

PUBLIC HEALTH IN NEW YORK CITY IN THE LATE NINETEENTH CENTURY



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This booklet is designed to accompany an exhibit on "Public Health in New York City in the Late 19th Century" at the National Library of Medicine, September 10 - December 28, 1990. The exhibit commemorates the centennial of the publication of Jacob Riis' How the Other Half Lives in 1890.

Cover: "A Board of Health Doctor in a New York Tenement." An interior scene of a New York City Board of Health doctor listening to the chest of a child, who is being held by the mother as an older daughter watches. A wood engraved, hand colored illustration, by W. A. Rogers from Harper's Weekly, v. 33 (1889), cover.

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"Public Health in New York City in the Late 19th Century" is an exhibit at the National Library of Medicine commemorating the centennial of the publication of Jacob Riis' How the Other Half Lives in 1890. Health was then as it is now a very important area of people's lives. This booklet was designed to accompany the exhibit and highlights some of the major public health concerns during this time period, as well as the contributions of Jacob Riis and the New York City Department of Health.

Jacob Riis

Jacob Riis, a newspaperman, was one of a few individuals in the late nineteenth century who began to publicize the deplorable conditions in cities through the use of print and photographs, specifically New York City. His famous book, How the Other Half Lives, was published in 1890. This publication was the beginning of an era of muckraking that was able to effectively publicize health conditions. Riis' description of slum life was vivid and "his impressions coalesced with those of the antituberculosis movement, for the central image of How the Other Half Lives is suffocation, darkness, claustrophobia, the ubiquitousness of poisonous air, awful smells, and the closing in of walls and inmates." (Mark Caldwell, The Last Crusade, 1988, p. 182.)

This was a time when immigration was reaching ever increasing new heights and city dwellers, many of whom were immigrants, were getting increasingly poorer. His book discussed how badly the immigrant poor lived and urged government action to rectify the problems. As a police reporter for the New York Tribune, Riis was able to go on inspection rounds with health officers. What he saw gave him the initiative to

photograph these scenes for the public. Through his use of photographs, he was able to translate the life of the poor into striking images that the public could understand.

New York City Department of Health

The Board of Health for New York City and Brooklyn was founded in 1866. In 1870, the State Legislature passed a new charter establishing ten departments, one of which was the Health Department. This new Department replaced the Board of Health and was only responsible for New York City, not Brooklyn. In 1892, Hermann Biggs, a prominent physician within the Department of Health, received the necessary permission to establish a bacteriological division within the Department. New York City's municipal laboratory served as an important transitional institution and implemented life-saving procedures based on the germ theory of disease.

As of 1890, the Health Department was divided into two Bureaus: Sanitary Bureau and Bureau of Records. The Sanitary Bureau was then divided into four Divisions: Contagious Diseases, General and Special Sanitary Inspection, Plumbing and Ventilation, and Offensive Trades and Food Inspection. The Bureau was also responsible for the three hospitals that the Health Department ran: Riverside Hospital, Reception Hospital, and Willard Parker Hospital.

In 1890, the Division of Contagious Diseases divided the City into eleven districts. Each of these districts was headed by a medical sanitary inspector. These inspectors, who were physicians, were responsible for general sanitary conditions in their districts and for inspecting the residences of patients suffering from infectious disease.

In 1893, there was a concentrated effort against diphtheria and tuberculosis. By this time, Dr. Hermann M. Biggs had become director of Laboratories under the Contagious Diseases Division. Dr. Biggs submitted a report on tuberculosis to the Board of Health in November 1893. This report "recommended a systematic campaign of

public education, the reporting of cases by public institutions, the assignment of special inspectors to investigate the disease, routine bacteriological examinations for diagnostic purposes, and the provision of proper hospital facilities for tuberculosis patients." (John Duffy, A History of Public Health in New York City 1866-1966, 1974, p. 98.) The Board accepted these recommendations in December and immediately began to implement his ideas.

