

# **Guide C, Part 2:**

# **Quarantine Guidelines**

# QUARANTINE MEASURES AS PART OF THE RESPONSE TO A SMALLPOX EMERGENCY

**Quarantine is defined as the restriction of activities or limitation of freedom of movement of those presumed exposed to a communicable disease in such a manner as to prevent effective contact with those not so exposed. Although quarantine measures may be instituted and enforced for both individual persons and populations, the term is used more frequently to discuss measures undertaken at a population-wide level.**

## I. Quarantine Law

Tabletop exercises and simulated bioterrorism events such as the TOPOFF exercise and Dark Winter, have demonstrated a number of important vulnerabilities and challenges to be addressed to strengthen the ability of public health agencies to respond to and counter the threat of biological weapons in the future. One of the challenges is to evaluate and assure that relevant law can support appropriate and effective responses and state and federal governments can implement legal authorities into the actions needed to respond to a bioterrorism event. Limited experience with the application and success of various quarantine measures precludes inclusion of standardized guidelines for the implementation of such measures during a bioterrorism event at this time. However, what has been learned during these exercises is that state quarantine laws are in most cases dated and varied.

Each state must undertake a review of their own authorities and revise and update their laws to assure sufficient legal powers to carry out an effective response. In addition, the division of legal authority between the state and federal governments requires rapid and efficient coordination of actions to provide a public health response, and should be recognized as an essential part of the overall smallpox response plan. In the short term, both state and federal public health officials need to develop plans for the implementation and logistics of both individual and population level quarantine measures under their current authorities.

### A. State Quarantine Laws

The major source of legal authority for public health interventions is the police power, defined as the inherent authority of all sovereign governments to enact laws and promote regulations that safeguard the health, welfare, and morals of its citizens. The 10<sup>th</sup> Amendment reserves to the states all powers not expressly granted to the federal government nor otherwise prohibited by the United States Constitution, including the police power. The courts have repeatedly held that state quarantine laws are a proper exercise of their police power. Such laws, for example, may be used to detain individuals within a circumscribed area and to exclude healthy persons from entering the area. Assuming that legal authorities are sufficient to allow public health officers to use personal control measures, many practical questions remain:

- Who enforces a quarantine,
- Who detains an infected or exposed person,
- How due process is accommodated, and
- What actions government may take if a person disobeys a quarantine order.

Current laws authorizing compulsory public health measures, such as quarantine, were enacted at different times with different disease-causing agents or diseases in mind. The laws relied on different or inconsistent medical and legal approaches to disease control. In addition, because many of these laws are very old (in some cases enacted more than 50 years ago) they only have been judicially challenged in limited circumstances in recent years. States should take into account modern-day constitutional considerations, such as due process, freedom of movement, and bodily integrity when devising quarantine and related compulsory disease control measures.

In recent years, while quarantine has not been widely employed by states as an infection control measure, most states should at least have current experience with quarantine through its application to limited numbers of patients with tuberculosis. To quickly respond to a smallpox outbreak, states will need to review their state quarantine and bioterrorism response authorities to identify gaps and develop procedures for informed, rapid decision making in a crisis. In particular, states should examine the logistics of quarantine to be able to adequately implement quarantine measures involving both individuals and populations. Recently (October 2001), CDC released a draft of a model law for the states (the [Model State Emergency Health Powers Act](#)), which it commissioned to provide a template for states to respond to the release of a bioterrorism event. The law would give state officials broad powers to:

- Close buildings,
- Take over hospitals, and
- Order quarantines during a biological attack.

