This is Public Health: A Canadian History

By Christopher Rutty, PhD, and Sue C. Sullivan

CPHA100 | CELEBRATING A CENTURY OF PUBLIC HEALTH LEADERSHIP

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The Canadian Public Health Association is a national, independent, not-for-profit, voluntary association representing public health in Canada with links to the international public health community. CPHA's members believe in universal and equitable access to the basic conditions which are necessary to achieve health for all Canadians.

Design: Leah Gryfe Designs

Glossary Definitions: *A Dictionary of Public Health,* Edited by John M. Last (2007), Oxford University Press

Message from the Board of Directors

When the Canadian Public Health Association started its work in April 2009 to produce a history of public health on the occasion of its centenary, a decision was made to go beyond the history of CPHA itself and tell the broader story of public health in Canada. The story needed to be told because the public health component of the health system continues to be misunderstood. Indeed, many do not realize that health is determined by factors that lay outside the health care system.

This history covers the period from before Canada was a nation through to 1986, when the First International Conference on Health Promotion launched a new era of public health with the Ottawa Charter for Health Promotion. Public health had a significant impact throughout these decades and its role evolved, from controlling infectious diseases to focusing on population health, health promotion, health protection, and primary prevention of diseases and injuries.

It is a remarkable story. I would like to thank the Public Health Agency of Canada for its significant financial contribution towards this effort along with the other centenary sponsors. I would also like to thank members of CPHA's Centenary Steering Committee, and in particular, members of the History Working Group, chaired by Margaret Hilson, for their outstanding contribution to this endeavour.

Cory Neudorf, Chair
CPHA Board of Directors

Foreword

This history of public health in Canada was a centenary project of the Canadian Public Health Association (CPHA). CPHA was formed in 1910 by a small group of physicians who were concerned about the state of public health in Canada. CPHA held its first annual conference at McGill University in December 1911 and was constituted through an Act of Parliament in April 1912.

This book came into being through the efforts of many. Christopher Rutty, PhD, wrote the first draft. This draft was edited by Sue Sullivan and reviewed both externally and by members of CPHA's Centenary History Working Group. Sue Sullivan responded to the reviewers' comments by conducting additional research and writing a second draft, which was copy-edited by me and Dr. Rutty. I researched the minutes of the Dominion Council of Health and selected and wrote the profiles. All three of us identified the photos and illustrations.

John M. Last, MD, DPH, MD (honoris causa) Uppsala and Edinburgh, a member of the History Working Group, added additional commentaries and, with others, wrote the epilogue.

Drs. Maureen Malowany and Shannon Tania Waters agreed to be the official external reviewers of the first draft of the book. They worked independently and their detailed and thoughtful commentaries and suggestions for additional resources greatly strengthened the manuscript.

Maureen Malowany, PhD, is the Associate Director of the Strategic Training Program in Transdisciplinary Research on Public and Population Health Interventions: Promotion, Prevention and Public Policy (4P) at McGill University and guest editor of a series of historical articles that commemorated 100 years of the *Canadian Journal of Public Health*. Shannon Tania Waters, MD, MHSc, FRCPC, is Director of Health Surveillance, First Nations and Inuit Health, Health Canada, BC Region, a community medicine specialist and a member of Stz'uminus First Nation from Vancouver Island, BC.

CPHA's Centenary Steering Committee, chaired by Gerry Dafoe, struck the History Working Group to oversee the development of historical products. Members of this committee carried out their work with a great deal of heart, and CPHA is indebted to them. The following members reviewed draft chapters of the book:

Margaret Hilson, Committee Chair (former director of CPHA's Global Health Programs)
James Chauvin (current Director of Policy and Global Health Programs, CPHA)
Dr. Jamie Hockin (former director of Professional Development, Office of Public Health Practice, Public Health Agency of Canada)
Dr. John M. Last (Emeritus Professor of Epidemiology, University of Ottawa)
Dr. Maureen Law (former deputy minister of the National Department of Health and Welfare)
Klaus Seeger (life member of the Canadian Institute of the Public Health Inspectors and recipient of the Alex Cross Award)

This book was researched, drafted, reviewed, revised, and designed within a year, which was an arduous undertaking, requiring countless volunteer hours from all those involved along with a lot of good will. Thanks to Leah Gryfe, who showed us that an interactive e-book has many advantages over a static, printed book.

Every effort has been made to ensure accuracy; however, if errors have crept in, please let CPHA know (one of those e-book advantages is that corrections are a lot easier to make.)

It has been a real privilege to be part of the making of this book on the history of public health, of learning about the men and women who worked to advance the health of the community long before the health system that we rely upon today was in place. I trust this electronic book will make them forever visible.

Sylvia Fanjoy
Director, CPHA's Centenary

Authors' Prefaces

Christopher Rutty

Tackling the task of researching and writing the history of public health in Canada from the beginning to almost the present, and within a year, has been a daunting, though rewarding one, and made possible with the help of a number of key people, especially Sylvia Fanjoy and Sue Sullivan. Sylvia kept the project moving forward efficiently and provided encouragement and helpful input on many levels as I researched and drafted the manuscript. Sue's contributions extended well beyond her initial role as editor to one of co-researcher and co-writer, not only reworking my initial drafts, but also finalizing the manuscript and adding considerable material to it. I also must thank the members of the History Working Group and the reviewers for their commitment to the project and their helpful suggestions.

Special acknowledgement must be given to Sanofi Pasteur Limited's Connaught Campus Library in Toronto, and especially Hugh McNaught, Manager of Library Services at Sanofi Pasteur, for providing access to an almost complete run of the *Canadian Journal of Public Health* from its beginning in 1910, and also to a rare collection of early Canadian public health journals published during the 1870s and 1880s. Also of practical importance was having free access to a photocopier to enable me to undertake a thorough review of these journals upon which much of this book has been based. Access to the extensive archives of Connaught Laboratories, especially the historical photo collection, is also greatly appreciated.

Special acknowledgement must also be made to Dr. Luis Barreto, Vice-President, Immunization Policy & Scientific and Medical Affairs at Sanofi Pasteur's Connaught Campus, for facilitating my involvement in this project and for his confidence in my abilities to get the job done. Dr. Barreto has been a great supporter of the history of public health and has made it possible for me to develop a broad research and knowledge base in many areas covered in this book. Such work enabled me to use the limited time I had to expand that base into areas of public health history that I was less familiar with when I started.

On a personal level, my wife Andrea and my daughter Alessandra deserve special acknowledgement in putting up with me as I toiled away in my basement office going through many boxes of photocopied articles and historical documents and often spending late nights drafting this almost overwhelming story. They kept me

going, but there were times when they didn't see me much. However, I think it was all worth it. The story you are about to read was a challenge to tell, and one that hasn't been told before on this scale. I learned a lot putting all the pieces together into what I'm confident readers will find is a dynamic, dramatic and engaging book.

My involvement in this project follows an extensive academic and professional background as a historian of medicine that began during an undergraduate program in history and the history of science at the University of Western Ontario, a Master's degree in History at UWO and a PhD in History at the University of Toronto. The history of polio in Canada has been of special interest since an undergraduate essay on musician Neil Young's personal experience with the disease as a five-year-old in 1951, followed by a MA thesis on polio in Ontario and a national study for my PhD, which took me into studying the development of polio vaccines and broader scientific, social and political aspects of public health in Canada. After completing my PhD in 1995, I established myself as a medical historian/consultant with the creation of "Health Heritage Research Services," through which I have provided research, writing and creative services for a variety of clients. The HHRS website includes more information about my background and experience, as well as extensive content related to many aspects of the history of public health in Canada.

Sue Sullivan

The production of *This is Public Health: A Canadian History* has been a collaborative, evolutionary process, thanks in large part to the History Working Group and the external reviewers who told us that we needed to paint a broader picture and reflect the diversity of the public health community of the past. I'd also like to thank Sylvia Fanjoy for giving me the opportunity to contribute to this history and for motivating and coordinating the whole team behind it. We looked beyond the official records of the traditional elites for stories of public health nurses, sanitary inspectors and the many others who toiled on the "front lines" of public health. We added context and commentary from a variety of sources, including other CPHA centenary products in development. I am acutely aware this is *a* history and not *the* history of public health in Canada. With neither a scholarly nor a public health background, my goal has been to engage a broad audience so that like me, readers gain a new appreciation for everything that public health encompasses and why our history is important today. The public's health has improved enormously over the past 100 years and this is due in large part to the commitment of individuals who fought to change the status quo because they wanted to improve the health of the community, especially history's voiceless, powerless and invisible. Ann Robertson of the University of Toronto's Department of Public Health Sciences, in a 1998 article on "Shifting Discourses on Health in Canada" says, "The ways in which we conceptualize and speak and write about health are never just about health; they also function as repositories and mirrors of our ideas and beliefs about human nature and the nature of reality, as well as about the kind of society we can imagine creating and how best to achieve it." I hope that this history of public health brings alive the public health reformers of the past and inspires us all to imagine a healthier society for today and tomorrow.

Acknowledgements

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INTRODUCTION

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Ottawa City, Canada West, 1855

This is Public Health, A Canadian History explores the evolution of public health from its early foundation before Canada was a nation until 1986, when the Ottawa Charter for Health Promotion launched what many considered to be a new era in public health.[1] During this time span, numerous public health milestones were achieved through organized community efforts to promote health and to prevent disease and injury, which have always been at the core of public health.

The public health systems and tools developed by different societies are determined by the health issues of the day, as well as the level of economic development, knowledge and techniques and the relationships of power between its social groups. This history underscores the importance of federal leadership in the implementation of successful public health initiatives in Canada, despite the tensions of federal-provincial jurisdictional boundaries in matters of health. The struggle to eliminate disparities—between geographic regions, urban and isolated communities, Aboriginal and non-Aboriginal people—was a longstanding concern that continues to this day. Since its beginnings, public health has faced changes and challenges and has too frequently been undervalued. However, a number of remarkable advances in Canada over the past 100-plus years can be attributed to public health.

1 World Health Organization, Ottawa Charter for Health Promotion, First International Conference on Health Promotion, Ottawa, 21 November 1986, WHO/HPR/HEP/95.1, available at: http://www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf

The Beginning—Quarantine and Sanitation

Indigenous peoples have inhabited the North American continent for thousands of years and their health, social, economic and physical conditions were adversely affected by increased European immigration, which began in the 1600s. As the fur trade drove French and British expansion across North America, smallpox, measles, tuberculosis and alcohol destroyed many Indigenous lives.

As European immigration grew, vessels arriving at the Port of Quebec often had large numbers of sick passengers, especially due to typhus fever. Haphazard efforts to inspect ships before they landed passengers became more organized beginning in 1710, followed by a quarantine act in 1721 that was enacted because of fears of the Black plague that was spreading across Europe. The plague never made its way to New France but despite the legislation, the number of typhus and smallpox outbreaks did not abate. A more comprehensive law called the *Quarantine Act of Lower Canada* was enacted in 1795 but it had to be renewed periodically or it would lapse, which it often did. However, the law served as a template for other colonial governments in British North America as they developed their laws to prevent infectious diseases from spreading. In general, quarantine legislation was of limited effectiveness because local governments tended to act only during or immediately after the spread of disease epidemics.

Library and Archives Canada

New France, 1688

The idea that smallpox could be prevented through arm-to-arm inoculation was introduced in Britain in the 1720s, although the practice had been known in Asia centuries earlier. In 1796, British physician Edward Jenner used fluids collected from cowpox lesions on livestock to protect humans from smallpox infection, creating the first effective vaccine. Epidemic cholera, typhus, tuberculosis, measles and scarlet fever spreading across Europe and Britain prompted a series of sanitary reforms and the creation of local boards of health.

A physician was appointed as Health Officer of Lower Canada in 1816, in response to a high incidence of illness occurring among thousands of new immigrants—"the wretched and miserable class of starved people that annually arrive" in Quebec City from Britain. A strengthened quarantine bill was passed in 1823 and provided for the appointment of a Board of Health made up of five licensed physicians or surgeons, although these measures were still only temporary.[2]

Cholera Spreads to the Colonies

In the early 1830s, pandemic cholera spread across Britain and Europe and some physicians had linked cholera and other fevers with impoverished living conditions. They argued that diseases could be prevented if the community took steps to improve the deplorable conditions endured by the poor while others argued that cholera was due to "miasma," an ill-defined poisonous vapour or mist believed to emanate from rotting organic matter. A potent combination of fear and humanitarianism prompted the British government, for the first

2 Journals of the House of Assembly of Lower Canada, March 1823

time, to establish a temporary national board of health and order town authorities to appoint local boards of health to oversee sanitary improvements. Similar laws were soon enacted in Spain, Germany and France and what would be described as public hygiene or public health was born.

The government of Lower Canada also authorized the establishment of local boards of health in Quebec, Montreal and elsewhere as needed, and appropriated funds for these boards and the costs of quarantine. As approximately 50,000 British immigrants were sailing across the Atlantic Ocean from cholera-infested ports to the Port of Quebec, Lower Canada's quarantine act was re-invoked and a squad of soldiers was dispatched to Grosse Isle, a small island about 50 kilometres east of Quebec City, to build a quarantine station for inspecting and cleansing the arriving immigrants. The first reported cholera cases arrived on April 28, 1832 and the quarantine station was quickly overwhelmed, while apparently healthy but infectious immigrants passed through and the human wastes from the succession of arriving ships infected the St. Lawrence River. Cholera spread to Montreal and Upper Canada in June and by the time the epidemic had passed, cholera had killed about 2,300 people or 10% of the population in Quebec City and 4,000 or almost 15% of the population in Montreal.[3]

As cholera spread across Lower Canada, the colonial governments of New Brunswick, Nova Scotia and Newfoundland took steps to prepare by establishing central boards of health and passing temporary legislation to strengthen quarantine provisions. They focused on cleaning

Library and Archives Canada, Acc. No. R9266-45 Peter Winkworth

Dalhousie Square, Halifax, NS, 1851

up the cities and towns, especially the areas where the poorer classes lived. Whether as a result of these efforts or by coincidence, there was no cholera outbreak in the maritime colonies in 1832. In Upper Canada, however, there were no quarantine regulations for its ports and local governments did not have legal authority to stop and inspect ships. As cholera spread, local boards of health were appointed and funded to manage the disease. As in the other colonies, streets and alleys were cleaned of filth and rubbish, pools of stagnant water were emptied and blocked drains were cleared, especially in areas where poor immigrants lived in crowded, filthy conditions. When the epidemic subsided in 1833, the Upper Canada government passed progressive but temporary legislation for the implementation of preventive public health measures. As the flood of British immigrants continued, epidemic cholera struck the colonies again in 1834, despite stricter quarantine regulations and local clean-up efforts.[4]

Strengthening Infrastructures

In 1849, the government of the United Canadas (Upper and Lower) created a Central Board of Health with new legislation, but when the threat

3 P.H. Bryce, "History of Public Health in Canada," *Canadian Therapeutist and Sanitary Engineer* 1 (June 1910): 287–88; J.D. Pagé, "Grosse Isle Quarantine Station," *Canadian Public Health Journal* 22 (September 1931): 454–55

4 Geoffrey Bilson, *A Darkened House: Cholera in Nineteenth-Century Canada* (Toronto: University of Toronto Press, 1980); Kenneth G. Pryke, "Poor Relief and Health Care in Halifax, 1827–1849," in Wendy Mitchinson and Janis Dickins McGinnis, *Essays in the History of Canadian Medicine* (Toronto: McClelland and Stewart, 1988): 39–61

of a cholera epidemic ended, the Central Board was dissolved. There were consolidations of public health legislation during the early 1850s in Nova Scotia and the United Canadas, however, with the establishment of permanent local boards of health and the strengthening of quarantine laws. When cholera returned in 1854, the Canadian Central Board of Health was revived and the government assumed full control of Grosse Isle.

In 1847, some 100,000 poor Irish emigrants fled famine and en route to British North America fell victim to typhus in large numbers. A report to the British Parliament said "6,100 perished on the voyage, 4,100 on their arrival, 5,200 in the hospitals, and 1,900 in the towns to which they repaired. The total mortality was 17 per cent of the number emigrating." According to official Canadian statistics, 5,424 died of typhus fever at Grosse Isle in 1847, while thousands of others died in Quebec City, Montreal, New Brunswick and Upper Canada.[5]

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Peter Winkworth

Four Indian Figures, ca. 1840

In Britain, where high rates of infectious diseases and child mortality were linked to the grossly unsanitary conditions and polluted drinking water among the working classes, the sanitary reform movement continued to grow. Britain's 1848 *Public Health Act* resulted in more proactive measures to prevent disease and promote health, including the establishment of vital statistics registrars and voluntary public health associations to build support for public health reforms. During a cholera outbreak in London, England in 1854, British physician John Snow discovered that a neighbourhood water pump on Broad Street was the cause of hundreds falling ill and many deaths. Snow's work followed Edwin Chadwick and other physicians in Britain and New York City, who had undertaken detailed investigations into the sanitary conditions of labourers. Their work was strengthened by the scientific application of statistics. Snow's research, in particular, marked the beginning of the modern science of epidemiology and a moving away from reliance on quarantine.[6]

Compulsory vaccination measures to prevent smallpox were introduced in the early 1860s in the United Canadas and Prince Edward Island. The Hudson's Bay Company, which served as a *de facto* public health agency in the west from the late 18th to the early 19th century, launched a vaccination campaign that kept the disease under some control among some Indigenous communities, although the importation of smallpox into British Columbia from California during the gold rush of the early 1860s was particularly devastating to the First Nations who lived there.[7]

5 Pagé, "Grosse Isle Quarantine Station," p. 455; Ruggles George, "When Typhus Raged in Canada," *Public Health Journal* 11 (December 1920): 548–51; W.E. Swinton, "George Mellis Douglas: Typhus and Tragedy," *Canadian Medical Association Journal* 125 (December 1, 1981): 1284–86; Bill Trent, "Grosse Ile: Island of the Dead," *Canadian Medical Association Journal* 131 (October 15, 1984): 960–68

6 M.W. Flinn, "Introduction," in Edwin Chadwick, *The Sanitary Condition of the Labouring Population of Great Britain, 1842* (Edinburgh: University of Edinburgh Press, 1965): p. 1

7 Paul Hackett, "Averting Disaster: The Hudson's Bay Company and Smallpox in Western Canada During the Late Eighteenth and Early Nineteenth Centuries," *Bulletin of the History of Medicine* 78 (2004): 575–609

Despite a public outcry, the government of the United Canadas legislated the rapid removal and burial of deceased victims of infectious diseases, but legislation requiring inspection of food and drink by a qualified chemist to identify adulteration was shelved shortly after its introduction.[8]

As the Fathers of Confederation worked on the drafting of the *British North America Act*, they were not concerned with public health, despite the experience of major epidemics since the 1830s, a new cholera threat in 1866, and the advances being made in understanding the importance of clean water and proper sanitation. The political leadership of the new Dominion of Canada and the provinces remained wedded to the quarantine approach to public health. Thus, during the early post-Confederation period, a growing preoccupation of Canada's small but energetic group of sanitary reformers was to integrate a broader concept of public health protection and promotion into the new Canadian provincial and federal political structure.

Library and Archives Canada

America: Western Hemisphere

8 "Bills Before Parliament," *The British-American Journal* 1 (May 1860): 237–38; The *British-American Journal* 2 (April 1861): 185

CHAPTER 1: 1867–1909

The Sanitary Idea

The history of Canadian public health begins to gain momentum after Confederation. The sanitary reform movement required a number of fundamental elements before it could succeed: the gathering of information on mortality and morbidity levels in order to understand and measure public health problems; activists who could publicize this type of information in order to mobilize public and professional opinion; and the existence of a municipal infrastructure sophisticated enough to be able to implement and enforce legislated reforms.[1] Between 1867 and 1909, these elements were still being developed to varying degrees in Canada.

The *British North America Act of 1867* created the Dominion of Canada through the Confederation of the provinces of Nova Scotia, New Brunswick, Quebec and Ontario. Prior to 1867, what little organized health care available was provided locally. Some cities and towns set up local health boards, usually after a serious epidemic of cholera, smallpox or typhoid. Legislation permitting such

John Henry Walker, ©McCord Museum M991x.5.795

A depiction of death, 1878

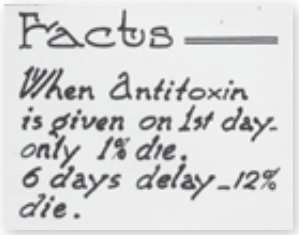
1 Heather MacDougall, "Epidemics and the Environment: The Early Development of Public Health Activity in Toronto, 1832–1872" in R.A. Jarrell and A.E. Roos (eds.) *Critical Issues in the History of Canadian Science, Technology and Medicine* (Ottawa: HSTC Publications, 1983), pp. 145–151

health boards was passed by the Parliament of Upper Canada in 1834. There was little mention of health in the British North America Act, other than establishing federal jurisdiction over quarantine and marine hospitals. Provincial governments had responsibility for hospitals other than marine hospitals, and asylums and quarantine stations were the only permanent public health institutions. (In this era, the mentally ill were either kept at home or in insane asylums, where they were often brutally treated.) Municipal government authority varied widely, even within provinces.

Sanofi Pasteur Limited, Connaught Campus, Archives

Hygiene and Sanitary Reform

The creation of permanent local and provincial boards of health was still a work in progress but their efforts to control infectious diseases and build effective water and sewage systems were aided by discoveries of the bacteriological revolution in the 1880s. As knowledge and infrastructures developed, a growing number of voluntary organizations and individual sanitary reformers preached the gospel of hygiene. The invention of the microscope permitted the discovery of the microbe in the late 17th century, but the field of bacteriology didn't develop until the 19th century and popular acceptance of "the germ theory" was not widespread until the early 20th century. Before the 1880s, many common infectious diseases were thought to be due to bad air or heredity. Typhoid, for example, was widely thought to have a spontaneous origin but during this era, growing evidence pointed to contaminated drinking water or milk. The specific causative bacillus was identified in 1880 with definitive proof that it caused typhoid in 1896. The discovery and successful testing of both the diphtheria antitoxin and rabies vaccine in the 1890s were major achievements and provided the first reliable and scientific biological tools for the control of these deadly diseases.



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These and other scientific discoveries between 1850 and 1900 completely transformed the popular understandings of the nature of infectious diseases, including their origin, transmission and how to fight them. Knowledge about how infectious diseases were spread brought the realization that individuals and communities could do something to prevent the spread of disease and benefit from early detection. This new way of thinking was called the *sanitary idea*, and it first spread amongst medical elites and then was gradually adopted by the educated middle classes and then later by the population at large. Over time, long-standing beliefs about disease transmission were replaced with new understandings about personal hygiene, prevention through vaccination and early diagnosis and treatment.[2]

The challenges involved in managing human waste dominated Canada's public health journals in the 1870s and 1880s. The prevailing approach to the disposal of excrement at this time was by using portable dry-earth closets in the home with a variety of absorbents and then burying the waste. People became increasingly concerned

2 Nancy Tomes, *The Gospel of Germs* (Boston: Harvard University Press, 1999); G. Desrosiers, "Le système de santé au Québec : Bilan historique et perspective d'avenir" *Revue d'histoire de l'Amérique française,* 53 (1), 1991. p. 6

about sewers, wash basins and toilets. Collective action was needed to manage sewage and garbage and to purify drinking water and this led to a growing government role in the prevention of disease and death through public health. The early sanitary reformers embraced the need for hygiene and sanitation with religious fervour and their commitment helped lay the foundations of Canada's public health infrastructure.

Confederation and Growth

W. L. Bishop, NSARM accession no. 1983-240, no. 27

Mechanized industry began in Canada in the 1840s and gradually increased the concentration of economic power and the size of the labour force by the 1890s. Anglo-American industrial and financial elites were well represented at the federal political level, especially lawyers and doctors. Confederation permitted the creation of larger political and economic structures and economic growth in turn resulted in expanded immigration from continental Europe, in addition to the usual American and British sources. The social, political and economic elites, however, remained broadly Anglo-American.[3]

If health concerns for Indigenous peoples were considered at all, it was by missionaries, traders and individual physicians. The health of First Nations and Métis people had begun to seriously deteriorate by 1900, due to the decline of the fur trade and relegation of Indians to under-developed and isolated reserves that were

George W. Dawson, Provincial Archives of Alberta, A17476

Blackfoot Indians, Old Fort Whoopup, 1881

rife with poverty, overcrowded housing and malnutrition.[4]

Great Britain and its *Public Health Act of 1875* were models for sanitary reform in Canada. This landmark legislation enshrined the British government's responsibility for the health of the people, most of whom were living in old but rapidly changing cities and densely populated rural areas. In contrast, the first generation of Canadian sanitary reformers "functioned in relatively new cities which were trying to erect basic industrial, housing, and sanitary infrastructure while often absorbing immigrants on a scale not seen in Europe. Outside Canada's towns and cities, the widely scattered populations often living in wilderness conditions had no counterpart in Western Europe."[5]

Sanitary reformers worked tirelessly over several decades, trying to convince the federal government to follow a number of other countries and set up a national department to collect vital statistics, build sewers and reduce the impact of infectious diseases. Federal interest in public health matters tended to be led by Members of Parliament and Senators who were medically qualified. In the summer of 1873, Dr. William Henry Brouse, Ontario MP for Grenville South, led a select committee to look into the sanitary

Jean Holder, NSARM accession no. 1980-195, no. 24

Clayton & Sons, Halifax. Women sewing in factory, 1900

3 Desrosiers, p. 8; *Canadian Encyclopedia* (accessed online at www.thecanadianencyclopedia.com

4 Moffat and Herring, 1999; History of the Medical Services Branch, April 1969

5 Aleck Ostry, "Difference in the History of Public Health in 19th Century Canada and Britain," *Canadian Journal of Public Health* 86 (1) (January-February 1995): 5

condition of the House of Commons itself, focusing on the heating, lighting and ventilation.[6]

Edward Playter, A Leader in Canada's Sanitary Reform

One of the most important early sanitary reformers was Dr. Edward Playter (1834–1909). This physician, based in Toronto and later in Ottawa, single-handedly published Canada's first professional public health journal from 1874 until 1892. He also worked on a number of public health initiatives at the local, provincial and federal levels, playing a central role in sanitary reform and the scientific era. Playter was born into a prominent Upper Canadian family, graduated from medical school at the University of Toronto in 1868 and practised as a county coroner in York Township. His inherited wealth enabled him to focus his considerable energies on promoting public health reforms, including the need for a system of collecting accurate and comprehensive mortality and morbidity statistics. Likely influenced by British sanitary reformers, Playter recognized that the practice of medicine went beyond treating the sick to include the prevention of sickness and the promotion of health—not only to save lives and suffering but, as he often argued, to protect the economic health of the country.[7]

Canada's Indigenous Peoples

As detailed in the 1996 Report of the Royal Commission on Aboriginal Peoples, the term *Aboriginal peoples* refers generally to the Indigenous inhabitants of Canada who are made up of three main groups recognized under the Constitution—Inuit, First Nations and Métis people. Within these broad groups are a number of distinct languages and cultures. Today, the term *First Nations* replaces *Indian,* the word historically used by the Canadian government to describe the Indigenous peoples with whom the Canadian or British government had entered into treaties. The *Métis* are distinct Aboriginal peoples whose early ancestors were of mixed heritage (First Nations, or Inuit in the case of the Labrador Métis, and European). Inuit replaces the term *Eskimo* and refers to the Indigenous peoples of the North.

Edward Playter

Dr. Playter was a strong proponent of government's responsibility for general health. As a result of his efforts, Ontario passed an improved statute in 1875 concerning the reporting of deaths. He was one of the first medical officers of health appointed in Ontario. The public health journal founded and edited by Edward Playter appeared from July 1874 until 1892 under a variety of titles, including *Sanitary Journal, Canada Health Journal, Dominion Sanitary Journal, Man, and Health Journal.*

—Dictionary of Canadian Biography online

6 W.H. Brouse, "Report," Journals of the House of Commons, 36 Victoria, 1873, Appendix No. 4

7 Robert D. Defries, "Dr. Edward Playter: A Vision Fulfilled," *Canadian Journal of Public Health* 50 (September 1959): 368–77; Paul A. Bator, "Playter, Edward," *Dictionary of Canadian Biography: Volume XIII: 1901–1910* (Toronto: University of Toronto Press, 2000) (accessed online at http://www.biographi.ca)

Playter financed, produced and promoted *The Sanitary Journal*, "devoted to public health and individual hygiene." It was first published in 1876 and became a monthly in 1877 until June 1880, when the sudden death of Playter's wife forced a four-month suspension. When publication resumed, Playter renamed it *The Canada Health Journal*: *A practical sanitary monthly devoted to individual and public health and a reporter of vital statistics*. Playter tried to expand the journal's appeal beyond the medical profession and across the country, while frequently appealing to subscribers to pay late bills and distributing promotional copies to attract new subscribers.[8]

The Sanitary Journal highlights the development of public health in Canada during these early years. Included in the first issue were articles on sanitary science, the effects of tobacco, preventing the spread of contagion and disease, typhoid and disinfecting chambers. Playter's first editorial argued that more attention was needed to look after the health and development of infants, children, youth, mothers and their unborn. He also called on the medical profession to work at improving the recently implemented *Ontario Public Health Act of 1873* and to lobby the government to establish a sanitary bureau. Issues needing legislative attention included drainage and ventilation (especially in schools), school education in hygiene, physiology and greater physical exercise. Other concerns included the clothing of the young, which in many cases was "woefully defective; health is too frequently the sacrifice of fashion."[9]

8 Defries, "Dr. Edward Playter: A Vision Fulfilled," p. 368

9 Editorial, "Our Future Generations," *The Sanitary Journal*, 1 (1) (July 1874): 29–31

Expansion of Municipal Public Health

Awareness of public health was gradually increasing within some local governments. For example, Winnipeg implemented By-Law No. 13 in 1874 with regulations against adulterated food and tainted meat, the defiling of water and allowing stagnant pools to stand, and keeping dead animal carcasses in the city. The law required every home to connect a privy and keep it clean and to collect all dirt into one place and keep filth off the lots and streets, with penalties of a fine up to $20 or a jail sentence up to 21 days.[10]

In Toronto at this time, sanitary reformers were concerned about expense and safety of the city's proposal to build a trunk sewer line across the waterfront to channel the sewage into the lake, three miles from the city, in the questionable hope that currents would not carry it back to where the water supply was drawn.

Public health activity also expanded in Montreal, where before 1870, these matters related only to the control of nuisances, with a few policemen giving attention to cleaning yards, lanes and privy-pits. Unlike Ontario and most of the other provinces where public health services first developed at the municipal level, Quebec's public health services had been left to the attention of individual religious communities.

NSARM Album no. 5, #74

Infant mortality was a reality of life in Victorian Halifax. A recognized custom of the time was for parents to have their dead child photographed as if the youngster were sleeping

10 "Public Health," *Winnipeg Free Press* (August 24, 1874): 1

Fader, NSAHM accession no. 1972-21, no. 24

Faders Bros. Market, Halifax, NS, 1885

During the 19th century, Montreal recorded the highest mortality rates of all British North American cities. Montreal had become the industrial centre of Canada and rapid settlement resulted in working class families living in crowded, unsanitary and poorly built housing. As was common in other Canadian cities during or after epidemics, Montreal's city council established a health committee with limited powers after a smallpox outbreak in the 1870s. At a public meeting called by the mayor, a Citizens' Public Health Association was established, supplanting the Montreal Sanitary Association, to "increase and diffuse knowledge on all subjects relating to the public health, by the discussion of sanitary subjects, by exposure of sanitary evils, and by promoting sanitary legislation." In 1875, the Province of Quebec adopted compulsory smallpox vaccination, despite strong opposition, gave Montreal's health officer much more power and promised to fund a Bureau of Vaccination.[11]

11 Industrial Architecture of Montreal, "Living Conditions in Montreal's Industrial Neighbourhoods" (accessed online at http://digital.library.mcgill.ca/industrial/livingconditions.html); "Sanitary Reports: Public Meeting," *Public Health Magazine* 1 (1) (July 1875): 6–11; Georges Desroisiers and Benoît Gaumer, "Les debuts de l'éducation sanitaire au Quebec: 1880–1901, *Canadian Bulletin of Medical History* 23 (1) (2006): 186

Ontario Takes the Lead

Prompted by a serious yellow fever epidemic in the United States, Toronto's leading sanitarians—including Playter, William Oldright at the Toronto School of Medicine, and Charles W. Covernton of Trinity College Medical School—convinced Premier Oliver Mowat to appoint a special sanitary

Adelaide Hunter Hoodless

Mrs. Hoodless was born in 1857, near Brantford, Ontario. Growing up on a mid-19th century farm with its privations and isolation perhaps inspired her to take up the cause of domestic reform. She launched a life-long campaign to gain province-wide acceptance of domestic science in the educational curriculum in order to advance the education of girls. She was the visionary behind the Women's Institute movement and is also credited with helping to establish the National Council of Women, the Young Women's Christian Association, and the Victorian Order of Nurses. Mrs. Hunter recognized that the roles of women were changing and that more and more women were entering the work force in technical trades (factories, mills etc.) Most were underpaid, under-trained and working in deplorable conditions. She convinced the Minister of Education to send her to America to examine the technical schools there and bring back a report. Unfortunately she died in 1910, before she could complete this task.

—Adelaide Hunter Hoodless Homestead

committee of the Legislature in 1878. A survey of 171 municipal clerks revealed "that absolutely nothing, almost, is being done throughout the province toward the prevention of disease or improvement of the public health." Of about 1,000 municipalities in Ontario, no more than 20 had medical officers of health appointed. An anticipated provincial board of health was not established however, because according to the Attorney General, "there is not yet sufficient public interest taken in this question to warrant any special action and the appropriation of much money for the purpose." Playter responded by arranging through the Ontario government to distribute copies of his journal to the clerks of all the principle municipalities in order to help generate the interest and awareness needed.[12]

United Church of Canada, NSARM accession no. 1975-194, no. 19

Halifax Medical College, ca. 1890

In 1882, Ontario became the first provincial government to establish a full-time Provincial Board of Health. It was made up of seven members, including four physicians and a chairman appointed by the Lieutenant Governor in Council and given an annual budget of $4,000. William Oldright was the board's first chairman and Peter Bryce the first part-time secretary and chief medical officer of health until 1904. The provincial board's work in relation to local boards of health was strictly advisory, with no legal authority to require local authorities to appoint boards of health or require any action.

12 "The Proposed Sanitary Legislation," *The Sanitary Journal* 3 (7) (June 1878): 272–75; "Report of Select Committee on Public Health," *Journal of the Legislative Assembly of Ontario, 1878, Appendix No. 2;*" 'Sanitary Reform' This Year, And Why?" *The Sanitary Journal* 4 (4) (March 1880): 225–26

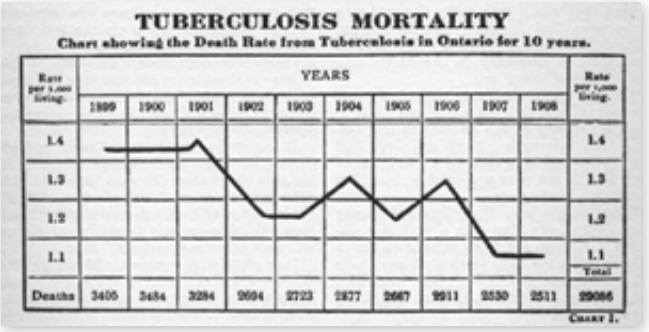
Montreal Living Conditions

The Royal Commission on the Relations of Labour and Capital described Montreal's working-class neighbourhoods in 1888 as "nests of contagion." Women represented 20% of the adult work force in the city but earned substantially less than men, who generally didn't earn enough to support a family. Many women worked in textile mills, tobacco factories, food processing, retail and domestic service and children were also working part-time to contribute to meagre family incomes.

In most working-class neighbourhoods, the toilets consisted of community privy pits in the backyards and houses had no facilities for bathing. Herbert Brown Ames, in his 1897 book, *The City Below the Hill,* reported that more that half the homes in Sainte-Anne Ward still relied on "that relic of rural conditions, that insanitary abomination, the out-of-door-pit-in-the-ground privy." His eight-year campaign against pit privies in Montreal earned him the title, "Water Closet Ames."

—digital.library.mcgill.ca

The Ontario Board of Health assembled public health education exhibits and gathered information about new strategies to prevent disease on behalf of local boards of health. A portable isolation hospital was displayed at the 1883 Toronto Industrial Exhibition which the Provincial Board "hoped that many municipalities or groups of municipalities will avail themselves of it and have such an inexpensive structure ready to meet any outbreak of infectious disease, and not wait to construct it after an outbreak appears



TUBERCULOSIS MORTALITY

Chart showing the Death Rate from Tuberculosis in Ontario for 10 years.

Rate per 1,000 living.	YEARS										Rate per 1,000 living.
	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	
1.4											1.4
1.3											1.3
1.2											1.2
1.1											1.1
											Total
Deaths	3405	3484	3284	2604	2723	2827	2667	2911	2530	2511	29086

CHART I.

Public Health Journal, 2 (March 1911)

and after many lives have been sacrificed by the spread of the disease."[13]

Ontario strengthened its public health act in 1884, requiring that a local board of health be established in each city, village and township and medical officers of health appointed. The new act also provided for a full-time secretary, who served as the province's chief medical officer of health, and empowered the board to investigate the causes of disease and issue regulations to prevent their spread, secure sanitary conditions and establish quarantine, to be enforced by local boards of health. In addition, all plans for water and sewer systems had to be submitted to the Provincial Board for approval.

Ontario served as a model for other provinces in setting up their boards of health over the next two decades. Manitoba passed a pubic health act in 1883, administered by a public health superintendent within the Department of Agriculture, Statistics and Health, and then established a provincial board in 1893. New Brunswick followed with a comprehensive *Public Health Act* in 1887, which established a provincial board of health and divided the province into health districts, while Nova Scotia set up a central board of health in 1889.

13 "Isolation Hospital," *The Sanitary Journal* 6 (1) (October 1883): 16–17

Federal Impetus for Progress

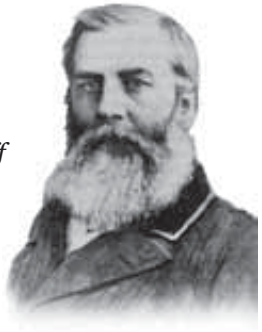
The federal *Census and Statistics Act* was passed in 1879, providing funding for the collection of vital statistics in cities with a population of more than 10,000. In early 1881, a delegation from the Canadian Medical Association met with Prime Minister Sir John A. Macdonald to discuss the "establishment of a bureau of statistics, and the adoption of certain legislation upon sanitary subjects." Macdonald promised "to lay the whole

Peter Henderson Bryce

Public Health Pioneer and First Secretary of Ontario Board of Health

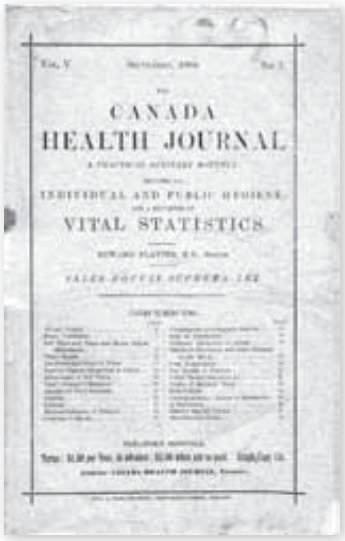
Dr. Bryce was Chief Medical Officer in the federal Department of Immigration and chairman of the organizing committee appointed at the inaugural meeting of the Canadian Public Health Association in 1919. Dr. Bryce was appointed the first secretary of the Provincial Board of Health of Ontario in 1882 and prepared the comprehensive Public Health Act of 1884, which became the model for legislation in other provinces. He was a pioneer in health education in Canada and stressed the necessity of public education if tuberculosis was to be controlled, setting up in 1883 Canada's first public health education exhibit. Upon his retirement from the position of chief medical officer of health of Ontario in 1904, he became chief medical officer of health of the Department of the Interior.

—*Canadian Journal of Public Health*, Vol. 50, No. 1, January 1959



Dr. William Canniff

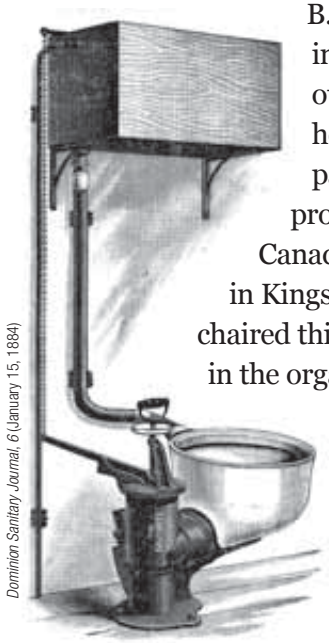
matter speedily before his colleagues"[14] and in 1882, the *Public Health Act* compelled local governments to set up health boards and impose sanitary regulations. In 1883, the vital statistics grants were made conditional upon the existence of an active local board of health and a permanent, salaried health officer in the cities, which provided an incentive for public health investments across the country. Toronto, for example, appointed William Canniff as its first permanent, salaried medical officer of health in 1883, encouraged by federal grants for the collection of mortality statistics to any city with a permanent salaried medical officer of health.


CANADA
HEALTH JOURNAL
VITAL STATISTICS

Public Health Journal, 5 (September 1880)

More broadly, federal sponsorship for statistics collection also sparked the first effort to organize a national public health association in Canada.

