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Legal Authorities for Interventions During Public Health Emergencies

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> Every imaginable threat from civil suits to cold-blooded murder when they got an opportunity to commit it, was made by the writhing, cursing, struggling tramps who where operated upon, and a lot of them had to be held down in their cots, one big policeman sitting on their legs, and another on their heads, while the third held the arms, bared for the doctors.
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> Account of the 1901–1903 smallpox epidemic in Boston[1]

The public health measures used to control the 1901–1903 outbreak of smallpox in Boston, as reflected in the media account quoted above, no doubt appear draconian to a modern-day public health officer. Recently, however, public health officers, academics, and government policy makers, motivated by concerns about the threat of bioterrorism, have questioned whether the intentional release of a biologic agent such as smallpox would necessitate a return to such coercive public health measures as compulsory vaccinations. Such concerns have been highlighted by recent events surrounding the unprecedented terrorist attacks on the World Trade Center and Pentagon on September 11, 2001. These tragedies underscore the importance of public health officers understanding their legal authorities to ensure an effective, well-reasoned, and appropriate public health response that will safeguard civil liberties in a national emergency.

This chapter describes the legal authorities for interventions during public health emergencies. Although this chapter focuses almost exclusively on acute events, namely, bioterrorism, pandemic influenza, and emerging and infectious diseases, many of the principles covered may also apply to noninfectious or nonacute events. The second part of the chapter provides a brief historical background explaining how the power of the state has traditionally been used to control infectious disease and describes the legal structure and sources of public health law in the United States. The third section discusses evolving issues

related to bioterrorism, focusing on the government's use of emergency public health powers with respect to records, property, persons, and communications. Finally, this chapter emphasizes the need for public health officers to understand the use of legal authorities as a tool in protecting the public's health.

HISTORICAL PERSPECTIVE: SOURCES OF LEGAL AUTHORITY IN PUBLIC HEALTH INTERVENTIONS

The concept of using the power of the state to control infectious disease is neither new nor novel. The Old Testament—specifically, Leviticus, Numbers, and the First Book of Samuel—gave specific instructions for the sequestration of lepers and detailed how the priests were to examine people for leprosy.[2] In Medieval Europe, lepers were required to wear special costumes and to limit their walks to certain roads, and they were forbidden from gathering in public places such as marketplaces, inns, and taverns. The term *quarantine* is derived from the Italian *quaranta* and the Latin *quadragina* and refers to the period of time, 40 days, during which health authorities thought a disease to be contagious.[2] Torture, exile, and death were among the penalties for violating a land or maritime quarantine.[2]

Although many governments have used coercive measures in the name of public health, not all public health interventions are necessarily coercive. In 1855, Dr. John Snow published an expanded version of his pamphlet, "On the Mode of Communication of Cholera," in which he argued that cholera was spread primarily through contaminated drinking water and not through casual contact with infected persons.[3] Dr. Snow's theory was based on his investigation of the "Broad Street" pump, in which he discovered that all of the suspected cholera-associated deaths in London were among persons who had drunk from that pump rather than from one of the other public water pumps in the area.[3] Dr. Snow's public health intervention was simply to remove the pump handle, thereby ending the epidemic.

In the United States, 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.[2] Under the authority of the police power, for example, states have enacted laws for nuisance abatement, traffic safety, and firearms safety. In Colonial times, public health interventions were primarily exercised at the local level, with the earliest municipal ordinances enacted by Boston in 1647 and New York in 1663.[2] Local boards of health were eventually organized, leading to more extensive state public health laws and regulations in the late eighteenth and early nineteenth centuries. At the time of the framing of the Constitution, such public health powers as quarantine were well-established.[2] The Tenth Amendment reserves to the states all powers not

expressly granted to the federal government nor otherwise prohibited by the Constitution, including the police power (Table 10–1).[a]

