

The Ottawa Typhoid Epidemics of 1911 and 1912 A Case Study of Disease as a Catalyst for Urban Reform

Sheila Lloyd

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Article abstract

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THE OTTAWA TYPHOID EPIDEMICS OF 1911 AND 1912:
A CASE STUDY OF DISEASE AS A
CATALYST FOR URBAN REFORM

Sheila Lloyd

ABSTRACT/RESUME

Severe typhoid epidemics in Ottawa in 1911 and 1912 prompted vigorous agitation for corrective measures to protect the city's health. Despite a proven crisis, reformers met strong resistance from an orthodox political and business community that over two decades had maintained an indifferent record on health questions. The confrontation produced some changes, but once the immediate crisis ended, the familiar pattern reasserted itself.

Des sérieuses épidémies de typhoïde sévissant à Ottawa en 1911 et 1912 provoquèrent une forte animation réclamant des mesures de correction afin de protéger la santé publique. Malgré l'évidence de la crise, les protagonistes d'une réforme à cet effet rencontrèrent une farouche opposition de la part d'une communauté vouée aux affaires et à l'orthodoxie politique qui, pendant deux décennies n'avait manifesté qu'indifférence à l'égard de ce problème. L'affrontement produisit certains changements, mais dès la fin de la crise, l'indifférence se réinstalla dans la communauté.

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The curtailment of infectious disease was an integral part of early urban development. When contagious disease reached epidemic proportions--as it frequently did--public attention focused on the urban conditions that fostered disease and pressure for better public health measures mounted. But the outbreak of an epidemic also precipitated efforts, in some circles, to minimize the underlying causes and to resist demands for a greater expenditure on public health. The outbreak of contagious disease brought about a general improvement in urban conditions and public health measures only to the extent that those who favored reform were able to overcome the resisting elements in the community.

The incidence of typhoid fever in Ottawa was high throughout the first decade of the century. Ordinarily, however, the disease was primarily confined to the lower-class districts and civic officials showed almost no concern about the prevalence of the disease. Suddenly, in January, 1911, the disease swept across the city. Each week the number

of reported cases increased. By early February, there were 119 new cases in one week alone. When the epidemic finally ended in late March, a total of 987 cases had been reported and 83 people had died from the disease.¹ Despite this dramatic warning, civic authorities did little to remedy the underlying causes of the epidemic. In July, 1912, the city was stricken with a second and even worse typhoid epidemic; 1,378 people contracted the disease and 91 died from it.²

By the beginning of the twentieth century, the clinical picture and pathology of typhoid fever, its causative agent, and the method of its spread were well-established facts.³ Civic officials could no longer absolve themselves of responsibility for an epidemic of typhoid fever on the grounds that they were helpless to prevent it; developments in the field of epidemiology had virtually made typhoid a preventable disease. Thus the outbreak of an epidemic of typhoid was a clear indication that civic authorities had been lax, if not negligent, in the area of public health. The typhoid epidemic of 1911 prompted two investigations into its causes, both of which demonstrated that public health had been no more than a secondary concern for Ottawa's civic officials.

The causes of the typhoid epidemic were first investigated by the Chief Health Officer of Ontario, Dr. J. W. McCullough, in February, 1911.⁴ Dr. McCullough concluded that contaminated water had been admitted into the city's water supply through an emergency valve located in Nepean Bay.⁵ While the city ordinarily took its water supply from the middle of the Ottawa River, the emergency valve in Nepean Bay was used

¹Ottawa City Archives (O.C.A.), Annual Report of the Medical Health Officer (M.H.O.), in Departmental Reports of the City of Ottawa, 1911, p. 129.

²M.H.O. Annual Reports, 1912.

³H. F. Dowling, Fighting Infection (Harvard, 1977), p. 14.

⁴The investigation was requested by Ottawa's medical health officer, Dr. R. Law.

⁵O.C.A., J. W. McCullough, Report of the Chief Medical Health Officer, February 7, 1911, Council Minutes, 1912, p. 95.

often during the low-water period--December to January--to increase the water pressure in case of fire.⁶ The pollution in Nepean Bay was traced to Cave Creek, a small stream that ran through a newly annexed portion of the city, Hintonburg. This thickly populated district did not have a full sewage system and a large number of outdoor closets emptied directly into Cave Creek, which in turn, emptied into Nepean Bay. Since the city's water supply was untreated, there was no protection from the contamination of the water supply by water-borne bacilli such as typhoid.

Having assessed the situation, Dr. McCullough did not hesitate to place the blame for the typhoid epidemic on the civic authorities. In his opinion, the civic authorities were guilty of failing to implement well-known and often recommended measures to ensure a safe water supply.⁷ Indeed, the failure to ensure a safe water supply was perhaps the most glaring example of the city authorities' lack of concern about public health measures. The civic authorities had done nothing about the health hazard posed by the existing water supply system; yet even before the turn of the century, the possible contamination of the city's water supply had been recognized as a problem.

In 1900, the medical health officer had pointed out the increase in typhoid over the past year could be attributed to the fact that "the water supply was not what it should be."⁸ But despite the realization that the water supply was contributing to the incidence of contagious disease, the first serious consideration of improvements in the water supply did not come until 1910 when city council decided to call in the well-known water works engineer, Allan Hazen of New York. Hazen was initially contracted to evaluate the Ottawa River as a water supply and to determine how it might be improved. He concluded that the best way to improve the quality of the water was to pass it through mechanical filtration after a preliminary chemical treatment.⁹

⁶Ibid.

⁷Ibid.

⁸M.H.O. Annual Report, 1900, p. 216.

