Controlling Typhoid Mary

When reports began to emerge in October 2014 that a New York City doctor had fallen ill with Ebola, media outlets whipped themselves into a frenzy. Mayor Bill de Blasio attempted to reassure the public that there was no risk of an Ebola outbreak in the Big Apple at a press conference announcing that Dr. Craig Spencer had tested positive for Ebola. "We want to state at the outset—there is no reason for New Yorkers to be alarmed," de Blasio said. The mayor's efforts to assuage the public, however, did not dissuade a flurry of Twitter commenters, bloggers, and even mainstream media reporters from feeding public hysteria. Predictably, the New York City tabloids ran sensational front-page headlines that capitalized on New Yorkers' fears: "EBOLA HERE!" (*New York Post*) and "NY DOC HAS EBOLA" (*New York Daily News*).

Over the next twenty-four hours, reporters began to piece together the timeline of Dr. Spencer's movements through a combination of news releases from the governor, the New York City Health Department, and even the ride-sharing service Uber. New Yorkers were collectively outraged by the story that crystallized: not only did Spencer not remain in his apartment under self-quarantine, but he took an Uber to go bowling in Williamsburg! The *New York Times*—the city's standard-bearer—ran a short, dry online piece headlined "Can You Get Ebola from a Bowling Ball?"[1] The *New York Daily News* ran a more sensational piece, "New Yorkers, Twitter Users Wonder Why Dr. Craig Spencer Went Bowling," that featured a collection of more than a dozen angry

posts from Twitter users condemning the doctor's actions.[2] That article cited a post from Twitter user ericbolling that encapsulated much of the public anger expressed towards Spencer online: "ABSOLUTELY NO SYM-PATHY for a doctor who knows he's been in contact w/Ebola, goes bowling, takes 2 subways, has contact with girl, Uber. None."[3] Online comment threads predictably devolved into angry disputes over issues as diverse as gentrification (keywords: uber, Williamsburg) and Ebola transmission pathways (keywords: saliva, bowling ball).

Dr. Spencer's infection came on the heels of the death of Thomas Eric Duncan, a Liberian man who became ill after traveling to the United States.[4] Furious debate centered on Duncan's first visit to the hospital after he initially developed symptoms. Although he told a nurse he had traveled to Africa, that information was not communicated to other medical staff.[5] When his providers asked him if he had been in contact with Ebola patients, he reportedly said no—a statement that was not true. Medical staff discharged him with a prescription for antibiotics, sending him back out into the world, where he might have inadvertently exposed others to the disease.[6] Authorities in Liberia were outraged—not with medical providers or their failure to catch his infection earlier, but with Duncan himself. Liberian president Ellen Johnson Sirleaf characterized his failure to report contact with Ebola patients as "unpardonable."[7] Airport officials went further, threatening to file criminal charges against Duncan should he ever return home.

Across the Hudson River, Nurse Kaci Hickox returned to New Jersey from Sierra Leone, where she had been treating Ebola patients. After being quarantined in New Jersey by health officials for two days, she was allowed to return home to Maine, where health officials pressured her to quarantine herself.[8] She openly defied those calls and was photographed biking around her hometown (a fact jokingly cited in a *Saturday Night Live* skit about her case: "that's Kaci with an 'I'—as in I don't care if I got Ebola, I'm riding my damn bike!"[9]). Maine governor Paul LePage threatened to take action but hesitated to follow New Jersey's lead in instituting mandatory twenty-one-day quarantine policies for anyone who had been in contact with Ebola patients after Centers for Disease Control and Prevention (CDC) director Anthony Fauci called such policies "a little bit draconian."[10] Backed by the American Civil Liberties Union, Hickox sued New Jersey for depriving her of her liberty in a case that remains pending.[11]

The range of responses to these three cases—moral outrage, criminalization, and quarantine—illustrates the spectrum of coercive and punitive

attitudes toward the sick, which have deep roots in public health history. The tension between individual liberty and public health stretches as far back as Typhoid Mary, an Irish immigrant and asymptomatic typhoid carrier who was quarantined in 1907 by New York authorities. For centuries, public health officials have waged a battle—sometimes against overwhelming odds—to promote and protect the health of populations and to prevent the spread of disease. Controlling the actions of individuals and communities believed to spread disease has been a core public health strategy, including persuading people to take up practices believed to be "healthy" while discouraging or regulating those actions believed to be "unhealthy."[12] In its battle to preserve population health, a key weapon of public health has been what sociologists refer to as social control.

This chapter traces the history of coercion, persuasion, and regulation in American disease control—first, by examining the rise of coercive practices such as quarantine in the face of deadly and rapidly spreading infectious diseases like the plague; second, by turning to the rise of persuasion and regulation in the twentieth century as improved sanitation, better nutrition, and the advent of antibiotics and vaccines erased the most horrific diseases from the American epidemiological landscape; and third, by revealing how the emergence of new infectious diseases in the late twentieth century such as AIDS and Ebola, as well as new antibiotic-resistant strains of old scourges like tuberculosis, sparked renewed demands for coercive and punitive approaches to disease control.

COERCION AND PUNISHMENT IN THEORY AND PRACTICE

Coercion and punishment are not necessarily the same.[13] Health authorities have an interest in controlling disease and that has at times required restricting the freedom and movement of individuals and even entire communities. In the context of public health law, *coercion* is defined as restricting the liberty of a person or a group of people in the interest of protecting or promoting the public's health; it does not necessarily imply that the person or group of people has committed an offense.[14] Punishment, on the other hand, is a social response to a person's wrongdoing; while it necessarily involves coercion (through fines, jail time, or other means), it is also specifically intended to punish.

Although on paper this distinction between coercion and punishment appears straightforward, in practice it can become muddied. For example, the Supreme Court has upheld "civil confinement" programs under

which convicted sex offenders are detained well beyond their court-ordered prison sentences, potentially indefinitely, as deemed necessary by corrections officials. The court has ruled that this continued detention does not violate constitutional guarantees against double jeopardy because the procedures are civil rather than criminal in nature; the prisoner's extended detention, the court further reasoned, is therefore not punishment at all because "the commitment determination is made based on a 'mental abnormality' or 'personality disorder' rather than on one's criminal intent."[15] The fact that the conditions of civil commitment are virtually indistinguishable from prison is treated almost as a coincidence; the programs' intended function differentiates their constitutional standing. Public health experts have made similar observations of the state's power to quarantine: under certain conditions, the deprivation of liberty imposed through isolation exceeds what is constitutionally permitted under the criminal justice system.[16]

These legal and philosophical distinctions may prove cold comfort to the detained sex offender or the quarantined person; whatever the state's intent, the effect of detention may well be experienced as *punitive*. Although the coercive practices critically examined in this chapter may not constitute punishment in the strict, constitutional-law sense of the term, this chapter nonetheless considers historical cases in which public health practice has taken on characteristics of state-sanctioned punishment.[17]

When and how does coercion turn punitive in public health practice? The hallmark of a punitive campaign is the attribution of blame: punishment is meted out by the state against individuals who have been found culpable. Calls to blame someone for their actions are nearly invariably followed by calls for their punishment. This is most obvious in cases of criminalization in which individuals are tried before a court of law, found guilty, and punished accordingly. But criminal justice authorities do not have a monopoly on blame. Although medical problems are supposed to be handled neutrally, many people—including some doctors and public health officials—nonetheless ascribe blame to individuals who become sick.[18] This chapter examines moments in public health history in which the line between coercion and punishment has been blurred.

