



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

V. Community-Based Control Measures

Whereas decisions on use of containment measures in individual situations depend primarily on the characteristics of the exposure and the affected contact, the decision to institute broader use of community measures is more complex. The different options – e.g., active monitoring with voluntary activity restrictions, legally mandated quarantine, institution of snow days – will vary in their effectiveness in controlling the outbreak and their impact on personal liberties. Other measures that might prevent inadvertent SARS-CoV exposures (e.g., temperature monitoring in public places; use of masks) should also be considered. Decisions should be based primarily on the epidemiologic characteristics of the outbreak. Other considerations will include the healthcare and public health resources available and the level of community cooperation (see Appendix D4).

Local officials will face enormous logistic, economic, ethical, and psychological challenges in implementing community-level containment measures. Preparedness planning should include development of essential partnerships to address: 1) provision of essential services and support (e.g., food, household and medical supplies, medical attention, caretaking, continuation of work/school via telecommuting or home-based curricula, financial support), 2) mental health (e.g., stigma management and prevention, psychological support), and 3) enforcement (e.g., controlling entry into and exit from narrowly defined geographic areas; border surveillance/monitoring; travel permits and credentials).

Even with the most comprehensive planning, however, officials must be prepared to make decisions on the basis of incomplete or inadequate information and to modify strategies as the situation unfolds. Although control measures should never be used indiscriminately or in a manner out of proportion to the situation, undue caution should not inhibit the bold and swift implementation of the interventions upon which effective control depends.

Objective 1: Reduce the risk of transmission of SARS-CoV at the community level by implementing large-scale measures that limit social interactions and prevent inadvertent exposures.

Activities

- Implement community containment measures based on the epidemiologic characteristics of the outbreak, according to the graded response outlined in the Box below.
- In the absence of SARS-CoV transmission in the world, activities should focus on *preparedness, planning and surveillance* for the first case(s). Public health and healthcare officials should provide community members with information about SARS and promote hand hygiene and respiratory hygiene/cough etiquette (See Supplement C).

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<i>Level of SARS activity</i>	<i>Response</i>
No SARS-CoV transmission globally	Preparedness planning
SARS-CoV transmission in the world, but all cases Locally either are imported or have an identifiable epidemiologic link to other cases at the time of initial evaluation	Passive or active surveillance/monitoring of contacts
SARS activity in the area, with either a small number of cases in persons without an identifiable epidemiologic link at the time of initial evaluation or increased occurrence of SARS among known contacts	Quarantine of close contacts
SARS activity in the area, with a large number of cases in persons without an identifiable epidemiologic link at the time of initial evaluation; control measures are believed to be effective	Focused measures to increase social distance; consider community-level measures to increase social distance
SARS activity in the area, with a large number of cases in persons without an identifiable epidemiologic link at the time of initial evaluation; control measures are believed to be ineffective	Community-level measures to increase social distance; consider community-wide quarantine.
Decreases in the number of new cases, unlinked (or "unexpected") cases, and generations of transmission	Quarantine of contacts
Transmission has been controlled/eliminated; no new cases reported	Active monitoring in high-risk populations; Continue for 2-3 incubation periods after control or elimination of transmission.

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- If SARS-CoV transmission is occurring in the world but the United States is reporting only a few imported cases and no or limited local transmission from those cases, then officials in areas with SARS cases should consider passive (at minimum) or active *monitoring of close contacts*. Although active monitoring promotes early identification of non-specific or insidious symptoms and reliable assessment of fever and symptoms, it also requires substantial resources. Local conditions therefore may dictate at least initial use of passive monitoring, particularly in the management of contacts with lower-risk exposures. For persons with high-risk exposures (e.g., healthcare workers with unprotected exposure to a SARS case, especially during a high-risk procedure), home quarantine with either passive or active monitoring may be considered.
- Jurisdictions should consider *more restrictive measures* for any of the following situations:
 - Identification of cases without known epidemiologic links (i.e., cases occurring in persons who, at the time of diagnosis, are not known to have had contact with a known SARS case or exposure to a known transmission setting)
 - Increasing number of cases among contacts of SARS patients
 - Significant interval between the onset of symptoms and the isolation of cases
 - Inadequate resources for continued isolation of cases and tracing and monitoring of contacts

Measures to be considered include *quarantine of close contacts*, such as family members or healthcare workers who provided care to SARS patients. This approach has the advantage of limiting the use of quarantine to those at greatest risk, but implementation requires time, effort, and availability of skilled interviewers.

