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Emerging and Reemerging Infectious Diseases: Challenges for International, National, and State Law†

I. Introduction

A. PREMATURE DECLARATION OF VICTORY

In the late 1960s, the American medical and scientific establishments proclaimed victory for humankind over infectious diseases. Long the scourge of civilization, infectious diseases have marked the development of societies in all regions of the world.¹ Evidence of the microbial world's power often was dramatic, as illustrated by the toll diseases exacted during the epidemic in the Athens of Pericles, the Black Death of medieval Europe, the decimation of native populations by infections carried by European explorers, and the great worldwide influenza pandemic of 1918-19. In the twentieth century, however, social and scientific

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1. For an account of infectious diseases in human history, see WILLIAM H. MCNEILL, *PLAGUES AND PEOPLES* (1977).

developments have given humankind new weapons against infectious diseases, as improvements in sanitation and antimicrobial drugs (e.g., antibiotics and vaccines) worked wonders against infectious agents. By 1969, so much progress had been made that the U.S. Surgeon General reported to Congress that it was time to "close the book" on infectious diseases.²

The story was not finished, however. In the following two and a half decades, the microbial world has made a resurgence. New infectious diseases emerged. Old diseases re-emerged in new areas, new populations, or in more virulent forms. The most well-known of the emerging infectious diseases has been the human immunodeficiency virus (HIV) that produces the acquired immunodeficiency syndrome (AIDS). As AIDS exploded into a global pandemic, pestilence clearly had returned to the field of battle unvanquished.

In the last six years, awareness around the world about the threat posed by emerging infectious diseases has grown. An example of this awareness in the United States came on June 12, 1996, when Vice President Al Gore announced the Clinton Administration was declaring war on emerging infectious diseases.³ Recognizing the potential impact of emerging and reemerging infectious diseases on international, national, and state law, the International Health Law Committee sponsored a program entitled *Law and Emerging and Reemerging Infectious Diseases* to raise the profile of the new threats from infectious diseases in the American legal community and to begin a discourse about the legal challenges these threats create.⁴ This article is intended to contribute to the awareness building and substantive legal analysis begun by the International Health Law program.

B. EMERGING AND REEMERGING INFECTIOUS DISEASES

According to the U.S. Centers for Disease Control and Prevention (CDC), emerging infectious diseases (EIDs) are "diseases of infectious origin whose incidence in humans has increased within the past two decades or threatens to increase in the near future."⁵ This definition includes both new diseases previously unidentified and older diseases having reemerged. In 1995, a U.S. inter-agency governmental working group (CISSET Working Group) identified the

2. *Emerging Infections: A Significant Threat to the Nation's Health: Hearings Before the Senate Comm. on Labor and Human Resources*, 104th Cong. 1 (1995) [hereinafter *EID Hearings*] (statement of Senator Kassebaum).

3. Ellen McCleskey, *Gore Unveils New Initiative for Fighting Infectious Diseases*, BNA HEALTH CARE DAILY, June 13, 1996, available in LEXIS, News Library, Curnws File.

4. This program was the idea and achievement of W. Lane Porter, Chair of the International Health Law Committee. The authors thank Lane for his efforts on the program and the drafting and publication of this article.

5. U.S. CTRS. FOR DISEASE CONTROL AND PREVENTION, ADDRESSING EMERGING INFECTIOUS DISEASE THREATS: A PREVENTION STRATEGY FOR THE UNITED STATES 1 (1994) [hereinafter *CDC Strategy*].

emergence of twenty-nine new diseases and the reemergence of twenty older diseases since 1973.⁶

The obvious question raised by this evidence of microbial resilience is how did this situation occur when humankind's scientific knowledge and powers were at historical highs? This question defies an easy answer because the reasons for infectious diseases mounting a comeback are many and complex.⁷ The literature on EIDs typically identifies the following as factors behind the return of infectious diseases:

- *Microbial Adaptation and Change.* One lesson taught by EIDs is the microbial world is constantly changing. Microbes randomly, or in response to pressures exerted by antimicrobial drugs, adapt to survive and to proliferate. As a result, many viruses, bacteria, and parasites develop resistance to antimicrobial drugs.
- *Complacency.* Another factor is the complacency exhibited by political institutions, scientists, and the medical community in the last few decades concerning infectious diseases. With victory in hand, these groups allowed public health infrastructures to decay, channelled resources into chronic disease research, and ignored warnings from the microbial world.
- *Environmental Degradation.* Human changes to the natural environment contribute to the EID problem. Encroaching on undeveloped land brings humans into contact with new infectious agents. Pollution spurs the reemergence of certain diseases, and global warming threatens to expand the territory of certain disease carrying vectors like mosquitoes.
- *Human Demographics and Behavioral Changes.* Overpopulation combined with urbanization, particularly in the developing world, provides microbes conditions they thrive upon: malnourished millions with depressed immune systems congregated in overcrowded living spaces, without proper sanitation or basic medical care. Human behavioral changes, such as increased multiple partner sex and substance abuse, multiply the opportunities for the microbial world.
- *Globalization.* The speed and volume of international travel today is unprecedented, providing ways infectious agents can spread to new regions or populations. Further, the growth of international trade through agreements such as the Treaty of Rome, the North American Free Trade Agreement (NAFTA), and the General Agreement on Tariffs and Trade (GATT) gives

6. NATIONAL SCIENCE AND TECH. COUNCIL COMM. ON INT'L SCIENCE, ENG'G, AND TECH. WORKING GROUP ON EMERGING AND REEMERGING INFECTIOUS DISEASES, *INFECTIOUS DISEASE—A GLOBAL HEALTH THREAT 14-15* (1995) [hereinafter Ciset Report].

7. More detailed analyses of the factors behind EIDs can be found in INSTITUTE OF MED., *EMERGING INFECTIONS: MICROBIAL THREATS TO HEALTH IN THE UNITED STATES* (1992) [hereinafter IOM Report], and David P. Fidler, *Return of the Fourth Horseman: Emerging Infectious Diseases and International Law*, 81 Minn. L. Rev. 771 (1997).

infectious agents opportunities to spread to new places and peoples through products, merchants, and the means of transporting goods.

Even though the list is not exhaustive, it demonstrates that EIDs represent a complex problem touching upon an awesome array of political, economic, social, and scientific challenges.

C. ALARM BELLS ARE RINGING

Since 1986, national and international scientific and public health institutions have produced seven major responses to EIDs, demonstrating that these institutions understood a crisis was at hand. In the United States, the National Institute of Medicine issued three reports (1987, 1988, and 1992), in various respects cataloging the crisis and the unprepared condition in which the United States confronted it. The 1992 report served as a catalyst for others to examine the issue.⁸ The CDC responded in 1994 with a strategy through which the United States could address EID threats.⁹ The Ciset Working Group completed a study in 1995 with recommendations for the United States.¹⁰ The European Community also began trying to improve infectious disease surveillance and prevention among its Member States.¹¹ Internationally, the World Health Organization (WHO) began creating a strategy for dealing with the EID threat.¹²

All the above-mentioned efforts argue the EID threat is a global problem.¹³ A disease arising anywhere on the planet poses a threat to public health in every nation. The distinction between national and international health policy has become irrelevant. With infectious diseases, humans truly live in a global village. While the infectious disease problem is global in scope, local efforts are required in community public health clinics and in the actions of individual physicians. The adage "think globally, act locally" captures the perspective that must prevail in the fight against infectious diseases.

The EID plans share core elements.¹⁴ The four basic objectives are:

- *Surveillance*. The ability to detect and to diagnose infectious diseases early and to disseminate that information to local, regional, national, and interna-

8. IOM REPORT, *supra* note 7.

9. See CDC STRATEGY, *supra* note 5.

10. Ciset REPORT, *supra* note 6.

11. See Proposal for a European Parliament and Council Decision Creating a Network for the Epidemiological Surveillance and Control of Communicable Disease in the European Community, 1996 O.J. (C123) 10.

