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Kelly Hacker Jones
Ivy Tech Community College

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History

*Rebelling against Lawful Authority? The Vaccination Controversy during the Smallpox Epidemic at Muncie, Indiana, 1893**

KELLY HACKER JONES
Ivy Tech Community College

ABSTRACT

This article will explore the ways in which compulsory vaccination was resisted or protested in Muncie, Indiana, during an outbreak of smallpox in that city in the summer and fall of 1893. It will examine previous analyses of anti-vaccination sentiment at the end of the nineteenth century, discuss the actions taken in Muncie to prevent the spread of smallpox, and describe the ways in which Muncie citizens resisted compulsory vaccination. This article will also trace the spread of anti-vaccinationist sentiment across the state and outline the arguments used for and against compulsory vaccination. It is the author's contention that resistance to compulsory vaccination at the turn of the century did not necessarily stem from ignorance or foolishness but from genuine, legitimate concerns regarding the safety of vaccination and the authority of the state to compel its citizens to undergo the procedure.

KEY WORDS Smallpox epidemic; Vaccination; Muncie, Indiana; Anti-vaccination movements

A majority of the best medical authorities are in favor of vaccination as a preventative of small pox, but there are people who are opposed to it. With such the city will have lots of fun in trying to enforce the recently enacted ordinance compelling vaccination. The city no doubt has authority to prevent persons from enjoying certain privileges, such as children attending the public schools unless they are vaccinated, but there is a limit to the authority though.

The above statement appeared in the *Daily Herald*, a newspaper published in Muncie, Indiana, on September 16, 1893. One day earlier, in response to an impending smallpox epidemic, the city council had published a proclamation requiring all citizens to be vaccinated

* Kelly Hacker Jones, 947 Bristol Road, Indianapolis, IN 46280. This article is based on research used for the author's master's thesis, completed at Ball State University in 2008. The author would like to thank her thesis adviser, Dr. James Connolly, for his assistance in completing this work.

and to adhere to city-wide quarantine regulations. The writer expresses skepticism about the authority actually held by the city health officer, Dr. Frank G. Jackson, which was not uncommon among Muncie residents. Several cases of smallpox had been discovered but a few weeks earlier, around August 18, and it had not taken the local authorities long to put into place stringent measures to combat the disease. Over the course of the two-month epidemic, regulations were put into place that quarantined the city, suspended public gatherings of any kind, and required all citizens to be vaccinated.

By the numbers, the epidemic was not a severe one: There were 150 cases of smallpox and 22 deaths from the disease. Only a small fraction of the city's total population became ill, and of those who caught smallpox, just under 15 percent died. Smallpox is typically fatal in 25 percent of cases (Hopkins 2002:xi). Despite its small size, the epidemic had a large effect. It resulted in the institution of a railroad quarantine that prohibited normal travel to and from Muncie, in addition to the local quarantine that prohibited public gatherings in schools, churches, and public facilities. It started a public quarrel between the health authorities over the exact nature of the disease. It also opened a public dialogue regarding the extent of the authority of local boards of health and sparked a statewide debate over the issue of compulsory vaccination.

During the Muncie smallpox epidemic of 1893, some citizens openly refused to be vaccinated; others found more subtle means to avoid the health inspector and his needle. Some citizens even wrote to the local papers to express their opinions that compulsory vaccination was not legal and that vaccination itself was a dangerous and questionable procedure. These instances of resistance and expressions of anti-vaccinationist sentiment were not the actions of “foolhardy and criminally careless persons,” as they were characterized by local physicians and the press (*Epidemic* 1894:359–60). I argue, rather, that those citizens who opposed vaccination were not necessarily anti-modern Luddites but had legitimate arguments against the safety of vaccination and against the authority of the local or state government to compel its citizens to undergo the procedure. Furthermore, the spread of the vaccination controversy to cities and towns all over the state of Indiana, oftentimes ahead of the real threat of smallpox, also indicates that many citizens felt threatened by laws that put public safety above individual liberty.

* * *

Interpretations of anti-vaccinationist sentiment have shifted over time. Those who have resisted vaccination have historically been characterized as quacks and fools who try to stand in the way of inevitable progress in the field of medicine. Martin Kaufman, author of “The American Anti-Vaccinationists and Their Arguments,” writes that the anti-vaccinationists were led by irregular physicians and patent medicine manufacturers who were jealous of the monopoly that regular physicians had gained in the licensing and practice of medicine (1967:463–78). John Duffy adopts a similar argument in *The Sanitarians: A History of American Public Health*, in which he describes the anti-vaccination movement as an obstacle to progress; it was a movement supported by irregulars and those who “will cling to tradition at all costs” (1990:200–201).

