Public Health Chronicles

THE POWER OF PERSUASION: DIPHTHERIA IMMUNIZATION, ADVERTISING, AND THE RISE OF HEALTH EDUCATION

James Colgrove, PhD, MPH

"The key-note of modern public health work is public health education—not compulsion," asserted New York state health commissioner Hermann Biggs in 1915, explaining to the legislature why he supported a bill scaling back the use of compulsory vaccination in the state. "Success comes from leading and teaching; not from driving people."[1] Biggs' stance, which reflected lessons learned from decades of front-line health work in the nation's largest city, typified a new ideology of public health that emerged during the first decades of the twentieth century.

Much of the work of public health professionals in the nineteenth century centered on applying the government's police powers to protect the welfare of the community. But during the Progressive Era, a time of reformist ferment in American civic and political life, health education joined law enforcement as a prime force in the field of public health. In addition to reflecting broad social trends, the emergence of health education was fed by the rise of consumerism, as health professionals self-consciously borrowed the new techniques of advertising that were remaking the American landscape. Health education as it developed during this period was explicitly linked to notions of commerce and sales. In a marketplace of competing ideas and activities, health-promoting behavior was just one of many options available to the citizenry, and it became the mission of public health to "sell" it, through face-to-face appeals and the techniques of mass communication. Like advertisements for consumer goods, these appeals attempted to play on the full range of emotions—guilt, fear, desire to conform to a publicly approved norm—to motivate their target audiences.

This article examines the emergence of this new ideology, and describes one of the most notable examples of the new approach: the campaign to foster public acceptance of immunization against diphtheria.

EDUCATION, ADVERTISING, AND HEALTH

The new orientation toward fighting illness began to take shape in the late nineteenth century in campaigns against tuberculosis, when health departments and voluntary agencies began to distribute brochures designed to teach people how they could protect themselves from the disease. But health education truly flowered during the Progressive Era, when it was recognized as a distinct discipline encompassing specialized knowledge and skills, and moved to the forefront of the profession's activities.[2,3,4] The New York City Department of Health established the country's first Bureau of Health Education in the country in 1914, and in 1923, the American Public Health Association established a Health Education and Publicity section for members.[2]

The belief in education as a force for moral uplift and social melioration, especially as directed by elite reformers toward the working and lower classes and the immigrant poor, was a prominent theme of Progressive Era politics.[5,6] The change in public health methods also reflected a conceptual shift that accompanied the bacteriological revolution, as leaders in the profession came to identify the source of disease as lying within the individual rather than in the environment. This new perspective engendered a focus on personal behavior rather than social change, and the development of vaccines contributed to and reinforced the tendency to focus disease-control efforts at the individual level rather than at broad social conditions such as poor housing or economic inequity.[7]

One of the principal areas in which the new educational methods were applied was maternal and child health, as public health officials sought to reform the practices of mothers—especially poor, immigrant ones—along the lines of current scientific knowledge. This work was embodied in institutions such as the United States Children's Bureau, which distributed millions of health education pamphlets on enlightened and modern methods of child rearing.[8] In addition to publications, health education took the form of individual tutelage by public health nurses and didactic displays and exhibits at fairs and community gathering places. One of the most notable manifestations of the new method was the popularity of "health weeks," during which entire communities would come together to address a particular issue. These events, which combined public health reform with civic boosterism, proliferated during the 1910s and 1920s. The events gave businesses, chambers of commerce, fraternal organizations, and the general public the chance to express municipal pride through the melioration of health problems, and in so doing, compare their city's status favorably to cities of similar size and situation.[2]

The rise of health education and the form that it took were strongly influenced by a broader trend that was transforming American civic life during this period: the growth of advertising, marketing, and public relations. Spurred by technological changes in printing and photographic reproduction and the mass distribution of commodities, new forms of persuasion penetrated into all areas of daily life, creating a cultural ethos in which comfort and consumption began to replace older values of abstinence and frugality.[9,10] New ways of shaping attitudes and behavior—vibrantly illustrated advertisements in newspapers and magazines, store window displays, staged publicity stunts—were a natural companion for health education, and public health professionals were quick to see the potential of these methods and adopt their use. Health education specialists urged their colleagues to adopt modern methods of visual persuasion. Instead of drab pamphlets dense with small, monochromatic type, they felt that modern health messages should feature attractive layouts, colors, and typefaces for maximum impact; publicity should be dramatic, entertaining, and carefully planned.[11]