Montreal health officer Dr. A. B. Larocque invited the other 10 health officers who were participating in the federal program to meet with the Canadian Medical Association in Kingston in 1883. Playter chaired this meeting, which resulted in the organization of the Dominion Sanitary Association "to enlist the co-operation, with medical men, of all others who feel an interest in public health work in Canada in the education of the people in all matters pertaining to health."



Dominion Sanitary Journal, 6 (January 15, 1884)

Early plumbing, 1884

However, as reported in *The Sanitary Journal,* "on account of the great distance between the different members of the Executive, and the consequent difficulties in the way of meetings," the association dissolved after its 1884 annual meeting in Montreal when not enough members were present to form a quorum.[15]

There was greater success at the local level. The Toronto Sanitary Association formed in the fall of 1884, was overseen by a council of physicians, architects and plumbers and the Associate Editor of *The Sanitary Journal*, Alan Macdougall, as Secretary. Active members were directly connected with sanitary matters and associate members had an interest in furthering sanitary science, and would focus on water purity, sewage, ventilation and sanitation of schools, colleges and other public buildings, and the licensing of plumbers. The Ottawa Medical Society, alarmed by the threat of cholera, focused on sanitary matters in the city, with Playter playing a leading role after he moved to the Ottawa area.

Playter also helped organize a group of MPs and Senators who were medically qualified, along with Ottawa-area physicians for a March 4, 1884 meeting to again consider the question of a Dominion Health Bureau. Playter presented a

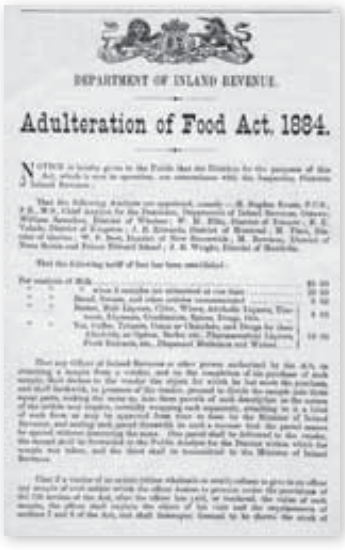
14 "The Public Health: How The Good Work Goes On," *Canada Health Journal* 5 (7) (April 1881): 183

15 "The Dominion Sanitary Association," *The Sanitary Journal* 6 (4) (January 1884): 122; "Canadian Sanitary Association," *The Sanitary Journal* 6 (11, 12) (August-September 1884): 310

detailed plan, in which a Deputy Minister or Chief Sanitary Officer connected with the Department of Agriculture and a Sanitary Committee made up of representatives from each province, and at least 145 Sanitary Officers in each of the electoral districts providing monthly disease statistics to the bureau.

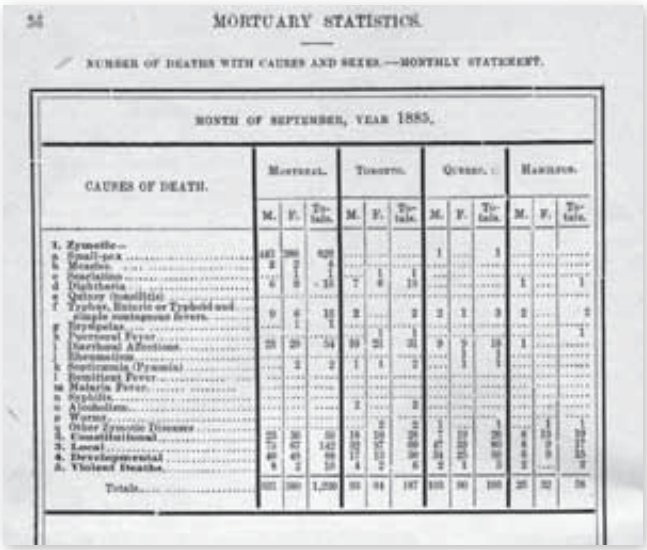
Two weeks later, a delegation of physicians, aldermen and other members of the Quebec Sanitary Association visited Ottawa to give a presentation to the Minister of Agriculture on public health matters. They called for a Dominion Sanitary Exposition sponsored by the federal government, "embracing an exhibition of all appliances pertaining to the public health, which would tend to inform the public generally on this subject of great importance, such as drainage, disinfectants, heating appliances, baths, closets, etc."[16]

Although the Dominion government took some action to address the adulteration of food with the implementation of legislation in 1874 and the act's revision in 1884, the government hesitated to act further on public health and disease prevention. A March 1884 debate in the House of Commons focused on the lack of progress in mortality statistics and some MPs argued that the government was listening too much to the medical profession and questioned the $600 federal subsidy Playter received for 600 copies of *The Sanitary Journal*. Others argued that a similar subsidy should also be given to the new French sanitary publication, *Le Journal d'Hygiène*. By 1887, the federal subsidy to Playter's journal had risen to $1,000, with $400 also provided to the editor of the French journal, which was published by the Hygienic Society of Montreal.


DEPARTMENT OF INLAND REVENUE.

Adulteration of Food Act, 1884.

Man: Canada Home Magazine, 1 (November 1885)


56 MORTUARY STATISTICS.

NUMBER OF DEATHS WITH CAUSES AND SEXES.—MONTHLY STATEMENT.

MONTH OF SEPTEMBER, YEAR 1885.

CAUSES OF DEATH.	Montreal.			Toronto.			Quebec.			Hamilton.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1. Zymotic—												
a. Small-pox	447	380	827				1		1			
b. Measles	2	2	4									
c. Scarlatina		1	1									
d. Diphtheria	6	5	11	1	0	1				1		1
e. Quinsy (tonsilitis)												
f. Typhus, Enteric or Typhoid and simple contagious fevers	0	4	10	2		2	2	1	3	2		2
g. Erysipelas		1	1									
h. Puerperal Fever	23	29	54	10	21	31	0	1	10	1		1
i. Diarrhœal Affections												
j. Dysentery												
k. Cerebro-spinal (Pyæmia)		2	2	1	1	2						
l. Remittent Fever												
m. Malaria Fever												
n. Syphilis												
o. Alcoholism				1		1						
p. Worms												
q. Other Zymotic Diseases												
2. Constitutional	33	30	63	16	10	26	1		1	6	1	7
3. Local	74	67	141	22	17	39	25	7	32	6	3	9
4. Developmental	40	49	89	13	7	20	14	5	19	6	0	6
5. Violent Deaths	6	3	9	4	2	6	2	1	3	2		2
Totals	631	580	1,211	69	64	137	45	16	69	25	5	30

Man: Canada Home Magazine, 1 (November 1885)

The Montreal Smallpox Epidemic, 1885

In the spring of 1885, two Pullman-car conductors infected with smallpox had arrived in Montreal from Chicago. The disease spread within and then beyond the Hotel Dieu hospital. Public health officials tried to enforce vaccination and isolation of the sick but were met with resistance and some were assaulted as they tried to remove corpses from the worst-infected neighbourhoods. On September 28, police from all over the city assembled to disperse an angry mob that roamed the streets while hurling stones.

Ontario had amended its *Public Health Act* to compel the appointment of a local medical officer of health and sanitary officers answerable to the provincial board and if necessary, to appoint local health officers and tax municipal funds to pay

16 "Recent Sanitary Proceedings," *The Sanitary Journal* 6 (6) (March 1884): 182–83

Anti-Vaccinationists

The first law requiring compulsory vaccination passed in Britain in 1853, requiring parents to have their young children vaccinated against smallpox. Popular resistance to vaccination began immediately after, with violent riots in a number of towns. The Anti-Vaccination League spoke out against infringements on their personal liberty and choice. An 1867 act extended the compulsory requirement to age 14 and a number of other books and journals started publishing against vaccination legislation in the 1870s and 1880s in Britain and elsewhere. During this era, French Canadians were generally much more suspicious of vaccination than English Canadians, although anti-vaccination sentiment could be found across the country. French Quebeckers associated vaccination with British surgeons and while many of them lived in filthy, overcrowded tenements in the poorest neighbourhoods of Montreal, they were hostile to public health attempts to help them or to contain the disease. Homeopathic advocates called the vaccinators charlatans and many among the poor saw a conspiracy of the rich and powerful trying to kill their children.[a]

a R.M. Wolfe and L.K. Sharp, "Anti-vaccinationists past and present" British Journal of Medicine 325 (24 August 2002) pp. 430-432; *Canadian Encyclopedia*, http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0007462

them. A smallpox epidemic that struck eastern Ontario in 1884 gave the Provincial Board of Health its first opportunity to manage a serious infectious disease threat. When the head of a hastily assembled local board of health fell ill, residents of nearby towns called in the Provincial Board of Health. Peter Bryce, Secretary of the Provincial Board, ordered schools and churches closed, banned public gatherings, suspended stagecoach service into the community, and posted constables on the roads and railway stations to control the movement of anyone who might be carrying the disease. He also brought in medical students to conduct house-to-house vaccinations, disinfected and fumigated all infected houses, and issued a special pamphlet that attacked the anti-vaccination views of a local practitioner. By January 1885, and after 202 cases and 45 deaths, smallpox was kept from spreading outside the township.

In response to the growing smallpox crisis in Montreal and the "complete absence of any provincial sanitary authority prepared to grapple with the epidemic" in Quebec, the Ontario Board of Health took the extraordinary action of extending its authority across provincial lines. Bryce deployed medical inspectors to Quebec to ensure that all persons and freight boarding trains to Ontario would be free of smallpox infection, enforced through strict inspection, vaccination and fumigation.

In the end, this interprovincial strategy was remarkably effective, limiting smallpox deaths in Ontario to 30 in 1885, while the death toll in Montreal reached 3,157, with a total of 19,905 cases and 5,964 deaths across Quebec that year. The Montreal outbreak would prove to be the last uncontained outbreak of smallpox in a modern city and in its aftermath, Quebec passed a public health act in 1886 and established a provincial board of health in 1887. The Montreal smallpox experience also led to a requirement that all passengers and crews of arriving vessels had to show evidence of smallpox vaccination or submit to vaccination upon their arrival in Canada.[17]

17 http://www.thecanadianencyclopedia.com/PrinterFriendly.cfm?Params=A1ARTFET_E103

Bacteriology and Public Health Laboratories

Canadian Bulletin of Medical History 1989

Dr. Alexander Stewart

In 1882, Louis Pasteur successfully demonstrated his anthrax vaccine for sheep and Robert Koch announced his discovery of "the germ of tuberculosis."[18] No ships stopped at the Grosse Isle quarantine station for inspection that year, as quarantine was being replaced by more pragmatic regulations that reflected the increased speed of ocean shipping and better understanding of infectious diseases, as revealed by bacteriology. In 1886, Dr. Alexander Stewart of Palmerston began producing smallpox vaccine on behalf of the Ontario Board of Health and the Ontario Vaccine Farm was soon shipping to other provinces.

Ontario established the first public health laboratory in North America in 1890. Dr. J.J. Mackenzie was appointed the director of the lab and oversaw its modest quarters, working alone except for the assistance of a young boy to look after the animals and clean glassware. In 1900, Dr. John A. Amyot succeeded McKenzie as director of the Provincial Laboratory and in 1910, he was also appointed part-time professor in the newly created Department of Hygiene and Sanitary Science at the Provincial University.

University of Toronto Archives

Dr. J.J. Mackenzie

Building on the Ontario model, public bacteriological laboratories were established in Quebec and Nova Scotia in 1894 and in Manitoba in 1897. The Ontario laboratory's early work focused on systematic examination of milk and water supplies, tests of samples taken from suspected diphtheria and typhoid cases, employing chemical and bacteriological methods to ensure the safety of public supplies, and investigating rabies outbreaks. By the mid-1890s, provincial public health laboratories also facilitated the inspection of cattle and meat and the serum diagnosis of typhoid cases.

John A. Amyot

First Deputy Minister of the Federal Department of Health and First Chairman of the Dominion Council of Health

Lt.-Col. John A. Amyot was born in Toronto in 1867 and graduated in Medicine from the University of Toronto in 1891. In 1900, he was appointed Director of the Ontario Provincial Board of Health Laboratory, where he served until 1919. Dr. Amyot had a leading role in introducing the filtration and chlorination of water and the pasteurization of milk in Canada. In 1919, Dr. Amyot became the first Deputy Minister of the Federal Department of Health, where he secured the co-operation of provincial and local health authorities throughout Canada. When the Department of Soldiers' Civil Re-establishment and the Department of Health were united in 1928 under the name of the Department of Pensions and National Health, he was made Deputy Minister of the new department. Dr. Amyot exercised a wide influence on public health in Canada for nearly 40 years.

—*Canadian Public Health Journal*, Vol. 25, 1934

18 Peter H. Bryce, "History of Public Health in Canada," *The Canadian Therapeutist and Sanitary Engineer* 1 (6) (June 1910): 290

Sanofi Pasteur Limited, Connaught Campus, Archive

Louis Pasteur's developing and testing a rabies vaccine in France was a key event in the bacteriological revolution. The success of Pasteur's treatment against the otherwise always fatal bite from a rabid animal generated considerable interest. The subsequent founding of the Pasteur Institute in Paris in 1888 was the first in a series of institutions that were built around the world to prepare the new rabies treatment, as well as the diphtheria and tetanus antitoxins that were discovered in the 1890s.

Diphtheria incidence had increased sharply around the world during the second half of the 19th century. Its causative bacterial organism was identified in 1883–84 and the specific endotoxin produced by the disease was recognized in 1888. The New York City Department of Health produced and administered the first supplies of diphtheria antitoxin on the continent in 1895 and a former collaborator of Pasteur's set up the New York Bacteriological and Pasteur Institute in 1889, becoming one of the first companies to produce and market the new antitoxins in North America.

The cost of importing diphtheria antitoxin was the focus of a lively discussion at a meeting of the Ontario Medical Association in 1905. An editorial in the *Canada Lancet* found it remarkable that the discoverer of diphtheria antitoxin, Emil von Behring, received nothing for his discovery, yet commercial manufacturers have made millions out of it, while the public have been "charged a very long price for the serum.... Such a discovery as this should be placed under the highest authority in the government of the country."[19]

19 "Discovery and Commercialism," *Canada Lancet* 39 (5) (Jan 1906): 463–64.

Pushing for Progress

Sanofi Pasteur Limited, Connaught Campus, Archive

Meanwhile, Edward Playter and other sanitary reformers kept working to keep public health issues alive at the federal level in Canada. Playter gave detailed addresses to the Members of Parliament, focused on Canada's death rate, which was 25% higher than in Great Britain and on "the immense money loss in Canada through preventable sickness and deaths."[20]

In 1891, when Prime Minister John A. Macdonald died, Playter wrote that his passing was a significant loss for Canadian public health development. "It is probable that but for him the Journal would not have survived more than a year or two," and indeed a comprehensive Dominion sanitary system "would have been achieved had Sir John Macdonald lived but a year longer."[21]

Health, Disease and Medicine: Essays in Canadian History (Toronto, 1982)

After Macdonald's death, Playter's energies flagged and his struggling journal published its last issue in September 1892. When the Dominion Sanitary Association also failed, Playter left Ottawa and

20 Edward Playter, "An Address to the Members of the Parliament of Canada," *Man: A Public Health Magazine* 1 (6) (April 1886): 183–93; Edward Playter, "On the High Death Rate in Canada and its Prevention: An Address to the Members of the Parliament of Canada," *Canada Health Journal* 9 (5) (May 1887): 109–13

21 "Editorial Notes," *Canada Health Journal* 13 (6) (June 1891): 105; "Playter, Edward," in H.J. Morgan (ed.) *The Canadian Men and Women of the Time: A Handbook of Canadian Biography* (Toronto: W. Briggs, 1898), p. 824

returned to Toronto to re-establish his practice, leaving to others his life's ambition of "a national public health association and an adequate program of public health services, in which the medical profession was intimately involved."[22]


THE DOMINION
SANITARY JOURNAL
The "Cream" of the Sanitary Literature of the World.
THE CHEAPEST SANITARY JOURNAL IN THE WORLD.

Dominion Sanitary Journal, 6 (May 15, 1884)

Doctors pointed to the amount of public money being spent on preventing and stamping out infectious diseases among animals and plants by the Department of Agriculture, while little, if anything, was being spent on preventing or stamping out human diseases. Appearing before Prime Minister Wilfrid Laurier in 1908, the Canadian Medical Association stressed that "we are not making full use of the scientific knowledge of the age in preventing many forms of disease that have been traced to their source." It was estimated that the cost of typhoid in Canada amounted to $5.5 million a year. There were also some 40,000 cases of tuberculosis and 8,000 deaths in Canada annually at an estimated cost to the economy of $8,800 each, or a total of $70,400,000 per year.[23]

The fight for infectious disease prevention and control prompted the creation of a number of national organizations, such as the Canadian Association for Prevention of Tuberculosis which was established in 1901, as well as the expansion of other groups into this sphere of interest. The National Council of Women, for example, dedicated itself to the fight against venereal disease in 1906.

Public education remained fundamental to reformers' public health crusades. While the new bacteriological understandings were embraced by the medical and social elites in Canada, significant numbers of the rural and working classes—most of whom were illiterate—clung to the old beliefs and fatalistic attitudes towards infectious diseases.

Peter Bryce moved from Toronto to Ottawa in 1904 and became Chief Medical Officer of the departments of the Interior and of Indian Affairs, but his efforts to advance public health within the federal government would not result in the same success he achieved in reforming Ontario's provincial system. Dr. Frederick Montizambert,

Frederick Montizambert

Dr. Frederick Montizambert was born in 1843 in Quebec City and was appointed Assistant Superintendent and later as Superintendent of Grosse Isle Quarantine Station. As thousands died in this country from typhus fever and cholera, Dr. Montizambert worked to improve quarantine regulations and became General Superintendent of Quarantine Services of Canada in 1894. He served as Director General of Public Health from 1899 until 1919 and played a leading part in the organization of the St. John Ambulance Association, the Victorian Order of Nurses and the Canadian Tuberculosis Association and the Canadian Public Health Association.

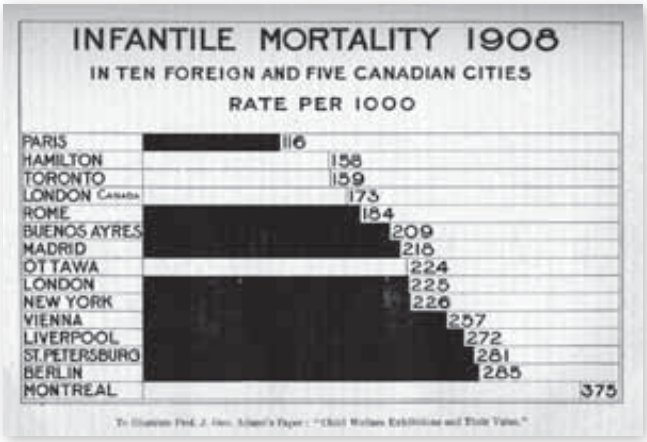
—*Canadian Journal of Public Health*, January 1959

22 Defries, ""Twenty Years of Pioneer Effort to Establish a Canadian Health Association," pp. 365–66; Defries, "Dr. Edward Playter: A Vision Fulfilled," pp. 373–75

23 "Dominion Bureau of Health," *Canada Lancet* 41 (7) (March 1908): 549–50; "A Federal Department of Health," *Canada Lancet* 41 (8) (April 1908): 652

who had worked managing the Grosse Isle quarantine station since 1869, was named Director General of Public Health and Sanitary Advisor to the Dominion Government in 1899. His promotion to an office in Ottawa overseeing contagious diseases in the Northwest Territories was in recognition of his long service, but the lack of an appropriate salary in his new deputy minister position, as he viewed it, also reflected a lack of recognition for the value of his work.[24]

Thanks to these two men as well as a number of others advocating for change, progress was slowly being made in establishing Canada's public health infrastructure, and legal and educational foundations. McGill University endowed a Chair in Hygiene in 1894, while the University of Toronto created a Department of Hygiene in 1896. Canada's first tuberculosis sanatorium, the Muskoka Cottage Sanatorium, had opened in 1887 and in the next century, provincial governments would begin to launch



Public Health Journal, 3 (July 1912)

concerted responses against this disease. In 1904, the Department of the Interior and of Indian Affairs appointed a medical officer to organize and supervise the health of more than 100,000 Aboriginal people across the country.

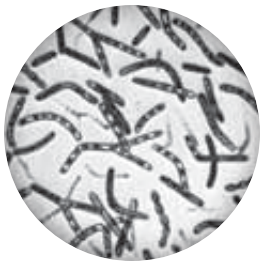
There was also a growing expectation that the bacteriological revolution would continue to bear fruit and quickly produce new wonder drugs against other infectious diseases. But the demise of Playter's journal in 1892 and the failure of the Dominion Health Institute reflected the ongoing challenges for expanding public health in Canada. Playter's retirement and subsequent death in 1909 symbolized the passing of an era.

24 Bilson, "Dr. Frederick Montizambert (1843–1929): Canada's First Director General of Public Health," pp. 393–95

CHAPTER 2: 1910–1919

Transformation and World War I

At the first annual meeting of the Dominion Commission for the Conservation of Natural Resources in January 1910, Peter Bryce, the Chief Medical Officer of the Departments of the Interior and Indian Affairs, urged the Commission to include public health in its focus on preserving and protecting the nation's natural resources. Bryce stressed the need to meet the challenges of the preservation of infant life, the health of school children, tuberculosis, deaths due to industrial causes, and disease prevention measures. Tuberculosis and infectious diseases spread by contaminated water were major concerns and a Commission sub-committee was struck to create a national plan for treatment and prevention of tuberculosis and to develop legislation with the provinces to prevent the pollution of rivers from sewage.[1]



Tubercle bacillus

The sub-committee looked to Saskatchewan, which had become a province in 1905 and had developed progressive public health policies under the leadership of its medical officer of health, Maurice Seymour. Saskatchewan's *Public Health Act*, as

1 Charles A. Hodgetts, "The Canadian Commission of Conservation and Public Health," *Journal of the American Public Health Association* 1 (June 1911): 400–05; P.J. Smith, "Commission of Conservation," *The Canadian Encyclopedia* (Historica Foundation of Canada, 2009) (viewed at http://www.canadianencyclopedia.com)

Maurice Macdonald Seymour

Early Public Health Leader in Saskatchewan

Dr. Maurice M. Seymour was in charge of public health in the new province of Saskatchewan from 1905 and in 1906 organized the Saskatchewan Medical Association. He reacted quickly to local and provincial needs by drafting ground-breaking legislation for municipal doctors, municipal hospitals and free tuberculin testing of cattle. He organized the Saskatchewan Anti-tuberculosis League, hired its first physician and director, and chose the site for the first sanatorium. Under the "Seymour Plan," doctors immunized against diphtheria in September and October, small pox during November and December, and typhoid during January and February. He made public health simple and easy to understand, with such slogans as "Do not spit" and "Swat the fly."

—University of Regina and Canadian Plains Research Centre, 2007

noted in a Toronto *Globe* article, was "so much in advance of similar legislation in other parts of the Dominion" with its measures to protect water supplies and provide care for tuberculosis cases. Saskatchewan had a relatively fragile water supply and its Act required municipalities to submit for approval all sewage construction or improvement plans to a newly created Commission of Public Health. As Commissioner of Public Health, Seymour was directly responsible for the administration of the Act and the Saskatchewan Bureau of Public Health. In contrast, most provinces administered their public health acts through provincial boards of health and a secretary or chief officer of health—a system, the *Globe* noted, that was increasingly recognized as "cumbersome and inefficient, especially in epidemics of typhoid and smallpox."[2]

In addition to more effective sewage management and the appointment of a provincial sanitary engineer, the *Saskatchewan Public Health Act* required the compulsory notification of all tuberculosis cases, so "that patients may be taught to take the proper precautions to minimize the spread of the infection."[3] In response to the growing tuberculosis challenge, specialized hospitals called sanatoriums were being opened by some provinces to provide publicly funded treatment. Canada's first sanatorium opened in 1897 in Gravenhurst, Ontario, followed by others in Manitoba (1910), New Brunswick (1913) and Saskatchewan (1917). Despite high rates of tuberculosis in the Indigenous population, sanatorium treatment was not used widely in Indigenous patients for decades, in a misguided effort to keep federal spending low.[4]

Arthur Goss, photographer, City of Toronto Archives, RG 8-32-315

Rear yard, 512 Front Street East, August 1914

Rabies and poliomyelitis emerged as new epidemic threats at the beginning of the decade. A 1910 rabies outbreak in southwestern Ontario spread public alarm,

2 G.D. Porter, "Pioneers in Public Health," *Canadian Journal of Public Health* 40 (February 1949): 85; "Saskatchewan In Lead," *The Globe* (January 28, 1910): 5

3 G.D. Porter, "Pioneers in Public Health," *Canadian Journal of Public Health* 40 (February 1949): 85; M.M. Seymour, "Health Work in Saskatchewan," *Public Health Journal* 16 (4) (April 1925): 151–53

4 S. Grzybowski and E.A. Allen, "Tuberculosis: 2. History of the disease in Canada," *Canadian Medical Association Journal* 160 (Apr 6, 1999): 1025–28

Helen MacMurchy

Pioneering Interest in Mental Hygiene and Child Welfare

Dr. Helen MacMurchy was one of the pioneers in the development of mental hygiene and child welfare in Canada. In 1906, Dr. MacMurchy was appointed Inspector of the Feeble-minded in the Department of the Provincial Secretary in Ontario and took an active interest in education, public charities and child welfare. In 1920, following the organization of the federal Department of Pensions and National Health, Dr. MacMurchy was selected as the Director of the Division of Child Welfare. She was the first woman ever appointed to the Permanent International Committee of the Congress of Hygiene. Retiring from this office in 1934, she devoted her time to the preparation of a number of scientific articles and books which were a contribution of great value in the advancement of the special fields to which her interest has primarily been given.

—*Canadian Public Health Journal*, Vol. 28, 1937

prompting lobbying by the Toronto Academy of Medicine for the establishment of a Pasteur Institute in Toronto to produce a domestic supply of the Pasteur Rabies Treatment, which had been developed in Paris in the 1880s. The medical journal, *The Canada Lancet,* reported that victims of rabies had to travel to New York City for the treatment, which took 21 days to complete. To meet the immediate need, the Provincial Board of Health provided rabies treatments at special clinics at Toronto General Hospital and The Hospital for Sick Children for a fee of $25 per case to cover the cost of vaccine imported from New York. This program continued until the summer of 1913, when the Ontario Provincial Laboratory began preparing its own rabies vaccine.[5]

Infantile Paralysis: The New Epidemic

Shortly after the rabies scare subsided, the first widespread appearance in Canada of a strange and sometimes deadly disease sparked a wave of concern.[6] In July 1910, a little girl from the Hamilton, Ontario area was taken to hospital with what was thought to be rabies, where she died. It was later discovered that she was a victim of infantile paralysis (poliomyelitis). Rabies and poliomyelitis are both viral diseases that affect the central nervous system and symptoms of the two were frequently confused. The *Toronto Star* reported, "While most of the cases here are children under four years of age, two or three adults are victims.... Some years ago the disease swept over a portion of the States, claiming victims by the hundreds."[7] Public health authorities recognized that infantile paralysis was not a new disease, but a 1912 *Maclean's* magazine article was entitled "Paralysis: The

5 "The Rabies Outbreak," *Canadian Journal of Medicine and Surgery* 27 (4) (April 1910): 222–26; "Rabies in Canada," *Dominion Medical Monthly* 35 (3) (March 1910): 128; R.D. Defries and N.E. McKinnon, "The Rabies Problem and the Use of Rabies Vaccine (Semple) in Canada," *University of Toronto Medical Bulletin* 9 (1929): 8

6 C.J. Rutty, "Do Something! Do Anything! Poliomyelitis in Canada, 1927–1962," Ph.D. Thesis, Department of History, University of Toronto, 1995; C.J. Rutty, L. Barreto, R. Van Exan, S. Gilchrist, "Conquering the Crippler: Canada and the Eradication of Polio," *Canadian Journal of Public Health* 93 (Mar-Apr 2005), special insert

7 "Children are Attacked by Strange Epidemic," *Toronto Star* (August 17, 1910): 1

New Epidemic." Written by child and maternal health authority, Helen MacMurchy, the article said that, "1910 was in a terrible sense a 'wonder year' for epidemic poliomyelitis. In that year it appeared all over the world, as it were."[8]

Indeed, at the 1910 Congress of American Physicians and Surgeons, poliomyelitis received more attention than any other subject. MacMurchy added that the "toll of the victims of tuberculosis grows smaller every year," while polio "now counts its victims by the thousand where it used to count them by the couple." Polio was not like other diseases that struck "the poor, or delicate" and its cause was unknown. MacMurchy's article about this "pestilence which walketh in darkness" asked, "How does it select its victims and where does it strike them that we might protect them from its murderous and cruelly disabling attack?" There was no consensus about whether it was contagious or what could be done to control, prevent and treat it.[9] A noted pathologist told a meeting of the Chicago Neurological Society, "We cannot even diagnose, because the first certain symptom is the paralysis of the patient."[10] Toronto health officials decided to isolate patients in a room in their homes, but not post placards and quarantine their homes, while in Hamilton, Ontario placards were posted. In Canada, only Ontario and British Columbia had designated infantile paralysis as a reportable disease by 1911. An investigation by the Canadian Commission of Conservation canvassed physicians across the country to report the cases and deaths from infantile paralysis and received reports on 658 cases and 46 deaths between November 1, 1909 and October 31, 1910.[11]

The Commission of Conservation organized a special public health conference in Ottawa in October 1910 for provincial and federal health officials to meet with the Commission's new

Charles John Colwell Orr Hastings

Internationally Renowned Medical Officer of Health

Dr. Charles Hastings was Toronto's Medical Officer of Health from 1910 to 1929. He was a crusader in making Toronto the first city in Canada to pasteurize milk. He introduced a safe water supply and established an internationally recognized public health nursing system. Dr. Hastings was a leading pioneer of health education programs, medical and dental inspection in public schools and neighbourhood baby clinics in Canada. Under his direction, the Toronto Health Department expanded from a staff of 27 with one public health nurse in 1910, to a staff of 500 with 114 public health nurses in 1920. Toronto became a model of public health administration in Canada and around the world. The key to this reputation was accurate records, believing that records supply both the direction and justification for radical health programs. His goal for Toronto was to create a Health Department which would "reduce in every possible way unnecessary and preventable disease with its attending suffering and premature death."

—Janice R. Sandomirsky,
Toronto's Public Health Photography

8 H. MacMurchy, "Paralysis: The New Epidemic," *Maclean's* (November 1912): 110.

9 "New Disease A National Peril," *Toronto Star* (October 3, 1910): 7; R.W. Lovett, "The Occurrence of Infantile Paralysis in the United States and Canada in 1910," *American Journal of Diseases of Children* 2 (August 1911): 65–74

10 "Infantile Paralysis," *The Globe* (November 12, 1910): 21

11 "Infantile Paralysis," *The Globe* (June 29, 1911): 5; C.A. Hodgetts, "The Statistics of Infantile Paralysis," *Canadian Medical Association Journal* 1 (November 1911): 1036–39

Public Health Journal, 5 (September 1914)

Prince Arthur William Patrick Albert, 1st Duke of Connaught and Strathearn

Medical Advisor, Charles Hodgetts. Hodgetts focussed on the persistent incidence of typhoid due to contaminated water in Canadian cities. Canada's typhoid death rates exceeded those in the United States, the United Kingdom and most European countries and the Toronto *Globe* reported that Hodgetts declared that it was time "that we were alive to our responsibilities and made haste to put our house in sanitary order."[12] Hodgetts recommended more efficient and federally-enforced legislation, with the cooperation of the provincial departments of health. The conference called for the establishment of a federal council of health, government action to prevent pollution of public water supplies, establishing subsidized federal and provincial tuberculosis sanatoriums and funding for an educational campaign against the white plague (tuberculosis). The conference also recommended the creation of a laboratory to conduct research and manufacture vaccines and antitoxins.

Canadian Public Health Association

On October 12, 1910, at an evening meeting chaired by Peter Bryce, Toronto physicians Duncan MacKenzie Anderson and Lester McDonnell Coulter met with 14 public health officials attending the conference to formally organize the Canadian Public Health Association. Anderson and Coulter had started publishing a new national public health journal in January 1910, 18 years after Edward Playter stopped publishing the *Canada Health Journal*. The *Public Health Journal* was developed and published monthly by the York Publishing Company, which had been established by Anderson and Coulter in 1909.

The new journal's editors directed their efforts towards the creation of the new Association, which they incorporated in Ontario on September 22, 1910, along with Toronto dentist A.J. Harrington, Toronto Medical Officer of Health Charles J.O. Hastings, and T. Aird Murray, who had recently been appointed as a sewage system consultant to the Saskatchewan

George Dana Porter

Leader in Anti-Tuberculosis Movement in Canada and CPHA Charter Member

In 1908, Dr. Porter left the practice he had established in Toronto to devote himself to the control of tuberculosis in Canada. He was known from coast to coast as the leader of the anti-tuberculosis movement, encouraging and inspiring laymen everywhere to organize local anti-tuberculosis societies and to provide sanatorium accommodation for needy patients. He was one of CPHA's charter members and its first honorary treasurer, serving from 1910 to 1914. It was through his interest and financial participation that the Association gained ownership of the *Canadian Public Health Journal (*originally published as *The Public Health Journal*) and he assisted generously in its maintenance.

—*Canadian Public Health Journal*, Vol. 33, 1942

12 "Health Measures," *The Globe* (October 13, 1910): 4

Eugenics

Coined by one of the great men of 19th century science, Francis Galton, the term describes the application of the emerging scientific understanding of genetics to encourage the breeding of those deemed to be worthy of reproducing, such as outstanding scholars and fine athletes, and to discourage perpetuation into new generations of others deemed to be 'unfit' because of low intelligence, mental disorders, or certain classes of chronic illness and disability such as tuberculosis, alcoholism, and 'criminal proclivities.' Enabling laws and regulations to apply eugenics, notably by the practice of 'sterilization of the unfit' were enacted in many enlightened jurisdictions including Sweden, various states in the USA, and Canadian provinces. Some of these laws and regulations remained on the statute books long after the practice of eugenics had been thoroughly discredited by close study of the patterns of health and disease among the aristocracy and the ruling families of Europe, and by the infamous racial purification policies advocated and practised by the Nazi party in Germany in the 1930s. Among the last jurisdictions to erase such laws from the statute books were Sweden and the Canadian province of Alberta; both rescinded their laws in 1970, although they had not been applied so far as is known for many years prior to 1970.
—*John Last*

Bureau of Health. The Association's purpose was to establish professional public health standards, conduct research and provide technical and scientific information. CPHA's objective was "the development of the science and art of general prophylaxis with promotion of social welfare, in judicious conservation of natural resources, popularization of eugenics and more effective national and international co-operation along all lines of public health."[13]

The Canadian Public Health Association's first president was T.A. Starkey, Professor of Hygiene at McGill University, its secretary was Major Lorne Drum, Chief Officer of the Military Laboratory of Hygiene, and its treasurer was George Porter, Secretary of the Canadian Anti-Tuberculosis Association. The Governor General, the Duke of Connaught, served as CPHA's Patron and the Association was granted a federal charter in April 1912. Membership was open to all, as either active or associate members, subject to $3 or $2 membership fees respectively, including a one-year subscription to the *Public Health Journal*.[14] A journal editorial promised that the Association would help overcome the isolation of provincial public health workers. "Everywhere health officers were too often looked upon as necessary evils, like the nuisances they were supposed to abate, rather than as most important elements in the construction of the social fabric of a modern State."[15]

Typhoid

Sanofi Pasteur Limited, Connaught Campus, Archives

Not long after CPHA's initial meeting, the city of Ottawa provided a compelling demonstration that poor sewage control could result in a major outbreak of typhoid. There had been cases of typhoid in the area for several years, but they were largely confined to the poorer areas of the city

13 "Inter Alia," *Public Health Journal of Canada* 1 (9) (September 1910): 460–61

14 14 Minutes, Meeting for Organization of the Canadian Public Health Association, October 12, 1910, Canadian Public Health Association

15 "The Canadian Public Health Association Congress," *Public Health Journal* 2 (November 1911): 504

> *The disposal of sewage should be taken up. The outhouses are a menace in the breeding of flies. Waste is thrown outside the door, making another breeding place for them. This waste could be put in a garbage can and afterwards covered in a heap to make fertilizer. Many septic tanks are being put in today in the most progressive parts of our country, but there are thousands of our farms that still have no way of disposing of sewage except by throwing it out.*
>
> —*Mr. W. Stephen,* Dominion Council of Health minutes*, 1919*

and all but ignored by city officials. In January 1911, typhoid cases suddenly appeared in all areas of the city, leaving 987 stricken and 83 dead by March. Amid considerable alarm and criticism of the local government, Ontario's chief officer of health, J.W.S. McCullough, and the secretary of the Dominion Board of Health, Charles Hodgetts, joined the local health commissioner to investigate. They found sewage-contaminated water from the Ottawa River was entering the city's water supply. There was little action taken on a recommendation to begin a water treatment program as rival water treatment plans from city aldermen with mayoralty aspirations had turned the public health crisis into a political one. When a second epidemic sickened 1,378 and killed 91 in July 1912 McCullough imposed a $100 per day fine on the city.[16]

Cities in North America first began building sewers in the late 1800s. Sewers were originally designed to deposit raw sewage directly into the nearest body of water. Untreated waste washed up on beaches and contaminated the lakes and bays where drinking water was drawn from. The management of sewage and water systems was gradually improving but typhoid from contaminated milk supplies fuelled increased local, provincial and federal action during the 1910s. Cities were the first to organize the control of milk supplies (Quebec City in 1884, Winnipeg in 1885), followed later by some provinces. The Canadian Medical Association appointed a Milk Commission in 1908 to work with local and provincial health boards to investigate milk supply, especially the spreading of communicable diseases such as tuberculosis. Charles Hastings launched an aggressive approach to the issue as Toronto's Medical Officer of Health and in 1911, Ontario passed a series of amendments to its *Public Health Act* and enacted a separate *Milk Act* to strengthen local health board powers and strictly regulate the production and sale of milk in the province. The *Public Health Journal* noted that "Ontario has at last realized the importance of prompt action in State prophylaxis."[17] Milk regulation was also an important part of Manitoba's comprehensive new *Public Health Act* of 1911.

Inspection in Schools

Concerns about the milk supply were part of a growing interest in the physical and mental health of children, which was gradually applied through medical inspection in schools in Canada beginning in 1910. The United States had begun earlier, with the first school physician

16 "Report of the Committee on Public Health of the Commission of Conservation on the Ottawa Typhoid Epidemic," *Public Health Journal* 2 (August 1911): 372–73; Major L. Dunn, "Typhoid Fever: Character of the Recent Epidemic at Ottawa, January 1st to March 18th, 1911," *Public Health Journal* 2 (September 1911): 412–14; "Ottawa Must Act or Province will Impose Penalty," *The Globe* (August 3, 1912): 1

17 "Hygiene and the Ontario Legislature," *Public Health Journal* 2 (April 1911): 170–71

> *It is true that on many farms they do not value milk as a food and the milk is all sent to the creamery and only a very little kept in the home. Frequently the cream is taken from that and the child has only skim milk. There should be a corrective factor and that factor is education. It has proved beyond doubt that no food is equal to milk for children. I would say that 50% of the children born in the country do not get enough milk to drink, where milk is plentiful. I think there has not been given enough attention to the balancing of foods given to the children in the farm communities. The farmer gives attention to the food for his live stock but no attention to that for the children.*
>
> —*Mr. W. Stephen,* Dominion Council of Health minutes*, 1919*

employed in Boston in 1894 and the first school nurses in New York City in 1902. Canadian school inspections began in the Ontario cities of Hamilton (1907), Brantford (1908) and Toronto (1910). British Columbia was the first province to provide medical inspection in schools, conducted by local boards of education. Lina L. Rogers moved from New York to lead Toronto's school inspection initiative in April 1910, marking a growth in demand and prominence for public health nurses. Rogers was soon supported by several nursing assistants, two medical inspectors and a dental inspector. The state of dental health among school children was particularly alarming during this period and initial inspections in Toronto revealed that only 1,864 of 5,850 children inspected had ever used a toothbrush.[18]

The health of children in Indian Residential Schools was even more alarming. Peter Bryce reported in 1907 that the schools were underfunded, rife with disease and lacking proper medical facilities. His examination of survey data over a 15-year period found that between 25% and 35% of students had died, primarily from tuberculosis but also from other diseases, such as measles.[19]

> *Forty percent of the rural school houses are not fit to raise swine in. As far as heating was concerned, it would be nearly noon before the temperature was fit to live in. There were no playing areas. The gospel of Public Health should be preached to the rural districts.*
>
> —*Dr. W. H. Hattie,* Dominion Council of Health minutes*, 1919*

Growth of Public Health Education

Scientific discoveries and preventive medicine became a central element of local and provincial public health disease control strategies. Inspired by major exhibits in the United States and Europe, increasingly elaborate provincial exhibits became a key part of public health education strategies.