QUARANTINE AND COERCION IN PUBLIC HEALTH HISTORY

On an otherwise ordinary winter afternoon in 1907, authorities arrived at a Park Avenue home in New York City to take the cook, Mary

Mallon, into custody. Mallon was accused not of theft or murder but instead of unwittingly spreading typhoid to several members of the households in which she worked as a cook. Authorities had tracked Mallon down by following a trail of "breadcrumbs" left in her wake: a string of typhoid infections and deaths. Antibiotics did not yet exist, and nearly 10 percent of those infected with the disease died.[19]

Authorities told Mallon that she could have her freedom if she allowed them to remove her gallbladder (where the disease was believed to be festering) or agreed to change her profession. Mallon refused, in large part because she did not believe that she was a carrier of the disease, and, as such, she argued that her detention was unjust. In 1910, Mallon finally relented and agreed to stop cooking and work instead as a laundress. However, after her release, she became frustrated with the lower wages of laundry workers. Adopting an alias to conceal her widely reported identity, she returned to cooking. In 1915, authorities detained her again after food she had prepared was found to be the source of another outbreak. She spent the next twenty-three years in isolation on North Brother Island at Riverside Hospital, which was largely used to quarantine tuberculosis patients. The facility was notoriously isolating and poorly managed. One historian describes the site in this way:

> Five miles up the East River, approximately 1,500 feet east of 140th Street in the South Bronx and, on a bad day, downwind from the city's garbage dump on Riker's Island, was the city lazaretto, Riverside Hospital on North Brother Island. Even a century later, when one stands on the rocky shoals of the island, peering into the distance, the city seems remote and inaccessible. The sense of loneliness on North Brother Island is almost palpable. The site had been used as a small hospital for the poor afflicted with contagious diseases since the 1850s. . . . The facilities lacked space, financial resources, adequate medical equipment, and nursing personnel.[20]

Mallon spent the remainder of her life on North Brother Island's "rocky shoals," where she died in 1938. Soon after her first quarantine, a 1908 issue of the *Journal of the American Medical Association* labeled her "typhoid Mary"—a moniker that would live on in notoriety long after her death.[21]

Although Mallon's case is perhaps the most widely reported quarantine in public health history, she was hardly the first person in history to be quarantined. The fact that the hospital she called home was located on an island is the relic of a much longer history that begins in medieval Europe during the fourteenth century. The bubonic plague—colloquially known as the Black Death—claimed the lives of millions. (It has

been estimated that 75–200 million Europeans died of the plague between 1346 and 1353.) Scholars believe the epidemic began in central Asia and traveled along trading routes to Western Europe by way of Italian merchants. Sicily was wracked by one of the first known outbreaks in October 1347, followed quickly by Genoa and Venice in January 1348. Confronted with this rapidly spreading and poorly understood affliction, officials in the Italian city states forced ships from plague-infested countries to remain anchored for a period of time at island isolation stations known as *lazarettos*. Infected sailors were confined to hospitals on the island. Sailors and ships were originally confined for thirty days under a *trentino* policy; when it was extended to forty days, the policy became known as *quarantino*.[22]

On land, infected people were isolated to their homes in cities across Europe. Authorities erected cordons sanitaires, blockades that sectioned off whole neighborhoods to prevent anyone from entering or leaving. Unfortunately, cordons sanitaires were rarely successful because the plague was not primarily spread by human-to-human contact. Instead, most scholars today agree that the disease was spread primarily through rodents infested with a species of flea that carried the bacteria *Yersinia pestis* in its gut; while blockades could restrict the movement of humans, they did little to prevent rodents from freely moving across cities.[23] But this fact was not yet known so authorities continued to cordon off homes and entire neighborhoods.

When colonists left Europe for the New World, they brought these practices with them. Quarantine and isolation were widely used from the seventeenth through the nineteenth century as America faced epidemics of smallpox, yellow fever, cholera and typhus.[24] Although the late-eighteenth-century sanitarian movement—which focused on providing clean water, sewage disposal, and hygienic housing—had a profound impact on infectious disease long before effective medical treatments or vaccines were developed, equally important were the more coercive practices of quarantine and isolation.

In the United States, two systems of quarantine gradually emerged. In ports, a system of maritime quarantine stations—eventually managed by the federal government—detained and inspected cargo, crew, and immigrants from countries with outbreaks of contagious diseases. In cities and towns, local outbreaks were managed by state and local health officials. In the wake of the Industrial Revolution, overcrowding, unsanitary living conditions, and urban poverty led to frequent outbreaks of infectious diseases. Local officials ordered the isolation and

confinement of infected individuals and suspected carriers to "pest-houses," hospital wards, or their homes.[25] Nineteenth-century public health officials adopted other methods that were only slightly less coercive: compulsory vaccination, imposing fines or confinement of those who refused, mandatory reporting of infected patients by physicians to disease registries, contact tracing, and other surveillance techniques.

Better nutrition, improved sanitation, and the advent of vaccines and modern medicine began to turn the tide against many widespread infectious diseases in the twentieth century. In the wake of these shifts in mortality and morbidity, many public health experts came to view coercive strategies for containing epidemics as old-fashioned or even regressive. Medical historian Eugenia Tognotti describes the perspective at the turn of the century:

> In 1911, the eleventh edition of *Encyclopedia Britannica* emphasized that "the old sanitary preventive system of detention of ships and men" was "a thing of the past." At the time, the battle against infectious diseases seemed about to be won, and the old health practices would only be remembered as an archaic scientific fallacy. No one expected that within a few years, nations would again be forced to implement emergency measures in response to a tremendous health challenge.[26]

That challenge came in the form of the devastating influenza epidemics that traveled around the world in 1918, claiming the lives of between 20 and 40 million people. In the face of such a rapidly spreading and deadly disease, local municipalities closed churches, schools, and movie theaters and prohibited attendance at funerals and other public gatherings.[27]