⁹O.C.A., A. Hazen, Report on the Improvement of the Ottawa Water Supply, Council Minutes, 1911, p. 705.

Consideration of the means of improving the water supply grew more complicated when the city's waterworks committee asked Hazen to investigate an alternative source of water, McGregor Lake in the Gatineau Hills. He concluded that the McGregor Lake scheme, while more expensive than a mechanical filtration plant, offered a better supply of water than the Ottawa River.¹⁰ Finally, he recommended that hypochlorite of lime be added to the water supply as a temporary and partial treatment measure until either a mechanical filtration plant or the McGregor Lake scheme could be put into effect.¹¹

Hazen's report marked the beginning of a controversy that further prolonged the acquisition of a safe water supply. But had his recommendation--that hypochlorite of lime be added to the water as a temporary measure--been implemented some improvement in the water supply might have been achieved. Instead, his advice was rejected by the waterworks committee after a delegation consisting of John Grant (chairman of the committee and a member of the board of health), and the city engineer and the city treasurer went to Toronto to investigate the hypochlorite system in use there.¹² On his return, Grant submitted a report that counselled against the use of hypochlorite of lime in Ottawa. His objections to the treatment were that the smell and taste of hypochlorite could not be overcome unless the chemical was introduced far away from the point of consumption, something that could not be done in Ottawa.¹³ Despite long standing evidence that some treatment of the water supply was needed to protect the city's health, the waterworks committee adopted Grant's recommendation.¹⁴

The typhoid outbreak was thus not the result of a single, if unfortunate, accident. Instead, it resulted largely from procrastination

¹⁰Ibid.

¹¹Ibid.

¹²O.C.A., Report No. 22 of the Waterworks Committee, Council Minutes, 1910.

¹³Ibid.

¹⁴Ibid.

over the choice of a safe water supply and complacency about the health problem posed by the lack of one. A second investigation--ordered by Clifford Sifton of the Commission of Conservation--into the causes of the 1911 typhoid epidemic, concurred with the view that negligence on the part of the civic authorities with respect to the water supply was the chief factor in the outbreak of typhoid.¹⁵ The report, submitted by Dr. Charles A. Hodgetts, medical advisor to the Commission of Conservation, in April, 1911, criticized Ottawa's civic authorities for failing to take precautionary measures:

The outbreak could have been obviated had the hypochlorite treatment been installed forthwith after its recommendation by Mr. Hazen, on October fifth, 1910.¹⁶

The investigation conducted by the Commission of Conservation uncovered a number of health problems besides the water supply: unsanitary conditions existed in a large percentage of the city's dwellings; several sectors of the city had no sewage system, and the premises of milk vendors were in fair condition at best.¹⁷ Roughly 357 of 14,000 houses inspected were deemed unfit for habitation; another 2,038 had outside privies; 1,107 yards were found to constitute a health hazard and 748 stables were found to be improperly constructed or kept.¹⁸

The findings of the investigations suggest that sanitary inspection and the enforcement of health regulations had not been rigorously carried out over the years. The remaining possibility--that the conditions existed despite a concerted effort to implement public health measures--can be largely ruled out on the basis of evidence provided by the city's annual reports between 1900 and 1910. Among other things, the reports show that the city lacked an adequate staff to

¹⁵Public Archives of Canada (P.A.C.), Commission of Conservation, Report on the Epidemic of Typhoid Fever Occurring in Ottawa in 1911, p. 1.

¹⁶Ibid.

¹⁷Ibid., pp. 1-2; p. 7.

¹⁸M.H.O. Annual Report, 1912, p. 137.

fulfill the myriad responsibilities of the health department. At the beginning of the century, the public health staff consisted of a medical health officer, a sanitary and a plumbing inspector.¹⁹ Moreover, the medical health officer was no more than a part-time employee and neither the plumbing nor the sanitary inspector were specifically trained for his job.²⁰ But this small staff was charged with the responsibility of conducting city wide sanitation and plumbing inspections, enforcing quarantine and disinfection regulation, recording the incidence and mortality from disease, regulating the sale of meat and dairy products and inspecting hospitals.

The duties of the public health staff, already more than it could cope with in 1900, became even more burdensome as the population of the city increased. By 1906, there were 14,000 dwellings in the city, only 2,000 of which had plumbing that conformed with the city's by-laws.²¹ The task of inspecting roughly 12,000 houses and enforcing city regulation was clearly more than a single plumbing inspector could accomplish. Yet while the growth of the city's population during the first half of the decade²² indicated the need for additional staff, the plumbing inspector did not get an assistant until 1910²³--and that appointment came only after years of protest on the part of the medical health officer and the plumbing inspector.

Only one additional appointment to the health department was made before 1910. In 1907, J. B. Hollingsworth, a veterinarian, was

¹⁹ Ibid., 1900.

²⁰ O.C.A., Dr. Charles Hodgetts, Report of the Medical Health Officer, 1912, in Judicial Investigation Re Ottawa Waterworks and Health Departments by His Honour R. D. Gunn (Gunn Investigation), Exhibit 289, p. 1.

²¹ O.C.A., Annual Report of the Plumbing Inspector, Departmental Reports, 1906.

²² According to the M.H.O. Annual Reports for 1900 and 1906, the estimated population of Ottawa at the beginning of the century was 60,000; in 1906 it was 67,572.

