

The Model State Emergency Health Powers Act Planning for and Response to Bioterrorism and Naturally Occurring Infectious Diseases

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SAFEGUARDING THE PUBLIC'S HEALTH, SAFETY, AND SECURITY took on new meaning and urgency after the attacks on the World Trade Center in New York City and the Pentagon in Arlington, Va, on September 11, 2001. On October 4, 2001, a Florida man was diagnosed with inhalational anthrax.^{1,2} The intentional dispersal of anthrax through the US postal system in New York, Washington, and other locations resulted in 5 confirmed deaths, hundreds of persons treated, and thousands tested.³ The potential for new, larger, and more sophisticated attacks has created a sense of vulnerability. National attention has urgently turned to the need to rapidly detect and react to bioterrorism, as well as to naturally occurring infectious diseases.

In the aftermath of September 11, the president and the Congress began a process to strengthen the public health infrastructure.⁴ The Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities drafted the Model State Emergency Health Powers Act (MSEHPA or the Model Act)⁵ at the request of the Centers for Disease Control and Prevention (CDC) and in collaboration with members of national organizations representing governors, legislators, attorneys general, and health commissioners. Because the power to act to preserve the public's health is constitutionally reserved primarily to the states as an exercise of their police powers,⁶ the Model Act is designed for state, not federal, legislative consideration. It provides the responsible state actors with the powers they need to detect and contain a potentially catastrophic disease outbreak and, at the same time, protect individual rights and freedoms. Legislative bills based on the MSEHPA have been introduced in 34 states and the District of Columbia; 16 states and the District of Columbia already have enacted a version of the act (as of June 26, 2002, states enacting or expected shortly to enact legislation influ-

The Center for Law and the Public's Health at Georgetown and Johns Hopkins Universities drafted the Model State Emergency Health Powers Act (MSEHPA or Model Act) at the request of the Centers for Disease Control and Prevention. The Model Act provides state actors with the powers they need to detect and contain bioterrorism or a naturally occurring disease outbreak. Legislative bills based on the MSEHPA have been introduced in 34 states. Problems of obsolescence, inconsistency, and inadequacy may render current state laws ineffective or even counterproductive. State laws often date back to the early 20th century and have been built up in layers over the years. They frequently predate the vast changes in the public health sciences and constitutional law.

The Model Act is structured to reflect 5 basic public health functions to be facilitated by law: (1) *preparedness*, comprehensive planning for a public health emergency; (2) *surveillance*, measures to detect and track public health emergencies; (3) *management of property*, ensuring adequate availability of vaccines, pharmaceuticals, and hospitals, as well as providing power to abate hazards to the public's health; (4) *protection of persons*, powers to compel vaccination, testing, treatment, isolation, and quarantine when clearly necessary; and (5) *communication*, providing clear and authoritative information to the public. The Model Act also contains a modernized, extensive set of principles and requirements to safeguard personal rights. Law can be a tool to improve public health preparedness. A constitutional democracy must balance the common good with respect for personal dignity, toleration of groups, and adherence to principles of justice.

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enced by the Model Act were Arizona, Florida, Georgia, Hawaii, Maine, Maryland, Minnesota, Missouri, New Hampshire, New Mexico, Oklahoma, South Carolina, South Dakota, Tennessee, Utah, and Virginia).^{7,8} This article explains the need for law reform, describes the main provisions of the Model Act, and discusses the delicate balance between public health and civil liberties in a constitutional democracy.

Background

Both naturally occurring infectious diseases and deliberate acts of bioterrorism pose threats to public health. Historically, major infectious disease outbreaks have killed far more people than war: approximately 25 million Europeans, over a quarter of the population, died of bubonic plague in the 14th century⁹; diseases such as smallpox, measles, influenza, typhus, and bubonic plague killed an estimated 95% of pre-Columbian Native American populations¹⁰; and a worldwide influenza epidemic in 1918-1919 resulted in the death of 21 million people.¹¹ While infectious disease may no longer be the leading cause of death in the United States because of advancements in hygiene, nutrition, and medicine, the death toll is still substantial.¹² Each year approximately 170 000 people in the United States die from infectious diseases.¹³