New York City health authorities tried to control the rapidly spreading influenza outbreak while allowing for a certain amount of freedom of movement.[28] Instead of shutting down businesses altogether, the city's health commissioner, Dr. Royal S. Copeland, implemented staggered business hours in an attempt to limit congestion in public places. "Offices opened at 8:40 A.M. and closed at 4:30 P.M., while wholesalers started their days earlier, and nontextile manufacturers moved their start time to 9:30."[29] The effectiveness of these policies is not known, but historical analyses suggest the death rate may have been slightly mitigated in the Big Apple as compared to its neighbors, Boston and Philadelphia, which did not implement similar policies.[30]

Confinement and isolation continued through the first half of the twentieth century, used occasionally during outbreaks of scarlet fever and polio and more frequently for tuberculosis. Until antibiotic treatments for tuberculosis were developed in the 1940s, confinement in a

sanatorium for three to six months was the standard treatment for tuberculosis.[31] Even with the development of antibiotics, however, coercive practices for containing tuberculosis did not end. Tuberculosis patients who refused treatment were handled especially aggressively. In 1949, for example, Seattle's Firland Sanatorium established a locked ward intended for the treatment of only the most noncompliant and "recalcitrant" of tuberculosis patients, who were deemed a threat to public health. In practice, however, the facility was used much more widely and ultimately housed over a thousand patients. The vast majority of patients quarantined at Firland were poor alcoholics living in one destitute neighborhood, Seattle's Skid Road, who were detained even if they were noncontagious or adhering to treatment protocols. Medical historian Barron Lerner describes the facility in stark terms:

> Known as Ward 6 and located in the old naval brig, the unit was equipped with both locked doors and heavily screened windows. All patients admitted to Ward 6 (most of whom were intoxicated) spent the first 24 hours in one of seven locked cells, which contained only concrete slabs covered by thin mattresses.[32]

Historical examples like Firland reveal how well-intentioned disease control strategies can turn punitive when disproportionately applied to specific marginalized groups. The facility—described as a "model" for others around the country—persisted and even expanded for over a decade despite accusations that the facility had effectively institutionalized quarantine as a form of punishment without due process for poor alcoholics.[33]

Sexually transmitted infections (STIs) were also the target for a wide array of coercive policies aimed at controlling infectious diseases in United States history. During World War I, states implemented policies in response to public anxiety over "venereal diseases," such as mandatory screening to obtain a marriage license and screening of newborns. However, just as Seattle's tuberculosis program targeted poor alcoholics, America's venereal disease response during World War I reserved the most invasive and punitive policies for commercial sex workers. Authorities believed prostitutes were carriers and repositories for STIs. By March 1918, over thirty-two states had passed laws requiring that individuals arrested for prostitution be screened for STIs.[34] Just as in Seattle, this frequently involved medical detention that was not subject to the normal legal safeguards of the criminal justice system. Medical historian Allan Brandt offers a telling example:

> In San Francisco, the Department of Health provided arrested women with circulars explaining, "You are in quarantine and cannot be released on bail. . . . If you are found ill with venereal disease you will go to the hospital and stay there until found negative. . . . No lawyer or other person can obtain your release."[35]

That their detention was done in the name of public health rather than in the name of punishment perversely allowed the state to more severely restrict the liberty of commercial sex workers. Despite the public health label attached to their detention, however, the fact that women engaged in a criminal offense, prostitution, were singled out for detention by the state suggests a punitive motive.

On the other side of the country, the Virginia State Board of Health provided its officers with the authority to detain anyone "reasonably suspected" of carrying an STI, which included "vagrants, prostitutes, keepers, inmates, and frequenters of houses of ill fame, prostitution and assignation, persons not of good fame, persons guilty of fornication, adultery, and lewd and lascivious conduct."[36] Despite such broadly construed categories, however, no efforts were made during the time to quarantine men for STIs; these policies were systematically enforced against women.

STIs again became the subject of coercive and punitive policies during World War II. For example, a 1945 Baltimore ordinance gave public health officials the power to isolate patients with syphilis or gonorrhea who refused penicillin treatment.[37] But just as before, the most aggressive tactics were reserved for female sex workers. The Army appointed former Prohibition champion Eliot Ness (whose efforts to take down Al Capone were fictionalized most recently in the HBO series *Boardwalk Empire*) to lead a campaign against prostitution. Sex workers were once again detained in large numbers, subjected to mandatory STI screening, and placed under quarantine until treated. During this time, estimates suggest that over seven hundred cities and towns closed down their red-light districts. With so many women arrested for sex work, many jails became overcrowded. Ness attempted to ease the strain on local corrections facilities by setting up nearly thirty "civilian conservation camps" to house detained prostitutes. These facilities offered more than just medical testing and treatment. Public health scholar Troy Thompson describes one Florida woman who ended up in such a camp in 1944:

> In light of the 1943 Florida laws on prostitution, the police apprehended Jean and gave her an invasive vaginal examination. The court then convicted

her and sent her to one of Florida's newly converted civilian conservation camps. Jean spent the next five weeks there receiving treatment, job training, and lessons in socially sanctioned morality.[38]

Despite detaining thousands of prostitutes, the Army's efforts failed to eliminate new STI infections among troops. Officials lamentingly changed their tune, blaming not prostitutes but "amateur girls—teenagers and older women—popularly known as 'khaki-wackies,' 'victory girls,' and 'good-time Charlottes.'"[39]

Estimates suggest that more than thirty thousand prostitutes were detained between World War I and World War II. These strident efforts reflect a pattern noted by historians: from their inception in the Middle Ages, campaigns to control the spread of infectious disease through coercion have frequently targeted particular groups: disfavored immigrant groups, the poor, the "deviant," and the "disenfranchised." Typhoid Mary is a telling example not just for her brazen resistance to public health quarantine but also because she was a poor immigrant woman working in service for wealthier families—a woman in a precarious social position, a woman without the resources to contest her detention. Mary Mallon became historical legend not just for her actions, but also because of her denigrated social standing. Other typhoid carriers living at the same time are all but forgotten—carriers such as Frederick Moersch, a German-born immigrant working as a confectioner, who infected more people with typhoid fever than Mallon. Moersch, like Mallon, was confined on North Brother Island in 1915 but, as a father and "skilled workman," was viewed far more favorably by the staff; after a brief detention, he was allowed to live at home, where the state even arranged for his rent to be paid.[40] Despite the similarities in their cases, Moersch was treated far more leniently, and his case is all but unknown to history.

This disparity is not unique to American public health history: public health measures have been enforced in deeply discriminatory ways for centuries, with the harshest, most coercive measures reserved for the most marginalized communities and people. It is in these historical moments that coercion becomes punitive. It would be impossible to review every example of this trend. Instead, figure 1 illustrates key examples of coercion and discrimination in public health history. In each case listed in figure 1, coercive measures intended to combat disease were aimed at marginalized groups. In fact, labeling a person or a community a threat to public health casts the sick as hostile aggressors rather than sympathetic victims. During epidemics, fear and stigma of contagion have

heightened the social exclusion of already-stigmatized groups. Viewed in this light, quarantine comes dangerously close to being a metaphor for the need of elites to protect themselves from the "dangerous" classes.