Diphtheria antitoxin's first wide scale use in a clinical setting was in 1894 in Europe. Biggs first learned of the success of the serum during his research travels to Europe the same year. While Biggs was still in Europe, the laboratories of the Contagious Diseases Division of the New York City Department of Health began producing the antitoxin. They were the first to do so in the United States. Diphtheria antitoxin serum was first used in this country in New York City on January 1, 1895, on two patients at Willard Parker Hospital. After the antitoxin's initial use in New York City, its quality was improved and the production increased.

Housing

Housing conditions for the poor were wretched. Newly arrived immigrants, with little or no money, tended to reside in the slum areas consisting of tenement houses. The condition of these tenements was poor. Landlords charged exorbitant rent for little in return. Buildings were overcrowded, ill-ventilated, and had bad plumbing and a lack of proper sewage disposal: Many families lived in two rooms and shared water closets with several other families. The facilities were not always in proper working condition; sewerage frequently backed-up. When tenants complained about the conditions, they were told to either pay their rent or move out. Some laws existed to prevent these sad conditions but they were generally not enforced. Many people also used their small, cramped apartments as a work place. Their jobs included sewing, cigar making, and

necktie making.

Jacob Riis described a tenement as "generally a brick building from four to six stories high on the street, frequently with a store on the first floor...; four families occupy each floor, and a set of rooms consists of one or two dark closets, used as bedrooms, with a living room twelve feet by ten feet. The staircase is too often a dark well in the center of the house, and no direct through ventilation is possible, each family being separated from the other by partitions. Frequently the rear of the lot is occupied by another building of three stories high with two families on a floor." (Jacob Riis, How the Other Half Lives, 1890, p. 18.)

Thirty-seven thousand tenement buildings existed in New York City in 1890, housing more than 1,200,000 people. These buildings in New York City housed the densest population in the country. There were up to 522 people per acre in New York City compared with 83.5 people in Chicago and 118 people in Philadelphia. This overcrowding was achieved by building new tenements on empty lots, converting old homes into tenements, and placing shacks and shanties in backyards and alleys.

Sanitation

Sanitation was a major problem for New York during the late nineteenth century. Some of the major concerns were obtaining a sufficient amount of ventilation in apartments, relieving overcrowded conditions in tenements, preserving a pure water supply, and having clean and healthy streets.

Ventilation and light were scarce in tenements. What ventilation there was came from air shafts that were used as garbage dumps. Since foul odors emanated from these shafts, many windows opening onto them remained closed. Many of the windows in tenements opened only onto the airshaft and were not large enough to allow a sufficient amount of light into the apartments. Consequently, lights had to be lit 24 hours

a day. With the repeated visits by sanitary inspectors from the New York City Department of Health, most of whom were physicians, attention was focused upon the problem of ventilation as well as crowded living conditions.

Water was another major problem. It was necessary to insure that the supply was adequate and that it was not contaminated with human and industrial waste, especially since the population density increased near the Croton Watershed, the major source of the City's drinking water.

The problem of filthy streets caused many debates in newspapers, magazines, and political campaigns. City contracts for cleaning the streets were so inadequate in 1871 that the streets were cleaned by private companies supported through voluntary contributions.

Infectious Disease

With overcrowding a major problem in large cities, the spread of infectious disease was staggering. The infectious disease problem was also facilitated as a result of food adulteration and sanitation problems. Health officials had the difficult task of trying to control diseases whose causes and modes of transmission were not always understood. They also had to contend with a constant shortage of money. Physicians did not always report the diseases that they treated as required by law, and the poor often hid their sick so the authorities would not take them away and place them in hospitals.

Peak years for reported diseases were 1881 and 1882, possibly because of extensive new immigration from Italy and eastern Europe. The diseases that resulted in the majority of deaths were cholera, diphtheria, smallpox, tuberculosis, yellow fever, typhus, measles, and scarlet fever. A smallpox vaccine was available and had been for years but no law existed requiring a person to be vaccinated. Physicians used an

"active semblance of authority" in the tenement districts so they could vaccinate people. In 1889, deaths reported from these diseases for a population of some 1,500,000 were as follows: 1242 deaths from scarlet fever, 1686 from diphtheria, 647 from whooping cough, 470 from measles, 1589 from "cholera infantum," and 5179 from tuberculosis.

