



Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

Appendix D1

Interventions for Community Containment

Contacts of SARS patients can be managed by use of a range of interventions, all of which are designed to facilitate early recognition of illness in persons at greatest risk of becoming infected and thereby to prevent transmission to others. Whereas many of these interventions are applied individually to persons identified as contacts of a person with possible or known SARS-CoV disease, others are applied to larger groups of persons, or communities, who share a similar risk of exposure. The interventions include the following:

Passive Monitoring

Definition	The contact is asked to perform self-assessment at least twice daily and to contact authorities immediately if respiratory symptoms or fever occur
Application	Situations in which 1) the risk of exposure and subsequent development of disease is low, and 2) the risk to others if recognition of disease is delayed is also low.
Benefits	Requires minimal resources Places few constraints on individual freedoms
Challenge	Relies on self-reporting Affected persons may not perform an adequate self-assessment
Resources Required	Supplies (thermometer; symptom log; written instructions) Hotline to notify authorities about symptoms or needs Staff to receive telephone reports and provide in-person evaluation and care
Partners	Household members
Forms/Templates	Symptom logs Instructions for patients and healthcare workers

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Active Monitoring without Explicit Activity Restrictions

<i>Definition</i>	A healthcare or public health worker evaluates the contact on a regular (at least daily) basis by phone and/or in person for signs and symptoms suggestive of SARS-CoV disease
<i>Application</i>	Situations in which 1) the risk of exposure to and subsequent development of disease is moderate to high, 2) resources permit close observation of individuals, and 3) the risk of delayed recognition of symptoms is low to moderate
<i>Benefits</i>	Places few constraints on individual liberties
<i>Challenges</i>	Requires adequate staffing Requires a system to track information and to verify monitoring and appropriate actions based on findings
<i>Resources Required</i>	Trained staff to provide in-person and/or telephone evaluations Contingency plans for managing noncompliant persons Contingency plans for rapid isolation of persons who develop symptoms Hotline to notify authorities about symptoms or needs
<i>Partners</i>	Professional and lay healthcare workers to perform evaluations on behalf of the health department Possible need for law enforcement to assist with management of noncompliant persons
<i>Forms/Template</i>	Checklist for assessment of active monitoring Template for recording results of clinical evaluation

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Active Monitoring with Activity Restrictions (Quarantine)

Definition

The contact remains separated from others for a specified period (generally 10 days after potential exposure), during which s/he is assessed on a regular basis (in person at least once daily) for signs and symptoms of SARS-CoV disease. Persons with fever, respiratory, or other early SARS-CoV symptoms (See MMWR 52(49):1202-1206 [www.cdc.gov/mmwr/preview/mmwrhtml/mm5249a2.htm]) require immediate evaluation by a trained healthcare provider. Restrictions may be voluntary or legally mandated; confinement may be at home or in an appropriate facility.

No specific precautions are required for those sharing the household with a person in quarantine as long as the person remains asymptomatic. However, because onset of symptoms may be insidious, it may be prudent to minimize interactions with household members during the period of quarantine.

Application

Situations in which the risk of exposure and subsequent development of disease is high and the risk of delayed recognition of symptoms is moderate

Benefits

Reduces risk of spread from persons with subacute or subclinical presentations or from delayed recognition of symptoms

Challenges

Infringes on personal freedom of movement
May lead to a feeling of isolation from family and friends
May lead to loss of income or employment
Requires plans/protocols for provision of essential services
Requires plan for provision of mental health support
Risk of noncompliance, particularly as duration increases
May require enforcement for noncompliance

Resources Required

Staff for monitoring and evaluation
Appropriate facility if home setting is unavailable or inadequate
Staff, funding, goods for provision of essential services
Hotline for notification of symptoms or personal needs
Mechanisms to communicate with family members outside the household or facility
Mental health and social support services
Delivery systems for food and other essential supplies

Partners

Professional and lay healthcare workers to perform assessments on behalf of the health department
Community volunteers/workers to assist with provision of essential services
Potential need for law enforcement to assist with noncompliant persons