The policies that this chapter describes did not go uncontested. Coercive measures, such as compulsory vaccination programs, mandatory treatment, quarantine, and isolation, often provoked popular resistance and were the subject of many legal challenges. However, these challenges rarely proved successful. Presented with a choice between promoting the freedom of the sick and protecting the health of the masses, U.S. courts have typically deferred to public health authorities and affirmed their prerogative to use coercive measures to control epidemics.

Perhaps the most important such decision came over a century ago with the Supreme Court's ruling in *Jacobson v. Massachusetts.* The case was brought by a Swedish immigrant to the United States, Henning Jacobson, who objected to an order from the Cambridge, Massachusetts, city council requiring that all adults be vaccinated for smallpox. The penalty for not complying was set by the state at $5 (about $100 today), and there was no set procedure for actually forcing anyone to be vaccinated. Jacobson was already familiar with state vaccination programs, which were in place in his home country of Sweden, but he objected to Cambridge's program on the grounds that he and his son had experienced adverse reactions to previous inoculations. The court ruled 7–2 against Jacobson, ruling that the state had the power to impose punishment (either a fine or imprisonment) for failing to comply, but that it could not force anyone to be vaccinated.[41]

The sweeping power of public health authorities to quarantine and isolate sick people against their will falls within the civil law, but it rivals the power of the criminal justice system to infringe on individual liberties. Moreover, "until relatively recently," notes medical ethics expert Ronald Bayer, "the protections accorded to defendants in criminal prosecutions have not been extended to those viewed as a threat to the public health."[42] This changed during the 1970s when courts began to reconsider due process claims from mental patients who were facing civil commitment against their wishes. After a federal district court struck down Wisconsin's commitment law in *Lessard v. Smith* (1972), other courts began to rule that patients were entitled to the due process protections of the Fourteenth Amendment: the rights to notice, to a fair hearing, to be represented by counsel, to cross-examine witnesses, and to hold the state to a clear and convincing standard of proof. One of the most important doctrines to come out of these decisions was the least

Coercion and Punishment in Modern Public Health History

1892   Following outbreaks of typhus and cholera, nativist sentiments led to quarantines of Jewish immigrants who arrived in New York City, while Italians arriving on the same boat were detained only briefly; that same year, first-class passengers were confined to hotels, while those in steerage consigned to an overcrowded quarantine facility with squalid conditions.[1]

1894   Milwaukee officials forced immigrants and poor residents into a quarantine hospital for smallpox.

1900   A San Francisco ordinance required that all Chinese residents of the city receive a dangerous experimental vaccine for plague. Following reports of nine deaths from plague, city officials roped off the Chinese quarter, quarantining 25,000 residents and closing Chinese businesses, while explicitly exempting non-Asians. The court overturned both ordinances, ruling that officials had acted with "an evil eye and an uneven hand."[2]

1902   After smallpox cases were identified in Boston, public health officials, with police in tow, forcibly inoculated African Americans and immigrants.[3]

1907   New York health authorities quarantined Mary Mallon, a poor immigrant woman working as a cook in a private home and carrier of Typhoid. Nicknamed "Typhoid Mary," Mallon would become synonymous with the spread of infectious disease.

1. Markel, *Quarantine*!
2. Parmet, "Legal Power and Legal Rights"; Tyson, "Short History of Quarantine."
3. George J. Annas, Wendy K. Mariner, and Wendy E. Parmet, *Pandemic Preparedness: The Need for a Public Health—Not a Law Enforcement/National Security—Approach* (New York: American Civil Liberties Union, 2008).
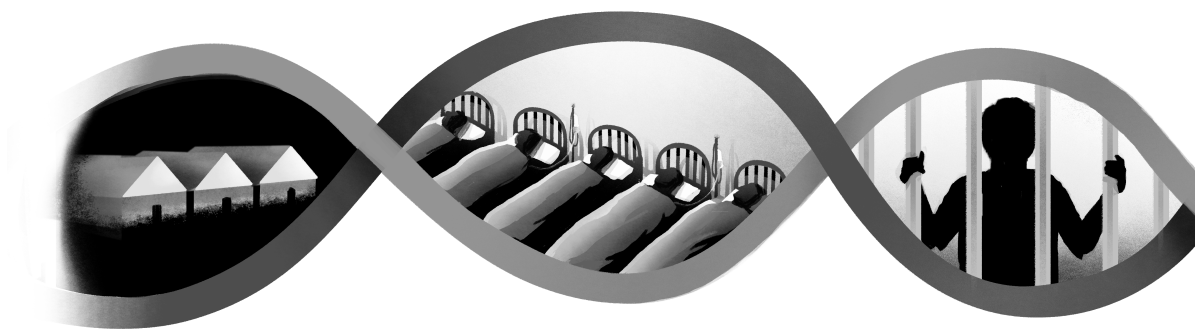

FIGURE 1. Coercion and punishment timeline. Design: Jonathan Lefrançois. Illustration: Justin Karas for Pulp & Pixel.

1916 During the 1916 polio epidemic in New York City, health workers conducted door-to-door searches, forcibly removing sick children from their homes, but allowing the children of wealthy families to remain in a separate room in their homes.[4]

1944 Military officials set up civilian conservation camps in the United States to house imprisoned prostitutes, who were rounded up in raids in an unsuccessful effort to squash sexually transmitted infections among American servicemen.

1949 Seattle's Firland Sanatorium opened its tuberculosis ward, which was used to quarantine over 1,000 mostly alcoholic tuberculosis patients—whether or not they were contagious or compliant with their treatment regimen.

1987 Author Randy Shilts published *And the Band Played On,* which blamed the spread of HIV in the United States on a promiscuous gay male flight attendant referred to as "Patient Zero."

1993 New York City began a program of directly observed treatment and quarantine in response to an outbreak of tuberculosis, disproportionately detaining poor and homeless patients who were deemed likely to be noncompliant.[5]

2014 Liberian president Ellen Johnson Sirleaf characterized Thomas Eric Duncan's failure to report contact with Ebola patients to Texas health care providers as "frankly, unpardonable." Airport officials threatened to file criminal charges against Duncan should he ever return home.

