SUPPLEMENT D: COMMUNITY CONTAINMENT MEASURES, INCLUDING NON-HOSPITAL ISOLATION AND QUARANTINE

North Carolina Department of Health and Human Services, Division of Public Health

I. Rationale and Goals

"Community containment strategies, including isolation and quarantine, are fundamental measures that have been used for centuries to control the spread of communicable diseases."
CDC *Public Health Guidance for Community-Level Preparedness and Response to Severe Acute Respiratory Syndrome (SARS) Version 2 - Supplement D*
Overall Goals:

- 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 persons 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.

II. Concepts of the NC SARS Community Containment Plan

- Isolation and Quarantine are standard practices in public health; both aim to control exposures to infected or potentially infected persons, and both raise legal, social, financial, and logistical challenges that should be anticipated and addressed.
- Isolation applies to people who are known to have an illness, whereas quarantine applies to those who may have been exposed to an illness but are not ill.
- Quarantine is a collective action for the common good.
- Quarantine does not have to be mandatory, and compliance does not have to be 100% for the measure to be effective.
- Modern quarantine must be designed not only to prevent disease transmission in the community but also to ensure prompt delivery of medical care and support to exposed persons and to protect individual civil liberties.
- Effective implementation of quarantine measures requires a clear understanding of the roles and legal authorities of public health staff at local, state, and federal levels and cooperation and collaboration with traditional and non-traditional partners.
- Obtaining and maintaining public trust is key to successful implementation of these measures. Clear messages about the criteria, justification, role, and duration of quarantine and ways in which persons will be supported during the quarantine period will help to generate public trust.
- Measures such as cancellation of public events or the implementation of community "snow-days" can reduce the risk of exposure to SARS at the population level by limiting social interactions and preventing inadvertent exposures.
- Tracing and monitoring of contacts of SARS patients is resource intensive yet critical for containment and early recognition of illness in persons at greatest risk of becoming infected and transmitting infection to others.

III. Legal Authority

All state governments have the authority to enact laws and promote regulations to safeguard the health, safety and welfare of its citizens. Under “quarantine authority” or isolation this includes:

- Limiting movement of persons that have been exposed to a communicable disease or condition in order to prevent the spread of disease
- Limiting movement of persons who have not received immunizations required to control an outbreak of disease
- Limiting access to an area or facility that may be contaminated with an infectious agent

All local health directors have the power to order isolation or quarantine but should accomplish this in consultation with state public health authorities and the Centers for Disease Control and Prevention (CDC). The following laws apply:

- Restriction of access to quarantine or isolation premises unless authorized by the local health director. The intention is not to restrict the access of authorized health care personnel, law enforcement or EMS personnel from performing their duties. (G.S. 130A-145)
- ISOLATION ORDERS should not exceed 10 days. A person affected by a limitation may ask a superior court to review the limitation and the court must respond within 72 hours (excluding Saturdays and Sundays). (G.S. 130A-145)
- If the local health director determines that the limitation of movement or access must extend beyond 10 days, the local health director must ask a superior court to order an extension of the period of time. If the court concurs the limitation will not exceed 30 days. The local health director may ask the court to continue the limitation for additional periods of up to 30 days each. (G.S. 130A-145)
- Guidelines and recommended actions for prevention and the spread of SARS published by the Centers for Disease Control and Prevention (CDC) shall be the required control measures for SARS. (G.S. 130A-144 and 10A NCAC 41A .0213)

Existing law makes violations of such orders a misdemeanor (G.S. 130A-25). A person may be held by law enforcement when arrested for violation of an order until the individual's first appearance in court. The local health director's ISOLATION or QUARANTINE ORDER must indicate that the person must be detained in a designated place. Limitation of transmission of illness to others is the main objective.

When legal authority is initiated two copies of the agreement (ISOLATION ORDER or QUARANTINE ORDER) must be signed. The original is given to the individual being so ordered and a copy must be kept on file at the health department for law enforcement if required to enforce. Without the appropriate document, there are no legal grounds for enforcement.

IV. Isolation and Quarantine Practices for SARS

Isolation refers to any situation in which a person who is sick with a highly communicable disease is kept separate from others to prevent spread of the disease. Isolation is a common public health measure that can take place in a hospital, home, or other setting.

Quarantine refers to a situation in which a person who is not sick, but who may have potentially been exposed to a highly communicable disease, is kept apart from others or whose movements are restricted to prevent the spread of disease.