12. See, e.g., WORLD HEALTH ORG., DIV. OF EMERGING AND OTHER COMMUNICABLE DISEASES SURVEILLANCE AND CONTROL, STRATEGIC PLAN OUTLINE 1996-2000 (WHO/EMC/96.1) (1996); WORLD HEALTH ORG., WORLD HEALTH REPORT 1996: FIGHTING DISEASE, FOSTERING DEVELOPMENT (1996).

13. David P. Fidler, *Globalization, International Law, and Emerging Infectious Diseases*, 2 EMERGING INFECTIOUS DISEASES 77, (1996).

14. For a detailed examination of the national and international plans, see Fidler, *supra* note 7.

tional public health authorities is crucial and must be improved at each level. The objective is nothing less than a global surveillance network.

- *Research.* Research into the etiology and epidemiology of diseases remains critical, and capabilities in this area need strengthening. Further, more research and development are needed to produce new antimicrobial drugs.
- *Training.* Global surveillance networks and expanded research efforts require trained infectious disease scientists and epidemiologists, whose ranks thinned during the decades of complacency.
- *Public Health Infrastructures.* The public health infrastructures neglected during the years of complacency must be rebuilt to support surveillance, control, prevention, and application of scientific research and development.

D. THE LEGAL DIMENSIONS OF THE INFECTIOUS DISEASE THREAT

The EID plans constitute ambitious strategies. Both the threat and the proposed responses implicate law at the international, national, and local levels. The next sections explore at each of these levels the weaknesses of existing law and ideas concerning legal reform in the face of the EID threat.

II. International Law and the Control of EIDs¹⁵

A. DEVELOPMENT OF THE INTERNATIONAL LEGAL REGIME ON THE CONTROL OF INFECTIOUS DISEASES

The control of infectious diseases has long been a concern of states in their relations. States recognized early in the development of the international system that they were vulnerable to the importation of diseases from other countries.¹⁶ International cooperation began in 1851 with the first international sanitary conference. Between 1851 and the beginning of the Second World War, states negotiated many different treaties addressing infectious disease control. Although states began to use international law for infectious disease control purposes, the treaties produced a confusing and inadequate international legal regime. The WHO adopted the International Sanitary Regulations in 1951 to create a single legal regime designed to provide maximum protection against the spread of disease with minimum interference with world traffic. These Regulations were amended and renamed the International Health Regulations (IHR) in 1969. The IHR remain the only legal binding multilateral agreement among the WHO member states on infectious disease control.

15. Part II is adapted from David L. Heymann, "The International Health Regulations: Ensuring Maximum Protection with Minimum Restriction."

16. The city-state of Venice wrote the first recorded quarantine legislation in 1377 to protect itself from disease importation.

B. RECOGNIZING THE INADEQUACY OF THE IHR

The WHO acknowledges the IHR do not ensure maximum protection against the spread of disease with minimum interference with world traffic. States often do not fulfill the two basic duties under the IHR: reporting outbreaks of infectious diseases subject to the Regulations to the WHO and limiting their reactions to disease outbreaks in other states to those measures prescribed in the IHR. In addition, the IHR only apply to cholera, plague, and yellow fever, and have no role in regulating state interactions in connection with many other diseases having the potential to spread internationally. Four examples help demonstrate the inadequacy of the IHR.

1. *Cholera in Latin America*

The present pandemic of cholera in Latin America was first identified in Peru in 1991. Peru reported the disease to the WHO as required by the IHR. During 1991, cholera infected over 300,000 persons and caused 3,000 deaths in Peru. The epidemic also led to losses in trade and travel estimated as high as US\$700 million. While Peru fulfilled its reporting obligation under the IHR, the economic losses suffered by Peru indicate a failure by other states to apply the IHR properly.

2. *Plague in India*

In 1994, an outbreak of plague occurred in India. The appearance of pneumonic plague resulted in thousands of Indians fleeing from the outbreak area, risking spread of the disease to new areas. India reluctantly reported the outbreak to the WHO after information was widely diffused by the international press, and this outbreak of an IHR-reportable disease led to tremendous economic disruption. Estimates of the cost to India in lost trade and travel are as high as US\$1.7 billion, with inappropriate closing of airports to aircraft arriving from India, barriers to exportation of foodstuffs, and in some cases forced return of Indian guest workers, even though some had not lived in India for years. Again, states failed to apply the IHR properly in connection with the plague outbreak in India.

3. *Ebola in Zaire*

In 1995, an outbreak of 316 Ebola haemorrhagic fever cases occurred in Zaire, causing 245 deaths. The national government closed the road leading from Kinshasa, the capital city, to the outbreak site in order to contain the epidemic. Though a twenty-four-hour police barrier was established on the road, the airport near the outbreak site and the river passing through the site that eventually leads to Kinshasa were not part of the quarantine. Indeed, a case of Ebola arrived in Kinshasa by air. Strengthened disease surveillance in Kinshasa, however, detected the case and no local spread occurred. Had this case of Ebola boarded an international flight in Kinshasa, the IHR would have had no application because Ebola is not an IHR-reportable disease.

4. *Hantavirus Pulmonary Syndrome in the United States*

In 1993, an outbreak of a disease characterized by fever, muscle aches, and intestinal complaints followed by the abrupt onset of shortness of breath and rapid progression to death was first identified in the southwestern United States. Cases were soon identified in other southwestern states, caused by a newly identified virus in the Hantavirus family. The epidemic was shown to be associated with the deer mouse, the reservoir of this virus. Though there was great national alarm resulting from this outbreak and concern about the possibility of cross-border transmission, the IHR again were not applicable since the disease is not covered under their mandate.

C. REVISING THE IHR

Recognizing the inadequate application and scope of the IHR, the WHO in 1995 started the process of revising the IHR to make them more effective for the twenty-first century. In December 1995, the WHO gathered experts from a wide range of medical fields to establish principles to guide the IHR's revision.¹⁷ These experts recognized changes in the global health situation and the increase in international travel had weakened the IHR. Nevertheless, the experts agreed the basic objective of the revised IHR should continue to be to ensure maximum security against the international spread of diseases with minimum interference with world traffic. In order to achieve this objective, improved global coordination would be needed in such areas as monitoring, reporting, and response.

More specifically, the experts formulated four principles to guide the IHR's revision:

1. The current role and function of the IHR should be revised and expanded. The current practice of reporting only three specific diseases should be replaced by reporting to the WHO defined syndromes representing diseases of international importance.
2. The IHR should be expanded to include a description of inappropriate interventions and should provide clear indications as to why these actions are not required.
3. A handbook explaining the requirements of the revised IHR should accompany the new Regulations.
4. The revised IHR should be integrated into all surveillance and control activities at global, regional, and national levels.

The WHO anticipates the revised IHR will be submitted for approval to the World Health Assembly in 1999. Currently, the WHO's Division on Emerging

17. WORLD HEALTH ORG., DIV. OF EMERGING AND OTHER COMMUNICABLE DISEASES SURVEILLANCE AND CONTROL, THE INTERNATIONAL RESPONSE TO EPIDEMICS AND APPLICATION OF THE INTERNATIONAL HEALTH REGULATIONS: REPORT OF A WHO INFORMAL CONSULTATION, WHO DOC. EMC/IHR/96.1 (Dec. 11-14, 1996).

and Other Communicable Diseases Surveillance and Control is coordinating an international working group (Working Group) that is preparing various aspects of the draft-revised Regulations, with particular attention given to defining the reportable syndromes. The Working Group has been incorporating a wide range of advice from many disciplines as it prepares to make the IHR a more effective international legal regime in the era of EIDs.¹⁸

III. U.S. Federal Law and the Control of EIDs¹⁹

A. INFECTIOUS DISEASES IN THE UNITED STATES

At the beginning of the twentieth century, American life expectancy was well below fifty years and infectious diseases were the leading cause of death. Improvements in sanitation, combined with the impact of antimicrobial treatments and vaccines, resulted in substantial declines in infectious disease mortality. American life expectancy has almost doubled during the course of this century and infectious diseases are no longer the leading cause of death.

