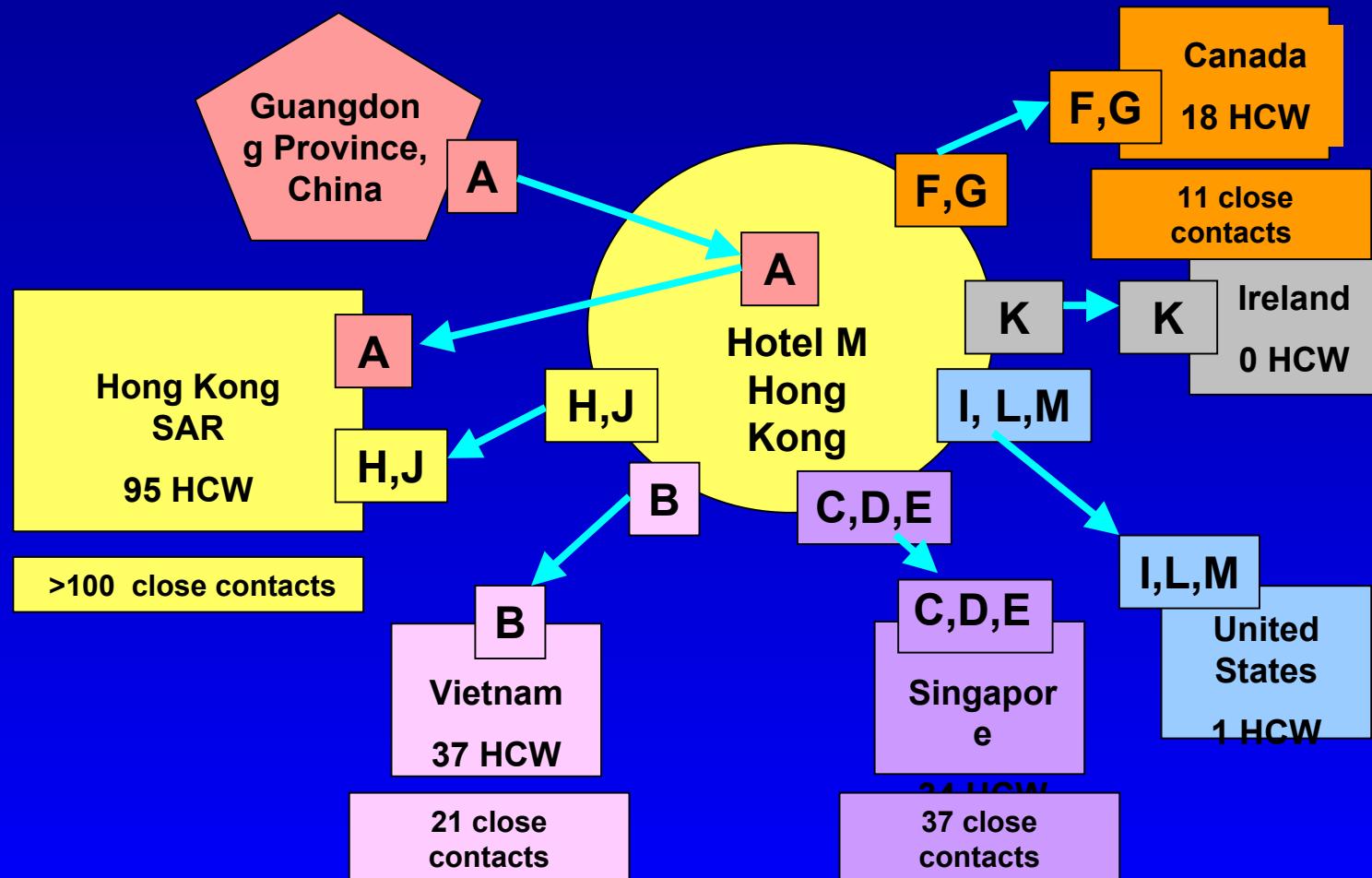
New York State Preparing for SARS

Guiding Principles:

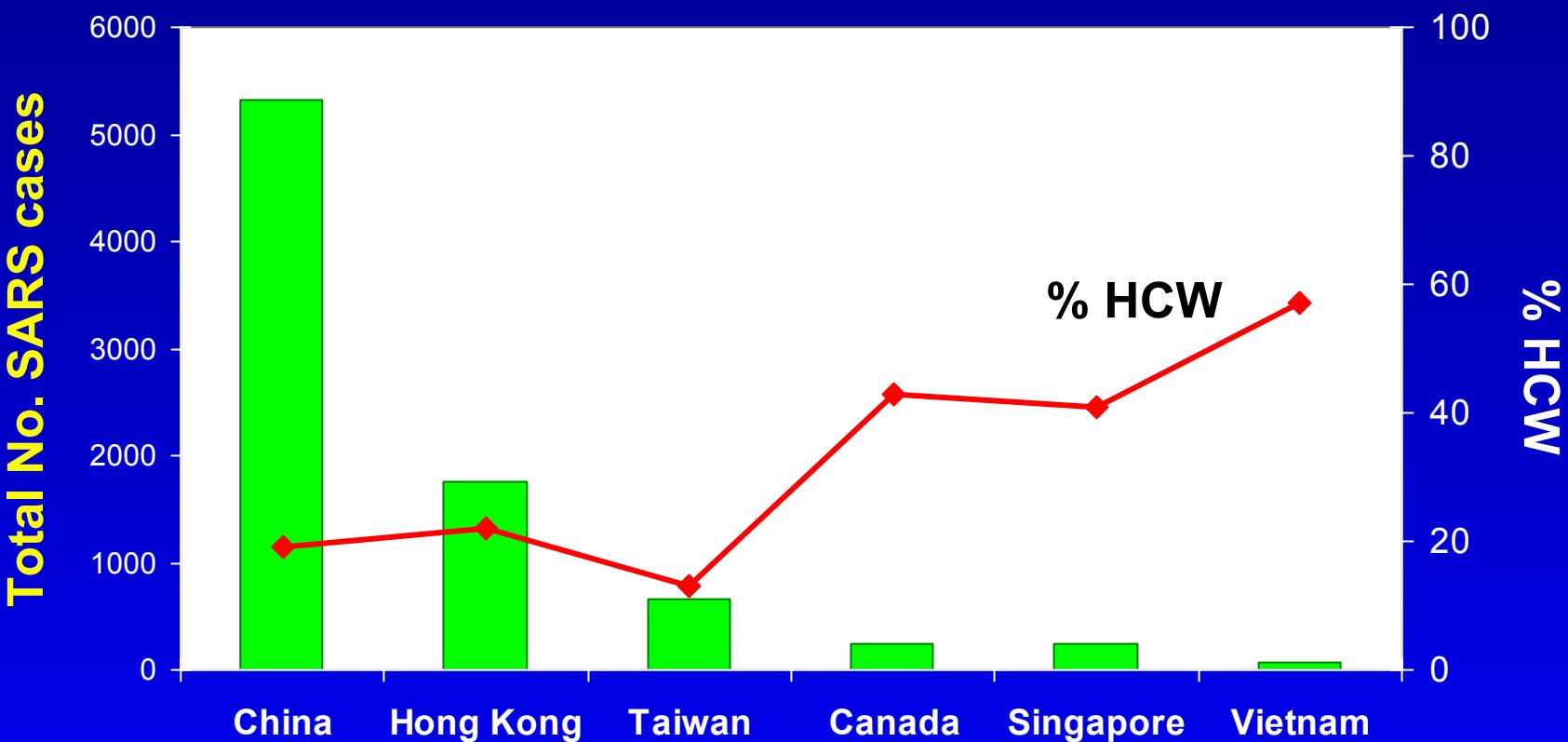
- Preparation, based on lessons learned this past year, can minimize transmission and disruptions
- NYS is using the draft CDC materials to guide our planning
- In emergency situation, close consultation among NYSDOH, LHDs, CDC, and providers will be essential
- Ongoing assessment will be critical to guide control measures in a large outbreak
- The NYS HIN/HAN system will be a primary model for emergency communications