The relationship between health and advertising ran in

both directions: just as health officials adopted the techniques of mass marketing, so did makers of consumer goods exploit the supposed healthful benefits of products such as toothpaste, household disinfectants, and detergents, attempting to lend the credibility of scientific medicine to their wares.[12,13] Proponents of health education self-consciously modeled their efforts on the work of those who placed the latest consumer goods in millions of American households. "Health is a saleable commodity," asserted Herman Bundesen, the president of the American Public Health Association, in 1927. "Mere laws to enforce health do not create health. A desire for good health must first be aroused, stimulated by knowledge of its value and means of attainment. Then the health salesman must come in."[14]

One of the highest-profile campaigns to use the new sales-oriented approach was the effort in the 1920s to encourage the use of diphtheria immunization. Toxin-antitoxin as a preventive for diphtheria was the second immunizing procedure, after smallpox vaccination, to become routine for the general public, and the deployment in the community of the two interventions differed starkly. Many states passed laws making vaccination mandatory during the nineteenth century, and widespread protection against smallpox was achieved in large measure through the tireless efforts of individual physicians who often went house to house, and onsite to workplaces to vaccinate the public. Moreover, even in places where vaccination was not compulsory, the forceful means used by the vaccinating squads often bordered on the coercive, giving people the impression they had no choice but to submit.[15] But the adoption of toxin-antitoxin as protection against diphtheria would rely on persuasive measures. As the New York City health commissioner declared during the campaign, "This idea of diphtheria immunization had to be 'sold' almost in the same manner as chewing gum, a second family car or cigarettes."[16]

"NO MORE DIPHTHERIA" IN NEW YORK STATE

Antitoxin had been available as a treatment for diphtheria since the 1890s, but it was not until the 1920s, after a series of large-scale trials among school children, that active immunization with a toxin-antitoxin mixture went into widespread public use.[17] In 1926, the New York State health department, with financial backing from the Metropolitan Life Insurance Company and the Milbank Memorial Fund, launched a statewide drive to encourage people to immunize their children against diphtheria, one of the most common infectious diseases of childhood. Each city's effort in the statewide drive involved a collaboration among the local medical society, the health department, and business and charitable organizations. The campaigns were launched across upstate cities in early 1926 and continued over the next three years, using the full range of techniques in the advertising and public relations armamentaria. Virtually every state newspaper ran advertisements, articles, and editorial commentary. An educational film produced by the Metropolitan Life company, "New Ways for Old," was screened in local theaters. Radio broadcasts carried the message into homes. Billboards, posters, and placards were ubiquitous. Parades, pageants, and publicity stunts were staged.[18] The mayor of Yonkers posed for news cameras as his three children received their shots; in Yonkers and Mount Vernon, an army airplane scattered handbills urging immunizations.[19] In Syracuse, the Boy Scouts stood on the roofs of downtown buildings and wigwagged an anti-diphtheria message to kick off the campaign. Later, the health department restaged a dramatic dog sled journey that had carried antitoxin to sick children in Alaska, an event that had captured newspaper headlines around the country in the winter of 1925; the recreated race made its way through the streets of downtown Syracuse, with one of the actual sled drivers mushing his team of dogs to City Hall.[20] At a conference of the state Charities Aid Association, participants held a mock trial in which "Black Diph," a black-robed figure wearing a red mask, was tried for the murder of hundreds of children.[21] The publicity efforts, like much of the child health propaganda of the day, underscored the role of mothers as guardians of young people's well-being. Anti-diphtheria posters depicted bucolic scenes of happy mothers and children; parades featured troops of mothers pushing baby carriages down main streets.