The EID problem demonstrates, however, that progress against infectious diseases in the United States may be waning. Since 1980 deaths caused by infectious diseases have increased by 58 percent in the United States.²⁰ Although much of this increase is related to AIDS, infectious disease deaths have risen 22 percent excluding AIDS.²¹

B. THE CDC'S STRATEGY

The CDC, as one of the leading public health agencies of the U.S. Federal Government, has taken action to deal with the EID threat through preparation of a national strategy for controlling and preventing EIDs.²² The CDC plan, in combination with the Ciset Working Group's report, forms the substance of the Clinton Administration's strategy on EIDs.

The CDC plan has four major objectives: (1) to improve the capacity to monitor, detect, and respond to infectious diseases; (2) to conduct applied research to

18. For analyses of the proposed IHR revision, see Fidler, *supra* note 7; David P. Fidler, *Mission Impossible? International Law and Infectious Diseases*, 10 TEMP. INT'L & COMP. L.J. 503 (1996); Bruce Jay Plotkin, *Mission Possible: The Future of the International Health Regulations*, 10 TEMP. INT'L & COMP. L.J. 503 (1996); Allyn L. Taylor, *Controlling the Global Spread of Infectious Diseases: Toward a Reinforced Role for the International Health Regulations*, 32 Hous. L. REV. 1327 (1997). For a more general analysis of international law and EIDs, see David P. Fidler, *The Role of International Law in the Control of Emerging Infectious Diseases*, 95 BULLETIN DE L'INSTITUT PASTEUR 57 (1997).

19. Part III is adapted from Stephen M. Ostroff, "Law and Emerging and Reemerging Infectious Diseases: A View from the CDC."

20. Robert W. Pinner et al., *Trends in Infectious Diseases Mortality in the United States*, 275 JAMA 189, 190 (1996).

21. *Id.* at 192.

22. CDC STRATEGY, *supra* note 5.

develop better methods to detect infectious agents, to determine risk factors for their spread, and to develop sound strategies to limit and prevent their occurrence; (3) to implement control and prevention strategies, including enhanced communications to the clinical community, the public, and the media; and (4) to rebuild the public health infrastructure to accomplish the first three objectives.

C. LEGAL ISSUES RAISED BY AMERICAN PUBLIC HEALTH APPROACHES TO EIDs

The ambitious nature of the CDC plan raises many legal issues. This section discusses some of the most important legal issues, barriers, and trends as perceived from the CDC's public health perspective.

1. *Disease Surveillance*

Surveillance is critical to any strategy to combat infectious diseases, but the distribution of authority for surveillance in the United States hinders American infectious disease control efforts. Under the U.S. system, primary responsibility for disease monitoring lies at the state and not at the federal level. Surveillance developed independently in several states in the 1880s. Not until the early 1900s had all states established some type of monitoring system. Submission of data to the U.S. Public Health Service was done by collective agreement through state health officers in the 1920s. In 1952, this responsibility was transferred to the Council of State and Territorial Epidemiologists (CSTE). Currently, the CSTE (in consultation with the CDC) decides what diseases and conditions are nationally reportable to the CDC, determines case definitions, and determines how and when to report the various diseases.

Although the CSTE decides which diseases are nationally reportable, the system is voluntary and states are under no obligation to expand their list of reportable diseases, to follow approved case definitions and methods of data collection, or to report to the CDC, even when state reporting is required. In addition, the states largely continue to utilize disease reporting requirements established at the turn of the century, namely physicians being legally mandated to report a series of diseases or conditions to the local health department. Although many states prescribe penalties for noncompliance, these penalties are rarely enforced. Some states expanded their surveillance methods to include requirements for clinical laboratories to report certain test results, but these requirements vary from state to state and are also not likely to be enforced.

As a result, surveillance data in the United States is fragmentary and difficult to interpret. Only a fraction of the true disease burden in the United States, even for reportable conditions, is likely to come to the attention of health authorities. No two states have a similar list of reportable conditions, and reporting is not required in all states for many of the nationally reportable diseases. State capacity for surveillance is highly variable and in some states few, if any, resources are

available for such purposes. Often the flexibility needed to respond to new threats is not present within the legal system of many states and data collection is not timely. For example, although the CSTE made *E. coli* O157:H7 infections nationally reportable in 1994 following the large 1993 outbreak in the Pacific Northwest, two years later just over half the jurisdictions had been able to accomplish this change in law.

The CDC plan recommends several steps to assist national surveillance efforts. These steps include federal funds to improve state capacity for disease surveillance and active, population-based surveillance to get better estimates of disease incidence. Innovative surveillance is stressed, including electronic collection of lab-derived data and networks of physicians and facilities to monitor for unusual events and conditions which do not lend themselves to traditional surveillance. However, all these efforts must be integrated within the legal mandate for disease monitoring at the state level.

Investigations of reported diseases or outbreaks are also the responsibility of state health departments in the United States. Although the CDC has developed a strong epidemiologic and laboratory capacity to respond to disease outbreaks, it has no legal mandate to respond, even when an outbreak crosses borders. The CDC sends investigators into the field only at the invitation of state health authorities. The CDC has developed a strong relationship with state and local authorities and CDC domestic field assistance during outbreaks is requested frequently. Even when field assistance is not requested, the CDC and the states collaborate well during disease emergencies. In some instances, however, this requirement results in delays and incomplete investigations. With changes within the food industry and with increased travel, disease outbreaks have a greater potential to be larger and more diffuse, crossing jurisdictional lines. With the CDC's lack of a national mandate to conduct investigations, an increased likelihood of uncoordinated approaches to these types of outbreaks exists.

2. *Legal Position of the CDC*

With limited exceptions, the CDC is not a regulatory agency. To a certain extent, this fact can impede disease investigations and implementation of measures for outbreak control. By their nature, many outbreaks occur in industrial or business settings. Examples include food services and agriculture, health care facilities, buildings or maintenance systems, and the transportation sector. Concerns about litigation, loss of income, or control of proprietary information make the private sector reluctant to cooperate at times. The CDC has no authority to compel the release of needed information. In addition, findings of investigations are issued as recommendations and the CDC has no authority to enforce them. Instead, the CDC relies on state authorities or other federal agencies to carry out interventions, or on the voluntary cooperation of the investigative target to implement needed control measures. Conversely, the lack of regulatory authority can be viewed as beneficial. The CDC is viewed as independent in the conduct

of investigations and many attribute the CDC's success over the years to its nonregulatory status.

The lack of a federal mandate to maintain surveillance data or conduct outbreak investigations means surveillance and investigation information come to the CDC without personal identifiers. While this has no direct impact on EIDs, the lack of personal identifiers is important to litigation that may subsequently arise with respect to privacy. Concerns regarding privacy and confidentiality are a perceived disincentive to disease reporting, particularly with regard to diseases such as AIDS and other sexually transmitted diseases. Concerns about issues such as job security and health insurance represent disincentives for persons submitting to testing. Caregivers may also be reluctant to report such diseases for similar reasons.

The CDC also has no mandate for responsibilities related to international assistance. Thus the agency's direct budget for international work is limited. Although the CDC has a long tradition of international assistance, efforts such as outbreak investigations and capacity building are largely supported by other government agencies or by international partners. At times, the CDC staff spends significant amounts of time seeking support to conduct investigations abroad. In recognition of the CDC's important international role and the global nature of EIDs, the CISET Report calls for legislative changes to provide the CDC with a legal basis to conduct international efforts.

3. *Quarantine and Screening Powers*

One area in which the CDC does have statutory enforcement authority relates to quarantine and disease importation. Quarantine rules were established in an era when most international travel was by ship, and they are ill-configured for a time of global air transportation when millions of persons cross borders daily. Most cities are less than twenty-four hours from any other destination on the globe, a period well below the incubation period for such lethal agents as Ebola, Lassa fever, and plague.

Another area of concern relates to the screening of immigrants and refugees overseas. All persons in these categories must be screened for the presence of diseases such as active tuberculosis, HIV, and sexually transmitted agents. Despite these requirements, an increasing proportion of newly diagnosed tuberculosis occurs in the foreign-born, usually in persons who have recently arrived in the United States. The United States relies on physicians and civil surgeons overseas to conduct screening examinations. The diversity and complexity of the screening process have expanded beyond the CDC's ability to oversee the process efficiently. Enhanced resources and efforts are needed in this area, in concert with an overhaul of policies and procedures related to quarantine measures.