Even though the Constitution reserves the police power to the states, the federal government nonetheless has extensive authority over public health by virtue of the Commerce Clause, which grants it the exclusive power to regulate interstate and foreign commerce.[4,b] Under this authority, for example, the federal government has enacted such diverse laws as those prohibiting racial discrimination, mandating environmental clean-up, and criminalizing certain activities such as loan-sharking.[5] In the area of public health, the federal government has authority under the Commerce Clause to medically examine immigrants seeking entry into the United States and quarantine infectious persons with certain communicable diseases when they are about to move from one state to another.[6,7] Although courts have construed broadly the Commerce Clause, the federal government's authority under that clause is not without its limits. For example, the Supreme Court has struck down key provisions of laws, such as the Gun Free School Zones Act and the Violence Against Women Act, where it found the connection to interstate commerce to be unsupported or too tenuous.[8] Accordingly, the scope of the federal government's authority under the Commerce Clause remains the subject of much debate.

The federal government also may effect public health policy under its constitutional authority to tax and spend. Article I, Section 8, of the U.S. Constitution states that "Congress shall have the power to lay and collect taxes . . . and provide for the common defense and general welfare of the United States." The federal government, for example, has spent money on programs that raise awareness of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) and imposed taxes on cigarettes to discourage people from smoking. Furthermore, unlike recent Supreme Court cases limiting the scope of Congress' Commerce Clause power, courts have been deferential to Congress' use of the Tax and Spend power, as long as Congress does not use that power in a manner that violates other constitutional protections, such as the separation of church and state.

The Constitution acts as both a source of authority for public health interventions and a restraint on what actions government may take. The state's interest in imposing such personal-control measures as quarantine, civil confinement, and mandatory treatment must be balanced against an individual's constitutional rights to due process, freedom of movement, and bodily integrity. Similarly, state-initiated programs that, without an epidemiologic basis, single out high-risk populations for screening or treatment may raise concerns under the Equal Protection Clause. Furthermore, disease reporting and collection of contact information may have freedom of speech and privacy implications. In addition to constitutional restraints, federal statutes also limit the manner in which state and local governments may act. For example, in the wake of the

TABLE 10–1. State Emergency Public Health Powers

POWER	SOURCE	RESTRICTION
Disease reporting and medical surveillance	Police power reserved to states under Tenth Amendment	Constitutionally recognized right to privacy; state statutes covering medical privacy
Subpoena of business information, for example, customer lists, shipping information	Derived from state statute	Fourth Amendment right against "unreasonable" searches and seizures; trade secrets and other information may be viewed as "property" under the Fifth and Fourteenth Amendments
Commandeer private buildings and seize pharmaceuticals	Police power	Fifth and Fourteenth Amendments' requirements of due process and just compensation
Abate nuisances	Police power	No compensation required if deemed a "nuisance," otherwise a "taking" requiring compensation
Personal-control measures, for example, quarantine, compelled medical testing, mandatory vaccination	Police power	Considered a significant deprivation of "liberty" requiring due process; Equal Protection Clause implicated if applied in a discriminatory manner; possibly First Amendment Freedom of Religion Clause
Legal immunity	State statute may provide legal immunity from lawsuits under state law	42 U.S.C. §1983 authorizes damage awards for violation of rights under the Constitution subject to doctrine of "qualified immunity"
Dissemination of public health information	Unclear whether the police power authorizes control of media outlets	First Amendment doctrine of "prior restraint" generally prohibits government from censoring information in advance of publication

outbreak of West Nile virus in 1999, a group of concerned citizens filed suit challenging New York City's mosquito-abatement program, contending that the program violated provisions of the Clean Water Act and the Resource Conservation and Recovery Act.[9] Accordingly, public health measures that arguably touch on areas of civil liberties may be the subject of a court challenge.