Preventing major disease outbreaks poses as great a challenge as ever before. The globalization of travel and trade allows for the widespread, rapid transmission of disease. A person infected in Hong Kong can travel to the United States in less than a day. Large concentrations of people also facilitate the spread of disease, and many cities have populations in the millions. Even in contemporary societies human populations remain in close proximity to animal populations. Some of the most deadly human diseases are believed to have evolved from animal diseases.¹⁰

In addition to the threat of severe naturally occurring diseases, both recent events and several reports highlight the threat of bioterrorism. We define *bioterrorism* as the intentional use of a pathogen or biological product to cause harm to a human, animal, plant, or other living organism to influence the conduct of government or to intimidate or coerce a civilian population. A report by the National Intelligence Council for the Central Intelligence Agency concluded that infectious disease is not only a public health issue but also a problem of national security: the US population is vulnerable to bioterrorism as well as emerging and reemerging infectious diseases.¹³ In 1998, the US Commission on National Security in the 21st Century concluded that biological agents are the most likely choice of weapons for disaffected states and groups. Biological weapons are nearly as easy to develop, far more lethal, and will likely become easier to deliver than chemical weapons and, unlike nuclear weapons, biological weapons are inexpensive to produce and the risk of detection is low.¹⁴ In 1993, the US Congressional Office of Technology Assessment estimated that the aerosolized release of 100 kg of anthrax spores upwind of Wash-

ington, DC, could result in approximately 130 000 to 3 million deaths, a weapon as deadly as a hydrogen bomb.¹⁵

For years, experts have been calling attention to the threat of bioterrorism and the unique problems that arise in modern society.¹⁶⁻²⁰ The Internet allows for the widespread dissemination of information on biological agents and technology. Advancements in biotechnology make bioproduction capabilities accessible to individuals with limited experience. The dual-use nature of this knowledge and technology, allowing for both legitimate and illicit use, makes tracking and identifying bioterrorists much more difficult. And while certain countries are known or suspected to have biological weapons programs, nonstate actors have become important as well.¹⁴ Documents recovered in Afghanistan suggest that Al Qaeda has conducted extensive research on weapons that can cause mass fatalities, including biological weapons.²¹

Government and public health officials must be able to react quickly and intelligently to a potentially catastrophic disease outbreak, whether intentionally instigated or naturally occurring. Two exercises, Dark Winter (smallpox)²² and TOPOFF (plague),²³ simulated biological attacks in the United States to test government response and raise awareness of the bioterrorism threat. Both simulations demonstrated serious weaknesses in the US public health system that could prevent an effective response to bioterrorism²⁴ or severe naturally occurring infectious diseases.¹⁴⁻²⁵

The Need for Law Reform

Law has long been considered an important tool of public health.²⁶ While federal law-making authority is constitutionally limited in scope, as an exercise of their broader police powers, states have more flexibility in legislating to protect the public's health. State public health laws create a mission for public health authorities, assign their functions, and specify the manner in which they may exercise their authority.²⁷ Prior to September 11, 2001, some states had legislatively (eg, Colorado²⁸) or administratively (eg, Rhode Island²⁹) developed public health response plans for a bioterrorism event. However, problems of obsolescence, inconsistency, and inadequacy may render some public health laws ineffective or even counterproductive.³⁰ Reforming state public health law can improve the legal infrastructure to help respond to bioterrorism and other emerging threats.

State public health statutes frequently are outdated and were built up in layers during the 20th century in response to each new disease threat. Consequently, these laws often do not reflect contemporary scientific understandings of disease (eg, surveillance, prevention, and response) or legal norms for protection of individual rights. When many of these statutes were written, public health sciences, such as epidemiology and biostatistics, were in their infancy and modern prevention and treatment methods did not exist.

At the same time, many existing public health laws predate the vast changes in constitutional (eg, equal protection and due process) and statutory (eg, disability discrimi-

nation) law that have transformed social and legal conceptions of individual rights. Failure to reform these laws may leave public health authorities vulnerable to legal challenge on grounds that they are unconstitutional or preempted by modern federal statutes. Even if state public health law is not challenged in court, public health authorities may feel unsure about applying old legal remedies to modern health threats. The Minnesota state legislature has recently passed a bill that, like the Model Act, permits quarantine and isolation in limited circumstances but makes these practices subject to modernized, significant personal safeguards including due process.³¹

Health codes among the 50 states and territories have evolved independently, leading to profound variation in the structure, substance, and procedures for detecting, controlling, and preventing disease. Ordinarily different state approaches are not a problem, but variation could prevent or delay an efficient response in a multistate public health emergency. Infectious diseases are rarely confined to single jurisdictions but pose risks within whole regions or the nation itself. Coordination among state and national authorities is vital but is undermined by disparate legal structures.

