



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

I. Rationale and Goals

Community containment strategies, including isolation and quarantine, are fundamental public health measures used to control the spread of communicable diseases. All such strategies have in common the primary goal of preventing person-to-person spread of disease by separating those with disease or at increased risk for developing disease from those at lower risk. Although the terms “isolation” and “quarantine” have often been used interchangeably, they actually represent distinct concepts (see Box).

Isolation is a commonly used practice in modern public health. Isolation refers to the separation of ill persons with a communicable disease (e.g., *SARS patients*) from those who are healthy. A prototypical example is the isolation of persons with potentially infectious tuberculosis. Isolation not only prevents transmission of infection to others but also allows for the focused delivery of specialized health care to ill persons. SARS patients can be isolated in a hospital, at home, or in a designated community-based facility.

Quarantine is the separation or restriction of activities of persons who are not ill but who are believed to have been exposed to a communicable disease and are therefore at highest risk of becoming infected (e.g., *close contacts of SARS patients*¹). Although rarely used in the modern era -- due in part to the advent of antibiotics and antiviral agents and to the negative connotations associated with past use -- quarantine and other community containment strategies were valuable for the control of the 2003 global SARS outbreaks.

Contacts of SARS patients can be managed through a range of strategies, all of which are designed to facilitate early recognition of illness in persons at high risk and thereby to prevent transmission to others. Key to each of these strategies is the ability to closely monitor contacts of SARS patients for the onset of symptoms. Monitoring may be *passive*, in which contact themselves report the appearance of symptoms, or *active*, in which healthcare officials periodically assess contacts for symptoms.

In this document, “quarantine” refers to interventions -- either voluntary or compulsory -- in which active monitoring is accompanied by a restriction on the activities of persons exposed to SARS-CoV to prevent transmission if they develop SARS-CoV disease. Quarantine may also have a specific legal definition that may differ among jurisdictions based on applicable laws. Although quarantine, by definition, restricts some personal liberties, it is a collective action implemented for the common good. Modern quarantine is predicated on the need to aid persons who are infected with or exposed to infectious agents while protecting others from the dangers of inadvertent exposure. As such, it differs substantially from the quarantine of the past.

In addition to separating exposed persons from unexposed persons, quarantine can have other potential benefits. For diseases, such as measles, that can be transmitted from asymptomatic persons (i.e., persons who appear healthy and have not yet developed symptoms), quarantine can reduce the risk of

¹ Close contact: A person who has cared for or lived with a person with SARS-CoV disease or had a high likelihood of direct contact with respiratory secretions and/or body fluids of a person with SARS-CoV disease. Examples of close contact include kissing or hugging, sharing eating or drinking utensils, talking within 3 feet, and direct touching. Close contact does not include activities such as walking by a person or briefly sitting across a waiting room or office.

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further spread. Although transmission from asymptomatic persons is considered unlikely for SARS-CoV disease, symptom onset may be insidious and quarantine can reduce the risk of transmission from those in whom symptoms are yet to be recognized and acknowledged. In addition, restricting the activities of exposed but asymptomatic persons should facilitate careful monitoring of these persons for development of symptoms and thereby reduce delays in their recognition. In this way, closer follow-up can expedite the implementation of appropriate precautions, thereby preventing additional transmission. The utility of quarantine in this context is to:

- Identify through contact tracing those at greatest risk for the onset of SARS symptoms,
- Separate them from others by restricting their movements,
- Actively monitor them, and
- Rapidly institute appropriate isolation procedures as soon as symptoms are detected.

In this way, quarantine reduces both the period during which transmission might occur and the number of persons who might be exposed during this period.

Whereas isolation and contact management strategies such as active monitoring are directed to individuals, broader *community containment measures* may be applied to groups of persons or to communities during outbreaks characterized by extensive transmission. These interventions range from *measures to increase social distance* among community members (e.g., cancellation of public gatherings, use of masks, implementation of community-wide “snow days”) to *community-wide quarantine*.

Although all of these interventions are designed to prevent transmission by limiting social interactions and preventing inadvertent exposures, the less stringent actions may be easier to implement on a large scale. For example, in the “snow day” approach, community members are asked to stay home as they would during a major snowstorm. Schools are closed, work sites are closed or restricted, large public gatherings are cancelled, and public transportation is halted or scaled back. Implementation requires fewer resources than are needed to activate and maintain community-level quarantine. In addition, as snow days are a familiar concept in most communities, implementation can occur quickly. Implementation of quarantine, on the other hand, can be resource intensive, requiring mechanisms for enforcement and provision of necessities. Snow days and other measures to increase social distance are therefore the preferred community-level responses, with quarantine reserved for situations in which less drastic measures have not been successful in containing an outbreak.

Appendix D1 provides detailed descriptions of the interventions for community containment, including definitions, applications, benefits, challenges, and required resources. Answers to frequently asked questions about community containment measures, including quarantine, are provided in Appendix D2.

Although isolation, quarantine, and other containment measures are optimally performed voluntarily, many levels of government (local, state, federal) have the legal authority to compel mandatory isolation and quarantine of persons and communities to protect the public’s health. (See Supplement A and Section VI: Enforcement of Community Containment Measures.)

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)