THE CASE OF BIOTERRORISM

Although public health officers may find an understanding of legal authorities useful in their day-to-day practice, the threat of bioterrorism and emerging infectious diseases has made such an understanding essential. One reason an effective public health response is critical is the unique nature of biologic weapons; a biologic weapon has the same potential to cause mass casualties as a nuclear weapon.[10,c] In 1970, the World Health Organization released a report estimating that a 50 kilogram release of anthrax spores along a 2 km line upwind of a city of 500,000 would in 3 days cause 125,000 infections and 95,000 deaths.[11] Furthermore, even without a large number of casualties, the disruption and fear caused by a potential bioterrorism event would be significant. In 1994, for example, a naturally occurring outbreak of bubonic plague in Surat, India, caused an estimated 500,000 residents—including a large portion of the city's private physicians—to flee.[12] This occurred despite the availability of antibiotics such as tetracycline and doxycycline, which are usually 100% effective if administered in the first stages of the illness or simply after a suspected exposure.[12]

If a bioterrorist event occurs, an effective, well-considered, and lawful response will help ensure public safety and ward off the panic and dread that a terrorist may hope to cause. Many of the legal authorities for responding to an epidemic, whether natural or human made, may already exist. For example, it is not unusual for public health officers to deal with tuberculosis (TB) patients, participate in nuisance abatement, or close hotels, restaurants, and other facilities for public health reasons. Although public health officers may use all or some of the same legal authorities during a bioterrorism event or an epidemic, the scale and implementation may be completely different. For example, legal authority may exist that allows public health officers to close buildings or condemn articles that are potential sources of infection. Because a public health administrative order, however, may not be sufficient to facilitate the commandeering of hotel rooms that operate on separate ventilation systems (and thus aid in isolating patients), the state's governor may need to invoke an executive order to compel such actions. Accordingly, it is incumbent on health officers and their legal counsel to determine what public health or executive powers would be needed in an emergency and examine whether existing legal authorities are sufficient.

To assist in reviewing and revising state public health statutes, the Centers

for Disease Control and Prevention commissioned Georgetown and Johns Hopkins Universities, through the Center for Law and the Public's Health, to draft model legislation. This legislation, known as the Model State Emergency Public Health Powers Act provides states with strong public health powers to rapidly detect and respond to bioterrorism and other emergency health threats.[13] The act, among other things, requires the reporting of suspect illnesses or conditions to detect a serious threat to the public's health, provides standards for a governor's declaration of a public health emergency, allows a public health authority to access and use private facilities during an emergency, and contains provisions for mandatory medical examinations, isolation and quarantine, and access to patient records. The act also immunizes from legal liability the governor, public health authority, and other state executive agencies or actors for actions taken during a public health emergency. The goal of the act is to provide a public health authority with powers needed to respond adequately to a public health emergency while protecting an individual's right to liberty, bodily integrity, and privacy to the fullest extent possible. State legislatures can adopt any or all of the provisions of the model law or tailor individual provisions to meet their needs.

In this regard, a review of the Boston smallpox epidemic of 1901–1903, which resulted in 1596 cases of smallpox and 270 deaths in a city population of approximately 500,000, is insightful.[1] The Boston Board of Health took steps to control the epidemic, including isolating patients with smallpox in special facilities, placing persons who had been in contact with or exposed to patients under surveillance, and establishing a program of mandatory house-to-house vaccinations.[1] Persons who refused vaccination were subject to a $5 fine or a 15-day jail sentence.[1] Although ultimately successful in controlling the epidemic, the Board of Health engaged in activities that would not be tolerated today. The Board of Health, for example, employed "virus squads" that resorted to physical violence to vaccinate the homeless, whom the public had blamed for spreading the epidemic.[1] The Board also engaged in medically and ethically questionable practices by challenging vaccination opponents to expose themselves to smallpox and, in one case, allowing such an opponent to tour a smallpox ward without the benefit of vaccination.[1] Although unimaginable today, such abuses nonetheless underscore the importance of public health officers operating within a legal and ethical framework.