Similar concerns can be broached respecting the global movement of products. Treaty agreements such as the GATT and the NAFTA have potential consequences related to EIDs. An increasing proportion of the food supply comes from outside the United States, where production standards may be different.

The differing standards are of particular concern with fruits, vegetables, and seafood, where disease outbreaks attributable to imported products have been documented. Responding to concerns about possible food contamination, the Clinton Administration announced in January 1997 a new food safety initiative for the United States.²³ Movement of animals, such as cattle, raises concern about diseases such as bovine tuberculosis, which is transmissible to humans. Likewise, the increasing importation of reptiles is linked to increased rates of reptile-associated salmonellosis. Clearly the impact of such trade agreements on public health bears further assessment.

4. *Health Care Changes in the United States*

The changing American health care milieu has the potential to affect the CDC's ability to monitor and respond to EIDs. This change not only refers to legal restrictions regarding access to care by illegal aliens, but more broadly refers to shifts in health care provisions to managed care. At present, the impact of this shift is difficult to assess, as both potential benefits and potential problems may be found. Possible benefits include better utilization of prevention measures, such as vaccination; a better ability to implement policies regarding use of antibiotics, with consequent improvements in antibiotic resistance patterns; and enhanced opportunities for patient education. However, limits in the use of diagnostic procedures, such as stool and sputum specimens, can impede the ability to monitor the spread of emerging agents and drug-resistance patterns. Managed care organizations may also take over activities traditionally performed by public health agencies, such as management of patients with tuberculosis or sexually transmitted diseases. This may impede reporting, proper case management, and contact tracing.

Legislative initiatives to privatize state services, especially those usually performed by state public health laboratories, are also a concern. State laboratories play a critical role in outbreak investigations, strain subtyping, and performance of tests with little commercial interest, such as rabies testing or legionella detection. State and city lab privatization have been explored by at least half of the state governments and have been proposed in several states. There is little question such moves would impair the CDC's ability to monitor EIDs and investigate outbreaks, as many surveillance systems are based on isolates processed in state laboratories.

IV. State Law and the Control of EIDs²⁴

A. ALL DISEASE IS LOCAL

An EID may originate in an African village, be transported into the United States, and ultimately infect a small town in Minnesota. Any breakdown in the

23. John Schwartz, *Clinton to Announce Food-Safety Initiative; \$43 Million Sought to Fight Contamination*, WASH. POST, Jan. 25, 1997, at A03.

24. Part IV is adapted from Terry O'Brien, "Emerging and Reemerging Infectious Diseases: The State Law Perspective."

public health infrastructure beginning in the African village may have deadly consequences in Lake Wobegone. Further, Minnesota itself may be the source of infectious diseases that spread elsewhere. Such possibilities are neither hypothetical nor guesswork.

The following are examples of infectious diseases imported into Minnesota from other jurisdictions:

- Women throughout Minnesota experienced Toxic Shock syndrome resulting from the use of tampons manufactured in other states and distributed internationally.²⁵
- Persons consuming a dietary supplement manufactured in Japan became ill, some severely, with *eosinophilia myalgia* syndrome.²⁶

The following are examples of infectious diseases exported from Minnesota to other jurisdictions:

- Ice cream manufactured in a small Minnesota town and distributed nationally caused the largest documented foodborne disease outbreak in U.S. history.²⁷
- A catering service preparing approximately 100,000 meals a week for passengers departing from an international airline hub located in the Twin Cities was responsible for an outbreak of *Shigellosis*.²⁸

That microbes recognize no borders may be axiomatic. In 1917, a New York court held public health officers could quarantine a person merely because he lived in a house next to a home where disease existed.²⁹ In today's world, our neighbor's home may be in another country. The human hosts of microbes, however, fall within a variety of jurisdictions, all of which must address infectious disease threats and design lawful strategies to confront such threats.

To paraphrase Tip O'Neil's famous axiom of politics, all disease is local, even if its scope is also interstate and international. Local institutions are at the front-line of all outbreaks.³⁰ Government responses to infectious pathogens ultimately become a matter of state and local law in the United States. Any epidemiologic activities undertaken by state or local public health authorities require constitutional, statutory, or administrative bases.

Moreover, the law assists epidemiologists. For example, in the Toxic Shock syndrome, *eosinophilia myalgia*, and Schwan's investigations, the manufacturers' attorneys agreed to submit manufacturing and product distribution informa-

25. Michael T. Osterholm et al., *Tri-State Toxic-Shock Syndrome Study. I. Epidemiologic Findings*, 145 J. INFECT. DIS. 431 (1982); J.P. Davis et al., *Tri-State Toxic Shock Syndrome Study. II. Clinical and Laboratory Findings*, 145 J. Infect. Dis. 441 (1982).

26. Edward A. Belongia et al., *An Investigation of the Cause of the Eosinophilia-Myalgia Syndrome Associated with Tryptophan Use*, 323 N. ENGL. J. MED. 357 (1990).

27. Thomas W. Hennessy et al., *A National Outbreak of Salmonella Enteritidis Infections from Ice Cream*, 334 N. ENGL. J. MED. 1281 (1996).

28. Craig W. Hedberg et al., *An International Foodborne Outbreak of Shigellosis Associated with Commercial Airline*, 268 JAMA 3208 (1992).

29. *Crayton v. Larabee*, 116 N.E. 355 (N.Y. 1917).

30. George A. Gellert, *Preparing for Emerging Infections*, 370 NATURE 409 (1994).

tion only after public health counsel provided written confirmation of the Minnesota statutory provisions protecting corporate trade secrets. In the *Shigella* investigation, the international airline disclosed flight manifests only after public health counsel apprised it of the Health Commissioner's subpoena power to secure the data. Routine investigations also have legal implications. Minnesota statutes, for example, require that state officials provide privacy warnings to persons when the officials solicit private health data.³¹

B. STATUS OF CURRENT STATE PUBLIC HEALTH LAW

1. *Where Are the Lawyers?*

The Institute of Medicine (IOM) described the United States public health system in 1988 as "a hodgepodge of fractionated interests and programs, organizational turmoil among new agencies, and well-intended but unbalanced appropriations—without coherent direction by well-qualified professionals."³² In suggesting legal reform, the IOM stated "[s]tate public health laws are in many cases seriously outdated. Statements of public health agency authority, responsibility, and organizational structure are inadequate to deal with contemporary problems. Procedural safeguards protecting individual rights are frequently weak and absent."³³ In 1992, an IOM committee stated "[i]t is the committee's view that there has been little positive change in the U.S. public health system since the release of that [1988 IOM] report."³⁴ Since then, the CDC issued its EID strategy, suggesting, among other things, prompt implementation of prevention strategies.³⁵ Similarly, the Ciset Working Group addressed the international, national, and local ability to detect EIDs, noted imperfections in the current system, and presented recommendations.³⁶

All activities undertaken to respond to EIDs must be judged on legal principles at the state and local level. Neither the CDC nor the Ciset Working Group plans provide any legal analysis of state and local public health law inadequacies or identification of lawful options available to state or local health authorities to implement the CDC's or the Ciset Working Group's recommendations. The lack of legal analysis in these reports may be based on an assumption that a modern and clear legal framework exists. Unfortunately, the assumption is wrong.

2. *Public Health Powers and the Law*

Disease prevention cannot rely on legal coercion. In the vast majority of cases, epidemiologists depend upon education and persuasion to secure voluntary com-

31. MINN. STAT. § 13.04(2) (1994).

32. INSTITUTE OF MED., *THE FUTURE OF PUBLIC HEALTH* 139 (1988).

33. *Id.* at 146.

34. IOM REPORT, *supra* note 7, at 7.

35. CDC STRATEGY, *supra* note 5.

36. Ciset REPORT, *supra* note 6.

pliance with their recommendations. In certain instances, however, a public health official insists upon a certain action and a citizen declines. At this point the public health issue also becomes a legal issue.