Most recently, Arthur Allen, in *Vaccine: The Controversial Story of Medicine's Greatest Lifesaver* (2007:104–105), has shown that there was some truth to many of the arguments that anti-vaccinationists used—that vaccination was unsafe and that it spread secondary infections—but ultimately concludes that they were in fact “Luddites” with “paranoid” arguments against government intervention in matters of personal health. Allen's assessment of the anti-vaccinationists is tempered by facts and anecdotal evidence that prove the dangers of vaccination

at the turn of the twentieth century but neglects to locate the anti-vaccinationist movement in the broader Progressive Era struggle between individual liberty and state authority.

An earlier history of the smallpox epidemic could also be characterized as belonging to this interpretation of the triumph of medical science over both disease and detractors. William G. Eidson, in his 1990 article “Confusion, Controversy, and Quarantine: The Muncie Smallpox Epidemic of 1893” (pp. 374–98) explores in depth the story of the epidemic—how it was rumored to have spread to Muncie, the actions of the civic authorities, resistance by certain members of the community to those actions, and some of the effects of the epidemic on the town itself and the health authorities involved in quelling it.

Eidson also describes some of the confusion that arose among community members regarding the issues of whether or not the disease was smallpox (certain members of the medical community argued that it was a form of chickenpox instead) and whether or not vaccination was safe and effective in preventing smallpox. The “anti” side of the issue is, however, absent in this piece. Eidson mentions the medical argument against vaccination as but one of several issues that divided Muncie physicians of the regular school of medicine and those of competing schools, something that the “irregular” physicians could and would use to hinder the efforts of the physicians in charge. Eidson closes, “As bad as the epidemic was, it would have been much worse had city officials showed [sic] an unwillingness to establish quarantine, had they been unsupportive of vaccination, or had they refused to open smallpox hospitals” (p. 398).

These interpretations share a view of the history of medicine as a story of the triumph of science over disease and therefore view opposition as inconsequential. Other historians of this era have instead examined the social implications of compulsory vaccination and reached different conclusions about the anti-vaccinationists. These historians have concluded that members of this movement were part of a broader dialogue regarding the proper role of government in personal matters such as health.

A growing number of historians of the Progressive Era have begun interpreting the anti-vaccinationists not as Luddites but as citizens with legitimate, reasonable concerns regarding the safety of vaccination and the state's power to force citizens to undergo the procedure. These historians tend to look at the anti-vaccination movement and agree with Progressive Era radical B.O. Flower, in that anti-vaccination sentiment was part of the era's “conflict between privilege and the people in the healing art” (Johnston 2006:180). The anti-vaccinationists did not merely represent the stubborn resistance of the minority to scientific progress but were instead part of a larger struggle between the tradition of American individualism and the era's tendency toward greater government paternalism and regulation.

One such historian, Joan Retsinas, adopts noted philosopher of science Thomas Kuhn's model of scientific progress to explain the anti-vaccinationists in her article “Smallpox Vaccination: A Leap of Faith” (1979). Kuhn's model shows that scientific progress is not linear but happens suddenly when scientists embrace a new idea in “a leap of faith,” hoping that this new paradigm will lead to new solutions to old problems. In this way, the old theory that miasms (unhygienic vapors that emanated from the soil) caused disease gave way to germ theory; those in favor of vaccination embraced the germ-theory paradigm, while those opposed to it instead embraced the idea that proper sanitation would be most effective in fighting smallpox and that, therefore, vaccination was unnecessary (pp. 113–24).

More recently, anti-vaccinationist sentiment has been interpreted by Robert D. Johnston in *The Radical Middle Class* (2006) as a reaction against the preponderance of medical and public

health experts that arose during the Progressive Era. In examining anti-vaccinationist sentiment and its effects on compulsory school vaccination, Johnston asserts that this story is largely one of conflict between the school and the home. He considers this conflict between state control and the family's autonomy "one of the most striking controversies of the Progressive era" (p. 179). His own analysis of the movement leads him to conclude that during the Progressive Era, anti-vaccination sentiment usually ran strongest at times when a community was faced with a severe epidemic. Because of this timing, he believes that these attitudes arose not out of ignorance of the severity of the disease but from the individual's preference to weigh the costs and benefits of vaccination for himself rather than to have local authorities make the decision for him. Johnston thus concludes that anti-vaccinationists might reasonably be considered progressive (p. 185).

Taking a broader view, James Colgrove, in his monograph on the national debate surrounding vaccination legislation throughout the twentieth century, comes to a similar conclusion: "one of the most fundamental and enduring tensions in the enterprise of public health is the balance between the rights of the individual and the claims of the collective, and nowhere is this dynamic more salient than in the policies and practices surrounding immunization" (2006:2). Colgrove examines the politics surrounding the implementation of all major immunizations in twentieth-century America. He sees the anti-vaccinationist movement as a backlash against two related phenomena: the vast array of biologic products for combating disease that became available in the early twentieth century, and the expansion of government regulation and authority into the heretofore private sphere of home and health (p. 47). Colgrove concludes that individuals' opinions on the issue of compulsory vaccination throughout the twentieth century have been influenced as much by their personal values of individual choice and freedom and what they believe to be the government's role in issues of personal health as by the question of whether vaccines work (p. 251).