Several emergency public health powers exist that the government may need to control or mitigate a bioterrorism event or serious outbreak of disease. Although not an exclusive list, these powers fall under the broad categories of (*1*) collection of records and data, (*2*) control of property, (*3*) management of persons, (*4*) dissemination of information, and (*5*) legal immunity or indemnification for public health officers responding to an emergency.[13] The remainder of

this chapter analyzes the legal authorities and restrictions on the use of each of these public health powers.

Collection of Records and Data: Disease Reporting, Surveillance, and Privacy

One of the most well-known public health powers is that of surveillance, derived from a French word meaning "a close watch or guard kept over a person."[2] In this respect, the police power authorizes states to mandate reporting of infectious diseases and sometimes injuries and other health conditions. Which diseases are reportable, under what conditions they must be reported, and who has the duty of reporting vary from state to state. To detect and respond adequately to an act of bioterrorism, however, public health officers may need additional authorities beyond surveillance and disease reporting. For example, because a terrorist may not necessarily announce the release of a biologic agent, public health officers may learn of an event only through unusual mechanisms, such as a large increase in workplace absenteeism or in the sale of certain types of medications. Similarly, access to hospital records and the ability to share that information with other agencies may assist law enforcement and public health officers to either track down the perpetrators or discover which biologic agent has been used. In addition, many infectious agents that affect human health, such as West Nile virus and certain strains of influenza virus, may first manifest themselves in animals. Accordingly, public health officers should examine whether authorities exist that would allow them to access hospital and provider records; share data with law enforcement and other entities; and mandate reporting of veterinary illnesses, workplace absenteeism, and sales of medications from pharmacies.[14]

Notwithstanding the public health importance of disease reporting and surveillance, the disclosure of medical information raises legitimate public concerns about privacy, particularly regarding sensitive information that may lead to stigmatization and discrimination. Although courts have recognized state authority under the police power to mandate reporting of medical information, states must have adequate procedural protections in place to safeguard patient confidentiality. In *Whalen v. Roe*, the U.S. Supreme Court upheld a New York statute requiring physicians to report information about certain prescription drugs because, among other factors, the state had adequate procedures in place to protect against unauthorized access.[15] At the federal level, statutes such as the Privacy Act of 1974, subject to certain exceptions (e.g., those governing "routine uses"), generally require that federal agencies not disclose "any record" that exists within a "system of records" controlled by those agencies.[16] State laws, to varying degrees, may also govern the privacy of medical records and public health reports gathered through surveillance and follow-up investigation. In addition,

while creating exemptions for public health, proposed federal regulations enacted pursuant to the Health Insurance Portability and Accountability Act of 1996 may potentially limit a health-care provider's ability to disclose confidential patient information without consent.[17]

In addition to medical records, public health departments may also need access to nonprivileged business records such as customer lists, shipping information, and other information about business practices. For example, if an outbreak occurs in a hotel, the local health department may have to know what other guests have stayed in the hotel. A constitutional limitation on a health department's ability to obtain such information may be the Fourth Amendment, which guards against unreasonable searches and seizures. Generally, a search or seizure is unreasonable unless accompanied by a warrant that describes with particularity the places to be searched and the articles to be seized. Although health departments can inspect premises on an emergency basis to avert an immediate threat to health or safety, whether this authority allows them to seize documents is unclear. Health departments, however, may possess subpoena power to access relevant information during a public health emergency.[18] Although not necessarily rising to the level of medically privileged information, business information obtained through subpoenas may nonetheless contain valuable trade secrets or proprietary information that health departments should treat as confidential. Given the usefulness of this authority, public health officers who lack subpoena power may wish to consider obtaining such authority from their state legislatures.

