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Between Persuasion and Compulsion: Smallpox Control in Brooklyn and New York, 1894–1902

JAMES COLGROVE

SUMMARY: Two major outbreaks of smallpox occurred in Brooklyn and New York around the turn of the twentieth century. Health officials moved aggressively to contain the disease, conducting mass vaccinations from house to house and in workplaces. Although these programs were ostensibly voluntary, the manner in which they were conducted was often coercive, giving many people the impression they had no choice but to submit. Officials portrayed their programs as voluntary because they lacked a clear legal basis for their actions and because they believed this was the most effective strategy for gaining public cooperation. This essay examines the events that surrounded a series of legal cases challenging the use of coercive measures to enforce vaccination during and after the smallpox epidemic of 1894, and the repercussions that this litigation had on disease-control efforts and popular attitudes toward vaccination and other measures. The cases described here were part of an extensive body of nineteenth-century jurisprudence on vaccination that was crucial for the evolution of public health police powers in general, and of vaccination policy in particular.

KEYWORDS: vaccination, smallpox, legislation and jurisprudence, New York

“Carelessness in the matter of vaccination is sure to tell against the health of a community, sooner or later,” opined the *New York Daily Tribune* in the winter of 1902, as a smallpox epidemic raged in the city.¹ The newspaper’s editorial, which urged responsible citizens who had not undergone the procedure recently to update their protection, gave public voice to the private frustration of many municipal health officials. Smallpox should

I thank Elizabeth Blackmar, Amy Fairchild, Ronald Bayer, Cynthia Connolly, and three anonymous *Bulletin* reviewers for their thoughtful critiques of earlier versions of this paper, and Jack Termine of the Medical Research Library of Brooklyn, State University of New York, for assistance with archival materials of the Brooklyn health department.

1. “The Value of Revaccination,” *New York Daily Tribune*, 4 January 1902, p. 10.

have been controllable, for a reliable preventive had existed for more than a century, yet the very success of widespread vaccination caused many people to take their freedom from the disease for granted. How best to overcome this civic complacency—how to convince people to protect themselves, for their own good and that of the community—was a recurring problem in a city where a huge population and a constant influx of new arrivals meant an ongoing struggle with infectious threats.

Two major episodes of smallpox occurred in Brooklyn and New York around the turn of the twentieth century: an outbreak in the winter and spring of 1893–94, and a larger epidemic that struck in 1901–2. During this period, the power of the health department to control the disease through vaccination was argued in numerous legal actions and debated in the state legislature, in the popular and medical press, and in city neighborhoods. At issue was the question of whether those who did not wish to undergo the procedure should or could be compelled, legally or practically, to do so. When an epidemic loomed, many people waited voluntarily in long lines to receive their protection. For reluctant citizens, the Brooklyn and New York health departments sent teams of vaccinators door-to-door in affected neighborhoods and on-site to large employers. Although these programs were ostensibly voluntary—New York State never placed a law on its books making vaccination compulsory for adults—the manner in which they were conducted was at least arguably coercive, and gave many people the impression that they had no choice but to submit. The health commissioners in Brooklyn and New York exercised *de facto* compulsion, but portrayed their practices in the language of voluntarism because they lacked a clear legal mandate for their actions and because they believed this strategy was the most effective way to accomplish their goals and reduce the likelihood of organized resistance.

While the social and political controversies over the government's use of its "police powers" to guard the public health during the nineteenth century have attracted much historical analysis,² there has been relatively little focus on the courtroom as a site of contention and the role of the

2. Seminal work in this area includes Charles Rosenberg, *The Cholera Years: The United States in 1832, 1849, and 1866* (Chicago: University of Chicago Press, 1962); Barbara Gutmann Rosenkrantz, *Public Health and the State: Changing Views in Massachusetts, 1842–1936* (Cambridge: Harvard University Press, 1972); and Judith Walzer Leavitt, *The Healthiest City: Milwaukee and the Politics of Health Reform* (Princeton: Princeton University Press, 1982). Notable recent works have included Nayan Shah, *Contagious Divides: Epidemics and Race in San Francisco's Chinatown* (Berkeley: University of California Press, 2001); Howard Markel, *Quarantine! East European Jewish Immigrants and the New York City Epidemics of 1892* (Baltimore: Johns Hopkins University Press, 1997).

judiciary in shaping policy.³ In this essay I will examine the events that surrounded a series of legal cases during and after the smallpox epidemic of 1894, and the repercussions that this litigation had on disease-control efforts and popular attitudes toward vaccination and other measures. The cases described here were part of an extensive body of nineteenth-century jurisprudence on vaccination that was crucial for the evolution of police powers in general, and of vaccination policy in particular. These cases, especially *In re Smith* and *Smith v. Emery*, have received scant attention from historians. Yet the court documents offer important new insights into the ways that health officials negotiated the boundaries of their powers, while the inconsistent and sometimes conflicting rulings in the cases reveal how mutable were ideas about the proper role of the government in guarding the community's health during this period. Both cases went through a protracted series of appeals in the New York State court system, and set the stage for a landmark U.S. Supreme Court ruling in 1905 that explicitly addressed the question of how far individual liberty could be constrained in order to prevent the spread of disease. A close examination of these cases and their effect on subsequent policy-making—especially a key battle in the state legislature several years later—reveals conflicts and tensions in public health practice during a pivotal era. Health officials expanded their influence and codified many of their powers around this time, but continued to maintain an ambiguous relationship with both legal authority and public opinion. Recent controversies over smallpox vaccination and the use of coercion in the context of bioterrorism reveal both the signal importance of these cases and their ongoing relevance to health policy and law.

Vaccination in Late Nineteenth-Century America

In the last decades of the nineteenth century, public attitudes about smallpox ran toward an ambivalent mixture of complacency and dread. Although it had once been among the world's most devastating diseases,

3. The best reference on the historical development of health law is Lawrence O. Gostin, *Public Health Law: Power, Duty, Restraint* (Berkeley and Los Angeles: University of California Press, 2000); on police powers, see pp. 47–51, 61–83. An examination of the role of police powers as part of a broad pattern of nineteenth-century law and regulation aimed at creating a well-ordered society is William J. Novak, *The People's Welfare: Law and Regulation in Nineteenth-Century America* (Chapel Hill: University of North Carolina Press, 1996); see pp. 191–233 for a discussion of public health jurisprudence. For a concise overview of the role of the law in public health, see Daniel M. Fox, "The Professions of Public Health," *Amer. J. Pub. Health*, 2001, 91: 1362–64.

it had long ceased to be a major source of either sickness or death in the United States and elsewhere in the Western world.⁴ Years of relative freedom from the disease—due, many argued, to the success of vaccination⁵—had engendered considerable indifference among the public, and many physicians could no longer accurately diagnose it in its early stages, often mistaking it for measles or chicken pox.⁶ At the same time, smallpox's gruesome symptoms, high fatality rate, and rapid spread made it greatly feared among any who had personal experience with it; so it was that a Brooklyn health department report noted that when outbreaks occurred, “the proximity of the contagion act[ed] as an efficient aid to the efforts of the vaccinators.”⁷

Vaccination had come to America in 1801 just a few years after its introduction in England, and had been widely adopted.⁸ Empirical evidence suggested that it was highly effective at protecting a community from smallpox, and in the latter part of the nineteenth century medical and popular journals devoted considerable space to discussing its efficacy, as demonstrated by the experience of places where the practice was widespread compared with those where it was not. Proponents of vaccination noted, for example, that Germany, which had made vaccination

4. For example, in 1894, when one of the last major outbreaks struck the United States, the city of Brooklyn recorded more than ten cases of measles, the city's most common infectious disease, for every one case of smallpox; the incidence of scarlet fever and diphtheria numbered in the thousands, while smallpox cases totaled 459; diphtheria, the leading cause of mortality in the city, accounted for more than 1,200 deaths, compared to 102 for smallpox: *Annual Report of the Board of Health of the City of Brooklyn for the Year 1894* (Brooklyn, 1895), p. 11 (henceforth *Annual Report . . . Brooklyn*, plus the year).

5. The reasons for the secular decline in the mortality from smallpox and other infectious diseases during the nineteenth century have been the subject of considerable debate among historians. See, e.g., Thomas McKeown, *The Role of Medicine: Dream, Mirage, or Nemesis?* (London: Nuffield Provincial Trust, 1976), which downplays the role of vaccination and other preventive interventions. On the beneficial effects of inoculation on smallpox mortality during the eighteenth century, see Peter Razzell, *The Conquest of Smallpox* (Firle: Caliban Books, 1977).

6. *Annual Report of the Board of Health of the Health Department of the City of New York for the Year Ending December 31, 1894* (New York: Martin Brown, 1895), p. 45 (hereafter *Annual Report . . . New York*, plus the year).

7. *Annual Report . . . Brooklyn . . . 1886*, p. 37.