This article follows this more recent historiographical trend. It is my contention that to correctly interpret past anti-vaccinationist sentiment, we must not remove it from the historical context. Although it is certainly true that vaccination has eradicated smallpox and that those who questioned its effectiveness have been proven wrong, it is important to remember that this was not yet clear to Muncie residents in 1893. At the time, there was no scientific theory or explanation as to why vaccination with cowpox virus was effective in preventing smallpox in humans. Furthermore, vaccination could be a dangerous procedure; secondary diseases and infections such as tetanus and *staphylococcus* were known to occur. There was also open debate between Muncie physicians as to whether the disease present was smallpox or chickenpox, and if it were the latter, vaccination would be unnecessary. In light of these issues, many citizens across the state of Indiana called into question the authority of state and local governments to compel citizens to submit to vaccination.

AN IRRUPTIVE FEVER COMES TO MUNCIE, INDIANA

The Muncie smallpox epidemic began in the summer of 1893. City Health Officer Frank G. Jackson discovered his first case on August 17; however, upon inspecting the patient's family, he concluded that the disease may have been present as early as May of that year. When questioned, the family informed him that they had previously been attended by another local physician, Ralph A. Bunch, who had diagnosed the disease as "black chickenpox." Jackson and his colleagues Garret D. Leech (a local physician who had been involved in the management of a smallpox outbreak in Muncie in 1876), Charles N. Metcalf of the Indiana State Board of Health, and Hugh A. Cowing, the county health officer, inspected four other families in the neighborhood

with similar symptoms who had also been visited by Dr. Bunch. The diagnosis was the same: smallpox.

In the early weeks of the epidemic, Bunch bore much of the blame for the spread of the disease as a result of his incorrect diagnosis. “As several physicians contended that the disease was not smallpox,” wrote Dr. Cowing in his report on the epidemic to the State Board of Health, “a distrust was created in the minds of many citizens, which rendered the duties of the health officers in enforcing quarantine and vaccination of exposed persons more difficult than it would otherwise have been” (Cowing 1894:6). Based on the evidence available, it is difficult to determine whether Bunch was simply wrong in this case or, as an anti-vaccinationist and member of one of the “opposite” schools of medicine, was trying to avoid alarming the authorities into instituting mandatory vaccination regulations.

Jackson's first move, with the collaboration of his colleagues, was to quarantine the entire neighborhood in which the infected houses were located. Those who had been in contact with the smallpox patients were vaccinated and kept in isolation for a period of two weeks. Four days later, on August 21, the Muncie City Council created a Committee of Public Safety, which was granted “full power to take whatever measures are in their judgment necessary to prevent further spread of the disease, and support the quarantine declared by the health officer” (*Morning News* August 25, 1893).

Within three weeks, the Committee of Public Safety deemed it necessary to quarantine the entire city. The quarantine restricted travel by rail to those who could produce a certificate of good health and vaccination and required all baggage carried to be fumigated. The quarantine also prohibited public gatherings of any kind, including school and church services. Most provocatively, however, ordinances were passed that allowed the health officer to remove any smallpox patient from their home—using force if necessary—to quarantine in a smallpox hospital, and also requiring all citizens to be vaccinated by September 15, 1893 (Common Council 1903:253).

PROFESSIONAL RIVALRIES AND RESISTANCE TO VACCINATION

These ordinances certainly represented a dramatic expansion of the powers of the city health officer, a position that had not existed in Muncie more than a year prior to the epidemic. Some doubted the legitimacy of the authority invested in such a new office; others remained skeptical because the doctors themselves could not agree on what disease was plaguing the city. Although Jackson, Cowing, and other prominent physicians assured the public that smallpox was in their midst, Bunch, and the families he treated, stood by his original diagnosis of chickenpox. Their debate played out in the local press: Cowing publicly chastised Bunch for not bringing the early alleged cases of smallpox to the attention of the health officer and for not recognizing the “obvious” symptoms of the disease. Bunch responded by describing Cowing's attack as “boyish” and listed details of the cases he treated; he believed that these details proved that the cases were chickenpox and not smallpox (*Daily Times* August 21–24, 1893). Regardless of which physician was correct, their public argument did serve to undermine public confidence in the public health authorities and their diagnosis.