²³ Annual Report of the Plumbing Inspector, 1910.

hired on a part-time basis as the city's food inspector.²⁴ Prior to his appointment, the city had no food inspector; the job of regulating the sale of meat and dairy products had been left to the medical health officer. At the same time that Dr. Hollingsworth was taken on staff, Dr. Robert Law, the medical health officer, requested that a bureau of food inspection be established.²⁵ Apparently Dr. Law's experience with food inspection had convinced him that the task could not adequately be carried out by one person. His recommendation was not, however, accepted by the civic authorities.

Since the city's health staff was clearly too small to carry out all the responsibilities assigned to it, some duties had been passed on to the city engineer. Supervision of the scavenging system, the collection of dead animals and inspection of yards, were added to his responsibilities. But this was a far from satisfactory solution to the problem since the city engineer lacked the authority to carry out the tasks assigned to him. In 1910, Newton J. Ker, the city engineer, noted in his annual report that only the medical health officer had the authority to order the clearing up of yards and premises and he strongly recommended that the scavenging system be placed under the health department "where it properly belongs."²⁶

The health problems identified by the Conservation Commission's inquiry resulted not only from the lack of an adequate staff to enforce regulations but also from an unwillingness, on the part of civic authorities, to implement a number of health measures. The failure to ensure a safe water supply has already been discussed. But there were other measures, such as a proper scavenging system, that civic authorities had not put into effect.

In 1901, a special committee had been appointed to consider the question of a scavenging system, "the necessity for one having become

²⁴M.H.O. Annual Report, 1907.

²⁵Ibid.

²⁶O.C.A., Annual Report of the City Engineer, Departmental Reports, 1910.

apparent in that year."²⁷ In 1902, the city engineer was sent to visit several cities in Canada and the United States to inspect the different incinerators being used.²⁸ On his return, specifications for the collection of garbage and its disposal by incinerator were drawn up and tenders called for. The tenders were all rejected, however, and, in 1905, city council decided against construction of the proposed type of incinerator.²⁹ The city engineer and one of the alderman were then appointed to inspect and report upon the latest and most improved type of incinerator.

Again an extended tour of cities as far flung as Baltimore and Savannah was undertaken to determine what type of incinerator was best. And for a second time specifications were drawn up and tenders called for. Then in 1906, city council decided against construction of an incinerator altogether; instead of a complete scavenging system, collection was to be carried out by day labour and the garbage used as a land fill.³⁰

A number of other health measures--all of which had, at one time or another, been recommended by the medical health officer--had either been neglected or partially implemented. Several sections of the city were still without a sewage system by 1911,³¹ making the enforcement of the by-law³² prohibiting privy vaults within certain limits of the city virtually impossible. The isolation hospital, built in 1902, was often unable to accommodate all patients suffering from contagious diseases,³³ and the smallpox hospital, situated on a flood-prone island, was in

²⁷Ibid., 1901.

²⁸Ibid., 1902.

²⁹Ibid., 1905.

³⁰Ibid., 1906.

³¹M.H.O. Annual Report, 1911, p. 140.

³²City of Ottawa By-Law No. 2337, May 1, 1904.

³³M.H.O. Annual Report, 1903.

serious need of repair.³⁴ Despite a high incidence of tuberculosis, the city did not have a tuberculosis sanatorium.³⁵ And while the heavy rate of infant mortality during the summer months was largely attributed to the lack of a means of preserving milk in many homes, civic authorities had not acted on the advice that a milk depot be set up.³⁶

The health problems exposed as a result of the typhoid outbreak in 1911, and the approach to public health measures taken by civic authorities in the decade before the epidemic, strongly indicate that public health was, at best, a secondary concern of city government. But there were several factors beyond the control of the board of health and the civic authorities in general, that contributed to the existing health problems. For example, a number of dwellings that lacked sewage connections had been built on solid rock; the cost of constructing sewers to serve these houses was prohibitive and, in some cases, it was practically impossible to put sewers in.³⁷ Just how extensive this problem was, has not, however, been determined. A second problem was that the number of dwellings unfit for habitation was so great that had they all been closed considerable pressure would have been placed on the city's remaining accommodation.³⁸ Many of the unsuitable dwellings that existed in 1911 had been hastily built after the disastrous fire in 1900. The city's few building regulations had been waived to allow rapid construction of temporary dwellings; the buildings were unsuitable for the installation of modern improvements but their number made the closing

³⁴The shortcomings of the Porter Island Isolation Hospital were a matter of frequent discussion at board of health meetings between 1900 and 1910 but improvements were rarely undertaken.

³⁵The Anti-Tuberculosis Association in Ottawa had been unsuccessfully petitioning for a sanatorium for years.

³⁶M.H.O. Annual Report, 1906.

³⁷Ibid., 1911, p. 140.

³⁸Ibid.

down of these places extremely difficult.³⁹

The rapid technological change occurring in this period may have contributed to the hesitation on the part of civic authorities to inaugurate certain health measures. The experience of older and larger cities with respect to different types of water filtration and incinerators demonstrated that a number of factors had to be taken into account in selecting the most suitable mechanism. Moreover, a limited understanding of the latest technological developments in these areas may have hampered the selection process.

Yet these factors do not seem to constitute an adequate explanation for the inadequacies in Ottawa's health measures at the time of the epidemic. While they may have hindered progress, the major cause of the shortcomings in the city's health measures was undoubtedly the indifference of the civic authorities. And as long as the disease fostered by unsanitary conditions and an inadequate public health system occurred primarily among the poor and unorganized, civic officials could attribute the problem to the ignorance and indolence of the lower classes and continue to do nothing to remedy the situation. The medical health officer's report for 1911 provides some evidence for this argument.

In his report, the medical health officer noted that mortality from all types of disease was greatest "in the most congested and poorer parts of the city."