8. Vaccination replaced inoculation, an older method of immunization in which smallpox material was transferred from the arm of a sick person to that of a healthy one in order to induce artificially a milder form of the illness. Inoculation occasionally produced a full-blown case, however, and could inadvertently spread the disease instead of preventing it. Vaccination, in contrast, involved the use of cowpox, a related disease of cattle which produced only mild illness in humans and provided cross-protection against its more dangerous cousin. See Donald Hopkins, *Princes and Peasants: Smallpox in History* (Chicago: University of Chicago Press, 1983).

compulsory in 1874, enjoyed far greater immunity from the disease than any of its neighbors without such a law,⁹ and comparisons in U.S. cities of the incidence and death rates among protected and unprotected populations offered similar support for its efficacy.¹⁰ The idea that vaccination's protective value could be demonstrated by comparative statistics also gained currency in the popular press, as newspaper editorials cited these studies approvingly.¹¹

Physicians who championed vaccination saw the proper administration of the procedure as crucial to assuaging public qualms about it. The arm was scraped several times with a sharpened "point" (usually made of ivory) to break the skin; a preparation of glycerinated lymph from a calf infected with cowpox was then applied to the incision. Discussions on the safest and most efficacious ways of vaccinating—how deeply to scratch the arm, how best to disinfect the site—featured prominently in the medical literature and at meetings of professional organizations.¹² A physician writing in the *New York State Journal of Medicine*, for example, scolded his colleagues for too often performing slipshod work, noting that "this perfunctoriness on the physician's part teaches parents to wish their children to have as little vaccination as possible, and encourages in them an active opposition" to the practice.¹³

Opposition to vaccination dated from its first use in this country in the early 1800s, and was generally centered on the premise that the practice was ineffective at preventing disease and was the source of other infections. Many of those who spoke out most forcefully were members of one of the many alternative medical sects that thrived during the nineteenth century. Vaccination, because of its association with allopathic medicine, became a focal point for the resentment that many alternative practitioners felt toward the regulars.¹⁴ Organized groups devoted to resisting the

9. "Anti-Vaccinism," *Boston Med. Surg J.*, 1894, 130: 346–47.

10. William W. Welch, "A Statistical Record of Five Thousand Cases of Small-Pox," *New York Med. J.*, 1894, 59: 326–30. In calculating statistics such as standardized mortality rates, which enabled the comparison of countries and cities with very different population sizes, such reports articulated in an inchoate form the epidemiological principles that would become cornerstones of public health practice in the next century.

11. "The Question of Vaccination," *New York Daily Tribune*, 2 September 1896, p. 6; *New York Times*, 13 March 1897, p. 8.

12. See, e.g., F. G. Attwood, "Vaccination," *New York Med. J.*, 1899, 70: 803–4; "Proceedings of Societies," *Brooklyn Med. J.*, 1901, 15: 712–15.

13. Frank S. Fielder, "What Constitutes Efficient Vaccination?" *New York State J. Med.*, 1902, 2: 107–9, quotation on p. 107.

14. Martin Kaufman, "The American Anti-Vaccinationists and Their Arguments," *Bull. Hist. Med.*, 1967, 41: 463–78.

practice became prominent in the second half of the century;¹⁵ many of them were imported from England, which had made vaccination compulsory as part of a series of laws that were widely despised among both middle-class and poor citizens.¹⁶ The British movement spawned several energetic pamphleteers and political rabble-rousers, at least one of whom, William Tebb, was so devoted to the cause that he traveled abroad in order to convince Americans of the evils of the practice. Tebb was instrumental in founding several organizations in major U.S. cities around this time, including the Anti-Vaccination Society of America, established in New York in 1879.¹⁷ In addition to portraying the practice as dangerous and ineffective, such groups also asserted that any effort to compel it through legal means was a tyrannical violation of individual liberty.

The efficacy of vaccination in protecting communities from smallpox had led to a patchwork of local and state laws to enforce it. In 1809 Massachusetts was the first state to make it compulsory for the general population, requiring that all infants undergo the procedure before their second birthday and again before entering a public school; during epidemics, local public health officers could also require revaccination for all citizens in their area who had not undergone the procedure within the previous five years.¹⁸ Most other states had some law on the books, but their provisions varied widely, some mandating the practice only during epidemics, others only for schoolchildren. (New York State law required the practice only for students.) The laws imposed a variety of penalties on those refusing the procedure, ranging from fines to impris-

15. Resistance to vaccination was based on substantially the same concerns about safety and efficacy (along with libertarian arguments) that had been expressed regarding the earlier practice of inoculation, even though, as noted above, the practice was considerably safer than inoculation. On resistance to inoculation in colonial America, see, e.g., Maxine Van De Wetering, "A Reconsideration of the Inoculation Controversy," *New England Quart.*, 1985, 58: 46–67; Elizabeth A. Fenn, *Pox Americana: The Great Smallpox Epidemic of 1775–82* (New York: Hill and Wang, 2001); John Blake, "The Inoculation Controversy in Boston, 1721–1722," in *Sickness and Health in America: Readings in the History of Medicine and Public Health*, ed. Judith Walzer Leavitt and Ronald Numbers (Madison: University of Wisconsin Press, 1978), pp. 347–55.

16. On the British antivaccinationists, see Dorothy Porter and Roy Porter, "The Politics of Prevention: Anti-Vaccinationism and Public Health in Nineteenth-Century England," *Med. Hist.*, 1988, 32: 231–52; Roy MacLeod, "Law, Medicine and Public Opinion: The Resistance to Compulsory Health Legislation, 1870–1907," *Public Law*, 1967, pp. 106–28; Nadja Durbach, "'They Might as Well Brand Us': Working-Class Resistance to Compulsory Vaccination in Victorian England," *Soc. Hist. Med.*, 2000, 13: 45–62.

17. Kaufman, "American Anti-Vaccinationists" (n. 14), p. 465.

18. "Vaccination and Revaccination," *Boston Med. Surg. J.*, 1894, 130: 21–22.

onment.¹⁹ Such regulations in turn provoked numerous legal challenges and legislative battles, especially in the second half of the century, when many states repealed or modified their laws in response to activist pressure.²⁰

The inconsistent legal authority to enforce vaccination in different cities and states reflected broader debates during the second half of the century over the rights and responsibilities of the government in guarding the public welfare. State and local health departments began to be created in the 1860s, and health officials' authority in general expanded over the next decades. A new class of professionals trained in the latest techniques of chemistry, engineering, and medicine established regulations concerning the production and distribution of meat and milk, tenement construction, garbage collection, private and public privies, and water supplies.²¹ Enforcement in many of these areas remained patchy, however, and officials often encountered opposition from private citizens who resented governmental intrusion into their lives and from businessmen who viewed health regulations as an interference with commerce.²²

The second half of the nineteenth century was punctuated by controversies over the boundaries of public health authority. While some cities, most notably New York, exercised very broad powers, others maintained only weak or sporadic enforcement of their health regulations. The extent to which officials were able to exercise their police powers, and the amount of resistance they encountered, varied considerably in cities

19. New York's law on school enrollment was enacted in 1860: see William Fowler, "Principal Provisions of Smallpox Vaccination Laws and Regulations in the United States," *Pub. Health Rep.*, 1941, 56: 167–73; Charles L. Jackson, "State Laws on Compulsory Immunization in the United States," *ibid.*, 1969, 84: 787–95.

20. Kaufman, "American Anti-Vaccinationists" (n. 14), p. 464.

21. The first permanent municipal health department was founded in New York City in 1866, and the first state board was created in Massachusetts in 1869. On the growth in the authority of health departments and scientific medicine during this period, see, e.g., Elizabeth Fee, *Disease and Discovery: A History of the Johns Hopkins School of Hygiene and Public Health, 1916–1939* (Baltimore: Johns Hopkins University Press, 1987), pp. 10–13; Elizabeth Fee and Evelyn M. Hammonds, "Science, Politics, and the Art of Persuasion: Promoting the New Scientific Medicine in New York City," in *Hives of Sickness: Public Health and Epidemics in New York City*, ed. David Rosner (New Brunswick, N.J.: Rutgers University Press, 1995), pp. 155–96; Stanley K. Schultz and Clay McShane, "To Engineer the Metropolis: Sewers, Sanitation, and City Planning in Late-Nineteenth-Century America," *J. Amer. Hist.*, 1978, 65: 389–411; Rosenkrantz, *Public Health and the State* (n. 2).