Both ISOLATION ORDERS and QUARANTINE ORDERS should detail the mandated activities of the individual during the period covered by the order. Appropriate control measures are described below for non-hospitalized SARS patients or contacts. Control measures for hospitalized patients will follow recommendations set forth by CDC and amplified in Supplement C of this document.

All SARS patients will be placed under an ISOLATION ORDER by public health authorities. SARS patients will remain under an ISOLATION ORDER until 10 days after fever resolves and respiratory symptoms are improving. Control measures on hospitalized patients will follow recommendations set forth by CDC and amplified in Supplement C of this document.

ISOLATION ORDERS will be issued on all patients who are tested by the NCSLPH or who are recommended for SARS Co-V testing by state public health officials. Additional ISOLATION ORDERS or quarantine measures may be implemented for close contacts with unprotected exposure to a SARS patient.

The "72 Hour" ISOLATION ORDER is used for an individual epidemiologically-linked to a SARS patient who has developed either cough or fever and must be closely monitored and separated from well individuals until symptoms either progress to meet the case definition for SARS or symptoms resolve.

V. Control Measures for Isolation of SARS patients in the Non-Hospitalized Setting

The object is to separate and confine patients with SARS during the period of communicability. This can be accomplished by limiting movement where known SARS patients are housed during the period of infectivity. Patients with SARS should be admitted to a facility only if clinically indicated or if they cannot be safely cared for in the home.

A. Minimum requirements for ISOLATION ORDER in the home

1. If patient is unable to self-care, must have a designated primary caregiver to assist patient
2. Telephone, electricity and water available and working

B. Specific Instructions for Health Care Providers and Local Public Health Staff when discussing Control Measures for all SARS patients, their caregivers and other close contacts

1. Counseling
   a. Counseling on infection control practices should be done initially by the health care providers and as soon as possible by local public health staff.
   b. Continue to reinforce control measures with each contact to the SARS patient or their contacts.
   c. Make information resources available such as those provided on the CDC web site.
   d. Assess availability of resources in the home to practice respiratory and hand hygiene measures.
   e. See http://www.epi.state.nc.us/epi/gcdc/infectioncontrol.html
2. Symptom Monitoring
   a. Non-hospitalized SARS patients should be medically monitored for progression of symptoms that may indicate a need for immediate hospitalization.
   b. All close contacts of SARS patients should check their temperature twice a day and keep a record. If temperature increases above 100.4 F, they should contact the local health department and/or seek medical attention immediately.
3. Patient Environment
   a. Household waste soiled with secretions (tissues, masks) may be discarded with the normal trash. See http://www.cdc.gov/ncidod/sars/guidance/I/index.htm.
4. If possible, other household members should be relocated if not involved in caring for the patient. If this is not possible, contact with the patient should be limited. Persons with chronic illnesses or those that may be immuno-compromised should not have contact with the infected individual (i.e., heart lung disease, diabetes, the elderly, cancer, compromised HIV, etc.).

C. Specific Instructions for non-hospitalized SARS patients

1. "Follow these instructions until 10 days after your fever has gone away and your respiratory symptoms are improving."
2. "Cooperate with the local health department in monitoring your illness, as well as illness in household members and close contacts."
3. "If during the 10 days your symptoms become worse, seek medical attention."
4. "Be sure to contact your healthcare provider beforehand to let them know you may have been exposed to SARS so arrangements can be made, as necessary, to prevent transmission to others in the healthcare setting."
5. "Do not go to work, school, child care, community gatherings, or other public areas, and limit all activities outside the home."
6. "Wash your hands often and well, especially after you have blown your nose."
7. "Cover your mouth and nose with a tissue when you sneeze or cough".

8. "If possible, wear a surgical mask when in close contact with uninfected persons. If you can't wear a mask, the members of your household and other uninfected people should wear one when they are around you."
9. "Don't share silverware, towels, or bedding. Don't reuse these items until they have been washed with soap and hot water."
10. "Clean surfaces (counter or tabletops, doorknobs, bathroom fixtures, etc.) that have been contaminated by your body fluids (sweat, saliva, mucous, vomit or urine) with a household disinfectant used according to the manufacturer's instructions. Wear disposable gloves during all cleaning activities. Throw these gloves away when you are done. Do not reuse them."