Hospitals

During the late 1800s, hospitals were overcrowded and underfinanced. Hospital budgets increased but so did the population. It was not unusual to have two people sharing one hospital bed.

There were several types of hospitals: municipal hospitals supported by the Commissioners of Public Charities and Correction, (there were twelve hospitals in this category in 1873), immigrant hospitals maintained by the Commissioners of Quarantine, and private hospitals. Newly arrived immigrants as well as those who had been in this country for several years usually entered an immigrant hospital.

Some hospitals specialized in the treatment of one or several diseases. For example, the Smallpox Hospital on Blackwell's Island treated only smallpox patients, and the Fever Hospital, also on Blackwell's Island, treated only typhus and typhoid cases. This was partly the result of physicians' concerns about the spread of infections which were not fully understood.

There was a high incidence of secondary infections in hospitals. The design of the hospital itself was part of the problem. One type of construction was the block system, which used the wards themselves as thoroughfares between wards. The other widely-used design was the pavilion system, which placed the wards at the end of the corridors. Although this was better than the block system it did not eliminate the spread of infectious disease. Another culprit in the infection problem was the uncleanness of the surgical areas. Antiseptic and aseptic techniques were known at the time, but not

routinely used. Because of the inability of hospitals to control the spread of disease, people continued to care for their sick at home. Not until the twentieth century, when the design of hospitals changed and the practice of antisepsis was uniformly followed, would people begin to use hospitals with confidence.

Food and Drug Adulteration

In 1890, The New York City Department of Health established a division called the Division of Offensive Trades and Food Inspection. They were responsible for inspecting milk, meat, fish, fruit and food supplies, and the offensive trades (e.g. slaughterhouses). Every store that sold milk and any type of food, had its supply inspected every week. Milk was even inspected during the early morning hours at the ferries and depots where it was received.

Even before this Division was established, however, The New York City Department of Health examined food to determine its purity. In 1885, for example, 7,006 samples of milk were taken and as a result, 1,701 quarts of milk were destroyed. Other items examined and destroyed included 72,700 pounds of candy, 5,700 pounds of cheese, and 4,100 pounds of coffee. Not all of the destroyed food would have had a deleterious effect on the health of the population. A large number of the cases involved the substitution of cheaper ingredients to increase the profit margin.

Swill milk was a major concern of the late nineteenth century. The problem at this time was created by locating dairies in conjunction with breweries. The food the dairy cows were exposed to came from the swill or waste products of the brewery, and the animals were crowded together in dirty surroundings. Consequently, the cows produced a thin bluish milk, "suffered constantly from diarrhea, and were generally ulcerated and filthy." (John Duffy, A History of Public Health in New York City 1866-1966, 1974, p. 23.)

There was also a problem with the adulteration and false advertising of drugs. Over the counter cure-alls were sold to the unsuspecting populace. Advertisements were placed in widely-read newspapers and magazines helping to lend an air of respectability to the patent medicines. These products were purported to cure everything from general debility to growing hair on bald heads.

Existing laws concerning food and drug adulteration were generally inadequate and difficult to enforce. Concerns about these problems eventually led to the passage of the Federal Food and Drug Act of 1906.

Substance Abuse

Physicians, not fully aware of the consequences of using certain drugs such as opiates, freely prescribed them for ailments ranging from bowel complaints to pain. Patent medicine companies also used these drugs, along with alcohol, in over-the-counter medications. Cough medicines as well as remedies for female complaints often contained mixtures of opiates and alcohol.

Opium smoking was largely introduced by the Chinese labor force in the 1860s, and soon spread beyond the Chinese community. Opium dens became popular for both the Chinese and the white Americans. Jacob Riis saw many people using and suffering from the effects of opium during his nightly rounds with the New York City Police Department as a police reporter.

Excessive use of alcohol was also a problem. There were organizations founded to help alcoholics, as well as addicts, such as The New York Christian Home for Intemperate Men. Some tried to cure themselves of their habit on their own, often without success. Although there was concern expressed about narcotic addiction and alcoholism, substance abuse was not widely recognized as a public health problem until the twentieth century.