Forms/Templates

Checklist for active monitoring
Template for recording results of clinical evaluation
Checklist and guidelines for evaluation of homes for quarantine
Checklist and guidelines for evaluation of community-based sites for quarantine

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Guidelines for monitoring compliance with home quarantine

Guidelines for monitoring compliance with quarantine in community-based facilities

Forms for recording compliance with quarantine

Examples

Home quarantine (voluntary or mandatory)

Facility quarantine (voluntary or mandatory)

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Working Quarantine

<i>Definition</i>	Persons are permitted to work but must observe activity restrictions while off duty. Monitoring for fever and other symptoms before reporting for work is usually required. Use of appropriate PPE while at work is required.
<i>Application</i>	Persons for whom activity restrictions (home or facility quarantine) are indicated but who provide essential services (e.g., healthcare workers)
<i>Benefits</i>	Reduces risk of community spread from high-risk contacts while minimizing adverse impact of activity restrictions on provision of essential services Clinical monitoring at work reduces the staff required for active monitoring at the quarantine site
<i>Challenges</i>	Need for close and consistent pre-shift monitoring at the work site to prevent inadvertent exposures May require means of transporting persons to and from work site to minimize interactions; persons in working quarantine should wear appropriate PPE during transport. Must maintain close cooperation and communication between work-site and local health authorities
<i>Resources Required</i>	Appropriate facility for off-duty quarantine if home is unavailable or inadequate Staff, funding, goods for provision of essential services Hotline for notification of symptoms and personal needs System to track results of work-site monitoring and location(s) of off-duty quarantine Mental health and psychosocial support services, especially if work includes care of SARS patients
<i>Partners</i>	Work-site administrators and infection control personnel Community volunteers/workers Staff/volunteers to assist with transportation to and from work Potential need for law enforcement to assist with noncompliant persons
<i>Forms/Templates</i>	Guidelines and instructions for persons in working quarantine Instructions for supervisors of persons in working quarantine Checklist to evaluate homes for quarantine Guidelines for monitoring compliance Checklist for active monitoring at work site Template for recording results of clinical evaluation Forms for recording compliance

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Focused Measures to Increase Social Distance

<i>Definition</i>	Intervention applied to specific groups, designed to reduce interactions and thereby transmission risk within the group. When focused, the intervention is applied to groups or persons identified in specific sites or buildings, most but not necessarily all of whom are at risk of exposure to SARS-CoV
<i>Application</i>	Groups or settings where transmission is believed to have occurred, where the linkages between cases is unclear at the time of evaluation, and where restrictions placed only on persons known to have been exposed is considered insufficient to prevent further transmission
<i>Benefits</i>	Applied broadly, reduces the requirement for urgent evaluation of large numbers of potential contacts to determine indications for activity restrictions. May enable reductions in transmission among groups of persons without explicit activity restrictions (quarantine)
<i>Challenges</i>	May be difficult to solicit cooperation, particularly if popular buildings are closed or popular events are cancelled Requires excellent communication mechanisms to notify affected persons of details and rationale May need to provide replacement for affected activities (e.g., school, essential services) Generally relies on passive monitoring
<i>Resources Required</i>	Systems to communicate relevant messages May require enforcement, particularly if closure of popular buildings or gathering places is necessary Requires resources for passive monitoring Hotlines to report symptoms and obtain follow-up instructions Transportation for medical evaluation, with appropriate infection control precautions
<i>Partners</i>	News media and communication outlets Law enforcement Community groups
<i>Forms/Templates</i>	Messages for affected persons Messages for employers of affected persons Messages for persons supplying essential services
<i>Examples</i>	Closure of schools or office buildings Suspension of public markets

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Community-Wide Measures to Increase Social Distance

