



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

### II. Lessons Learned

During the 2003 epidemic, the community containment strategy for the United States consisted mainly of coordinating SARS response activities through CDC's Emergency Operations Center and providing information and education to the public, healthcare workers, and others. Activities included issuing guidelines and fact sheets, holding press conferences, and meeting with groups and communities to address their concerns about stigmatization. CDC also recommended isolation of SARS patients until they were believed to be no longer infectious. This practice allowed patients to receive appropriate care and helped contain the spread of infection. Severely ill persons were cared for in hospitals; those with mild illnesses were cared for at home. Sick persons in home isolation were asked to avoid contact with others and to remain at home until 10 days after the resolution of fever, provided respiratory symptoms were absent or improving. In the United States, where there was little or no transmission of SARS-CoV, neither individual nor population-based quarantine of contacts was recommended. CDC advised persons who were exposed but not symptomatic to monitor themselves for symptoms and advised home isolation and medical evaluation if symptoms appeared.

Large-scale quarantine was used for the first time in decades in several countries that were severely affected by the 2003 SARS outbreak. Strategies included quarantine of close contacts in healthcare and household settings, work and school contacts, travelers arriving from other SARS-affected areas, and, in some cases, of entire apartment complexes or areas of a city. Other strategies used to control and prevent SARS-CoV transmission in these countries included 1) requiring fever screening before entry to schools, work sites, and other public buildings, 2) requiring use of face masks in certain settings, such as public transportation systems, 3) implementing population-wide temperature monitoring and SARS fever hotlines and referral services, and 4) implementing community-level disinfection strategies.

The impact and effectiveness of individual isolation and quarantine measures and community- and population-level interventions undertaken to contain the SARS epidemic globally are not yet fully understood, but some important generalizations can be made. Overall, strategies associated with timely and successful control of local outbreaks were characterized by rapid and aggressive use of case and contact identification and community containment strategies. Other lessons learned from this modern experience with community containment include the following:

- Most, but not all, SARS patients have a clear history of exposure to another SARS patient or to a specific setting with recognized SARS-CoV transmission.
- Strict infection control measures are needed for isolation of SARS patients; these may be difficult to implement in home and community settings.
- Tracing and monitoring of contacts of SARS patients are resource intensive but critical to the containment and early recognition of illness in persons at greatest risk for development of disease.
- Community control measures such as cancellation of public events and other "snow day" measures may reduce the risk of exposure to SARS-CoV at the population level by limiting social interactions.
- Although quarantine of individual contacts was an integral part of SARS control in most settings, quarantine of large groups was used only in selected settings where transmission was extensive.
- To be effective, quarantine does not have to be mandatory and compliance does not have to be 100%; voluntary compliance with quarantine requests was >90% in most settings.

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- A variety of quarantine strategies (e.g., home quarantine, working quarantine) may be used, depending on specific needs.
- Isolation and quarantine raise legal, social, financial, and logistical challenges (e.g., financial support, provision of services, prevention of stigma) that should be anticipated and addressed. Meeting the social, financial, and psychological needs of persons with SARS and their contacts is key to the successful application of containment measures.
- Effective implementation of quarantine requires a clear understanding of the roles and legal authorities of local, state, and federal public health officials.
- Effective implementation of quarantine requires identification of appropriate traditional and non-traditional partners (e.g., law enforcement) and their engagement in coordinated planning and response.
- The financial, social, and psychological impact of quarantine measures is substantial; preparedness planning should include measures to reduce this impact.
- Obtaining and maintaining public trust are key to successful implementation of these measures; clear messages about the criteria and justification for and the role and duration of quarantine and ways in which persons will be supported during the quarantine period will help generate public trust.

### Isolation and Quarantine

**Isolation** is the separation and restriction of movement or activities of ill infected persons who have a contagious disease, for the purpose of preventing transmission to others.

- 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.

**Quarantine** is the separation and restriction of movement or activities of persons who are not ill but who are believed to have been exposed to infection, for the purpose of preventing transmission of diseases.

- 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 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 (*cordon sanitaire*) with strict enforcement to prohibit movement into and out of the area.

Isolation and quarantine are optimally performed on a voluntary basis, in accordance with instructions of healthcare providers and health officials. However, many levels of government (local, state, federal) have the basic legal authority to compel mandatory isolation and quarantine of individuals and communities when necessary to protect the public's health.

For more information, visit [www.cdc.gov/ncidod/sars](http://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)