Whenever possible, contacts should be *quarantined at home*. Home quarantine requires the fewest additional resources, although arrangements must still be made for monitoring patients, reporting symptoms, transporting patients for medical evaluation, and providing essential supplies and services.

In some cases, affected persons may not have access to an appropriate home environment for quarantine. Examples include travelers; persons living in dormitories, homeless shelters, or other group facilities; and persons whose homes do not meet the minimum requirements for quarantine. In other instances, contacts may have an appropriate home environment but may not wish to put family members at risk. In these situations, health officials should identify a *facility with the appropriate characteristics for quarantine of contacts*. Monitoring may be either passive or active, although active monitoring may be more appropriate in a facility setting.

- Jurisdictions with large numbers of cases without known epidemiologic linkages should consider instituting *measures to increase social distance*. Identification of an unlinked case can mean either that transmission is occurring from undetected cases or that contact tracing efforts are not identifying all potential contacts. Increasing social distance can reduce the likelihood that unexposed community members will be exposed to SARS-CoV and that persons who have already been exposed will unknowingly transmit to others if they become symptomatic. Interventions to increase social distance are usually applied to groups of persons in settings where there might have been exposure to SARS-CoV (e.g., a school in which several cases of SARS have been diagnosed). In a community with ongoing transmission, these measures may be applied to settings without known exposure (e.g., cancellation of concerts or sporting events; restricted use of public transportation).

The “snow day” approach may be an effective way to increase social distance and reduce transmission because it is a concept with which most Americans are familiar. This intervention

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would likely be instituted for an initial 10-day period, with final decisions on duration based on assessment of current epidemiologic information. Other community-level measures, such as community-wide temperature monitoring, temperature screening before entering public buildings, or recommended or mandatory mask use, may also be considered. Although the effectiveness of these interventions has not been quantified, they might enhance public awareness and facilitate early detection of cases.

- In extreme circumstances, when control measures do not appear to be effective or resources are overwhelmed, more restrictive measures such as *widespread or community-wide quarantine* may be considered.

Objective 2: Scale back community containment measures as soon as appropriate.

Communities may scale back community containment measures as the outbreak comes under control. For example, with significant declines in the number of new cases, unlinked cases, and generations of transmission, the community measures can be halted and efforts can be refocused on quarantine of known contacts.

The process by which community containment measures are lifted requires as much thought and planning as their implementation. When applied to individuals, movement restrictions such as quarantine can be removed as soon as the exposed contact has remained without signs or symptoms of disease for a complete incubation period for SARS-CoV disease (i.e., 10 days).

A decision to discontinue the broader use of community-level measures is more complex. A decision on the optimal time to remove these measures must balance the need to restore personal liberties against community safety. Premature removal of containment strategies can increase the risk of additional transmission and recurrent outbreaks. Decisions should be based on evidence of improving local/regional control, such as 1) consistent decrease in the number of confirmed cases, 2) reduction in the number of probable and known cases, and 3) confirmation that all cases either were imported or have a known source or well-defined epidemiologic link.

Activities

- When there is reasonable evidence of improved control of the outbreak, discontinue quarantine of contacts of persons meeting the criteria for SARS RUI (see MMWR 52(49):1202-1206 [www.cdc.gov/mmwr/preview/mmwrhtml/mm5249a2.htm]). Continue quarantine of contacts of persons with probable or confirmed SARS-CoV disease, particularly those with known exposures or well-defined epidemiologic links.
- When three incubation periods have elapsed since the last reported confirmed case of SARS-CoV disease, discontinue quarantine of contacts. Also discontinue maintenance of designated facilities for quarantine.
- As soon as appropriate, discontinue use of community-level containment measures. Withdraw the most stringent measures (e.g., geographic or population-based movement restrictions, mass transit interruptions, travel restrictions) first. Begin scaling back community-level measures when three incubation periods have elapsed after identification of the last unlinked or probable case of SARS-CoV disease (i.e., all cases are imported or have known exposures or well-defined epidemiologic links).

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)