22. Rosenkrantz, *Public Health and the State* (n. 2), pp. 65–67; Leavitt, *Healthiest City* (n. 2), pp. 8–9 and *passim*.

around the country depending on, among other factors, how adequately funded was the public health infrastructure, how well were health officials able to marshal political and popular support for their endeavors, and whether those targeted for regulation were able to mount opposition.²³

Moreover, the tools of bacteriology that underlay health authorities' expanding powers were often used to reinforce ideologies of race, class, and gender, and to control unpopular or marginalized groups and individuals.²⁴ Perhaps the best-known example was the case of "Typhoid Mary" Mallon, who was forcibly detained on the strength of bacteriological evidence that branded her as a disease carrier: the fact that Mallon was a working-class immigrant woman had a direct bearing on the actions of the New York health authorities who deprived her of her liberty in order to protect the public.²⁵

Smallpox vaccination was the only disease-specific preventive during this era, and it differed from other public health measures in an important way that affected its acceptability to the public: health regulations that limited individual liberty in order to protect the common good generally required that people *refrain from* doing something (letting their privy overflow into the street, for example); vaccination, in contrast, required people to *submit to* a procedure,²⁶ one that was painful and disfiguring, and whose efficacy remained uncertain in the minds of many.²⁷ Given the potentially controversial nature of enforcement, it is

23. Notable recent works exploring the sociopolitical dimensions of public health authority include Susan Craddock, *City of Plagues: Disease, Poverty, and Deviance in San Francisco* (Minneapolis: University of Minnesota Press, 2000); Margaret Humphreys, *Malaria: Poverty, Race, and Public Health in the United States* (Baltimore: Johns Hopkins University Press, 2001).

24. See, e.g., Markel, *Quarantine!* (n. 2). The New York City Department of Health had scored a notable success when it contained incipient typhus and cholera outbreaks in 1892 by enforcing strict quarantine on ships in New York Harbor. Markel stresses that while health officials justified quarantine on bacteriological grounds, their application of it was influenced by class and ethnic bias, with poor immigrants on affected ships receiving very different treatment from first-class passengers. On health officials' beliefs about the association between disease and class, see also Amy L. Fairchild, *Science at the Borders: Immigrant Medical Inspection and the Shaping of the Modern Industrial Labor Force* (Baltimore: Johns Hopkins University Press, 2003). Other recent works to examine the effects of race on disease control include Marilyn Chase, *The Barbary Plague: The Black Death in Victorian San Francisco* (New York: Random House, 2003); Shah, *Contagious Divides* (n. 2).

25. Judith Walzer Leavitt, *Typhoid Mary: Captive to the Public's Health* (Boston: Beacon Press, 1996).

26. Jackson also makes this point in "State Laws" (n. 19), p. 787.

27. The practice scarred the arm, and it was also well known for causing soreness that lasted for several days. The care and skill with which practitioners administered the procedure varied widely, and sloppy vaccination sometimes resulted in other infections or

thus not surprising that lawmakers around the country adopted different strategies for protecting their communities from smallpox—some judging that a compulsory policy was the only way to ensure compliance, others choosing appeals to voluntarism on both pragmatic and philosophical grounds.

At the heart of many health officials' efforts to expand their powers in the latter part of the century lay the premise, sometimes explicitly stated, that the mass of common citizens—especially the lower classes, but also recalcitrant business owners and landlords—needed the guidance of enlightened and scientifically trained professionals to ensure the public good.²⁸ This beneficent paternalism extended to attitudes on vaccination, and is reflected in a Brooklyn health department report which described tenement dwellers as “so indifferent to vaccination, that they accumulate the material upon which contagious disease feeds and spreads, and are a constant source of anxiety unless specially supervised. As a rule their habits are careless, and as they have no dread of smallpox, its suppression among them is at all times difficult.”²⁹

Vaccination was only one component of a coordinated system developed by municipal health departments for controlling smallpox. Brooklyn's methods were typical. A yellow flag signaling the presence of the disease was placed in front of an infected house, and police officers were stationed at the door to prevent anyone from entering or leaving.³⁰ Occasionally, the patient might be allowed to convalesce at home if the family was willing to observe a strict quarantine, but usually he or she was taken immediately by ambulance to the infectious disease hospital. The floor, ceiling, and walls of the sickroom were thoroughly scrubbed; the room was then sealed and fumigated with a combination of sulphur and steam. Clothes, bedding, and other rags were soaked in disinfectant, and

inadequate protection from disease. Moreover, the operation provided relatively short-term immunity; experts disagreed on precisely how often people needed to be revaccinated, since the duration of protection could in general only be estimated. See Pedro Jose Salicrup, “Smallpox and the Value of Vaccination as a Preventive,” *New York Med. J.*, 1893, 57: 605–10.

28. Evelyn Maxine Hammonds, *Childhood's Deadly Scourge: The Campaign to Control Diphtheria in New York City, 1880–1930* (Baltimore: Johns Hopkins University Press, 1999), p. 15. Hammonds quotes Hermann Biggs, New York City's health commissioner in the 1890s, as writing: “Sanitary authorities must protect the community from the individual, in order to provide the greatest good to the greatest number. . . . the State, not the individual, would define the common goal and see to its fulfillment” (*ibid.*).

29. *Annual Report . . . Brooklyn . . . 1886*, p. 10.

30. Placards were more commonly used for residential quarantine, while flags were typical of maritime quarantine.

burned if necessary. All household members were interviewed about their contacts over the previous several days. Meanwhile, vaccinators fanned out to the houses on either side, offering protection to the residents—“surrounding each case by an impenetrable wall of vaccination,” as one health department report described the process.³¹ These visits to neighbors were typically made at night when all residents were more likely to be at home. Children who were diagnosed with the disease were barred from attending school for six weeks.³²

The absence of a clear legal mandate for the vaccination of adults was a source of frustration for health officials in Brooklyn: “We can only persuade; arguments are our only resource” in encouraging reluctant citizens to be vaccinated, noted a health department report.³³ Thus, “In case of refusal in an unvaccinated person a record was kept of the same and the parties strongly urged to have their family physician do it.”³⁴

At the peak of the 1893–94 epidemic, Brooklyn’s top health official was Z. Taylor Emery, a physician and former president of the Kings County Medical Society who had been practicing in the city for almost twenty years. Newly appointed by Brooklyn’s popular Republican mayor, Charles Schieren, Emery took office on 1 February 1894 and immediately confronted an alarming increase in the number of smallpox cases. He moved aggressively, expanding the number of vaccinators, the scope of their activities, and the force with which they conducted their rounds. His actions during the epidemic would test the vaguely defined limits of the health department’s powers.

The Epidemic of 1893–1894

After having been absent from the city for three years, smallpox reappeared in Brooklyn at the end of January 1892. Brooklyn at this time was a rapidly growing city independent of New York, with its own well-established department of health.³⁵ Sporadic cases were seen throughout

31. *Annual Report . . . Brooklyn . . . 1888*, p. 45.

32. *Annual Report . . . Brooklyn . . . 1894*, pp. 91–92.

33. *Annual Report . . . Brooklyn . . . 1887*, p. 12.

34. *Annual Report . . . Brooklyn . . . 1888*, p. 48.

35. The Metropolitan Board of Health that had been created in New York City in 1866 encompassed Manhattan and neighboring cities, including Brooklyn. In 1870, when a new city charter was approved, the jurisdiction of the board was limited to Manhattan, and a separate board of health was created for the city of Brooklyn: John Duffy, *A History of Public Health in New York City, 1866–1966* (New York: Russell Sage Foundation, 1967), p. 51. The modern-day city of New York, joining Manhattan and Brooklyn along with the adjacent boroughs of Queens, the Bronx, and Staten Island, was consolidated in 1898.

that year and the next in wards around the city, but the spread was kept largely in check by vigilant vaccinators. In December 1893, however, the number of cases rose precipitously.

At the beginning of February 1894 Emery dispatched teams of vaccinators to the twenty-seventh ward, which had a heavily German population. The city's German immigrants were well known not only for opposing vaccination but also for their more general suspicion toward health department officials. "Case after case occurred and was concealed, meanwhile the inmates were going about their usual work, many taking in tailoring and the children going to school," according to a report by the city's chief of contagious diseases; "there seemed to have been a mutual understanding among them to keep the cases from the Health Department."³⁶ The immigrants' resistance to state authority in this matter may have been influenced by their sentiments toward Germany's compulsory vaccination law, which imposed a fine or three days' detention for refusal to be vaccinated. The law, enacted two decades earlier in response to a smallpox epidemic in western Europe, had provoked widespread opposition based both on skepticism about the efficacy of the procedure in preventing disease and on ideological objections to state interference with private matters such as parents' decisions over how to protect their children from illness.³⁷

Meanwhile, the department established free vaccination clinics at more than two dozen locations around the city, including department headquarters on Clinton Street and various hospitals and dispensaries, and doctors visited more than two hundred factories and other places of business over the next several weeks to vaccinate the employees.³⁸ They also continued house-to-house sweeps in areas adjacent to cases that were discovered. The official "Rules for Vaccinators" issued by Emery to his teams gave the following guidance on dealing with public reluctance:

36. F. A. Jewett, "Smallpox in Brooklyn," *Brooklyn Med. J.*, 1894, 8: 290–92, quotation on p. 291. On German immigrants' mistrust of the health department, see also *Annual Report . . . Brooklyn . . . 1888*, pp. 11, 45.