4. Guenter B. Risse, "Epidemics and History: Ecological Perspectives and Social Responses," in *AIDS: The Burdens of History*, ed. Elizabeth Fee and Daniel M. Fox (Berkeley: University of California Press, 1988), 33–66.
5. Gostin, Burris, and Lazzarini, "Law and the Public's Health"; and M. Rose Gasner, Khin Lay Maw, Gabriel E. Feldman, Paula I. Fujiwara, and Thomas R. Frieden, "The Use of Legal Action in New York City to Ensure Treatment of Tuberculosis," *New England Journal of Medicine* 340, no. 5 (1999): 359–66.
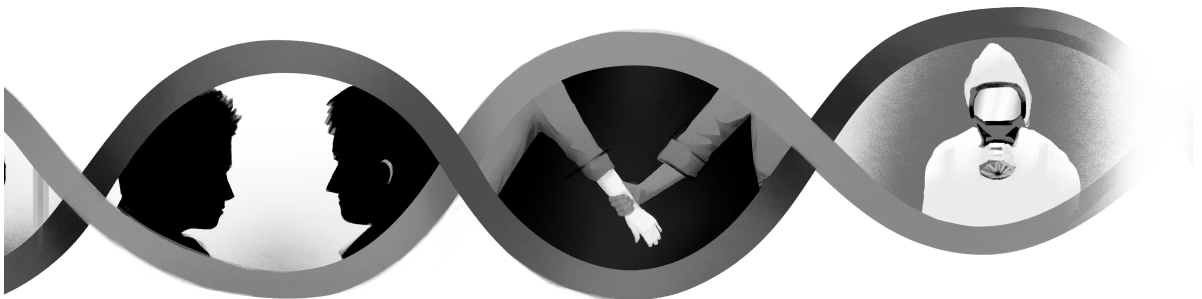
restrictive alternative doctrine, which holds that patients have the right to be treated in the least restrictive setting that meets their needs.[43]

CONTROLLING CHRONIC DISEASE THROUGH EDUCATION, PERSUASION, AND REGULATION

At the dawn of the twentieth century, infectious disease claimed more lives than any other cause of death. According to the CDC, the five leading causes of death in the United States in 1900 were[44]

- influenza and pneumonia (202.2 deaths per 100,000 people);
- tuberculosis (194.4 deaths per 100,000 people);
- gastrointestinal infections (142.7 deaths per 100,000 people);
- heart disease (137.4 deaths per 100,000 people);
- stroke and other cerebrovascular diseases (106.9 deaths per 100,000 people).

By 1950, however, dying in America had changed drastically. With dramatic improvements in nutrition, sanitation, and, finally, the advent of antibiotics and vaccines, infectious disease was dethroned as the leading cause of death in America and was replaced by heart disease (355.5 deaths per 100,000 people) and cancer (139.8 deaths per 100,000 people).[45]

This radical shift in mortality in the United States had a profound impact on public health practice. Better nutrition, improved sanitation, vaccines, and antibiotics had effectively stomped out diseases like smallpox, polio, and the measles—diseases that once maimed or killed millions. In their place were more complex diseases, such as heart disease and cancer, that were not communicable and that could not be traced to a single bacterial or viral agent. Instead, public health argued that these diseases were linked to specific "lifestyle" behaviors such as smoking, drinking alcohol, not getting enough physical exercise, and eating high-calorie foods.

Communicating this new model of disease to the public proved challenging for public health practitioners. For the past century, Americans had gradually come to understand the germ theory of disease, which linked disease and infection to the spread of bacteria and viruses. Public health now had to explain that behaviors, too, could cause disease—but the scientific link between them was harder to demonstrate. Exactly how many hamburgers does one need to eat to get fat? To get diabetes?

How many cigarettes does one need to smoke to get lung cancer? The answers were not black and white.

Smoking proved to be the low-hanging fruit. Although scientists are still debating whether x amount of salt or y amount of saturated fat causes heart disease, there has long been consensus that smoking tobacco causes lung cancer. Beginning in the 1950s, epidemiological studies came out in rapid succession demonstrating a causal relationship between smoking and lung cancer. Based on this research, the Surgeon General's Advisory Committee on Smoking and Health released its first report on smoking in 1964; the report analyzed over seven thousand studies to conclude that smoking directly causes lung cancer, emphysema, and other diseases.[46]

Once the public health establishment agreed that smoking caused cancer, they needed to find ways to convince the sizable proportion of the American public to give up the habit. That proportion was, indeed, sizable: the CDC estimates that in 1965 42.4 percent of adults in the United States smoked tobacco.[47] The mandatory vaccination, quarantine, and coercive strategies of yesteryear were obviously not the right tools for the job.

In their place, public health experts developed new strategies for disease control aimed at getting individuals to take care of their own well-being by avoiding "risky" behaviors—in this case, smoking. Authorities turned to two primary strategies to get Americans to stop smoking: regulation and persuasion. First, they regulated tobacco companies' business practices, the sale of tobacco products, and the locations in which people were allowed to smoke. In 1965, Congress passed the Cigarette Labeling and Advertising Act requiring that all cigarettes sold in the United States carry a warning label advising consumers that "Caution: Cigarette Smoking May Be Hazardous to Your Health."[48] Authorities followed quickly to ban cigarette advertisements on television and radio in 1969; to limit the ability of smokers to use tobacco in public places beginning in the 1970s; and to increase federal excise taxes on cigarettes beginning in the 1980s.[49] Over the next fifty years, local, state, and federal lawmakers would continue to ratchet up regulations on advertising and smoking in public while continuing to increase the cost to consumers through taxation.

Alongside these regulations, public health authorities at all levels began designing education programs and mass media campaigns to persuade the public to stop smoking. Young people, whose habits were perceived to be still malleable, were typically the target of media campaigns

that cast smoking as unhealthy, unsexy, and uncool. Health departments were aided by Federal Communications Commission (FCC) regulations implemented in 1967 that required broadcasters to air one antismoking message for every three cigarette commercials.[50] In 1988, California voters approved Proposition 99, which raised taxes on cigarettes by twenty-five cents and required that 20 percent of the tax revenue collected be used to establish a statewide antitobacco education program featuring a mass media campaign.[51] Other states followed suit, implementing similar programs that significantly increased the scope and production quality of antitobacco messaging.