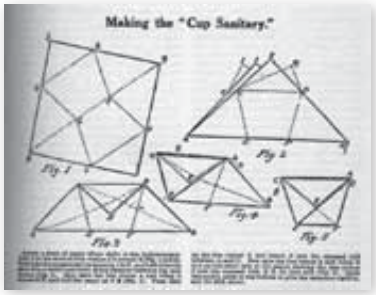
Of particular interest for public health education were a number of specific disease threats that had recently been identified through bacteriological investigations. Houseflies, public drinking cups, and kissing were particular

18 "Inter Alia," *Canadian Therapeutist and Sanitary Engineer* 1 (July 1910): 365

19 M. Sproule-Jones, "Crusading for the Forgotten: Dr. Peter Bryce, Public Health, and Prairie Native Residential Schools," *Canadian Bulletin of Medical History* 13(1) 1996

> *It is a pity the old-fashioned cup or dipper from which all humanity imbibed in a care-free, democratic fashion should have to go. But today, whoever hangs out such a vessel is simply issuing an invitation to a house party for germs. If every public institution, particularly schools, hotels, railway stations and trains would do away with the public drinking cup the percentage of tuberculosis and other communicable diseases would be surprisingly lowered.*
>
> —*Mr. W. Stephen,* Dominion Council of Health minutes*, 1919*

concerns. Microscopic attention to common insects identified flies as "germs with legs" that could contaminate food and household items, leaving a trail of filth and bacteria.[20] To prevent the "massacre of the innocents," people were advised to "screen therefore your doors, your windows and your food against this pilot of pollution. Swat *Musca Domestica* and sweep him from the confines of your home."[21]



Public Health Journal, 2 (July 1911)

The common drinking cup, which was widely used in public parks, schools and railway stations, had been marked by public health authorities as unhygienic and "a conveyor of disease germs sometimes of the most serious type."[22] Science had also revealed the dangers of kissing. An experiment at an international tuberculosis congress in Paris, demonstrated that swabs taken from lips, particularly bearded lips, swarmed with microbes, including germs that caused tuberculosis and diphtheria. A young woman, who volunteered to be kissed for one such experiment, survived, "but had her lips not been so carefully sterilized, she might have become the victim of one of several diseases which could easily have cost her life or have left her an invalid…. Kissing may be nice. Kissing may or may not be naughty—authorities disagree. But kissing is dangerous—in more ways than one."[23]

Newark Evening News, June 1916

Charles Hodgetts, Ontario's chief officer of health and Secretary of the Provincial Board of Health from 1903 to 1910,demonstrated his belief in public education by having a traveling tuberculosis exhibit developed, with charts, maps, photographs, sanatorium models, and demonstrations of the value of fresh air. This exhibit was often set up at fall fairs and Hodgett's successor, John W.S. McCullough, took the idea of a traveling public health exhibit in a more literal direction. He had an exhibit installed in a train car that stopped at railway stations around the province, where materials were displayed and public demonstrations and lectures held.

20 N. Rogers, "Germs With Legs: Flies, Disease, and the New Public Health," *Bulletin of the History of Medicine* 63 (1989): 599–617; F.W. Waugh, "Some Household Insects and Their Neighbours," *Canadian Therapeutist and Sanitary Engineer* 1 (7) (July 1910): 337–42

21 "Swat the Fly," *Canadian Therapeutist and Sanitary Engineer* 1 (6) (June 1910): 312; "That Fly," *Canadian Therapeutist and Sanitary Engineer* 1 (8) (August 1910): 363; Rene Bache, "Massacre of the Innocents," *Canadian Therapeutist and Sanitary Engineer* 1 (8) (August 1910): 405–06; "The Fly War," *Public Health Journal of Canada* 1 (9) (September 1910): 454–56; "Fly, Breeder of Disease, is to be Exterminated," *The Globe* (October 17, 1910): 8

22 "Inter Alia," *Canadian Therapeutist and Sanitary Engineer* 1 (6) (June 1910): 315

23 "The Costly Salute," *Public Health Journal of Canada* 1 (9) (September 1910): 452–54

John W.S. McCullough

Ontario's Long-Serving Chief Officer of Health

As the long-serving chief officer of health in Ontario, Dr. McCullough strengthened provincial public health education and infrastructures and contributed to the provision of essential biological products at prices within reach of everyone in Canada. He promoted public education and set up traveling public health exhibits in a train car that stopped at railway stations around the province, promoting vaccination, venereal disease control and other public health issues. Dr. McCullough pressed for more comprehensive public health legislation, more transparent and efficient local health boards, a comprehensive revision of Ontario's *Public Health Act* in 1912 and a stronger *Vaccination Act*. He developed a set of regulations in 1917 for the Provincial Board of Health to control venereal diseases. In 1923, Dr. McCullough initiated a campaign to advance pubic health in North America, starting with the establishment of competent health departments with an efficient organization overseen by a full-time officer of health.

—*Canadian Public Health Journal*, Vol. 27, 1936

Ontario's public health exhibits set the national standard during this period, with the largest exhibits mounted at the Canadian National Exhibition in Toronto. In 1911, exhibits included "charts for the conservation of vision, the prevention of infant mortality, and models for ventilation," as well as health talks by public health leaders. An elaborate exhibit loaned by the Chicago Health Department portrayed "by means of sleeping dolls and smoke the unhealthy effect of sleeping in a poorly ventilated room." The *Canada Lancet* said, "We hope that this feature of Toronto's great exhibition may be repeated in future years. Knowledge is power. Nowhere is this power of more value than in the fight with disease."[24]

Public Health Journal (January 1916)

Itinerant push cart and food safety

Venereal Disease and Social Hygiene

A subject rarely mentioned at this time was venereal disease, although the *Canadian Medical Association Journal* estimated that in 1916, 50% to 60% of adults would have gonorrhea at some time in their lives.[25] In 1912, the *Public Health Journal* proposed that this serious public health threat could be prevented through sex hygiene education targeted at public school children. The journal had reported the previous year that a number of private schools in the United States had demonstrated the practicality of sex instruction and that the state of Washington made it mandatory. Also, sex hygiene lectures

24 "The Public Health Exhibit," *Canada Lancet* 45 (2) (October 1911): 148; "The Public Health Exhibit of the Ontario Board of Health at the Canadian National Exhibition," *Public Health Journal* 2 (October 1911): 492–934

25 "Legislation for the Protection Against Venereal Disease," *Canadian Medical Association Journal* 8 (April 1918): 355–58; Jay Cassel, *The Secret Plague: Venereal Disease in Canada, 1838–1939* (Toronto: University of Toronto Press, 1987), p. 18

Sanofi Pasteur Limited, Connaught Campus, Archives

at Canadian universities had "caused a notable reduction of immorality among college men in the last five years.... It is either education in the home or education in the streets."[26] News that Oakland, California had opened public schools in the fall of 1911 with lectures and classes in sex hygiene was reported with approval in the *Public Health Journal:*

> There are reactionary and ignorant prudes in Oakland who are blushing violently and noisily and this "destruction of modesty and sense of propriety".... The folly and barbarity of prudish parents is responsible for from 50 to 60 per cent of the inmates of the insane asylums, for half the "specialists" in medicine; for boys, girls, men and women who die, some of them insane, or blind, or deaf, or speechless, or in idiocy.... Sexual ignorance has desolated more homes and ruined more lives than any inherent laxity of morals, and they all decry the persistent prudery that has already wrought such havoc in the rising generation.[27]

The *Public Health Journal* called Ohio's 1912 legislation for education of the young in sexual matters "the most radical step in the direction of social hygiene ever taken by Public Health officials, and it is the initial effort to make practical a theory that is becoming widely accepted as being of paramount importance from the viewpoints of health and morals."[28]

At a presentation to the annual convention of Alberta school trustees, L. Barrow had raised the question of venereal diseases and their relation to the work of the schools, saying "that if children were enlightened as to the causes and the results of venereal diseases, they would know what they had to face and would be on their guard." Barrow's views reflected a growing awareness that the traditional policy of silence and repression in matters of sex hygiene had to end. As "parents are extremely loath to do anything in the matter," it was thus up to school authorities to take responsibility.[29]

An editorial reprinted in the *Public Health Journal* from the *Journal of the American Medical Association* declared, it was "an inherent and unique responsibility" of the medical profession to further this educational work, "and every physician can participate either privately or publicly." A modern social sentiment thus demanded "a new style of treatment and a new point of view in considering venereal disease, and it behooves the physician to be a leader in this great work."[30]

Public Health Journal, 4 (October 1913)

Exhibition

26 "Inter Alia," *Public Health Journal* 2 (March 1911): 135–36

27 "Sense and the Sex Question," *Public Health Journal* 2 (October 1911): 495–96

28 "Ohio State Board of Health and Sex Hygiene," *Public Health Journal* 3 (February 1912): 95

29 "Alberta Health Act and Its Relation to Medical Inspection," *Public Health Journal* 3 (March 1912): 153–54

30 "Education in Sex Hygiene and Prophylaxis," *Public Health Journal* 4 (May 1913): 340–41. See also "Sex Hygiene to be Discussed by Distinguished Speakers at the International School Congress in Buffalo," *Public Health Journal* 4 (June 1913): 380–82; "Venereal Diseases and the Public Health," *Public Health Journal* 4 (September 1913): 530–32

There was a growing public debate about whether school children should be taught about sex at all, however. Citing an inability to add to the workload of teachers, the Toronto Board of Education decided not to introduce sex instruction into schools in 1913. "It is still the general opinion of school men that sex instruction is, to say the least, a doubtful school duty."[31]

Provincial Structures

In the fall of 1911, Ontario's newly appointed chief officer of health, John McCullough, pressed for more comprehensive public health legislation, targeting local health organizations and responsibilities. In 1912, the Ontario government thus implemented a comprehensive revision of its *Public Health Act*, creating 10 health districts (although three in northern Ontario were "left in abeyance"). Each district would have full-time medical officers of health, who would be "paid a reasonable salary fixed by law" and be independent of municipal control, provided they pass a post-graduate course at the University of Toronto's Department of Hygiene. Similar health districts were created in Quebec and Saskatchewan, while Manitoba strengthened its control of infectious diseases and provided free supplies of smallpox vaccine and diphtheria antitoxin.[32]

In the spring of 1913, John A. Amyot, Director of the Ontario Provincial Laboratories and Professor of Hygiene at the University of Toronto, invited John G. FitzGerald to assume the position of part-time Associate Professor of Hygiene and produce the first made-in-Canada supply of the rabies treatment. FitzGerald built a small backyard stable and lab so he could make the antitoxin available at a much lower cost than was being paid for the imported antitoxin. After McCullough expressed Ontario's interest in purchasing the antitoxin, FitzGerald convinced the University of Toronto Board of Governors to establish the Antitoxin Laboratory in the Department of Hygiene with the assistance of Robert D. Defries, the first to graduate with a

Prohibition

In 1901, Prince Edward Island became the first province to prohibit intoxicating beverages and the rest of the country followed suit during the First World War. Alcohol could be purchased through government dispensaries for exceptions, such as scientific, industrial, artistic, sacramental and medicinal uses. Prohibition culminated decades of effort by the temperance movement and much of Canada was "dry" before the war by local plebiscite. However, illicit alcohol was widespread and manufacturing resumed after the war as bootlegging and speakeasies proliferated. Quebec was the first to overturn prohibition in 1919 and rest of the country gradually followed suit in the 1920s, except Prince Edward Island—"the last bastion"— until 1948.

—Canadian Encyclopedia Online

31 31 "Sex Hygiene Not For Toronto Schools," *The Globe* (November 14, 1913): 9

32 "Twenty-Ninth Annual Report of the Ontario Board of Health," *Public Health Journal* 2 (October 1911): 491; "The Amended Ontario Act," *The Public Health Journal* 3 (April 1912): 218–19; "Ontario Health Districts," *Public Health Journal* 3 (June 1912): 349; "Regulations Regarding Health Districts in the Province of Saskatchewan," *Public Health Journal* 3 (May 1912): 291–92; E.M. Wood, "The New Public Health Act as it Affects Provincial Municipalities," *Public Health Journal* 2 (November 1911): 520–22

Diploma in Public Health from the School of Hygiene in 1914. FitzGerald continued to direct the laboratory after enlisting in the military in 1915, where he was assigned to take charge of the Bacteriological Unit at the Camp Niagara. In February 1916, the Ontario Board of Health began distributing the Antitoxin Laboratory's products for free and made it the official source of public health biological products in Ontario, practically eliminating commercial firms competing in the province. With new buildings constructed with money donated to the university by Toronto Distiller, Colonel Albert E. Gooderham, the laboratories were named the Connaught Antitoxin Laboratories after his friend and then former Governor General, and CPHA Patron, the Duke of Connaught.[33]

Ongoing Challenges

After the First World War began in August 1914, the Canadian Public Health Association's annual meeting was cancelled.[34] Physicians and nurses were called into military service in growing numbers and the public health field struggled with limited personnel to manage ongoing challenges, including polio, venereal disease and influenza. Uncertainties persisted about the financial health of CPHA and the *Public Health Journal*. CPHA's annual meetings resumed in 1915, but it was clear that the journal's subscriber base was declining and an effort to expand its readership by including literary articles, poetry and profiles of Canadian artists was unsuccessful. In 1916, Anderson and Coulter gave up their editor positions and left the York Publishing Company. Gordon Bates volunteered to assume the editorship, but

John Gerald FitzGerald

Founder of Connaught Laboratories and School of Hygiene, University of Toronto

Born in Drayton, Ontario on December 9, 1882, Dr. John Gerald FitzGerald graduated from the University of Toronto in 1903. While studying at the Pasteur Institutes in Paris, Brussels and Freiburg, he visualized the possibilities of an antitoxin centre in Canada and then developed Connaught Laboratories, which served as one of the country's most active research laboratories. Another great achievement which lies to his credit is the School of Hygiene at the University of Toronto. He served as a member of the Health Committee of the League of Nations from 1930 to 1936 and gave his time to many national, provincial and local organizations. He was a charter member of the Dominion Council of Health and served on the executive of the Canadian Public Health Association and the Canadian Medical Association. Dr. FitzGerald was for many years a regular attendant at Dominion Health Council meetings and his contributions to their proceedings were greatly valued.

—*Canadian Journal of Public Health*, Vol. 31, No. 8, August 1940

33 James FitzGerald, *What Disturbs Our Blood* (Toronto: Random House, 2010); Christopher J. Rutty, "Personality, Politics and Public Health: The Origins of Connaught Medical Research Laboratories, 1888–1917," in E.A. Heaman, A. Li, S. McKellar (eds.) *Figuring the Social: Essays in Honour of Michael Bliss* (Toronto: University of Toronto Press, 2008), p. 273–303

34 "Lest We Forget," *Public Health Journal* 5 (September 1914): 586; "Our Annual Congress," *Public Health Journal* 5 (October 1914): 634; "Ourselves" and "An Explanation," *Public Health Journal* 5 (November 1914): 682–83

substantive financial support was needed for the journal to survive. At CPHA's annual meeting in September 1917, 10 members led by FitzGerald pledged their personal financial support to keep the journal and York Publishing afloat.

Beginning in July 1916, one of the most severe polio epidemics ever seen developed in the north eastern United States, causing some 27,000 cases and 6,000 deaths. Cases were soon reported north of the border, raising considerable alarm among Canadian public health authorities. McCullough and FitzGerald traveled to Windsor, Ontario to investigate a significant outbreak where 38 cases and one death had occurred. While it was thought to be of a "rather mild nature," a report presented to a conference of Ontario officers of health, described the Windsor polio epidemic as "one of the worst calamities that had ever befallen our city." A strict quarantine was imposed, "thereby quarantining the wager earner. By quarantining these families in such a drastic measure, we were obliged to feed all these people, costing our city an immense sum of money, but money, I dare say, well spent for the protection of our people."[35]

Dominion Director-General of Public Health, Frederick Montizambert, monitored the polio situation from his office within the Department of Agriculture, receiving regular updates from the Superintendent of Immigration, provincial and local officers of health and American doctors and health officials. In mid-July, Canadian quarantine regulations were amended to include polio.

Public Health Journal, 6 (July 1915)

Well Baby Clinic, St. Christopher House, 1915

35 E.J. Durocher, "Clinical Studies of Infantile Paralysis," *Public Health Journal* 8 (June 1917): 141–2

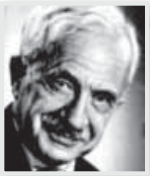
Pressure built on the federal government to do more "to protect the Dominion from invasion of the disease." Federal border inspectors in Kingston, Ontario, began to check for medical certificates for children entering Canada from the United States. While the American crisis abated in October, an alarming polio outbreak in Montreal prompted Ontario to apply provincial border restrictions against Quebec. In early November, Montizambert felt that "all these matters keeping the feelings and fears of our people so keenly alive that I do not think it would be wise to recommend any modification of our regulations for the present."[36] However, all border restrictions were lifted at the end of the month.

Venereal Disease

The threat of venereal diseases became a dominant issue as the war progressed. An estimated 28.5% of Canadian troops were infected by venereal diseases in 1915. Public interest spiked after a report by the British Royal Commission on Venereal Diseases in February 1916 said some 13% of public ward patients at Toronto General Hospital had positive tests for syphilis. In May 1916, the *Public Health Journal* began to dedicate considerable attention to the subject of venereal disease, including a detailed article on medical measures taken by the Royal Navy to prevent syphilis and gonorrhea, based on a paper presented to the Sanitary Inspector's Association of Western Canada.[37]

36 F. Montizambert to W.D. Scott, November 9, 1916, National Archives of Canada, RG29, Vol. 300, file 416-2-13

37 H. MacDougall, "Sexually Transmitted Diseases in Canada, 1800–1992," *Genitourinary Medicine* 70 (1994): 58; H.B. Weston, "Prevention of Venereal Diseases," *Public Health Journal* 7 (May 1916): 285



Gordon Bates

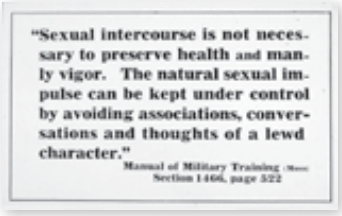
Founder and Director of the Health League of Canada

Dr. Gordon Bates was the long-serving Founding Director of the Health League of Canada and a rough-and-tumble crusader for public health. Alarmed by the syphilis and gonorrhoea rates in Canada during World War I, Dr. Bates became the first Canadian physician to use the words syphilis and gonorrhoea in public speeches. His activities led to pioneer legislation in Ontario for the control of VD as well as the establishment of hundreds of clinics. Dr. Bates' persistent badgering of health authorities led to compulsory pasteurization of milk in Ontario and Saskatchewan, as well as hundreds of municipalities. In 1930, he formed a Diphtheria Toxoid Committee in Toronto to show that diphtheria could be banished by using immunization effectively. Dr. Bates also succeeded in making a national issue of the fluoridation of water.

—*MacLeans*, November 26, 1955

With his new position as Editor of the *Public Health Journal*, Gordon Bates, who was also the Officer in Charge of the Venereal Disease Section at the Base Hospital for Military District Number 2 in Toronto at the time, used the platform to lead a Canadian campaign against venereal disease and what were seen as related threats, such as feeble-mindedness, alcohol and prostitution.[38]

The high incidence of syphilis prompted a delegation of Toronto physicians to take their concerns to the Commission of Conservation in January 1917, in hopes of prompting some federal action. The Commission members were impressed by what they heard about what other countries were doing, particularly Australia's comprehensive 1915 venereal diseases legislation. The Commission asked the Toronto Academy of Medicine to demonstrate that the Canadian medical profession supported legislative action, so Bates chaired a meeting and published an extensive report in the *Public Health Journal*. Recommendations included applying to the general community the same type of efficiency the military used to diagnose, treat and prevent venereal diseases, free diagnostic and treatment services, and a broad public education campaign. Bates' work at the Base Hospital focused on increasingly detailed examinations and case histories of troops being treated in Toronto, tracking down when, where and from whom—whether prostitutes or "pick ups"—they contracted venereal disease from. This investigative work led to "certain conclusions as to the social conditions surrounding infections in Toronto, Hamilton" and particularly Montreal, where "we have the recital of details of the most flagrant and vicious prostitution of such a degrading character that I cannot describe them in this paper." Bates "found no evidence of what might be called organized vice in Toronto," which was "much to the credit of our energetic police department."[39]


"Sexual intercourse is not necessary to preserve health and manly vigor. The natural sexual impulse can be kept under control by avoiding associations, conversations and thoughts of a lewd character."
Manual of Military Training (Non-Section 1466, page 322

Sanofi Pasteur Limited, Connaught Campus, Archives

38 "Obituaries: Gordon Bates," *Canadian Journal of Public Health* 67 (January-February 1976): 74–75; "Dr. Gordon A. Bates: Founder of Health League Made Preventive Medicine His Career," *Globe and Mail* (November 8, 1975): 5

39 Cassel, *The Secret Plague*, pp. 147–50; "Section of State Medicine," *Public Health Journal* 8 (2) (February 1917): 35–51; G. Bates, "The Venereal Disease Problem From the Military Standpoint," *Public Health Journal* 8 (2) (February 1917): 43–45; "The Control of Venereal Diseases," *Public Health Journal* 8 (8) (August 1917): 187–89; G. Bates, "Social Aspects of the Venereal Disease Problem," *Public Health Journal* 8 (November 1917): 287–91

Bates was determined to bring the details of the venereal disease problem to the general public, through newspapers, public lectures, motion pictures and any other medium possible. As his obituary in the *Globe and Mail* noted, "Bates was the first Canadian physician to use the words syphilis and gonorrhea in public speeches. He nagged newspaper editors until they admitted the words to their news and editorial columns."[40] *The Globe* newspaper in Toronto, for example, reported in frank detail Bates' presentation on venereal disease before the 1917 Annual Meeting of the Canadian Public Health Association in Ottawa. One of Bates' most important allies was Ontario's John McCullough, who developed a set of regulations in 1917 for the Provincial Board of Health to control venereal diseases, along similar lines as Manitoba in 1910 and Saskatchewan in 1914. In January 1918, Bates provided McCullough with a platform in the *Public Health Journal* for the Provincial Board of Health to "contribute a few pages of material each month of particular interest to the Medical Officers of Health," venereal diseases dominating the reports during the first year.[41]

Public Health Journal, 8 (November 1911)

In 1918, following the deliberations of the Ontario Royal Commission on the Care and Control of the Mentally Defective and Feeble-Minded and the Prevalence of Venereal Disease, McCullough facilitated the passage of the province's comprehensive *Venereal Disease Prevention Act*, modeled on Western Australia's 1915 legislation. Social hygiene was based on psychiatric and medical theories that linked amoral "abnormal" sexuality with dubious measures of intelligence. Charles Clarke popularized his research from the Toronto Psychiatric Clinic that claimed over 75% of prostitutes were "feeble minded" and that the "immorality" of sexually-active factory girls was linked to their "low mental capacity."[42] Provincial venereal disease legislation focused on syphilis, gonorrhea and chancroid and gave public health the power to detain women suspected of having venereal disease. Those infected were required to seek professional medical treatment through provincially-funded hospitals and the provincial government or its agents were to be the only source of educational literature, a measure aimed at patent medicine vendors and medical quacks.[43]

In the meantime, Bates, along with FitzGerald, had led in the formation of an Advisory Committee on Venereal Diseases for Military District No. 2 in August 1917. With the activities of its various sub-committees extensively published in the *Public Health Journal*, this committee assembled interested physicians, the National Council of Women, the Young Men's Christian Association (YMCA), the Young

40 "Dr. Gordon A. Bates: Founder of Health League Made Preventive Medicine His Career," p. 5, *Globe and Mail* (November 8, 1975): 5

41 "J.W.S. McCullough, "The Provincial Board of Health of Ontario," *Public Health Journal* 9 (January 1918): 35

42 J. Sangster, *Regulating Girls and Women: Sexuality, Family and the Law in Ontario 1920–1960* (Toronto: Oxford University Press, 2001), pp. 87–88

43 McCullough, "The Provincial Board of Health of Ontario," p. 35.; McDougall, "Sexually Transmitted Diseases in Canada, 1800–1992," p. 58; "Regulations of The Provincial Board of Health, Ontario, Respecting Venereal Diseases," *Public Health Journal* 9 (July 1918): 335–41

Women's Christian Association (YWCA), and the military to focus on educational, publicity, and legislative efforts. By the end of 1918, this advisory committee had launched a "nation-wide campaign against vice," although an official Canadian National Committee for the Control of Venereal Diseases would not be established until May 1919.[44]

"Spanish" Influenza

One reason for the delay in setting up a national venereal disease organization was the unprecedented national public health crisis brought on by the Spanish influenza epidemic sweeping across Canada in the fall of 1918. The Spanish flu pandemic of 1918–1919 had little to do with Spain, but was so named because it was first widely reported in that country. The new and unusually deadly influenza strain originated in China in February and likely first spread to France via a group of transient workers. The war provided an ideal environment for the flu to infect, multiply and spread across the globe with remarkable rapidity. It reached the United States in March 1918, appearing in a Kansas military camp. Troop, hospital and civilian ships sailing from England into Grosse Isle, Montreal and Halifax were the main routes of infection into Canada by late June and early July, followed by spread across the country via the railway in the summer. By the time the pandemic eased, at least one-sixth of the Canadian population, predominately young adults, had been stricken and 50,000 died, accelerated by complications from infections such as pneumonia. Quebec and Alberta were the most severely affected provinces. Indigenous communities were especially hard hit by the epidemic. The Department of Indian Affairs reported 3,694 deaths out of a national Indigenous population of 106,000—a mortality rate five times the national average. Influenza was so severe among the Haida living on islands off the north coast of British Columbia that entire settlements were wiped out.[45]

Public Health Journal, 2 (June 1911)

Influenza was not a reportable disease in Canada and most provinces recognized the impracticality and unenforceability of strict quarantine measures. With little understanding of its viral cause—the influenza virus was not isolated until 1933—the severity of the epidemic was not recognized in Canada until late September, when major outbreaks had occurred in most parts of the country and beyond. Local and provincial health authorities, already hampered by significant shortages of medical and nursing, saw many health workers fall ill to the flu. There was little that could be done to prevent, control or treat the disease, despite some misguided efforts to use surgical masks in the community. Torontonians, for example, were advised by their medical officer of health "against doing anything that will

44 J.G. FitzGerald, "The Advisory Committee on Venereal Diseases for Military District No. 2," *Public Health Journal* 9 (February 1918): 49–52; "Conference on Social Hygiene," *Public Health Journal* 9 (December 1918): 551–59; "A Conference on Social Hygiene," *Public Health Journal* 10 (August 1919): 371–78

45 45 M. Humphries, "Lessons From the 1918 Pandemic: Focus on Treatment, Not Prevention," *Globe and Mail* (July 24, 2009), theglobeandmail.com, article1230854; K. Patterson, "Influenza Has a Cure: Affluence," *Globe and Mail* (September 4, 2009), theglobeandmail.com, article1276838

lower their vitality. People should secure proper nourishment, proper rest and sufficient exercise as a preventive."[46] As was noted at a meeting of the American Public Health Association during the height of the epidemic, "in the face of the greatest pestilence that ever struck this country we are just as ignorant as the Florentine were with the plague described in history."[47]

National Coordination

The end of the war in 1918, coupled with the influenza pandemic and the persistent venereal disease threat, brought growing pressure from national organizations with an interest in health for the establishment of a federal department. On the suggestion of military authorities, Prime Minister Robert Borden called a national conference in Ottawa on February 3, 1919 to organize a national Social Hygiene program aimed at controlling venereal diseases. This conference set in motion the political process that led to the drafting of legislation creating a federal department of health. Attending the conference were most provincial officers of health, as well as several provincial and federal cabinet ministers and officials, along with key leaders of the social hygiene movement. The conference's principal resolution said, "It is in the interests of the future health and life of the Citizenship of Canada that there should be immediately established a Federal Department of Health." The conference called for a shared 3:1 federal-provincial funding arrangement for the treatment of venereal diseases, "supplemented by the further development of the machinery necessary to enforce it."[48] On February 20, 1919, the Speech from the Throne formally committed the federal government to create a Department of Public Health.

In early April 1919, this bill was first presented in the House of Commons by N.W. Rowell, who would later be named the first Minister of Health after the bill was passed in late May. It included provisions for "the conservation

The Halifax Explosion

Just after 9 a.m. on December 6, 1917, a French ship loaded with munitions and TNT exploded in the Narrows of the busy Halifax Harbour. Halifax, population 50,000 was bustling with wartime activity when the largest explosion ever seen threw debris and obliterated everything in two square kilometres. About 1,500 were killed by day's end, many trapped in buildings, ensuing fires, or drowned in the tsunami created by the blast. About 9,000 people were injured and emergency personnel worked without stopping until relief came from nearby civilian and military resources. The Red Cross, Salvation Army and Saint John Ambulance shifted their efforts from overseas to the home emergency and local doctors performed surgeries on their kitchen tables.

—www.cbc.ca\halifaxexplosion

Victorian Order of Nurses, Halifax, 1917

46 "Sunshine to Combat Flu, *The Globe* (October 10, 1918): 6

47 "Influenza," *Public Health Journal* 10 (January 1919): 30

48 "Important Conference of Public Health Officers, February 3rd, 1919," *Public Health Journal* 10 (February 1919): 85–87

of child life and child welfare," the medical inspection and care of immigrants, the medical supervision of all methods of transportation under federal jurisdiction (such as the railway), and the "collection, publication and distribution of information to promote good health, and improved sanitation." The bill also created the Dominion Council of Health, made up of the federal Deputy Minister of Health, the provincial chief officers of health, and five appointed members, including representatives from organized labour, women's groups, social service agencies, agriculture and universities. The new federal Deputy Minister of Health, John A. Amyot, was named chair of the Dominion Council of Health, and he began building a new department, which excluded senior officials who had overseen health matters in other federal departments, such as Frederick Montizambert and Peter Bryce.[49]

Sanofi Pasteur Limited, Connaught Campus, Archives

The 1919 annual meeting of the Canadian Public Health Association in Toronto was characterized as galvanizing the new Department of Health into action, as some of the Ottawa authorities were invited to hear CPHA views on fighting venereal disease. A Social Hygiene Conference held in Ottawa in May urged the federal government to provide provincial subsidies for fighting venereal diseases and to remove all restrictions on the importation, manufacture and sale of products used in the treatment of syphilis. These resolutions were quickly acted upon and the federal government permitted the Ontario Board of Health to manufacture arsenical products to treat syphilis and budgeted $200,000 for combating venereal diseases. Of this amount, the Dominion Council of Health recommended $10,000 be kept by the Department of Health for VD supervisory work and $10,000 be granted to the new Canadian National Council for Combating Venereal Diseases "for educational and propaganda work." The balance should be divided among the nine provinces on a per capita basis, "on condition that each province vote a like sum for the same work."[50]

The new shared federal-provincial funding and enthusiasm for implementing a broad social hygiene program for venereal disease control would dominate the Canadian public health agenda during most of the early 1920s. At the same time, fuelled by the devastation of the war, the priorities of the Canadian public health community were driven by urgent demands for improvements in child and maternal health. After a decade dominated by war and plagues, public health leaders entered a new decade seeking to improve the health and education of mothers, sanitary conditions at home and school, and food safety with the support of new public health tools and financing from government.

49 G. Bilson, "Dr Frederick Montizambert (1843–1929): Canada's First Director General of Public Health," *Medical History* 29 (1985): 399–400

50 "News Items," *Public Health Journal* 10 (November 1919): 533

CHAPTER 3: 1920–1929

Modernization and Growth

A new public health order emerged in the aftermath of World War I, represented at the international level by the development of the Health Organization of the League of Nations. In Canada, this new order was symbolized by the Dominion Council of Health (DCH), which was created to develop policies and advise the new federal Department of Health. Initially, the Department was primarily focused on collecting and distributing information, with some lesser effort to develop federal laboratory research capacity.

In some ways, the Dominion Council of Health was more important to the development of public health during the 1920s than the fledgling department it served. Council members tackled a variety of issues together on a national level that had not been possible before. Major issues included increased immigration, industrialization, the beginning of a transition from a rural to an urban society, and fundamental changes in the role of women—as the social and economic foundations of the country continued to evolve.

Miriam Elston, Provincial Archives of Alberta, A19485

From Austria to Alberta, Ruthenian family, 1911

Dominion Council of Health

The Dominion Council of Health was chaired by the federal Deputy Minister of Health and made up of the chief provincial officers of health and representatives of urban and rural women, labour, agriculture and universities, the latter representing academic and scientific expertise in medicine, public health and laboratory research. The Council provided a twice-yearly forum to openly discuss, compare and co-ordinate strategies on the major public health concerns of the day and went a long way to overcoming the practical and political isolation of provincial governments when faced with significant public health challenges.

Sanofi Pasteur Limited, Connaught Campus, Archives

Dominion Council of Health, 1919

In the 1920s, government officials worried about the impact of immigrants in sparsely settled rural areas, especially after an economic depression in 1921. Rural public health resources were limited or non-existent and both prairie and Maritime populations were growing rapidly. The Department of Health developed policies to screen immigrants from continental Europe for diseases before they left for Canada. "Undesirables… suffering from tuberculosis, defective mental conditions or a loathsome disease" were to be deported as soon as possible.[1]

1 Minutes, Dominion Council of Health, June 19–21, 1923

Maternal and Child Health

Provincial Archives of Alberta, 1924, A11807 (left), A11808 (right)

Concerns about the effects of factory work on pregnant women and the health of mothers with small children brought maternal and child health concerns to the forefront, especially since the influx of women in the workforce during World War I. In 1920, the Dominion Council of Health endorsed an international minimum standard for women working in industry before and after childbirth that had been developed at the 1919 International Labour Conference.

Dr. Helen MacMurchy conducted the country's first comprehensive survey of maternal mortality and reported 1,532 deaths between June 1925 and June 1926—a rate of 6.4 deaths per 1,000 live births. MacMurchy also estimated that the maternal mortality rate averaged 5.5 per 1,000 live births between 1900 and 1920, but these rates were under-reported by as much as 25% until the 1930s. Compared to most other industrialized countries, Canada rated poorly in both infant and maternal mortality and the rates varied widely across the country. Rural women had very little, if any, access to obstetrical, pre- or post-natal medical care.[2]

> *"If we make Canada safe for the mother we shall make it safe for the baby."*
>
> *—Dr. Helen MacMurchy, Chief of the Division of Child Welfare, 1923*

2 Wendy Mitchison, *Giving Birth in Canada, 1900–1950,* (2002) Toronto: University of Toronto Press

J.D. Pagé

First Chief of Immigration Medical and Quarantine Services

Dr. J.D. Pagé was born in St. Casimir, Quebec in 1861 and graduated in medicine from Laval University. He practised medicine for some years before joining the federal Government as Medical Superintendent, and later Chief, of the Immigration Hospital at the port of Quebec. With the creation of the federal Department of Health in 1919 and the transfer of Immigration Medical and Quarantine Services to this department, Dr. Pagé was appointed Chief of these divisions. Due largely to his initiative the Overseas Immigration Medical Service was established, enabling the physical and mental status of prospective immigrants to be determined prior to embarking.

—*Canadian Public Health Journal*, Vol. 25, 1934

In 1920, the Canadian Red Cross Society funded a new child welfare section of the Canadian Public Health Association, enabling it "to initiate immediately, a most energetic movement, along educational lines looking to the reduction of infant mortality throughout Canada."[3] The Dominion Council of Health endorsed CPHA's Child Welfare Section as the national focus of voluntary child welfare programs to work with public health departments at all levels of government. The federal Department of Health also established a child welfare division at this time and its first major activity was the publication of pamphlets and brochures on child and maternal health.

Eunice Henrietta Dyke

Comprehensive System of Child and Family Health and Welfare Services

Eunice Henrietta Dyke was born in Toronto in 1883 and entered Johns Hopkins School for Nurses in Baltimore, Maryland in 1905. She started at the Department of Public Health of the City of Toronto in 1911 at a time when public health was extremely susceptible to the efforts of enthusiastic, energetic and pioneering individuals. On Ms. Dyke's recommendation, child welfare services became the nucleus of the Department's child health centres and the Department's nursing staff was organized to provide service on the basis of the family as a unit and decentralized on a district basis—a system that was the first of its kind and which received world-wide acclaim. Ms. Dyke was also credited with establishing links between public health and associated community welfare and social services.

—*Canadian Journal of Public Health*, Vol. 51, July 1960

Ontario had progressive maternal and child health and welfare programs at this time, made possible by significantly higher budget appropriations for the Provincial Board of Health. The amount allocated rose from $50,000 in 1910 to $530,000 in 1920—a sum that exceeded the allocations of all the other provinces of Canada put together. In 1920, the Province hired eight public health nurses, supplemented by another eight provided by the Ontario Red Cross, and organized local community health centres to "undertake maternal and child welfare work

3 "News Items," *Public Health Journal* 11 (May 1920): 233

as well as general public health under the supervision of the district nurse." Every effort was to be made to "arouse general interest in the necessity for pre-natal care and allied problems."[4]

Public health nurses were given primary responsibility for the health and welfare of women and children and Ontario's district nurses were provided with a "motor car" to "readily cover her district in order to persuade individual mothers of the necessity for supervision and expert advice."[5] An inexpensive travelling exhibit in a truck would also be provided on occasion to the district nurse, supplemented by a pediatrician and a general nurse for explaining and demonstrating scientific methods.

> *The particular phase of bed-side nursing, which comes more than any other to the Victorian Order of Nurses, is that of maternity service. In the year 1929, some 64,356 patients were cared for by the Order. Of this number, 14,218 were obstetrical cases, or well over twenty per cent of the total number. The Order thus provides nursing care for approximately six per cent of the births that occur in Canada.*
>
> *—Dominion Council of Health, 1931*

The condition of children and women living in rural areas were a particular concern to the DCH. In addition to a lack of safe and available food, farm women were seen to be working themselves to death. About half of Canada's modest but growing population (from 8.4 million in 1920 to 10 million in 1929) was spread sparsely across large rural areas and the provision of public health services was a challenge. Rural schools received limited medical inspection and home sanitation and plumbing were usually poor or non-existent. While outdoor privies threatened groundwater supplies, most farmers could not afford to install modern septic tanks and indoor plumbing. Many rural communities also were excluded from the construction of more efficient and safe water and sewage management systems undertaken by cities and towns during this decade.

Public Health Nurses

In 1920, the Dominion Council of Health expressed dismay about "the revelation of the fact that there is a deplorable scarcity of nurses in every province of Canada."[6] An increased demand for nurses began in World War I and continued well into the 1920s.

Manitoba established the first provincial public health nursing service with five nurses in 1916 and by 1922, had 53 working around the province. British Columbia appointed its first public health nurse in 1917, followed by Alberta in 1918 and Saskatchewan in 1919. The western provinces focused on child health stations in the major cities and rural municipalities and conducting home nursing classes.[7]

4 J.W.S. McCullough, "An Era of Public Health Progress," *Public Health Journal* 11 (July 1920): 293–300

5 "Child Welfare in Ontario," *Public Health Journal* 11 (July 1920): 336; J.J. Middleton, "Health Promotion and Disease Prevention," *Public Health Journal* 12 (January 1921): 15–23

6 Minutes, Dominion Council of Health, October 25–26, 1920

7 Elizabeth Russell, "Public Health Nursing in Manitoba," *Public Health Journal* 16 (December 1925): 589–92; F.C. Middleton, "The Nursing Medical and Hospital Problem in the Rural West," *Public Health Journal* 10 (July 1919): 297–308

Dalhousie University in Halifax offered the first substantive public health nursing course in February 1920, followed shortly thereafter by the University of Toronto, McGill University, the University of Western Ontario, the University of British Columbia (UBC), and the University of Alberta. Public health nursing at UBC was a supplement to the baccalaureate in nursing program it had established in 1919, the first such nursing degree program in the British Empire.

The universities required financial assistance to develop public health nursing courses and to attract and support students. In 1920, the Ontario Division of the Canadian Red Cross provided full funding for the establishment of a Department of Instruction in Public Health Nursing at the University of Toronto in connection with the Faculty of Medicine and the Ontario Red Cross, which offered 10 one-year scholarships to graduates of recognized schools of nursing.[8]

Full-Time Health Units

Canada's first full-time county health unit was created in Saanich, British Columbia, in 1921, although many urban areas had full-time health departments staffed by well-qualified, full-time medical officers of health. Small towns and rural areas still depended on part-time officers of health and limited infrastructures in the 1920s and the rural officer of health was usually a busy private physician. Many lacked the time, interest and professional qualifications to be effective public officers of health but there simply was not enough funding available from the local tax base in rural areas and smaller communities to support a full-time public health organization.[9]

In 1923, Ontario's chief provincial officer of health, John McCullough, initiated a campaign to advance pubic health, starting with the establishment of competent health departments

Hibbert Winslow Hill

Pioneering Work, Authorship and Teaching in Bacteriology

Dr. Hibbert Winslow Hill was born in Saint John, NB in 1871 and was the first bacteriologist to serve in a full-time capacity in Canada and was one of the pioneer epidemiologists in the United States. He was the author of *New Public Health, Sanitation for Public Health Nurses,* and *The New Hygiene,* all of which expressed his keen, critical evaluation of existing public health methods. During his residency in Boston from 1898 to 1905, he served as Director of the Boston Board of health Laboratory and taught bacteriology at Harvard Medical School. In 1912 he became Director of the newly established Institute of Public Health in the University of Western Ontario, London, and in 1925, accepted the appointment of Director of Laboratories of the Vancouver General Hospital and Professor of Bacteriology and Nursing and Health in the University of British Columbia.