Whether to choose to adopt the model law is the final decision of each state legislature. A summary of the public health powers needed for adequate response to a bioterrorism event was also recently compiled by a multidisciplinary CDC conference, and is included below:

### **Public Health Powers Needed by a Health Officer in a Bioterrorism Event**

1. Collection of Records and Data
  - a. Reporting of diseases, unusual clusters, and suspicious events.
  - b. Access to hospital and provider records.
  - c. Data sharing with law enforcement agencies.
  - d. Veterinary reporting.
  - e. Reporting of workplace absenteeism.
  - f. Reporting from pharmacies.
2. Control of Property
  - a. Right of access to suspicious premises

- b. Emergency closure of facilities
  - c. Temporary use of hospitals and ability to transfer patients
  - d. Temporary use of hotel rooms and drive-through facilities
  - e. Procurement or confiscation of medicines and vaccines
  - f. Seizure of cell phones and other “walkie-talkie” type equipment
  - g. Decontamination of buildings
  - h. Seizure and destruction of contaminated articles
3. Management of Persons
- a. Identification of exposed persons
  - b. Mandatory medical examinations
  - c. Collect lab specimens and perform tests
  - d. Rationing of medicines
  - e. Tracking and follow-up of persons
  - f. Isolation and quarantine
  - g. Logistical authority for patient management
  - h. Enforcement authority through police or National Guard
  - i. Suspension of licensing authority for medical personnel from outside jurisdictions
  - j. Authorization of other doctors to perform functions of medical examiner
4. Access to Communications and Public Relations
- a. Identification of public health officers (e.g., badges)
  - b. Dissemination of accurate information, rumor control, 1-800 number
  - c. Establishment of a command center
  - d. Access to elected officials
  - e. Access to experts in human relations and post-traumatic stress syndrome
  - f. Diversity in training, cultural differences, dissemination of information in multiple languages

(excerpted from: [State Emergency Health Powers and the Bioterrorism Threat, Cantigny Conference](#), April 26-27, 2001)

## **B. Federal Assistance in Enforcement of State Quarantine**

### **Section 311 of the PHS Act**

Federal assistance may be provided to state and local authorities in enforcing their quarantine and other health regulations pursuant to Section 311 of the Public Health Service Act. ([42 U.S.C. § 243\(a\)](#)). In addition, while intrastate control of communicable diseases generally may be the purview of state and local officials, CDC’s domestic quarantine regulations authorize federal intervention “in the event of inadequate local control.” See [42 CFR. § 70.2](#) and [21 CFR. § 1240.30](#)

## C. Federal Intervention When State Response Is Inadequate

### 42 CFR Part 70

While the United States Constitution reserves the police power to the states, the federal government has extensive authority over public health by virtue of the Commerce Clause of the United States Constitution, which grants the federal government the exclusive power to regulate interstate and foreign commerce.

Under the authority of Section 361 of the Public Health Service Act ([42 U.S.C. § 264](#)), the Secretary of Health and Human Services may issue regulations necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the United States and from one state or possession into another. The statute defines interstate movement to include authority over individuals who might expose other persons engaged in travel to other states. The current implementing regulations, found at 42 CFR Part 70, authorize:

- Imposition of permit requirements by the Surgeon General for interstate travel, or travel on conveyances engaged in interstate traffic, applicable to any person in the communicable period of smallpox, or who, having been exposed to smallpox, is in the incubation period ([42 CFR § 70.5\(a\)](#)).
- Federal enforcement of state-required travel permits ([42 CFR § 70.3](#)).
- Imposition of disease mitigation requirements and reporting for interstate carriers transporting infected individuals or those suspected of infection ([42 CFR § 70.5\(b\)](#) and [§ 70.4](#)).

In addition, these regulations, through Section 70.2, authorize action by the Centers for Disease Control and Prevention (CDC) in the event that measures taken by local and state health authorities are insufficient to prevent the spread of smallpox to other states. The director of the CDC is empowered to “take such measures to prevent such spread of the diseases as he/she deems reasonably necessary, including inspection, fumigation, disinfection, sanitation, pest extermination, and destruction of animals or articles believed to be sources of infection.” This section, in conjunction with other sections of the interstate quarantine regulations, authorizes the apprehension and examination of “any individual reasonably believed to be infected with a communicable disease in a communicable stage,” so long as the individual either is “moving or about to move from a state to another state,” or is “a probable source of infection to individuals who, while infected with such diseases in a communicable stage, will be moving from a state to another state.”