Public health laws remain fragmented within states as well as among them. Most state statutes have evolved over time so that, even within the same state, different rules may apply depending on the particular disease in question. This means that necessary authority (eg, screening, reporting, or compulsory treatment) may be absent for a given disease. For example, when a resurgence of multidrug resistant tuberculosis swept major metropolitan areas in the 1990s, many statutes did not allow for directly observed therapy.³² Worse still, state laws can be so complex that they may not be well understood by health practitioners or their attorneys. Laws that are ambiguous prevent agencies from acting rapidly and decisively in an emergency. Many current laws not only provide insufficient authority to act but might actually thwart effective action. This is evident when one examines the key variables for public health preparedness: planning, coordination and communication, surveillance, management of property, and protection of persons.

State statutes generally fail to require planning or to establish mechanisms. As a result, most states have not systematically designed a strategy to respond to public health emergencies. Perhaps the most important aspects of planning are clear communication and coordination among responsible governmental officials and the private sector. As the recent anthrax outbreaks demonstrate,³³ there should be a defined role for public health, law enforcement, and emergency management agencies. Also, there should be coordination among the various levels (eg, federal, tribal, state, and local) and branches (legislative, executive, and judicial) of government as well as with private actors, particularly the health care and pharmaceutical sectors. Communication and coordination are improved by a systematic planning process that involves all stakeholders. The law can require such plan-

ning and sharing of information. However, many public health statutes do not facilitate communication and, due to federal and state privacy concerns, may actually proscribe exchange of vital information among public health, law enforcement, and emergency management agencies. Indeed, some statutes even prohibit sharing data with public health officials in adjoining states by strictly limiting disclosures by the public health agency that holds the data, often in the interest of protecting individual privacy.³⁴ Laws that complicate or hinder data communication among states and responsible agencies would impede a thorough investigation and response to such a public health emergency.

Surveillance is critical to public health preparedness. Unlike most forms of terrorism, the dispersal of pathogens may not be evident. Early detection could save many lives by triggering an effective containment strategy such as vaccination, treatment, and, if necessary, isolation or quarantine. However, current statutes do not facilitate surveillance and may even prevent monitoring. For example, many states do not require timely reporting for certain dangerous (Category A) agents of bioterrorism such as smallpox, anthrax, plague, botulism, tularemia, and viral hemorrhagic fevers.³⁵ In fact, virtually no state requires immediate reporting for all the critical agents identified by the CDC.³⁶ At the same time, states do not require, and may actually prohibit, public health agencies from monitoring data collected in the health care system. Private information held by hospitals, managed care organizations, and pharmacies that might lead to early detection (eg, unusual clusters of fevers or gastrointestinal symptoms) may be unavailable to public health officials.³² New federal health information privacy protections may unintentionally impede the flow of data from private to public sectors despite regulators' attempt to broadly exempt public health information sharing from nondisclosure rules.³⁷

Coercive powers are the most controversial aspects of any legal system. Nevertheless, they may be necessary to manage property or protect persons in a public health emergency. There are numerous circumstances that might require management of property in a public health emergency (eg, shortages of vaccines, medicines, hospital beds, or facilities for disposal of corpses). It may even be necessary to close facilities or destroy property that is contaminated or dangerous. Even in the case of a relatively small outbreak, such as the recent anthrax attacks, the government considered the need to compulsorily license proprietary medications and destroy contaminated facilities.⁶ The law must provide authority, with fair safeguards, to manage property that is needed to contain a serious health threat.

There similarly may be a need to exercise powers over individuals to avert a significant threat to the public's health. Vaccination, testing, physical examination, treatment, isolation, and quarantine each may help contain the spread of infectious diseases. Although the vast majority of people probably will comply willingly (because it is in their interests and/or desirable for the common welfare), some compulsory pow-

ers are necessary for those who will not comply. Provided those powers are bounded by legal safeguards, individuals should be required to yield some of their autonomy, liberty, or property to protect the health and security of the community.