The CDC proposes implementation of disease prevention and control mechanisms.³⁷ These strategies entail assessing the authority of public health officers to insist on compliance with certain directives. Ed Richards identifies public health tools in disease prevention and control as authority to: (1) require reporting of private medical data to government agencies; (2) search medical and hospital records to locate information concerning the spread of infectious diseases; (3) immunize persons against infectious diseases; (4) collect specimens, perform tests, and examine persons without their consent; (5) treat persons without their consent; (6) restrict a disease carrier's occupation; (7) restrict the freedom of association and movement of disease carriers; and (8) seize and destroy property that threatens the public health.³⁸

State epidemiologists and their counsel should review their current statutory authority to ensure this authority supports both routine activities and responses to emergency situations.

3. Routine Authority

All disease prevention and control activity should be grounded on sound legal bases. If more authority is necessary to fulfill routine acts, such authority should be secured.

Disease surveillance is the crucial first step in discovering an EID threat.³⁹ Certainly items one and two of Richard's list are routine. Yet the Minnesota legislature, for example, has not given investigators the authority to search medical or hospital records. Indeed, the statutes prohibit the Commissioner of Health from compelling disclosure of privileged health or medical information except to conduct a "look-back" investigation if a provider has exposed his or her patients to HIV.⁴⁰ Health investigators may legally demand from health providers only the data specified in the disease reporting rules.⁴¹

a. Mandatory Reporting

The list of conditions to be mandatorily reported in a passive surveillance system should be reviewed for adequacy.⁴² Moreover, state officials should determine their enforcement mechanisms' sufficiency in dealing with uncooperative

37. See CDC STRATEGY, *supra* note 5.

38. Edward P. Richards, *Communicable Disease Control in Colorado: A Rational Approach to AIDS*, 65 DENV. U. L. REV. 127, 133-34 (1988).

39. R.L. Berkelman et al., *Infectious Disease Surveillance: A Crumbling Foundation*, 264 SCIENCE 829 (1994).

40. MINN. STAT. § 144.054 (1994).

41. MINN. R. 4605.7090 (1995).

42. See, e.g., MINN. R. 4605.7040(A-WW) (1995).

or, more commonly, indifferent or careless nonreporters. For example, a small minority of physicians in Minnesota initially stated they would refuse to report the identity of HIV-positive persons to the Department of Health as required. That a violation of any Health Department rule constituted a misdemeanor⁴³ did not provide sufficient incentive to cause compliance. Public officials' subsequent intensive educational efforts resulted in most physicians reporting. Very few physicians, however, complied only when advised that failure to obey the Health Department rule could result in the Board of Medical Practice initiating disciplinary action against their professional licenses.

b. Subpoena Powers

Many states may not possess subpoena power to access relevant data. Public health agencies at all levels need to consider whether the legislature should grant them subpoena authority for active surveillance. In 1985, the Minnesota Department of Health sought access to the registration records of a Twin Cities hotel. A local prostitute named a foreign diplomat as a contact for a virulent sexually transmitted disease. Because the Health Department lacked subpoena power, the hotel refused health investigators access to its records. Through negotiations with corporate counsel, the hotel agreed to accept a subpoena entitled "Commissioner's Directive" to protect it from any later invasion of privacy claim by a patron. In the next legislative session, the Minnesota Department of Health secured the power to subpoena nonprivileged information as part of an investigation to determine the existence of a serious health threat or to locate persons possibly exposed to an agent seriously affecting his or her health.⁴⁴

This statute has been useful in several contexts. As previously indicated, while investigating a national foodborne outbreak of *Shigellosis* associated with food served by a Minnesota-based airline in 1992, epidemiologists needed to secure the identities of persons who flew on various flights from the metropolitan Twin Cities area. Because the Health Commissioner had subpoena power, the airline submitted manifests, enabling the investigation to proceed.⁴⁵

Similarly, Schwan's, Inc., was reluctant to provide customer lists to the state epidemiologist. Because the Commissioner possessed subpoena power, the company provided customer names to the Minnesota Department of Health.⁴⁶ Nonetheless, as the CDC lacked similar subpoena power, the company initially refused to cooperate and stated it would not fulfill the CDC's request for information.⁴⁷ Public health officials lacking subpoena authority should consider securing such authority and identifying circumstances under which this authority may be exercised.

43. MINN. STAT. § 144.49 (1994).

44. MINN. STAT. § 144.054 (1994).

45. See Hedberg et al., *supra* note 28, at 3209.

46. See Hennessy et al., *supra* note 27, at 1281-82.

47. *Report Says '94 Schwan's Outbreak Affected 240,000: Company Official Disputes CDC's Estimate*, MINNEAPOLIS STAR TRIBUNE, May 16, 1996, at 1A.

c. Privacy Concerns

Persons reviewing legislation for surveillance should also be conscious of privacy concerns. The U.S. Supreme Court reaffirmed the authority of health departments to mandate nonconsensual reporting of significant public health conditions.⁴⁸ In a concurring opinion, Justice Brennan suggested such authority was contingent upon the degree to which the government agency maintained the data as private.⁴⁹ Subsequently, several federal district courts have held citizens have a constitutional right to privacy in the confidentiality of disease information maintained by government officials.⁵⁰ Because circumstances may exist in which a public health officer should disclose confidential information, the criteria allowing disclosure should be clarified in privacy statutes.⁵¹

4. Emergencies

Unfortunately, many state public health statutes are either too vague⁵² or too disease specific⁵³ to offer guidance to health officials in an emergency. Because public health officials and law enforcement officers may fear litigation as much as contagion, policy makers and legislators should clarify public officials' authority and various participants' roles in health emergencies.

Consider this fictitious scenario: Flight 107 arrives directly from New York–JFK International Airport to the Minneapolis/St. Paul International Airport with 200 passengers aboard. Fifty passengers, from throughout the United States and Canada, had been on an African archeological walking tour sponsored by the University of Minnesota. The group departed Africa five days prior to its flight to the Twin Cities. Ten of these fifty passengers become violently ill within an hour of departure from JFK, with symptoms including vomit laced with blood, severe diarrhea, spiked temperatures, and delirium. Five others report feeling a sense of malaise, a feeling experienced several days before by all ten violently ill persons. The crew radios ahead to request emergency medical assistance upon landing, but four of the severely ill passengers die en route.

The physician called by the airline realizes other asymptomatic passengers on board may be exposed to an infectious agent and could pose a serious health threat if they embark for points throughout the United States and Canada. He requests all passengers remain in the gate area, which they reluctantly agree to do. The physician and the state epidemiologist both acknowledge they know little of the agent, its epidemiology, incubation period, and other information necessary to establish

48. *Whalen v. Roe*, 429 U.S. 589 (1977).

49. *Id.* at 607.

50. *See, e.g., Doe v. Barrington*, 729 F. Supp. 376 (1990).

51. *See, e.g., MINN. STAT. § 13.38(2)(c)* (1994).

52. *See, e.g., MINN. STAT. § 144.05* (1994).

53. *See, e.g., Lawrence O. Gostin, The Future of Public Health Law*, 12 AM. J.L. & MED. 461, 461 (1987); Lawrence O. Gostin, *Controlling the Resurgent Tuberculosis Epidemic—A 50-State Survey of TB Statutes and Proposals for Reform*, 269 JAMA 255, 255 (1993).

the nature of the problem or to implement a specific course of action. Under a very old statute,⁵⁴ the state epidemiologist advises that the incoming passengers be held within a confined area of the airport and prohibited from contact with others except for medical and public health personnel until more is known.

The advice of the state epidemiologist may well be appropriate. Some passengers, however, claiming they are in robust health, assert they have business or personal commitments they intend to keep or connecting flights they intend to make.

Someone must decide who shall restrain these apparently healthy passengers and must determine how such physical restraint shall be accomplished. The physician on site may ask the airport police to prevent anyone from leaving or from coming into contact with the passengers. The law enforcement authorities, who may know of the fatalities, may choose to have as little as possible to do with restraining the passengers, however. Moreover, the airport police chief, in checking with his or her attorney, may be advised that no one may be detained without a court order.⁵⁵ Although a judge may be contacted in an emergency, no one knows who should make the contact. Further, the identification of the agency with jurisdiction may be muddled, with national, state, county, and city health and law enforcement authorities involved. The attorneys advising various governmental authorities may disagree among themselves as to what action is necessary and who shall undertake it. Meanwhile, there is simply insufficient physical restraint to prevent a disgruntled passenger from leaving.