Effect of Travel and Missed Cases on the SARS Epidemic

Spread from Hotel M, Hong Kong

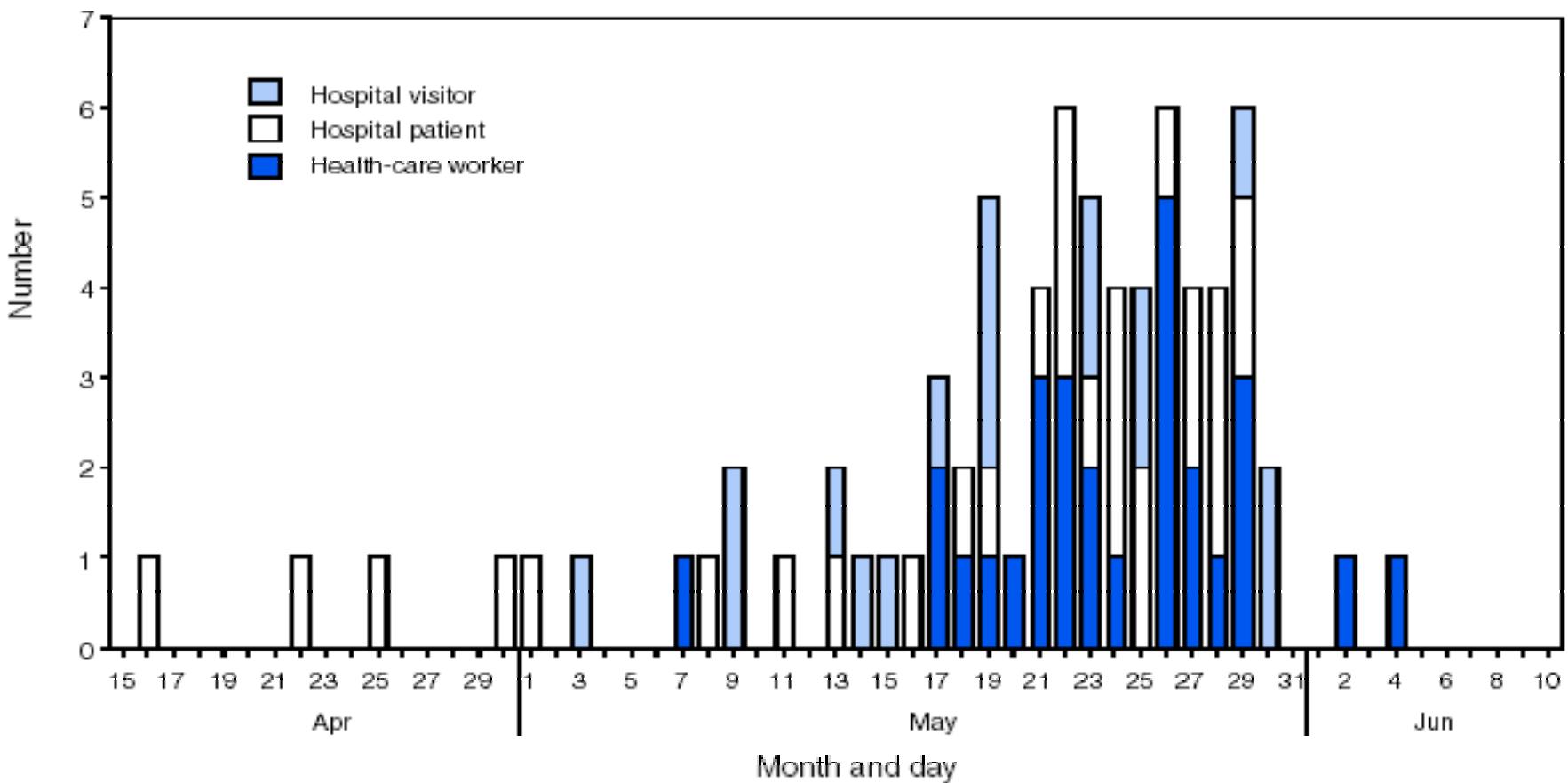


Total SARS Cases and % Healthcare Workers by Country



Second Wave of SARS Outbreak in Toronto

FIGURE 2. Number* of reported cases of severe acute respiratory syndrome, by source of infection and date of illness onset — Toronto, Canada, April 15–June 9, 2003



* N = 74.