In Lower Town, that is between Rideau Street and Rideau River, some 42 deaths occurred in that locality; in Georges Ward only two; Rideau Ward six; Hintonburg and Mechanicsville 24; Wellington and Central Ward 12; Ottawa South 3. It will be apparent that these correspond with the districts which were the most unsanitary localities.⁴⁰

While a breakdown of the incidence of, and mortality from, disease was not given in reports between 1900 and 1910, it is unlikely that the above pattern first occurred in 1911. It seems much more likely that the

³⁹Ibid.

⁴⁰Ibid., p. 138.

pattern of incidence and mortality shown in 1911 was in keeping with that of previous years.

The medical health officer listed a number of causes for the conditions that had been revealed by a sanitary inspection of the city.⁴¹ The first cause listed was the lack of an adequate public health staff to provide proper sanitary inspection. The second was "the naturally dirty habits of some of the inhabitants." And the third was "the lack of an education in health of those who might not be naturally dirty but at the same time are not alive to the seriousness of a lack of proper sanitary care." While the health officer also pointed out the need for more municipal regulation of sanitary conditions, he clearly placed the onus of responsibility for the high incidence of disease--in some districts--on the inhabitants themselves.

The public offered no objection to this line of defense as long as the incidence of contagious disease was primarily confined to the poorer districts. But when infectious disease became widespread--touching the lives of the middle and upper classes--as it did in the case of typhoid in 1911, the performance of civic officials was quickly brought into question. The typhoid epidemic precipitated a public outcry over the medical health officer and his staff:

The cold fact seems to be that . . . no feature exists of the health office work in Ottawa which shows evidence of watchful, active and aggressive promotion of sanitary conditions.⁴²

Dr. Law was singled out by the public as the individual most responsible for the epidemic. According to the local press, "the target of most public misgivings is the medical health officer, Dr. Law."⁴³

The public's limited access to information was likely a contributing factor in the singling out of Dr. Law as the person responsible for the epidemic. The full findings of the two investigations

⁴¹Ibid.

⁴²Ottawa Evening Journal, 16 February, 1911, p. 6.

⁴³Ibid., 18 February, 1911, p. 6.

into the causes of the epidemic did not become widely known; by mid-February, all that the public really seemed to know was that the water supply had become contaminated when the emergency valve in Nepean Bay was opened in December and January. Few people saw this as an indication that the city authorities had been negligent in providing the basic preventive health measures, such as treatment of the water supply. Instead, the public perception, initially at least, was that Dr. Law, and to a lesser extent his staff, had not adequately surveyed the water supply and were thus responsible for the epidemic.

The attention focused on the medical health officer conveniently deflected criticism away from the board of health, city council and the mayor. And the civic authorities did not hesitate to encourage the view that Dr. Law's incompetence and negligence had caused the epidemic. The members of city council and board of control called for the medical health officer's resignation and passed several resolutions calling for a thoroughly qualified replacement.

No one appeared more anxious to identify the local health officer as the person responsible for the epidemic than Mayor Hopewell. He repeatedly urged that Dr. Law's resignation be secured at once. And he voiced strong objections when the board of control considered the possibility of keeping Dr. Law on until a replacement was found.⁴⁴ He may have felt that as government leader, it was incumbent upon him to ensure that the public's demand for a better health officer was met. Moreover, the epidemic cast a poor reflection on his administration and the mayor was no doubt anxious to demonstrate both leadership ability and concern with the public's welfare. But the mayor may also have harboured some concern about what Dr. Law might reveal to the public. While the medical officer had never been an open critic of the civic authorities, he had demonstrated over the years that he was prepared to point out their shortcomings. The mayor's insistence on Dr. Law's failings and on the need for his resignation helped to discredit the medical health officer in the eyes of the public and removed him from a position that

⁴⁴Gunn Investigation, Exhibits 180-1.

would allow him to criticize the civic authorities. Moreover, the mayor's refusal to ask the medico-surgical society of Ottawa to select the new health officer--a step requested by board of control--suggests that he was less interested in securing a competent health officer than he was in being able to appoint a compliant individual to the position. Dr. Law's successor, Dr. Sherriff, proved to be just such an individual. By demanding Dr. Law's resignation the public may well have frustrated its own interests.

Not everyone was satisfied that all of the circumstances surrounding the epidemic had come to light during the two inquiries into the outbreak. The first indication of this came in early March when a public meeting was held at the Y.M.C.A. under the auspices of the Local Council of Women.⁴⁵ A decision was taken to appeal to the Ontario government to appoint a third commission of inquiry into all aspects of the epidemic and a select committee was set up to give further consideration to the matter.

The select committee consisted of a group of citizens aptly described by the local press as prominent and influential: Sir Charles Fitzpatrick, Chief Justice of Canada; Sir Louis Davies; Rev. Dr. Herridge; Prof. Adam Shortt; Dr. Charles Gordon Hewitt; Lt. Col. Irwing; Mr. J. A. Machedo and Mr. T. C. Thompson.⁴⁶ The committee concluded that a full inquiry by the provincial authorities should be requested. Although it was not public knowledge, the committee apparently had reason to suspect that information about one of the major contributing factors in the epidemic had been suppressed. The two investigations that had been conducted into the causes of the epidemic had shown that the contamination of the water supply occurred when the emergency intake valve was opened; the pipes themselves were reported to be in good repair. Sir Charles Fitzpatrick claimed to have learned that, contrary to what had been reported, the city's intake pipe was not in good condition. A conversation with one of the divers hired to examine the pipe--as part of the

⁴⁵Ottawa Evening Citizen, 13 March, 1911, p. 1.