It should be noted here that the practice of medicine and the education of physicians was not regulated in this period, but it was during this era that regulars began aggressively pursuing dominance and regulation of the practice of medicine. Rivalries developed between the various schools of theories of practice—the homeopathic, allopathic (or regular), eclectic, and physio-

medical schools—rivalries that became even more embittered in Muncie over the course of the epidemic. Members of the Delaware County Medical Society (an organization for regular physicians) were appointed by Jackson to write quarantine regulations and to vaccinate citizens; local eclectic and homeopathic physicians were excluded from the official efforts to fight the epidemic as a general rule (Cowing 1894:41–42). Those who most openly criticized their efforts—Bunch, Auburn C. Jones, and Charles Bohannon—were of the eclectic and homeopathic schools. Members of these “opposite” schools of medicine did not, as a group, embrace the practice of vaccination; instead, they asserted that there were other, less dangerous, cures or preventatives for the disease (ISBH 1894:391). Some speculated that professional rivalry was one of the primary motivations for Jackson and his regular-school colleagues to later deny the validity of vaccination certificates from physicians of “opposite” schools (*Daily Herald* November 6, 11, 1893).

Adding to doubts about the authority and competence of Muncie public health officials and their diagnosis was the issue of vaccination itself. The effectiveness of vaccination as a preventative for smallpox and the government's authority to compel citizens to undergo the procedure was an issue much debated in this era, not only in Muncie but across the state (*Daily Herald* October 3 and November 2, 1893). When smallpox came to Muncie, the actions of physicians eager to serve the public by protecting it from disease clashed with individual values of liberty. The result was statewide controversy over the government's authority in matters of public health and its right to enforce compulsory vaccination.

The debate over compulsory vaccination highlighted attitudes regarding the individual's autonomy in making decisions regarding his health. Smallpox vaccination in the late nineteenth century was an operation that carried considerable risks. In Delaware County, one woman was widely known to have contracted tetanus and died following her smallpox vaccination (Cowing 1894:57). In the aftermath of the epidemic, her case was used as evidence of the dangers of the procedure. Secondary infections associated with vaccination were not uncommon: Farms where cowpox virus was harvested were unregulated until 1902, and so the vaccine itself often contained dust, hair, and excrement, or the virus itself was ineffective or fake (Allen 2007:72–73). Sterilization procedures were not yet universal in this era, and so instruments and the injection site were not always disinfected, which sometimes led to streptococcal and staphylococcal infections. Furthermore, vaccination, if it took, left the patient with an open wound and a sore, swollen arm that was also vulnerable to infection or injury (Johnston 2006:187–88). Given such risks that the individual was asked to assume, even if for the safety of the community, it is no small wonder that many people wished to have more choice in the matter.

It is difficult to establish the exact number of those who went unvaccinated, but there is proof that more than a few found ways of getting around the operation. A conservative estimate drawn from the figures of local physicians suggests that approximately 10,000 individuals were vaccinated during the epidemic, a substantial proportion of the population of approximately 20,000. The ordinance establishing compulsory vaccination excused all persons who had been vaccinated within the three years prior to September 15, 1893; however, it cannot be assumed that the remainder of the soaring population decided to have themselves vaccinated between September 1890 and September 1893, especially in light of Cowing's observation that vaccination had been neglected in the city since the 1876 epidemic (Cowing 1894:56). The employees of Hemingray's Glass Manufacturing Company illustrate this point.

The management at Hemingray's required all employees to get vaccinated before returning to work when the factory reopened in early September of 1893. The factory manager

requested a local physician (unnamed by the press) to stand guard at the factory entrance and inspect workers for a vaccination scar to ensure that the order had been followed, but this physician reported that not one of the boys he examined had a recent vaccination scar (*Morning News* September 9, 1893). This report would have been particularly troubling to the authorities; many who worked at the factory lived in or near the infected district (located on the city's south side, among the working-class neighborhoods), where health officers had already gone door to door vaccinating residents. Furthermore, the factory itself was located not far outside the infected district (Cowing 1894:51).

Reports such as these prompted local authorities to expand the vaccination and quarantine orders. By September 15, all Muncie residents were required to be vaccinated; to leave town by railroad, one had to present a certificate of vaccination and have one's luggage fumigated. There were several incidents in which people transferred fumigation tags from one piece of luggage to another or bribed the fumigators to stamp their luggage without going through the process, and it seems that there were ways of obtaining false vaccination certificates as well. Doctor William Driscoll revealed to the city council in mid-September that he “knew of some crooked work that had been done in getting certificates to leave town” (*Morning News* September 19, 1893). He also predicted that some parents would do the same for their children when the schools reopened. Jackson decided to guard against this possibility and provided W.R. Snyder, superintendent of Muncie's city schools, with a list of doctors whose vaccination certificates would not be accepted—including doctors Bunch and Jones—and posted school inspectors at all public schools that opened Monday, November 6 (*Morning News* November 7, 1893). These inspectors were instructed not to admit any child with a certificate from one of the physicians on that list, to give certificates to children who didn't have them but who could show a vaccination scar, and to vaccinate all unvaccinated children on the spot free of charge; local papers reported that the vaccination certificates of one hundred children were refused that day (*Epidemic* 1894:84–85).