SARS Cases in the United States, Spring 2003

Type of Case	No.	CoV+*	CoV-*	Pending
Probable	74	8	38	28
Suspect	344	0	169	175

*Based on presence of absence of SARS antibody at ≥ 28 days

Lessons Learned: Key Epidemiologic Features

- SARS can spread rapidly around the world
- Healthcare facilities played central role
- Most cases were spread person-to-person
- Vast majority of febrile respiratory infections in U.S. were not SARS

New York State SARS Planning

1. SARS Surveillance, Testing, and Contact Tracing

- Barbara Wallace – Surveillance, Contact Tracing
- Geraldine Johnson – Surveillance, Contact Tracing
- Jill Taylor – Lab
- Barbara Asheld - Legal

New York State SARS Planning (cont'd.)

2. Clinical, Hospital, and Infection Control
 - Judy Faust – Hospital Preparedness
 - Marilyn Kacica – Clinical, Infection Control
 - Rachel Stricof – Surge Capacity,
Environmental Control
3. Data Management
 - Hwa-Gan Chang – Reporting
 - Ivan Gotham - Technical

New York State SARS Planning (cont'd.)

4. Public Information (Communication)
 - Kris Smith
5. Education and Training
 - Pat Anders

New York State SARS Plan

- Follows CDC Guidance Documents
(<http://www.cdc.gov/ncidod/sarsprepplan.htm>)
- First draft November 6, 2003
- Invite your feedback
- Plan can (will) evolve

The New York State SARS Plan

- Five Sections
 1. Surveillance
 2. Clinical Guidance
 3. Non-Hospital Isolation and Quarantine
 4. Laboratory Diagnosis
 5. Communication
- Distillation of CDC Guidance
- Customized to New York State

SARS Surveillance Goals

- Early identification of cases
 - Signal the re-emergence of SARS-CoV
- Timely and complete reporting
 - Essential to implementing control measures
- Identify and monitor contacts
 - Enables earliest detection of illness in those at greatest risk

Preparing for SARS Surveillance: Key Clinical Concepts

- Non-specific clinical presentation
 - difficult to distinguish from other respiratory diseases
- No rapid diagnostic test exists that can reliably detect infection *early* in the illness
- Nearly all laboratory-confirmed cases have X-ray evidence of pneumonia by day 7 of illness

SARS Surveillance

- Case Definition being revised
- Confirmed and probable cases
- SARS “reports under investigation” include patients whose illness is less severe or whose exposures to SARS-CoV are not definitive

Surveillance – Case Reporting

- Based on SARS Activity Worldwide
 - Absence of known activity
 - Presence of known activity
- Clinical criteria
- Risk Exposures
- CSTE draft case definition

Surveillance – Case Reporting

No Known Activity

- Severe clinical manifestations
 - Hospitalized pneumonia
- Potential exposures
 - Healthcare worker
 - Travel to China, Hong Kong, Taiwan
 - Other contacts with pneumonia