The Model State Emergency Health Powers Act

From a practical and political perspective, it is important that any model law draw its legitimacy from recognized sources of authority. The MSEHPA's theoretical foundations and structures are derived from existing federal or state law that offers model language; lessons derived from theoretical exercises such as TOPOFF and Dark Winter; and a meeting of high-level experts in public health, emergency management, and national security, which took place at the Cantigny Conference Center in April 2001.³⁸ The Center for Law and the Public's Health received comments on the Model Act from government agencies, national organizations, academic institutions, practitioners, and the general public. The Model Act, therefore, expresses an attempted best synthesis of advice, recommendations, and dialogue regarding the purpose of emergency public health law, its proper reach, and the protection of civil liberties and private property (TABLE).

The purpose of the MSEHPA is to facilitate the detection, management, and containment of public health emergencies while appropriately safeguarding personal and proprietary interests. The Model Act gives rise to 2 kinds of public health powers and duties: those that exist in the preemergency environment (predeclaration powers found in Articles II and III) and a separate group of powers and duties that come into effect only after a state's governor declares a public health emergency (the postdeclaration powers of Articles V, VI, and VII). Postdeclaration powers deliberately are broader and more robust.

Under Article IV, a governor may declare a public health emergency only if a series of demanding threshold conditions are met: (1) an occurrence or imminent threat of an illness or health condition, that (2) is caused by bioterrorism or a new or reemerging infectious agent or biological toxin previously controlled and that (3) also poses a high probability of a large number of deaths, a large number of serious or long-term disabilities, or widespread exposure to an infectious or toxic agent that poses a significant risk of substantial future harm to a large number of persons. Recognizing the continuing threat of infectious disease, the Model Act as drafted is not limited to bioterrorism emergencies; a mass epidemic could be sufficiently severe to trigger the Model Act's provisions even if naturally occurring. States may therefore choose to enhance and further strengthen the threshold conditions for invoking the Model Act, perhaps by including a requirement that the security, safety, or normal operation of the state be threatened before an emergency may be declared. States may also choose an all-hazards approach that adds chemical and nuclear threats to the biological threats contemplated by the Model Act. The MSEHPA requires the governor to consult with the public health authority and other experts prior

to declaring an emergency (unless the delay would endanger the public's health), specifies minimum information to be provided in an emergency declaration, and authorizes the suspension of ordinary state rules or regulations to facilitate emergency response. The legislature, by majority vote, may discontinue the state of emergency at any time.

The predeclaration powers and duties are those necessary to prepare for and promptly identify a public health emergency. Under Article II (Planning for a Public Health Emergency), the Public Health Emergency Planning Com-

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mission (appointed by the governor) must prepare a plan which includes coordination of services; procurement of necessary materials and supplies; housing, feeding, and caring for affected populations (with appropriate regard for their physical and cultural/social needs); and the proper vaccination and treatment of individuals in the event of a public health emergency.

Article III (Measures to Detect and Track Public Health Emergencies) addresses measures necessary to detect initially and then to follow a developing public health emergency, including prompt (24 hours) reporting requirements for health care providers, pharmacists, veterinarians, and laboratories. Public health professionals must interview and counsel persons exposed to illnesses, which may cause a public health emergency, and their contacts. Additionally, the public health authority must investigate physical materials or facilities endangering the public's health. The Model Act recognizes that exchange of relevant data among lead agencies is essential to assure the public's health and security. Therefore, public health, emergency management, and public safety authorities are required to share information necessary to prevent, treat, control, or investigate a public health emergency.

The Model Act provides "special powers" that may be used only after a governor declares a state of public health emergency. Article V (Management of Property) provides that the state's designated public health authority may close, decontaminate, or procure facilities and materials to respond to a public health emergency, safely dispose of infectious waste, and obtain and deploy health care supplies. The authorities are required to exercise their powers with respect for cultural and religious beliefs and practices such as observing, wherever possible, religious laws regarding burial. Compensation of private property owners is provided if there is a *taking* (ie, the government confiscates private property for public purposes, such as the use of a private infirmary to treat and/or isolate patients). No compensation would be provided for a *nuisance abatement* (ie, the government destroys property or closes an establishment that poses a serious health threat). This comports with the extant constitutional takings jurisprudence of the Supreme Court.³⁹ If the government were forced to compensate for all nuisance abatements, it would significantly chill public health regulation.