37. The European smallpox epidemic was triggered by the Franco-Prussian War of 1870–71. The fact that German soldiers, most of whom had been vaccinated, suffered far fewer casualties from the disease than the French, who had not, was widely cited by vaccination proponents in Europe and the United States as proof of the procedure's efficacy. See Claudia Huerkamp, "The History of Smallpox Vaccination in Germany: A First Step in the Medicalization of the General Public," *J. Contemp. Hist.*, 1985, 20: 617–35. On the resistance of German immigrants to health department authority in Milwaukee, see Leavitt, *Healthiest City* (n. 2), pp. 80–83 and passim.

38. *Annual Report . . . Brooklyn . . . 1894*, pp. 18, 87.

In case persons are found who have never been vaccinated, every effort should be made to induce them to accept it, and, if necessary, they should be visited a second or third time to bring about this result. . . . When the inmates of infected houses refuse to be vaccinated, the vaccinator may, at his discretion, direct the Sanitary Police to maintain a quarantine until all are vaccinated.³⁹

As the policy was implemented, however, it was not only those in “infected houses” who became subject to quarantine.

An example of the department’s tactics and public resistance to them was the case of the McCauley family, a sixty-five-year-old couple and their twenty-seven-year-old son, who were placed under quarantine after refusing vaccination. Smallpox had been diagnosed a block away on Atlantic Avenue, and Emery ordered everyone in the neighborhood to bare their arms. The McCauleys alone refused, fearing dire health consequences from the procedure, and the following day two policemen were stationed at their doors. “They were forbidden to leave their apartment, and the other tenants were warned, under penalty of arrest, not to deliver any messages for them,” the *New York Times* reported; “the grocers, butchers, and bakers in the vicinity were also forbidden to deliver provisions.”⁴⁰ The next day, shocked police discovered a two-foot-square hole in a closet wall, through which the family had crawled into an adjacent apartment that was unoccupied; a neighbor reported that the three had fled to New Jersey. Three days later, after being convinced by family members with whom they had taken refuge in Hoboken that they had nothing to fear from the procedure, the three surrendered themselves at the Atlantic Avenue police station and consented to be vaccinated.⁴¹

In applying quarantine in this way, Emery was testing the elasticity of a state law that empowered local boards of health to “guard against the introduction of contagious and infectious disease” and to “require the isolation of all persons infected with and exposed to such disease.”⁴² How broad a net could be cast over those “exposed to” disease was unclear, and this was soon to become the central legal question in a court battle between Emery and vaccination opponents that would advance to the state’s highest court.

39. Exhibit C, Rules for Vaccinators, 20 March 1894, *In Re Smith*, New York State Supreme Court Cases and Briefs, vol. 4269, Appellate Division 1896–1911, pp. 68–69.

40. “Quarantined Family Escapes,” *New York Times*, 23 March 1894, p. 9. According to the *Sun*, McCauley threatened health department doctors with a rifle when they first attempted the vaccinate him: “No Vaccination for Him,” *Sun*, 23 March 1894, p. 1.

41. “The McAuleys Vaccinated,” *Brooklyn Daily Eagle*, 26 March 1894, p. 1. The *Times* and *Eagle* spellings of the family’s last name are discrepant.

42. Cited in *In Re Smith*, 146 N.Y. 68 (1895), p. 68.

By the middle of March, the aggressive tactics of Emery's staff of vaccinators had begun to attract some public notice and opposition. The *Brooklyn Daily Eagle* criticized the department's "loose methods of quarantining," citing public complaints that "families are shut up in tenement and apartment houses without any reason."⁴³ The department also faced criticism on other fronts. One Brooklynite wrote to the *Eagle* complaining that the system of paying health department vaccinators thirty cents for each operation they performed created an incentive for them to "terrorize or intimidate healthy people to be revaccinated by them under penalty of quarantine for refusal."⁴⁴ Another letter writer took the department to task for removing sick patients from their homes, claiming that this practice risked spreading the infection throughout the hallways of apartment buildings and into the streets.⁴⁵

Well aware of the influence of the press,⁴⁶ Emery throughout the epidemic used the *Eagle* to advance his case, issuing regular statements and giving interviews to the newspaper in which he attempted to justify his actions and enlist public support for them.⁴⁷ The day after the McCauleys' return, for example, he gave an interview to the *Eagle* in which he addressed himself to those who accused the department of overstepping its bounds in the name of public health:

The law clothes the department with ample authority to do all which it deems necessary, and it is pursuing a systematic course of vaccinating, disinfecting and quarantining. For the most part the citizens have shown a patriotic readiness to submit to all these unavoidable inconveniences. . . . In the few

43. "Bungling Health Board Doctors," *Brooklyn Daily Eagle*, 8 April 1894, p. 3. The Department of Health did not record how many houses were placed under quarantine during the outbreak, so it is impossible to determine precisely how widespread the practice was. Based on other information in annual reports and in press accounts, its use seems to have been uncommon relative to the number of vaccinations administered.

44. "Smallpox Precautions," *Brooklyn Daily Eagle*, 30 March 1894, p. 7. The validity of this complaint is uncertain. The city did contract with private physicians to serve as vaccinators during epidemics, but it is unclear from health department records whether they were paid a flat or per capita salary.

45. "Moving Smallpox Patients," *Brooklyn Daily Eagle*, 30 March 1894, p. 7.

46. On the influence of the press on popular opinions about science and medicine, see Bert Hansen, "America's First Medical Breakthrough: How Popular Excitement about a French Rabies Cure in 1885 Raised New Expectations for Medical Progress," *Amer. Hist. Rev.*, 1998, 103: 373–418; Hammonds, *Childhood's Deadly Scourge* (n. 28), pp. 98–119 and passim.

47. New York City health officials were also very skillful in their use of the press to generate public support for their work during this period. See Markel, *Quarantine!* (n. 2), pp. 8–9.

cases where selfishness and unreasonableness have led to opposition the officials have considerably but firmly insisted on carrying out their instructions.⁴⁸

With such rhetoric Emery sought to transform the vaccination issue from one of private liberty to one of public duty.

At the same time, Emery appealed to individual self-interest and reinforced the idea that every citizen could undergo the procedure without fear of adverse consequences. He acknowledged that “much misapprehension exists in the public mind concerning vaccination,” and at length sought to reassure the public about its safety and efficacy: based on “statistics [which] have been so carefully compiled and considered” in “all civilized countries,” he was able to assert that vaccination was “perfectly safe and absolute protection.”⁴⁹

Although many Brooklynites may have had doubts about his tactics, Emery continued to enjoy political support in crucial quarters. He retained the backing of Mayor Schieren, whose family physician he was, and in March Schieren granted an emergency appropriation to the health department for the hiring of additional vaccinators.⁵⁰ Emery was also backed by the city’s Common Council, which, at the request of a delegation of Eastern District residents, passed a resolution at the end of March in support of his actions in fighting the disease there.⁵¹ At the May meeting of the Kings County Medical Society, the group passed a similar resolution commending Emery’s “energy, efficiency and zeal” in dealing with the outbreak.⁵² The major newspapers of Brooklyn and New York, although they reported on skirmishes between health department vaccinators and reluctant citizens, and may have had qualms about some of the department’s tactics, remained supportive of vaccination in general. The *New York Times* commented in an editorial that those opposed to the practice were en-

48. “Vaccination Is Safe,” *Brooklyn Daily Eagle*, 26 March 1894, p. 5. See also “Smallpox Precautions,” *ibid.*, 21 March 1894, p. 12.

49. “Vaccination Is Safe” (n. 48).

50. *Annual Report . . . Brooklyn . . . 1894*, p. 12. The kind of support that Emery received from Schieren was essential in the intensely political environment of municipal public health during this period, as was most vividly exemplified by the successes of prominent New York figures like Hermann Biggs and Cyrus Edson. Biggs in particular was masterly in maintaining the support of New York’s Tammany Hall government while appearing to remain aloof from the muck of partisan politics. On the effects of city politics, especially the machinations of Tammany Hall, on the practice of public health, see, *inter alia*, Markel, *Quarantine!* (n. 2); Fee and Hammonds, “Science, Politics” (n. 21); Duffy, *History* (n. 35).

51. Exhibit A, *Smith v. Emery*, New York State Supreme Court Cases and Briefs, vol. 426, Appellate Division, 1896–1911, p. 48.

52. “Proceedings of Societies,” *Brooklyn Med. J.*, 1894, 8: 643.

gaged “in a futile attempt to head off human progress and to reopen a question about which pretty much all of the world has made up its mind.”⁵³

As winter turned into spring and the epidemic showed no signs of abating, Emery’s vaccinators continued to blanket the city, focusing especially on large employers. At the Havemeyer & Elder sugar refinery, some two thousand “big men bared their brawny arms and were inoculated,” according to the *New York Times*.⁵⁴ At the Chelsea Jute Mills in Greenpoint almost all eight hundred workers were scraped, while at the nearby Dunlap’s hat factory half of the five hundred employees were. All the operators of the city’s surface and elevated railways were to be vaccinated.⁵⁵ Such efforts were carried out not only at the health department’s insistence: many companies, concerned about the devastating effects that an outbreak of the disease among their employees could have on their business, requested that a team of vaccinators come on site. Workers’ anxiety over the threat of unemployment—the nation had plunged into a depression the previous summer, and thousands of Brooklynites were thrown out of work—probably made many of them more inclined to go along with the programs without complaint.