⁴⁶Ibid.

first investigation--led him to believe that the true condition of the intake pipe was being concealed. The diver apparently told him that when he had reported the unsanitary condition of the pipe, he was told to say nothing about it and the matter was hushed up.⁴⁷

Pressure for a third inquiry was also mounted by a number of aldermen. Close to a dozen motions calling for another investigation--to be held under oath--were put forward during city council meetings in early March.⁴⁸ But they were all either ruled out of order by the mayor or defeated by his vote. The mayor and council were aware of Sir Charles' reasons for wanting a third inquiry. He had informed Mayor Hopewell of his conversation with the diver and the mayor had, in turn, passed the information on to council with the request that Sir Charles be asked to name his informant so that evidence of the allegation might be secured. Without further evidence to contradict the findings of the first two investigations, Mayor Hopewell may have felt that a third inquiry was unwarranted. The possibility remains, however, that the mayor was unwilling to allow an inquiry under oath because he feared the exposure of some particular information. While his motives cannot be fully determined, the mayor's successful efforts to block a third investigation prevented the true condition of the city's water pipes from coming to light. It took a second typhoid epidemic and a judicial investigation into its causes to determine conclusively that the intake pipes had, in fact, been in the condition revealed to Sir Charles.

The effort of a small but influential group to fully expose the conditions surrounding the typhoid epidemic in 1911 was not successful. Had there been more public pressure for a third inquiry, the mayor's resistance might have been overcome. But as the epidemic began to abate, in the middle of March, public attention shifted away from the issue of public health. Nonetheless, the epidemic had generated enough pressure, both locally and among provincial authorities, to bring about some improvement in public health measures. Treatment of the water supply

⁴⁷Gunn Investigation, Exhibit 160. This information comes to light in a memo from the mayor to city council.

⁴⁸Gunn Investigation, Exhibits 171-174.

with hypochlorite of lime had begun a few weeks after the epidemic started.⁴⁹ No decision was taken on the contentious issue of a pure water supply, but the question was given further consideration. A contract for the construction of an incinerator was awarded and a more adequate scavenging system was set up. A milk depot was established to provide milk to mothers at a reasonable cost. And a concerted effort was made to reduce the number of privy pits in the city.⁵⁰

Yet it would be easy to overstate the progress that was made in the field of public health in Ottawa in response to the epidemic of 1911. Public health was still a secondary concern among civic officials and over the months immediately after the epidemic, some of the most important aspects of public health received almost no attention. The measures that were implemented in 1911 each had serious shortcomings; for example, the incinerator that was built was inadequate within a year of its completion.⁵¹ And the attitude that many of the city's health problems could be attributed to the habits and ignorance of the poor persisted. The medical health officer's annual report for 1911, cited earlier, made this abundantly clear.

The most serious failure in the administration of public health during the first 18 months after the epidemic concerned the water supply. The city continued to take its water supply through the old intake pipe. But a new pipe was needed, not because the old one posed a recognized health problem, but because a larger pipe was needed to ensure adequate pressure in case of fire.⁵² In the meantime, although hypochlorite was still being added to the water supply, blockages in the intake pipe prevented injection of the full amount of lime. The problem was not considered to be serious and, in fact, bacterial testing of the water supply, conducted by J. B. Hollingsworth, the food inspector, showed no

⁴⁹Annual Report of the City Engineer, 1911.

⁵⁰M.H.O. Annual Report, 1911.

⁵¹Annual Report of the City Engineer, 1913.

⁵²Hazen, Report of the Pure Water Commission, p. 781.

serious contamination of the water supply.⁵³ Construction of a new intake pipe got underway in the fall of 1911 and by April 13, 1912, the new pipe was in use.

Two weeks later, testing of the water supply showed considerable contamination in the city taps. When informed of the problem by the medical health officer, the city engineer replied that about eight per cent of the water was being drawn from the old intake pipe. This was necessary, he claimed, as long as the flood water in the river persisted.⁵⁴ The condition of the old intake had remained a matter of dispute among civic officials and yet no effort had been made to determine whether it was safe to use. When bacterial testing of the water began to show contamination, the need to ascertain the state of the pipes was obvious. But no effort was made to investigate the matter. On May 10, Hollingsworth expressed increasing concern over the results he was obtaining when he tested the water.⁵⁵ In the following weeks, he submitted report after report to the city engineer, and the health officer, warning them of the dangerous condition of the water supply. But still no action was taken.

Their lack of concern soon had disastrous consequences. No cases of typhoid had yet been reported in 1912; in June, suddenly 10 cases were reported. And in July, the number soared to 1,015. The epidemic continued well into September and, in all, 1,378 people contracted the disease and 91 died from it.⁵⁶

As the epidemic swept across the city, public attention once again turned to the administration of public health. The water supply was immediately suspected as the main cause of the outbreak and this time pressure for a judicial inquiry into the causes of the epidemic came from several areas. Not only an elite group, but a large portion of the city's population, demanded a full inquiry. They were supported by a number of

⁵³Gunn Investigation, Exhibit 136.

⁵⁴Ibid., Exhibits 142-3.

⁵⁵Ibid., Exhibits 144-159.

⁵⁶M.H.O. Annual Report, 1912.

aldermen and even the school board in demanding that an investigation under oath be held to determine the causes of the second typhoid epidemic in 18 months.⁵⁷ And this time, the mayor did not block demands for a full investigation. Board of Control passed a motion in late September for a judicial inquiry into the administration of the affairs of the waterworks and health departments, to be held in September with the county judge, R. D. Gunn, presiding and Taylor McVeity, the city solicitor, conducting the investigation.