—*Canadian Public Health Journal*, Vol. 26, 1935

8 E. Kathleen Russell, "Special Training For Public Health Nurses," *Public Health Journal* 12 (December 1921): 543–45; Susan M. Duncan, Beverly D. Leipert and Judy E. Mill, "'Nurses as Health Evangelists'? The Evolution of Public Health Nursing in Canada, 1918–1939," *Advances in Nursing Science* 22 (1) (1999): 40–51; "University Course in Public Health Nursing Established in Ontario," *Public Health Journal* 11 (September 1920): 431–32

9 "Every Doctor a Health Officer," *Public Health Journal* 16 (July 1925): 348–49; J.W.S. McCullough "Progress in Public Health," *Public Health Journal* 16 (August 1925): 367–70

Provincial Archives of Alberta, A11813

On the job safety, 1924

with an efficient organization overseen by a full-time officer of health. In 1924, he focused on promoting the concept of full-time health units at the district or county level, which he saw as "the greatest public health need in Canada" and pressed the issue as often as he could, to the point of apologizing to the Dominion Council of Health for "hammering away at it for the last 10 years." Substantial financial commitments provided by the Rockefeller Foundation were critical, as federal funding for McCullough's campaign never materialized.[10]

Quebec was the second province to create a full-time county health unit in 1926 and more populated and developed county structures facilitated the efficient establishment of county health units, with 23 established by the end of 1930. Quebec had created a hygiene council in 1887 but invested very little in this body and although the province already had 876 municipalities by 1891, they did not begin to provide public health services until the 1920s. From that point on, public health services were delivered by the counties and administered and directed centrally by the provincial government. Athanase David was appointed provincial secretary and registrar in 1919 and created a division of public assistance in 1921 and a division of provincial hygiene in 1922. He named Dr. Alphonse Lessard to lead both and the two essentially ran a provincial ministry of health under the auspices of the Secrétariat de la Province.

Quebec's public assistance division was responsible for administering provincial grants for hospitals and other charitable establishments, including the care of the indigent. The Service provincial d'hygiène replaced the Conseil d'hygiène

H.E. Young

Effective Leadership in Public Health in BC, Canada and the United States

As Dean of Canadian officers of health, Dr. H.E. Young entered the Legislature of British Columbia in 1906 and was appointed Minister of Education and Provincial Secretary. The rapidly developing Provincial Board of Health claimed the interest of Dr. Young and in 1916 he was appointed Secretary of the Board of Health and Registrar General of Vital Statistics. Because of his keen interest in education, British Columbia was the first province to provide a system of school medical inspection. Dr. Young organized the first county health unit in Canada at Saanich in 1921 and directed the first public health nursing service in Canada. It is said that the Victorian Order of Nurses, the Canadian Welfare Council, the Health League of Canada, the Canadian National Committee for Mental Hygiene all owe a debt of gratitude to him for his interest and support.

—*Canadian Public Health Journal*, Vol. 29, 1938

10 J.W.S. McCullough, "Full Time Health Officers," *Public Health Journal* 15 (Match 1924): 106; J.W.S. McCullough, "Full-Time Health Officers," *American Journal of Public Health* 14 (March 1924): 188–92; Minutes, Dominion Council of Health, December 11–13, 1923; J.W.S. McCullough, "The Greatest Public Health Need of Canada," *Public Health Journal* 16 (April 1925): 171–74

and the division quadrupled public health spending between 1922–23 and 1935–36, focusing on VD, TB and childhood diseases. As health units spread across the province, administered at the county level, the province also began building TB sanatoriums in 1924, an initiative that had until then been left to the private sector.[11]

Saskatchewan, with almost fully rural conditions, took a different approach by providing free consultative health clinics. As Deputy Minister of Health Maurice Seymour told the June 1928 meeting of the DCH, "the province of Saskatchewan covers a very large area, and it is very difficult for a great many of the people to obtain the necessary medical assistance, and it is very difficult for a great many to pay for that assistance after they have obtained it." Saskatchewan, Manitoba and Alberta amended provincial health legislation enabling municipal councils within a county to work together to request provincial funding to support a unit.[12]

Alphonse Lessard

Developed and Demonstrated the Value of Full-Time Health Units in Quebec

Dr. Alphonse Lessard was intimately associated with the development of the full-time health unit movement in Quebec. On assuming the direction of the Provincial Bureau of Health in 1922, he gave earnest consideration to improving health administration. On his retirement in 1937, Dr. Lessard saw the fruition of much of his efforts through the provision of travelling tuberculosis diagnostic clinics, enlarged sanatorium accommodation, an effective program of venereal disease clinics, and greatly reduced death rates from typhoid fever and diphtheria. This demonstration of the value of full-time health services provided by qualified personnel meant much in the development of public health in Canada.

—*Canadian Public Health Journal*, Vol. 29, 1938

Services for Indigenous Communities

Glenbow Museum, PD-341122b

Children at residential school, 1924–25

Indigenous communities also had very limited public health services. As it is today, the federal government was responsible for health promotion and protection for Canada's Aboriginal peoples, but few services were provided at this time. The Indian Health Service did not begin to develop until 1927, when Dr. E. L. Stone succeeded Dr. Peter Bryce as Medical Superintendent General. Bryce had been an outspoken critic of the federal government's failure to provide health care and services for First Nations and his persistent advocacy effectively ended his career in the federal public service. Remarkably high rates of tuberculosis

12 F.C. Middleton, "Full-Time Health Districts in Saskatchewan," *Canadian Public Health Journal* 20 (March 1929): 140–47; M.R. Bow and F.T. Cook, "The History of the Department of Public Health of Alberta," *Canadian Public Health Journal* 26 (August 1935): 395; Ross Mitchell, "The Development of Public Health in Manitoba," *Canadian Public Health Journal* 26 (February 1935): 68; Norman MacL. Harris, "Some Thought on the Organization and Progress of Public Health in Canada," *Canadian Public Health Journal* 20 (August 1929): 381–8

in Indigenous communities became more publicly known in the mid-1920s, when the Canadian Tuberculosis Association undertook a two-year study of coast and interior bands in British Columbia on behalf of the Department of Indian Affairs.[13]

Provincial Archives of Alberta, A11821

Provincial Archives of Alberta, A11819

The first substantive federal effort to provide health services to Indigenous people in the North began in 1922 with the appointment of Dr. L.D. Livingston as Medical Officer for the Northwest Territories and Yukon Branch of the Department of the Interior. Catholic and Anglican missionaries operated small northern hospitals, often duplicating their efforts in the same area, much to Livingston's annoyance. He also objected to the building of hospitals to serve the very sparse and nomadic northern Indigenous population. Instead, he established a "medical headquarters" in Pangnirtung in 1928, incorporating a small Anglican hospital there. A second was established in Chesterfield Inlet in 1930 as an administrative base for the medical officers under his direction and for out-patient and limited in-patient services.[14]

Venereal Disease

Provincial Archives of Alberta, A11823

Stopping the spread of venereal diseases (VD) became a national preoccupation after the First World War. The deadly impact of Spanish influenza and tuberculosis among Indigenous people contributed to a post-war effort to keep VD from spreading to Indigenous populations in the Arctic. Syphilis had spread from contact with early European explorers in the North, but Deputy Health Minister Amyot stressed that "the protection has got to be not to allow anyone up there, except those who are free from Venereal Disease."[15]

VD prevention and control were driven by the concept of social hygiene, which emphasized the need for "normal" marital sexual activity as opposed to the "abnormal" extra-marital sexual relations, which were considered the root of venereal diseases. Canada's VD campaign was the first shared federal-provincial health program. The federal government provided $200,000 annually and by 1922, 52 venereal disease clinics were established in every province except Prince Edward Island, providing free, compulsory treatment. Physicians were required to report confirmed cases but carelessness or ignorance of the provincial reporting regulations tended to limit this in practice.[16]

13 Megan Sproule-Jones, "Crusading for the Forgotten: Dr. Peter Bryce, Public Health, and Prairie Native Residential Schools," *Canadian Bulletin of Medical History* 13 (1996): 199–224; "Tuberculosis Study Among the Indians," *Canadian Public Health Journal* 19 (May 1928): 241–42

14 G. Graham-Cumming, "Northern Health Services," *Canadian Medical Association Journal* 100 (March 15, 1949): 526–31

15 Minutes, Dominion Council of Health, May 17–19, 1920; Pat Sandiford Grygier, *A Long Way From Home: The Tuberculosis Epidemic Among the Inuit* (Montreal and Kingston: McGill University Press, 1994), pp. 55–65

16 "Social Hygiene," *Public Health Journal* (12 (September 1921): 427–8; "The Campaign Against Venereal Diseases," *Public Health Journal* 11 (March 1920): 146; R.R. McClenahan, "Syphilis and Gonorrhoea from the Public Health Point of View," *Public Health Journal* 11 (April 1920): 177–80

Police Powers

An unfortunate mistake of public health practice still happens occasionally: exercise of "police powers." We see this nowadays only rarely, for instance when a sexually promiscuous person knowingly transmits HIV disease, is arrested, charged and imprisoned. Nobody seriously objects to this except the HIV positive individual and a few fringe civil libertarians. But in the early 20th century the police powers of local public health services were very widely used in a way that tarnished the image of public health quite seriously. We would nowadays regard it as a serious abuse of power. For instance, public health officials had warrants (like police search warrants) to enter private homes and seize children who were, or were thought to be, contacts of contagious diseases such as diphtheria and typhoid fever. In that way, public health acquired an image of heavy-handed authoritarianism that in some communities with long memories it is only now beginning to lose.

—John Last

The Canadian National Council for Combating Venereal Diseases (renamed the Canadian Social Hygiene Council in 1922) was a voluntary organization largely responsible for implementing the VD campaign in most provinces and major cities. Speaking tours were sponsored by local Council branches and featured public health officials and celebrity speakers. A popular men-only VD exhibit was shown at Ottawa's Central Canada Exhibition in 1923, with life-size wax models procured from France, "copied from life in wax and painted by artists to represent cutaneous lesions of syphilis and gonorrhea." A similar exhibit for women only was later held in a less conspicuous location in downtown Ottawa.[17]

In the 1920s, the Council called for sex and moral education for children, social and athletic clubs, the control of alcohol, custodial care for the "feeble-minded" and the supervision of dance halls and other public places. Stopping the spread of VD required a new attitude towards male sexuality, recognizing "that sex indulgence is not essential to good health, and that venereal disease resulting from prostitution was a great menace to the individual, community and nation." VD Council president and *Public Health Journal* editor Gordon Bates called on readers "to help in a crusade against the literary scavengers and scandal mongers whose publications pollute the atmosphere of our newsstands and the minds of our young people."[18]

The diagnosis of venereal diseases was a challenge for public health laboratories and compulsory treatment and the deprivation of individual liberty required a level of precision that some felt was not yet possible. The legal community became concerned about the "tremendous power" given to medical officers

17 "Ottawa Social Hygiene Council," *Public Health Journal* 14 (November 1923): 506–09; "Report of Annual Meeting Ottawa Social Hygiene Council," *Public Health Journal* 15 (March 1924): 115–16

18 "Report Adopted and Presented to the Conference by the Section on Venereal Diseases," *Public Health Journal* 11 (April 1920): 158–59; Gordon Bates, "Essential Factors in a Campaign Against Venereal Diseases," *Public Health Journal* 12 (September 1921): 385–96; Rachelle S. Yarros, "The Prostitute as a Health and Social Problem," *Public Health Journal* 10 (January 1920): 607; "Pernicious Literature," *Public Health Journal* 14 (November 1923): 529–30

of health. In a 1922 *Public Health Journal* article, Toronto Assistant Crown Attorney J.W. McFadden wrote that, "what was intended to be treated as a disease is treated as a crime.... The British people did not go so far. All they did was set up clinics and afford free treatment."[19]

Charitable Organizations

In addition to the VD campaign, voluntary health organizations and international charities helped fund the training of public health nurses, strengthened university infrastructures and facilitated the creation of full-time county health units. The Canadian Red Cross was of particular importance in providing public health training and services on the east coast. In Prince Edward Island, where there was no provincial health board or department, the Canadian Red Cross assumed responsibility for delivering all public health services, with most of the work conducted by public health nurses. Metropolitan Life and other life insurance companies sponsored a range of local initiatives and studies, while the Rockefeller Foundation supported public health education in Canada and around the world.

The Canadian Public Health Association, meanwhile, struggled with its finances and with finding a national focus, as competing voluntary organizations with specific public health interests developed. CPHA President and New Brunswick Minister of Health, W.F. Roberts, downplayed doubts about the public health's field ability to sufficiently support CPHA, while stressing the need to find organizational efficiencies. An Advisory Council for better co-operation with other voluntary organizations was formed, including representatives of the Canadian Red Cross, the Victorian Order of Nurses, the Canadian Medical Association, the Canadian National Council Combating Venereal Diseases, the Canadian Social Hygiene Council, the Canadian Association for the Prevention of Tuberculosis, the Independent Order of the Daughters of the Empire, and Women's Institutes.

Despite a resolution for CPHA to hire a full-time Executive Secretary to administer the Advisory Council and establish affiliate provincial or district public health associations, the Association could not afford to implement this or even to hold an annual meeting in 1924. At the 1925 CPHA annual meeting in Montreal, a renewed initiative was launched to develop "alternate proposals for the future of the Association" and the *Journal of Public Health*. CPHA's leadership considered becoming a part of the American Public Health Association but at the 1928 annual meeting in Winnipeg,

Arthur Dicaire

Pioneer in Sanitary Inspection and Hygiene

Mr. Arthur Dicaire of Lachine, Quebec became the first person to receive the Certificate in Sanitary Inspection (Canada). He received Certificate #1 in October, 1935. Born in 1886, he began his public health career in 1914 with the Lachine Hygiene Department and obtained official qualifications in Milk Testing and Plumbing. He was an Associate with St. John's Ambulance for 24 years and had excellent references from the medical establishment in Montreal, Quebec City and Lachine.

—Tim Roark, Historian, Canadian Institute of Public Health Inspectors

19 R.H. Mullin, "The Role of the Laboratory in the Control of Venereal Diseases," *Public Health Journal* 11 (September 1920): 389–95; J.W. McFadden, "Law and Morality," *Public Health Journal* 13 (March 1922): 97–105

Canadian Red Cross

The Red Cross movement in Canada was founded by George Sterling Ryerson, who organized a Canadian branch (Toronto) of the British Red Cross Society in 1896. The federal government passed the *Canadian Red Cross Society Act* in 1909, making the Society responsible for providing volunteer aid in Canada. During World War I, the Canadian Red Cross raised $35 million for overseas relief and set up outpost hospitals in isolated areas of Canada after the war. During World War II, the Canadian Red Cross contributed volunteer services and $80 million in goods and money.[a]

the membership renewed its commitment to continue CPHA and "develop it into an effective professional society" and conduct various public health studies. CPHA assumed full ownership of the journal, with its Executive Committee responsible for business management and Robert D. Defries responsible for editing it, with new professional focus on scientific content and accuracy. In January 1929, the journal was re-named the *Canadian Public Health Journal*.[20]

Lapses in Oversight: Smallpox and Typhoid

Persistent outbreaks of typhoid and smallpox demonstrated unacceptable lapses in public health oversight and highlighted a longstanding neglect by some local governments. Anti-vaccination sentiments among some members of the public and the medical profession were often reinforced when physicians improperly stored or administered vaccines. When a smallpox outbreak occurred in the Toronto area and resulted in 33 deaths in 1920, city authorities hesitated to carry out compulsory vaccinations. As a result, the United States required proof of recent smallpox vaccination in order to cross the border, and similar quarantine restrictions were imposed on anyone from Toronto entering Manitoba and Quebec.

Mona Gordon Wilson

Dedicated Nurse and Pioneer in PEI Health

After Mona Gordon Wilson took her nurse's training, she volunteered for duty in WWI in France, Siberia, Montenegro and Albania. She then set off for Canada's smallest province where she became the moving spirit behind the development of its public health program. When PEI's Department of Health was formed in 1922, Ms. Wilson was the Chief Red Cross Nurse. She organized the Junior Red Cross as an in-school aid for the development of better health and evolved a project for the treatment of handicapped children. Ms. Wilson inaugurated clinics for immunization and smallpox vaccination, developed the school health program, health education, and arranged for the first dental hygienists to receive training. In 1940, Ms. Wilson was given a leave when she was requested by the Canadian Red Cross to serve as its Commissioner in Newfoundland.

—*Canadian Journal of Public Health*, Vol. 51, July 1960

20 "Canadian Public Health Association: Annual Meeting, St. John, N.B., June 7, 1922," *Public Health Journal* 13 (July 1922): 303–08; "Canadian Public Health Congress," *Public Health Journal* 14 (July 1923): 334–36; "Report of the Fourteenth Annual Conference of the Canadian Public Health Association," *Public Health Journal* 16 (June 1925): 287; R.D. Defries, "The Canadian Public Health Association, 1910–1956," *Canadian Journal of Public Health* 48 (January 1957): 39

Ontario History (December 1983)

Anti-vaccination sentiments

Despite pressure, Ontario's chief officer of health, Dr. John McCullough, refused to enter into a debate with anti-vaccinationists, trusting the public's ability "to judge fairly in the matter." The epidemic in Toronto eased after 200,000 voluntary vaccinations were given, while a more severe smallpox outbreak in Windsor, Ontario in 1923–24 resulted in a mortality rate among the unvaccinated of 71% of the reported cases. No one who had been vaccinated over the previous 12 years contracted the disease and no one who had ever been vaccinated died in Windsor. When the emergency was over, local health officials concluded, "the value of vaccination as a means of prevention has been proven as never before."[21]

A major typhoid epidemic in Cochrane, Ontario in March 1923 and another in Montreal four years later illustrated other lapses in public health oversight. In Cochrane, typhoid-contaminated sewage entered the water supply, resulting in more than 800 cases and 50 deaths among a population of 3,400. The Provincial Board of Health provided engineers, general and public health nurses, as well as $20,000 to help the town. The Montreal typhoid epidemic was caused by contaminated milk and left more than 5,000 stricken and 533 dead. Public health authorities were struck with "amazement that such a situation could possibly develop in a modern civilized city," and how it reinforced persistent concerns about that city's ability to protect public health.[22]

City officials were the main target of blame, for failing to enforce a milk pasteurization by-law. New York City's Health Commissioner, in assessing the epidemic, paid high tribute to the work of Montreal's officer of health, in his attempts to combat the epidemic, noting that Dr. Seraphim Boucher was hobbled by insufficient power vested in the civic health officials and insufficient salaries for hiring and retaining qualified public health workers. The severity, scale and economic

Seraphim Boucher

Advanced and Developed Montreal Public Health

When Dr. Seraphim Boucher first entered Montreal's Department of Health, the budget was small, the staff inadequate, and the activities limited largely to sanitation. When he retired as Director in 1938, the City had a highly efficient Department with activities in every field of public health. Montreal's general death rate had dropped in 1936 to 10.2 per 1,000, from 21.5 in 1913. The infant mortality rate when he assumed office was 215 per 1,000 and down to 84 on his retirement. Such results stand as records of his achievements. Dr. Boucher was one of the founders of Montreal's Société Médicale and later served as Registrar of the College of Physicians and Surgeons of the Province of Quebec. He established the first infant health clinic in Montreal in 1901 and served on numerous Canadian and international commissions.

—*Canadian Public Health Journal*, Vol. 29, 1938

21 Provincial Board of Health of Ontario: Lessons From the Windsor Outbreak of Smallpox," *Public Health Journal* 15 (March 1924): 134–36; R.R. McClenahan, "Comments on the Recent Smallpox Epidemic in Windsor and Vicinity," *Public Health Journal* 15 (June 1924): 263–66

22 "Typhoid in Montreal," *Public Health Journal* 18 (March 1927): 149–50

Joseph Albert Baudouin

Advanced Public Health in Montreal and Established Vaccine Research Centres

Dr. Joseph Albert Baudouin became Medical Officer of Health of the Town of Lachine in 1909. In 1927 he became President of La Société Médicale of Montreal and worked to lower the infant mortality rate in Quebec by relating public health service with local parish groups. He also founded a training school for public health nurses, which was later integrated with the School of Hygiene of the University of Montreal. Under Dr. Baudouin's direction, Montreal established several centres for experimental research in methods of immunization, particularly for the prevention of tuberculosis and diphtheria, that led to his invitation to represent Canada at an international congress on BCG in 1950.

—*Canadian Public Health Journal*, Vol. 50, 1959

impact of the 1927 typhoid in Montreal prompted Montreal's Anti-Tuberculosis and General Health League to invite an "unprejudiced group of public health experts" and unaffiliated business and professional men to undertake a thorough investigation of Montreal's health needs.[23]

The ground-breaking 1929 Montreal Health Survey Report reflected a sophisticated and early understanding of the importance of using statistics and placing public health within its social context. The survey compared Montreal's mortality and municipal health expenditures with those of 12 American cities and Montreal clearly ranked last. Its per capita health expenditure was 39¢, compared to Pittsburgh, the highest at $1.18, and Philadelphia, the lowest of the U.S. cities at 50¢. The report called for a reorganization of the Department of Health, a budget up to 91¢ per capita to properly support school health, laboratory and communicable disease control services, strict enforcement of food and milk by-laws and better co-operation with voluntary health organizations. The recommendations were unanimously endorsed by Montreal's City Council and most implemented with minimal delay. Some reforms, such as hiring more sanitary inspectors, public health nurses and a bacteriologist, had been made before the survey was done. A *Canadian Public Health Journal* editorial described the city's strong endorsement of the survey report as "an event of importance," while cautioning that "a great deal remains to be done."[24]

Outbreaks of typhoid and other enteric diseases exposed weaknesses in sanitary controls of milk supplies. These outbreaks and the persistent threat of milk-borne tuberculosis enflamed the debates between advocates of raw milk and those calling for compulsory pasteurization. Public health leaders put raw milk advocates in the same category as opponents of vaccination, compulsory school attendance and child labour laws. As a

23 "News Notes," *Public Health Journal* 18 (June 1927): 297; "Montreal's Typhoid Epidemic," *Public Health Journal* 18 (August 1927): 399–400

24 "The Montreal Health Survey," *Public Health Journal* 19 (November 1928): 532–33; "The Recommendations of the Montreal Health Survey Report," *Canadian Public Health Journal* 20 (April 1929): 179–85; "The Montreal Health Survey," *Canadian Public Health Journal* 20 (April 1929): 196–97; Montreal Sets and Example," *Public Health Journal* 19 (June 1928): 278; Eugene Gagnon, "Notes on the Early History and Evolution of the Department of Health of Montreal," *Canadian Public Health Journal* 29 (5) (May 1938): 221

Canadian Public Health Journal editorial noted, "Some of these people are undoubtedly affected by purely selfish motives, some are misinformed, but, in the main, this opposition would appear to be based upon the inherent dislike of the Anglo-Saxon to all measures which are designed to restrict the right of personal choice."[25]

Toronto's School of Hygiene and Connaught Laboratories

The dramatic story of insulin's discovery by Frederick Banting and Charles Best at the University of Toronto in 1921 has been well documented. The news of the first diabetic patients who successfully received the new pancreatic extract spread rapidly around the world in January 1922 and drew unprecedented attention to Canada and the University of Toronto. John FitzGerald, Director of Connaught Antitoxin Laboratories, offered Banting and Best the laboratory's assistance with expanding production methods and clinical trials.

Insulin had a big impact on Canada's public health and medical research infrastructure, beginning with the establishment of the Banting Research Foundation in 1924 and the University of Toronto's School of Hygiene in 1927, dedicated to research, teaching and medical public service. With financial assistance from the Rockefeller Foundation, the School of Hygiene played a major role in helping to meet the growing demand for a qualified public health workforce. By the end of the era a number of other Canadian universities also began offering graduate programs in public health.

Sanofi Pasteur Limited, Connaught Campus, Archives

The facilities of Connaught Antitoxin Laboratories, University of Toronto

In 1924, Connaught's J.G. FitzGerald met Dr. Gaston Ramon at the Pasteur Institute in Paris and learned how he treated diphtheria toxin with heat and formalin to render the toxin harmless while still provoking an immune response. FitzGerald sent a telegram from Paris to Toronto and tasked Connaught scientist Dr. Peter J. Moloney with developing and testing diphtheria toxoid, sparking the birth of a modern immunization program. Connaught and the provincial governments began conducting field trials using the toxoid on school children in Ontario and Saskatchewan from 1925 through 1927. In surprisingly short order, Canada became the global leader in the production and testing of diphtheria toxoid and provided the first statistical demonstration of the value of a non-living vaccine in preventing a specific disease. The toxoid proved to be safe and effective, and subsequently diphtheria incidence declined dramatically in Canada and elsewhere.

Diphtheria immunization was undertaken across the country along with elaborate publicity campaigns and popular reaction to diphtheria immunization was generally very positive, especially compared with opposition to smallpox

25 "The Menace of Unsafeguarded Milk Supplies," p. 257

Neil E. McKinnon

Established the Effectiveness of Diphtheria Toxoid

Dr. Neil E. McKinnon was appointed in 1925 to the staff of the Department of Epidemiology and Biometrics and as research associate in the Connaught Laboratories. With Dr. Mary Ross, he undertook studies of the efficacy of diphtheria toxoid, using primarily the records of the immunization of 36,000 children in Toronto and established unequivocally the effectiveness of diphtheria toxoid in preventing diphtheria. In 1944, he was appointed as Professor of Epidemiology and Biometrics and Head of the Department and Research Member in the Connaught Laboratories. He made many surveys and studies including the trends of mortality in Canada from important causes, with his findings on cancer mortality attracting international attention.

—*Canadian Journal of Public Health*, Vol. 53, June 1962

vaccination. In May 1926, Saskatchewan Deputy Minister of Health Maurice Seymour launched an initiative to boost diphtheria immunization rates with well-coordinated and concentrated education and immunization campaigns against diphtheria in September and October, against smallpox in November and December, and against typhoid in January and February.[26]

Poliomyelitis

In contrast with the successful control of diphtheria, poliomyelitis (often shortened to "polio") increased dramatically in incidence, first in British Columbia and Alberta in 1927, Manitoba in 1928, Ontario in 1929, and Quebec in 1930. Polio was still widely called "infantile paralysis," although the new and strange disease did not strike infants only. A magazine article entitled, "Death Walks in Summer," urged parents to "suspect everything" since no one could predict which case would prove mild, "or which will cripple hopelessly."[27]

The only weapon against polio at this time was a human "convalescent" serum made with blood collected from polio victims. The serum was freely supplied in most provinces to prevent polio's paralytic effects, although its effect was unclear. Alberta's Department of Public Health made little effort to use the serum in 1927, recognizing that "the public, in spite of the Department's extensive educational efforts, did not realize the significance of the early symptoms," and usually called the physician only after paralysis had appeared. Alberta instituted school closings, quarantine and restrictions on public gatherings and travel for children.[28]

Provincial Archives of Alberta, A11764

Muscle training exercises, 1928

26 "News Notes," *Public Health Journal* 15 (September 1924): 434; Claude E. Dolman, "Landmarks and Pioneers in the Control of Diphtheria," Canadian Journal of Public Health 64 (July-August 1973): 317–36; Jane Lewis, "The Prevention of Diphtheria in Canada and Britain," Journal of Social History 20 (1986): 163–76; Nan B.D. Hendrie, "Diphtheria Prevention Campaign (City of Calgary)," *Canadian Nurse* 22 (May 1926): 252–53

27 A.R. Foley, "The Present Outbreak of Poliomyelitis in Quebec," *Canadian Public Health Journal* 23 (Oct. 1932), 494–7; A.R. Foley, "The 1932 Epidemic of Poliomyelitis in Quebec," *Canadian Public Health Journal* 25 (June 1934), 260–74

28 R.B. Jenkins, 'Some Findings in the Epidemic of Poliomyelitis in Alberta, 1927,' *Canadian Public Health Journal* 20 (May 1929): 219–24

Manitoba responded with public education emphasizing the early use of convalescent serum, reflecting a better awareness of current research indicating that isolation and school closings were "of doubtful efficacy."[29] Manitoba engaged newspapers and radio in an effort to prevent public panic from developing. "Nothing was held back; the seriousness of the situation was not minimized, but no scare stories or exaggerated statements were printed."[30] Ontario took an approach similar to Manitoba's as polio continued its west to east spread.

The Alberta government was the first to address the longer-term physical and economic impact of polio with specialized hospital-based treatment and aftercare for affected children, following a survey of 131 patients. A 60-bed Special Hospital for Infantile Paralysis was built near the University of Alberta Hospital in Edmonton in 1928, staffed by orthopedic specialists. It provided specialized treatment given at cost for all provincial cases, with financial assistance available in cases of necessity.

Depression and the End of Expansion

The stock market crash of 1929 would hinder the provision of public health and acute care services in the next decade and the urban-rural disparity in the level of services provided would deepen in the 1930s. The industrialization and modernization would also be slowed in the next decade, as would the expansion of public health services and infrastructure.

29 Manitoba Department of Health and Public Welfare, *Report on the Poliomyelitis Epidemic in Manitoba, 1928* (Winnipeg, Feb. 1929), p. 71

30 Day, 'Poliomyelitis in Manitoba in 1928,' p. 555; MDHPW, *Report on the Poliomyelitis Epidemic in Manitoba, 1928*, pp. 71–2; M.M. Seymour and W.J. Bell, "Convalescent Serum in Epidemic Poliomyelitis," *Canadian Public Health Journal* 19 (Oct. 1928): 480–3

CHAPTER 4: 1930–1939

A Period of Decline

Rural children in Gaspé, 1930

The stock market crash of October 1929 and the Great Depression that followed had a devastating impact on the Canadian economy. The Gross National Expenditure declined an estimated 42% between 1929 and 1933 and a significant proportion of the population needed government relief to survive. The demands on the federal and provincial governments vastly exceeded the resources available, while voluntary organizations, which traditionally provided free health and social services, were equally hard-pressed.

As the federal government cut back on health spending, provinces and municipalities were left to fill the gaps and some areas of the country fared better than others. Quebec relied on assistance from its well-established religious organizations and Ontario negotiated a system of care with its doctors. Despite high unemployment, these two provinces fared better than the rest of the country with their more diversified, industrialized economies. The economies of the Maritime provinces saw the decline that began in the 1920s continue, but the four western provinces were the hardest hit. Their agricultural and resource-based economies were devastated by the collapse of world markets and a severe drought on the prairies. Cities and towns struggled to provide even basic public health services, while the federal government opened relief work camps where single, unemployed men earned 20 cents a day. Hundreds tried to trek from British Columbia to Ottawa to protest poor conditions but were

denied access to train cars by Prime Minister R.B. Bennett. Two died when a July 1 protest turned into a riot in Regina in 1935 and left-wing political parties and labour unions started organizing the working classes. Unemployed immigrants were deported by the thousands and entrance to Canada for new immigrants was essentially restricted to the British and Americans.

As the economic crisis deepened, the *Canadian Public Health Journal* appealed for adequate appropriations to public health departments, arguing that any short-term cost saving would ultimately be paid for in increased sickness and death. Some new health units were established, including in North Vancouver (1930) and High River and Red Deer (1931) but the pace of growth slowed. Quebec's 1933 *Health Unit Act* made all existing health units permanent and authorized new ones in the remaining counties, while making significant progress with infectious disease control, child health and public health engineering. Ontario re-organized its Health Department in 1934, dividing the province into health districts and amending its *Public Health Act* to permit the uniting of counties, municipalities or districts for the purpose of providing full-time health services. Its first full-time county health unit was established in Eastern Ontario in 1934, with the help of a five-year $33,000 grant from the Rockefeller Foundation.[1]

The field of public health broadened in terms of specialties and professionalism, statistical data gathering and training standards. Education, certification, and training standards in the public health field were strengthened, especially for nurses and inspectors. When the economy gradually began to recover in the latter half of the decade, the Dominion government, the Dominion Council of Health and the Canadian Public Health Association also began expanding the specialization of interests and activities.

John M. Uhrich

First Saskatchewan Minister of Public Health

Dr. Uhrich was the first Minister of Public Health in Saskatchewan. In 1921, he was elected to the Provincial Legislature and appointed Provincial Secretary and Minister in Charge of the Bureau of Public Health. He was later appointed Minister of Public Works and Public Health. For almost 20 years under Dr. Uhrich's direction, public health work was marked by a great expansion of health services throughout the province, in spite of pressing economic concerns. Free treatment of all who had tuberculosis was introduced under his administration, with the result that Saskatchewan had the lowest tuberculosis mortality rate in the Dominion. As well, there was an increase in rural hospitals, in medical and health services, and Saskatchewan became a leader in cancer control. Dr. Uhrich was appointed Lieutenant Governor in 1948.

—*Canadian Public Health Journal*, Vol. 31, 1940

On to Ottawa Trek, Medicine Hat, AB, 1935

Medicine Hat and District Historical Society, Provincial Archives of Alberta, A5150

1 "County Health Units," *Canadian Public Health Journal* 22 (March 1931): 151–52; "Quebec Moves Forward," *Canadian Public Health Journal* 24 (May 1933): 242–43; "Recent Health Legislation in Canada," *Canadian Public Health Journal* 25 (November 1934): 526; "News From the Field," *Canadian Public Health Journal* 26 (March 1935): 154

Provincial Archives of Alberta, A4615

Nurse Olga Freifeld, 19—

Child and Maternal Welfare

The challenges of maternal welfare were the focus of considerable discussion by the Dominion Council of Health in the 1930s, while the national rate of births and marriages declined and many tried to keep their families from growing during the Depression. Birth control was illegal and family planning advocates called unsuccessfully for the relaxation of the restrictions on contraception.

More women delivered their babies in hospitals instead of at home and the medical specialization of obstetrics was growing. As Toronto physician, H.B. Van Wych wrote, "No longer is obstetrics the despised practice of midwifery, but takes its place as a fully scientific branch of practice, a field in which modern concepts of medicine and surgery have a most beneficent application to the function of reproduction."[2] Compared to hospital births, however, maternal mortality was considerably lower with homebirths—even when there was no physician present at the delivery. In 1937, an international comparison of maternal mortality ranked Canada 21st and Canadian statistics showed wide variations across regions and ethnicities. For example, maternal mortality rates in 1927 per 1,000 live births were 4.9 for French Canadians, 6.1 for English Canadians and 11.0 for Indigenous Canadians.[3] The reasons accounting for the high rates of maternal death during childbirth have been debated, but appear to be linked to inadequate obstetrical training for physicians in obstetrics and poor practices for the prevention of sepsis, such as sterilizing instruments and wearing gloves during delivery.[4]

According to Ontario Member of Provincial Parliament, Dr. John Robb, the province's high rate of maternal mortality in 1930 could be attributed to the part-time arrangement for most medical officers of health. Thus, as the *Canadian Public Health Journal* reported, "it was his opinion that a full-time health official, assisted by nurses and sanitary inspectors to supervise a county or part of same, would not only be a great factor in the reduction of the maternal mortality rate, but also be of extreme value in the larger field of preventive medicine."[5]

Despite being severely affected by the Depression, Saskatchewan and Manitoba managed to lower their rates of maternal mortality in the 1930s. Manitoba's rate of maternal mortality per thousand live births dropped from 6.8 in 1929 to 3.8 in 1934, while Saskatchewan saw its rate drop from 7.1 in 1926 to 4.4 in 1934. A 1938 survey showed that maternal deaths were beginning to decline in 1937, likely due to improvements in nutrition and maternal education.[6]

2 Wendy Mitchison, *Giving Birth in Canada, 1900–1950,* (2002) Toronto: University of Toronto Press, p. 49

3 Wendy Mitchison, *Giving Birth in Canada, 1900–1950,* (2002) Toronto: University of Toronto Press, p. 262

4 Wendy Mitchison, *Giving Birth in Canada, 1900–1950,* (2002) Toronto: University of Toronto Press, pp. 277–283

5 "News and Comments," *Canadian Public Health Journal* 21 (January 1930): 48

6 Enid Charles, "Canadian Vital Statistics During the War Years," *Canadian Journal of Public Health* 35 (November 1944): 439–51; Ernest Couture, "Maternal Hygiene in Wartime," *Canadian Journal of Public Health* 35 (May 1944): 175–80; J.J. Heagerty and J.T. Marshall, "State of Health of the People of Canada in 1943," *Canadian Journal of Public Health* 36 (January 1945): 6–17

William Warwick

Developed Public Health Department of New Brunswick

Dr. Warwick joined the Department of Health in New Brunswick in 1920 after extensive public health experience in federal health work and service in France during WWI. Dr. Warwick became Chief Medical Officer for the province in 1932. Under his leadership, there was increased support for public health, which led to the subdivision of the province into 10 health districts, each under the direction of a full-time medical officer. Medical inspection of schools was provided and the efforts for the control of tuberculosis were greatly strengthened by the provision of additional hospitals and by the appointment of physicians with special training in tuberculosis as district health officers. Dr. Warwick also served as Registrar General of Vital Statistics.

—*Canadian Public Health Journal*, Vol. 33, 1942

Nutrition, Food Safety and Pasteurization

Sanofi Pasteur Limited, Connaught Campus, Archives

Hamilton Dept. of Health, early 1930s

The National Nutrition Committee, later named the Canadian Council on Nutrition, was established during the Depression to develop a scientific nutritional standard to help ensure that families on relief could be adequately nourished with the minimal money they received. Before the Council issued Canada's first dietary standards in 1939, the Dominion Council on Health noted in 1937 that, "at present, they are very resentful and claim they cannot possibly live on account of the rising prices, so that we would welcome very much a scientific survey that would determine these factors and would allow our government groups to arrive at some basis of determination."[7]

Cow's milk was increasingly viewed as a fundamental nutrient, as well as an efficient vehicle for spreading infectious diseases if

Edna Lena Moore

Distinguished Leader in the Nursing Profession

Edna Moore had a long and varied career in the nursing profession. She served overseas with the Royal Canadian Army Medical Corps for four years during WWI and saw service in France, Malta, Salonica and England. She spent several years as a social service nurse with the Soldiers Civil Re-establishment and the Division of Preventable Diseases of the Ontario Department of Health. She became the first field worker with the Canadian Tuberculosis Association in Ottawa and in 1931, was appointed Chief Public Health Nurse with the Ontario Division of Maternal and Child Health and Public Health Nursing. When Public Health Nursing became a separate division in 1944, Ms. Moore was appointed as Director. She served on many committees and held the chairmanship of the Public Health Committee of the International Council of Nurses for seven years.

—*Canadian Journal of Public Health*, Vol. 53, June 1962

7 Minutes, Dominion Council of Health, October 15–16, 1937

Glenbow Museum, NA-3258-3

Hospital cars on Hudson's Bay Company Line picked up typhoid patients, 1929

not pasteurized. There was wide variation in milk control legislation across the country and if referenced specifically, pasteurization was left to local health boards to enforce, although provincial governments exercised some control through licensing of milk suppliers and vendors.[8]

Typhoid and similar enteric disease outbreaks exposed the weaknesses in sanitary controls, especially of milk supplies and milk-borne tuberculosis led to growing calls for compulsory pasteurization. A major typhoid epidemic due to cheese made with raw (unpasteurized) milk in the St. Maurice Valley region of Quebec in 1932 resulted in 527 cases and 45 deaths—the worst milk-borne epidemic since the Montreal's 1927 crisis. Raw milk advocates were characterized by public health officials as little different from anti-vaccinationists and opponents of obligatory school attendance and child labour laws. As a *Canadian Public Health Journal* editorial noted, "Some of these people are undoubtedly affected by purely selfish motives, some are misinformed, but, in the main, this opposition would appear to be based upon the inherent dislike of the Anglo-Saxon to all measures which are designed to restrict the right of personal choice."[9]

In 1936, 12 out of 32 cities with more than 20,000 people had 95% or more of their local milk supply pasteurized, while six had 50% or less protected. In almost all of the nation's smaller communities, the bulk of the milk supply remained unpasteurized.[10] Close to 8,000 cases of typhoid, scarlet fever, septic sore throat and undulant fever had been traced to milk since 1912, including 688 of which were fatal. The Canadian Public Health Association and the Canadian Medical Association strongly endorsed compulsory pasteurization of milk and in 1938, the Ontario government took the pioneering step of implementing compulsory pasteurization across the province.[11]

Tuberculosis and Indian Affairs

Soeurs de l'Assomption de la Sainte Vierge, Provincial Archives of Alberta, A17205

Sisters of the Assumption with Indian students at Onion Lake, SK

Provincial health authorities continued to express alarm about the threat of tuberculosis spreading to non-Indigenous populations while the federal government still did not act. Recent

8 "Report of the Committee on Milk Control: Reports from the 24th Annual Meeting, Canadian Public Health Association, June 3–5, 1935," *Canadian Public Health Journal* 26 (July 1935): 358–61; "Progress in Securing Adequate Milk Control," *Canadian Public Health Journal* 27 (October 1936): 512–13

9 "The Menace of Unsafeguarded Milk Supplies," *p.* 257

10 "Only Properly Pasteurized Milk is Safe Milk," *Canadian Public Health Journal* 27 (November 1936): 571

11 "Compulsory Pasteurization of Milk Supplies," *Canadian Public Health Journal* 29 (February 1938): 89–91; "The Value of Pasteurization," *Canadian Public Health Journal* 29 (June 1938): 318–19; A.E. Berry, "A Survey of Milk Control in Cities and Towns in Canada," *Canadian Public Health Journal* 29 (June 1938): 305–09; R.D. Defries, "Survey of Milk-borne Diseases in Canada," *Canadian Public Health Journal* 29 (June 1938): 255–61; A.E. Berry, "Milk Control Legislation in Canada," *Canadian Public Health Journal* 29 (June 1938): 301–03

M. Stuart Fraser

Distinguished Sanitarian Fought to Alleviate the Suffering of Children in Manitoba

Dr. Fraser graduated from the University of Manitoba's Faculty of Medicine in 1890 and undertook post-graduate study in Edinburgh. For some years he was engaged in general practice in Brandon until he became the Provincial Epidemiologist. He established the first provincial public health nursing service in 1917 and was appointed Chief Health Inspector in 1928. Dr. Fraser was one of a small group of distinguished sanitarians who helped lay the foundation of an effective public health organization. He fought to alleviate the suffering of children. On the public platform and in newspaper articles, he outlined how much of this suffering was unnecessary, urging the continued supervision of children by their family physicians, the organization of child health clinics, and the provision of public health nurses to serve the whole province.