The implicit goal of these efforts was to erode the number of tobacco users in the United States while appearing to support freedom of individual choice. No one was coerced to stop smoking or quarantined for doing so. Instead, authorities regulated smoking to make it more costly and more difficult to do in public places while also persuading Americans that smoking was dangerous and uncool. This combination of strategies at local, state, and national levels had a sizable impact: between 1965 and 2014, the proportion of American adults who smoked tobacco fell from 42.4 percent to 16.8 percent.[52]

The model of regulation and persuasion proved to be a useful framework for public health efforts in many areas. Health educators persuaded through advertising campaigns and other interventions designed to change health behaviors by promoting driving with seat belts and helmets, making healthy choices based on the food pyramid, and, more generally, prodding Americans to determine their risk profile.[53] Occasionally, public health turned to regulation, enacting policies requiring that people wear seat belts and helmets and that restaurants post the caloric content of their food, and in New York, lobbying for legislation that would prohibit the sale of large sugary drinks.[54]

Despite success in domains like smoking, public health's focus on individual health behaviors has troubled some. Opponents criticized these regulations as paternalistic products of a "nanny state," while proponents pointed to the harmful effects of careless, risky health behavior on both the risk-taker's body and society at large. Instead of debating their legitimacy, social theorists have drawn attention to the ways in which focusing on health behaviors have both echoed and reinforced a general trend in American society toward emphasizing individual responsibility.[55] By promoting the notion that individuals need to take responsibility for their own health as well as the health of the collectivity, public health has ushered in an era in which the smoker, the drinker, the

obese person, and the careless driver have become the new "health threat." Their behavior is not just viewed as unhealthy but is blamed for a wide array of negative consequences, from soaring health care costs to moral decay.

This shifting approach to social control—from coercion to regulation and persuasion—was not unique to public health. French social theorist Michel Foucault has shown how approaches to punishment followed a similar path; he tracks the rise of Western penal systems from the eighteenth to the twentieth century to show how governments phased out the public torture and executions of medieval times in favor of building prisons to discipline prisoners.[56] The idealized form of this new penal system was the Panopticon, a circular prison in which inmates are always visible to a single guard; under such surveillance, prisoners are trained to believe that they are always being watched and, thus, ought to police their own behavior. In many ways, the Panopticon and the food pyramid, emblematic of this "new public health," have similar aims: to prod individuals to police their own behavior rather than coercing them to change their ways.[57]

Experts have noted that morality messages are deeply embedded in modern public health campaigns that blame individuals for engaging in "risky" behaviors, blurring the line between risk and sin.[58] While ostensibly a neutral term, the way in which health authorities attach risk to some practices but not others reveals its moral underpinnings. Many people die in car accidents every year, yet we do not label driving as a risky behavior. Gay men having sex without condoms is described by public health practitioners as risky and labeled as "bareback"; sex between heterosexuals is almost never similarly described by health authorities—except, perhaps, when it is done by the poor (especially African Americans, women, and people receiving public benefits). Every step we take in life carries some form of risk, but only certain steps taken by certain people in certain contexts are labeled and controlled as risk.

CONTAGION REDUX: THE PUNITIVE TURN IN MODERN AMERICAN DISEASE CONTROL

In the early 1970s, scientists reported a cluster of unusual rheumatoid arthritis cases affecting children in Lyme, Connecticut. After exploring a number of possible causes, researchers noted that all of the children who were ill lived near wooded areas and that their symptoms typically began during the summer. Although researchers began referring to the

set of symptoms as "Lyme disease," it would take nearly a decade to conclusively identify the cause: a bacteria, *Borrelia burgdorferi,* spread by deer-tick bites.[59]

Not far from Lyme, 221 attendees of a July 1976 American Legion convention in Philadelphia fell ill with strange symptoms: pneumonia and fevers reaching over 107 degrees. Within a month, news outlets were reporting that between six and fourteen men had died of what was colloquially known as Legionnaires' disease. The cause was a mystery. Fearing a major outbreak, the Pennsylvania health secretary reportedly "contemplated seizing control of all hospitals in the state and imposing quarantines."[60] Apart from the Legionnaires, however, no new cases emerged; in total, 221 cases were documented, including thirty-four deaths. After a six-month investigation, medical authorities determined the cause: a bacteria spread through the conference hotel's air conditioning system.

As the twentieth century wore on, outbreaks of new diseases like Lyme and Legionnaires' cast doubt on the optimistic claims of the 1950s that modern medicine would forever vanquish infectious disease. Alongside these new, unknown diseases came outbreaks of old scourges such as tuberculosis and the mutation of old microbes into antibiotic-resistant strains such as MRSA (methicillin-resistant *Staphylococcus aureus*). Across the globe, even more deadly epidemics of diseases such as Ebola, SARS, and avian flu shook the public confidence in medicine. Both at home and abroad, inequality appeared to be driving many of these new outbreaks; experts cite local factors such as overcrowding in prisons and homeless shelters and broader patterns such as poverty, malnutrition, homelessness, and HIV infection, which increase susceptibility to disease.[61] With global travel and migration reaching historic levels, experts feared that the epidemics of the future would quickly become global.

In the United States, this resurgence in infectious disease coincided with the rise of neoliberalism (commonly defined as the twentieth-century emphasis on laissez-faire economic policies, namely through deregulation, free trade, and privatization) in the Reagan-Thatcher years and the growing influence of religious conservatism, or the New Right.[62] Evangelical conservatives played to Americans' fear and ignorance of diseases like HIV, blaming those they deemed responsible for the spread of disease. Public health was not immune to these politics, especially as it had spent the last several decades promoting the idea that individuals and their risky health behaviors were to blame for modern epidemics. Given this context, public health officials not only returned to the restrictive measures that had been used to control the spread of infec-

tious disease historically, but they also developed new, sometimes more coercive laws and practices. This was most apparent in the response to two of the most common diseases of the late twentieth century: tuberculosis and HIV.

Tuberculosis (TB) is a disease primarily affecting the lungs and is caused by a range of bacteria, most commonly *Mycobacterium tuberculosis*. Humans have suffered from the disease throughout much of documented history, with evidence of the disease stretching back to the spines of Egyptian mummies.[63] Most people who are infected with TB are asymptomatic—so-called latent carriers—and cannot transmit the disease. However, about 10 percent of infections progress to what is known as active TB, which is extremely contagious via coughing or sneezing; characteristic symptoms of active TB include blood-tinged sputum, fever, night sweats, and weight loss (giving the disease its historic nickname, consumption). Left untreated, more than half of people with active TB die.

As noted earlier in the chapter, TB was once a leading cause of death in the United States, second only to influenza and pneumonia. The prognosis for infected patients remained poor until streptomycin was discovered in 1946. This new treatment, along with other public health efforts to control the disease, helped to dramatically reduce the number of new TB cases by the 1950s. However, driven in part by rising rates of drug use, poverty, and homelessness, several U.S. cities saw new TB outbreaks in 1985 that disproportionately impacted racial minorities, including Latinos, African Americans, and Asians.[64] Public health authorities were especially troubled because many new TB cases were resistant to standard antibiotic treatments and thus harder to treat and more deadly.