Legislators, lawyers, and health policy makers need to prepare for such contingencies now rather than expecting a physician or health officer on site to identify and implement coercive actions or to convince reluctant and fearful agencies to comply with his or her directions. In order to anticipate and to plan for this type of problem, scientists and lawyers must work together to identify practical and lawful options in an emergency. Lawyers must assist public health officers in modernizing state health codes to authorize a quick, efficient, and lawful response to contain an outbreak at its beginning. Ideally, the health officer, the airport chief, and the various jurisdictions involved should know who must do what, when, and how.

Lack of clarity in establishing jurisdictional authority for responding to a disease outbreak results in mismanagement and inefficiency. In reviewing the Hantavirus outbreak in the four corners area of Arizona, Colorado, New Mexico, and Utah, the Arizona State Epidemiologist describes the operational difficulties encountered.⁵⁶ He identifies the number of jurisdictional organizations involved, including the four states plus the Navajo Nation Division of Health, the CDC, and the Indian Health Service, as well as county health departments, coroners, university

54. Minn. Stat. § 144.14 (1994).

55. The police attorney may cite a statute prohibiting a health commissioner or his or her agents from issuing directives to a class of persons (MINN. STAT. §144.4172(6) (1994)) and appearing to require specific judicial authority to hold or detain any individual in an emergency (MINN. STAT. § 144.4182(1) (1994)).

56. See Gellert, *supra* note 30.

medical centers, and others. Because he and others had to devote energy and time defining and implementing “rudimentary management procedures,” and developing strategies in isolation and on an ad hoc basis, he concludes, “the response as a whole was inefficient and could easily have become a medical and public policy debacle.”⁵⁷

Similarly, in any major foodborne outbreak, numerous local, state, and national agencies have a jurisdictional role. In the Schwan’s outbreak, the Minnesota Department of Health, the Minnesota Department of Agriculture, the U.S. Department of Agriculture, the CDC, and the U.S. Food and Drug Administration all had legal authority to address a portion of the problem. For example, although Minnesota Health Department authorities identified the source of the outbreak, the Health Department did not have authority to inspect the premises. Indeed, the company would not even permit health investigators to take photographs until the Minnesota Agriculture Department asserted its authority. Developing a pre-existing protocol that specifies, among other matters, the jurisdictional role of each agency will save time, energy, and perhaps lives.

5. Governor’s Emergency Authority

A state chief executive’s authority to respond to an emergency should also be reviewed. In the movie *Outbreak*, the U.S. Army simply surrounded a town and prohibited anyone other than government scientists and military officials from entering or leaving, but the legal basis for such a curtailment of liberty was not addressed. In some crises, a governor may legally use the National Guard. During the cold war, Minnesota granted upon its governor authority to declare a state emergency under certain circumstances and established an Executive Division of Emergency Management.⁵⁸ Reading the emergency power statute in context, however, clearly shows the statute was designed to respond to a military attack.⁵⁹ Although the governor may control movement of citizens or vehicular traffic during attacks, interpreting the statute to include an attack by pathogens is difficult. Although the statute contains a provision addressing peace time emergencies,⁶⁰ the degree to which individuals within an entire community could be prohibited from leaving or entering is ambiguous.

Lawyers and legislators should specify the criteria and circumstances under which the chief executive may declare a public health emergency and may authorize, on a temporary basis, measures designed to prevent the spread of serious illness. In a nightmarish scene when a disease needs to be confined in a restricted area, a chief executive requires clearly specified criteria to invoke temporary emergency measures.

57. *Id.*

58. MINN. STAT. § 12.02 (1995) (initially passed in 1951).

59. MINN. STAT. § 12.31 (1995).

60. MINN. STAT. § 12.31(2) (1995).

One may legitimately demand to know when a nonjudicially authorized emergency order or, alternatively, the governor's invocation of emergency power, is justified. The legislature should grant public health officials authority to make initial judgments in an emergency. In one of the few modern quarantine decisions, the U.S. District Court for the Eastern District of New York reviewed the restriction of a woman not having a valid smallpox vaccination certificate upon arriving in the United States on an international flight from an area where smallpox was identified. In determining the nature of the evidence justifying the detention, the court stated:

[T]he judgment required is that of a public health officer and not of a lawyer used to insist on positive evidence to support action; their task is to measure risk to the public and to seek for what can reassure and, not finding it, to proceed reasonably to make the public health secure. They deal in a terrible context and the consequences of mistaken indulgence can be irretrievably tragic. To supersede their judgment must be a reliable showing of error.⁶¹

Put in plain language, health authorities in a public health crisis should be cut some slack pending judicial review. Subsequent judicial review must be swift. Even in an emergency, no citizen wants a bureaucrat's discretion escaping judicial review. Our rights should not be abused any more by a public health officer wearing a white lab coat and carrying a stethoscope than by a police officer in a blue uniform carrying a night stick. Nonetheless, statutes should be reviewed to ensure that in a legitimate emergency, as delineated by specific criteria, health officers may direct, law enforcement agents must enforce, and citizens must comply with temporary personal control mechanisms.

C. HISTORY OF PUBLIC HEALTH LAW

1. *The Pre-Antibiotic Era*

The scenarios outlined above would not have presented many legal issues throughout most of U.S. history. For example, when Pennsylvania authorities established a *cordon sanitaire* around Philadelphia during a yellow fever epidemic in 1798,⁶² they isolated the federal government.⁶³ No congressman, some of whom helped draft the U.S. Constitution, or anyone else objected to this extreme personal control restriction. Indeed, at one time the imposition of personal control mechanisms to control disease was accepted as a joint governmental and individual obligation to protect one's self and one's family.⁶⁴

61. Siegel v. Shinnick, 219 F. Supp. 789, 790 (E.D.N.Y. 1963).

62. Smith v. Turner, 48 U.S. (7 How.) 283, 340-41 (1849).

63. For the degree of fear concerning contagion and the legal response in addressing communicable diseases, see Edward P. Richards, *The Jurisprudence Prevention: The Right of Societal Self-Defense Against Dangerous Individuals*, 16 HASTINGS CONST. L.Q. 329-34 (1989).

64. Wendy E. Parmet, *Legal Rights and Communicable Disease: AIDS, the Police Power & Individual Liberty*, 14 J. HEALTH POL., POL'Y & L. 741, 743 (1989), hereinafter Parmet, *Legal Rights*.

The first case in which the U.S. Supreme Court addressed a conflict between individual rights and public health was *Jacobson v. Massachusetts*.⁶⁵ The Supreme Court held state health authorities were justified in mandating administration of the smallpox vaccination, even to those who objected and in spite of a body of medical opinion disfavoring vaccinations. The Supreme Court reaffirmed state police power, holding states do not surrender this authority when becoming a member of the Union under the U.S. Constitution.⁶⁶ The Supreme Court acknowledged, however, a sphere within which individuals may assert the supremacy of their own interests, but also stated citizens must bend to such reasonable regulations as the general public health may demand.⁶⁷

Similarly, supreme court decisions in almost every U.S. jurisdiction contain language similar to the Minnesota Supreme Court's in *Schulte v. Fitch*, which stated in a tuberculosis (TB) case:

That the preservation of the public health is one of the duties devolving upon the state, as a sovereign power, cannot be successfully controverted. In fact, among all the objects sought to be secured by governmental laws, none is more important than the preservation of the public health. . . .⁶⁸

2. *The Post-Antibiotic Era*

With the advent of antibiotics, coercive personal control mechanisms became unnecessary, and the substantive concepts of public health law remained undisturbed and unchallenged while the revolution in due process regarding other governmental intervention occurred.⁶⁹ A major legal development in public health jurisprudence is exemplified by *Green v. Edwards*,⁷⁰ in which the West Virginia Supreme Court held a person alleged to have TB must be accorded procedural due process rights, regardless of the vague and general language authorizing isolation in the West Virginia statute.