The city solicitor approached the inquiry in a most unexpected manner. He was determined to prove that a business venture between Mayor Hopewell and the city engineer, N. J. Ker, was in direct conflict with their civic responsibilities. The investigation had barely begun when McVeity alleged that the mayor was financially dependent on Ker as a result of the real estate business they had established together.⁵⁸ He charged the mayor with blocking a third inquiry into the typhoid epidemic of 1911 in order to protect Ker from charges of incompetence in performing his responsibility as the city engineer.⁵⁹

The investigation continued for weeks; McVeity called witness after witness to testify about the performance of the water works and health departments, about the best method of securing a safe water supply and about innumerable other matters that often seemed only faintly related to the on-going inquiry. In the course of his confusing and often repetitive line of questioning, he brought a number of important facts to light. Perhaps the most significant evidence that he provided was that pressure had been exerted by the local business community on the mayor and the medical health officer to conceal the extent and underlying causes of the second typhoid epidemic.

Since the second epidemic occurred in late summer--at a time

⁵⁷Gunn Investigation, Exhibit 265.

⁵⁸O.C.A., Transcript of the Proceedings of the Judicial Inquiry into the Departments of Health and Waterworks, 1912, p. 1564.

⁵⁹Ibid.

when local businessmen counted on visitors to increase the volume of sales--the second outbreak had a more negative effect on local business than did the first. Moreover, the wide publicity that Ottawa's epidemics were getting threatened to give the city a lasting reputation as an unsafe place to visit. A private meeting of businessmen was held in early August, 1912, to discuss the adverse effects the epidemics were having on the city's commerce.⁶⁰ Not only did the mayor and the medical health officer attend, but the mayor also presided over the meeting. The mayor and the medical health officer later denied that pressure had been exerted on them to conceal the extent of the city's current health problems, but an astonishing bulletin issued by the medical health officer shortly after the meeting suggested otherwise. The bulletin assured the public that the water was safe and that the epidemic was over:

I wish to assure the public and I am perfectly aware of the responsibility I am assuming, that the typhoid epidemic is over. . . . Bacteriological tests of our water supply have shown absolutely no contamination for five weeks, and only an occasional case of typhoid fever is being reported.⁶¹

In fact, about 30 new cases of typhoid had been reported by the middle of the month and the bacterial reports had shown gross contamination of the water supply.⁶² The medical health officer was fully aware of these facts when he issued his bulletin, as were a number of other civic officials. Within four days of Dr. Sherriff's statement, it was obvious to everyone, however, that the epidemic was not over. Sherriff had no choice but to concede publicly that his reassurances had been 'premature.'⁶³

The mayor's apparent willingness to co-operate in an effort to minimize the extent and underlying causes of the epidemic may have been

⁶⁰Gunn Report, p. 942.

⁶¹Ibid., p. 943.

⁶²Gunn Investigation, Exhibit 289, p. 10; p. 15.

⁶³Ibid., p. 944.

as much the result of his own private interests as the pressure exerted on him by the business community. The judicial inquiry in 1912 found the mayor's business partner, Ker, guilty of negligence in performing his job as city engineer over the past few years. A full examination of the pipes revealed that the contamination of the water supply, reported by Hollingsworth in May, 1912, had occurred both through leaks in the new and the old intake pipe.⁶⁴ Had the inquiry under oath been held in 1911, the dilapidated and unsanitary condition of the city's old intake pipes might have been revealed and a more conscientious engineer found to replace Ker. But the mayor's refusal to allow the third inquiry had prevented these developments. When Hollingsworth's tests began to find evidence of contamination in the water supply, shortly after the new intake was put into use, Ker showed his usual lack of concern and did nothing to determine the cause of the problem. The mayor's alleged indebtedness to Ker might, in fact, account for his unwillingness to allow all of the circumstances surrounding the epidemics, including the city engineer's incompetence, to be exposed. Once the judicial investigation in 1912 had determined the state of the intake pipes, Ker was suspended from his position.⁶⁵

Further evidence of efforts to minimize the extent and causes of the epidemic came to light in the course of the inquiry. Testing of the water supply was regularly conducted by Hollingsworth throughout the first weeks of the epidemic and his reports continued to show gross contamination. Suddenly in mid-August, civic authorities finally acted on the advice given by the provincial health officer in 1911, and hired a bacteriologist to conduct tests of the water.⁶⁶ Joseph Race took over from Hollingsworth on August 12, 1912. The decision to employ a more highly trained person initially appears to have been a step towards improving the health department's performance. This conclusion seems

⁶⁴Ibid., p. 942.

⁶⁵Ibid.

⁶⁶Gunn Investigation, Exhibit 188.

less warranted, however, when the findings of Race's examinations are taken into account. Soon after his appointment, the bacterial reports changed from a finding of gross to almost no contamination of the city's water supply. His findings were drawn into question in mid-September when McVeity called in the provincial bacteriologist, Campbell Laidlaw, to examine the water supply. Laidlaw found both the river and tap water grossly contaminated. He concluded that there was not a single point in the river, in the near vicinity of the city, that provided water suitable for consumption unless it was first boiled.⁶⁷ The discrepancy between Laidlaw's and Race's findings was made public by the local press and the mayor was asked to explain. His reply was simply that "he was at a loss to explain it."⁶⁸

It is possible that Race's findings were not the result of a willful effort to mislead the public. A difference in technique could account for differences in the bacterial count. The inquiry revealed that the technique used by Hollingsworth differed from that used by Race and it was Hollingsworth's method that was criticized by a number of experts called in by McVeity during the inquiry.⁶⁹ According to these bacteriologists, Hollingsworth had been using an outdated and discredited technique. But nonetheless, it was Race's findings, not Hollingsworth's, that differed significantly from those of Laidlaw. Moreover, the fact that 100 new cases of typhoid were reported in September strongly suggested that the water supply was not yet safe. Intentionally or otherwise, Race had provided test results that supported the mayor and the medical health officer in their effort to minimize the extent and causes of the epidemic.