Fig. 1. "Our New York Board of Health." This cartoon shows the members of the Board of Health as fat men who slept at meetings, oblivious to important health issues. It was not until after the Board of Health became the New York City Department of Health in 1870 that the organization began to have a better understanding of the problems and how to help solve them as well as the ability to enforce necessary changes. A wood engraved illustration from *Harper's Weekly*, v. 9 (1865), p. 496.



THE HYGIENE OF NEW YORK CITY.

SENATORIAL INVESTIGATING COMMITTEE (to Mr. T—, the Health Officer). "Do you know, Sir, what Hygiene is?"
HEALTH OFFICER. "Oh yes! I know Hygiene. It's the effluvia arising from stagnant water, the consequences of which is disease!"
[The Committee look astonished, and the Health Officer, suspicious of a blunder, adds: "Oh, I don't understand Greek!"]

Fig. 2. "The Hygiene of New York City." This cartoon shows one of the Health Officers for New York City answering questions before a Senatorial Investigating Committee, and illustrates the City's perception of its Health Officers. It was not until later in the century that people began to have confidence in their public medical personnel. A wood engraved illustration from Harper's Weekly, v. 9 (1865), p. 224.



THE STREETS.

MOTHER OF FAMILY. "My dears, such is the selfishness of man that some eople would even make the authorities deprive us of this luxury."

Fig. 3. "The Streets." A cartoon of pigs wallowing in the dirty streets of New York City. This is one of many illustrations depicting the sad condition of the City's streets. A wood engraved illustration from Harper's Weekly, v. 24 (1880), p. 55.



Fig. 4. "A Tenement House On Mulberry Street." This picture shows the exterior of a slum dwelling that was condemned in 1871 and reoccupied in 1873, illustrating the housing conditions of many of the City's poorer people. A wood engraved illustration from Harper's Weekly, v. 17 (1873), p. 796.



HYGEIA. "You doubtless think that as all this filth is lying out in the back streets, it is no concern of yours. But you are mistaken. You will find it stealing into your house very soon, if you don't take care."

Fig. 5. "Hygeia." A cartoon shows Hygeia admonishing a well-dressed gentleman about the filthy streets of New York City. This caricature portrays the assumption that many of the wealthier people thought- filthy streets were only the concern of the poor. A wood engraved illustration by Bellew from Harper's Weekly, v. 25 (1881), p. 231.



Fig. 6. "Immigrant Inspection Service." While an immigrant child is being vaccinated for smallpox by a physician on a train, others wait their turn.
A wood engraved illustration by W. A. Rogers from Harper's Weekly, v. 27 (1883), p. 85.



Fig. 7. "At The Gates." The diseases of "Cholera," "Yellow Fever," and "Smallpox" shrink before the angel of "Cleanliness," who stands on a stairway holding her shield. A barrier marked "Quarantine" lies between them. This picture shows the City's concern with these serious infectious diseases.

A wood engraved illustration from Harper's Weekly, v. 29 (1885), p. 592.



Fig. 8. "The Night Superintendent of Bellevue Hospital enjoying himself after a late Dinner." A fat rat, dressed in a waist coat, smokes a pipe in an easy chair as women patients sleep nearby. The City's perception of hospitals, especially public hospitals, was one of dirt and uncleanness, with little hope of survival for those who entered. This is just one of the many caricatures portraying unsafe conditions. Even though this caricature was published in 1860, the majority of the problems hospitals encountered generally persisted into the twentieth century. A wood engraved illustration from Harper's Weekly, v. 119 (1860), p. 304.



THE FLOATING HOSPITAL OF ST. JOHN'S GUILD.—(DRAWN BY E. A. ABBEY.)

Fig. 9. "The Floating Hospital of St. John's Guild." The interior of a crowded ship shows many women with their children. This was a volunteer ship that provided fresh air to those who were poor and sick, as well as providing medical diagnoses. Floating hospitals were also used to help educate mothers on the care of their children. A wood engraved illustration by E. A. Abbey from *Harper's Weekly*, v. 18 (1879), p. 752.

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