Control of Property: Seizures, Takings, and Nuisances

Public health officers also should be aware of legal authorities concerning the control of private property. In general, state laws authorize health departments to take, destroy, or restrict the use of private property to protect the health and safety of the community. This often includes the authority to enter suspicious premises, close facilities on an emergency basis, and seize and destroy contaminated articles. A bioterrorism event or a large-scale epidemic, however, can require greater government control of private property than that to which the public is accustomed. For example, public health officers may have to designate certain hospitals to receive infected patients and transfer noninfected patients to other facilities. In addition, health officers may have to confiscate medicines from local hospitals and pharmacies and ration limited stockpiles of pharmaceuticals among the population.[14] Furthermore, public health officers may have to commandeer additional private facilities, such as hotel rooms that generally operate on separate ventilation systems and fast-food–type drive-through facilities that can easily be used to dispense medication.[14] Given a large-scale event, the government could conceivably seize cell phones and other communication

devices to simply maintain open lines of communication during an emergency.[14] Finally, the disposal of human corpses may be radically different in a large-scale epidemic, and public health officers may be required to issue orders directing how corpses should be treated.

The major legal constraints on a public health department's use of private property are the constitutional requirements of due process and just compensation. The Constitution states that the government may not take private property for public use without compensating the owner.[19] Similarly, the government must generally provide notice and an opportunity for a hearing before depriving a landowner of the use of private property.[20] Although the concept of compensation for public use appears simple, under what circumstances the government must compensate private landowners has been the subject of extensive litigation.

In general, courts have defined two types of "takings" that require compensation: "possessory" and "regulatory."[2] Possessory takings, also known as physical invasions or "per se" takings, are relatively easy for courts to identify because they involve the physical possession by the government of private property.[2] Therefore, if the health department were to seize a drive-through facility and use it to dispense medications to the public, it would in all likelihood have to compensate the owner. Regulatory takings, on the other hand, are more difficult for courts to identify because they involve the diminution in economic value through government regulation of an owner's property.[2] In general, the more the regulation diminishes the economic value associated with the private owner's property rights, the more likely courts are to examine whether the regulation amounts to an unconstitutional taking.

One reason regulatory takings are difficult for courts to identify is that government may legitimately abate nuisances without compensation to the owner. A public nuisance is an activity that unreasonably interferes with the public's use and enjoyment of a public place or that harms the health, safety, and welfare of the community.[2] Public nuisances typically have included explosives; garbage and offal; decaying animals; improper sewage; and, more recently, places that promote high-risk sexual activity.[2] For example, under the nuisance theory, public health authorities in New York City were able to order the closing of bathhouses to prevent the spread of AIDS.[21]

Even though government may legitimately abate nuisances, it may not avoid paying compensation to private property owners by simply declaring their activities to be nuisances. Rather, the U.S. Supreme Court has held that government must rely on "background principles of nuisance and property law" requiring that government find some precedent, either in common law or in the law pertaining to private nuisance suits, that allows it to declare an activity to be a nuisance.[22] Some legal commentators have argued that this approach unduly hampers public health departments because it forces health officers to rely on often vague and outdated concepts of what constitutes a public health threat.[2]

One example of where public health concerns have clashed with private property rights is tobacco regulation. In *Philip Morris v. Harshbarger*, for example, a federal court of appeals preliminarily enjoined a Massachusetts law that required cigarette manufacturers to report tobacco ingredients on the ground that it could amount to an uncompensated taking of property, specifically, the manufacturers' trade secrets.[23] Accordingly, given the courts' protection of private property rights and the public's evolving understanding of what constitutes a public heath hazard, such clashes are likely to continue.

Management of Persons: Quarantine, Detention, and Treatment

A highly controversial area of public health is management of people. In general, public health officers possess authorities, subject to statutory and constitutional restraints, that allow them to restrict the liberty of persons through such measures as cease-and-desist orders, compelled physical examination, compelled vaccination, and possibly detention. A bioterrorism event or a large-scale epidemic, however, may require additional powers, such as the ability to suspend state licensing requirements for medical personnel from outside jurisdictions, authorization of other doctors to perform the functions of medical examiners, ability to waive informed consent requirements for collection of clinical specimens for laboratory testing, and procedures to allow for the safe disposal of corpses.[14] In addition, public health departments may need procedures in place to allow for large-scale isolation of infected persons and quarantine of persons believed to be exposed to an infectious agent. Although some health departments may have experience with personal-control measures with problems such as TB or measles, the scale and implementation of a bioterrorism event may be completely different. A bioterrorism event probably will require public health officers to collaborate with other agencies and organizations with which they do not have regular working relationships (e.g., public safety, law enforcement, or the National Guard).