The provisions for protection of persons found in Article VI (Protection of Persons) deal with some of the most sensitive areas within the MSEHPA. The Model Act permits public health authorities to physically examine or test individuals as necessary to diagnose or to treat illness, vaccinate or treat individuals to prevent or ameliorate an infectious disease, and isolate or quarantine individuals to prevent or limit the transmission of a contagious disease. The public health authority also may waive licensing requirements for health care professionals and direct them to assist in vaccination, testing, examination, and treatment of patients.

While the Model Act reaffirms the authority over persons and property that health agencies have always had, it

supplements these traditional public health powers with a modernized, extensive set of conditions, principles, and requirements governing the use of personal control measures that are now often lacking in state public health law. Public health officials are explicitly directed to respect individual religious objections to vaccination and treatment. Officials must follow specified legal standards before using isolation or quarantine, which are authorized only to prevent the transmission of contagious disease to others and must be by the least restrictive means available. This allows individuals, for example, to be confined in their own homes. The Model Act also affords explicit protections to persons in isolation or quarantine that go beyond most existing state laws: the public health authority is affirmatively charged with maintaining places of isolation or quarantine in a safe and hygienic manner; regularly monitoring the health of residents; and systematically and competently meeting the needs of persons isolated or quarantined for adequate food, clothing, shelter, means of communication, medication, and medical care. Orders for isolation or quarantine are subject to judicial review, under strict time guidelines, and with appointed counsel; the Model Act also provides for expedited judicial relief.

Finally, the Model Act provides for a set of postdeclaration powers and duties to ensure appropriate public information and communication (Article VII: Public Information Regarding Public Health Emergency). The public health authority must provide information to the public regarding the emergency, including protective measures to be taken and information regarding access to mental health support. Experience following September 11th and the anthrax attacks demonstrated the need for an authoritative spokesperson for public health providing comprehensible and accurate information. These events also revealed the significant mental health implications of terrorism on the population.⁴⁰

The Model Act also recognizes that if government officials, health professionals, and others are to fulfill their responsibilities for preventing and responding to a serious health threat, they should not fear unwarranted liability. Consequently, MSEHPA affords persons exercising authority under the Model Act immunity from liability except for gross negligence or willful misconduct.

Taken as a whole, MSEHPA resolves a series of difficult policy debates in which the public health goals of facilitating the detection, management, and containment of public health emergencies are balanced against the need to safeguard individuals' civil rights, liberties, and property. The Model Act is an outgrowth of a process to identify and legitimize critical public health functions against a framework of personal rights and freedoms protected by law.

Civil Liberties and the Exercise of Emergency Powers

The Model Act is designed to be triggered by an extreme public health emergency comparable with the sudden, devastating epidemics of the 19th century.^{41,42} Emergency health

powers by definition are a concession to the fact that normal systems of civil governance may break down under the pressure of widespread sudden death or illness, even as the outbreak demands a decisive response.

The exercise of emergency powers to control the movement of individuals and populations, and to seize property, poses risks to personal and economic liberties. It is important, however, to consider carefully the nature of these risks as understood since the founding of the Republic.⁴³ The rights of liberty, due process, and property are fundamental but not absolute. Justice Harlan in the foundational Supreme Court case of *Jacobson v Massachusetts* (1905) wrote: "There are manifold restraints to which every person is necessarily subject for the common good. On any other basis organized society could not exist with safety to its members."⁴⁴ Similarly, private property was held subject to the restriction that it not be used in a way that posed a health hazard, as Lemuel Shaw of the Massachusetts Supreme Judicial Court observed in 1851: "We think it settled principle, growing out of the nature of well ordered civil society, that every holder of property . . . holds it under the implied liability that it shall not be injurious to the right of the community."⁴⁵ "It is unquestionable," wrote the Maine Supreme Court in 1876, "that the legislature can confer powers upon public officers, for the protection of the public health. . . . The individual right sinks in the necessity to provide for the public good."⁴⁶

These doctrines remain lively today in the United States⁶ and under international law.⁴⁷ Even in principle, it would be almost disingenuous to argue that individuals whose movements or property pose a significant risk of harm to their communities have a "right" to be free of interference necessary to control the threat, or that property rights trump the protection of the common good from extreme peril. There is simply no basis for this argument in constitutional law and perhaps little more in political philosophy.