In the 1980s, when the AIDS crisis hit the United States, many commentators suggested substantive public health laws developed in an earlier era were archaic and antiquated, if not dead.⁷¹ But, other than insuring minimal due process rights in nonemergency public health situations, the courts upheld the substantive authority of public health authorities in responding on behalf of a community. Indeed, one commentator suggests that courts have not only reaffirmed, but have also expanded historical public health legal concepts in other prevention contexts.⁷²

65. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905).

66. *Id.* at 25.

67. *Id.* at 29.

68. *Schulte v. Fitch*, 202 N.W. 719, 712 (Minn. 1925).

69. See Gostin, *supra* note 53, at 461; Parmet, *supra* note 64, at 748-54.

70. *Green v. Edwards*, 263 S.E.2d 661 (W. Va. 1980).

71. See Wendy E. Parmet, *AIDS & Quarantine: The Revival of an Archaic Doctrine*, 50 HOFSTRA L. REV. 53, 54-55 (1985) [hereinafter Parmet, *Aids & Quarantine*].

72. Richards, *supra* note 63, at 342.

One of the prominent legal authorities in the field, Lawrence Gostin, acknowledges civil liberties are better secured through statutory development than by reliance on the judiciary.⁷³ Indeed, Gostin suggests that if public health authorities engage in coercive personal control mechanisms, these authorities must comply with the Americans with Disabilities Act.⁷⁴ A New Jersey case implies that public health authorities may have to comply with the Americans with Disabilities Act in order to lawfully isolate a multi-drug resistant, infectious TB carrier continuing to refuse treatment while exposing others to infection.⁷⁵

3. *The Era of EIDs*

Responding to calls for statutory reform, Minnesota passed legislation attempting to bridge the gap between long-standing substantive police power to protect public health and modern concepts of procedural due process.⁷⁶ In so doing, the statutes possibly provided more process than is due and abrogated common law discretionary health authority to respond to an emergency.⁷⁷ In Minnesota, for example, a health officer may no longer order the involuntary detention of a person, even in an emergency.

In 1996, a bill was introduced enabling a sheriff, on a health officer's directive, to apprehend alleged carriers of active and infectious TB prior to securing a court order.⁷⁸ The Minnesota Sheriff's Association stated, even with statutory authority, its membership would be reluctant to honor a health officer's directive to apprehend and to hold an alleged TB carrier without a court-issued warrant. Because the legislation failed, health officers must continue to secure court authorization even in an emergency situation involving a deadly airborne pathogen.⁷⁹

In our fictitious airport scenario, persons held against their will may later claim they were falsely imprisoned, suffered severe economic loss from missed business meetings, or suffered emotional distress for a missed funeral. Absent clear statutory authority with prearranged procedures whereby law enforcement officers

73. See Gostin, *Controlling the Resurgent Tuberculosis Epidemic—A 50-State Survey of TB Statutes and Proposals for Reform*, *supra* note 53, at 256; Gostin, *The Future of Public Health Law*, *supra* note 53, at 461-62.

74. Lawrence O. Gostin, *The Resurgent Tuberculosis Epidemic in the Era of AIDS: Reflections on Public Health, Law, and Society*, 54 MD. L. REV. 1, 80 (1995).

75. *City of Newark v. J.S.*, 652 A.2d 265 (N.J. 1993).

76. MINN. STAT. § 144.4171-4186 (1994).

77. Prior to the passage of this law, pre-existing statutes authorized the commissioner to act in an emergency. See, e.g., MINN. STAT. § 144.14 (1994). The *Green v. Edwards* case, 263 S.E.2d 661 (W. Va. 1980), did not consider whether the Constitution requires any hearing prior to instituting a quarantine, and case law suggests the state could avoid a prior hearing in an emergency. See, e.g., *Camara v. Municipal Court of San Francisco*, 387 U.S. 523, 539 (1967) (officials could engage in a prompt inspection in an emergency without a warrant); *North Am. Cold Storage Co. v. City of Chicago*, 211 U.S. 306, 315 (1908) (upheld the right of a state to seize and destroy spoiled and unwholesome food even though no notice or opportunity to be heard was previously given).

78. S. 1866, H.R. 2108, 1st Legis. Sess. (Minn. 1996).

79. MINN. STAT. § 144.4182 (1994).

will implement legitimate health orders, the health officer may have to rely on a necessity defense to criminal or tortious charges of false imprisonment. Lawyers, legislators, and policy makers anticipating EIDs should be in a position to delineate the criteria under which and the mechanisms by which a health officer in an emergency may restrain a person. As planning for the next war by fighting the last one is sometimes a mistake, using AIDS and HIV as a paradigm to plan for EID threats must be avoided.⁸⁰

D. FEDERAL-STATE LEGAL ISSUES

1. *State Interference with Interstate Commerce*

Experts in federal-state relations should consider some fundamental legal issues arising in the context of infectious disease threats. For example, to what extent may a locality or state restrain interstate travel? Assume a highly contagious pathogen is identified in LeSueur, Minnesota, a community across the Mississippi River from LaCrosse, Wisconsin. Wisconsin authorities may wish to restrain the entry of people fleeing LeSueur. May they do so, under what circumstances, and how? The federal government traditionally defers to states in public health regulation of migration.⁸¹ Indeed, scholars refer to quarantine as an exception to federal commerce clause powers.⁸² Does this fact authorize Wisconsin to prohibit the introduction of persons or products from Minnesota if Congress has not acted?

The leading case in quarantine law occurred in 1902 when the U.S. Supreme Court upheld a Louisiana public health resolution prohibiting the entry of any person in any city or town in quarantine, regardless of whether the person was healthy or infected with disease.⁸³ Immigrants from a French steam ship were denied entry at their port of arrival, New Orleans, even though they were free from disease when leaving Europe and when arriving in the United States. The Supreme Court ruled that until Congress exercised its power on the subject, state quarantine laws and any state laws for the purpose of preventing or controlling contagious diseases were not repugnant to the Constitution, even though they impeded interstate commerce.⁸⁴ If Congress is silent, to what extent may a state authority impede interstate travel in the disease context in responding to outbreaks in airports, seaports, or border areas?

80. HIV is simply not useful as a guide in drafting laws dealing with EIDs. AIDS is a disease that is hard to catch; no cure or immunization exists and, so far as is known, infectivity continues for life.

81. Gerald L. Neuman, *The Lost Century of American Immigration Law (1776-1875)*, 93 COLUM. L. REV. 1833, 1859-60 (1993).

82. See, e.g., Blair P. Bremberg & David C. Short, *The Quarantine Exception to the Dormant Commerce Power Doctrine Revisited: The Importance of Proofs and Solid Waste Management Cases*, 21 N.M. L. REV. 63, 65 (1990) (proposing adoption of a quarantine theory in deference to state regulations promoting public health for the analysis of whether municipal solid waste regulations passed the Commerce Clause test).

83. *Compagnie Francaise De Navigation A. Vapeur v. State Bd. of Health*, 186 U.S. 380 (1902).

84. *Id.* at 389.

2. *Federal Interference with State Police Powers*

Could the federal government impose personal control measures such as isolation or quarantine within a state, thereby superseding the state's exercise of its own police power? Currently, national quarantine regulations exist that address cooperation with states. For example, federal law grants authority for the states and the federal government to cooperate with respect to quarantines.⁸⁵ Federal law also authorizes the Surgeon General to make and to enforce regulations preventing the spread of disease, including the quarantine of infected or suspect cases, but these regulations only apply to persons traveling in interstate and foreign commerce.⁸⁶ The statute and the regulatory program thereunder do not establish a national quarantine system.

At least two possible sources of federal authority exist under which the federal government could legitimately respond within a state to a national epidemic: the Commerce Clause and the executive emergency powers. Essentially, while the federal government regulates various public health areas, such as air and water quality and food and drug safety, the states retain primary public health authority by virtue of the police power, reserved to them by the Tenth Amendment.⁸⁷ Constitutional experts in the Commerce Clause and state police power should identify the circumstances, if any, under which the national government may preempt state health authority in responding to a national epidemic.