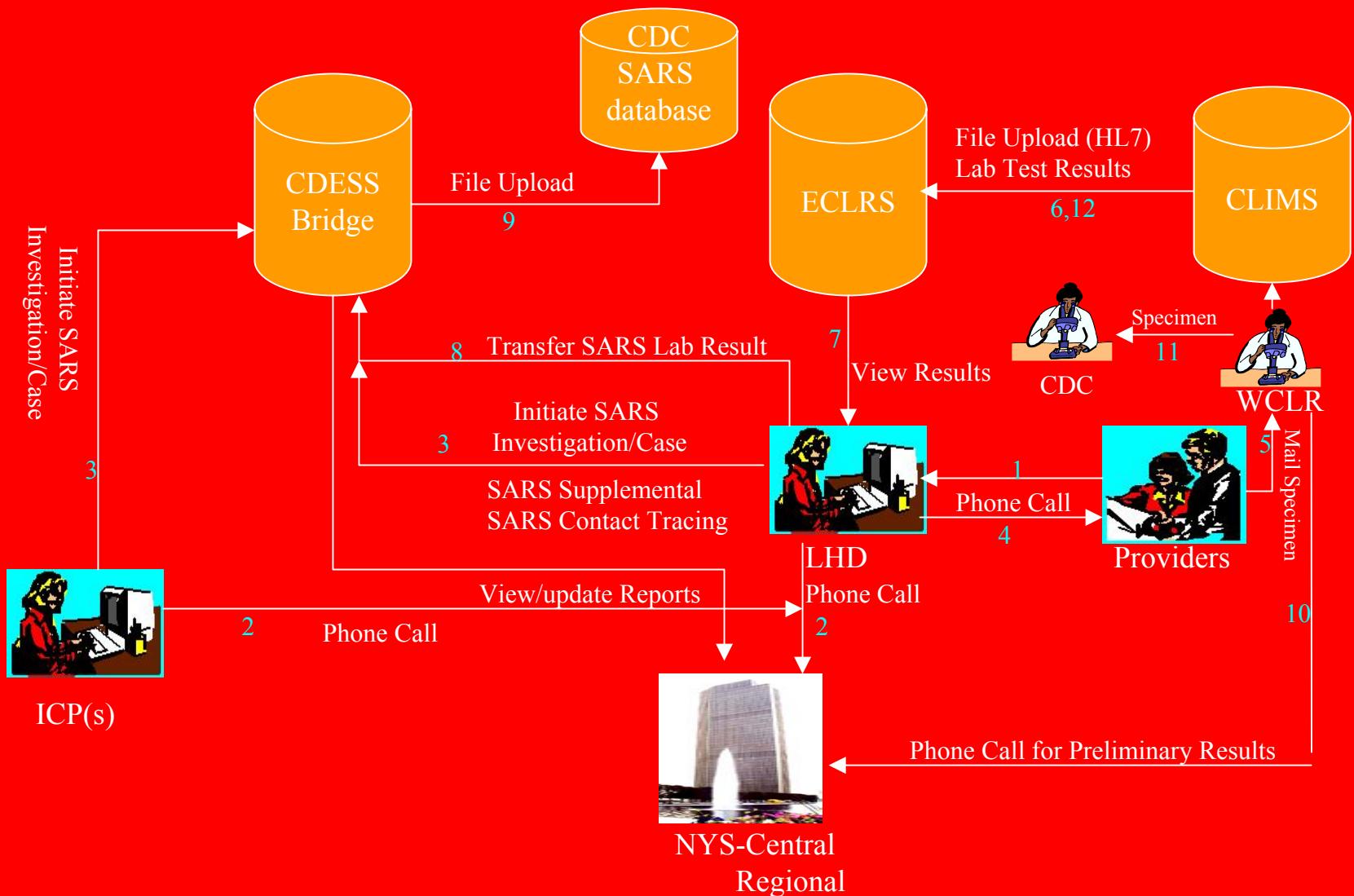
Surveillance – Case Reporting Presence of Known Activity

- Add to previous criteria
 - Broader clinical manifestations
 - Fever and respiratory illness
 - Broader potential exposures
 - Travel to an area with documented current or recent activity
 - Contact with ill traveler to area(s) above
 - Contact or epi-link to a SARS-CoV case

Surveillance – Contact Tracing

- Likely only to be done when there is presence of SARS activity
- Contact identification
 - Household members, close contacts, others
- Contact monitoring
 - Twice daily temperature and symptom monitoring
 - Daily follow-up by LHD

Proposed Data Flow For SARS Data Management



Clinical Guidance

Severe Acute Respiratory Syndrome

New York State Department of Health

Healthcare Facility Guidance

- Specific guidance dependant on level of SARS activity
 - No SARS
 - SARS in the world
 - SARS locally
 - Nosocomial SARS

Healthcare Facility Guidance

- Specific guidance includes:
 - Infection control preparedness for re-emergence of SARS
 - Guidance for all levels of SARS activity
 - Triage
 - Infection control
 - Clinical evaluation
 - Employee health
 - Visitation policies

New Strategies

- Respiratory Etiquette
 - Universal approach to patients with respiratory symptoms
 - Early identification
 - Surgical mask
 - Tissues
 - Hand hygiene
 - Droplet precautions

Healthcare Worker Surveillance

- Based on epidemiology from previous SARS outbreak, HCWs were at increased risk
- HCW hospitalized with CXR confirmed pneumonia will be a sentinel event
- Hospitals will develop systems to monitor employee absence and illness
 - Surveillance dependant on level of SARS activity (No SARS vs nosocomial SARS)

Infection Control Preparedness

- Strategies for triage and admission
 - Minimize risk of transmission to staff, patients, and visitors
- Education and training of personnel
 - Methods
 - Hand hygiene
 - Standard and transmission based precautions
 - PPE – donning and removal
 - Respiratory etiquette