Most public health interventions are accomplished through voluntary compliance, but coercive measures, such as detention, are sometimes necessary. Few states have a modern public health statute that specifically addresses bioterrorism. Rather, laws authorizing compulsory public health measures were enacted at different times, with different disease-causing agents or diseases in mind, and may rely on different or inconsistent medical and legal approaches to disease control. Typically, disease-control laws fall into three categories: (*1*) laws relating to sexually transmitted diseases, such as syphilis and gonorrhea; (*2*) laws targeted at specific diseases, such as HIV infection and TB; and (*3*) laws applicable to "communicable" or "contagious" diseases, a broad category dealing with a range of diseases from malaria to measles.[24] In addition, some states may have within their public health statutes laws that address environmental diseases

or conditions. The problem with most of these statutes is that they are old; for example, laws enacted 50 to 100 years ago to deal with polio may not be sufficient to deal with viral hemorrhagic fevers, foot and mouth disease, West Nile virus, or a bio-engineered weapon. Moreover, these laws may not necessarily reflect a modern understanding of infectious disease, biology, or epidemiology; current treatment methods; or present-day standards of due process. As a practical consideration, however, adding specific statutory authority with respect to bioterrorism may be more prudent or expeditious than overhauling broad public health disease-control laws that have stood the test of time. Public health agencies must therefore decide whether to engage in wholesale revision of public health statutes or to modify existing regulations to deal with bioterrorism concerns.

The legal precedents authorizing compulsory public health measures, like the public health statutes themselves, also are old and of questionable value. For example, *Jacobson v. Massachusetts*, the U.S. Supreme Court case decided in the wake of the 1901–1903 Boston smallpox outbreak, while acknowledging that the state could pass laws mandating compulsory vaccinations, simply emphasized the state could not do so in an arbitrary or unreasonable manner.[2] Similarly, most state court cases addressing compulsory public health powers simply emphasize the importance of preserving the public's health without addressing the rights of the individual.[18] Accordingly, how courts today would react to a quarantine on the scale of the Boston smallpox outbreak is unclear.

One measure of how courts may react to a modern-day quarantine, however, may be the law surrounding involuntary detention of the mentally ill or TB patients. As the need for large-scale personal-control measures diminished through the advent of antibiotics and improved public health in the 1950s, courts became increasingly concerned with individual rights and due process. As a result, courts generally scrutinize very closely government actions that result in the involuntary commitment of persons. For example, courts have held, in the context of civil commitment to mental hospitals, that involuntary commitment is a significant deprivation of liberty requiring that the state afford the individual with due process of law.[2] In the context of detaining infectious persons, due process requires that the state provide written notice of the behavior or conditions that allegedly pose a risk to the community, access to counsel, a full and impartial hearing, and an appeal.[2] Even though the state must ordinarily provide notice and a hearing before detaining someone, the law recognizes emergency exceptions in which the state may be able to afford the person a post-deprivation hearing. In such cases, the government generally has the burden of proving its case by "clear and convincing evidence," a legal standard somewhat greater than a "preponderance of the evidence" but less than "beyond a reasonable doubt."[2] In addition to adequate procedural protections, the state may also have to show that its interest in confinement outweighs the individual's liberty interest and

that no less restrictive means exists for accomplishing the state's objective.[2] This may require, for example, that the state prove that the person is actually infectious and that no other less restrictive treatment options are available. Furthermore, because public health powers are civil, designed to safeguard the public's health rather than punish the individual, the state may have to prove that detention is being carried out in a medically appropriate environment such as a hospital or other treatment facility.[2]