The children of Andrew R. Mock, a local street contractor, were among those sent home for not having certificates of vaccination. Mock refused to vaccinate his children and declared that because there was no state compulsory vaccination law, the authorities had no right to bar his children's entrance to the school. Mock also declared his intent to take the matter to court as a “test case” against compulsory vaccination, but it seems that the case never made it to trial (*Daily Herald* November 13, 1893). This was perhaps because, as Cowing asserted, the ordinances in Muncie requiring vaccination were “in strict conformation” with Indiana's public health laws and therefore legally sound (Cowing 1894:51).

Some Muncie residents did get their opinions into print via letters to the editor. One signed by William Lynn, Sr., a clerk in a local shoe store, published in the *Morning News* on August 26, refuted an article published earlier that year by the Delaware County Medical Society titled “Vaccination and Revaccination: Who Shall Decide When Doctors Disagree?” Lynn argued that the article was “not very comforting in its character” and stated further that the writer's “mode of reasoning proves to my mind conclusively the futility and utter unreliability of vaccination and revaccination as a means to prevent the malady of smallpox.” Lynn also asserted that as the members of city councils across the country grew more intelligent, the harder it would become for doctors to convince city councils to uphold compulsory vaccination, because “evidence is accumulating on every hand, going to show that vaccination is a dangerous expedient.”

Lynn also criticized the regular school of medicine, stating that the member of the medical society who wrote the article was in favor of strict state laws enforcing the “doubtful and

dangerous” operation of vaccination and that the writer had blatantly asserted that the regular physicians should be placed in charge of vaccinating all state residents and paid well for the job. Lynn argued that the danger of smallpox was overstated by regular physicians, for whom a smallpox scare was a wonderful opportunity to earn some extra money from the increased number of vaccinations. He declared in his conclusion that he “offer[ed] these suggestions in hopes that some [would] be led to pause and consider well before they subject[ed] themselves or their dear little ones to this doubtful and dangerous remedy” (*Morning News* August 26, 1893).

Uncertainty over the exact cause of smallpox and how it spread also fueled resistance to quarantine and vaccination: These measures made little sense if they did not strike at what an individual believed to be the source of the disease. A second open letter signed by a “Citizen” reveals the writer’s own belief that smallpox is one of the zymotic diseases or one of those diseases that “have their origin in unwholesome conditions of life, and in common are diminished or prevented by the reduction or removal of these conditions.” By this logic, vaccination would be useless in preventing smallpox. This citizen went on to describe how cattle were purposely infected with smallpox or cowpox virus and how the pus was subsequently collected from the sores on the cows’ abdomens. The conclusion reiterated one of the favorite arguments of the anti-vaccinationist movement: “Has anyone the right to transplant such pus or poison into the body or arm of a child?” (*Morning News* September 27, 1893).

“GIVE THE HEALTH OFFICERS PROPER SUPPORT”

At a meeting of the newly formed Indiana Anti-Vaccination League in December 1893, Doctor Lewis Payton of Muncie was asked to share his experiences in the recent smallpox epidemic in that city. Payton told the others in attendance that he refused to administer vaccinations, but he claimed that anti-vaccinationism gained little headway in the city. He revealed that “the anti-vaccinationists were allowed to use the columns of the newspapers for a few days, but the Board of Health captured the papers, and the men who were opposed to vaccination had no way of getting their views before the people.” (Cowing Scrapbook:48).

It is true that only a couple of letters to the editor were published in Muncie detailing the philosophy behind anti-vaccinationism during the epidemic. It is probable that Payton was partially right and that the newspapers—the *Daily Times* especially—were sympathetic to the health authorities. In an era of boosterism and rivalries between communities, local newspapers also would have felt the need to downplay any crises that could put a damper on trade and business. It was most likely a combination of these factors that kept bold statements of opposition to vaccination out of print; however, other clues found in the papers indicate that vaccination was not supported by all Muncie residents, and some hints can be found as to their motives. Furthermore, the threat of smallpox and the vaccination question had direct effects on the surrounding area. Other cities in east-central Indiana—including Anderson, Elwood, New Castle, Hartford City, Marion, and Frankfort—implemented quarantines against travelers from Muncie, and compulsory vaccination measures were enacted for school children across the state to protect populations from the potential threat of smallpox. In Indianapolis and other towns in the region, the vaccination debate became more public and those opposed were able to make their views known in local newspapers (Jackson 1894:93).