Environmental Control

- Facility assessment
 - Ventilation systems
 - Airborne infection isolation rooms (AIIR)
- Surge capacity planning for AIIR
 - Creating AIIR units
 - Air handling guidance
 - HEPA filtration
- Emergency room and inpatient guidance

Emergency Medical Services

- Approach to patients with respiratory symptoms
 - No SARS
 - Varying levels of SARS activity
- Disseminate policy
- Personal Protective Equipment
 - Fit testing
 - Availability
- Training diverse volunteer workforce

Clinical Guidance

- Healthcare facility training
 - Discuss guidance
 - Feedback
- Evolving guidance
- For more information or comments:
 - Dr.Marilyn Kacica – mak12@health.state.ny.us
 - (518) 486-2938

New York State SARS Plan

- Section 3: Non-Hospital Isolation and Quarantine

Contact: James Miller

jrm17@health.state.ny.us

518-486-2151

Non-Hospital Isolation

- Home Isolation
 - Model Home Agreement
 - Assessment
 - Conditions to minimize risk of transmission
 - Availability of support services and supplies
- Alternate Facility Isolation
 - Travelers, homeless, unsuitable home isolation conditions, uncooperative patients
 - Assessment as above

Non-Hospital Quarantine

- Home Quarantine
 - Model home agreement
 - Basic needs are met
 - Protection of unexposed household members
- Alternate Facility
 - Contacts who do not have appropriate home environment OR do not want to be quarantined at home

Non-Hospital Quarantine

- Work Quarantine
 - Healthcare worker or other essential personnel who need to continue working
 - Outside of work are quarantined at home or in an alternate facility

Community Containment Measures

- Extensive community transmission of SARS
- May be employed to reduce risk of transmission
- Restrictions on public gatherings/travel
 - Identify partners to implement restrictions and provide essential services.

New York State SARS Plan

- Section 4: Laboratory Diagnosis

Laboratory Testing

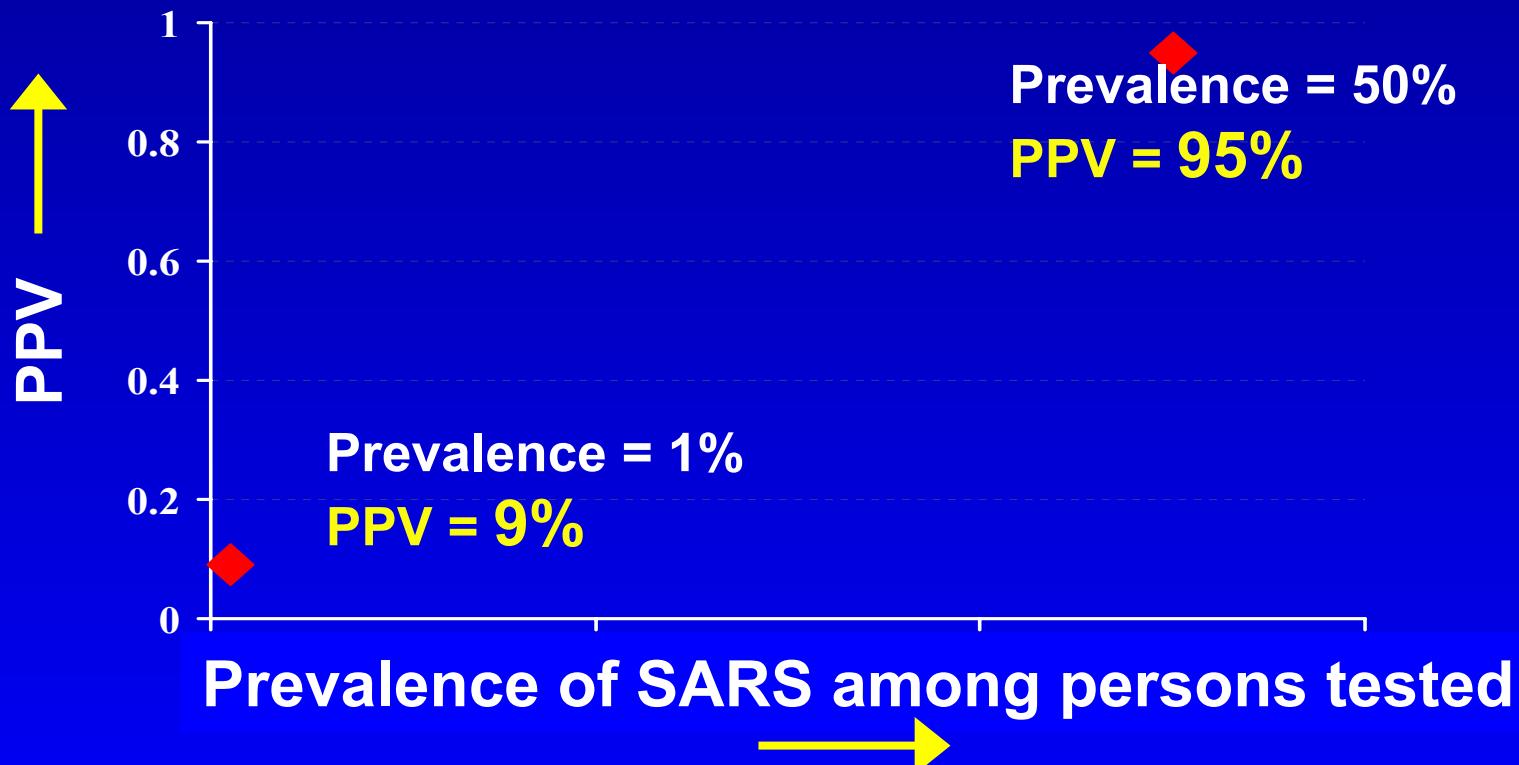
- Performed at Wadsworth
 - RT-PCR
 - Respiratory specimens, stool, blood/plasma
 - To maximize detection, test multiple specimens collected at different times
 - Enzyme-linked immunoassay (EIA)
 - Acute and convalescent serology (> 28 days post onset)
 - Rapid test and viral culture
 - After SARS Co-V has been ruled out