Rather than citing a lack of access to affordable housing or poverty as the forces behind these new outbreaks, some in public health blamed these new resistant cases instead on *patients* who failed to complete the six- to eight-month treatment protocol required for curing TB. Most patients who are otherwise healthy can be successfully treated and cured of the disease.[65] Most patients do take their medication during the acute phase of their illness when they feel sick, but many drop out during the post-acute phase when they feel relatively healthy. In New York City, for example, only 53 percent of all patients completed treatment during these outbreaks (although completion rates have risen to over 90 percent more recently).[66] While these patients may feel healthy and are no longer contagious, their TB infection could come back. Worse yet, it could return as a newly mutated strain resistant to antibiotic treatments.[67]

To ensure that patients followed through with a lengthy treatment protocol, scientists pioneered direct observed therapy (commonly known as DOT) in Madras, India, and Hong Kong in the 1960s.[68] These programs typically require a patient to routinely visit a health care provider who can directly observe the patient swallowing the antibiotic treatment. Initially, DOT was mandated only for patients deemed likely to be noncompliant. But in practice, this often meant that doctors disproportionately targeted the poor and homeless as they were most likely to be viewed as potential health threats. For these reasons, some experts suggested that all patients treated for tuberculosis should be required to undergo mandatory DOT. However, this proposal was ultimately rejected as too broad and too intrusive on patients' civil liberties. Moreover, blanket DOT programs turned out to be unnecessary; most patients accept DOT and complete treatment, especially when their alternative is quarantine.[69]

Faced with the new outbreaks of TB, the New York City Public Health Department revised its health code to allow coercive actions to protect against these threats to public health. Under the new regulations, the health commissioner could order compulsory examinations for patients suspected of having tuberculosis, require that patients continue treatment until cured, order mandatory treatment under direct observation, and issue orders for involuntary detention of those deemed unwilling or unable to comply with treatment.[70] The city's new regulations proved controversial. Critics charged that the requirement that patients undergo treatment until cured expanded the notion of a health threat beyond just those individuals with active TB who were contagious. Under the new rules, individuals with latent infections who were not presently contagious but might at some point become contagious could be labeled a health threat and detained accordingly. Such a broad policy could set the stage for a repeat of Seattle's previously discussed approach to tuberculosis in 1949 that ended up systematically quarantining poor alcoholics. Further, the city was not required to provide social supports, such as transportation and housing for homeless patients, that would enable them to complete treatment. Finally, the ordinance violated the least-restrictive doctrine by not requiring the city to explore less restrictive measures before issuing confinement orders.

In actual practice, the city did attempt to remove barriers to nonadherence by providing housing, bus tokens, and incentive payments for patients undergoing DOT. Moreover, department policy was to use less restrictive measures before restrictions were imposed—for example, to offer voluntary DOT before imposing mandatory treatment, and DOT

before confinement.[71] This led the authors of a study of the program in its first two years to conclude, "For most patients with tuberculosis, even those with severe social problems, completion of treatment can usually be achieved without regulatory intervention."[72] Although involuntary confinement was imposed on only 2 percent of the eight thousand tuberculosis patients, the actual number of patients subjected to involuntary confinement was notable: between 1993 and 1995, New York City confined more than one hundred patients who refused voluntary treatment, most of them confined to the secure ward of a hospital for six months.[73]

At nearly the same time that tuberculosis outbreaks were being reported, health authorities also began to report cases of a new deadly disease that seemed to be primarily affecting homosexuals. In June 1981, the CDC first reported a cluster of unusual cases of *Pneumocystis* pneumonia that appeared to be killing otherwise healthy young gay men.[74] The outbreak coincided with the election of Ronald Reagan and the ascendance of the New Right, a coalition of conservative politicians and the Christian conservatives who would become a formidable force in American politics. Health authorities were flummoxed by the new disease, and Americans were increasingly terrified. Conservatives capitalized on American's fear and ignorance of the disease, which they heralded as a symbol of America's moral decline. Medical authorities originally called the disease G.R.I.D. (gay-related immunodeficiency), a grave misstep that facilitated the New Right's characterization of the disease as a gay plague—divine retribution for sexual sin, or in the words of Jerry Falwell, "the wrath of a just God against homosexuals."[75]

Combining racism, homophobia, and xenophobia, commentators began to speak of the 4-H risk groups: homosexuals, heroin addicts, hemophiliacs, and Haitians. However, the New Right focused most of its ire on the perceived transgressions of gay men. Political pundits fed the homophobia of a terrified public with doomsday proclamations about the plague imposed on general public by the hedonistic lifestyles of drug addicts and homosexuals. A 1987 Gallup Poll showed that, like conservative religious leaders, 43 percent of Americans said that AIDS was a punishment for moral decline.[76] In communities across the country, tensions were high. When a Florida couple successfully sued the DeSoto County School District to allow their three hemophiliac, HIV-positive sons to attend school, they found their house had burned down, forcing them to leave town.[77]

By the mid-1980s conservative politicians and religious leaders, such as Jesse Helms and Pat Robertson, argued for draconian and excessively

coercive measures: mandatory testing of all those "at risk" of spreading the disease, branding people with AIDS with a visible tattoo, and quarantine and criminal incarceration of "recalcitrant" AIDS carriers.[78] In their call for coercion, conservatives were joined by members of a public increasingly frightened by the spread of an incurable disease. Public opinion polls conducted in 1985 and 1986 showed that between 28 and 51 percent of respondents agreed that "people with AIDS should be put into quarantine to keep them away from the general public."[79]

At the center of many public debates was a murky figure blamed for the disease's rapid spread in gay communities. "Patient Zero," as he was called, was a French-Canadian, gay male air steward who reportedly had infected numerous of his partners in his travels. Although the CDC did interview the man and strongly urged him to stop having sex, scientists and health authorities did not, in fact, suspect him of being the source of HIV in the United States. But he made for a great story for San Francisco journalist Randy Shilts, who was putting the finishing touches on his 1987 book chronicling the government's lackluster response to AIDS, *And the Band Played On*. His publisher worried that the book would fall flat and pressured Shilts to find a way to make it more sensational:

> [Shilts's publisher] described the initial dismal prospects for *And the Band Played On* that motivated them to find a more creative way to promote the book. The solution was to use Patient Zero and present him as the handsome, promiscuous French-Canadian airline steward who may have brought AIDS to America. This was the pathway to the bestseller list, and it worked.

Just as nearly a century before Mary Mallon had been blamed for the spread of typhoid fever, so too was Canadian air steward Gaëtan Dugas blamed for the spread of HIV. While Shilts had hoped his book would be a boon to AIDS activists in calling out the federal government's inaction, debates over Patient Zero and his culpability overshadowed the rest of the book—playing right into the hands of religious conservatives:

> Shilts's salacious story of Patient Zero was ideal propaganda for conservatives because it played into the tenets of their latest campaign to isolate [people living with HIV] and gays. As an immigrant with AIDS, Gaëtan stood in for others like him who should be kept out of the country. Meanwhile, as both a gay man with an unchecked libido and an AIDS carrier who recklessly infected others, he embodied those who deserved to be locked up for their sociopathic behavior.[80]

In the minds of many Americans, the AIDS epidemic was a dangerous and deadly disease fueled by the reckless sexual behaviors of unrepentant gay men. The Patient Zero mythology represented that recklessness, providing the perfect villain for angry and fearful Americans.