—*Canadian Public Health Journal*, Vol. 26, 1935

studies had showed tuberculosis mortality among First Nations in British Columbia to be about 10 times the national rate while in Saskatchewan, Aboriginal TB mortality was almost 20 times the national rate. Saskatchewan had been offering free treatment since 1929 and the province's Deputy Minister of Health told the Dominion Council of Health in 1934 that the populations on reserves under federal jurisdiction were "a menace to the health of the white citizens of the province."[12]

The Dominion Council of Health advised the federal government to purchase health services from the provinces for First Nations. The federal chief officer of health, Dr. John Heagerty, told the Council that with the many reserves spread across the country, "it has always struck me that it is quite impossible for the Department of Indian Affairs, from a central office, to maintain an adequate health service through traveling nurses and through doctors who are on part-time service and cannot give anything like an efficient service in the control of infectious diseases."[13]

In 1935, the Medical Branch of Indian Affairs had 11 full-time medical officers and eight Indian agents with medical training. Some 250 physicians were employed part time or as needed and there were 11 field nurses working in remote nursing stations, such as Fisher River, Manitoba, which opened in 1930. The Indian Health Service came under the administration of the Department of Mines and Resources in 1936 and began to expand its services and facilities under Dr. Percy E. Moore, who was director from 1939 to 1965, while Dr. Stone remained the medical superintendent.[14]

A number of provinces expressed interest in providing health services to the Department of Indian Affairs, with some offering to do it "free of charge for their own protection." But Heagerty indicated that the federal government "does not want to lose control over Indians" and would not permit provincial health authorities to enter the reserves, leaving "public health among

12 J.B. Waldram, A. Herring, & T.K. Young, *Aboriginal Health in Canada (2006),* University of Toronto Press: Toronto, ON

13 Minutes, Dominion Council of Health, November 29–December 1, 1934; "Saskatchewan's Achievement in Tuberculosis Control," *Canadian Public Health Journal* 24 (November 1933): 543; F.C. Middleton, "Evolution of Tuberculosis Control in Saskatchewan," *Canadian Public Health Journal* 24 (November 1933): 505–13; "News From the Field," *Canadian Public Health Journal* 25 (March 1934): 151

14 Waldram, Herring & Young, *Aboriginal Health in Canada*

Armand Frappier

Instrumental in the Fight Against Tuberculosis in Canada

Dr. Frappier founded the Institute of Microbiology and Hygiene in Montreal in 1938, and served as director until 1975, when it was renamed *Institut Armand-Frappier*. Dr. Frappier was instrumental in the fight against tuberculosis in Canada and one of the first researchers to confirm the safety and usefulness of the Bacillus Calmette-Guérin (BCG) vaccine. In addition to research into the BCG vaccine, Dr. Frappier made outstanding contributions in the study of blood transfusions and blood substitutes, virus vaccines, and fundamental aspects of infection and immunity. He founded the first French-language school of hygiene in the world at the Université de Montréal in 1945 and served as its dean for 20 years.

—*Canadian Journal of Public Health*, Vol. 64, March/April 1974

Indians… pretty much neglected." Saskatchewan health officials tried to provide what they could within their jurisdiction to give reserve communities "some at least of the crumbs that fall from the provincial table" and funds raised by the Saskatchewan Anti-Tuberculosis League's Christmas Seals campaign supported traveling tuberculosis clinics that some First Nation communities could access, although TB among First Nations remained high. The Department of Indian Affairs indicated that, "it is impossible to admit to sanatorium more than a very small proportion of Indians who are recommended for such care" due to its limited budget.[15]

Sanofi Pasteur Limited, Connaught Campus, Archives

Sanofi Pasteur Limited, Connaught Campus, Archives

Infectious Diseases

Diphtheria outbreaks persisted in rural areas due to limited and uneven application of toxoid. Quebec launched a concerted effort in 1930 to provide diphtheria toxoid widely through the county health units and Deputy Minister of Health, Dr. Lessard, told the Dominion Council of Health that "it is to be hoped that in a few years we will not be ashamed, as we now are, at the death-rate from diphtheria."[16] In Ontario, diphtheria incidence dropped dramatically where it had been consistently used but this excluded many rural areas.

Smallpox outbreaks also continued to the frustration of public health officials. In Vancouver in 1932, a mild smallpox outbreak quickly turned into a significant emergency, resulting in 56 cases and 17 deaths. At least

15 Minutes, Dominion Council of Health, November 29–December 1, 1934; "Saskatchewan's Achievement in Tuberculosis Control," *Canadian Public Health Journal* 24 (November 1933): 543; F.C. Middleton, "Evolution of Tuberculosis Control in Saskatchewan," *Canadian Public Health Journal* 24 (November 1933): 505–13; "News From the Field," *Canadian Public Health Journal* 25 (March 1934): 151

16 Minutes, Dominion Council of Health, December 10–12, 1930

Alexander Joseph Douglas

Four Decades of Service to Public Health in Winnipeg

In 1939, Dr. Douglas completed almost 40 years of distinguished service as Medical Officer of Health of the City of Winnipeg. To this post he brought energy, versatility, clear thinking, diplomacy, and a remarkable memory for detail. His work on behalf of the Health Department of Winnipeg won recognition throughout the continent. Dr. Douglas was intimately associated with the Medical College of the University of Manitoba for almost as long a period. As Professor of Public Health, he contributed much not only in Manitoba but beyond the boundaries of the province.

—*Canadian Public Health Journal*, Vol. 30, 1939

half of the public school population and a large proportion of the general population in Vancouver were unvaccinated.

Gordon Bates, meanwhile, continued to press the issue of venereal disease throughout the 1930s, reminding his public health colleagues about the history of the dynamic national VD control program of the 1920s and lamenting its cancellation. He continued to conduct surveys of venereal disease incidence, particularly in Toronto, where it appeared that between 1929 and 1937 there had been a decrease in and better diagnosis of syphilis. Bates launched the Health League of Canada in the spring of 1936 as the successor organization of the Canadian Social Hygiene Council, focusing on diphtheria control, pasteurized milk and the application of preventive medicine.

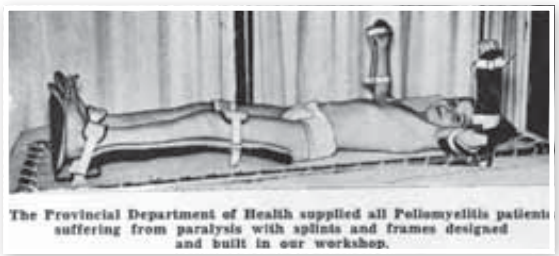
Polio Spreads

Hospital for Sick Children Archives, Toronto

One of the 27 iron lungs built in the basement of the Hospital for Sick Children in Toronto during one of Canada's most severe polio epidemics in 1937

Polio continued its west to east pattern of infection, with significant epidemics striking Ontario in 1930, Montreal in 1931 and Quebec City in 1932. The Polio epidemic spread and in 1937, there was an alarming number of the most severe form of the disease, which resulted from the polio virus attacking the brainstem's motor neurons. Without an iron lung respirator, death almost always resulted. There was only one iron lung in Canada at the start of the epidemic, which had been brought to The Hospital for Sick Children in Toronto from Boston in 1930. With serious respiratory paralysis cases mounting, technicians hurriedly assembled a total of 27 iron lungs in the basement of the hospital over a period of six weeks. Each iron lung was paid for by the Ontario government and rushed to where it was most needed, both in the province and elsewhere in the country.

Convalescent serum remained the main public health action in the 1930s but there was no scientific proof of its value, sparking debate about its continued use. Researchers knew little



The Provincial Department of Health supplied all Poliomyelitis patients suffering from paralysis with splints and frames designed and built in our workshop.

Annual Report, 1937, Hospital for Sick Children, Toronto

John J. MacRitchie

Developed Public Health in Nova Scotia

Dr. John MacRitchie was born in 1883 at Englishtown, Cape Breton. Following graduation in medicine from Dalhousie University in 1911, he entered private practice in Guysboro County for 20 years. He remarked that he was probably the only man in the medical profession who reached his patients by walking, by snowshoe, by horse and buggy or horse and sleigh, by motorboat, sail boat, row boat and latterly, by automobile. In 1931, Dr. MacRitchie joined the Nova Scotia Department of Public Health where he stayed for nearly a quarter of a century. He conducted tuberculosis clinics throughout the province and was also responsible for inspecting penal and humane institutions.

—*Canadian Public Health Journal*, Vol. 47, 1956

about the disease and there was pressure to act against in any way possible. In 1937, the Ontario Department of Health approved a plan with the School of Hygiene and The Hospital for Sick Children to test a prophylactic nasal spray on 5,000 Toronto children. After two rounds of spray treatments, the results were alarming. The spray did not appear to prevent the disease and many of the children involved in the study lost their sense of smell—in some cases, permanently.

Provincial governments took an increasingly generous and universal approach to hospital and after-care treatment for polio victims. Parents were instructed on how to care for their polio-stricken children at home following their hospitalization. In Ontario, the provincial government worked closely with the Society for Crippled Children and several visiting nurses organizations to provide follow-up care across the province. In Alberta, a comprehensive *Poliomyelitis Sufferers Act* came into force in March 1938, despite the government being "quite bitterly assailed by many of our political opponents for giving something for nothing."[17]

Accidents and the Automobile

Detailed statistical information was being gathered about the alarming toll of preventable accidents in industry and from motor vehicles but despite much discussion, nothing was done. In 1933, more than 5% of all deaths were due to accidental causes and more than one-quarter of these were related to land transportation. Drowning and water transportation accidents were also significant and accidental deaths were the leading cause of death among 5- to 14-year-olds.

There were rules of the road in the 1930s but minimal regulation of drivers in Canada unlike in Britain and Europe, where driving tests were required before granting a licence. A special CPHA committee was formed to look at driver regulation, as well as at the complex psychological factors behind reckless and irresponsible driving habits, especially among the young. Provincial health departments had no direct jurisdiction in matters related to the control of automobile accidents and the problem grew faster than preventive measures could be applied against it.

As a 1936 *Canadian Public Health Journal* editorial noted, "irresponsible individuals are permitted to run five-ton trucks at an

17 "An Act to Provide Facilities for the Rehabilitation and Assistance of Persons who have been Afflicted by Poliomyelitis," 1938, Chapter 70, Statutes of the Province of Alberta, March 31, 1938; Canada, *House of Commons Debates* 1952–53, Vol. 5, 8 May 1953, (Ottawa, 1953), 4986–8

Lynn Blair

Peripatetic Public Health Nurse Served Manitoba for 41 Years

Lynn Blair was one of the first nurses hired for the new Department of Health and Welfare in Manitoba in 1929. She was assigned to the Fisher Branch Nursing Station in north-central Manitoba in 1937, where in addition to nursing she was pressed into service as a substitute physician and veterinarian. She describes this period as one of the happiest and most rewarding in her career as a public health nurse. Ms. Blair and a colleague averaged 1,000 miles a week, searching out suitable families willing to open their homes to children evacuated from war-torn Britain, travelling over roads that were hardly more than trails in some areas. She volunteered with the Canadian Army Medical Corps as a Nursing Sister in South Africa for three years before being assigned to several senior public health nursing positions in Manitoba, including work with crippled children in areas not covered by organized health units and as Nursing Consultant in Venereal Disease for the province.

—*Canadian Journal of Public Health*, March/April 1975

extraordinary speed on narrow highways. Motor cars advertised to go 70 miles an hour are placed in the hands of youths who are only a decade from a perambulator; and a few socially minded people try to control this Frankenstein which they helped to create." Voluntary groups had made attempts to do something, but there existed "an attitude of laissez-faire among those who are or should be most concerned, namely, the public themselves."[18]

Professionalizing Canadian Public Health

In 1930, Dr. James Roberts, Hamilton's Medical Officer of Health, told a meeting of the British Medical Association in Winnipeg of his concerns about the training and regulation of sanitary inspectors. "There are far too many instances throughout the Dominion where the sanitary inspector is the Cinderella of the health department, dreaming among the ashes of the past. Too often we find him bound like Sisyphus of old to the perfunctory performance of his meaningless and unproductive task, and prevented by the limitations of his education and training from becoming the integral factor that he ought to be in the machinery of disease prevention."[19] In an effort to raise the knowledge, training and professional standing of its members, the Sanitary Inspectors Association of Western Canada was created in 1913 and became a national association in 1920. In its early years, the association adopted the *Public Health Journal* as its official organ and gave every member a subscription so they could expand their knowledge and training and a regular column was included in every issue for that purpose. Active branches of the association began to be established across the country in the 1930s and after some effort by its members, the association was incorporated as the Canadian Institute of Sanitary Inspectors in 1934 and CPHA assumed responsibility for the testing and certification of inspectors in 1935. With the cooperation of the provincial

Stefanie Gravelle, CPHI

Grandpa Sanitary Inspector

18 "Accidental Deaths," *Canadian Public Health Journal* 25 (August 1934): 402

19 James Russell Roberts, "Training of the Sanitary Inspector," *British Medical Journal* (October 18, 1930) p. 636

Mac Harvey McCrady

Outstanding Public Health Scientist

In 1910, Mac Harvey McCrady's job was to reorganize the public health laboratory of the Superior Board of Health of the province of Quebec. During his 43 years of service, he laid the foundations of a comprehensive diagnostic laboratory service and became one of the foremost authorities in public health bacteriology on the continent. He took an active part in the development of *Standard Methods for the Examination of Water, Sewage and Dairy Products* for the American Public Health Association and was a co-author, in 1946, of *Water Bacteriology*. Although particularly interested in sanitary bacteriology as relating to municipal problems of water, sewage and milk, he kept ever in mind practising physicians, adapting bacteriological and immunological procedures to meet their needs. Mr. McCrady was considered to be one of the outstanding scientists in the field of public health.

—*Canadian Public Health Journal*, Vol. 47, 1956

departments of health, a course of study and certification examinations were held in the provinces. A manual of instruction was prepared under the direction of CPHA's Committee on the Certification of Sanitary Inspectors.[20]

The Canadian Public Health Association continued to expand the number of sections devoted to special fields of public health with the assistance of volunteers interested in advancing and growing the field of public health. The laboratory section that was formed in 1917 grew into the Canadian Society of Bacteriologists and began holding annual meetings of its own. The child welfare, venereal disease control, and mental hygiene sections that had been established in its first decade continued, and sections on industrial hygiene, public health nursing, and vital statistics were added in the 1920s. The 1930s saw new sections on public health engineering, epidemiology, and public health education. Committees made up of volunteers collaborated in various studies and presented their findings through the *Canadian Public Health Journal*. The vital statistics committee conducted a number of studies, including the revision of the International List of Causes of Death, phraseology related to the physician's statement of death, and the education of physicians and medical students in the fundamentals of vital statistics.

The Federal Role

Although a resolution was passed in the House of Commons on March 3, 1930 calling for federal grants to the provinces covering one-third of the cost of full-time health units, the government did not act on this. Between 1932 to 1935—the worst

CPHA's Hygieia

In 1935, the Canadian Public Health Association introduced a new seal, which depicted Hygieia, the Greek goddess of health, cleanliness and sanitation, whose name was the source of the word, hygiene. Hygieia's father, Asclepius, is more directly associated with healing and medicine, while Hygieia was associated disease prevention and health promotion. A snake coiling around her arm was symbolic of the patient embodied with wisdom.

20 C. Lyons & M. Malowany, "Who's a Public Health Professional? The Struggle for Recognition by Sanitary Inspectors in Early 20th Century Canada," *Canadian Journal of Public Health* (Nov/Dec 2009), pp. 409–410

years of the Depression—the federal government cancelled its grants to the provinces for venereal disease control and closed the Venereal Disease Control Division. The Child Welfare Division also closed after founding chief Dr. Helen MacMurchy retired in 1934.

In the last half of the 1930s, however, economic conditions improved and Prime Minister R.B. Bennett was impressed by the United States' New Deal with its social security and infant and maternal care in under-served rural areas. The *Canadian Public Health Journal* said the U.S. "federal action is highly significant, being the first occasion of the participation of the federal government in a county-wide program of assistance to state departments in public health work."[21]

Bennett introduced his government's plans in a series of speeches to the nation in January 1935, which the provincial ministers of health later discussed with their federal counterpart, D.M. Sutherland. The plans included reinstating grants for venereal disease, as well as funding for mental hygiene, cancer, tuberculosis and full-time health units. In 1937, the Department of Pensions and National Health created new divisions of epidemiology, industrial hygiene, and restored the divisions of publicity and health education, and maternal and child welfare. The Dominion Council of Health also established new committees, including one to address the protracted challenge of reducing maternal mortality.

The Depression changed some longstanding beliefs about the free market and the role of the government. When Germany invaded Poland on September 1, 1939, Canada followed Britain and France and entered the Second World War one week later. This war ended Canada's economic downturn and the next decade would see a new approach to governmental health and social programs in Canada in addition to the enormous human and economic costs.

Arthur Edward Chegwin

Early Promoter of Dental Health Education

Born in 1895 at Lacombe, Alberta, Dr. Chegwin set up a dental practice in Moose Jaw, Saskatchewan in 1919 and was a part-time school dental officer. Observing the poor dental health among school children, he soon realized that dental health education was a necessity if general dental health were to be maintained or improved. From that time on, Dr. Chegwin dedicated much of his time and effort to dental health education in the schools, in his practice, and with his professional colleagues. During WWII, Dr. Chegwin enlisted in the Army Dental Corps and served as a senior dental officer in various training centres for the RCAF. Later, he became Director of Dental Health for the Saskatchewan Department of Public Health and took a leading role in the organization of the Saskatchewan Branch of the Canadian Public Health Association and as chair of CPHA's dental section.

—*Canadian Journal of Public Health*, Vol. 52, August 1961

21 "The Annual Meeting of the American Public Health Association," *Canadian Public Health Journal* 26 (November 1935): 566a

CHAPTER 5: 1940–1949

World War II and Expansion

Elizabeth L. Smellie

Service to VON and First Female Military Colonel

Elizabeth Laurie Smellie was born in 1884 in Port Arthur, Ontario. After attending the Johns Hopkins Training School for Nurses in Baltimore, she signed up as a Nursing Sister during WWI with the Royal Canadian Medical Corps. In 1924, she joined the Victorian Order of Nurses and was appointed Chief Superintendent shortly after, helping to expand the Victorian Order of Nurses across Canada. In 1940, Ms. Smellie rejoined the Canadian army in World War II and helped organize the Canadian Women's Army Corps (CWACs). The CWACs performed a variety of war-time duties, from clerical and administrative to driving, sail-making, as supply assistants and teletype operators. Ms. Smellie was placed in command of the CWAC division in 1942 and promoted to Colonel in 1944, the first woman to reach this rank in the Canadian army.

—suite101.com

The Second World War created unprecedented growth in the labour force and the rate of industrialization in Canada. Raw materials, farm products, and manufactured goods were needed to fight the war. In addition to significant increases in capital investment and technological

advances, a predominantly rural country became an urban one during the 1940s. Women were essential in keeping the farms and the economy running during the war and their rate of full-time labour force participation doubled between 1939 and 1944, many doing what was traditionally considered "men's work." Technological advances put hospitals and medical specialists centre stage as industrialization continued to transform Canadian society, while labour and left-wing political forces called for greater social equity. The end of Second World War brought the promise of progressive change, growth and prosperity to Canada, although there was also growing anxiety about the accelerating pace of change and the looming atomic shadow of the Cold War.[1]

During World War II, many of the country's most talented medical and public health personnel joined the armed forces. A *Canadian Public Health Journal* editorial on public health in wartime warned that while the ultimate scope and cost of the war was still unknown, it was clear that demands had "already gone out for curtailment of public expenditures and redirection of effort.... Gains must be consolidated. The last war left its lessons. There can be no reduction in public expenditures, and no lessening of public effort, for the safeguarding of health."[2] CPHA continued to press for federal funds for full-time health units and provincial tuberculosis control programs. In every province, public expenditures for tuberculosis control and sanatorium care "closely approximates or even exceeds the expenditure of the Health Department for all other services," leaving very little to support preventive services.[3]

Cockfield, Brown & Company Limited

Safe milk supply

Nutrition and Food Safety

During and after the war, many Canadians had problems accessing and affording good quality food. The war brought a new focus on nutrition for the civilian and the military populations, as recent surveys revealed malnutrition among a significant proportion of the population. Bread was of particular interest to help improve nutrition levels by shifting popular preferences away from white bread to more nutritious whole wheat breads, although the addition of a synthetically-derived vitamin B_1 to white bread was seen as an improvement. Nutrition surveys revealed deficiencies in calcium, with children in lower income families receiving only half the calcium they needed—their diets lacking in milk and cheese due to economic hardship or lack of appreciation for the nutritive value of milk. As a *Canadian Public Health Journal* editorial stressed, "in a predominantly agricultural country, frequently embarrassed by surplus crops, a large number of our children are not securing healthful meals."[4]

1 http://www.warmuseum.ca/cwm/exhibitions/newspapers/canadawar/homefront_e.shtml

2 "Public Health in Wartime," *Canadian Public Health Journal* 31 (January 1940): 35–36

3 "The Need for Federal Government Assistance in Public Health," *Canadian Public Health Journal* 32 (September 1941): 478–79

4 E.W. McHenry, "Nutrition in Canada," *Canadian Public Health Journal* 30 (September 1939): 431–34; "Improving the Staff of Life," *Canadian Public Health Journal* 31 (September 1940): 441; Dietary Calcium Deficiencies in Canada," *Canadian Public Health Journal* 32 (April 1941): 227–28

Josephine DeBrincat

Developed Public Health Nursing in Manitoba

Josephine DeBrincat's career is closely linked with the development of public health nursing services in Manitoba. She was born on the island of Malta and graduated from nursing training at the Winnipeg General Hospital in 1925. She went on to earn the Royal Sanitary Inspector's Certificate and the Public Health Nursing diploma. Ms. DeBrincat specialized in industrial nursing and during and after the Second World War served as Public Health Nurse Supervisor for the United Nations Rehabilitation and Relief Administration in Italy. Upon her return to Manitoba in 1946, she took up her responsibilities as Industrial Nursing Consultant, Public Health Nursing Consultant, and Civil Defence Consultant to the Department of Health and Public Welfare.

—*Canadian Journal of Public Health*, Vol. 61, 1970

Better nutrition was seen as necessary for the young and for adults, particularly those employed in war industries. A Division of Nutrition was created within the Department of Pensions and National Health in 1941 to improve Canadian nutrition standards and work with nutritional committees set up in each province. Canada's first national food guide, then called the Official Food Rules, was introduced in 1942 to help prevent nutritional deficiencies during wartime food rationing. The Division launched a comprehensive national nutrition program with assistance from the Wartime Information Board and the Association of Canadian Advertisers "to awaken Canadians to the need for adequate nutrition for the maintenance of health and physical efficiency."[5]

Recovery from wartime food shortages during the early post-war period was slow. Import restrictions and the high price of fresh

Health Canada

Canada's first food guide

Chester B. Stewart

Researcher, Administrator and Dean of Medicine, Dalhousie University

Chester Bryant Stewart was born in Prince Edward Island. Following graduation as Gold Medalist in Medicine in 1938, he was appointed Assistant Secretary of the Associate Committee on Medical Research of the National Research Council in Ottawa, under the chairmanship of Sir Frederick Banting. He was involved in the first program of research in aviation medicine in Canada and from early 1940 to mid-1945, pursued aviation research activities in the Canadian Armed Forces, retiring with the rank of Wing Commander. After postgraduate training in public health and epidemiology, he was appointed Professor of Epidemiology in the Faculty of Medicine, Dalhousie University in 1946 and later Dean of Medicine.

—*Canadian Journal of Public Health*, Vol. 67, May/June 1976

5 "The Canadian Nutrition Program," *Canadian Journal of Public Health* 34 (January 1943): 38–39

fruits and vegetables were significant and in 1948, the Dominion Council of Health noted that "housewives were expressing concern that their families were being deprived of needed nutrients." The Council advised the federal health department to provide advice about suitable substitutes for items in short supply and how to stretch the food dollar. The Dominion Council of Health also considered the regulation of salt suppliers, as provincial health departments were being pressured to address iodide deficiencies causing goitre. Vitamin D deficiencies among children prompted the Dominion-Provincial Nutrition Committee to press for the preparation of new and updated educational material on nutrition.[6]

For families forced to look for fat substitutes, the 1886 ban on the manufacture of margarine was difficult to understand. The dairy industry was unable to meet the demand for butter and shortages finally resulted in the lifting of the ban in 1948. Many thought the nutritional value of margarine was poor, but the chief of the federal Nutrition Division was confident that "from the economic and nutritional aspects, good margarine is superior to butter."[7]

Dept. of National Defense, Library and Archives Canada, PA-055375

Soldiers exercising, RCAF, Hamilton, ON, 1944

Physical Fitness

Along with the nutrition initiatives, a broad national health education and physical fitness initiative was

Canadian Public Health Journal, 34 (November 1943)

launched mid-way through the war. As with World War I, large numbers of young men called up for military service had to be rejected because of their lack of physical fitness. The House of Commons reported that some 43% of new recruits had to be rejected in 1941, a figure that rose to more than 50% by 1944 and many were accepted despite having remedial defects of eyes, teeth, hernias and orthopedic conditions, among others. In 1943, the federal government implemented the *National Physical Fitness Act*, established the National Council on Physical Fitness and provided grants to the provinces for local health education initiatives. As one *Canadian Public Health Journal* editorial stressed, "war teaches valuable lessons but it should not be necessary to have a war to make people realize that the health and physical fitness of children and of young people are of paramount importance to the country."[8]

Tobacco Use

Public Health Journal, 15 (June 1924)

Despite the persistent opposition by the Women's Christian Temperance Union since World War I, tobacco use continued to grow in popularity in Canada. Raymond Pearl published actuarial life tables in a 1938 issue of *Science* that clearly showed more frequent

6 Minutes, Dominion Council of Health, May 14–16, 1947, October 15–17, 1947, May 10–12, 1948

7 Minutes, Dominion Council of Health, October 15–17, 1947; "Margarine," *Canadian Journal of Public Health* 40 (June 1949): 275–76

8 "Health Training in Schools," *Canadian Public Health Journal* 33 (April 1942): 178–79; "Military Rejections and the Public Health," *Canadian Public Health Journal* 35 (September 1944): 367–68

June Lawson

Canada's First Female Sanitary Inspector

June Lawson was the first woman to receive the Certificate in Sanitary Inspection (Canada). Born in Scotland in 1907, Ms. Wilson moved to Winnipeg and graduated from Success Business College in 1930. She worked as a clerk for the T. Eaton Company, later for the City of Winnipeg Tax Office, and later for the City Health Department Food and Dairy Division as well as the Sanitation and Housing Division. While with the City Health Department, Ms. Lawson trained to become a Sanitary Inspector and received Certificate # 254 in 1942.

—Tim Roark, Historian, Canadian Institute of Public Health Inspectors, 2009

early death among smokers than non-smokers, but this and other evidence of the harmful effects of tobacco use apparently had no impact on the public. The habit was glamorized in the Hollywood movies of this decade, further boosting smoking's popularity, including among a growing number of women. Cigarettes were custom-packaged for the soldiers and provided by tobacco companies in the rations. The number of cigarettes consumed annually in Canada increased tenfold between 1921 and 1949, reaching 28 billion. A 1947 survey showed that 49% of Montreal women smoked, while other surveys showed that about three-quarters of men and 50% of women in their 20s and 30s were smokers.[9]

9 N. Collishaw, *History of Tobacco Control in Canada* (2009), Ottawa, ON

Venereal Disease and Penicillin

The war expedited the development and large scale supply of penicillin—one of the most dramatically successful medical drug treatments to emerge since insulin. Discovered in London by Alexander Fleming in 1929, penicillin's antibiotic effects prompted intense research efforts during the early 1940s by Howard Florey, Ernst Chain

Claude Ernest Dolman

Distinguished Microbiologist, Researcher and Recognized Botulism Expert

Dr. Claude Ernest Dolman was a distinguished microbiologist and well known for his contributions to both public health and academic aspects of bacteriology. Born in England in 1906, he came to Canada in 1931 as Research Assistant at Connaught Laboratories. He went on to become Professor and Head of the Department of Bacteriology and Preventive Medicine at the University of British Columbia. Dr. Dolman made more than 100 contributions to the medical literature, including 36 to the *Canadian Journal of Public Health*. These papers cover a wide range of topics, such as brucellosis, gonorrhoea, typhoid fever, cholera vaccine, diphtheria, influenza and rat-bite fever. He gained a world-wide reputation for his work on botulism and put forward the epidemiologically significant hypothesis that *Clostridium botulinum* type E is not a marine organism but of terrestrial origin.

—*Canadian Journal of Public Health*, Vol. 64, March/April 1973

and others in Oxford to produce it on a large scale. It was increasingly clear that penicillin would have a significant impact on the treatment and management of pneumonia, meningitis, gonorrhea and syphilis and the Canadian Forces used it with supplies largely provided by Connaught Laboratories.

The federal government re-established its Venereal Disease Control Division in 1943, under the joint authority of the Department of Pensions and National Health and the Department of National Defence. There was a lower incidence of VD among military personnel than had been expected and this was attributed to health education, treatment, contact tracing, and condoms and prophylactic packages provided to soldiers prior to leaves. On the home front, federal health grants enabled provinces to provide antibiotic treatment for free, contributing to a 72.2% reduction in syphilis rates and a 35.6% reduction for gonorrhoea between 1944 and 1951.[10]

Sanofi Pasteur Limited, Connaught Campus, Archives

Immunization and Infectious Diseases

Measles, hepatitis, a resurgence of rabies and of the importation of malaria via soldiers returning from Korea added to public health concerns about diseases such as typhoid fever entering the country with new immigrants. Immunization efforts were hampered by apathy and complacency among parents and many within the medical profession. Lapses in diphtheria immunization for preschool children and limited uptake among nurses, physicians, medical students and hospital staff members fuelled persistent diphtheria incidence and Canada, which had been a global leader in bringing diphtheria under control, had fallen behind the United States, England and Wales by the mid 1940s.

Allan Reid Morton

Able and Hardworking Developer of Public Health in Halifax

Dr. Allan Reid Morton became the first full-time Medical Officer of Health for Halifax in 1940 and also accepted an appointment as Associate Professor of Preventive Medicine at Dalhousie University. Diphtheria was a prime concern in the early 1940s, especially as Halifax was an embarkation and assembly point for troops during WWII. During the war, Dr. Morton served as Chairman of the Medical Committee for the armed services of the area and after the war, guided the development of a mental health program, and a maternal and child health program. He supervised the Salk Poliomyelitis Vaccine Trial program in Halifax in 1954, the first area in Canada to use the vaccine. Dr. Morton waged a personal battle with tuberculosis, which interrupted his career on a number of occasions but each time he returned with renewed vigour.

—*Canadian Journal of Public Health*, Vol. 55, June 1964

10 Gordon Bates, "Venereal Disease Control," *Canadian Public Health Journal* 32 (July 1941): 339–49; "The Importance of the Moral Factor in the Control of Venereal Diseases," *Canadian Public Health Journal* 32 (July 1941): 366–67; An Essential Consideration in Venereal Disease Control," *Canadian Public Health Journal* 33 (October 1942): 502–03; "A Coordinated Program for Venereal Disease Control in Canada," *Canadian Journal of Public Health* 34 (May 1943): 246–47

Sanofi Pasteur Limited, Connaught Campus, Archives

A severe case of smallpox

J.J. Heagerty, Smallpox and Vaccination, Ottawa, 1925

Three siblings, two vaccinated; middle child unvaccinated

Provincial health departments renewed efforts to raise awareness of free toxoid inoculations but follow-up doses of toxoid were often not given. Nova Scotia experienced a diphtheria epidemic among civilians and the military and Halifax's poor public health management history prompted the city government to launch an independent survey of health conditions, carried out by the International Health Division of the Rockefeller Foundation. The survey criticized the city government's laissez-faire attitude towards its public health responsibilities, evident in a high incidence of preventable diseases, tuberculosis and infant mortality rates.[11]

When a virulent smallpox outbreak in Seattle, Washington in 1946 resulted in 51 cases and 16 deaths, British Columbia's provincial officer of health issued a strong statement through the press, advising all citizens to be vaccinated. The public responded quickly, prompting emergency calls to Connaught Laboratories for rush supplies of vaccine while Vancouver and Victoria health departments held vaccination clinics that were open for 12 to 14 hours a day to accommodate the steady lines of people. Once the vaccine supply was sufficient, vaccination clinics were arranged across the province and proof of vaccination was required to cross the Canada-United States border. By the time the crisis had passed, a total of 300,000 people were vaccinated in the Vancouver and coastal areas of the province, with no significant complications reported and no noticeable anti-vaccination activity. The importance of routine vaccination of children during their first year of life was re-emphasized, while at CPHA's Annual Meeting in 1946 a resolution was passed urging "the adoption of a more vigorous policy of health departments in regard to re-immunization."[12]

Health Services for Aboriginal People

As concerned individuals continued to urge better federal responses to tuberculosis among Indigenous communities, Dr. J. D. Galbraith wrote a seven-page letter describing TB in Bella Coola and urging British Columbia's provincial secretary to take some action to address the "utter lack of measures to deal with treatment of existing cases or prevention of spread of this disease" in 1940.[13] He noted that still, "the Canadian Indian is the only person in Canada who is excluded entirely from the nation-wide organization to cope with the disease of tuberculosis." Death rates in the 1940s remained in excess of 700 deaths per 100,000 Indigenous Canadians—among the highest ever reported in a human population, due to poverty, poor nutrition, overcrowding and co-morbidity with other diseases. In contrast, the national rate of TB mortality began a rapid decline in the 1940s,

11 "National Immunization Week, November 14–21," *Canadian Journal of Public Health* 34 (October 1943): 476–77; "The Halifax Health Survey," *Canadian Journal of Public Health* 34 (March 1943): 140–41; "The Occurrence of Diphtheria in Halifax from October 1, 1940 to January 31, 1941: An Interim Report to the Dominion Council of Health," *Canadian Public Health Journal* 32 (August 1941): 404–09

12 "Resolutions Adopted at the 34th Annual Meeting of the Canadian Public Health Association, Toronto, May 6–8, 1946," *Canadian Journal of Public Health* 37 (June 1946): 254

13 J.D. Galbraith. Letter to G.M. Weir, February 15, 1940.

now believed to primarily be due to a cohort effect resulting from the death and aging of a vulnerable generation.

The health of Indigenous peoples in the North was determined to be a federal responsibility under a 1939 Supreme Court of Canada ruling. The Inuit (generally called Eskimos at this time) were to be included with Indians, in terms of federal jurisdiction for their health care, but not extending to the provisions of the *Indian Act*. A unified Indian and Eskimo health service was created in 1945 under the new Department of Health and Welfare. Military activity during and after the war and subsequent economic development in the territories brought infectious disease threats that proved especially dangerous to Inuit communities, including polio, influenza and a number of other virus diseases.

Canadian Medical Association Journal, October 1949

Polio in the north of Canada, 1940s

Polio continued to spread among the whole population in the 1940s in the absence of an effective vaccine. The federal health research grants program supported a comprehensive polio virus research program at Connaught Medical Research Laboratories, launched in 1947 under the direction of Dr. Andrew J. Rhodes. During the winter of 1948–49, he heard of an outbreak among the Inuit population on the western coast of Hudson's Bay from the Indian Health Services Medical Officer of Health for the Eastern Arctic region, Dr. J.P. Moody. Moody was one of 27 full-time medical officers of the Indian Health Services division of the Department of National Health and Welfare, seven of whom were stationed in the eastern Arctic area. There were also some 700 doctors providing medical services on a part-time basis to Aboriginal communities, in addition to 24 field nurses scattered across the country and a medical group stationed on the Eastern Arctic Patrol onboard the *HMS Nascopie*.[14] By the end of February, some 25 cases and four


Flu Vaccine

Scientists Here Hope Immunization Against Mysterious Disease Soon Possible

Globe and Mail, February 12, 1946

Andrew J. Rhodes

Applied Electron Microscopy to Virus Identification

Born in 1911, Dr. Andrew Rhodes was a research scientist for nearly four decades in his chosen field of microbiology, particularly virology. He led in the application of electron microscopy to virus identification, in the *in vitro* cultivation of poliovirus in tissue culture and in studies of other viruses. He had over 140 papers accepted for publication and in cooperation with C.E. Van Rooyen, he authored two of the definitive textbooks on virus diseases, both of which went on through multiple editions. At various times he was Director of the Research Institute, Hospital for Sick Children, Director of the School of Hygiene, and Medical Director of the Laboratory Services Branch of the Ontario Ministry of Health.

—*Canadian Journal of Public Health*, Vol. 66, March/April 1975

14 P.E. Moore, "Indian Health Services," *Canadian Journal of Public Health* 37 (April 1946): 140–42

Joseph Henry Gilbert Page

Development of Vital Statistics and Public Health in Canada

Joseph Henry Gilbert Page was born in Chalk River, Ontario in 1909. In 1942, he accepted an appointment in the Statistics Department of the Health and Welfare Division and played a leading role in developing, in collaboration with the provinces, the National Birth Index—the cornerstone of the National Family Allowances Program. He was appointed Chief of the Vital Statistics Section in 1947—a position he held with distinction until his retirement in 1974. He participated in planning five Canadian censuses and in laying the groundwork for the 8th and 9th Revision of the *International Classification of Diseases*. Through dialogue and communication with the provinces, Mr. Page built confidence and understanding that led to the evolution of Canada's vital statistics system.

—*Canadian Journal of Public Health*, Vol. 65, March/April 1974

deaths had occurred and a team of six doctors was flown into the area by the Air Force to diagnose and treat the outbreak. On February 20, Moody imposed an unprecedented regional quarantine, covering some 40,000 square miles.[15]

Around the same time as the Arctic polio epidemic to the east, an unusually virulent outbreak of influenza struck the entire Inuit population of

John Thornton Marshall

Distinguished Statistician Made Significant Contributions to Public Health

John Thornton Marshall was born in Buckingham, England and came to Canada as a boy, settling in Victoria. He took up employment with the Vital Statistics Division of the British Columbia Board of Health and from 1916 to 1941, rose from clerk to director of the Vital Statistics Division and supervisor of Medical Records. He invented and introduced a number of systems for the registration of births, marriages and deaths and he established registries for adoption and divorce. As well, he set up recording systems for hospitals, welfare agencies and public health nursing services. In 1941, Mr. Marshall moved to Ottawa and served as assistant Dominion Statistician. His pioneer work resulted in the establishment of the Vital Statistics Council of Canada, dedicated to standardization and improvement.

—*Canadian Journal of Public Health*, Vol. 56, 1965

Lawrence family, Provincial Archives of Alberta, A2089

Mackenzie Delta Eskimos, Aklavick, Arctic Circle, 19—?

15 A.F.W. Peart, 'An Outbreak of Poliomyelitis in Canadian Eskimos in Wintertime: Epidemiological Features,' *Canadian Journal of Public Health* 40 (Oct. 1949), 406; J.D. Adamson, J.P. Moody, A.F.W. Peart, R.A. Smillie, J.C. Wilt and W.J. Wood, 'Poliomyelitis in the Arctic,' *Canadian Medical Association Journal* 61 (Oct. 1949), 339

90 people who lived in the southern regions of Victoria Island in the northern Northwest Territories, near Cambridge Bay, resulting in 18 deaths. Among the non-Inuit population of approximately 50 men living in the area, very few were affected and medical attention was needed in only one case. There were concerted efforts to identify the strains responsible for the outbreaks and it was clear that there was "the need for immunizing Eskimos against infection introduced from without with similar inoculation of white persons entering these Arctic Territories."[16] Influenza was a significant factor in many areas of Canada that winter, especially in parts of Ontario, Quebec, New Brunswick, Saskatchewan and Alberta, but its effects among the non-Aboriginal population were generally mild.

Federal Expansion and Post-War Promise

A federal-provincial conference was held in 1941 to discuss the Rowell-Sirois Commission's recommendations, but most of these, including a proposed health insurance plan, did not proceed in the face of opposition from the provinces from what was seen as federal intrusion into provincial domains. However, pensions and welfare provision were transferred from provincial jurisdiction and the federal government turned its attention to improving the country's standard of living. A new Department of National Health and Welfare had replaced the Department of Pensions and National Health in 1944.

Dr. George Donald West Cameron

Paul Martin Sr.