Another focus of concern were the city’s seventy-two lodging houses, which sheltered a transient population of some 2,400 each night: “in them are gathered nightly a large proportion of those homeless and vagrant ones in our population whose unwholesome heredity and unsanitary lives render them liable not only to the commission of crime, but to the contraction of disease,” noted a health department report in language that revealed what many health officials viewed as the close connection between moral degeneracy and illness; “in the presence of an epidemic, such houses become strategic points in the consideration of places to prevent its spread.”⁵⁶

Meanwhile, smallpox was ravaging other major U.S. cities whose health boards were also moving aggressively to contain it, with mixed reactions from citizens. Across the river in Manhattan, as in Brooklyn, the health department was deploying teams of vaccinators to business and homes,

53. Cited in *Brooklyn Med. J.*, 1894, 8: 576.

54. “Physicians Fighting Hard,” *New York Times*, 29 March 1894, p. 9.

55. “Great Increase in Smallpox,” *New York Times*, 27 March 1894, p. 9. Newspaper accounts during the outbreak do not specify mass vaccination at all-female workplaces, but there is no reason to believe that the health department systematically neglected them. Indeed, health department annual reports frequently express concern over the work of seamstresses and laundresses because of the danger posed by contaminated clothes and bedding.

56. *Annual Report . . . Brooklyn . . . 1894*, p. 178.

although there is no evidence that they used quarantine on those who refused.⁵⁷ The resistance of the German immigrant community played a prominent role in events in Milwaukee, where the health department's insistence on forcibly removing patients, especially children, from their homes became a flashpoint for opposition and resulted in several violent uprisings against department inspectors and their police escorts.⁵⁸ In Chicago, teams of vaccinators accompanied by police went from house to house, using quarantine as they saw necessary, which also provoked community opposition.⁵⁹ In Providence, the state legislature voted to repeal Rhode Island's compulsory vaccination law following years of agitation by antivaccination activists.⁶⁰

In mid-April, Emery's teams intensified their efforts in the city's schools. Proof of vaccination upon enrollment was required for students under state law, but enforcement was desultory, and spot checks by the department discovered that in many schools scarcely half the children were protected.⁶¹ A team of fifty-six vaccinators was sent out and administered a total of about 27,000 vaccinations to the city's young scholars.⁶² The doctors encountered an especially delicate situation in the elite schools where the children of Brooklyn's leading citizens studied: Only those students who could show a recent scar were to be spared the vaccinator's lance, but the custom among the upper classes was not to vaccinate on their daughters' arms because the scar would spoil the beauty of a young debutante wearing a sleeveless gown. The teenage girls could hardly show an unknown health department doctor the place on their body where they had been vaccinated, and after tense consultations between Emery and at least two school principals, the department arranged to have its three women doctors verify protection among the daughters of the well-to-do.⁶³

Perhaps sensing an opportune moment to capitalize on public unease about health department tactics, a group made up mostly of homeopathic doctors formed the Brooklyn Anti-Vaccination League in April 1894. In addition to demanding the repeal of all state and local laws on

57. *Annual Report . . . New York . . . 1894*, pp. 12, 53.

58. Leavitt, *Healthiest City* (n. 2), pp. 76–121.

59. "Preparing to Stamp Out Smallpox," *New York Times*, 24 April 1894, p. 9.

60. "Anti-Vaccination Sentiment," *New York Daily Tribune*, 15 April 1894, p. 18.

61. Jewett, "Smallpox in Brooklyn" (n. 36); "Vaccination in the Public Schools," *Brooklyn Med. J.*, 1894, 8: 294.

62. *Annual Report . . . Brooklyn . . . 1894*, p. 96.

63. "Modest Girls, Horrid Doctors," *New York Herald*, 30 March 1894, p. 8; "The Girls Fooled the Doctor," *Brooklyn Daily Eagle*, 31 March 1894, p. 1.

the practice, the League launched a number of charges against Emery, accusing him of, among other crimes, falsifying death certificates to conceal the fact that vaccination was having fatal consequences for some of those who underwent it.⁶⁴ The group was to remain a thorn in the side of Emery and the health department—especially in the courtroom, where a series of protracted lawsuits would set limits on what health officials could do in the name of protecting the community's welfare. These cases would ultimately prove to be important milestones on the way to a U.S. Supreme Court ruling on the extent of public health police powers.

Vaccination on Trial

On 2 May 1894, two health department vaccinators visited a livery stable on Franklin Street in the Greenpoint neighborhood where William H. Smith operated an express delivery and hauling business. Smith employed more than a dozen men and boys who delivered goods from factories in the metropolitan area to retail businesses and from businesses to homes, as well as hauling away discarded items. In addition to offices, the upstairs quarters of the stable included a parlor where Smith sometimes spent the night after working late.⁶⁵ A case of smallpox had been discovered in the area, and the department was concerned that because of the nature of their business Smith and his employees could be vectors for spreading infection. In making the decision to send the vaccinators, Frederick Jewett, who headed the Bureau of Contagious Disease, must have remembered a similar case during the outbreak of 1886, when he was serving as an assistant sanitary inspector: a driver employed in the same type of hauling business had been found to spread the disease, leading to the death of at least one child.⁶⁶

The inspectors gave Smith and an employee at the office, Thomas Cummings, twenty-four hours to be vaccinated, and when they returned the following day and found that the two men had not followed their orders, they stationed a police guard at the front door and declared the business under quarantine. Smith called Charles Walters, his family physician, who—unfortunately for the health department—was a member of the Brooklyn Anti-Compulsory Vaccination League. Walters immediately hired a lawyer to seek a writ of habeas corpus from a special

64. "Against Compulsory Vaccination," *New York Times*, 22 April 1894, p. 12; "Anti-Vaccinators Busy," *New York Herald*, 28 April 1894, p. 4.

65. Testimony of William H. Smith, *Smith v. Emery* (n. 51), pp. 12–22.

66. *Annual Report . . . Brooklyn . . . 1886*, p. 39.

session of the state Supreme Court, demanding that the two men be released from custody.⁶⁷

The next day, Smith's lawyer managed to obtain a hearing before Judge William J. Gaynor. Like Emery a friend and ally of Mayor Schieren, Gaynor was a well-known figure in local political circles. As a long-time prosecutor in the Brooklyn courts he had led crusades against municipal corruption on such issues as city control of the water supply and taxes on elevated railways; a libertarian mistrustful of governmental power, he had in his short time on the bench become known for rulings protecting the rights of the common citizen, as well as for his brusque and irascible temperament.⁶⁸ Acting with the swift decisiveness for which he was well known, Gaynor granted Smith's writ the following day, commanding that the quarantine be lifted and the men be freed pending his decision on the legal aspects of the case.

Meanwhile, Emery continued to press his case with the public that the health department's control measures were just and appropriate. On 7 May he issued a lengthy statement, reprinted in the *Daily Eagle*, offering his rationale for the strict enforcement of vaccination and quarantine. He marshaled several types of arguments: He appealed most of all to civic duty, claiming that "in the presence of imminent peril private rights must subserve to public necessity."⁶⁹ He attempted to portray the procedure as widely accepted, asserting that the "vast majority of people have sympathized with the department and aided us in every practicable way, even where it involved considerable personal sacrifice." He invoked economic necessity, citing figures showing that if Philadelphia had adopted more aggressive control measures during its 1872 outbreak it could have saved more than \$24 million worth of lost commerce. He pointedly noted that "carriers of miscellaneous parcels, such as bedding, furniture, packages and other baggage are especially liable to come in contact with and spread the disease." Finally, he cited several cases, by name, of people who had refused vaccination and had met with predictably dire fates, including death.

When Gaynor's ruling came on 18 May, it proved a blow to the health department. Refusing to acknowledge that Smith and Cummings were a danger to the community, Gaynor asserted that the legislature had con-

67. Testimony of William H. Smith, *Smith v. Emery* (n. 51), pp. 14–17.

68. Mortimer Smith, *William Jay Gaynor, Mayor of New York* (Chicago: Regnery, 1951), pp. 19–38. Gaynor was elected mayor in 1910 and died in office in 1913. His biographer Smith describes him as "by a wide margin the most cantankerous man ever to sit in City Hall" (p. ix).