## II. Quarantine Measures and the Public’s Health

Responding to a case of smallpox may require the use of a variety of emergency public health and containment measures, at both the individual and community level (see flow

diagram: [Quarantine Measures in Response to a Suspected Smallpox Outbreak](#)). These measures would include:

- Active surveillance of presumed infected individuals and their contacts,
- Isolation (separation of a person or group of persons from other persons to prevent the spread of infection), and
- Population-wide quarantine measures which restrict activities or limit movement of individuals.

This may require suspension of large public gatherings, closing of public places, restriction of travel (air, rail, water, motor vehicle, and pedestrian), and/or “cordon sanitaire” (literally a “sanitary cord” or line around a quarantined area guarded to prevent spread of disease by restricting passage into and out of the area).

For smallpox, a single confirmed case warrants immediate public health action including appropriate isolation of the known or presumed infected individual, and initiation of active epidemiologic investigation, contact tracing, vaccination, and enhanced surveillance. Isolation and quarantine measures can be implemented on a voluntary basis. Public health authorities should be knowledgeable of the legal authorities and statutes that exist at the local, state, and federal level for enforcing quarantine measures, and pre-event planning should include the identification of personnel who can enforce these isolation and quarantine measures, if necessary.

In pre-event planning, three issues related to quarantine measures that are essential to assuring preparedness prior to a smallpox bioterrorism attack need to be addressed. The successful implementation of individual and population level quarantine measures hinge on numerous factors, including:

- Prior identification of relevant legal authorities, persons, and organizations empowered to invoke and enforce such authorities,
- Public trust and compliance with government directives, and
- Assured vaccination and other protection of personnel required to implement and enforce quarantine measures.

Pre-event planning must include review of the relevant legal authorities at the local, state, and federal levels to determine if they are sufficient to implement adequate isolation and quarantine measures. If not, these authorities should be revised or modified as time allows.

Public health practitioners will need to educate the public and other health care providers about smallpox in general, including the potential need for utilizing population quarantine measures as a means to decrease or interrupt disease transmission. Quarantine measures will require enforcement personnel and essential service providers who are themselves vaccinated. This will require prior identification of those to be vaccinated during a smallpox emergency and implementation planning to include certain protective measures (N95 masks, gloves, etc.) for use by personnel until the vaccine take can be verified.

The determinants that contribute to reaching the public health threshold for initiating population-wide quarantine measures include:

- The number of cases and exposed persons,
- The projected morbidity and mortality,
- The expected ease and rapidity of spread of disease,
- Current patterns of movement in and out of the community,
- Available resources for implementing measures of treatment and control,
- Perceived or actual need for urgent public health action, and
- The risk for public panic.

The first approach would be to apply concentric levels of quarantine to restrict movement of individuals and conveyances between communities (“cordon sanitaire”) in an effort to control the spread of smallpox. In addition to enforcement activities, other considerations and strategies that should be taken into account when implementing quarantine measures include:

- Communication strategies (e.g., issuing travel alerts and press releases and notification of interagency partners).
- Movement of essential personnel (e.g., rescue workers and first responders), and requirements for their validation of movement, into and out of the quarantined area.
- Movement of materials (e.g., food, medical supplies, and garbage) into and out of the quarantined area, and provision of essential services (e.g., utilities, water).
- Movement of individuals out of the quarantined area for legitimate health and safety reasons (e.g., the need for specialized and unavailable medical care or facility).
- Community-wide intervention strategies (e.g., mass vaccination).

When implementing the quarantine of an individual or a community or other population, consideration of the requirements necessary to terminate quarantine measures should be undertaken. For individuals, ongoing monitoring for disease manifestations, lack of such developments during the longest usual communicable or incubation, or communicable period for smallpox will determine the effectiveness of quarantine activities. At the population level, continued surveillance for lack of new cases in the quarantined area, and no demonstrated spread to contiguous areas will be important measures of containment and control activities.

# QUARANTINE MEASURES IN RESPONSE TO A SUSPECTED SMALLPOX OUTBREAK

## Individual Case Response

## Community Response