In New York City, the scope and reach of the anti-diphtheria drive that kicked off in January of 1929 were remarkable, even for a city where splashy and expensive publicity extravaganzas were commonplace. Two rotating billboards in Times Square and a painted sign over 200 feet long at Broadway and Twenty-third Street were among the largest pieces of outdoor advertising ever seen in the city. Some 300 radio talks were broadcast. A series of four short films were shown in 500 movie theaters. Virtually every newspaper in the city, including the large dailies, the foreign language press, local borough and neighborhood papers, and trade journals carried articles about the importance of immunization. Subways, elevated trains, streetcars, and buses displayed placards. The city's largest department stores donated advertising space in newspapers. Posters were displayed in chain stores such as Woolworth's and the A&P. To reach the city's many immigrant groups, posters, brochures, and leaflets were translated into the 10 most widely spoken foreign languages. Six "healthmobiles" (snow removal trucks converted into traveling clinics) toured city neighborhoods, parks, and beaches.[22]

The stunts used by cities across New York State to stimulate interest in toxin-antitoxin exemplified the staged events pioneered by public relations maven Edward Bernays, who famously promoted Lucky Strike cigarettes to female consumers by placing a contingent of proudly smoking women in New York City's Easter Parade.[9] This type of promotion would subsequently be dubbed a "pseudo-event" by the historian Daniel Boorstin, who described it in a trenchant 1961 critique in this way: "It is not spontaneous, but comes about because someone has planned, planted or incited it. . . . It is planted primarily (not always exclusively) for the purpose of being reported or reproduced. . . . Its relation to the underlying reality of the situation is ambiguous. Its interest arises largely from this very ambiguity. . . . Usually it is intended to be a self-fulfilling prophecy."[23]

A national survey conducted in 1930 of child health in 156 American cities revealed the effects of New York state's efforts. Of the 10 cities in the country with the highest levels of toxin-antitoxin coverage among preschoolers, seven were

in New York.[24] What proportion of this effect was attributable to the new health promotion techniques, however, remained a matter of some uncertainty. A subsequent evaluation by an official with the New York state health department on the impact of the "No More Diphtheria" drives suggested that splashy publicity was, by itself, insufficient to spur the public to action: "[the] posters, lectures, letters, postcards, merely served as a background; . . . it took face-to-face talk and the existence of a free clinic to get children to a clinic or the family doctor in appreciable numbers."[25] This assessment underscored the extent to which intensive canvassing of homes and in-person contact remained an essential component of health education.

In contrast to the extensive legal activity following the introduction of smallpox vaccination, just a handful of states moved to make diphtheria immunization compulsory in the two decades after its use became widespread. Only North Carolina adopted a universal law, requiring the immunization of all children between six months and 1 year of age, and of all children between 1 and 5 years old who had not been previously immunized. Four states made the procedure mandatory for school attendance, while another four required it under special circumstances such as in institutions or in the face of an epidemic.[26]

THE PERSISTENCE OF COERCION

Public health officials explicitly characterized the new techniques of persuasion as a repudiation of the coercive tactics of previous generations. "The great public health progress of the past has been made without the active co-operation . . . and even against the opposition of the average man and woman in the community," said Iago Galdston of the New York Tuberculosis and Health Association in 1929. "Far too often, the average man's appreciation of public health is confined to the begrudging conformity with laws that are a nuisance to him, the significance of which he does not understand."[27] Health education was framed not only as an advance over past methods, but also as a uniquely American innovation—reflecting strong traditions of liberty, autonomy, and freedom from government interference—that made this country's public health work superior to that of its European counterparts. Charles Bolduan, Director of Health Education for the New York City Health Department, was born in Germany and had spent several years there on special assignment after World War I; he wrote wryly that "The German seems to like to be bossed," in contrast with the American, who preferred to act based on an understanding of the value of various interventions.[28]

The extent to which European health education differed from American is beyond the scope of this article, but it is worth noting that in 1933, two British public health officials, surveying anti-diphtheria efforts in the U.S., found that the American methods were "altogether more intensive and more spectacular than our sober-minded ideas. . . . We in this country are apt to look askance at the flamboyant methods of propaganda used by our brethren on the American continent. . . . Our respectability rebels and our insular pride stands aloof from importing into our professional problems the methods of the marketplace and the habit of mind of the huckster."[29]

While many public health professionals in the U.S. framed the rise of health education in teleological terms as an inevitable advancement toward ever more enlightened means of accomplishing their goals, the use of compulsory measures hardly vanished from either the rhetoric or the practice of public health, and the new techniques of education stood in a somewhat uneasy relationship to the older, more coercive tools of law. A 1922 editorial in the *American Journal of Public Health*, noting with approval a recent Supreme Court ruling upholding compulsory school vaccination, acknowledged the necessity of backing up persuasive measures with the force of law. "[I]t is always better to have people carry out preventive measures willingly and through a fair knowledge of the principles which underlie these measures. Where this cannot be done the police power of the State must be resorted to," the *Journal* opined. "Occasions arise when an appeal to reason is of no avail and the strength of the law must be invoked. There are certain people who cannot be educated nor reasoned with."[30]