The judicial inquiry lasted well into September and, when it finally ended, an enormous amount of evidence about the performance of the waterworks and health departments had been amassed. The inquiry led

⁶⁷Ibid., Exhibit 72.

⁶⁸Ottawa Free Press, 13 September, 1912, p. 1.

⁶⁹Gunn Report, p. 941.

to the suspension of Ker, the city engineer, from his duties and ultimately brought about the resignation of the medical health officer. But McVeity failed to prove his case against the mayor to the satisfaction of Judge R. D. Gunn.⁷⁰ His failure to do so not only left him open to public ridicule, but also ultimately cost him his job as city solicitor.

McVeity's purpose in approaching the investigation as he did is not clear. His entrance into municipal politics two years later suggests the possibility that his action had a political motivation. And the fact that McVeity was strongly opposed to the McGregor Lake scheme--one of the proposed sources of a safe water supply--may have been a factor in his handling of the inquiry. Certainly in the course of the inquiry he attempted to discredit those who supported the McGregor Lake scheme, including the members of the board of health, the provincial health officer and the medical adviser to the Commission of Conservation. But whether what lay behind McVeity's political interests and his opposition to the McGregor Lake scheme was actually a conviction that civic authorities were abusing their power to serve their own ends--as he insisted--or some other interests, perhaps of a business nature, cannot be determined without further evidence. On the basis of the available evidence, McVeity's manner in dealing with the judicial inquiry seems to have been the product of a conviction that civic government was desperately in need of reform.

Although McVeity had not succeeded in proving his case against the mayor, the evidence he brought forward no doubt harmed the mayor's reputation. Perhaps for this reason, Mayor Hopewell declined to seek re-election in 1912. Moreover, the inquiry alerted the public to the serious need for a safe water supply and was largely responsible for the fact that the choice of a pure water supply was a central issue in the next civic election. The proceedings also led Gunn to the conclusion that the health department was in need of thorough reorganization and that a new basis for appointments to the board of health had to be found:

⁷⁰Gunn Report, p. 938.

. . . appointments to the Board of Health should not be made for the purpose of giving municipal office to ex-aldermen or prominent citizens who have no other qualifications.⁷¹

As a result of the second typhoid epidemic, some of the major underlying health problems in Ottawa were exposed and pressure for their reform generated. The health department was expanded and more money was allotted to public health measures. But again in 1912 as in 1911, the attitude that many of the city's health problems could simply be attributed to the poor, resurfaced as the epidemic began to abate. A striking indication that a high incidence of disease was considered to be normal and not a health problem for the city came when civic officials declared that the typhoid epidemic had ended by September 1, 1912. No new cases of typhoid were reported in the city's most affluent section, Capital Ward, after September 1, but 101 new cases were reported from the other wards during the month of September.⁷² In 1911, the medical health officer had observed that "Ottawa Ward, with a population practically the same size as Capital Ward, has a mortality 2.5 times as great."⁷³ He attributed this to the "crowded population and less sanitary conditions of Ottawa Ward."⁷⁴ As the epidemic abated in 1912, this pattern reasserted itself and there is little evidence of a concerted effort to remedy the problem in the ensuing months.

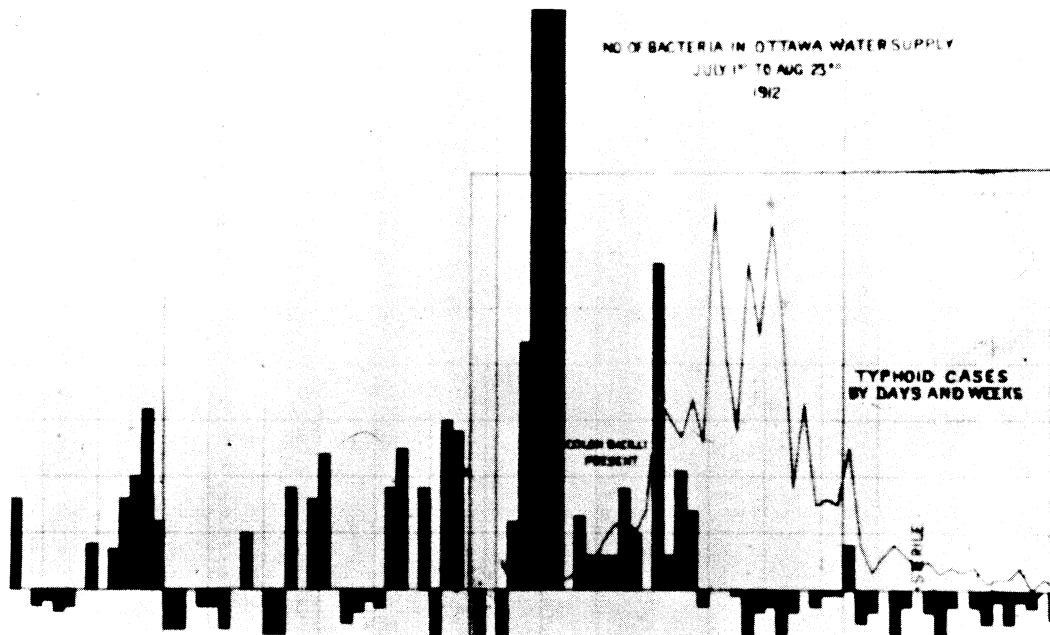
Despite a persistently high incidence of infectious disease in Ottawa, civic authorities had demonstrated little concern over public health measures during the first decade of the century. An undersized and poorly paid staff had been given the responsibility of performing the health department's myriad tasks. A short-term approach and ad hoc measures had characterized the administration of public health. The increasing mortality from typhoid fever--the disease that could most

⁷¹Ibid., p. 945.