These observations do not dispose of the serious threats to individual freedoms posed by the exercise of governmental power in a perceived emergency. Rather, they focus attention on what has been the real contention of parties opposing health actions: not the right to be free of any restraint, but the right to be free of a particular restraint that is not justified under the circumstances. It is not improper to restrain the free enjoyment of liberty, privacy, or property per se, but to do so unnecessarily, arbitrarily, or brutally. The restraint of liberty, privacy, or property could lack justification in several ways: the problem being addressed does not exist or is not as serious as believed, the measure taken is unresponsive to the problem, or the measure is more intrusive or restrictive than necessary to ameliorate the threat. Due process as afforded under the Model Act is an important means of forestalling or correcting these kinds of errors. It is also right intrinsically even when an emergency measure is justified. Compulsory powers should be carried out in a way that respects personal dignity and tolerates racial, religious, or ethnic differences.

Some commentators criticize the Model Act for including compulsory powers at all, arguing that governors may deliberately misuse their authority.⁴⁸ This criticism, however, ignores 3 fundamental elements of the Model Act. First, MSEHPA does not simply establish compulsory powers but creates the conditions for public health preparedness (eg, planning, surveillance, and communication). Second, compulsory power has always been a part of public health law, because it is sometimes necessary to prevent or ameliorate unacceptable threats to the common good. Third, MSEHPA actually affords greater safeguards of civil liberties than exist under traditional infectious disease laws (eg, providing checks and balances against government abuses, clear standards for the exercise of power, and rigorous procedural due process).

A civil rights society must reduce the risk of error and provide people with a timely and meaningful opportunity to correct mistakes and be made whole in instances of abuse. A sharper focus on the practical civil liberties issues posed by emergencies suggests 4 principled limitations. Agency actions should be (1) necessary to avert a significant risk, in the first instance in the judgment of health officials and ultimately, with reasonable deference, to the satisfaction of a judge; (2) reasonably well-tailored to address the risk in the sense officials do not overreach or go beyond a necessary and appropriate response; (3) authorized in a manner allowing public scrutiny and oversight; and (4) correctable in the event of an unreasonable mistake. The Model Act was drafted to satisfy each of these criteria. In these respects, MSEHPA is an improvement over many state laws that do not provide standards or procedures for the exercise of power.²⁸

Appropriate statutory language, of course, is only part of the solution to the problem of erroneous emergency action. The greatest risk to liberties may be that safeguards that are adequate in principle will not be practically sufficient in the face of the terror of an attack, that government officials may use a false emergency as a pretext for oppressive acts, or that social factors like race, religion, or class will influence decision makers.⁴⁹ Racial, religious, and class bias have influenced public health responses to epidemics in many instances in our past.⁵⁰ We also must be concerned that the breakdown of civil order may include a breakdown of administration in many social institutions, including the court system. The right to challenge a quarantine in court cannot be exercised if there are no court clerks or judges to accept writs or hear cases. In a community cordoned off because of an outbreak of smallpox, there may be no lawyers willing to leave their homes to file cases. Even as states consider the Model Act and make changes to their health codes, it will be important to develop contingency plans and to conduct training within major social institutions such as the judiciary, public health, and medicine. In this sense, the Model Act also attempts to promote the protection of civil liberties by requiring planning and training for a public health emergency.

Drafting and enacting a model emergency health powers act is technically and politically demanding.⁵¹ Law cannot

solve all, or even most, of the challenges that would be posed by a catastrophic health event. The nation's public health system is seriously deficient and can be repaired only with sufficient political will and economic resources.⁵² Public health agencies must have a robust infrastructure to conduct essential public health services at a level of performance that matches the constantly evolving threats to the health of the public. Critical components of that infrastructure include a well-trained workforce, electronic information and communications systems, rapid disease surveillance and reporting, laboratory capacity, and emergency response capability.⁵³ Law is a vital component of the public health infrastructure as well and laws themselves can be highly effective public health interventions. A constitutional democracy must balance the common good with respect for personal dignity, toleration of groups, and adherence to principles of justice.

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