In Muncie, as early as August 25, reports appeared that doctors vaccinating residents door to door in the infected districts had met with some resistance. Indeed, as observed by Doctor Jackson, this area in the south side of the city was particularly difficult to get under control, as it

was “a thickly settled and destitute neighborhood, and in which there was a strong anti-vaccination sentiment.” The *Morning News* ran statements such as the following, which seem to confirm Doctor Payton's allegation that the sympathies of local editors were with the health authorities: “The people should remember that [vaccination] is compulsory, and a refusal to be vaccinated may result in confinement in the guard house” (August 25, 1893). The *Daily Times* on September 5, 1893, also urged citizens to “give the health officers proper support.” Both statements suggest that there had been some resistance to vaccination and disregard for the authorities' proclamations. If this were not the case, such exhortations would not have been necessary.

By the end of the epidemic, the *Daily Times* had become almost fanatical in its support of the work of the health officer and in its condemnation of those who spoke against the authorities' methods. The following strongly worded editorial comment, published on October 27, 1893, reveals the editor's utter contempt for those who resisted the quarantine and vaccination ordinances; the language itself implies that those who resisted were not worthy of the rights of citizenship and self-government:

It is the evil-disposed and vicious who are always rebelling against lawful authority that makes it almost questionable whether man is capable of self-government and whether there is permanency in Republican institutions. The authorities are not above criticism, are not free from mistakes, but the indiscriminate abuse of them by irresponsible persons, who have nothing at stake and consequently nothing to lose, is such an outrageous abuse of the privilege of free speech that the very best men are often deterred from accepting official positions or are driven from public places rather than encounter the venomous shafts of ridicule emanating from the thoughtless and irresponsible.

In the same issue, the editor also noted that “city, county and State Boards of Health are created by law and their duties are clearly defined. The powers of the State Board of Health are absolute—they report to the Governor and the Legislature only.” This second statement was particularly directed toward those who disagreed with the board of health's decision to enforce the quarantine for an additional week after the discovery of a couple new cases, even though one week earlier they had declared that the schools would open on October 27, the day these two editorials were published. Statements as strongly worded as these, far from convincing Muncie residents of the authority of the health officers, would more likely buttress arguments that the authorities were behaving like dictators.

MUNCIE'S EPIDEMIC DOES OTHER MISCHIEF

With the spread of the threat of smallpox, anti-vaccinationist sentiment also spread. As mentioned previously, Muncie's smallpox epidemic affected other towns across central Indiana. Nearby towns quarantined against Muncie travelers. Towns as close as Elwood and Union City (about 25 miles to the west and 30 miles to the east of Muncie, respectively) and as far away as Terre Haute—over 100 miles to the west—enacted vaccination requirements for school children, claiming that Muncie's outbreak could lead to a statewide epidemic (*Daily Herald* September 15,

1893; ISBH 1895:334); cases that appeared in Indianapolis and Connersville did, in fact, trace their origins to Muncie (Cowing 1894:13). People in these outlying areas, faced with the threat of smallpox, also participated in the debate about the dangers and merits about smallpox and about whether compulsion was legal.

The spread of the vaccination debate beyond Muncie was predicted by the editor of the *Daily Herald*, who wrote, “Muncie's smallpox scare is liable to do other mischief. The demand made at Union City for all school children to be vaccinated, and the refusal by some, has brought the question of vaccination prominently before the people, and the more a person reads the reports as argued for both sides of the question, the less the reader knows as far as facts are concerned” (September 25, 1893). *The Morning News* briefly noted that nearby towns were in the throes of this debate and that “there seem to be very many antis in all the towns, and health boards are having a difficult task to perform in getting the school children vaccinated” (October 4, 1893). Some county boards of health reported to the State Board that they had come up against resistance in several areas where they tried to enforce compulsory school vaccination, and it was not only from parents. In Winchester, a school teacher sided against the health authorities and school board and refused to force her students to be vaccinated; the judge decided in her favor when suit was brought against her (*Morning News* October 22, 1893; *Indianapolis Journal* December 12, 1893).

The vaccination debate also surfaced in the *Indianapolis Journal*, which circulated across Central Indiana. Dr. W.B. Clarke, a well-known anti-vaccinationist, wrote a letter to the editor of the paper in response to an editorial in which the paper had supported the authority of boards of health to enforce compulsory vaccination, even though at the time there was no state law compelling it. Clarke stated that, in regards to the vaccination issue, a “handful of men” on the State Board of Health infringed more upon the personal liberty of the people of Indiana than did the laws of the state: “The 2,200,000 inhabitants of Indiana are bulldozed, coerced, and boycotted on the specious plea of the ‘public good’.” He concluded his letter with a plea that there be no more arguments for the public good at private expense, that it should not matter to a man who believes himself protected by his vaccination whether his neighbor is vaccinated or not (September 25, 1893).