A federal health grants program was announced in August 1945 but fizzled out when Ontario and Quebec did not agree with the plan's financial arrangements. A renewed federal focus on expanding national public health services began in 1946 with the appointment of Dr. George Donald West Cameron as Deputy Minister of National Health and of Paul Martin Sr. as Minister of National Health and Welfare. Martin had a strong interest in health issues, much of it drawn from personal experience. A few months before his appointment, a serious polio outbreak in the Windsor, Ontario area touched Martin's eight-year-old son, Paul Jr., among many others. Martin Sr. was Secretary of State at the time and in a cabinet meeting when he received a frantic call from his wife asking him to rush home. (In 1907, Martin Senior himself had suffered from an attack of polio, which left a number of physical scars.) He was given access to a government plane for the trip and found his son in an isolation ward, paralyzed in the throat and unable to speak. Fortunately, the crisis passed and Paul Jr. recovered, although it would take most of a year.[17]

The division of child and maternal hygiene in 1947 filled the gap created when the child welfare division was closed in 1943. A new division for epidemiology and new quarters for the Laboratory of Hygiene, the Food and Drugs Laboratory and an Industrial Hygiene Laboratory, modeled after the National Institutes

16 C.E. Van Rooyen, L. McClelland and E.K. Campbell, "Influenza in Canada During 1949, Including Studies on Eskimos," *Canadian Journal of Public Health* 40 (November 1949: 447–56; F.P. Naglet, C.E. Van Rooyen and J.H. Sturdy, "An Influenza Virus Epidemic at Victoria Island, N.W.T., Canada," *Canadian Journal of Public Health* 40 (November 1949): 457–65

17 Paul Martin, *A Very Public Life: Volume I, Far From Home,* (Ottawa: Deneau Publishers, 1983), pp. 459–60

of Health in Washington, were other signs of federal public health expansion.

Martin announced his national health program in May 1948 at the annual meeting of the Canadian Public Health Association in Vancouver. He stressed the "greatly accelerated progress" that was now possible based on "vastly increased expenditures" being committed by the federal government to "put into effect this far-reaching plan for national health."

John J. Heagerty

Developed Federal Health Insurance Legislation

Dr. John J. Heagerty was Canada's first chief officer of health of the federal Department of Health. In 1928, Dr. Heagerty wrote: "We have seen our health departments develop from a part-time physician, who was the sole staff, to armies of workers and an expenditure of many thousands of dollars. We have seen the death rate drop from 40 per thousand to as low as 7.5 per thousand, in some parts of the country. To all who have been engaged in fighting disease from generation to generation it has been a long and tiresome journey." His exhaustive *Report on Public Health in Canada* formed the basis of the draft health insurance bill presented to a parliamentary committee in 1943. He led a comprehensive federal effort to develop the bill, introduced in 1945. He created his own memorial in his *Four Centuries of Medical History in Canada*.

—*Canadian Medical Association Journal*, August 10, 1968

Frederick W. Jackson

Developed and Introduced Renowned Manitoba Health Plan

Dr. Jackson entered the Department of Health and Welfare of Manitoba as Director of the Division of Disease Prevention in 1928 and from 1931 to 1948 he served as Manitoba's Deputy Minister of Health and Public Welfare. In this position, he developed the renowned Manitoba Health Plan that was introduced in 1945. Due to his vision and untiring efforts, Manitoba developed a unique and highly effective health program, integrating hospital services, public health, laboratory and diagnostic services. He went on to assist the Department of National Health and Welfare in establishing health insurance studies.

—*Canadian Public Health Journal*, Vol. 48, 1957

The program was focused on three types of grant programs for provincial health services: $625,000 for provincial planning to survey existing health needs; $13 million a year for five years to construct hospitals; and eight national health grants totalling $17 million in the first year, expected to rise to $22 million annually for an indefinite period and distributed to each province on a per capita basis. The health grants focused on the control of tuberculosis, cancer and venereal disease, mental health care, support for crippled children, professional training, general public health, and public health research.

New federal welfare allowances were created to help support families, the aged and blind, provide insurance for the unemployed, financial support for housing, and assistance for farmers and fishermen. The new federal philosophy was that "social well-being is an essential and basic

consideration of healthful living," and this defined the foundation of the Department of National Health and Welfare. According to Martin, "Canada is among those countries where public health is shifting its emphasis and broadening its outlook to embrace all that affects human life."[18]

Martin and Cameron decided not to let provincial resistance stand in the way and planning proceeded for a national health insurance scheme. Saskatchewan pioneered North America's first province-wide hospitalization prepayment plan in 1947, based on an annual per capita fee of five dollars. British Columbia, Alberta and Newfoundland (which joined Confederation in 1949) also offered partial coverage.

A Mixed Blessing for Public Health

The Canadian Public Health Association appointed its first full-time executive director, Dr. J.H. Ballie, who began his new job at the end of 1945 by directing several public health surveys requested by provincial health authorities and launching a new initiative to establish provincial public health associations. CPHA conducted surveys of public health practice and salary schedules, but a legacy of undervaluing public health work continued to limit salary growth, despite increasing demands and shortages of qualified public health personnel.[19]

Gregoire Fere Amyot

Public Health Contributions to Canada and the United States

After graduating in medicine at the University of Toronto, Dr. Amyot joined the Department of Public Health in Saskatchewan and worked in the northern regions of the province, often travelling by canoe. He later became Assistant Provincial Health Officer and Advisor on Hospital Services for the Province of British Columbia as well as a Professor of Public Health Administration at the University of Minnesota's Department of Public Health and Preventive Medicine. In 1946, Dr. Amyot became the first Deputy Minister of Health for British Columbia's Department of Health and Welfare.

—*Canadian Journal of Public Health*, June 1963

The professionalization of public health continued, and it was officially recognized as a designated specialty of medicine by the Royal College of Physicians and Surgeons of Canada in 1947. Qualifying for this specialization status was a challenge, owing to the public nature of public health services in contrast to the personal relationships inherent in private medical practice. It also paid considerably more to be a general practitioner or to pursue a career in any of the other growing medical specialties, other than public health.[20]

18 Paul Martin, "A National Health Program for Canada," *Canadian Journal of Public Health* 39 (June 1948): 219–26

19 "Qualifications and Salaries of Public Health Personnel," *Canadian Journal of Public Health* 37 (May 1946): 209; "The Salary Survey," *Canadian Journal of Public Health* 38 (January 1947): 58–59; "The Canadian Public Health Association, 1946–1947: Report of the Executive Director," *Canadian Journal of Public Health* 38 (May 1947): 249–52; "The Shortage of Nurses," *Canadian Journal of Public Health* 38 (November 1947): 558–49; "Survey of Public Health Practices in Canada," *Canadian Journal of Public Health* 39 (February 1948): 84–85

20 "Qualification Requirements and Minimum Salaries for Public Health Personnel in Canada," *Canadian Journal of Public Health* 40 (April 1949): 186–87; "The Shortage of Public Health Personnel," *Canadian Journal of Public Health* 41 (January 1950): 44–45; "Public Health – A Specialty in Medicine," *Canadian Journal of Public Health* 41 (March 1950): 133–34

G. Brock Chisholm

First Director General of the World Health Organization

When Dr. Chisholm retired from the World Health Organization, an editorial in an international journal at the time said: "Dr. Chisholm's retirement after nearly two years with the Interim Commission and five years as Director General of the World Health Organization closes a notable chapter in the history of public health and of international collaboration. His dealings with individuals were directed by the skill of an experienced psychiatrist; and his vision and courage in program planning were characteristic of a leader of inherent and essential greatness." Dr. Chisholm entered the field of psychiatry after spending some years in private practice. During WWII, he served as Director of Personnel Selection, as Deputy Adjutant General and later, as Director General of Medical Services. When he was appointed Deputy Minister of National Health in 1944, it was said that he exhibited extraordinary skill in the post-war expansion of the Department. In 1946, Dr. Chisholm directed the Interim Commission of the World Health Organization and became its first Director General two years later.

—*Canadian Public Health Journal*, Vol. 49, 1958

Despite grants for professional development, there had been significant shortages in public health personnel since the end of the war, mostly due to a lack of financial incentives for physicians to specialize in public health. The public health nursing shortages were acute and expanding health services and hospital construction in the United States drew many young Canadian physicians and nurses south. The *Canadian Journal of Public Health* added an Employment Services section to advertise the growing number of public health positions that were increasingly difficult to fill.

Lyle M. Creelman

Developments of Nursing and Public Health in Canada and Around the World

"In fourteen years as Chief Nursing Officer, World Health Organization, Lyle Creelman probably achieved more for nursing throughout the world than any other nurse of her time," said the Journal of the International Council of Nurses in 1968. Lyle Creelman was born and educated in Nova Scotia and in 1938 was granted a Rockefeller Fellowship to attend Columbia University, where she completed a master's degree, specializing in public health nursing administration. Her work on the international level began immediately after WWII when she was appointed Chief Nurse for the United Nations Relief and Rehabilitation Administration in the British zone of occupation in Germany. On her return to Vancouver in 1947, she conducted an intensive study and evaluation of public health practice in collaboration with Dr. J.H. Baillie, with recommendations that made a decided improvement in the practice. Two years later she joined the World Health Organization as nursing consultant in maternal and child health and was appointed Chief Nursing Officer five years later.

—*Canadian Journal of Public Health*, Vol. 63, 1972

World Health Organization

Despite the field's challenges at home, Canada made a significant contribution to the creation of the World Health Organization (WHO) in 1948. Deputy Minister of National Health and Welfare, Dr. Brock Chisholm, played a central role in the development of the WHO after the war and is credited with defining the international organization's objective of the attainment by all people of the highest possible level of health.

Chisholm served as the first Director General of the WHO, from 1948 to 1953. The Organization's statement that "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity"[21] would help define the broader mission of the Canadian public health community in the next decade.

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21 S.W.A. Gunn, "The Canadian Contribution to the World Health Organization," *Canadian Medical Association Journal* 99 (December 7, 1968): 1080–88

CHAPTER 6: 1950–1959

Growth in Research, Services and Funding

The 1950s saw the continuation of significant expansion in federal and provincial funding for health services. Federal health grants to the provinces supported a variety of specific disease control and treatment programs as well as research projects, a key focus of which was research into developing a polio vaccine while the country experienced serious epidemics of the disease. The incidence of most infectious diseases declined, particularly from immunization programs targeting children, aided by the introduction of the Salk polio vaccine and the wide use of new antibiotic drugs. Dental health became a public health preoccupation and water fluoridation programs expanded, while preventable injuries among children and chronic diseases such as cancer and cardio-pulmonary diseases became major causes of death among adults.

Federal research grants had supported a variety of provincial public health initiatives since 1948, including TB, VD and cancer control, mental health care, support for crippled children and professional public health training. The National Health Program also provided grants for provincial health surveys and hospital construction and it was expanded in 1953 to include support for provincial child and maternal health services, medical rehabilitation, and laboratory and radiological services. In 1957, legislation was enacted allowing the federal government to enter into an agreement with the provinces to establish a comprehensive,

universal plan covering acute hospital care and laboratory and radiology diagnostic services. British Columbia, Alberta, Saskatchewan and Newfoundland had implemented their own government-sponsored hospital care programs by that time and by the end of the decade, all provinces had agreed to participate in the national hospital services insurance plan.

In the fall of 1950, the first national population-based health survey, the Canadian Sickness Survey, was launched. The National Health Program, initiated in 1948, had resulted in an increased use of health services and the government needed to be able to plan and evaluate costly new programs. The Canadian Sickness Survey collected household data over a 12-month period and was designed to provide an overall picture of the health problems of Canadians in the context of their social, physical and economic environment.[1] A growing demand for health services exceeded the supply of professionals, most notably with nursing.

Harry Knowlton Brown

Soldier and Public Health Dentist

Dr. Harry Knowlton Brown distinguished himself as a public servant and member of the dental profession. Born in Nova Scotia, he served as a machine gunner in World War I and in the Dental Corps in World War II where he attained the rank of Lieutenant Colonel. He attended the University of Toronto's School of Hygiene after the war and graduated with a Diploma in Dental Public Health. After a short time in private practice, he was appointed Director of Dental Public Health in the Department of National Health and Welfare in Ottawa. There, he organized and directed one of the first scientific research studies of water fluoridation conducted in North America.

—*Canadian Journal of Public Health*, Vol. 56, 1965

Peter J. Moloney

Distinguished Scientist, Teacher and Vaccine Developer

Dr. Peter J. Moloney earned an MA in Chemistry from the University of Toronto and in 1919, was appointed research chemist in the Connaught Laboratories. Dr. Moloney was given the responsibility of preparing the diphtheria toxoid for Connaught Laboratories in 1924, making its early use possible in Canada. He was Assistant Director of Connaught until 1955 and contributed to the development of the so-called "reaction test" for diphtheria toxoid. In studies with tetanus toxoid, he developed methods for its assay and purification and elucidated its antigenic constituents. Dr. Moloney was also one of a team that successfully devised methods for the preparation of penicillin during World War II, which was an urgent and complex challenge. Similarly, the call for a potent polyvalent gas gangrene antiserum was successfully met through the work of his colleagues and his own studies at the close of the war.

—*Canadian Journal of Public Health*, Vol. 53, June 1962

1 O. Kendall, T. Lipskie & S. MacEachern, "Canadian Health Surveys, 1950–1997" in *Chronic Diseases in Canada,* 18 (2), 1997 accessed at http://www.phac-aspc.gc.ca/publicat/cdic-mcc/18-2/b_e.html

Aboriginal Health Services

Federal health programs for the Inuit were provided later than for First Nations people in Canada. Inuit contact with non-Aboriginal people increased considerably in the 1950s, initiating a period of accelerated social change. Health services north of 60°L expanded along with increased military activity. Indigenous people relocated close to military bases and towns for employment opportunities and where centralized health services were being provided.

Extremely high infant mortality among First Nations and the Inuit was a major concern of the Northern Health Services, created in 1954 (later replaced by the Medical Services Branch). Non-Aboriginal midwives were recruited to work in nursing stations and became part of a concerted effort in the 1950s to have women deliver their babies in nursing stations or hospitals.[2]

A National Polio Crisis

Riverview Health Centre, Winnipeg, MB

Wheel chair race in Winnipeg

The menace of "the crippler" grew to unprecedented levels from east to west and into the Arctic. Polio epidemics increased in scope and severity and also involved growing numbers of adults, putting a greater strain on stressed public health and hospital infrastructures and requiring increasing financial support from government to cover the growing costs of care. What used to be a mostly harmless gastrointestinal infection among very young children became increasingly serious as sanitary improvements delayed exposure to the polio virus. Federal health grants buttressed increasingly generous provincial polio treatment and hospitalization policies, provided iron lungs and other equipment, and supported longer term care of polio cases through the crippled children health grants.[3]

Joseph Donovan Ross

Alberta Minister of Health

Dr. Joseph Donovan Ross was born at Waldo, British Columbia in 1911. In 1951, he founded the Alcoholism Foundation of Alberta, and served as President and Chairman of the Board. In 1952, he was elected as a Social Credit candidate in the Alberta Legislature and for 12 years served as Minister of Health. Dr. Ross was responsible for developing the Alberta Health Plan, which paved the way for Alberta's entry into the National Medicare Plan. He expanded preventive health programs, developed services in occupational health, and initiated programs of environmental protection, especially in relation to the petrochemical industry. After leaving political life, Dr. Ross became increasingly interested in the provision of health care to less affluent countries and directed Project Concern Incorporated, providing services in Mexico, Indonesia, Hong King and elsewhere.

—*Canadian Journal of Public Health*, Vol. 66, March/April 1975

2 K. Plummer, "From Nursing Outposts to Contemporary Midwifery in 20th Century Canada" *Journal of Midwifery and Women's Health* 45 (2), March/April 2000, 172

3 Christopher J. Rutty, "Do Something! Do Anything! Poliomyelitis in Canada," (Ph.D. Thesis: Department of History, University of Toronto, 1995), pp. 209–61

Clennel E. van Rooyen

Pioneer in the Development of the Polio Vaccine

Dr. Clennel Evelyn van Rooyen was born in 1907 in Ceylon and received numerous honours for his work in Egypt on smallpox, typhus, plague, and poliomyelitis. His early work on poliomyelitis led to the development of polio-vaccine by Dr. Sabin and Dr. Paul of Yale University. He moved to Canada and in 1956 was appointed Professor and Head of the Department of Bacteriology at Dalhousie Medical School, and Director of the Division of Public Health Laboratories at the Department of Public Health. He was a leader in the fight against poliomyelitis in Canada and directed the first trial of Sabin Poliomyelitis Vaccine in the Yarmouth area of Nova Scotia. He developed the first virus laboratory in the Atlantic Region and was responsible for many of the improved clinical uses of modern antibiotics in the area.

—*Canadian Journal of Public Health*, Vol. 67, May/June 1976

Canada's polio epidemic peaked in 1953. During that summer and fall and into the winter months, epidemic polio touched the whole country, causing nearly 9,000 cases and claiming some 500 lives—the greatest epidemic crisis since the 1918 influenza pandemic. In communities such as Winnipeg, polio incidence climbed beyond anything ever seen, with disturbingly high numbers of bulbar cases among young adults and many hospital rooms filled with iron lungs. Doctors and nurses were particularly vulnerable and a number of women gave birth while confined in an iron lung. The Royal Canadian Air Force was enlisted to make emergency deliveries of iron lungs across the country as the need grew. At the peak of Winnipeg's polio crisis, 92 cases were dependent on the respirators at the same time. This dramatic and desperate situation was repeated on a slightly smaller scale in many parts of Canada and Health Minister Martin declared a national emergency.

Ontario March of Dimes

US News and World Review, June 3, 1955

Boston researchers led by Dr. John F. Enders had developed a way to grow polio virus in test tubes in 1949 and this Nobel Prize-winning discovery motivated other researchers, including at Connaught Medical Research Laboratories. In an effort to develop the volume of polio virus required for vaccine development, Dr. Arthur E. Franklin tried a synthetic nutrient base known as Medium 199, which provided a non-allergenic base for a vaccine, and with this key development, Dr. Jonas Salk of the University of Pittsburgh became confident that an inactivated polio vaccine could stimulate the immune system enough to prevent polio in humans. In 1952, residents of a disabled children's institution near Pittsburgh were the first to receive Salk's vaccine produced with Connaught's Medium 199.[4]

Manitoba Provincial Archives

4 D. Duncan, A.E. Franklin, W. Wood and A.J. Rhodes, "Cultivation of Poliomyelitis in Tissue Culture: V, Observations on Virus Propagation in Certain Animal Tissues with a Synthetic Nutrient Medium," *Canadian Journal of Medical Science* 31 (February 1953): 75–83; J.E. Salk, "Studies in Human Subjects on Active Immunization Against Poliomyelitis: I, A Preliminary Report of Experiments in Progress," *Journal of the American Medical Association* 151 (March 28, 1953): 1081–98

An unprecedented vaccine field trial followed in the United States in 1954, with an elaborate tracking system of some 1,800,000 children. The Canadian government took part in the trial on a limited basis, when surplus vaccine from the U.S. was offered and used in Manitoba (except Winnipeg), Alberta, and Halifax. The American field trial found the Salk vaccine to be 60% to 90% effective in protecting children against the paralytic disease, depending on the type of polio virus. In 1955, the vaccine was licensed and six American vaccine producers rushed to supply it and unlike in the field trials, the U.S. government did not test each batch of new vaccine produced. Subsequently, 79 American children contracted polio due to incomplete inactivation of the polio virus in selected lots. Canada was successful in manufacturing and freely distributing a safe polio vaccine, and Connaught director Dr. Robert D. Defries was awarded the American Public Health Association's highest honour upon his retirement in 1955, for his long service and personal leadership during the development and introduction of the Salk polio vaccine.[5]

Immunization with the Salk vaccine struck a decisive blow to paralytic polio and national incidence remained low during 1956 and 1957, but an unexpected wave of polio outbreaks and epidemics in several provinces in 1958 through 1960 prompted more aggressive polio immunization campaigns across the country, especially among adults. Polio persisted, especially among groups slow to take advantage of the Salk vaccine, and there was an intensive research effort in 1959 to provide an oral polio vaccine based on attenuated polio virus strains developed by Dr. Albert Sabin.

5 "Administration of Poliomyelitis Vaccine (Salk)," *Canadian Journal of Public Health* 46 (May 1955): 212–4

Christian Smith

Journalist and Social Reformer in Saskatchewan

Christian Smith was born in Amsterdam and moved to Canada in 1910. In 1922, he joined the staff of the Saskatoon Daily Star and remained with this paper for 21 years. In 1944, he accepted the post of Director of Health Education in the Department of Public Health. During his newspaper days, Mr. Smith wrote a series of articles on tuberculosis, mental health, and narcotic drug traffic. During the early years of World War II, he was engaged in the first venereal disease education program of its kind in Canada. He gave his time to the John Howard Society and in 1946, became secretary of a Saskatchewan-appointed Royal Commission to investigate correctional practice. In 1952, Mr. Smith set up the first comprehensive accident prevention program conducted by any public agency in Canada.

—*Canadian Journal of Public Health*, Vol. 57, June 1966

Preventable Injury and Death

A growing proportion of preventable injuries and death affected children in the home due to falls, cutting and piercing, and poisonings in the 1950s. Prevention required co-operative efforts by administrators, public health nurses, doctors, sanitarians, and health educators, as well as a two-pronged attack on personal and environmental hazards.[6] In addition to research

6 Edward J. Brower, "Fatal Accidents in the Home," *Canadian Journal of Public Health* 49 (June 1958): 225–9; Antoine B. Valois, "Integration of Home Safety in a Public Health Program," *Canadian Journal of Public Health* 50 (November 1959): 474–7

Alex Cross

Highest Standard of Professional Practice in Canadian Environmental Health

Alex Cross started a five-year apprenticeship in 1923 as a pipe-fitter with the Canadian National Railways and through education and experience became District Inspector at the Winnipeg Health Department in 1931. During the war, he was posted to the 11th Canadian Field Hygiene Section of the 5th Canadian Armored Division, and on discharge returned to the Winnipeg Health Department where he eventually became Assistant Chief of the Health Department. Mr. Cross was a Charter Member of the Canadian Institute of Sanitary Inspectors and in honour of his lifetime contribution to public health the Institute created the Alex Cross Award in 1984, to be presented annually to a member who had displayed *"The Highest Standard of Professional Practice in the Field of Environmental Health In Canada."*

—Tim Roark, Historian, Based on a 1977 biography of Alex Cross

and educational efforts, a network of poison control centres was established across Canada through the efforts of provincial deputy ministers of health. By 1958, there were 13 such centres based in selected hospitals, providing emergency treatment and information about the nature of the substances involved in the poisoning, their possible antidote, treatment options and general advice by telephone.[7]

7 C. Collins-Williams, "Poison Control Centres," *Canadian Journal of Public Health* 49 (March 1948): 91–4

Food Safety

Botulism caused by improperly sterilized canned foods occurred most often in home-preserved produce and food-borne illnesses required a rapid local public health response to identify and isolate the source of the infection. However, educational efforts were increasingly directed at food handlers and owners in restaurants in the 1950s, and proper food sanitation concepts were better integrated into restaurants. The health education of food handlers and regular sanitation inspection and correction remained challenges for local public health departments throughout this decade.[8]

Industrial production, processing and distribution of food products drew greater federal attention in the late 1950s, especially of packaged, ready-to-eat meat products. A strengthened, more pro-active *Food and Drugs Act* was implemented in 1954 and prohibited the preparation and sale of food, drugs or cosmetics under unsanitary conditions, with violations a matter of criminal law. This required a growing team of federal inspectors from the Food and Drug Directorate, working in close cooperation with provincial and local health departments to systematically monitor unsanitary conditions, particularly in food

Glenbow Museum, PA-2453-199

Meat inspectors checking Jenkins Grocerteria beef, Calgary

8 C.E. Hornady, "The Education of Food Handlers," *Canadian Journal of Public Health* 47 (July 1956): 288–92; C.F. Barrigan, "Restaurant Design," *Canadian Journal of Public Health* 47 (October 1956): 438–41; C.G. More, "Securing Correction of Defects in Restaurant Sanitation," *Canadian Journal of Public Health* 47 (November 1956): 485–88

Douglas A. Strong

Chief Public Health Inspector for Newfoundland

Douglas Anderson Strong was said to be an outstanding public servant and community leader in his 27-year tenure as Provincial Chief Health Inspector in Newfoundland. In 1949, he was the first Newfoundlander to receive a certificate in public health inspection. When Mr. Strong retired from government service in 1981, he was Director of Emergency Health Services. In 1967, he chaired the Steering Committee leading to the formation of the Newfoundland and Labrador Branch of CPHA and became its first president. He was a founding member of the Atlantic Branch of the Canadian Institute of Public Health Inspectors.

—*CPHA Health Digest*, 1993

production. They started with cheese factories, then slaughterhouses, flour mills and poultry plants. While their scope was national, the legislative focus of federal inspectors in matters of environmental sanitation still remained limited. "We consider unsatisfactory conditions only as they may affect the product," noted O.B. Petursson of the Food and Drug Directorate. In addition to being concerned about whether the condition of the product represented a health hazard, the Directorate focused on "whether the product contains filth or foreign substances which should not be there."[9] The new *Food and Drugs Act* provided stronger legislative muscle but there was a limited team of federal inspectors working to regulate a rapidly growing food industry and opinions tended to be dominated and constrained by economies of production and the preservation and expansion of the standard of living.

Assessing the safety of food grew increasingly complex as new chemical, biological and technological tools were used to preserve the quality and shelf life of food products. The potential health impact of pesticide residues on fruits and vegetables, the addition of various kinds of chemicals in the production of foods, and the use of antibiotics in foods to serve as preservatives became issues of growing public health concern in the late 1950s.[10] The Dominion Council of Health discussed the large number of new pesticide products "being presented with inadequate evaluation of toxicological factors" and noted that "once a product is licensed there is no further control which can be exercised over its use."[11]

Environmental Contamination

Rapidly increasing usage of new industrial and agricultural chemicals introduced toxins into the air and soil, but the main focus of environmental concern was water pollution. The International Joint Commission on Boundary Waters was reactivated after the war and conducted surveys of the pollution of the Great Lakes and other boundary waters. A report issued in 1951, indicated

9 O.B. Petursson, "The Role of the Food and Drug Inspector in Sanitation," *Canadian Journal of Public Health* 48 (December 1957): 522–3; "The Food and Drugs Act and Food Sanitation," *Canadian Journal of Public Health* 47 (August 1956): 352–3; Randolph M. Frisen, "Problems of Packaged, Ready-to-Eat Meat Products," *Canadian Journal of Public Health* 48 (July 1957): 295–9; Andrew Hollett, "Food Plant Inspection," *Canadian Journal of Public Health* 49 (August 1958): 351–3

10 L.L. Pugsley, "Food Additives," *Canadian Journal of Public Health* 50 (October 1959): 403–10; R.C.B. Graham and M.G. Allmark, "Residue Tolerances for Pesticides in Foods," *Canadian Journal of Public Health* 49 (October 1958): 430–4; F.S. Thatcher, "Antibiotics in Foods: A Review of Some Public Health Aspects," *Canadian Journal of Public Health* 49 (February 1958): 58–72

11 Minutes, Dominion Council of Health, March 16–18, 1953

R.C. Harris Purification Plant, view from tunnel shaft, September 2, 1953

that water pollution, particularly from the rising volumes of untreated and partially treated industrial wastes, had created a health hazard as well as adverse economic effects.

Fish and wildlife were being threatened and the Commission ordered that all wastes discharged into the waters be treated to comply with the Boundary Waters Quality Control. Unlike the United States, where state and local governments received federal funding assistance to construct new sewage treatment plants, full responsibility for waterworks and sewage treatment and disposal in Canada rested with local municipalities. Since the early 1930s, there had been little to no upgrading, expansion or new construction of sewage and waterworks infrastructures in Canada and municipalities opted for the cheapest and easiest methods of sewage disposal.

Some work on water and sewage treatment works had been done in the western provinces with support from National Health Grants and in Ontario with funding from the recently established Pollution Control Board. The Dominion Council of Health (DCH) noted in 1953 that public health authorities may have lost sight of environmental issues in the expansion of their interests in other fields. The development of needed facilities had not kept pace with the rapid industrial and housing expansion taking place and environmental health issues were growing beyond the control of public health authorities. In 1956, Ontario established a Water Resources Commission, which brought water and built sewage plants for three million people across the province.[12]

The Dominion Council of Health formed a panel on water pollution and one on air pollution, with each including industry representatives. Water pollution challenges included depletion of sub-surface water supplies and the receding of the water table due to increasing urban demands for water, aggravated by rapid industrial expansion and fuelled by "the continual rise in the standards and comforts of living." As the Council noted, "No matter how abhorrent the thought, in populated areas mass drinking water

Margaret Isobel Whelan

First Female Sanitary Inspector in Ontario

Margaret Isobel Whelan was born in 1919 in Buffalo, New York and became the first qualified female Sanitary Inspector (SI) in Ontario. She originally worked in the Bacteriology Department at Connaught Medical Research Laboratories, doing technical work on antibiotic and immunization research. She encountered many public health professionals at Connaught, which raised her interest in pursuing a career as a SI. Ms. Whelan began with the inspection of food stores, beauty parlours and restaurants, working for the Township of Etobicoke Department of Health. Ms. Whelan later moved to Peel Public Health in Brampton, Ontario where she worked as a Public Health Inspector until her retirement in the mid 1980s.

—Dennis Persaud, Public Health Inspector, Peel Public Health

12 "The Control of Water Pollution," *Canadian Journal of Public Health* 47 (December 1956): 529

E.A. Electa MacLennan

Distinguished Nurse-Educator for Nova Scotia

Electa MacLennan was born in Brookfield, Nova Scotia and was educated at Dalhousie University, the Royal Victoria Hospital School of Nursing in Montreal, the School for Graduate Nurses at McGill, and earned her MA in Public Health Supervision at Columbia University. Her enjoyment of community nursing took her to the Victorian Order of Nurses, first as a supervisor in Montreal, then as National Office Supervisor for the Maritimes. In 1949, she became the first director of the newly organized School of Nursing at Dalhousie. Among her important innovations was organizing the annual Nursing Institutes for all the Atlantic provinces. Ms. MacLennan accomplished much for nursing education at the provincial, national and international levels.

—Canadian Journal of Public Health, Vol. 67, May/June 1976

consists largely of diluted sewage which has been subjected to artificial or natural processing to recover it from its more or less non-polluted original condition.... Many urban municipalities have no alternative but to use the liquid wastes from one or more municipalities above-stream or on the same watershed, without benefit of natural dilution." The industry representatives resisted a single legislated provincial standard of water quality. "It is our view then that the stream should be utilized for disposal of wastes both domestic and industrial on the basis of the assimilation capacity consistent with the program for that stream."[13]

The industry representative on the air pollution panel also saw the air as "a natural medium for the disposal of useless residues and, as in the case of water, subscribe to the principle of 'use—not abuse.' In our view, it should be utilized to the greatest possible extent consistent with public safety, welfare and comfort whenever it is the more economical method of disposal. We believe this because, by definition, other methods would be more expensive and as the extra cost is ultimately borne by the public would be reflected in a reduced standard of living." Building higher chimneys to disperse air pollutants was preferred over any of the many engineering techniques that existed for preventing the discharge of smoke, mists and other gaseous effluents into the air.[14] Such views represented the dominant economic, political and popular attitude of 1950s towards environmental health. Suburbanization also increased physical distance from public health and hospital services and a reliance on automobiles. As was noted, without two cars in the family, suburban housewives would otherwise be "marooned" in their homes in the absence of public transportation.[15]

Public Health

Persistent personnel shortages amidst rising public and government demand for health services caused CPHA to consider how to further the needs of the profession. As was noted at the first annual meeting of the Ontario Public Health Association, held in conjunction with CPHA's annual meeting in June 1950 in Toronto,

13 Minutes, Dominion Council of Health, October 5–7, 1953; "Canada's Problem of Water Pollution," *Canadian Journal of Public Health* 46 (August 1955): 339–41

14 Minutes, Dominion Council of Health, October 5–7, 1953; Gordon H. Josie, "Public Health Statistics in Air Pollution Studies," *Canadian Journal of Public Health* 45 (February 1954): 64–9;

15 Anthony Adamson, "Suburbanization," *Canadian Journal of Public Health* 46 (August 1955): 324–7

J. Arthur Melanson

New Brunswicker's Distinguished Military and Public Health Service

Dr. J. Arthur Melanson was born in Shediac, New Brunswick and completed his medical studies in Scotland at Edinburgh University and the University of Toronto. During WWII, he was Assistant Director of Hygiene with the rank of Lieutenant Colonel with the Second Canadian Corps Headquarters. He was Deputy Minister of Health for New Brunswick and Chief Medical Officer of the Provincial Health Department from 1945–65, as well as Registrar General of Vital Statistics for New Brunswick. Dr. Melanson began his work in public health in New Brunswick as a tuberculosis diagnostician and district medical officer of health. Dr. Melanson was instrumental in organizing the New Brunswick-Prince Edward Island Branch of CPHA and served as its first president.

—*Canadian Journal of Public Health*, Vol. 57, June 1966

"an outstanding problem in the functioning of the Canadian Public Health Association over the years has been one of geography." CPHA's annual meetings were held in the east, central and western regions, leaving long gaps between meetings in a particular province.

The Canadian Public Health Association and the *Canadian Journal of Public Health* prepared to celebrate their 50-year anniversaries. Both had struggled since the end of the war. The Executive Director position established in 1945 had only lasted for three years, leaving the Association to again rely on voluntary executive leadership, minimal staff and donated office space from the School of Hygiene. A special committee was formed in 1957 to look into ways to improve CPHA's organization and finances. Among the recommendations made a year later was a plan to increase membership numbers and fees, adding a new sustaining membership category for companies and institutions to provide financial support, and a more prominent role for provincial associations in shaping the policies of the national body. The national organization would provide services to the provinces and a full-time Executive Director would be hired once again, with full and part-time staff to provide professional leadership and co-ordination of the Association's growing range of activities into the future.[16]

John Collins, © McCord Museum, M965.199.6054

Too bad we can't have shots for this, too

An article in the *Canadian Journal of Public Health* by the Dean of the School of Public Health at the University of North Carolina, E.G. McGavran, described the winds of change reshaping the profession at the end of the 1950s. He said public health seemed to be "losing ground" and was "falling into disrepute" as other parts of government were taking over some public health functions. New government bodies and commissions were "being formed without even public health representation to deal with matters of stream pollution, air pollution, hospital construction, medical care administrations,

16 K.C. Charron, "The Association: Today and Tomorrow," *Canadian Journal of Public Health* 50 (September 1959): 378–84; "The Canadian Public Health Association, Annual Report, 1958–1959," *Canadian Journal of Public Health* 50 (June 1959): 256–60

Adelard Groulx

Nearly 30 Years as Montreal's Medical Officer of Health

Dr. Adelard Groulx retired as Montreal's Medical Officer of Health in 1965, a position he held since 1937. Born in Sainte-Scholastique, he graduated in medicine from the University of Montreal and entered civic service in Montreal as head of the division of child health in the Department of Health. He held a number of posts at the University of Montreal's School of Hygiene and lectured at the School of Public Health Nurses, the Faculty of Dentistry, the Faculty of Pharmacy, and the Institute of Hospital Administration. He was also a director of the Institute of Microbiology and Hygiene of the University of Montreal. Dr. Groulx was CPHA's President in 1943 and made significant and valuable contributions to the Association through his work on various committees. Dr. Adelard Groulx was appointed Chief Medical Officer of Health for *Expo '67*.

—*Canadian Journal of Public Health*, Vol. 57, June 1966

chronic disease control." McGavran suggested a new concept of public health, "based upon the new and coming acceptance that public health is the scientific diagnosis and treatment of communities." An excessive focus on the treatment of individuals through new "magic drugs and refined diagnostic tools" had blinded the public health profession from seeing the real focus and importance of its work which, he noted, was always community focused.[17]

17 Edward G. McGavran, "The Promise of Public Health," *Canadian Journal of Public Health* 50 (May 1959): 197–20

With Canadians living longer, new public health challenges continued to emerge. Chronic diseases and injuries and "lifestyle" risks related to tobacco, alcohol and drug use and a resurgence of sexually transmitted infections would become the next major prevention issues. Growing automobile use would increase death and injuries due to traffic collisions, while environmental issues would rise to the forefront in the next decade as the public health field grappled with redefining itself.

Eleanore Louise Miner

Promoting Public Health Nursing and Primary Prevention

Eleanore Louise Miner, of Regina, Saskatchewan, was a leader in the field of public health throughout her 35 years involvement. At every opportunity, she promoted primary prevention and supported the expansion of community health staff to include dental hygienists, nutritionists, speech therapists, psychologists and physiotherapists. She worked to establish public health programs for the underprivileged, for workers exposed to health hazards, for mothers and the newborn. She was president of both her provincial and national nursing associations, and from 1959 to 1961 was president of the Saskatchewan Public Health Association. Ms. Miner published a series of articles on public financing of public health nurses in the *Canadian Journal of Public Health*, documenting the important contributions of public health nurses in the community.

—*CPHA Health Digest*, Vol. 5, No. 2, April 1981

CHAPTER 7: 1960–1969

Social Transformation and Health Services

The 1960s were a period of rapid social change in Canada, and especially in Quebec where 16 years of Conservative rule ended and the province launched its "Quiet Revolution" with ambitious economic and social reforms that touched every level of society. Traditional governmental roles also changed radically and Canadians enjoyed greater access to medical care with the introduction of public medical insurance. Longer life expectancies brought greater attention to the challenges of chronic disease. Tobacco, alcohol and drug use became bigger concerns and the incidence of sexually transmitted infections increased. The public became more aware of the potential negative impacts of synthetic chemicals, prescription drugs and technological advances, while concerns about the impact of processing on food nutrition prompted research studies and calls for better education strategies. On the whole, however, public health seemed to be taken for granted and there was resistance to official messages about vaccination, tobacco, water fluoridation and automobile safety.

Sanofi Pasteur Limited, Connaught Campus, Archives

Public Health circular distributed to homes, 1961, Vol. 47, No. 1, p. 16

CPHA at Fifty

1961

[Second Session]

CHAPTER 1

An Act to provide for Payment for Services rendered to Certain Persons by Physicians and Certain other Persons.

[Assented to November 17, 1961.]

HER Majesty, by and with the advice and consent of the Legislative Assembly of Saskatchewan, enacts as follows:

SHORT TITLE.

1. This Act may be cited as *The Saskatchewan Medical Care Insurance Act, 1961*.

INTERPRETATION.

2. In this Act:

(a) "advisory council" means the advisory council established pursuant to section 11;

(b) "beneficiary" means a person who pursuant to section 25 is a beneficiary;

(c) "commission" means the Saskatchewan Medical Care Insurance Commission mentioned in section 3;

(d) "dentist" means a dentist who holds a valid and subsisting licence under *The Dental Profession Act, 1955*, authorizing him to practise the profession of dentistry in Saskatchewan and is not under suspension;

(e) "dependent" means a person who is a resident and depends upon another resident for maintenance;

1

In order to renew CPHA's 1912 federal charter, a private member's bill to update the *Canadian Public Health Association Act* was introduced in February 1960, received unanimous support in the Senate and the House of Commons, and was given Royal Assent on March 31. The Association appointed Dr. Edward J. Young as full-time Executive Director, after nearly a decade without one and an advisory board for the *Canadian Journal of Public Health* was also appointed, made up of representatives from each provincial association, as well as an associate editor from Quebec in an effort to attract a larger number of submissions from that province.

The public health field struggled to redefine itself as the bulk of government health spending was devoted to a national system of hospital-based health care. In a March 1960 issue of the *Canadian Journal of Public Health,* CPHA President Dr. Jules Gilbert stressed the need for more work in public health education, professional training, research, and the provision of preventive services. In the same journal issue, Department of National Health and Welfare director of health services, Dr. K.C. Charron, outlined five main priorities for public health: administration and organization; mental health; medical rehabilitation and chronic disease control; and health radiation and emergency health services.[1]

Hospitals and the Future of Public Health

A March 1960 editorial in the *Canadian Journal of Public Health* noted the "almost overwhelming" need for more hospital beds and nurses. The federal and provincial governments continued to expand hospital infrastructures while public medical insurance plans were being developed. The creation of Canada's system of public medical insurance began in Saskatchewan in 1960 with the re-election of Tommy Douglas' Co-operative Commonwealth Federation (CCF) government. Fear of government interference with professional freedoms and objections to the compulsory nature of the plan led to a provincial doctor's strike during the summer of 1962, but when the province agreed to remove or change any sections in the legislation that the Saskatchewan College of Physicians and Surgeons viewed as "hazardous to professional freedoms," the doctors' strike ended.[2]

Voluntary medical insurance plans had been introduced in British Columbia, Alberta and Ontario and in 1961, the federal government launched a Royal Commission chaired by Saskatchewan Chief Justice Emmett Hall, "to inquire into and report on the existing facilities and future need for health services for the people of Canada and the resources to provide such services and to recommend such measures,

1 "The Association's Future: Its Importance Place in Canada," *Canadian Journal of Public Health* 51 (March 1960): 113; K.C. Charron, "Present Challenges in Public Health," *Canadian Journal of Public Health* 51 (March 1960): 85–93

2 R.W. Sutherland, "Saskatchewan Medical Care Insurance Progress Report," *Canadian Journal of Public Health* 56 (February 1965): 77

consistent with the constitutional division of legislative powers in Canada."[3]

The Canadian Public Health Association urged the Commission to focus on issues of quality, availability and the effective use and co-ordination of health services. CPHA recommended in a 1962 brief that, "Canada should adopt a more positive philosophy towards health," and noted that "services for prevention and public health need a great deal more support." Long-term planning and evaluation, the control of chronic diseases, comprehensive rehabilitation facilities, a more progressive and integrated approach to mental health services, and greater support for public health research and training were among the Association's recommendations.[4]

Unaddressed Public Health Concerns

When the Commission's preliminary report was released in 1964, the emphasis on "a planned and coordinated approach to the development and maintenance of health services on a nation-wide basis" was welcomed but the field was disappointed by the lack of attention to public health issues. The suggestion of "radical changes" in the National Health Grants program was also disconcerting and the Commission apparently did not appreciate the historical importance of the grants in assisting establishing and expanding provincial public health services.