If a bioterrorism event occurs, detention of infected persons may not be sufficient; the state may have to compel exposed persons to accept chemoprophylaxis or vaccinations, despite personal or religious objections, to ensure that they do not become contagious and infect others.[25] The U.S. Supreme Court, however, has recognized a constitutionally protected right of competent persons to refuse medical treatment, which is derived from the common-law concept of informed consent.[26] As a practical matter, a public health department may therefore have to provide an exposed person with the choice of either accepting preventive therapy or being isolated until the incubation period passes and he or she is no longer at risk of becoming contagious. Today, in determining whether to allow compulsory vaccination, courts also are likely to balance the state's interest in protecting the public's health against the individual's liberty interest in bodily integrity. In *Washington v. Harper*, for example, the U.S. Supreme Court held in the context of prisoners that the state's interest in preventing dangerously mentally ill prisoners from harming themselves or others outweighed the prisoner's interest in refusing antipsychotic medications.[27] In addition to balancing the government's interest against the rights of the individual, courts may also subject state public health measures that single out high-incidence groups for compelled treatment to "strict scrutiny," the most rigorous and least deferential form of review, if such measures are found to discriminate along racial or ethnic lines.

The legal analysis applied to the compelled isolation of an individual with contagious pulmonary TB and the quarantine of a large number of people because of a bioterrorist's release of smallpox may be conceptually similar. In contrast, these problems are readily distinguished by factors such as the magnitude of a bioterrorist event, the fear created by the event, and the parallel criminal investigation of the perpetrators. Assuming that legal authorities are sufficient to allow public health officers to use personal-control measures, many practical questions such as who enforces a quarantine or detains an infected person and what actions government may take if a person disobeys a quarantine order may still be unanswered. Many public health officers may assume that, in the event of bioterrorism or a large-scale epidemic, the federal government will impose personal-control measures. Federal law, however, may limit the government's ability to control the movement of citizens. Regulations provide that the

Surgeon General, on recommendation of an advisory committee, may apprehend and examine individuals only if they are reasonably believed to be infected with a communicable disease and are about to move from one state to another or are a probable source of infection to individuals who, while infected, will be moving from one state to another.[28] Therefore, without such an interstate connection, the federal government may have to rely on state quarantine statutes. Similarly, the Posse Comitatus Act, subject to exceptions for insurrections and civil disturbances, generally prohibits the use of the military in civilian matters.[25] These restrictions, however, do not apply to the National Guard when in state status, which may be called on by a state governor to assist in an emergency.[25] Accordingly, in addition to ensuring adequate legal authorities, public health departments should begin addressing such practical considerations as who implements and enforces a quarantine order.

Legal Immunity

Even with sufficient legal authority, public health officers may feel constrained to act because of fears concerning legal liability. In general, people who believe state officials have violated their constitutional rights can file suit for damages pursuant to Title 42 of United States Code (U.S.C.) § 1983. In the public health context, for example, prisoners whom the state has compelled to accept TB treatment or those who have been involuntarily committed to mental hospitals have used 42 U.S.C. § 1983 to pursue damage suits against state public health officers.[29] In addition, most states recognize tort actions for battery, false arrest, and false imprisonment.

Regardless of the availability of damage suits, state officials may be shielded from federal liability for constitutional violations under the legal doctrine of qualified immunity. Qualified immunity provides that government officials performing discretionary functions are immune from civil liability under federal law if their actions do not violate clearly established statutory or constitutional rights of which a reasonable person would be aware.[30] Therefore, in theory, even if a court were to find a public health officer's actions to be unconstitutional, the officer would be shielded from liability if the officer reasonably believed he or she was acting pursuant to legal authority and his or her actions were objectively reasonable. In *Doe v. Marsh*, for example, a federal court of appeals found that a public health officer who had included the names of two HIV-positive persons in a government manual published in connection with an HIV/AIDS conference was entitled to qualified immunity.[31] Specifically, the court found that, although in error, it was objectively reasonable for the health officer to believe that the two persons had waived their rights to privacy by publicly announcing their HIV status at the conference.[31]

However, qualified immunity immunizes officials only from damages and not from suit, meaning that a government official would still have to defend himself or herself in court and bear the burden of showing his or her actions were reasonable. Furthermore, the doctrine of qualified immunity applies only to individuals, not agencies, and provides immunity from federal, but not state, liability. Even without immunity from liability, some states may nonetheless indemnify government employees from money judgments provided that they act in good faith and within the scope of their employment. Accordingly, public health officers may feel more comfortable making difficult decisions if they are either immunized or indemnified for decisions made in good faith.