69. "Dangers of Smallpox," *Brooklyn Daily Eagle*, 7 May 1894, p. 5.

ferred on Emery no power to quarantine those who were not actually infected with a disease: “Arbitrary power is abhorrent to our system of government,” he declared; “If the Legislature desired to make vaccination compulsory, it would have so enacted. . . . [The law] does not confer on the Commissioner the right to imprison any more than to take life.”⁷⁰

Emery promptly appealed the decision, hoping to obtain a ruling that would throw the weight of the law behind his actions. Testifying at a later trial, he revealed his motivation for pressing the case against Smith: “My motive [in appealing Gaynor’s decision] was for the purpose of obtaining a ruling defining the powers and rights and the duties of the Health Boards, this Health Board as well as others. And I deemed it essential to the efficient discharge of my duty and the duty of my subordinates that my authority should be particularly defined in that crisis.”⁷¹ Notably, he was not seeking a law that would explicitly declare vaccination compulsory; rather, he wanted a more general affirmation of the right to use his discretion in setting policy.

Gaynor’s action was widely reported in the press, garnering notices in the *Daily Eagle* along with the *Times*, *World*, and *Daily Tribune*,⁷² and public awareness of the ruling emboldened those who were inclined against vaccination. At the end of May, one of the employees at the Standard Oil factory in the Newtown Creek neighborhood took ill, and Emery sent a squad to the plant to vaccinate the man’s co-workers. When the men refused and the team tried to insist, one of the workers pulled out a copy of a newspaper that had printed Gaynor’s decision. “You can’t touch us,” the men were reported as saying: “We are protected by the law.”⁷³

Although the imposition of quarantine had been suspended, the use of coercive measures continued. In one late-night raid, a squad of 40 physicians accompanied by 120 police officers swept into an Italian quarter of Flatbush brandishing vaccination lances. The *Eagle* reported that upon seeing the policemen’s badges many “sprang through windows and doors” but were soon caught.⁷⁴ The following night, approximately 50 doctors and more than 100 police conducted another raid. A scuffle

70. Ruling of William J. Gaynor, 18 May 1894, *In Re Smith* (n. 39), p. 35.

71. Testimony of Z. Taylor Emery, *Smith v. Emery* (n. 51), p. 67.

72. “A Fight Against Vaccination,” *Brooklyn Daily Eagle*, 5 May 1894, p. 1; “Law as to Vaccination,” *New York Times*, 5 May 1894, p. 9; “As to Compulsory Vaccination,” *New York World*, 5 May 1894, p. 8; “Gaynor on the Health Board’s Rights,” *New York Daily Tribune*, 5 May 1894, p. 12.

73. “Smallpox Outbreak Feared,” *Brooklyn Daily Eagle*, 30 May 1894, p. 1; see also “Refused to Be Vaccinated,” *New York Times*, 31 May 1894, p. 9.

74. “Virus in an Italian Colony,” *Brooklyn Daily Eagle*, 7 May 1894, p. 1.

broke out when one of the residents lunged at a doctor and attempted to stab him with a pocketknife.⁷⁵

The Brooklyn Anti-Compulsory Vaccination League made hay of Emery's legal troubles, and at the end of May they publicly called for his removal.⁷⁶ Emboldened by Gaynor's ruling, which seemed to open a legal door to further action against vaccination, they next mounted an attack on the state law requiring the practice for school enrollment. Charles Walters—the family physician who had come to William Smith's aid—filed suit against the principal of Brooklyn Public School No. 22 seeking to compel him to admit Walters's two children, who had not been vaccinated.⁷⁷ On this front, however, the group was unsuccessful. A month later a judge ruled:

A common school education, under the existing constitution of the State of New York, is a privilege rather than a right. . . . It follows that the State can certainly exercise this discretion by debarring from attendance at the public schools such persons as are unwilling to adopt a precaution which, in the judgment of the legislature, is essential to the preservation of the health of the large body of scholars.⁷⁸

The judge was careful to point out that the legal question in this case was different from that which Judge Gaynor had considered in the Smith case.

From March through August 1894, when the epidemic finally dwindled, the health department administered approximately 225,000 vaccinations (close to one-quarter of the city's population) in addition to an unknown number that were done by private physicians. Of the vaccinations performed by city doctors, close to three-quarters were done in the house-to-house sweeps.⁷⁹ Smallpox virtually disappeared from Brooklyn in 1895, with only a single case recorded in the city.⁸⁰ But the legal battles over what had occurred during the 1894 outbreak, and over the practice of vaccination more generally, continued to be waged in the courtroom.

In February 1895, Emery claimed a victory for health department authority when the Supreme Court's Appellate Division overturned

75. "Slashed at the Doctors," *Brooklyn Daily Eagle*, 8 May 1894, p. 12.

76. "Want Emery Removed," *Brooklyn Daily Eagle*, 29 May 1894, p. 7.

77. "A Legal Contest over Vaccination," *New York Tribune*, 13 July 1894, p. 12; "Anti-Vaccination Test Cases," *New York Times*, 13 July 1894, p. 9.

78. "Vaccination and the Public Schools," *Brooklyn Med. J.*, 1894, 8: 637–39, quotation on p. 638.

79. *Annual Report . . . Brooklyn . . . 1894*, p. 96. The number of house-to-house vaccinations was 164,306.

80. "Smallpox in Brooklyn," *Brooklyn Med. J.*, 1897, 11: 34.

Gaynor's ruling of the previous May asserting that Emery had overstepped his bounds. The new ruling underscored just how ambiguous the definition of terms such as "compulsory" could be, and how much disagreement remained over whether vaccination constituted an assault or a public service. "There was neither coercion nor compulsion" in the health department's actions, the judges ruled; Smith and Cummings "were isolated and deprived of their freedom because they had been exposed to small pox and were liable to be seized therewith. . . . If they availed themselves of the privileges tendered to them, their acceptance would terminate their quarantine."⁸¹ It was an unalloyed victory for the kinds of broad powers that Emery had claimed for the Department of Health.

Lawyers for Smith and Cummings appealed, however, and on 3 May 1895, exactly a year after the health department had placed the quarantine on Smith's business, a three-judge panel on the Court of Appeals affirmed Gaynor's original ruling that Emery had overreached. Although it is unclear whether the three judges shared Gaynor's libertarian ideology, they concurred with his reading of the law. "That the powers conferred upon the health commissioner by the provisions of the city charter give him the right to compel the vaccination of every citizen in the city of Brooklyn, if he would escape quarantine, seems an unnecessary and it is an unwarrantable inference in the language," the decision said; while the judges did not doubt that the law properly invested the health department with certain powers to protect the public, "[l]ike all enactments which may affect the liberty of the person, this one must be construed strictly."⁸²

Not content with Gaynor's order releasing him from quarantine, Smith had also filed suit against Emery seeking damages for lost business during his confinement. Smith's complaint, filed in June 1894, alleged that the health department's action constituted an unlawful arrest without probable cause which led to the loss of \$10,000 due to his inability to continue his business.⁸³ The second suit came to trial in the Brooklyn Circuit Court on the first day of December 1895, and two weeks later the judge awarded Smith \$641.32 in damages after the jury found in his favor.⁸⁴

81. Ruling of J. Dykman, 14 February 1895, *In Re Smith*, Cases in the Court of Appeals, vol. 1442, New York Law Institute, p. 24.

82. *In Re Smith*, 146 N.Y. 68 (1895), p. 77.

83. The damages suit, *Smith v. Emery*, was a separate legal action from *In Re Smith*, the original suit contesting forced vaccination, although for several months during 1894–95 both were pending simultaneously in the state court system.

84. Judgment of Charles F. Brown, 16 December 1895, *Smith v. Emery* (n. 51), p. 10.

The trial of the damages suit revealed the wide gap between the rationale of the health department doctors and the legal perspective of the court. To justify the attempt to force vaccination on Smith and Cummings, Emery's lawyers produced multiple types of evidence to demonstrate the rapid spread of smallpox and the grave peril it posed to the population: statistics on the incidence of the disease, city maps depicting the distribution of cases, testimony by department inspectors, resolutions from the Common Council and the medical society describing the scope of the threat. Judge Charles Brown, however, found all of this irrelevant: "I do not regard it as at all material that there was smallpox in the City of Brooklyn or that they had 140 cases a day," he told Emery's lawyers during cross-examination.⁸⁵ In his view, the sole relevant issue was whether or not Smith himself had actually been diagnosed with the disease; in the absence of that circumstance, quarantine was unjustified.⁸⁶ Brown's decision over the use of quarantine, like Gaynor's before him, underscored the difference between the types of evidence that were persuasive to health officials and those that stood up in courts of law.

In 1895–96 the health department faced at least three other suits charging it with either assault or wrongful death as a result of vaccination. Although none of the cases had a direct legal bearing on the issue of the health department's authority, the negative press coverage that they generated served to fuel public unease about the safety of the procedure and, more generally, about the competence of the medical profession to protect the community from disease.⁸⁷ The most publicized of these involved ten-year-old Julia Burggraff, the daughter of a Williamsburg mineral water manufacturer. Within three days of being vaccinated at her school by a city doctor during the 1894 epidemic, "her entire left side had become swollen and inflamed," according to a press account; the muscles in her arms, legs, and neck became rigid, she lost her ability to swallow, and three weeks later she died.⁸⁸ The family doctor declared the cause of death to be lockjaw. Peter Burggraff, Julia's father, filed a wrongful death suit against Emery and vaccinator Frank Boyden, seeking

85. *Smith v. Emery* (n. 51), p. 43. The figure of 140 cases per day does not correspond to any health department data; it is probable that the judge here is speaking hyperbolically.