A Message to the People of Saskatchewan on
MEDICAL CARE

U of S Archives, V E A. Tollefson Papers MG26S1. H. Personal

"It is the opinion of [CPHA] that it would be unfortunate if it were concluded from the recommendations of the Royal Commission that these needs have been substantially met."[5]

Among the major needs not yet met was injury prevention. Public health nurses and sanitary inspectors were urged to use their enthusiasm, ingenuity and patience in highlighting specific preventable injury hazards during their home visits, bringing them to the attention of homeowners and keeping track of their correction. Mortality due to drowning, motor vehicle crashes and house fires within British Columbia First Nations communities was reported at five times higher than among non-Indigenous people. In 1964, more than 4,600 Canadians were killed in automobile crashes and public attention to and interest in vehicle safety intensified after American consumer advocate Ralph Nader published *Unsafe at Any Speed* in 1965, documenting the resistance of car manufacturers to address occupant safety issues.[6]

3 "The Royal Commission on Health Services Commences its Work," *Canadian Journal of Public Health* 52 (November 1961): 486–87; "News Notes: National," *Canadian Journal of Public Health* 52 (July 1961): 316

4 "A Submission to the Royal Commission on Health Services by the Canadian Public Health Association: Summary Statement," *Canadian Journal of Public Health* 53 (June 1962): 225–41

5 "A Preliminary Appraisal by the Canadian Public Health Association of Volume I of the Report of the Royal Commission on Health Services," *Canadian Journal of Public Health* 55 (September 1964): 497–99

6 "Home Accident Prevention and the Health Department," *Canadian Journal of Public Health* 52 (January 1961): 38–39; "Accident Prevention: A Symposium," *Canadian Journal of Public Health* 52 (January 1961): 1–9; "The Twentieth-Century Disease," *Canadian Journal of Public Health* 55 (May 1964): p. 221; CBC Archives. Accessed at http://archives.cbc.ca/lifestyle/living/topics/1754-12047/; L.P. Lonerao, *Finding the next cultural paradigm for road safety,"* AAA Foundation for Traffic Safety (2007): 1–2.

Thomas Clement Douglas

The Father of Canadian Medicare

While doing post-graduate work in sociology at the University of Chicago during the Depression and observing the suffering of those who had lost their jobs, Tommy Douglas became determined to do what he could to help "the poor, the weak, and the dispossessed." Born in Scotland in 1904 and raised in Winnipeg, Mr. Douglas became the leader of the Saskatchewan Co-operative Commonwealth Federation (CCF) in 1942 and when in power, Saskatchewan earned the reputation of the social laboratory of North America. His early achievements included free cancer treatment, free hospitalization for the mentally ill, a universal public hospitalization plan, and the *Saskatchewan Bill of Rights*. Under his leadership, the Saskatchewan CCF laid the foundation for North America's first universal, public medical insurance plan enacted in 1962.

—*CPHA Health Digest,* Vol. 8, No. 3, June 1984

Developing Public Health Tools

Better research methods and tools were also among the public health needs that were still being addressed in the 1960s. CPHA appointed a research committee in 1962 to improve the training of researchers and health workers in research methods. There was a preliminary recognition of the need for information about the health status and services for Indigenous people. The collection of this information was hampered by a 1962 decision by the federal Medical Services Branch to include Aboriginal health services with those for public servants, civil aviation personnel, immigrants, mariners and people needing to be quarantined. Injury and disease rates were best documented for status Indians but little was known about the health status of those living off-reserve or other Indigenous peoples.[7]

Hester Kernen

Inspired Development of Community Health

Hester Kernen graduated from the Regina General Hospital of Nursing and obtained a certificate in Public Health Nursing from McGill University and bachelor and master's degrees in nursing education from Columbia University in New York. With this preparation, Ms. Kernen accepted a position as Professor of Public Health Nursing at the University of Saskatchewan, a role she held for the next 27 years before her promotion in 1973 as Dean of the College of Nursing. For the next seven years, Ms. Kernen demonstrated her abilities to lead, organize and administer while filling special assignments at the national and provincial level in both the education and service aspects of nursing. Ms. Kernen was the first woman elected as president in any of the CPHA branches (1956–58).

—*CPHA Health Digest*, Vol. 5, No. 2, April 1981

7 J.B. Waldram, A. Herring, & T.K. Young, *Aboriginal Health in Canada (2006),* University of Toronto Press: Toronto, ON

A provincial study comparing the nutritional intake of Aboriginal and non-Aboriginal children in British Columbia was initiated in response to the lack of information on the subject. Indeed, a recognition of the paucity of information on a variety of Aboriginal public health issues and the lack of bridges between Aboriginal and non-Aboriginal services generated initiatives to build public health capacity within Aboriginal communities.[8]

In 1969, Minister of Indian Affairs Jean Chrétien introduced the White Paper on Indian Policy, which proposed to integrate Indigenous people into the same government structures that served other Canadians, repeal the *Indian Act*, and transfer control of Indigenous lands to Aboriginal communities. The philosophy behind the paper was that separate legal status had kept Indigenous peoples apart from and behind the benefits enjoyed by other Canadians but the proposals were widely opposed by Aboriginal leaders as assimilationist. The government shelved the document as most Aboriginal Canadians appeared to reject it in favour of continuing to fight for better service delivery from the federal government, including health services, while assuming a growing role as service providers in their own communities.

Persistent Challenges: Polio, Tuberculosis and VD

Uneven immunization rates against polio, especially among adults, continued to frustrate public health authorities. A 1961 survey in Victoria, British Columbia found that only 31% of all adults had been vaccinated and when asked, most said they believed "that polio is a child's disease and that vaccine is available only to those under 40." In addition to being misinformed about the disease, it appeared that the public had lost its fear of polio.[9]

Tuberculosis, however, would prove to be far more persistent than polio in Canada. In 1965, there was a 5.6% increase in newly active cases and an 11.4% increase in the number of new cases reported in children under 10. The high rate of TB infection among Indigenous people had left "the Indian population as a whole with reservoirs of quiescent or inactive disease ready to blossom with the first sign of lowered resistance." Tuberculosis sanatorium treatment had finally been expanded to include Indigenous people, but this often resulted in family tragedy, especially in the North. The Eastern Arctic Patrol, developed by Indian and Northern Health Services director Dr. Percy Moore, used the icebreaker *HMS Nascopie* and later the *C.D. Howe* to take Inuit for TB treatment in southern sanatoriums and many never made it back to their families. The average length of sanatorium treatment for the Inuit was two-and-a-half years, and when patients died, they were often buried without notifying their families. By the end of the decade, the incidence of drug-resistant strains increased considerably, and public health

8 Alice Dong and Moira C. Feeney, "The Nutrient Intake of Indian and Non-Indian School Children," *Canadian Journal of Public Health* 59 (March 1968): 115–18; "Something New in Training," *Canadian Journal of Public Health* 57 (November 1966): 535; Ethel G. Martens, "Culture and Communications: Training Indians and Eskimos as Community Health Workers," *Canadian Journal of Public Health* 57 (November 1966): 495–503; E. Casselman, "Public Health Nursing Services for Indians," *Canadian Journal of Public Health* 58 (December 1967): 543–46; Al Freestone, "Environmental Sanitation on Indian Reserves," *Canadian Journal of Public Health* 59 (January 1968): 25–27

9 "News Notes: British Columbia," *Canadian Journal of Public Health* 52 (December 1961): 526;

Jean C. Leask

VON Director-in-Chief Served over 30 Years in the Field of Nursing

Jean C. Leask was born in Moose Jaw, Saskatchewan in 1912 and received her Bachelor of Arts at the University of Toronto before entering the School of Nursing. Ms. Leask joined the Victorian Order of Nurses as a Staff Nurse in the Toronto Branch and later accepted a post as Nurse in Charge at the Regina Branch. With a fellowship from the Rockefeller Foundation, she travelled in the United States and Canada, observing official agency programs in 1941. She continued her education at the University of Chicago, majoring in Public Health Nursing Administration, and rejoined the Victorian Order of Nurses as Director in Chief for Canada in 1960. Ms. Leask was active on many national and international committees related to nursing.

—*Canadian Journal of Public Health*, 1969

strategies began focusing on improvements in supervision of the treatment of TB cases.[10]

A surprising increase in reported syphilis and gonorrhea preceded the widespread use of the birth control pill in Canada. A lack of familiarity with diagnosis, treatment and following up with contacts among younger physicians was a possible factor. An increasing incidence of venereal diseases among teenagers and children younger than 13 was linked to "changed moral standards and greater independence and unsupervised freedom young people have today." The Department of Health promoted its free VD treatment services and supplied updated films for high school and community group distribution upon request and a 1965 *Canadian Journal of Public Health* news item reported that "a renewed educational effort is taking shape."[11]

A British Medical Association committee investigating VD among young people in 1964 advised the public health community of the need to better understand the social factors involved. A *British Medical Journal* editorial commented that "impatience of the young with older generations was said to have a sharper edge than formerly, the beliefs and social responsibilities of the past being replaced by cynical and hard-boiled self-indulgence with equal mistrust for both religion and 'science.'" A *Canadian Journal of Public Health* article noted that, "We know a great deal about VD as a communicable disease, but to eradicate or control it, we need to know a great deal more about ourselves and apply this knowledge. This is the challenge for VD education and youth is eager for our response."[12]

10 "Tuberculosis Control – The Great Delusion," *Canadian Journal of Public Health* 57 (September 1966): 421–22; F.J. Forth, "Tuberculosis Control Among Indians in Saskatchewan," *Canadian Journal of Public Health* 59 (March 1968): 114; "Tuberculosis Control – Dream or Probability," *Canadian Journal of Public Health* 60 (January 1969): 43

11 "News Notes: Saskatchewan," *Canadian Journal of Public Health* 56 (January 1965): 53

12 "Some Sociological Aspects of Venereal Disease," *Canadian Journal of Public Health* 56 (April 1965): 162–63; British Medical Association, Venereal Disease and Young People (BMA, 1964); "Venereal Disease and Young People," British Medical Journal 1 (March 7, 1964): 575–77; Lynford L. Keyes and Henry M. Parrish, "Increasing the Effectiveness of Venereal Disease Education," *Canadian Journal of Public Health* 59 (March 1968): 122

A New Polio Vaccine

A live, weakened strain of the polio virus was used to develop an orally administered vaccine in the expectation that it would multiply in the digestive tract in the same way that the wild (naturally occurring) virus did, displacing the stronger wild strain as it spread. Using strains developed by Dr. Albert Sabin, Connaught Medical Research Laboratories developed an oral polio virus (OPV), paid for by joint federal-provincial funding in 1962. Four million doses were distributed in eight provinces, but when four cases of paralytic polio were reported among individuals who had received OPV, the federal government curtailed the program for a few months. A technical committee concluded there was a probable link between these cases and the vaccine. The risk was small but higher among adults who never received a polio immunization previously. By 1965, provincial vaccine programs had reduced the incidence of paralytic polio in Canada to zero.[a]

a J.K.W. Ferguson, "Live Poliovirus Vaccine for Oral Use," Canadian Journal of Public Health 53 (Apr. 1962): 135–42; F.P. Nagler, "Recent Experience with Oral Poliovirus Vaccine (Sabin) in Canada," Canadian Journal of Public Health, 54 (Nov. 1963): 509–14; Nagler, "Recent Experience with Oral Poliovirus Vaccine (Sabin) in Canada," p. 509–14

Environment and DDT

Environmental concerns came to the fore when marine biologist Rachel Carson published *Silent Spring* in 1962, documenting the harm being done through the indiscriminate and poorly understood use of chemical pesticides, especially DDT. This pesticide, which is now known to cause cancer, accumulates in the fatty tissue in increasingly concentrated amounts up the food chain. DDT is also suspected of causing neurological, respiratory and cardiovascular ailments in humans and it can remain in the soil for more than 30 years. *Silent Spring* is widely credited with launching the environmental movement and increasing attention to the public health risks of science and technology. Scientists began looking into ways to reduce the use of pesticides and their impact on health and the environment.[13]

Sanofi Pasteur Limited, Connaught Campus, Archives

Thalidomide and Drug Safety

The unforeseen implications of scientific and technological advances came to the forefront with the tragedy of thalidomide in Canada. Developed in West Germany in the 1950s, this drug had been widely used there to treat a number of ailments since 1957, including to prevent morning sickness among pregnant women. It was approved for use in Canada on April 1, 1961 if prescribed by a physician and was considered a safe alternative to other sedatives, such as barbiturates, as well as

13 Commission for Environmental Cooperation of North America, *DDT no longer used in North America,* DDT Factsheet (2003-04), accessed at http://www.cec.org/Storage/50/4285_DDT_en.pdf; Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 1962); "Pesticides," *Canadian Journal of Public Health* 56 (May 1965): 217–18

in over-the-counter medicines for the treatment of colds, flu, headaches, neuralgia and asthma. Such broad use made it difficult to isolate thalidomide as the cause of severe deformities in newborn babies with unusual anomalies in the arms, legs, hands and feet. As reports of side effects grew, the German manufacturer recalled the drug in November 1961, with British and Swedish producers shortly following suit. Studies published in early 1962 finally convinced the Canadian government to order thalidomide off the market on March 2, 1962. The Minister of Health and Welfare asked the Royal College of Physicians and Surgeons to set up a special committee to conduct an objective review of "the procedures relating to the issuing of new drugs and to make recommendations as it considered appropriate in the public interest." An estimated 115 children were born in Canada in 1961 and 1962 with congenital malformations associated with the mother's use of thalidomide in early pregnancy.[14]

Following the Canadian experience, the World Health Organization resolved to "improve the lines of communication among nations and to further the standardization of procedures regarding new drugs, as well as developing an international warning system." Reporting on a special federal-provincial conference on thalidomide held in August 1962, the *Canadian Journal of Public Health* noted "a new realization of the problems and hazards relating to the development and testing of new drugs. There is assurance in the knowledge that Canada has a capable, effective organization in its Directorate of Food and Drugs to grapple with these difficult problems."[15]

Carol Buck

An Epidemiologist Ahead of Her Time

Dr. Carol Buck was considered to be ahead of her times—a talented woman who rose rapidly through the ranks during the 1950s. She graduated in medicine in 1947, completed a PhD in 1950, received the Diploma in Public Health from the University of London in England while on a Rockefeller Scholarship, and by 1967, was Chair of Community Medicine at the University of Western Ontario. She contributed to the advancement of epidemiology and authored over 80 scientific articles, many of which appeared in the *Canadian Journal of Public Health*. She gained international recognition when elected President of the International Epidemiological Association in 1981. Her work demonstrated "a passionate commitment to advancing the health of the people by identifying and correcting the causes and determinants of ill-health, using the rigorous methods of epidemiology towards this end."

—*CPHA Health Digest*, Vol. 11, No. 3, 1987

Fluoride

Local fluoridation plebiscites and debates were common in the 1960s. Toronto's director of dental health services, Dr. F.H. Compton,

14 Barbara Clow, "Defining Disability, Limiting Liability: The Care of Thalidomide Victims in Canada," in E.A. Heaman, Alison Li and Shelley McKellar (eds.), *Figuring the Social: Essays in Honour of Michael Bliss* (Toronto: University of Toronto Press, 2008), pp. 304–14; Jean F. Webb, "Canadian Thalidomide Experience," *Canadian Medical Association Journal* 89 (November 9, 1963): 987–92; "Federal-Provincial Conference on Congenital Malformations Associated with Thalidomide," *Canadian Journal of Public Health* 53 (October 1962): 432

15 "Federal-Provincial Conference on Congenital Malformations Associated with Thalidomide," *Canadian Journal of Public Health*, p. 433

Cultural Changes

Another profound change since the 1950s has been a steady influx of immigrants to Canada, usually of over 100,000 a year. Fewer have come from European countries and more from South and Southeast Asia and China, the Philippines, South and Central America, North Africa, and the Caribbean. Many of these immigrants have been here long enough to have raised children who have reached adult years. Recently available census data suggests that these young adults mainly form marital unions within their own ethnic subculture, but enough marry across cultures to suggest that while the Canadian cultural mosaic remains substantially intact, over time some features of a melting pot socio-demographic pattern may emerge. This influx of immigrants has made Canada one of the most multicultural nations on earth. It also makes Canada a challenging nation in which to provide effective and efficient community-based public health services to meet all needs, perhaps most importantly in such aspects as female reproductive health and increasingly in the future, the care of dependent elderly people. In former times and in their countries of origin, not many survived to reach dependent old age, whereas in affluent modern Canada, many do; but the exigencies of modern occupational mobility may make it difficult for younger family members to care for their dependent elderly, and they do not have an extended family network to fall back on. The task of providing effective and efficient public health services for the complex multicultural population of the Canada of the 2010s and beyond is at least as difficult and challenging as the task of providing effective and efficient educational services.

—John Last

Norton Whittaker

Health Inspector Developed Creative Community Solutions

In 1961, Norton Whittaker, a health inspector in Pembroke, Ontario developed a recording of female mosquitoes to lure the male mosquito to enter a fog of poisonous spray. By eliminating the male mosquito, the female would not be able to lay fertilized eggs to enlarge the population. Whittaker also created the "Golden Garbage Can Award" to encourage citizens to clean their garbage cans in order to reduce the health hazards related to large numbers of houseflies. The Award was presented weekly to the best maintained can and a number of other cities in North America, Britain and Europe subsequently copied this successful program.

—Klaus Seeger

described fluoridation as "a nation-wide issue which periodically agitates Canadians from coast to coast as no other single event in the history of public health." Fluoridation was widely supported by public health experts for safely and efficiently reducing dental caries among children, but "to others, it represents no more than a thinly veiled intrusion into cherished civil liberties preserved by constitution and tradition." The public tended to be easily swayed by these loud voices over the advice of local dentists and public health leaders. Some objected to fluoridation of public water supplies on religious and moral grounds, while public health leaders pointed to opposition in the past to public health initiatives such as chlorination, pasteurization and immunization.[16]

16 F.H. Compton, "A Public Health Perspective on Fluoridation," *Canadian Journal of Public Health* 51 (January 1960): 20–24

William Harding Le Riche

Professor and Researcher in Epidemiology, Nutrition and Maternal and Child Health

Dr. Le Riche came to Canada in 1952 from Johannesburg, South Africa, stopping at Harvard University along the way for his Masters of Public Health. He starting teaching epidemiology at the University of Toronto in 1957 and it is said that his former students are well represented in the public health field across Canada today. Nutrition, maternal and child health, and developing local public health and primary care services were his enduring research interests. His work covered a range of epidemiologic issues, including hospital infections. His pioneering work analyzing the Physician Services Incorporated medical insurance records are landmarks in health-related research in Canada. He has published more than 130 articles and a number of books, including The Chemical Feast, written for a general audience in 1982. Dr. William Harding Le Riche served as an expert resource person on numerous national and international projects for both the Ontario and the Canadian Public Health Associations and he received CPHA's highest honour, the R.D. Defries Award, in 1981.

—*CPHA Health Digest*, Vol. 5, No. 2, April 1981

Tobacco

As the number of cigarettes sold in Canada exceeded 34 billion, preliminary results of a national survey of Canadian war veterans were presented at the Canadian Public Health Association's annual meeting in 1960. The study revealed a consistent relationship between cigarette smoking and mortality due to lung cancer and heart disease and CPHA was among the first to take on smoking as a priority health issue. The members passed a resolution calling on "all interested agencies to carry on vigorous educational programs designed to acquaint the public with the hazards of smoking… aimed particularly at encouraging young people not to acquire the habit."[17]

E.S.O. Smith

Years of Service to Public Health in Alberta

Dr. Edward Stuart Orford Smith earned 11 academic degrees and fellowships at universities in Canada and abroad. His public health service began in Alberta in 1953 as Medical Officer of Health in the Sturgeon Health Unit and he went on to be the Director of Epidemiology for Alberta Social Services and Community Health. Dr. Smith wrote over 30 publications on areas of concern including rehabilitation, poliomyelitis, rabies, cancer, accidents, hypertension, smoking, alcohol, traffic accidents, venereal disease, heart disease, family planning, epidemiology, reporting and contact tracing methods, and occupational health. He was chairman of CPHA's Task Force on Fluoride.

—*CPHA Health Digest*, Vol. 2, No. 3, June 1978

17 E.W.R. Best, G.H. Josie and C.B. Walker, "A Canadian Study of Mortality in Relation to Smoking Habits: A Preliminary Report," *Canadian Journal of Public Health 52* (March 1961): 99–106; "Cigarette Smoking and Health," *Canadian Journal of Public Health* 55 (January 1964): 31

Social and Biological Changes

The second half of the 20th century was a period of profound social change in most advanced industrial nations, including Canada. An important change in family structure, function, formation, and dissolution occurred with increased flexibility and variability of marital customs. Among couples born in Canada, average family size has fallen below replacement level, so the population would have declined were it not for immigration. Increasing proportions of couples have bonded, lived together, shared incomes and even raised children in stable albeit common law unions that can be dissolved without formality. Other couples have engaged in what amounts to serial monogamy, sometimes with but often without the legal sanction of formal marriage ties. There has been a large increase in numbers and proportion of single parent led families (mostly mothers, many of whom live in poverty), and in the numbers and proportion of families in which both partners are employed, in contrast to the old tradition in which men were bread-winners and women were primarily occupied in childbearing, child rearing and homemaking. As the 20th century progressed, Canadian society adopted more liberal attitudes towards homosexuality, including acceptance of same-sex unions. The proportion of the population who believe in God has declined but among believers, there has been an increase in fundamentalist beliefs, often associated with resistance to greater female reproductive choice. Television became increasingly the dominant form of entertainment, contributing to increased prevalence of juvenile obesity.

Another health-related phenomenon of late 20th and early 21st century Canada is an increase in children's height, weight and earlier sexual maturity. These trends may be associated with improved nutrition or possibly over-nutrition, because there is also a worrying increased prevalence of obesity and type II diabetes. Another possible causal factor for earlier sexual maturity is the presence of low level environmental endocrine disruptors. The long-term consequences of these trends for the health of the Canadian population are unknown but are unlikely to be desirable.

—John Last

CPHA and the Canadian Medical Association each launched anti-smoking campaigns to educate the public and health professionals about the dangers of smoking. In 1962, a physician wrote that, "one can sense an inevitable change in professional and lay reaction at long last in the cigarette controversy, with support of the anti-cigarette claims rapidly rising to a crest this past spring."[18] At the first Canadian Conference on Smoking and Health in 1963, the Minister of National Health and Welfare committed $600,000 over five years for anti-smoking education and research. In January 1964, the U.S. Surgeon General concluded that smoking caused lung cancer and in 1966, tobacco manufacturers agreed to an advertising code in Canada, while in the U.S., warning labels about the health risks of smoking were also required on cigarette packages.[19]

18 Norman C. Delarue, "Cigarette Smoking: A Clinical and Public Health Challenge," *Canadian Medical Association Journal* 87 (November 3, 1962): 961

19 "The 1963 Annual Meeting," *Canadian Journal of Public Health* 54 (July 1963): 331–32; "Cigarette Smoking and Health," *Canadian Journal of Public Health* 55 (January 1964): 32; John Keays, "The Smoking Enigma," *Canadian Journal of Public Health* 56 (March 1965): 105–07; http://www.tobacco.org/resources/history/Tobacco_History20-2.html; Smoking and Health: A More Forceful Stand," *Canadian Journal of Public Health* 60 (September 1969): 335–36

Ann Harling

Devoted Her Career to the Health of Children and Adults in New Brunswick

Ms. Ann Harling devoted her professional career to the health care of New Brunswickers. She developed a large number of public health programs and services, especially in the field of maternal and child health, and her general and specialized pediatric clinics became models for the delivery of highly specialized medical care to the children of New Brunswick. Ms. Harling gave her time, energy and expertise to a number of regional, provincial, national and international initiatives since her involvement in CPHA in 1972. She accompanied the Hon. Monique Bégin on the first Canadian Health Study Tour of China when they visited medical and nursing schools, hospitals, rehabilitation facilities, and day care centres over a period of five weeks.

—*CPHA Health Digest*, Vol. 19, No. 2, 1995

Targeting tobacco advertisers was a new public health tactic and in the 1960s, new levers were being pulled to promote health and prevent disease. In 1967 and 1968, a number of private members' bills were introduced in the House of Commons regarding cigarette advertising, labelling, and tar and nicotine content. The Standing Committee on Health, Welfare and Social Affairs held hearings but the Canadian Public Health Association was not among the organizations presenting. A 1969 *Canadian Journal of Public Health* Editorial noted that after the 1963 Smoking and Health Conference in Ottawa, CPHA had effectively left the issue to other groups and agencies.[20]

Birth Control and the Role of the State

Since 1892, birth control had been classified as obscene and made illegal in Canada. Physicians were not permitted to discuss contraception with an individual patient outside of fairly strict parameters. Concern about the global population explosion in the 1960s and the availability of new oral contraceptives increased public pressure for legal birth control and a number of associations urged the federal government to change the laws. In the U.S., the American Public Health Association established a policy in support of family planning services but birth control remained a controversial subject for CPHA. A motion regarding birth control at CPHA's 1964 meeting was "conveniently sent off to a committee for further study."[21]

Meanwhile, family planning clinics were established in several communities through Planned Parenthood, local health units, or in cooperation with hospitals. Because they were established to "further the public good," they were able to skirt the *Criminal Code* and by the late 1960s, there seemed to be little interest in

20 "Smoking and Health: A More Forceful Stand," *Canadian Journal of Public Health* 60 (September 1969): 335–36

21 V.L. Matthews, "The Public Health Implications of Population Trends," Canadian Public Health Journal 57 (February 1966): 61–62

enforcing the letter of the law restricting birth control information.[22]

A federal omnibus bill, introduced in December 1967 by Justice Minister Pierre Trudeau, proposed major changes to the *Criminal Code,* including lifting all restrictions on contraception, allowing therapeutic abortions in hospitals if a committee of doctors decides that continuing the pregnancy may endanger the mother's life or health, and decriminalizing homosexuality. In 1967, Trudeau's statements that, "There's no place for the state in the bedrooms of the nation," and "What's done in private between two consenting adults doesn't concern the *Criminal Code*," crystallized this radical change in governmental approaches to family planning and sexuality and the bill was enacted in 1969.

Final Report on Health Services

The final *Report of the Royal Commission on Health Services* in 1966 recommended a national health insurance plan but the lack of attention to disease and injury prevention disappointed the public health field. Dr. John E.F. Hastings of the School of Hygiene at the University of Toronto described the report's oversights, such as the social aspects of health, problems related to aging, non-prescribed drugs, environmental aspects of health, and income maintenance during periods of ill health. The report paid little attention to the importance of preventive medicine and health promotion and community health programs. Hastings noted the report overlooked the need to re-orient health promotion and prevention as central features of medical education while maintaining an outdated concept of public health, restricted to the areas of communicable disease control, environmental sanitation, and facilitating medical care in outlying areas.[23]

There was little recognition of long-standing universal programs in public health nursing, child and maternal health, school health and of the work by health departments in educating,

Jean E.C. Lewis

Instrumental in Public Health Nursing in Newfoundland and Canada

Jean E.C. Lewis studied pediatric and general nursing in Liverpool, England and worked at a military hospital there before returning to St. John's, Newfoundland at the end of WWII. She held the position of Provincial Director of Public Health Nursing for 29 years and was responsible for the province's entire nursing service—the point of entry into the health care system at that time, with many roles in primary, secondary and tertiary prevention. Ms. Lewis was instrumental in the establishment of CPHA's Newfoundland and Labrador Branch in the early 1960s and chaired the Association's Public Health Nursing Section.

—*CPHA Health Digest*, Vol. 17, No. 2, Summer 1993

22 "Population and Family Planning in Public Health," *Canadian Journal of Public Health* 59 (July 1968): 278–79; C.J.G. Mackenzie, G.P. Evans and J.G. Peck, "The Vancouver Family Planning Clinic: A Case Study," *Canadian Journal of Public Health* 58 (February 1967): 53–60; E.A. Dunton, "A Family Planning Clinic in a County Health Unit," *Canadian Journal of Public Health* 58 (April 1967): 181–82; H.H. Washburn, "Administration and operation of the Norfolk County Family Planning Clinic," *Canadian Journal of Public Health* 58 (June 1967): 277–79; R. Wilson, G.W.O. Moss, E.G. Laugharne and E.M. Read, "Family Planning in a Co-ordinated Hospital and Community Health Setting," *Canadian Journal of Public Health* 58 (December 1967): 527–34

23 John E.F. Hastings, "The Report of the Royal Commission on Health Services – Implications for Public Health," *Canadian Journal of Public Health* 57 (March 1966): 106–08

Robert Davies Defries

Led Connaught and Canada's First School of Hygiene, and Was First Editor of the Canadian Journal of Public Health

Dr. Robert Davies Defries became the Editor of the *Canadian Journal of Public Health* when it was purchased by CPHA in 1928. In 1953 he became President of the Association and his stimulation and guidance over many years were said to have contributed immeasurably to the Association's growth and development. Dr. Defries was appointed Director of Connaught Laboratories and Director of the School of Hygiene in 1940 and accepted the responsibility of the Department of Public Health Administration in 1941. He made numerous contributions to scientific literature in the fields of bacteriology, immunology, epidemiology, and public health administration. In 1965, CPHA instituted the R.D. Defries Award as its highest honour to be awarded annually in the form of a medal and citation for outstanding contributions to the broad field of public health.

—*Canadian Journal of Public Health*, Vol. 55, June 1965

identifying, and following up on cases of tuberculosis, venereal disease and mental illness. Essentially, Hastings wrote, the Commission did not consider public health departments "to have a particularly active role to play in the future development of our health services." Interest in other medical issues, a lack of time, or "the hostility of some professional and other bodies to public health involvement in anything more than traditional communicable disease and environmental control activities" were likely factors for the virtual eclipse of public health in the report. Hastings added that the field had to shoulder much of the responsibility for its poor showing in the report, because many apparently didn't want to upset vested interests. "We have forgotten our origins and our predecessors," who were "crusading, dedicated, militant people

George Donald West Cameron

Long-time Deputy Minister of National Health and First R.D. Defries Medal Recipient

Dr. George Donald West Cameron fought in France during World War I and after the war went on to study preventive medicine and public health at the School of Hygiene at the University of Toronto. In 1931, he became responsible for the production and testing of serums and diphtheria toxoid at the farm section of the Connaught Medical Research Laboratories and eight years later was appointed as Chief of the Laboratory of Hygiene in the Department of Pensions and National Health. By 1946, Dr. Cameron was Deputy Minister of National Health where he served with distinction until his retirement in 1965. He represented Canada as Chief Delegate of the Canadian Delegation to the World Health Assembly on numerous occasions and received the first R.D. Defries Medal from CPHA in 1966 for his lifetime of service.

—*Canadian Public Health Journal*, Vol. 57, 1966

CPHA's Highest Honour, The Defries Award

In 1964, Dr. Robert D. Defries retired as editor of the *Canadian Public Health Journal*—a position he had held since 1928. In honour of his long service, CPHA created the annual R.D. Defries Award, bestowed annually in the form of a medal produced by the Royal Canadian Mint, in recognition of outstanding contributions to the field of public health. The first Defries Award was given in 1965 to G.D.W. Cameron, who served as Deputy Minister of National Health from 1946 to 1965.

who saw community health problems that had to be solved. Come hell or high water they were determined to solve them or perish in the attempt."[24]

Public Health Challenges

As the decade came to an end, Hastings wrote "Some Plain Thoughts on the State of Public Health." He noted many significant changes in Ontario, where regional health services were organized in most of the province. Similar reorganizations were taking place in Quebec and the other provinces, characterized by increasing centralization, bureaucratization and government control over health care. Hastings felt that such changes pointed to the urgent need "to view public health as encompassing all matters relating to the health of our population and of the delivery of health services to them."[25]

The *Canadian Journal of Public Health* reported that at the 1967 annual meeting, CPHA's "membership unanimously endorsed the proposition that the CPHA as presently constituted is not likely to continue as an effective and relevant organization during the next century. The Association needs a remedy in large doses and Council was single minded in its recommendation to the annual business meeting to appoint a commission to study the whole purpose and structure of the Association with its future in mind." Questions about CPHA's future had been raised repeatedly over the previous decade and the Commission's preliminary report later that year identified once again the need for a full-time professional Executive Director. Significant new multi-year grants from the W.K. Kellogg Foundation and the Canadian Life Insurance Association expedited the appointment of a new Executive Director, C.D. Noble in 1969.[26]

24 John E.F. Hastings, "The Report of the Royal Commission on Health Services – Implications for Public Health," *Canadian Journal of Public Health* 57 (March 1966): 113–116

25 John F. Hastings, "Some Plain Thoughts on the State of Public Health," *Canadian Journal of Public Health* 60 (March 1969): 97–103

26 "An Obligation," *Canadian Journal of Public Health* 60 (June 1969): 251; "Executive Director Appointment," *Canadian Journal of Public Health* 60 (September 1969): 362

Rebuilding the Canadian Public Health Association would take several years, as less than one-third of those employed full-time in public health activities were members of the CPHA. In addition, "pitifully small" membership dues were inadequate to support the Association and Journal and CPHA did not want to rely on federal funding in order to be an impartial advisor on public health in Canada.

The Association's challenges reflected a broader need for the public health field to act boldly, redefine itself and try to remain relevant into the 1970s. A new political reality of health care was becoming clear. A federal Task Force on the Cost of Health Services had been established by the Department of National Health and Welfare in 1968 by a minority Liberal government facing growing inflationary and budgetary pressures. The task force's work was driven by the need to identify how the federal and provincial governments could provide health services at less rapidly-rising costs, specifically the costs of hospitals and medical care and physician fees.[27]

27 "Report of the Commission on the Canadian Public Health Association," *Canadian Journal of Public Health* 60 (February 1969): 49–84; "The Canadian Public Health Association: Problems and Challenges," *Canadian Journal of Public Health* 60 (February 1969): 85–86; A. Peter Ruderman, "Task Force Reports on the Cost of Health Services in Canada: A Review Article," *Canadian Journal of Public Health* 61 (July-August 1970): 321–24

CHAPTER 8: 1970–1986

A New Perspective on Public Health

After 22 years of expansion in Canada's health services, the 1970s began with a period of consolidation, rationalization and reduced federal funding for health care. Industrialized countries began to recognize that the substantial declines in mortality achieved over the last 100 years were largely due to improvements in living standards rather than medical advancements. This brought a rethinking of health systems in the 1970s and 1980s, initiating a period of Canadian innovation and leadership in new approaches to health promotion with an impact both at home and abroad. Concerns about the environment, chronic diseases, and the heavy toll of motor vehicle collisions were growing, as were new marketing approaches to deliver the "ounce of prevention" message to the public. Researchers developed systematic methodologies to reduce risk factors and applied an epidemiological approach to health promotion by defining goals and specific objectives.[1]

At the beginning of the 1970s, federal and provincial governments were still analyzing the 348 recommendations of the two-year National Task Force on the Cost of Health Services, which was set up by the federal and provincial ministers of health in 1968 to consult widely

1 Lindsey McKay, "Making the Lalonde Report," Towards a New Perspective on Health Project, Canadian Policy Research Network, Background Paper, October 2000, http://www.cprn.com/doc.cfm?doc=136&l=en; H.L. Laframboise, "Health Policy: Breaking the Problem Down into More Manageable Segments," *Canadian Medical Association Journal* 108 (February 3, 1973): 388–93; thecanadianencyclopedia.com

Jean Rochon

Father of Community Health in Quebec

A graduate of the University of Montreal, Laval University and Harvard University in law, medicine and public health, Dr. Jean Rochon was known by many as the "father of community health in Quebec." In the early 1970s, he served as advisor to the Castonguay Commission and a member of the MacDonald Committee that led to the creation of the 32 community health departments in Quebec in 1973. He served as chair of the Commission of Inquiry into Health and Social Services for the Government of Quebec, which laid the foundation for the internationally-recognized reform initiatives. Dr. Rochon also served as Director of Program Management of the World Health Organization and subsequently as Director of the Health Protection and Promotion Division at the WHO Head Office in Geneva.

—*CPHA Health Digest*, 1994

with health departments, academics and non-government agencies, including CPHA. The task force suggested a number of ways to control health care costs, as government expenditures were projected to be $6.2 billion in 1972, from $1.7 billion in 1957. The Department of National Health and Welfare commissioned a study of community health centres by health administration expert Dr. John Hastings of the University of Toronto, which recommended "accessible and well-managed" community health centres for more efficient delivery of resources, but only Quebec would act on integrating health and social services delivery. A provincial system of CLSCs (Centres local de services communautaires) was developed between 1973 and 1976 with an emphasis on community health services but opposition to this move by the medical profession discouraged other provinces from pursuing this approach.[2]

By the mid-1970s, Prime Minister Pierre Trudeau initiated wage and price controls, rising oil prices slowed economies around the world, while inflation and unemployment persisted. Changes to the *Federal–Provincial Fiscal Arrangements and Established Programs Financing Act* were passed in 1977, shifting from shared-cost funding to block funding for health and post-secondary education, with increases tied to growth of the gross national product. The worst recession since the Great Depression began in 1982 and the 1984 *Canada Health Act* confirmed the trend of reduced federal health spending and the need to re-think ways the government could ensure the best possible health and well-being for Canadians.

Cigarettes: a dangerous trap

2 Canadian Museum of Civilization, "The History of Health Care in Canada, 1914–2007" accessed at http://www.civilization.ca/cmc/exhibitions/hist/medicare/medic-6c04e.shtml

Environmental Concerns

Environmental health was a growing concern and auto emission controls and the phasing in of unleaded gasoline were introduced in the early 1970s, resulting in a gradual decrease of toxic substances into the air from cars during this decade. Acid rain was described by the International Joint Committee between Canada and the United States as one of the most serious problems plaguing North America in 1982, while depletion of the ozone layer, the greenhouse effect from carbon dioxide in the atmosphere, industrial and agricultural waste, urea-formaldehyde insulation, and air pollution became prominent issues in Canada.[3]

CPHA Health Digest, 1984

CPHA's membership called for a unified effort to establish "realistic standards for environmental control" with enforceable regulations, more in-depth environmental research programs and better information for the public about government environmental regulations. The *Canadian Journal of Public Health* expanded its coverage of environmental issues, such as lead and asbestos contamination, DDT and pesticide residues, and federal risk assessments of environmental health. CPHA also co-sponsored the First National Conference on Recreational Water Quality and Human Health in 1983 with the Health Protection Branch of the Department of National Health and Welfare and subsequently conducted a comprehensive study on the status of Great Lakes drinking water for the federal government.[4]

John E.F. Hastings

A Profound Impact on the Development of Community Health Services

Dr. John E.F. Hastings had a distinguished career as an advocate for community health services and as a leading educator in community health. In many ways, he continued the public health legacy of his great-uncle, Dr. Charles Hastings (Toronto's Medical Officer of Health from 1910 to 1929). John Hastings was appointed as a lecturer in the School of Hygiene at the University of Toronto in, where he remained for the next 36 years. In 1965, he completed a report for the Hall Royal Commission on Health Services with recommendations about the organization of community health services in Canada. Building on this work, he produced a seminal report in 1971–72, commissioned by the Conference of Health Ministers. Dr. Hastings worked on national and international projects. He was the founding Associate Dean of the Division of Community Health within the Faculty of Medicine at the University of Toronto and was instrumental in replacing the diploma programs in community health areas with master's degrees.

—*CPHA Health Digest*, Vol. 16, No. 3, Autumn 1992

3 http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=a1ARTA0000409

4 "CPHA's Comprehensive Survey of the Status of Great Lakes Drinking Water Makes Headlines," *CPHA Health Digest* 10 (November 1986)

Motor Vehicle Safety

In addition to the impact of emissions, governments began regulating to improve the safety of automobiles. The 1971 *Motor Vehicle Safety Act,* modelled on a similar American act, was the first Canadian legislation aimed at reducing road injuries and death. Transport Canada required seat belts in all new motor vehicles in the early 1970s and other North American safety standards significantly changed vehicle design with remarkable results. More than 6,000 Canadians were dying in car crashes every year in the 1970s—a rate that has since been reduced by almost 50%, even though there are more drivers and cars on the road today. In 1976, Ontario became the first Canadian province to make the use of seatbelts mandatory and eventually the other provinces and territories followed suit. Public education campaigns promoting seatbelt use were also a significant component of what has come to be known as social marketing. Campaigns against drunk driving also grew in the 1970s and 1980s. Police were given the ability to demand a breath sample on a roadside screening device when they have grounds to suspect alcohol in the driver's body and provincial anti drinking and driving groups started forming in the 1980s.[5]

Monique Bégin

Introduced the Canada Health Act

The Hon. Monique Bégin was born in Rome, Italy in 1936. Early in her career she distinguished herself as the executive secretary-general of the Royal Commission on the Status of Women that was published in 1970. A sociologist by training, she was elected to the House of Commons in Ottawa in 1972 and served as Minister of Health and Welfare from 1977 to 1984, when she twice increased the Guaranteed Income Supplement for pensioners in need; sponsored the Child Tax Credit legislation; strengthened Medicare through the *Canada Health Act* of 1984; initiated reforms of private pensions; obtained significant increases for medical research; and sponsored a policy of Indian health services devolution and created the Indian and Inuit Health Career Development Program.