Similarly, an editorial in the *New York State Journal of Medicine* noted, "People are willing to submit to law in the presence of danger that is evident and immediate; but not everyone is willing to submit to procedures which involve annoyance, discomfort, and expense. . . . There are those who do not believe in the preparation of vaccines and antitoxins for use in the warfare against contagious diseases. The acceptance of modern methods of disease prevention depends on education [but] Law is necessary for the ignorant, in order to compel obedience."[31]

Coercion thus remained as a less-touted companion to modern propaganda. Quarantines were still enforced against contagions such as scarlet fever and polio, even as health departments distributed pamphlets to teach people how to avoid these illnesses.[32] The campaign against venereal diseases, one of the highest-profile public health efforts in the years during and after World War I, featured the latest persuasive techniques such as posters and films, but also relied on several coercive measures, including compulsory premarital screening for syphilis, mandatory reporting of cases by physicians, and control of prostitution.[33] And "Typhoid Mary" Mallon, the Irish cook who achieved notoriety as a "passive carrier" of bacteria, remained incarcerated on an island in the East River throughout the time that health educators extolled the virtues of changing behavior through education.[34]

Much of the rhetoric that characterized health officials' efforts to sell the public on diphtheria immunization was inflected with strong undercurrents of parental culpability for the sickness of unprotected children.[17] A pamphlet published by the Orleans County Committee on Tuberculosis and Public Health, a charitable organization that assisted with anti-diphtheria efforts in upstate New York, declared, "Hereafter, any baby or any older child who suffers or dies from diphtheria will suffer or die needlessly and because someone has failed to do his or her duty."[35] Such claims were echoed in the popular press. A 1926 editorial in the *New York Sun* claimed, "If diphtheria is not eradicated from New York State this year it will mean that the people are too careless to safeguard their infants from death."[36]

At its most extreme, the rhetoric of blame sought to attach charges of criminal negligence to uncooperative

parents. "The time will come when every case of diphtheria will be an indictment against the intelligence of the parents," claimed a representative of the American Child Health Association in 1926, "and it will not be many years before every death from diphtheria will be referred to a coroner's jury for investigation to fix criminal responsibility."[37] This quasi-coercive rhetoric was typical of much of the "educational" language targeting mothers' child-rearing practices, and was not limited to the health professions. Advertisers of commercial goods also realized that guilt and shame could be powerful tools in persuading potential consumers to buy a product, and exploited the fear of parents (especially mothers) who might see themselves as failing to do all they could for their children's health if they did not purchase the best vitamins or toothpaste.[13]

CONCLUSION

Health professionals in the 1910s and 1920s embraced the new methods of persuasion for both philosophical and pragmatic reasons. The use of advertising and public relations in the service of good health was rooted in ideas that were ascendant during this period about freedom of choice in a capitalist society. Equally important, persuasion was felt to be a surer source of behavior change than coercion. "Persuasion is a slow process," wrote New York State Health Commissioner Matthias Nicoll in 1927. "Its results are seldom spectacular but they are certain and durable, accomplishing far more among average human beings than attempts at legal compulsion."[38] Even the most vocal proponents of health education conceded that the effect of mass advertising often proved ephemeral, requiring constant reinforcement that was expensive and time-consuming. But these efforts were seen as a worthwhile investment that would yield lasting value, especially as the principal sources of morbidity and mortality changed over the course of the century from acute infectious threats to chronic "lifestyle" conditions less amenable to the coercive interventions of the early days of public health.

Dr. Colgrove is with the Center for the History and Ethics of Public Health, Department of Sociomedical Sciences, at the Mailman School of Public Health, Columbia University, 722 West 168th St., New York, NY 10032; tel. 212-305-0561; e-mail <jc988@columbia.edu>.