Laboratory Testing

- Informed consent
- SARS testing will only be performed on specimens from patients that:
 - Have been reported to the LHD And
 - Meet the case criteria
- SARS lab testing data will be available on ECLRS when
 - Specimen is received
 - Final results are available
 - Positive results will be telephoned to Bureau of Communicable Disease Control and LHD

Rationale for Limiting SARS-CoV Testing In setting of no or limited SARS activity

IF: Sensitivity of detecting SARS in clinical specimen = 50%
Specificity of test = 95%



PPV=positive predictive value

New York State SARS Plan

Section 5: Communication

Kris Smith

kas10@health.state.ny.us

518-474-5422

SARS Education Plan for the Public Health and Healthcare Communities

New York State Department of Health

SARS Education - LHDs

- Content Areas
 - Informed consent, including retrospective consent
 - Guidelines for provider reporting
 - Contact identification and tracing
 - Surveillance guidelines
 - Case definitions
 - Clinical guidelines
 - Diagnostic, treatment, prophylaxis

SARS Education - LHDs

- Content areas (cont.)
 - Infection control
 - Triage
 - PPE
 - Infection control precautions
 - Fit-testing
 - Environmental issues
 - Isolation and quarantine
 - Discharge planning
 - Home isolation

SARS Education - LHDs

- Content areas
 - Laboratory issues
 - Available tests
 - Specimen collection, packaging and shipping
 - Follow-up on specimen collection/tracking
 - Reporting
 - Rule-out-and-refer criteria

SARS Education – LHDs

- **Methodologies**
 - Written protocols
 - Posted on HIN/HPN/EMS websites
 - Distributed to laboratories, hospitals, healthcare community
 - Videoconferences
 - Postings on websites of other training partners
 - MSSNY
 - WML
 - NYSNA
 - HANYS

SARS Education – LHDs

- Integrated training activities
 - LHDs and hospitals
 - Hospitals and EMS
 - HMOs and hospitals

SARS Education - LHDs

- **Timeline**
 - Mid-end of November
 - Distribute protocols and post on websites
 - Arrange videoconferences
 - Work with training partners to coordinate education programs
- **For more information**
 - Pat Anders – pea02@health.state.ny.us
(518) 402-5023

New York State SARS Plan

Next Steps

- Feedback by November 14, 2003
Joan Cleary-Miron
jmc15@health.state.ny.us
518-473-4436
- “Final” plan by December 1, 2003