86. *Ibid.*, pp. 39–42 and *passim*.

87. At the end of 1895 a jury awarded \$1,500 to Emil Schaefer, who claimed that he "came near dying from loss of blood and shock" after being vaccinated against his will by the same health department doctors who had attempted to force the procedure on Smith and Cummings ("\$1,500 for Forced Vaccination," *New York Times*, 16 November 1895, p. 1).

88. "Death Followed the Vaccination," *New York Herald*, 3 May 1894, p. 11.

\$5,000 in damages.⁸⁹ The jury was ultimately unable to reach a decision and the case was dismissed.⁹⁰

In December 1896, the circuitous legal battles between Emery and his antagonist William Smith finally came to an end when a panel of judges in the Appellate Division of the State Supreme Court heard Emery's appeal of the damage award that Smith had won against the health department a year earlier. The court found that the judge in the earlier trial had improperly excluded from consideration the evidence concerning the prevalence of smallpox and Emery's judgment about Smith's and Cummings's risk of contracting the disease. Their ruling affirmed the validity of Emery's professional opinion: "The conditions requisite to constitute exposure, and whether those . . . actually exist . . . are not necessarily, and may not be, matters within common understanding," the judges declared, showing striking deference to the authority of scientific knowledge; "They present medical questions, and the effect of them in a given case is the subject of professional opinion."⁹¹ With these words they overturned the previous court's ruling.

It was at best an ambiguous victory for Emery and the health department: the court did not find that the attempt to compel vaccination was justified, but rather that Emery had not had adequate opportunity to prove it so. Smallpox having passed from the city, however, the issue had lost its urgency for the moment. But the question of the limits of compulsion would resurface in a few years, in a somewhat different form, when the disease returned to the city just after the turn of the new century.

Vaccination in the Legislature

Smallpox was largely absent from New York in the final years of the nineteenth century, during which time Manhattan joined with Brooklyn and the surrounding boroughs to create the greater city with a total population of some 3.5 million. But an unsettling outbreak of cases in the northern wards of the city in December 1900 prompted long lines to form at the health department's midtown headquarters.⁹² A *Daily Tribune*

89. "Vaccine Suits in Brooklyn," *New York Times*, 10 January 1896, p. 9; "Light on That Vaccination," *New York Tribune*, 11 January 1896, p. 9.

90. "The Burggraff Jury Discharged," *New York Times*, 18 January 1896, p. 9. See also "Burgraf vs. Emery," *Brooklyn Med. J.*, 1896, 19: 139–47 (the spelling of the family name appears as Burggraff in most of the press accounts of the case); "Lockjaw Germs Abound," *New York Times*, 11 January 1896, p. 14.

91. *Smith v. Emery*, 11 A.D. 10 (1896), p. 14.

92. "Crowds Seek Vaccination," *New York Daily Tribune*, 2 December 1900, p. 6.

editorial expressed confidence in the city's ability to control the situation: "A thoroughly efficient Health Department can always keep under this revolting disease," the paper wrote; "New-York can assure its citizens that they need lose no sleep over the menace of the disease, if they are protected by vaccination."⁹³ The health commissioner, Ernst Lederle, moved swiftly against the new cases. Lederle, who held a doctorate in chemistry, authorized the allocation of \$22,500 to hire seventy-five vaccinators, who over the next several months administered close to 375,000 immunizations.⁹⁴

In 1901 just under two thousand cases of smallpox were diagnosed, with about one out of five victims dying from it.⁹⁵ The severity of the outbreak, which was raging in major cities across the northeast, presented the city with a frustrating paradox: on the one hand, the number of vaccinations administered by the health department was impressively large and seemed to indicate the success of its nominally voluntaristic policy; on the other hand, smallpox was spreading unabated, suggesting to some that more aggressive control measures—backed up with explicit legal authority—were needed. Against this backdrop, some physicians in the city began to question the absence in New York State of a compulsory vaccination law. It was the lack of clear legal authority, after all, that had stymied Emery's efforts to compel vaccination during the 1894 epidemic in Brooklyn. In May 1901 the New York County Medical Association appointed a special committee to consider the question of whether vaccination should be made mandatory, and invited all the group's members to offer their opinions.⁹⁶

After several months of study, the group prepared a recommendation in favor of a compulsory law and gained the sponsorship of State Senator James McCabe, a physician who had formerly practiced at the Long Island College Hospital. In February 1902 McCabe introduced a bill that would require each city in the state to enforce the vaccination of every citizen in any instance where the Department of Health deemed it necessary; anyone who refused would be guilty of a misdemeanor and subject to a fine of at least \$50 and imprisonment for at least ten days. No company employing more than ten people would be allowed to hire anyone who had not been vaccinated within the previous five years.⁹⁷

93. "Not a Plague-Stricken City," *New York Daily Tribune*, 23 December 1900, p. 10.

94. *Annual Report . . . New York . . . 1901*, pp. 13, 30.

95. *Ibid.*, p. 30. A total of 1,964 cases and 410 fatalities were recorded in 1901.

96. *New York State J. Med.*, 1901, 1: 138.

97. "Compulsory Vaccination," *New York Med. J.*, 1902, 75: 292; "To Make Vaccination Compulsory by Law," *New York World*, 11 February 1902, p. 4.

The bill sparked a fierce debate among the city's doctors and revealed fissures within the medical profession about whether compulsion best served the ends of the public health.⁹⁸ An editorial in the *Brooklyn Medical Journal* spoke candidly about the politically strategic reasons for keeping the practice voluntary:

it is unwise to make vaccination compulsory, for fear of arousing an antagonism to it which would defeat the very object it seeks to secure. . . . The antivaccinationists meet with very little encouragement, and their efforts to stay the onward march of the army of vaccinators amount to nothing. It is the fear of putting a powerful weapon in their hands which makes the Board of Health hesitate to endorse the bill of Senator McCabe.⁹⁹

Similarly, the *New York Medical Journal* stressed the value of retaining a policy that was voluntary—at least in name: “We have always felt that an out-and-out compulsory vaccination law . . . was doomed to more or less complete failure. . . . Compulsion in the matter of vaccination is an unwarrantable encroachment upon personal liberty and therefore one to be resisted.”¹⁰⁰ Instead, the journal's editors favored a strategy of what they termed “indirect compulsion” through which businesses with extensive public contact could assure the compliance of their customers: “there are other agencies than the government that have it well within their power to enforce general revaccination, notably the railway companies.”¹⁰¹ In other words, coercion was accomplished more appropriately, and more effectively, through the private sector. The editorial went on to describe with approval a plan recently instituted in Illinois, in which all the principal railway lines leading to Chicago were to require proof of vaccination for travelers embarking in localities where smallpox was prevalent.

98. Although the medical profession had become much more uniform in its use of allopathic methods, it remained highly fractured throughout this period, especially along lines of practice setting. Tensions were prominent between doctors associated with health departments, who embraced the power of bacteriology and laboratory methods in diagnosing and treating disease, and physicians in private practice, who placed greater value on the empiricism of clinical experience. Private practitioners often resented health department regulations such as mandatory reporting of infectious disease, which they saw as an intrusion on the doctor-patient relationship. See, e.g., Hammonds, *Childhood's Deadly Scourge* (n. 28), pp. 11–12. The debate over compulsory vaccination, however, does not seem to have broken out along any typical or predictable lines.

99. “Compulsory Vaccination,” *Brooklyn Med. J.*, 1902, 16: 184.

100. “Vaccination under Indirect Compulsion,” *New York Med. J.*, 1902, 75: 330–31, quotation on p. 330.

101. *Ibid.*, p. 331.