Clarke's argument summarizes the two main points frequently made by the anti-vaccinationists: that vaccination was unproven as an effective preventative for smallpox (indeed, no theory yet existed as to why it worked) and that government authority should not expand into personal and private matters. Americans in this era were not used to extensive government regulation and intervention in private lives. Appeals to public spiritedness and calls for individuals to make personal sacrifices for the public good did not always gain headway in a nation where individualism was a core value; however, doctors of the regular school in this era began to reassert themselves as a profession and as the authority on matters of health; regulars came to dominate the field of public health with the state's permission, creating sanitary and public health reforms that expanded the role of public officials and experts in everyday life (Wiebe 1967:114–16). Anti-vaccinationists perceived these agents of the state as a threat to the individual's or family's right to choose whether vaccination was in their best interest (Colgrove 2006:47–51).

Those who argued in favor of compulsory vaccination often responded only to questions raised about the effectiveness of vaccination; they assured the public that because vaccination was good for personal and public health, the state had the right to compel it. Where the anti-vaccinationists frequently made arguments based on liberty and personal interests, those in favor

of vaccination generally fought back with numbers and facts showing that vaccination almost always conferred immunity to smallpox and decreased death rates and that for these reasons, compulsory vaccination was in the public's best interest (*Indianapolis Journal* September 25, 1893). *The Indianapolis Journal* published another letter to the editor from Dr. Samuel Kennedy of Shelbyville, who used just such an argument in favor of vaccination. Another doctor in favor of vaccination later wrote to the *Journal* editor with enough facts and figures showing how effective vaccination had been in preventing smallpox and decreasing death rates to fill most of a page (October 9, 1893).

Anti-vaccinationists were not content merely to remain unvaccinated themselves or to educate others on the dangers of vaccination: Most anti-vaccinationists sought to outlaw compulsory vaccination. This often meant challenging compulsory vaccination orders in the courts. The legality of compulsory vaccination was thus challenged in Terre Haute, Indiana. The board of health in that city, fearing the spread of smallpox from other parts of the state (particularly Muncie) into Terre Haute, had enacted a compulsory vaccination order for all public school students. Frank D. Blue, a local physician, refused to have his young son vaccinated, and the boy was barred from the public schools.

Blue sued his son's school teacher, Fannie M. Beach, and her supervisor, Orville E. Connor, to repeal the order. Blue argued that there had been no cases of smallpox in Terre Haute and that at the time the order was enacted, there was only one case of smallpox in the state, and that one was in Muncie. Rather than quarantine against Muncie, the Terre Haute Board of Health had instead enacted coercive measures against schoolchildren by forcing them to be vaccinated. Vaccination, Blue told the court, had not yet been scientifically proven to prevent smallpox and was still a controversial measure, and he called upon Doctors Mock, Payton, Bunch, Ross, and Jones of Muncie to testify in support of his claims (ISBH 1895:334–42).

The defendants fought back by citing the rules established by the State Board of Health, which gave them the authority to exclude from school unvaccinated children who could potentially spread smallpox. The defense also sought expert testimony from Muncie, and Doctors Driscoll, Cowing, Ried, and Leech testified on their behalf. The court found that Beach and Connor were acting in accordance with the law and decided in their favor (*Morning News* July 12, 1894).

The vaccination controversy did not dissipate as the threat of smallpox faded. Articles published after the end of the epidemic indicate that community opinion leaders still felt the need to convince the people of the benefits of vaccination. A favorite argument of those opposed was that vaccination had failed in its objective; one article published in the *Daily Times* asserted that the reason why vaccination had not yet eradicated smallpox was because it had been so effective in decreasing the number of smallpox cases that no one feared the disease anymore and so were careless about keeping themselves vaccinated (November 17, 1893). Another article in the *Daily Times* stressed the importance of Edward Jenner's discovery of cowpox as a preventative for smallpox and related the long list of awards and honors that had been bestowed upon him for saving the lives of millions. This article, reprinted from *The New York World*, also sought to allay fears of secondary infections resulting from smallpox vaccination by assuring its readers that whenever vaccinating a large number of people, physicians always use a brand-new needle on every patient (November 22, 1893).

These arguments did not convince everyone of the effectiveness and safety of vaccination or of the state's power to enforce it, and the anti-vaccinationists soon saw the need to organize to continue the fight against compulsion. Late in November, Doctor R.A. Bunch facilitated an

organizational meeting for physicians and citizens opposed to compulsory vaccination “or other unjust restrictions of the rights of the people”; the purpose of the meeting was to discuss the issue and possible actions to take against the passage of such legislation. Here, in plain language, we see that anti-vaccinationists in Muncie also used arguments against the state's encroachments upon the rights of the people to gain support for their cause (*Daily Times* November 21, 1893).