Access to Communications: First Amendment and Media Strategy

Compulsory public health powers require that public health departments obtain the public's trust. Although public health departments play a large role in educating the public about health, for example, by warning about the dangers of smoking or obesity, bioterrorism requires a unique response. Such an event will probably cause fear and confusion, which, if government officials fail to address in an appropriate (i.e., timely, if not emergent) manner, may potentially lead to civil unrest and flight. At a minimum, public health officers will have to maintain clear lines of communication, for example, through a command center, to provide expert advice to the elected officials who will be managing such a crisis.[14] To dispel rumors and provide accurate information, public health officers should also consider using communications systems such as the emergency-response system, Internet-based websites, and toll-free telephone numbers.[14] Furthermore, experts in human relations and post-traumatic stress disorder may assist health officers in coordinating a message that will alleviate public concern. Public health officers, moreover, must be aware of cultural differences among ethnic groups that may require dissemination of information in different languages.

In the event of bioterrorism or a large-scale epidemic, government may have an interest in curtailing certain media outlets that could be perceived as endangering the public through dissemination of incorrect information. The First Amendment, however, generally prohibits government from censoring information in advance of publication. Under the legal doctrine of prior restraint, such measures are treated by courts with a great deal of suspicion and are presumed unconstitutional.[25] Furthermore, although the First Amendment does not encompass the right to endanger the public (the common example of shouting "fire" in a crowded building), attempts by government to control the media might lead to greater public mistrust and, therefore, prove counterproductive. A more realistic solution might be for government to formulate a media strategy in advance of a crisis that facilitates how public health officers will communicate with the media and the public.

CONCLUSION

Both historically and in modern times, people have looked to government to protect them against infectious agents and the diseases and epidemics caused by such agents. Although this responsibility falls primarily to state and local governments under U.S. constitutional structures, the federal government nonetheless plays a significant role in safeguarding the public's health. The threat of bioterrorism and of new and emerging infectious diseases, however, has compelled state and local public health officers to understand the role of legal authorities in responding to such health threats. Although public health officers may be familiar with using emergency public health powers to collect data, close dangerous facilities, control infectious persons, and disseminate information to the public, the scale and magnitude of a bioterrorism event requires a particularly well-coordinated and thoughtful response. Legal authorities must exist to allow public health officers to respond in a crisis, but such powers are useless unless public health officers possess the knowledge and ability to carry them out. This may, for example, require greater education of public health officers about their legal authorities and the formation of partnerships with outside communities—such as law enforcement, emergency-response managers, the governor's office, and federal health and emergency counterparts—that may be useful in managing the crisis. In some areas, legal authorities may be inadequate, but in others current operating procedures or a lack of planning may hinder the public health response to an emergency. Accordingly, public health officers should begin reaching out to groups outside the public health field and conduct exercises to test how public health and other executive powers would work in a real-life emergency. Only through such efforts will the public's trust in the ability of government to control and mitigate the serious public health consequences of a potential bioterrorism event be justified.

Notes

[a] The Tenth Amendment states that "the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the states respectively, or to the people."

[b] Commentators have noted that the federal government's control over public health significantly increased as a result of the U.S. Supreme Court's broad interpretation of Congress' Commerce Clause and Tax and Spend powers during the New Deal.

[c] A few kilograms of anthrax has the potential to kill as many people as a Hiroshima-sized nuclear weapon.

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