Sample ISOLATION ORDER templates are provided in Appendix D-1 (10 day) and Appendix D-2 (72 hour)

VI. Isolation Of SARS Patients In Designated Community Facilities

In the event that the number of SARS patients overwhelms the medical community or if home isolation is not feasible, designate an alternative facility in the community. The following should be taken into consideration:

- Sufficient space with water, electricity, storage, and parking.
- Temporary (i.e., trailers, bubble systems) or existing facilities (community centers, schools, dormitories, apartments) may be used.

Establish priorities with the following features:

- Separate patient rooms with independent ventilation for each room when possible.
- Separate bathrooms when possible
- Room for storage of supplies
- Staff and security

Local communities should discuss and plan for this possibility as a component of their county emergency preparedness plans.

VII. Control Measures and Monitoring for Individuals in Quarantine

Local public health authorities will recommend quarantine of individuals who have had unprotected exposure to a SARS patient. Compliance with a recommendation for quarantine is mandatory, not voluntary. If an individual refuses or is unable to adhere to the recommended quarantine measures, the local health director may choose to issue a QUARANTINE ORDER. Law enforcement is responsible for monitoring compliance to the order. Quarantine is used for:

- Individuals with close contact (household or other close personal contacts)
- Small groups with close contact (coworkers, healthcare workers with unprotected exposure)
- Large groups (social groups)
- Communities with potential exposure (college dormitories)

Quarantine will be put into place to reduce transmission of SARS by separating exposed individuals from others or limiting their mobility and monitoring them for signs and symptoms.

All individuals who have a known, unprotected exposure to a SARS patient should check their temperature twice a day and keep a record on a piece of paper for 10 days after last exposure. They should seek medical attention immediately if an increase in temperature above 100.4 F occurs or if respiratory symptoms occur.

The local health department should maintain a line listing of all individuals placed under quarantine (see Appendix B-1). A health department staff member should be designated to contact all contacts daily to monitor for increased temperatures or respiratory symptoms. In the case of healthcare facilities, the

employer should monitor its own employees and the local health department should communicate daily with the healthcare facility designee to update the line listing.

Telephone monitoring is the first choice for monitoring of quarantined individuals. Other choices include e-mail and personal visits.

The Public Health Regional Surveillance Team, Regional TB Nurse Consultants, and the HIV-STD disease intervention specialists are potential resources in contact tracing and/or active surveillance when working in a surge capacity.

A sample QUARANTINE ORDER template is provided in Appendix D-3.

VIII. Community-Based Control Measures

Objective: Reduce the risk of transmission of SARS-CoV at the population level by limiting social interactions or preventing inadvertent exposures.

Community-based control measures are designed to reduce the risk of SARS at the population level by either decreasing social interactions (e.g., canceling public events, scaling back public transit schedules, implementing community "snow-days") or by implementing mass measures that might prevent inadvertent SARS exposures (e.g., temperature monitoring in public places; use of masks). It should be noted, however, that the effectiveness of these mass measures has not been completely evaluated. The decision to institute community containment measures and the nature and scope of the measures should be decided based on the extent of the outbreak and the availability of resources. Factors to consider in determining thresholds for community action include:

1. Number of cases and contacts
2. Characteristics of local transmission
    a. Extent of spread
    b. Whether source is known
    c. Generations of transmission
    d. Rapidity of spread
3. Exposure categories of cases and contacts
    a. Travel
    b. Healthcare worker
    c. Household
    d. Other
    e. Unlinked
4. Morbidity and mortality
5. Movement into or out of the community
6. Local healthcare and public health resources
7. Level of public cooperation and trust vs. risk of public panic

Basic Activities

- Provide community information and education about SARS. Its spread. And how to prevent spread
- Promote "respiratory hygiene" and handwashing

Enhanced Activities

- "Snow-days" or "shelter in place"
- Suspension of public gatherings
- Temperature monitoring in public buildings and places
- Recommended or mandatory mask use
- Closing of public buildings and spaces
- Cancellation of events
- Closing of non-essential government functions (public libraries, DMV)

- Request voluntary or mandate closing of businesses and institutions (e.g., schools)
- Curfews
- Restrictions on travel (air, rail, water. Motor, pedestrian)
- Closing or scaling back of mass transit
- Geographic or population-based movement restrictions

In North Carolina, the decision to implement enhanced community-based control measures would be made at the highest level of state government in consultation with state public health officials and the Centers for Disease Control and Prevention (CDC). In the event of mass casualty or mass fatality due to SARS, the Governor would issue an emergency proclamation order and the NC Public Health Preparedness and Response Plan would be activated at Level IV (see Supplement A: Command and Control).