The impulse to organize against vaccination carried to the state level. In December, interested persons from across central Indiana came together in Indianapolis to form the Indiana Anti-vaccination League, an organization dedicated to putting an end to compulsory vaccination. Interest in such an organization had been sparked by recent compulsory measures taken in towns and cities across the region in the wake of the Muncie smallpox epidemic. Though the attendance was reportedly small, the group received 15 letters of support from persons who could not attend, each letter outlining its own arguments against compulsion. Many of these letters cited cases of friends or loved ones who suffered serious side effects—especially tetanus—from having been vaccinated. Doctor W.B. Clarke delivered an address to the group, in which he stated that some of those assembled opposed compulsory vaccination because they believed it to be a dangerous operation. There were others present, he noted, who might believe vaccination to be somewhat effective but opposed the idea of legal enforcement and the actions of health and school boards that had recently “ignorantly and brutally overridden the well-grounded wishes of educated citizens in all parts of the State.”

Clarke also argued that there had been but a few cases of smallpox in the entire state—roughly one case for every 15,000 inhabitants—and that local boards of health as well as the State Board of Health were overstepping their legal authority in enforcing universal vaccination. There was no state law at the time compelling it, and the threat of smallpox was not great enough to warrant granting boards of health the police powers they used to justify compulsory vaccination (*Indianapolis Journal* December 12, 1893).

PERSONAL AUTONOMY VERSUS PUBLIC HEALTH

The anti-vaccinationists of the 1890s were a small but vocal minority who decried the idea that individual liberty should be sacrificed in the name of public safety. The existence of the anti-vaccination movement also highlights one of the controversies of the Progressive Era: At a time when the opinions of experts and professionals were given more and more weight in the creation of public policy, not everyone was willing to sacrifice their personal autonomy when it came to the issue of health.

Acknowledgment of the legitimacy of some resistance to vaccination, furthermore, calls into question the legitimacy of medical professionals who, eager to improve the quality of life in their communities, acted on their own initiative and expanded the limits of local and state governments to include regulation of such matters as health and hygiene. Anti-vaccinationists, by asking their fellow citizens to “pause and consider well before they subject themselves or their dear little ones to this doubtful and dangerous remedy,” were asking them to take charge of their own health, regardless of the recommendations of public health experts. Faced with professional, medical, and public health organizations that asserted more and more that they knew what was best for the individual, anti-vaccinationists asserted that individuals had the right and the capacity to make these decisions for themselves.

In Muncie, health authorities did what they thought best and what conventional public health wisdom of the day recommended to contain and eradicate the threat of smallpox in their

area. They believed that the law was on their side. They knew there would be some resistance to their regulations, but they also believed that once the people realized that the health authorities were acting for the good of the community, they would fall in line. What the health authorities did not count on was that some Muncie citizens preferred to be diagnosed and treated by the doctor of their choice, that they had their own ideas of how diseases germinated and spread, and that they wanted to make their own decisions about vaccination. Open disagreement and competition between physicians only served to strengthen allegations that the health officers were incompetent and not to be trusted. The anti-vaccinationist cause in Muncie was strengthened by the troubles physicians encountered in the process of establishing themselves as experts.

Though the knowledge and authority of medical experts is now well-established, contemporary controversies over measles, mumps, rubella (MMR) and human papillomavirus (HPV) vaccines indicate that the issues of vaccine safety and the extent of government's authority over an individual's body are still with us today. Those currently opposed to vaccination draw upon some familiar arguments. Some parents' activist groups have argued that the use of thimerosal (a preservative containing ethyl-mercury) in vaccines given to infants under six months exposes those infants to amounts of mercury in excess of Environmental Protection Agency recommendations and that high exposure to mercury could result in autism or, worse, death (Colgrove 2006:231–33). It should be noted that *the Lancet*, which originally published Dr. Andrew Wakefield's 1998 study that linked autism to the MMR vaccine, has retracted the article as of February 2, 2010.

Public outcries have also risen against HPV vaccination. Some parents feel that the state should not force them to vaccinate their daughters against sexually transmitted diseases, even though HPV has been identified as the cause of certain types of cervical cancer and the vaccine has proven effective against most strains of the virus that can cause cancer. Furthermore, a press release issued by the National Vaccine Information Center (an advocacy group opposed to “one-size-fits-all” vaccination policies) in 2006 warns parents that the vaccine may not be safe for young girls (National Vaccine Information Center 2006).

This enduring question of who should decide when it comes to vaccination is indicative of broader issues regarding state control versus individual rights, whether experts should determine policy, and the limits of science. Since resistance to compulsory vaccination has existed almost since smallpox vaccine was introduced in the United States, are paternalistic policies that require all persons to be vaccinated justified? Tensions between individual rights and the common good crop up frequently in public-policy issues. How they will balance in the case of vaccination has yet to be resolved.

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