Yet many physicians expressed a very different view of the merits of compulsion. The editors of the *Medical Record* declared that the bill “deserves the support of the medical profession”: compulsion was justified because “the good of the many is the first consideration. A person who has been exposed to the contagion of smallpox is clearly a public menace.”¹⁰² Writing in the *Journal of the American Medical Association*, a health officer with the state of Kentucky (one of the states that did have such a law on the books) declared that “compulsory vaccination and surveillance of the exposed, has never yet failed to bring an outbreak under quick control.”¹⁰³

Ernst Lederle and his colleagues on the New York City health board came down firmly in opposition to McCabe’s bill, describing it as “unwise and uncalled for” and contending that “vaccination should be taught not by force but by education”¹⁰⁴—a somewhat ironic claim given many of the health department’s tactics, which included late-night raids by vaccinators with police accompaniment, not unlike the sweeps that Emery had used in Brooklyn. Lederle’s position on the bill was no doubt influenced by current events in Massachusetts. Only a month before McCabe introduced his bill in the New York State legislature, antivaccination activists in Massachusetts, who had successfully attacked various provisions of local laws on smallpox control over the years, had introduced legislation at the statehouse in Boston to repeal that state’s compulsory law. The result was a protracted political fight between activists and the Massachusetts Medical Society, which supported the law.¹⁰⁵ In light of the controversy in Massachusetts, a compulsory law must have appeared to Lederle and the health board not so much as a means to gain greater compliance with their programs, but rather as a likely spur for resistance and a potential source of political and legal headaches. Lederle also could not have failed to notice that Massachusetts’ law did not seem to be helping it greatly: smallpox was just as prevalent in that state as in New York.¹⁰⁶

The wisdom of Lederle’s assessment appeared to be borne out by the tepid response that antivaccination activists had been receiving in their attempts to generate public outrage during the current epidemic. A

102. “The Amended Vaccination Act for New York State,” *Med. Rec.*, 1902, 61: 379.

103. J. N. McCormack, “The Value of State Control and Vaccination in the Management of Smallpox,” *JAMA*, 1902, 38: 1434–35, quotation on p. 1434.

104. “Compulsory Vaccination Law,” *New York State J. Med.*, 1902, 2: 99.

105. Michael R. Albert, Kristen G. Ostheimer, and Joel G. Breman, “The Last Smallpox Epidemic in Boston and the Vaccination Controversy, 1901–1903,” *New England J. Med.*, 2001, 344: 375–79.

106. The effort to repeal the Massachusetts law was ultimately unsuccessful: *ibid.*

meeting of the New York Anti-Compulsory Vaccination League, at which the group called for an immediate end to the house-to-house sweeps by city doctors, was, according to the *Times*, attended by “nine men, one boy and seven reporters.”¹⁰⁷ The group’s message depended on two parts: first, that vaccination was unsafe and ineffective; and second, that legal enforcement of it constituted an unacceptable tyranny. The absence of a law on the books at least partially defused the second half of the message and deprived it of much of its resonance. New Yorkers might attempt to escape when they saw the vaccinators coming, but in general they declined to join any active resistance to the city’s practices.

Finally, debate over the proposed legislation revealed political tensions between New York City and the state over local control of health policies. Lederle and his colleagues took a dim view of the attempt by Albany to meddle in the city’s affairs, noting that the McCabe bill “implied that these local boards were incapable of conducting their own department”; New York City, Lederle declared, “could not afford to have the present harmonious relations between the Board [of Health] and all classes in the city upset by any mandatory legislation at Albany.”¹⁰⁸ Amid a heavy legislative schedule, the bill died in the state assembly in March 1902 without making it to the governor’s desk. Within a few months, the epidemic finally seemed to have burned itself out. A total of about 800,000 people were vaccinated in 1902, almost one of every four city residents.¹⁰⁹

In the middle of 1902, as a coda to the waning epidemic, two unsuccessful lawsuits challenged the state’s requirement of immunization for schoolchildren. Both suits, supported by the city’s leading antivaccination activists, sought to force local schools to admit children whose parents did not want them to undergo the procedure. The more persistent of the two litigants was Edmund Viemeister, a Queens attorney who took his battle all the way to the state Court of Appeals, which in October 1904 brought the suit to an end by upholding two previous lower-court rulings. The justices affirmed the clear legal basis of the law, which in their view had been appropriately enacted by the legislature and was not an unjust abrogation of individual liberty, as Viemeister claimed. “When the sole object and general tendency of legislation is to promote the public health, there is no invasion of the Constitution, even if the enforcement of the law interferes to some extent with liberty or property,” the court ruled; “The right to attend the public schools of the state is necessarily

107. “Anti-Vaccination League,” *New York Times*, 6 January 1901, p. 5.

108. “Compulsory Vaccination Law” (n. 104).

109. *Annual Report . . . New York . . . 1902*, p. 8.

subject to some restrictions and limitations in the interest of the public health."¹¹⁰

In spite of this endorsement of the power to enforce health regulations, the question of how much a state or local government could limit the liberty of residents in order to protect the community welfare remained unsettled in the minds of many people, both in New York and in other states, and would find its way to the U.S. Supreme Court the following year.

Jacobson v. Massachusetts and the Enforcement of Health

Ironically, the legal, political, and social controversies that arose in this period came at a time when smallpox was on the verge of disappearing as a fearsome and frequent scourge on the country's urban dwellers. But the court challenges that arose during these years set the stage for a landmark Supreme Court ruling that established the right of states and localities to use police powers broadly in controlling epidemic disease.

Two months after the New York State Court of Appeals rebuffed Edmund Viemeister's attempt to overturn the law on school enrollment, the U.S. Supreme Court heard arguments in a case brought by Henning Jacobson, a resident of Cambridge, Massachusetts, who had refused to be vaccinated during the epidemic of 1902, contending that the state had no right to force him to undergo the procedure. In arguing their case, Jacobson's lawyers cited, among other precedents, the ruling against Z. Taylor Emery's attempt to compel vaccination in Brooklyn through quarantine; while lawyers for Massachusetts cited the judgment against Viemeister in the school enrollment case. In its 1905 decision, the Supreme Court affirmed the right of the majority to override individual liberties when the health of the community required it. Writing for the court, Justice John Marshall Harlan declared that it was appropriate for state legislatures to enact "health laws of every description" to guard the common good in whatever way the citizens, through their elected representatives, thought appropriate.¹¹¹ By the same token, the state could legitimately impose penalties such as fines or quarantine on those who refused to cooperate with such laws. "The liberty secured by the Constitution of the United States to every person within its jurisdiction does not import an absolute right in each person to be, at all times and in all circumstances, wholly freed from restraint," Harlan wrote: "There are

110. *Viemeister v. White*, 179 N.Y. 235 (1904), p. 238.

111. *Jacobson v. Massachusetts*, 197 U.S. 11 (1905), p. 28.

manifold restraints to which every person is necessarily subject for the common good. On any other basis organized society could not exist with safety to its members."¹¹²

The ruling in *Jacobson v. Massachusetts* was the culmination of several decades of litigation by vaccination opponents resulting in dozens of decisions in courts around the country.¹¹³ Most of these lower-court judgments upheld the legality of compulsory vaccination laws, especially as they applied to school attendance; but there were notable exceptions, such as the ruling in William Smith's case against the Brooklyn health department. Several of these cases, like Smith's, turned on the question of whether or not the state legislature had expressly authorized the use of compulsion.

Working within the constraints of New York State's public health laws, both Emery and Lederle had to decide whether to follow the letter of the law, press for more explicit powers, or chart an uncertain course that took advantage of ambiguities in the delimitations of their powers. They made their decisions not only by judging the apparent efficacy of vaccination in controlling disease, but also by assessing the political and social climate within which they had to implement their policies. Actions to curb epidemics prompted varied community reactions, by turns cooperative and resistant, that reveal the extent to which popular ideas about the prevention and control of disease, and the government's proper role in these functions, remained in flux throughout the latter half of the century.

While Harlan's rationale would provide the legal authority in subsequent decades to support the use of compulsion in the enforcement of health, sharp debates over the ethical and practical ramifications of coercive tactics would flare repeatedly throughout the twentieth century, as health officials sought to control infectious threats such as typhoid, tuberculosis, syphilis, and AIDS. At the turn of the twenty-first century, the potential reappearance of smallpox as a bioterrorist weapon gives new salience to the question of how best to secure the cooperation of the public during a health emergency. During 2002, a protracted and often bitter public debate over the use of compulsory measures took place in response to the Model State Emergency Health Powers Act, a legislative

112. *Ibid.*

113. James A. Tobey, *Public Health Law: A Manual for Sanitarians* (Baltimore: Williams & Wilkins, 1926), pp. 89–98; William Fowler, "Smallpox Vaccination Laws, Regulations, and Court Decisions," *Pub. Health Rep.*, 1927, Suppl. 60: 1–21. The earliest case on vaccination was heard in Vermont in 1830.

template designed to help states update their public health legal infrastructure in order to be better prepared for acts of bioterrorism. The model act sparked controversy because of provisions that would have granted state governments the sweeping authority to enforce mandatory vaccination and quarantine during emergencies.¹¹⁴ These debates, like so many others before them, brought forth deep ambivalence in American attitudes toward governmental authority, individual privacy, personal responsibility, and the role of all of these factors in preventing disease.

114. On the debate over the MSEHPA, see, inter alia, John Colmers and Daniel M. Fox, "The Politics of Emergency Health Powers and the Isolation of Public Health," *Amer. J. Pub. Health*, 2003, 93: 397–99; Ronald Bayer and James Colgrove, "Bioterrorism, Public Health and the Law," *Health Affairs*, 2002, 21: 98–101; George J. Annas, "Bioterrorism, Public Health, and Civil Liberties," *New England J. Med.*, 2002, 346: 1337–42.