A review of executive emergency powers should be undertaken to determine the degree to which the president may authorize the use of military force to protect the national interest in the event of a pathogenic invasion. Although the Constitution does not explicitly give the president power either to declare a national emergency or to legislate independently of Congress during an emergency, presidents have declared national emergencies on the basis of their executive emergency powers conferred by Article II of the Constitution.⁸⁸

A relevant example concerns President Roosevelt's Executive Order authorizing military personnel to detain and to relocate persons of Japanese ancestry in the United States following the attack on Pearl Harbor. In *Korematsu v. United States*, the Supreme Court upheld this exclusion and detention of Japanese Americans despite the internment's abridgment of the Japanese Americans' rights to procedural due process and the obvious Equal Protection issue.⁸⁹ Since *Korematsu*, presidents have relied upon the executive emergency power to undertake a number of activities, including justifying the use of military personnel to respond to "natural disaster . . . technological emergency, or other emergency, that seri-

85. 42 U.S.C. § 243 (1994).

86. 42 U.S.C. § 264 (1994).

87. See Parmet, *Legal Rights*, *supra* note 64; Parmet, *AIDS & Quarantine*, *supra* note 71.

88. See, e.g., Jules Lobel, *Emergency Power and Decline of Liberalism*, 98 YALE L.J. 1385, 1398-99 (1989).

89. *Korematsu v. United States*, 323 U.S. 214 (1944).

ously degrades or seriously threatens the national security.’’⁹⁰ Under the National Emergencies Act, the president may declare a national emergency, but the power to respond to emergencies must derive from statutes other than that Act.⁹¹

The degree to which courts will uphold a president’s lawful authority to instruct the military to quarantine persons exposed to a disease is unknown. Justice Roberts, in his dissent in *Korematsu*, suggested the military, acting under the president, would have authority to remove people “from the area where a pestilence has broken out.”⁹² The time people could be held without a hearing would presumably be short. One could argue *Korematsu* stands for the proposition that in the event of a public health crisis jeopardizing the nation’s health, the president may take whatever action, including quarantine, necessary to protect the national community. However, should not scientists, policy makers, lawyers, and others discuss, deliberate, and establish the nature of such action in anticipation of a crisis, rather than relying on such an infamous precedent?

E. PROPOSALS

In order to ensure some follow-through to the work done by our scientific colleagues in preparing for EIDs, the following proposals are offered:

1. Agencies such as the CDC, the CSTE, and the Association of State and Territorial Health Officers should solicit active participation from lawyers to assist in developing EID strategies. These efforts could be bifurcated into strengthening public health officers’ authority in routine matters such as surveillance and subpoenas and into focusing on the rare emergency requiring personal control mechanisms on a temporary basis.
2. The American Bar Association, state bar associations, the National Health Lawyers Association, and similar organizations should impanel groups to identify strategies enabling public health officials to implement sound public health principles in routine and emergency situations. Organizations such as the National Attorneys General Association and other organizations comprised of government lawyers who advise public health officials should attempt to develop proposals for submission to state legislators and to Congress to assist public health authorities in fulfilling their mission.
3. Scientists and lawyers should discuss the role of law in addressing the EID threat. A review of the law’s role relating to the use of antibiotics, mechanisms of harvesting, processing, packaging, distributing and preparing of food products, changes in water ecosystems, reforestation and deforestation, urban decay, poverty, population growth, and shifts in migration is also necessary.

90. See Exec. Order No. 12,656, 53 Fed. Reg. 47,491 (1988) (Executive Order issued by President Reagan in his last months in office using his emergency powers).

91. 50 U.S.C. § 1621 (1994).

92. *Korematsu v. United States*, 323 U.S. at 231.

4. Lawyers must seek better methods of communication with their public health clients and must demonstrate they are to assist and not to frustrate implementation strategies. In *The Hot Zone*, Richard Preston describes the decision of the scientists investigating the Reston Ebola outbreak not to contact legal counsel. To the extent scientists and public health officials view their attorneys as impeding their mission, the scientists, the legal system, and the public are not well served.
5. Public health officials and lawyers should jointly develop a blueprint responding to outbreaks based upon sound legal principles designed to effectuate both public health flexibility and individual rights. The experiences faced by the Arizona epidemiologist in the Hantavirus outbreak are instructive. The epidemiologist found the lack of a pre-existing plan rendered the response inefficient and could have contributed to a major disaster. Among other things, he states as follows:

The state and local health departments in the United States do not have a standard protocol to follow when faced with an outbreak of a new infectious disease; rather they adopt a narrow technocratic view that holds that if the science is good, then so too will be the response. Without a cure or vaccine, however, rapid and effective organizational responses are vital for disease control.⁹³

Rather than reinvent the wheel in every public health crisis requiring judicial intervention, the Minnesota Attorney General's Office prepared legal policy and procedure protocols responding to public health emergencies. These protocols include checklists, draft pleadings, prepared and updated legal memoranda and forms, affidavits with attached curriculum vitae on relevant health department personnel, and trial books. Thus, when public health officers need to exercise the sovereign authority of the state, their counsel can focus limited time to the development of the facts unique to the circumstance, fill in the blanks, and act.

Obviously, the legal process lends itself more easily to procedure manuals than an evolving outbreak investigation will. Nonetheless, attorneys should assist public health officials in attempting to create a blueprint establishing leadership, roles, and expectations of the various parties and agencies involved in an investigation. To the extent the development of such a blueprint highlights gaps, legislative or regulatory changes should be proposed. Past experience has shown some of the jurisdictional, structural, and management problems. Attempts should be undertaken to correct these problems now rather than when confronted with a serious outbreak.

V. Conclusion

This article tried to present in brief a large number of international, national, and state legal issues arising in connection with plans to confront EIDs. By no

93. See Gellert, *supra* note 30.

means has treatment of these issues been exhaustive, but an effort was made to convey to the readership the important role lawyers have in fighting against EIDs.

The analyses of international, national, and state law undertaken share some common threads, recognition of which will help lawyers appreciate the EID challenge to their craft. The common threads are:

- *Legal Interdependence.* EIDs challenge law at the international, national, and state levels. Successful handling of EIDs at the state level depends upon effective legal responses at the international and national levels.
- *Complex Jurisdictional Environment.* While EIDs recognize no borders, responses must work through different legal jurisdictions. The WHO has to respect the sovereignty of its member states, the federal government has limited public health powers, and state public health authorities have no control over federal or international activities concerning infectious disease control.
- *Scope and Allocation of Public Health Powers.* Within any given jurisdiction, issues arise concerning the proper scope and allocation of public health powers. Should the WHO be given more powers to combat EIDs? How can the multiple federal agencies with responsibilities for infectious disease control be more effectively coordinated? Should state public health authorities wield broad, discretionary powers or be limited by strict due process and privacy requirements?
- *Integration of Epidemiology and Legal Procedure.* Law and epidemiology are intertwined because: (1) law needs guidance from epidemiologists to protect public health; and (2) epidemiology needs law and legal procedure to implement actions aimed at the control and prevention of infectious diseases.
- *Education and Responsibility.* Whether the public health minister of an independent state, a member of Congress, or a local physician, persons in positions of responsibility need more education concerning the epidemiological and legal aspects of infectious disease control and prevention.
- *Need for Legal Reform.* EIDs demonstrate public health law needs reformation internationally, nationally, and locally. Lawyers as well as scientists must react to the threats growing in the microbial world.

Whether the legal community in the United States and every other country desires it, lawyers will be directly involved in the struggle with the resurgent microbial world. As Laurie Garrett asserts, “[microbes] are our predators and they will be victorious if we, *Homo sapiens*, do not learn how to live in a rational global village that affords the microbes few opportunities. It’s either that or we brace ourselves for the coming plague.”⁹⁴

94. LAURIE GARRETT, *THE COMING PLAGUE: NEWLY EMERGING DISEASES IN A WORLD OUT OF BALANCE* 620 (1994).