<i>Definition</i>	Intervention applied to an entire community or region, designed to reduce personal interactions and thereby transmission risk. The prototypical example is implementation of a "snow day," in which offices, schools, transportation systems are cancelled as for a major snowstorm.
<i>Application</i>	All members of a community in which 1) extensive transmission of SARS-CoV is occurring, 2) a significant number of cases lack clearly identifiable epidemiologic links at the time of evaluation, and 3) restrictions on persons known to have been exposed are considered insufficient to prevent further spread
<i>Benefits</i>	Reduces need for urgent evaluation of large numbers of potential contacts to determine indications for activity restrictions May enable reductions in transmission among groups without explicit activity restrictions (quarantine) "Snow days" are familiar concepts and thus easy to implement on short notice
<i>Challenges</i>	May be difficult to solicit cooperation Requires excellent communication mechanisms to notify persons of details and rationale May need to provide replacement for affected activities (e.g., school, essential services) May need to address mental health and financial support issues When an entire community is involved, requires cooperation with neighboring jurisdictions that may not be using a similar intervention, particularly in situations where persons live in one city and work in another and only one locale is affected by the intervention. Generally relies on passive monitoring
<i>Resources Required</i>	Communication outlets Enforcement Resources for passive monitoring Hotlines and other communication systems to report symptoms and obtain follow-up instructions Transportation for persons requiring medical evaluation, with appropriate infection control precautions
<i>Partners</i>	News media and other communication outlets Law enforcement Transportation officials to enforce restrictions (e.g., closure of bridges, roads, or mass transit systems), plan detours, and maintain critical infrastructure supplies
<i>Forms/Templates</i>	Messages for affected persons Messages for employers of affected persons Messages for persons supplying essential services
<i>Examples</i>	Community-wide "snow day"

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Scaling back of mass transportation
Closure of bridges and tunnels
Closure of schools and work sites

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Widespread Community Quarantine, Including Cordon Sanitaire

Definition

Legally enforceable order that restricts movement into or out of the area of quarantine of a large group of people or community; designed to reduce the likelihood of transmission of SARS-CoV among persons in and to persons outside the affected area. When applied to all inhabitants of an area (typically a community or neighborhood), the intervention is referred to as *cordon sanitaire* (sanitary barrier).

Application

All members of a group in which 1) extensive transmission is occurring, 2) a significant number of cases lack identifiable epidemiologic links at the time of evaluation, and 3) restrictions placed on person known to have been exposed are considered insufficient to prevent further spread. Widespread quarantine is unlikely to be necessary because other less restrictive measures (e.g., snow days) may be equally effective.

Benefits

Reduces need for urgent evaluation of large numbers of potential contacts to determine indications for activity restrictions

Challenges

Most extreme of the potential containment measures
May be controversial because of infringement on personal liberties
May be difficult to solicit cooperation for extended periods, particularly if the rationale is not readily apparent or was not clearly explained
Requires excellent communication mechanisms to inform affected persons and to maintain public confidence in the appropriateness of the chosen course of action
May need to provide replacements for affected activities (e.g., school, essential service providers)
Must address mental health and financial support for affected population
When an entire community is involved, requires cooperation with neighboring jurisdictions that may not be using a similar intervention, particular in situations where persons live in one city and work in another and only one locality is affected by the intervention
Generally relies on passive monitoring
Need to provide mechanisms for isolating symptomatic persons with minimal delay

Resources Required

Systems to communicate relevant messages
Will likely require enforcement to maintain security at borders
Resources for passive monitoring
Transportation for persons requiring medical evaluation, with appropriate infection control precautions
Staff and supplies to maintain access to and availability of essential services and goods, including food, water, medicine, medical care, utilities
Plan to divert flow of critical infrastructure supplies and materials that normally transit through quarantined area

Partners

News media and other mass communication outlets
Public and private groups, industries, and officials to coordinate supply and provision of essential services to affected area

Supplement D: Community Containment Measures, Including Non-Hospital Isolation and Quarantine

(continued from previous page)

Law enforcement to maintain security at borders and to enforce movement restrictions

Transportation industry

Forms/Templates

Messages for affected persons

Messages for employers of affected persons

Messages for persons supplying essential services

Examples

Quarantine (*cordon sanitaire*) of a city or town

Quarantine of occupants of a housing complex or office building

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)