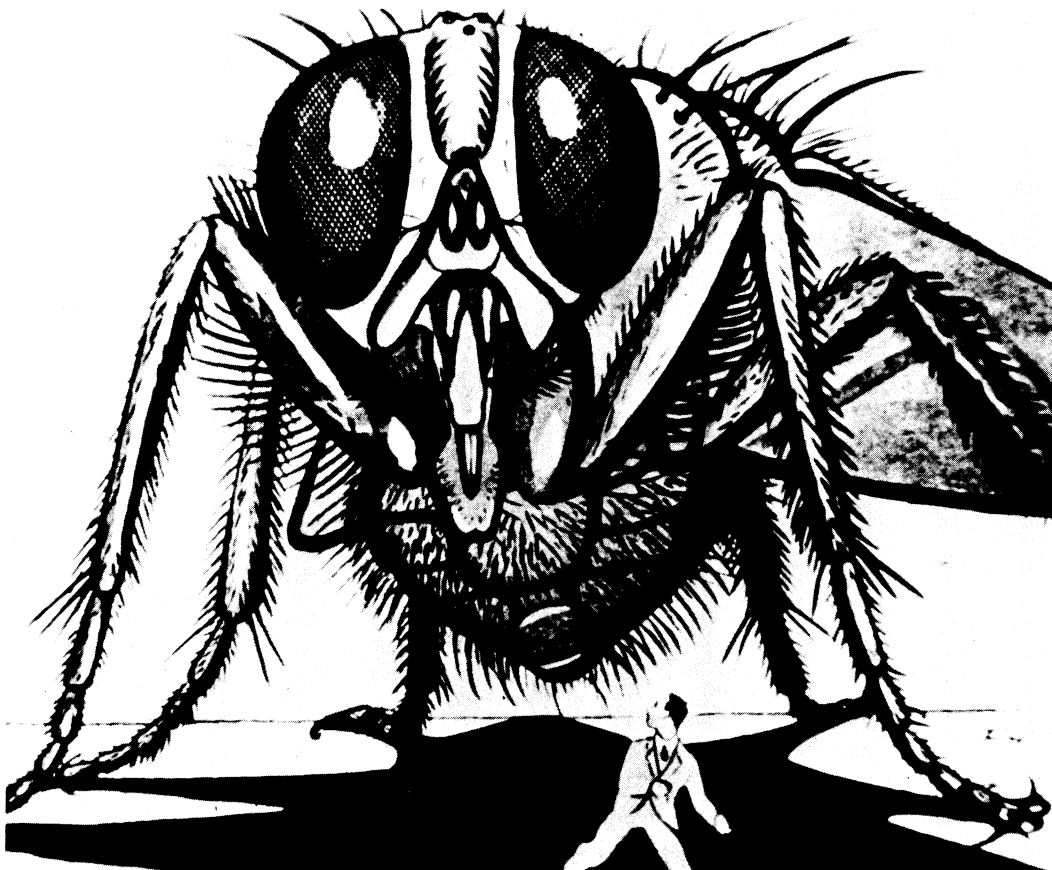
⁷²Gunn Investigation, Exhibit 289, p. 10.

⁷³M.H.O. Annual Report, 1911.

⁷⁴Ibid.



*Graph constructed to demonstrate association of bacteria
in Ottawa water supply and typhoid epidemic of July/August, 1912.
(Courtesy: Ottawa City Archives).*



*Poster to encourage improved habits of personal
health. n.d. (Courtesy: Ottawa City Archives).*

effectively be controlled by public health measures--should have alerted the board of health to the need for a more aggressive approach to public health services. But despite the evidence that existing measures were inadequate, the board continued to reject proposals for new health measures on the grounds that they were too costly.

The problem of controlling infectious disease became a matter of concern only when one of the contagious diseases reached epidemic proportions. As long as the high incidence of disease was confined to the lower classes, as it usually was, there was little organized pressure for an improvement in public health; those who were most seriously affected by the shortcomings in existing health measures were unable to organize effectively to demand better services. Moreover, the poor tended to accept a high incidence of disease as part of life. But when disease became widespread--touching the lives of the middle and upper classes--organized pressure for reform developed. Yet even then, there was no guarantee that civic authorities would tackle health problems more aggressively.

The vested political interests of the civic authorities in Ottawa predictably made many of them--including the mayor--unwilling to allow a full exposure of the shortcomings in the administration of public health. The business community reinforced the reluctance of some officials to permit a full inquiry into the city's health problems. Consequently, a wall of obstruction was put before those who were intent on bringing about a reform of public health in Ottawa.

During the first epidemic, only a small group of citizens actively sought a full inquiry into the epidemic. While public pressure succeeded in overcoming resistance to a judicial investigation in 1912, the reform sentiment that brought about the inquiry lasted only as long as the epidemic. Civic officials were forced to make some improvements in public health, but as the epidemic abated it appeared as if the old pattern was becoming re-established.