Despite the fiery rhetoric on the Right, however, AIDS activists resisted these calls for invasive and coercive measures against people living with HIV—but only in part. Conservatives such as Jerry Falwell and Pat Buchanan demanded that lawmakers institute blanket quarantine measures such as Cuba's policy of indefinitely confining all HIV-positive people to a sanitorium upon diagnosis.[81] Legislators rejected such blanket measures, but in several states they did debate and ultimately enact quarantine and isolation procedures for HIV-positive individuals classified as a "health threat to others." Discussed in greater detail in chapter 3, these policies target people living with HIV who have been warned by health authorities to change their behavior but continue to engage in conduct expressly prohibited by public health authorities—typically sexual intercourse without first disclosing one's HIV-positive status.

In many states, however, legislators went a step further and enacted even more coercive measures aimed squarely at punishing HIV-positive people labeled a health threat. Between 1986 and 2011, thirty-three states enacted HIV-specific criminal statutes that made it a crime (usually a felony) for people who know that they are HIV-positive to engage in a wide range of behaviors without first disclosing their HIV-status.[82] According to a recent report coauthored by CDC and Department of Justice staff, twenty-five states criminalize one or more behaviors that pose a low or negligible risk for HIV transmission, such as oral sex, biting, spitting, or throwing blood.[83] Several statutes do not specify which behaviors are criminalized; it is a crime simply to expose another person to HIV—wording that one observer calls "unconstitutionally vague."[84] Even HIV-positive people living in a state without an HIV-specific law have been incarcerated under similar circumstances. In states like Texas and New York without such a recalcitrant criminal law, prosecutors charge HIV-positive defendants under general criminal laws against assault and battery, reckless endangerment, or attempted murder.

Many of these statutes reflect the climate of the period in which they were enacted: a time when there was an exaggerated perception of the risk of transmission of HIV and punitive attitudes toward persons living with HIV. In 2010, however, the Obama White House released its

national HIV/AIDS strategy, stating that "in some cases, it may be appropriate for legislators to reconsider whether existing laws continue to further the public interest and public health."[85] For the many critics of these laws, these recommendations may come as welcome news. However, given that many of these points had been made as early as the late 1980s and that antiretroviral drugs have been in use since 1996, some may also wonder why these recommendations came so late.[86]

PUNISHING PATIENT ZERO

The impulse to punish the sick has a long history in public health—a history shot through with calls to coerce and quarantine the sick. Those efforts have repeatedly disproportionately impacted the poor, racial minorities, sex workers, and other stigmatized communities—sometimes by design, but more often as a matter of practice. Yet, despite the long, sordid affair between sickness and stigma, disease control remained a matter of civil law for most of American public health history. What begat this punitive turn?

As the HIV epidemic crystallized, it did so alongside the New Right's calls for Americans to take personal responsibility for their lives by putting an end to New Deal welfare programs. Conservatives in federal and state legislatures worked in concert to gut welfare programs while declaring a war on crime that prompted a rise in incarceration rates unprecedented in human history.[87] Funding to higher education was drastically cut while the number of prisons exploded, leading modern activists to demand "schools, not prisons."[88] For Black men especially, sociologists have demonstrated that incarceration has become a normal and even *probable* life event.[89]

It is in this context that the first cases of HIV began to be reported in major urban areas in the United States—cities such as San Francisco and New York City, which conservatives already associated with hedonism and immorality. Perhaps if the disease had struck middle-class heterosexuals in the suburbs, the New Right's reaction to HIV might have been different. Instead, the disease was immediately associated with gay men, sex workers, Haitians, and injection drug users—some of the most stigmatized communities in the United States at the time. As many of these groups were already suspected criminals, criminalization was already top of mind for authorities tasked with managing these populations.

Evangelical conservatives capitalized on this association, issuing damning proclamations that the "gay plague" would cross over and

infect middle-class American families. The cover of the July 1983 issue of Jerry Falwell's *Moral Majority Report* perfectly encapsulates the stigmatizing narrative invented by conservatives. Featuring a photo of a White, middle-class family with two children whose faces are covered with medical surgical masks, the headline read: "Homosexual Diseases Threaten American Families."

Although far more extreme, this punitive view of the epidemic resonates with public health's message that risky individual health behaviors cause disease and need to be prevented. The logical leap from arguing that we need to prevent individual health behaviors that cause disease to blaming individuals for engaging health behaviors labeled "risky" was not so great. Medical historian Allan Brandt observed in 1997 that

> AIDS has been placed strongly within the paradigm of responsibility. If one "merely" avoids the risk behaviors associated with transmission of the virus—unprotected sexual intercourse and sharing needles for intravenous drug use—one can avoid AIDS. Therefore, infection is a clear—and usually terminal—marker of individual risk taking, of engaging in behaviors typically held to be deviant or criminal. According to this view, those who are infected are *responsible* for their plight. AIDS is *caused* by a moral failure of the individual.[90]

In ushering in a new era of risk avoidance in which the responsibility for one's health was placed on each individual's shoulders, public health inadvertently contributed to a context in which blame and punishment seem apt disease control strategies.

Patient Zero proved a compelling narrative not simply as an exercise in tracing the epidemiological origins of the epidemic; rather, his story helped *And the Band Played On* become a best seller because many Americans desperately wanted someone to blame. A gay male flight attendant made the perfect scapegoat for a terrified public. The conservative magazine *The National Review* branded Dugas the "Columbus of AIDS" and blamed him for bringing the disease to America. In such a context, criminalizing HIV was a logical response in this march of shame and blame.

Although Patient Zero was a fictional character invented by a journalist, his story fueled calls for public health to institute coercive and punitive measures in response to AIDS. These demands for control resembled many of the historical cases reviewed in this chapter in that they typically singled out especially marginalized people for control: in the case of Patient Zero, an immigrant gay man; in other cases reviewed in this chapter, the poor, racial minorities, sex workers, and even

alcoholics. When public health institutions discriminatorily targets specific groups of people for coercive measures that are not applied to other groups, their efforts reinforce the view that certain social groups are to blame for the spread of disease. Their implicit offense is not their risky behaviors but their social difference. In this way, the history of punitive disease control is at times indistinguishable from America's troubled history of social marginalization.

We cannot know what would have happened if more cases of Ebola had been brought to American shores, or what will happen when the next infectious disease becomes epidemic in the United States. As this book reveals, however, disease and punishment are more closely linked than even before in modern history.