REFERENCES

1. Biggs HM. Arguments in favor of the Jones-Tallett Amendment to the public health law in relation to vaccination. N Y State J Med 1915;15:89-90.
2. Toon E. Managing the conduct of the individual life: public health education and American public health, 1910 to 1940 [dissertation]. Philadelphia: University of Pennsylvania; 1998.
3. Tomes N. The gospel of germs: men, women and the microbe in American life. Cambridge (MA): Harvard University Press; 1998. p. 242-4.
4. Burnham JC. How superstition won and science lost. New Brunswick (NJ): Rutgers University Press; 1987. p. 56-62.
5. Wiebe R. The search for order 1877–1920. New York: Hill and Wang; 1967.
6. Dawley A. Struggles for justice: social responsibility and the liberal state. Cambridge (MA): Harvard University Press; 1991.
7. Leavitt JW. "Typhoid Mary" strikes back: bacteriological theory and practice in early twentieth-century public health. Isis 1992;83:608-29.
8. Meckel R. Save the babies: American public health reform and the prevention of infant mortality, 1850–1929. Baltimore: Johns Hopkins University Press; 1990. p. 92-177.
9. Leach W. Land of desire: merchants, power and the rise of a new American culture. New York: Vintage Books; 1993.
10. Jackson Lears TJ. Fables of abundance: a cultural history of advertising in America. New York: Basic Books; 1994.
11. Moree EA. Public health publicity: the art of stimulating and focusing public opinion. Am J Public Health 1916;6:97-108.
12. Tomes N. Merchants of health: medicine and consumer culture in the United States, 1900–1940. J Am History 2001;88:519-47.
13. Apple R. Vitamania: vitamins in American culture. New Brunswick (NJ): Rutgers University Press; 1996. p. 13-32.
14. Bundesen HN. Selling health—a vital duty. Am J Public Health 1928;18:1451-545.
15. Colgrove J. Between persuasion and compulsion: smallpox control in Brooklyn and New York, 1894–1902. Bull Hist Med 2004;78:349-78.
16. City of New York Department of Health annual report 1928. New York: F. Hubner & Company; 1929. p. 23.
17. Hammonds EM. Childhood's deadly scourge: the campaign to control diphtheria in New York City, 1880–1930. Baltimore (MD): Johns Hopkins University Press; 1999.
18. Preventing diphtheria in New York State. New York: State Committee on Tuberculosis and Public Health and State Charities Aid Association; 1927.
19. War on diphtheria from air. New York Times, 1928 May 2;19.
20. Bache LF. Health education in an American city. Garden City (NY): Doubleday, Doran & Company; 1934.
21. Routzahn EG. Education and publicity. Am J Public Health 1928;18:518-9.
22. City of New York Department of Health annual report 1929. New York: F. Hubner & Company; 1930. p. 20-32.
23. Boorstin D. The image; or, what happened to the American dream? New York: Atheneum; 1962. p. 11-2.
24. Palmer GT, Derryberry M, Van Ingen P. Health protection for the preschool child. New York: The Century Co; 1931. p. 113.
25. Godfrey ES. Practical uses of diphtheria immunization records. Am J Public Health 1933;23:809-12; 810.
26. Fowler W. State diphtheria immunization requirements. Public Health Rep 1942;57:325-8.
27. Galdston I. Health education and the public health of the future. Journal of the Michigan State Medical Society 1929:32-5.
28. Bolduan C. Health education today. Undated typescript [1938?], New York City Municipal Reference Library.
29. Nash ET, Forbes JG. Diphtheria immunisation: its possibilities and difficulties. Public Health 1933;46:245-71.
30. The Supreme Court on vaccination laws. Am J Public Health 1923;13:120-1.
31. The evolution of public health work. N Y State J Med 1926;26: 614-6.
32. Rogers N. Dirt and disease: polio before FDR. New Brunswick (NJ): Rutgers University Press, 1992.
33. Brandt AM. No magic bullet: a social history of venereal disease in the United States, 1880–1980. New York: Oxford University Press; 1983.
34. Leavitt JW. Typhoid Mary: captive to the public's health. Boston: Beacon Press, 1996.
35. Little boy blue. Undated pamphlet [1926?], Orleans County Committee on Tuberculosis and Public Health, New York City Department of Health Archives, Box 141380, Folder Diphtheria.
36. A year to fight diphtheria. New York Sun 1926 Jan 7.
37. Diphtheria is called conquered disease. New York Times 1926 Sep 3; 14.
38. Nicoll M. The age of public health. N Y State J Med 1927;27:114-6.