—http://www.phac-aspc.gc.ca/media/nr-rp/2004/2004_01bk3-eng.php

Physical Activity

Promoting health through physical activity was a social marketing success story in Canada during this period. Historically, government interest in promoting physical fitness was motivated by military interests. In 1909, the federal government provided funds to the provinces through the Strathcona Trust Fund for incorporating physical activity programs into cadet training programs in schools and the 1943 *National Physical Fitness Act* was enacted in response to the poor health status of military

5 L. Evans, *Traffic Safety,* 2004, Science Serving Society, Bloomfield, Michigan; *Seat belt sense,* Transport Canada, TP 14646 E, March 2007; http://www.tc.gc.ca/media/documents/roadsafety/mvsadisc_s.pdf; *The Chief Public Health Officer's Report on The State of Public Health in Canada 2008,* accessed at http://www.phac-aspc.gc.ca/publicat/2008/cphorsphc-respcacsp/cphorsphc-respcacsp05b-eng.php; http://archives.cbc.ca/lifestyle/living/topics/1754-12047/

Russ Kisby

Health Promotion through ParticipACTION

Russ Kisby gave sustained and distinguished service to health promotion and public health through 20 years of leadership in ParticipACTION, an innovative health promotion initiative. Mr. Kisby initiated the CrownLife ParticipACTION Challenge, the biggest community participation event in Canada and shared his expertise in health promotion and social marketing with over 150 professional and community groups. He was born in rural Saskatchewan and studied physical education at the University of Saskatchewan. He was the National Physical Education Director for the YMCAs of Canada before joining ParticipACTION the year it began.

—*CPHA Health Digest*, Vol. 15, No. 3, Autumn 1991

recruits and provided grants to the provinces to support local health education initiatives. The first indication of broader governmental interest was *An Act to Promote Fitness and Amateur Sport Act,* enacted in 1961 after Prince Philip, during a visit from Britain in 1959, rebuked Canadians for their sedentary lifestyles in a speech to the Canadian Medical Association.[6]

ParticipACTION was established to promote active living for Canadians in 1971 with federal seed money for this non-profit social marketing pioneer. Emphasizing community engagement and fun, extensive media exposure was donated to the campaign and corporate partners matched or exceeded government contributions. The federal government would continue to fund ParticipACTION for the next 29 years, making it the longest running national-level public health marketing campaign anywhere in the world. ParticipACTION was a remarkably successful national campaign and the comparison of the fitness level of a 30-year-old Canadian with a 60-year-old Swede resonated with many.[7]

CPHA Health Digest, 1983

National Physical Activity Week, 1983

A National Conference on Fitness and Health was held in 1972 and in 1976, a FIT-KIT was introduced with a self-administered Canadian Home Fitness Test and distributed nationally by CPHA. The *Canadian Journal of Public Health* published results of a growing body of research on the health benefits of physical activity and workplace fitness programs as part of a broader public health initiative in occupational health protection. The National Nutrition Survey conducted between 1970 and 1972 also identified inactivity as a health threat to Canadians. The survey looked at the prevalence of nutritional diseases and food consumption patterns and reflected an evolution in Canadian health information collection using telephone surveys to gather information on health care utilization, health status and a wide range of health determinants.

CPHA Health Digest, 1981

6 Fitness in Canada, *Canadian Journal of Public Health* 74 (May-June 1983): Supplement, pp. 1–20

7 P. Edwards, "No Country Mouse, Thirty Years of Effective Marketing and Health Communications" *Canadian Journal of Public Health 95*(S2); A. Bauman, J. Madill, C. Craig, A. Salmon, "ParticipACTION, This Mouse Roared, But Did It Get the Cheese?" *Canadian Journal of Public Health 95*(S2):S14–18

Cortlandt J.G. Mackenzie

Expert in Community Medicine and Environmental Pollution

Dr. Cortlandt John Gordon Mackenzie was one of the guiding forces in the Family Planning Association in British Columbia and served as its president and medical consultant. He also was Director and Vice-President of the Family Planning Federation of Canada from 1970–1974. Dr. Mackenzie played an active role in environmental health issues in British Columbia and elsewhere. He was a member of BC's pollution control board from 1967 and its chairman from 1977 to 1982. His expertise in environmental pollution was recognized by the Canadian Public Health Association when he was asked to head up the Task Force on Arsenic in Yellowknife in 1977.

—*CPHA Health Digest*, Vol. 10, No. 2, August 1986

The 1978–79 Canada Health Survey collected data on lifestyle habits and physical activity and although funding cuts prevented the survey from continuing beyond one year, this survey would influence many that followed. In 1981, CPHA was involved in the Canada Fitness Survey to study physical recreation habits, physical fitness and health status and the Association established a Fitness Secretariat, sponsored by Fitness Canada.

People with Disabilities

Canada's interest in fitness was coupled with a new focus on challenges of the disabled. In 1981, a Special Parliamentary Committee on the Disabled and Handicapped published a report recommending that the federal government direct Statistics Canada to develop a long-term strategy for collecting information on disabled persons in Canada. As a result, the Canadian Health and Disabilities Survey was conducted in 1983–84 to determine the nature, cause and impact of disabilities in the population.

The World Health Organization (WHO) designated 1981 as the International Year of the Disabled—one year after 21-year-old Terry Fox launched a cross-Canada Marathon of Hope in 1980 in support of cancer research, having lost a leg to the disease. International designations and slogans defined this period and played "an essential role in shaping

Elizabeth MacKinnon Lambie

National Leader in Nutrition

Ms. Elizabeth MacKinnon Lambie was a national leader in public health nutrition who significantly influenced public health policy and programming in Canada. Throughout her professional career as a public health worker and nutrition educator, her commitment to nutrition and public health was said to have been exemplary. She became the first public health nutritionist for the Department of Health and Welfare in Halifax and worked for the Province of Nova Scotia as a public health nutritionist in addition to teaching nutrition in the Faculty of Medicine and the School of Nursing at Dalhousie University. She taught courses on human nutrition, the role of nutrition in health promotion and community development, and the economic, social and physical determinants of eating practices.

—*CPHA Health Digest*, Vol. 21, No.2, Summer 1997

attitudes, defining government priorities and providing the umbrellas essential or individuals to channel their resources."[8]

Chronic Disease

Cancer was a growing public health concern in the 1970s and 1980s, because the incidence of various types was increasing as Canadians lived longer on average. The Canadian Cancer Society launched a focused campaign to promote breast self-examination in the mid-1970s and full-page advertisements ran in the *Canadian Journal of Public Health* illustrating how women should do self-exams. The Canadian Cancer Society also sponsored clinics through local health units and nurses associations, where women were taught how to look for signs of breast cancer. These clinics were popular, but there were concerns about low rates of women who did the exams, whether they were being done properly and frequently enough, and whether physicians were sufficiently involved.[9]

Len Hiebert

Dedicated Sanitarian and Editor of Environmental Health Review

Born in Winkler, Manitoba and raised in Alberta, Jacob Lenard Hiebert received his Certificate in Sanitary Inspection No. 359 in 1945 and began a long and dedicated career in public health. Mr. Hiebert believed sanitary inspection was a 24-hour-a-day profession and his motto was, "We'll keep you healthy if it kills you." He served as a Chief Inspector in several communities in BC and was very active in the BC Branch of the Canadian Institute of Sanitary Inspectors. In 1971, Mr. Hiebert became editor of CIPHI's national publication, then titled *The Canadian Sanitarian,* which he professionalized, developed and expanded and, with great foresight, recommended it be re-named as *Environmental Health Review*, over which he became a veritable "one-man army."

—Tim Roark, Historian, Canadian Institute of Public Health Inspectors, 2009

A Stronger Stand

CPHA's membership adopted stronger positions on a number of policy statements, including calling for abortion to be removed from the *Criminal Code*. Articles in the *Canadian Journal of Public Health* argued for more equitable access to family planning services, while the number of reported abortions, which had been legalized within strict limits imposed by hospital committees, increased from 542 in 1969, to 11,152 in 1970, and 39,500 in 1972. In 1973, Dr. Henry Morgentaler was acquitted of performing illegal abortions, the first in a number of unsuccessful criminal prosecutions in this era which continued until the Supreme Court of Canada ruled that existing legislation against abortion was unconstitutional in 1988.[10]

In 1971, CPHA president Geneva Lewis explained that the Association was striving to become "involved with the complete spectrum of matters

8 Neil A. Croll, "Infection: Patterns and Trends in International Health," *Canadian Journal of Public Health* 72 (September-October 1981): 300

9 Cornelia J. Baines, "Some Thoughts on Why Women Don't Do Breast Self-Examination," *Canadian Medical Association Journal* 128 (February 1, 1983): 255–56

10 Cope W. Schwenger, "Abortion in Canada as a Public Health Problem and as a Community Health Measure," *Canadian Journal of Public Health* 64 (May-June 1973): 223–30

concerned with the health of the public and seeking a more active role in political processes," while promising "a reorientation of thinking." CPHA's Public Health Practices Committee was also determined to "wade into the battle for a larger share of the budget armed with facts and figures and an ability to talk to the planners and politicians in their own language."[11]

A 1972 proposal for a new name for CPHA was referred to a committee for further study as some members thought a new name, such as the "Canadian Association for Health," would encourage more people to become members. Some CPHA members felt the Association should become less of a professional organization, but the idea and new name did not receive a majority vote and the provincial associations expressed little enthusiasm for dropping "public health" from their names.[12]

CPHA moved its office from Toronto to Ottawa in 1973 in order to strengthen its national voice, influence policy and work in partnership with other national and international organizations and agencies. Dr. Andrew Sherrington became the new editor of the Journal and Gerald H. Dafoe became the Association's new Executive Director. Dafoe held a Masters of Health Administration, was qualified as a public health inspector and had been previously employed by the Ontario Ministry of Health and the Association would see enormous development and growth during his 30 years of executive leadership.

11 Geneva Lewis, "Report of the President," *The Canadian Public Health Association, Annual Report, 1970–1971* (Toronto: CPHA, 1971), p 2; C.D. Noble, "Executive Director's Column," *Canadian Journal of Public Health* 62 (May-June 1971): 253

12 C.D. Noble, "The 63rd Annual Meeting: Executive Director's Column," *Canadian Journal of Public Health* 63 (July-August 1972): 366–67; Donald C. F. Moors, "Keep Public Health: Letters to the Editor," *Canadian Journal of Public Health* 64 (January-February 1973): 111; "Public or Community Health?" *Canadian Journal of Public Health* 64 (March-April 1973): 117–18

The Lalonde Report

A New Perspective on the Health of Canadians was introduced in the House of Commons on May 1, 1974 by Minister of National Health and Welfare Marc Lalonde. This working paper was developed by a free-wheeling policy unit set up in 1971 within the Department of National Health and Welfare under the leadership of Hubert Laframboise. Initially, the report garnered limited attention and mixed reactions in Canada, but it had an immediate impact internationally, where its balanced approach to analyzing major health problems and getting at their root causes generated much discussion. The report described the Health Field concept, an analytical tool in which human biology, the environment and lifestyle were considered significant to health, as well as the health care system. The U.S., Britain and Sweden used the Health Field tool to assess their health systems and develop broader health promotion approaches.[13]

The Department of National Health and Welfare created a new Health Promotion Directorate in 1978, headed by Ron Draper, which developed health policy and programs that emphasized individual behavioural change as the most effective strategy for improving health. CPHA, with a renewed sense of purpose and relevance, worked constructively with the Directorate and other federal departments to develop priorities and programs in order to reduce the health risks of Canadians. The Lalonde Report resulted in a broader approach

13 McKay, "Making the Lalonde Report;" Laframboise, "Health Policy: Breaking the Problem Down into More Manageable Segments," *pp,* 388–93; Canadian Museum of Civilization, "The History of Health Care in Canada, 1914–2007" accessed at http://www.civilization.ca/cmc/exhibitions/hist/medicare/medic-6c04e.shtml

Gerry Dafoe

Over 30 Years of Vision and CPHA Leadership

Gerry Dafoe served as the Chief Executive Officer of the Canadian Public Health Association from 1973 to 2003, and was Managing Editor of the *Canadian Journal of Public Health* and the *CPHA Health Digest*. Over the course of his 30 years of leadership, CPHA grew into a nationally and internationally regarded non-governmental organization, highly respected for its contributions to the field of public health. CPHA implemented hundreds of projects during his tenure in areas such as environmental health, fitness and lifestyle, nutrition, AIDS education and awareness, literacy and health, educational resources about prescription and non-prescription drugs, Aboriginal health programs, health reform, child health, immunization education, and human resource planning. CPHA was also very active in research and policy development. After leaving CPHA, Mr. Dafoe was an advisor with the Pan American Health Organization on the Millennium Development Goals.

—*CPHA Health Digest*, Vol. 28, No. 2, Summer 2004

M. Josephine Flaherty

Strong Nursing Leadership and an Inspiration to Nurses Across Canada

Dr. M. Josephine Flaherty was born in Toronto and early in her career worked as the Nurse-in-Charge of an isolated Red Cross outpost in the north, where she was involved in generalized community health, school nursing, care of patients and families in the home, and occupational health care in several mines and bush camps. When she returned to Toronto, she worked for several years as a General Staff Nurse and a research assistant at St. Michael's Hospital, and then as Dean of Nursing at the University of Western Ontario. In 1977, Dr. Flaherty was appointed Principal Nursing Officer for Health and Welfare Canada. She wrote extensively on nursing, health care, ethics and education, and co-authored *Nursing Ethics–Theories and Pragmatics*. Dr. Flaherty was an inspiration to nurses in general and public health nurses in particular in all parts of Canada.

—*CPHA Health Digest*, Vol. 6, No. 2, April 1982

to public health and gave health promotion a stronger focus, although some felt that the focus on personal responsibility for lifestyle choices tended to "blame the victim" and ignore the social, economic and political contexts in which individual behaviours.[14]

The death of Robert D. Defries in 1975 marked the end of an era and his key legacy, the School of Hygiene at the University of Toronto, closed its doors on June 30, 1975 and re-opened the next day as the Division of Community Medicine in the Faculty of Medicine. A *Canadian Journal of Public Health* report said the new division "represents the culmination of several years of careful consideration of community needs,

14 A. Robertson, "Shifting Discourses on Health in Canada: From Health Promotion to Population Health," *Health Promotion International*(13)2, 1998, 155–166

present and future, of the resources required to fulfill these needs and of the most effective organizational structures to harness and utilize the resources of the University of Toronto to meet these needs."[15]

Lowering health care costs by shifting attention to health promotion did not prove to be an easy task, however, and in 1976, CPHA President Kenneth Benson warned that, "we are still involved—just as much today as we were years ago—in a nonsensical approach, spending millions in the treatment of preventable disease while continuing to acknowledge (but ignore) prevention *per se*." The costs of poor nutrition, occupational hazards, inadequate maternal and child care and preventable injuries were "mind-boggling" and Benson identified the need for a larger, more diversified CPHA membership and closer links to the private sector and consumers and a stronger advocacy role, both provincially and federally.[16]

Expanding Interests

From about the 1970s onward, an increasing number of graduate programs in public health were established in many Canadian universities. These provide advanced training in public health sciences and practice to Masters and in some cases doctoral level. Most are associated with faculties of medicine and/or nursing, a few are free-standing programs.

John M. Last

Professor of Epidemiology and Community Medicine

Born in Australia, Dr. John Last graduated from the University of Adelaide medical school in 1949. He held academic position at the Universities of Sydney, Australia, Vermont, USA, and Edinburgh, Scotland and as professor of epidemiology and community medicine at the University of Ottawa. He has authored or edited numerous books, articles, and reports for domestic and international agencies. He was the scientific editor of the *Canadian Journal of Public Health,* 1981–1991, editor of the *Annals* of the Royal College of Physicians and Surgeons of Canada 1990–1998, and interim editor of the *American Journal of Preventive Medicine* in 1988–89. He is the author of *Public Health and Human Ecology* and a *Dictionary of Public Health* and editor of four editions of the *Dictionary of Epidemiology,* which is used by epidemiologists throughout the world. Dr. Last led the initiative of the International Epidemiological Association to develop guidelines on ethical conduct of epidemiological research, practice, and teaching.

—*CPHA Health Digest*, Vol. 30, No, 2, Summer 2006

As CPHA continued to grow, the Northwest Territories Branch of the Association was created in 1976, providing CPHA "with a voice on health matters in the Canadian North." CPHA's membership had identified the need

15 "Obituary: Robert Davies Defries," *Canadian Journal of Public Health* 66 (November-December 1975): 510–12; G.H. Beaton, "Community Health: A New Approach in the University of Toronto," *Canadian Journal of Public Health* 65 (November-December 1974): 463–66

16 Kenneth Benson, "Editorial," *Canadian Journal of Public Health* 67 (July-August 1976): 273–74

to encourage and support the involvement of Aboriginal people in CPHA activities.

The Association also expanded its publishing activities with research monographs, special supplements of the *Canadian Journal of Public Health* and launching a new quarterly newsletter. Dr. John M. Last was appointed editor of the Journal in 1981 and brought a broad international perspective, experience in epidemiology and community medicine and an ability to spark lively debate. The quality and number articles submitted grew steadily, while Last wrote most of the lead editorials, including one that decried, "the intolerable situation of ill-health among the Aboriginal peoples of Canada." Last noted, "the nature of papers about Native health has subtly changed; now we clearly recognize the need for empowerment and local autonomy for communities, replacing the paternalistic outlook that was characteristic of earlier eras."[17]

A stronger voice for Aboriginal peoples was reflected in the outcome of a commission led by Justice Thomas Berger in the mid-1970s to examine the effects of a proposed oil and gas pipeline in the Northwest Territories. After concerted lobbying by Aboriginal leaders concerned about both the environment and the infringement on their land rights, the pipeline was never built. Indigenous rights were also strengthened with the 1982 *Constitution Act* and the *Canadian Charter of Rights and Freedoms*, which recognized the Métis as a distinct Aboriginal people and restored Indian status to women who had been disenfranchised under the *Indian Act* as a result of marrying non-Aboriginals.

17 John M. Last, "Health of Native Canadians: Its Relevance to World Health," *Canadian Journal of Public Health*, 73 (September-October 1982): 297–98

Jean Goodwill

Canada's First Aboriginal Nursing Graduate

Jean Goodwill was a leader in Aboriginal health care. A Plains Cree from Little Pine First Nation near North Battleford, Saskatchewan, Ms. Goodwill graduated in nursing in Prince Albert and subsequently was employed at the Indian Hospital in Fort Qu'Appelle. She went on to become Nurse in Charge of the La Ronge Nursing Station, which opened her eyes to the health conditions of First Nations people. During her 20 years with the federal government, she was instrumental in developing health and social policies for Aboriginal people. Ms. Goodwill helped found the Aboriginal Nurses Association of Canada in 1975, where she served as President for seven years. As a member of the CPHA Board of Directors, Ms. Goodwill raised the profile of Aboriginal health issues and explored ways in which Aboriginal youth could be encouraged to choose careers in the health field.

—*CPHA Health Digest*, Vol. 24, No. 4, Winter 2000

Researchers began approaching public health issues among Indigenous populations through a closer involvement with Indigenous communities, working within their cultural contexts. There were also more broadly-based surveys of infant and childhood nutrition and general health needs and more detailed and long-term assessments of infant and general mortality patterns, especially on reserves. Aboriginal infant mortality rates were more than a third higher than the national

rate, and among adults, there were elevated risks for all major forms of accidents and violence, diabetes and pneumonia.[18]

The health conditions of Aboriginal Canadians were often compared with the developing world, although a 1982 *Canadian Journal of Public Health* article questioned this practice. T. Kue Young, Medical Director of the Sioux Lookout Zone of Health and Welfare Canada's Medical Services Branch, argued that equating "health status and medical care resources in the North with conditions in the Third World is statistically misleading and inaccurate." Epidemiologically, beginning in the mid-1960s, the northern Aboriginal population had "graduated" from the patterns characteristic of developing countries as the main health challenges shifted from infectious diseases to socio-economic and community health issues related to social disruption and violence linked to alcohol and substance abuse. However, Young cautioned the public health community not "to congratulate ourselves on how well we've done in the Canadian North," noting the need to address the socio-economic disparities that keep the gap between northern and southern Canadians "considerable."[19]

Jill Christensen

Nutritionist Developed CPHA Branch in NWT

Jill Christensen graduated with a degree in nutrition from the University of Toronto and began her career in the NWT in 1975 with St. John Ambulance, developing and teaching home nursing in Inuit communities. She became Nutrition and Dietetics Consultant with the Department of Health and Director of Dietetics at the Yellowknife Stanton Hospital, where she developed the NWT Nutrition Guidelines. She coordinated the HIV/AIDS and tobacco public awareness campaigns for the McKenzie Regional Health Services and developed and taught nutrition modules at Arctic College. Ms. Christensen was a founding member of the Northwest Territories Branch of CPHA in 1977 and became President of the Branch in 1979.

—*CPHA Health Digest*, Vol. 16, No.3, Autumn 1992

Tobacco

A major target for healthy lifestyle choices to reduce death and illness related to cancer, heart disease and stroke was the significant rate of tobacco use among Canadians. School children continued to start smoking despite ongoing health education efforts, but a trend towards earlier smoking seen before 1973 began to reverse. A number of surveys of the attitudes of smokers and the general public done in the late 1970s revealed persistently high rates of smoking, particularly among teenage girls. The non-smoking majority

18 O.Schaefer and D.W. Spady, "Changing Trends in Infant Feeding Patterns in the Northwest Territories, 1973–1979," *Canadian Journal of Public Health* 73 (September-October 1982): 304–09; S. E. Evers and C.G. Rand, "Morbidity in Canadian Indian and Non-Indian Children in the Second Year," *Canadian Journal of Public Health* 74 (May-June 1983): 191–94; B. Postl, "Native Health: A Continuing Concern," *Canadian Journal of Public Health* 77 (July-August 1986): 253–54; Y. Mao, H. Morrison, R. Semenciw and D. Wigle, "Mortality on Canadian Indian Reserves, 1977–1982," *Canadian Journal of Public Health* 77 (July-August 1986): 263–68

19 T. Kue Young, "Self-Perceived and Clinically Assessed Health Status of Indians in Northwestern Ontario: Analysis of a Health Survey," *Canadian Journal of Public Health* 73 (July-August 1982): 272–77;

John Blatherwick

Moving Force Behind Canada's First Workplace Smoking Ban

Dr. John Blatherwick was the longest-serving Medical Health Officer in Canada when he retired in 2007. Twenty-three of those years were as Chief Medical Health Officer for Vancouver Coastal Health and the City of Vancouver. He was the moving force behind a number of important programs involving youth, people with disabilities, people living with AIDS, people combating drug addictions, and the move to abolish smoking in the workplace. "Our biggest achievement was bringing in the first non-smoking policy in the workplace in Canada and one of the first in North America. It was revolutionary." He was named Honorary Chair of the Environmental Health Foundation of Canada, the research arm of the Canadian Institute of Public Health Inspectors.

—CPHA interview, June 2009

was increasingly irritated by second-hand cigarette smoke and as one survey concluded, it seemed clear that "politicians have been too timid in enacting legislation to control the accumulation of cigarette smoke in public places."[20]

Many at the CPHA 1977 annual meeting in Vancouver were surprised to hear CPHA President Dr. Kenneth Benson tell the assembled audience after a toast to the Queen, "You may smoke now." A number of letters to the editor appeared in the *Canadian Journal of Public Health* afterwards, noting the contradiction with CPHA's anti-smoking activities. Benson explained that his comment was intended as "a gentle reprimand" to those who smoked before the toast but asked, "How far do we go in interfering with lifestyles?" That smoking would be permitted at an annual meeting, not to mention a public health meeting, is surprising today but in the 1970s, many health professionals continued to smoke, while warning others of its dangers. As noted in a 1978 article in the *Canadian Journal of Public Health*, "health professionals have not yet realized their full potential in counteracting this very important and preventable health problem."[21]

Canada was accused of addressing the issue of smoking and health "with timidity,"[22] and subsequently CPHA and the Department of National Health and Welfare co-sponsored a National Seminar on Smoking and Health in 1972, which initiated stronger, sustained leadership in tobacco education initiatives. A growing volume of smoking-related research studies illustrated among others, the harmful effects of second-hand smoke and the impact of smoking by pregnant women on the unborn. Researchers also tried to calculate the cost of smoking for Canada's health system and the estimated $5.1 billion in 1979

20 F.R. Wake, A.C. Sparks and R. Ellis, "Urban-Rural Smoking Pattern in Grade 7 Children: The Implications for Health Education," *Canadian Journal of Public Health* 68 (January-February 1977): 27–28; Gordon Mutter, "Smoking in the School Environment," *Canadian Journal of Public Health* 69 (May-June 1978): 197–98; G.W. Piper, "Turning the Tide of Teenage Smoking," *Canadian Journal of Public Health* 71 (May-June 1980): 161–62

21 Kurt Baumgartner and E. Robert Langford, "You May Smoke Now: Letters to the Editor," *Canadian Journal of Public Health* 68 (July-August 1977): 344; K.I.G. Benson, "You May Smoke Now: Letters to the Editor," *Canadian Journal of Public Health* 68 (September-October 1977): 431; Cheryl Rosen and Mary Jane Ashley, "Smoking and the Health Professional: Recognition and Performance of Roles," *Canadian Journal of Public Health* 69 (September-October 1978): 399–406

22 G.W.O. Moss, "The Second World Conference on Smoking and Health," *Canadian Journal of Public Health* 62 (November-December 1971): 540

dollars resulted in pressure for more aggressive legislation responses.[23]

Legislation had been proposed for a total ban on cigarette advertising in 1971 but the tobacco industry agreed to voluntary guidelines on advertising before the legislation was debated in the House of Commons. A number of local governments passed by-laws prohibiting smoking in stores, elevators, and escalators and in service line-ups, while the *Canadian Charter of Rights and Freedoms* increased pressure for the legal protection of non-smokers from tobacco smoke in public areas. The 1985 *Non-Smokers Health Act* prohibited smoking in all federal buildings and workplaces and a series of resolutions passed at the 1986 CPHA annual meeting in Vancouver called for bans on smoking in indoor public places and on tobacco advertising and sponsorship.[24]

Smoking would increasingly be seen as "a form of deviant or abnormal behaviour" and the smoker as an addict for whom "all possible measures should be taken" to assist those who wanted to stop. The many social variables that influenced children to start smoking, such as peer pressure and smoking by others in the home, received greater attention.[25]

23 "Federal Legislation to Ban Cigarette Advertising," *Canadian Journal of Public Health* 62 (September-October 1971): 366–67; "Selected Papers form the National Seminar on Smoking and Health," *Canadian Journal of Public Health* 64 (March-April 1973): Supplement; F.R. Wake, "Antismoking: Where Do We Go?" *Canadian Journal of Public Health* 64 (September-October 1973): 493–96

24 Donald T. Wigle, "Forced Smoking," *Canadian Journal of Public Health* 74 (July-August 1983): 231–32; Lorne Elkin Rozovsky and Fay Adrienne Rozovsky, "Public Health and the Charter of Rights," *Canadian Journal of Public Health* 73 (March-April 1982): 86–87; Lorne Elkin Rozovsky and Fay Adrienne Rozovsky, "'Dangerous' Products, Health and Law," *Canadian Journal of Public Health* 73 (July-August 1982): 230–31; "Backgrounder: History of Smoke-free Legislation in Toronto," Toronto Public Health, http://toronto.ca/health/smokefree

25 John M. Last, "Smoking or Health," *Canadian Journal of Public Health* 72 (November-December 1981): 366–67

Infectious Diseases

Indifference towards previously terrifying infectious diseases continued to grow and low vaccination levels concerned public health officials. Measles outbreaks in Saskatoon and Calgary in 1974 and 1975 led the *Canadian Journal of Public Health* to call for "a much more vigorous campaign… [so that] parents once again realize that measles can be a dangerous disease" and that vaccination could eliminate it.[26]

Stephen J. Corber

A Leading Force in Global Health Programs

Dr. Stephen J. Corber has been a practising public health professional for over 30 years, serving as the Medical Officer of Health for the Ottawa-Carleton Health Department and as Director of Disease Prevention and Control Division for the Pan American Health Organization. This PAHO program provides technical collaboration and expertise for the prevention and control of HIV/AIDS and other sexually transmitted diseases in the Americas. Dr. Corber was instrumental in the creation of CPHA's Global Health Program. He also served as the Scientific Editor of the *Canadian Journal of Public Health* and most recently he was Director of Public Health Practice at the Faculty of Health Sciences at Simon Fraser University.

—*CPHA Health Digest*, Vol. No. 2008

26 Stanley Stead, "Measles in Saskatoon 1974–1975," *Canadian Journal of Public Health* 68 (March-April 1977): 136–40

Smallpox and Its Eradication (World Health Organization, 1988), p. 439

On the eve of the 1976 Olympics in Montreal, concerns were raised about the potential importation of infectious diseases. Dr. W. Harding Le Riche, President of CPHA's Tropical Medicine and International Health Division, said in a *Canadian Journal of Public Health* editorial that any cases of cholera or typhoid occurring among international visitors to Canada could "easily be accommodated and dealt with," but new and emerging diseases were a threat of unknown proportions. The federal and provincial governments should "stop shilly shallying about what they would do if cases of serious epidemic disease, such as plague, louse typhus, cholera, typhoid in large numbers, or even smallpox, were to be brought into the country."[27]

The world was getting smaller as a result of the increased speed of travel, especially by airplane. Canada and the United States had launched a mass smallpox vaccination campaign in the 1960s after a 14-year-old Canadian boy came home with smallpox contracted in Brazil. The World Health Organization launched a global smallpox eradication initiative in 1967, with substantial American funding and significant Canadian involvement. The success of the initiative was officially declared on May 8, 1980 and the global eradication of smallpox was a considerable public health achievement.[28]

Sanofi Pasteur Limited (Connaught Campus)

Public attention was raised to the threat of new and emerging infectious diseases after a woman arrived at Toronto International Airport on August 2, 1976 from a European vacation with what was subsequently confirmed by the U.S. Centers for Disease Control as Lassa fever. The incident highlighted Canada's need for more

Margaret Hilson

International Health and Social Justice Crusader

Margaret Hilson was CPHA's Director of Global Health Programs for 22 years, starting in 1985 when CPHA established its international health secretariat. Ms. Hilson was instrumental in building public health capacity around the world and served as president of the World Federation of Public Health Associations. She trained as a nurse and went to India with Canadian University Services Overseas when she was in her twenties. "That was really a turning point for me," she says, "being involved in international development issues. When I first went to India, it was very evident that the disparities and the health inequities were not going to be addressed by the curative health model."

—CPHA interview, June 2009

27 W. Harding Le Riche, "Editorial: Are the 1976 Olympics a Health Hazard? Aspects of Communicable Disease and Immunization," *Canadian Journal of Public Health* 67 (January-February 1976): 7–8

28 Donald M. McLean, John R. Brown and J.S. Bell, "Smallpox in Toronto," *Canadian Medical Association Journal* 87 (October 6, 1962): 772–73

efficient diagnosis, better control of exposure and a designated high-security isolation facilities. Ontario built a Level-4 laboratory at a cost of $5.8 million but when nearby Toronto residents protested against it, the lab was never opened and the province decided this was actually a federal responsibility. It was not until 1999, however, that a federal facility was finally opened, in Winnipeg, Manitoba.[29]

The University of Toronto sold Connaught Laboratories to a federal Crown corporation in 1972, which later privatized it. In 1976, Connaught Laboratories announced that it would no longer incur the financial losses associated with maintaining emergency stockpiles of vaccines and antitoxins, which meant relying on foreign producers of vaccines and other critical medical products during emergency situations.[30]

A New Strain of Swine Flu

Production problems and the denial of liability insurance coverage to American vaccine producers sparked a political debate in Washington in the summer of 1976. A new strain of Influenza A virus, popularly referred to as swine flu, had caused an outbreak in February 1976 among 273 of the 1,321 army personnel at Fort Dix, New Jersey. Amid fears that this strain was related to the one responsible for the 1918–19 pandemic and that the young and middle-aged had little or no immunity to it, U.S. and Canadian officials launched influenza immunization programs. Knowing far enough in advance of widespread influenza circulation to be able to prepare and distribute a vaccine is always a challenge and this provided an opportunity to mount a large-scale pre-emptive strike. U.S. President Gerald Ford approved an unprecedented $135-million plan in March in order to immunize all 220 million American citizens before November. Canada expedited a more focused program targeted at the chronically ill and people over 65 years of age, as provincial authorities did not support a plan to immunize everyone and the WHO saw no signs of the swine flu strain elsewhere in the world.[31]

The CDC reported on a small increased risk of contracting Guillain-Barré Syndrome after the swine flu vaccine (a link that has since been called into doubt). Most provincial immunization programs were halted after eight people in Ontario were reported to have contracted a mild form of paralysis after receiving the vaccine. The remaining swine flu vaccine was stockpiled and never used and what the media referred to as the "swine flu fiasco" did considerable and long-term damage to the public image of vaccines. In an effort to broadly educate the public about the importance of immunization, the Canadian Paediatric Association launched the first annual Immunization Action Month in October 1977—a campaign similar to those in the 1940s. For U.S. vaccine producers, the challenges of the swine flu experience accelerated a retreat from the

29 A.J. Clayton, "Lassa Fever, Margurg and Ebola Virus Diseases and Other Exotic Diseases: Is There a Risk to Canada?" *Canadian Medical Association Journal* 120 (January 20, 1979): 146–55

30 Ross Henderson, "Reliance on Foreign Drug Makers Leaves Canada Vulnerable in Crisis," *Globe and Mail* (September 3, 1976): 5; Paul A. Bator, *Within Reach of Everyone: A History of the University of Toronto School of Hygiene and Connaught Laboratories Limited, Volume II, 1955–1975* (Ottawa: Canadian Public Health Association, 1995)

31 A.B. Morrison, A.J. Liston and John D. Abbott, "Special Report: The Canadian Influenza Decision, 1976," *Canadian Medical Association Journal* 115 (November 6, 1976); "Killer Flu Virus Not Spreading," *Globe and Mail* (February 24, 1976): 12;

industry that had begun in the 1960s.[32]

One of the first and most successful of the new generation DNA recombinant vaccines developed in the 1980s was to prevent Hemophilus influenza b

Sanofi Pasteur Limited (Connaught Campus)

The early 1980s were a fruitful period for the development of a number of new highly purified vaccines based on new recombinant DNA technology that targeted diseases such as meningitis, hepatitis, typhoid, cholera and malaria. Measles control was of particular concern among the Canadian public health community as outbreaks continued due to low immunity levels among children, often despite receiving a measles vaccine. High rates of measles in Latin America and lapses in Canadian and American measles immunization programs and uptake rates created a dangerous situation, despite a 1978 commitment by the U.S. government to eliminate measles in America by 1982.[33]

Sexually Transmitted Infections (STIs)

In the late 1970s, antibiotic-resistant forms of gonorrhea emerged, prompting a 1979 *Canadian Journal of Public Health* editorial to "ask why our campaigns in the realm of sexually-transmitted diseases have so far yielded relatively little in the way of tangible results.... One must admire the evolutionary guile and cunning [of STIs] and their ingenious decision to use the human copulatory act as a mechanism for propagation and survival." Taboo, superstition and general ignorance persisted with regard to STIs and researchers and public health officials hesitated to tackle STIs in the same way as other communicable diseases. In January 1981, CPHA established a Sexually Transmitted Diseases divisional affiliate and sponsored the First National Conference on Sexually Transmitted Diseases in Toronto in November 1982, becoming a key player in the redefinition and broadening of initiatives surrounding STIs.[34]

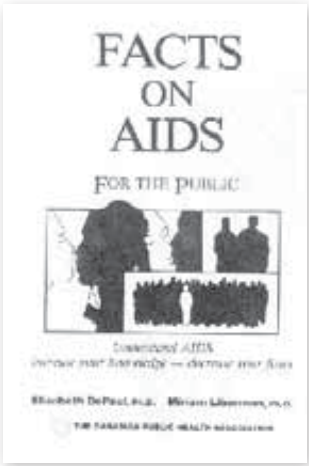
AIDS was a topic of discussion at the national conference, as the first confirmed Canadian case was reported in 1982. The media referred to it as the "gay plague" because its primary spread in North America was concentrated among male homosexuals. Of Canada's 14 known AIDS cases by the time of the conference, none survived more than 20 months. There were over 600 cases reported in the United States in 1982 and rapidly increasing media coverage heightened interest in STIs and generated debates about sex education and providing condoms in schools.

The initial public health response case of AIDS (HIV or Human Immunodeficiency Virus was identified in 1984) was described by CPHA's Director of the AIDS Education and Awareness Program, David Walters, as "fragmented confusion." Several key factors constrained the Canadian public health response to HIV/AIDS, including the economic recession, inadequate

32 Eve Drobot, "The Swine Flu Fiasco," *Globe and Mail: Weekend Magazine* (December 10, 1977): 19–21; Brian Gory, "Flu Vaccine Wastes Away in Storage," *Globe and Mail* (September 30, 1977): 8

33 A.V. Seefried, "Canadian Association for Clinical Microbiology and Infectious Diseases: Report," *Canadian Journal of Public Health* 71 (March-April 1980): 125–28

34 Alan Meltzer, "Sexually-Transmitted Diseases in Canada," *Canadian Journal of Public Health* 70 (November-December 1979): 366–70



CPHA Health Digest, 1986

Health Minister Jake Epp names CPHA the education and awareness partner for a major initiative on AIDS

and sporadic funding by different branches of government, a lack of co-ordination of efforts at the local and voluntary agency level, diffused responsibility for action, reluctance to act due to the social tensions surrounding homosexuality, and fears of contagion. According to Walters, "there seemed to be no safe ground in talking about homosexuality, condoms and needles at national or provincial levels. This reluctance resulted in foot-dragging and unclear messages about needed commitment to educational programs."[35]

In 1986, the federal government announced $6.6 million for AIDS research and education that year and another $39 million over the next five years. A proportion of this supported a CPHA-led AIDS Education and Awareness Program which allowed the Association to assume a significant leadership role in a national AIDS campaign aimed at the public and health professionals. Scientific and public forums enabled health professionals to meet with the general public and CPHA distributed *Facts on AIDS for the Public* as well as a broad education and awareness media campaign.

CPHA's central message advocated the use of condoms as the symbol and most readily available means of prevention and it was clear that this would be controversial. With the cooperation of the Canadian Broadcasting Corporation and many independent TV and radio broadcasters, the series of public service announcements aired, triggering open discussions about condom use and safe sex. These issues were off-limits for American television at the time and thus the CPHA campaign "was the first such effort to be carried by a national network in North America." As John Last later recalled, the AIDS epidemic "transformed what we publish, just as it has transformed social values and behaviour."[36]

James Howell

Developed Community Medicine in Alberta

Dr. James Howell was a public health physician, educator and practitioner for more than 30 years. He devoted his life to the promotion and protection of the health of the public and his contribution to public health in Alberta is unparalleled. He wrote extensively on public health and public health issues and as a practitioner oversaw many innovative public health initiatives, such as the establishment of the Boyle McCauley Health Centre in 1979 and programs to address health status inequities, child poverty and strengthening communities. From the beginning, the goal of the Health Centre was to look at the whole person and include that person in decisions about their care.

—*CPHA Health Digest*, Vol. 18, No. 2, 1994

35 D.Walters, "AIDS the Teacher: What Have We Learned in Canada?" *Canadian Journal of Public Health* 80 (May-June 1989): Supplement, pp. S3–S8

36 D.Walters, "AIDS the Teacher: What Have We Learned in Canada?" *Canadian Journal of Public Health* 80 (May-June 1989): Supplement, p. S4; J.M. Last, "A Last Editorial," *Canadian Journal of Public Health* 82 (November-December 1991): 366

CPHA Health Digest, 1986

The theme of Canada's International Immunization Program was "A Miracle in the Making." The Canadian International Development Agency chose CPHA to implement the program.

Global Issues

International health issues and the global threat of tropical diseases prompted the creation of a Division of Tropical Medicine and International Health in 1972 within CPHA and from this base, CPHA initiated a range of new international health programs, driven by "a multidisciplinary approach where the health team provides the primary health care and where there is a judicious blend of preventive and curative medicine."[37]

In the late 1970s and early 1980s, the federal government responded to challenges from WHO and UNICEF and strengthened its investment in international health initiatives and dispersed funds through the Canadian International Development Agency to more than 20 Canadian NGOs including CPHA, which took a leadership role and proceeded on several fronts. In 1978, CPHA embarked on a project to build capacity of public health societies and associations in Africa, South and Central America and, after the collapse of the Soviet Union, in Eastern Europe. The onset of the global pandemic of HIV/AIDS gave this initiative new impetus with the development of education and awareness programs about AIDS and HIV infection. These programs, originally based in Harare, Zimbabwe, later moved to a more stable base in Johannesburg where training programs were established. Largely through CPHA and a number of individual Canadian health workers, an international immunization program against all vaccine-preventable diseases in developing Commonwealth and Francophone nations was launched in 1986, in partnership with WHO, UNICEF, and a consortium of Canadian NGOs.

It had become clear to the WHO that improving health in the developing world through the extension of western-style medicine was not working. The emphasis on doctors, hospitals and technology and under-emphasis on prevention had little to offer the Third World, where three billion people had no access to any permanent form of health care. As a *Canadian Medical Association Journal* report on the health problems of developing nations noted, "In some ways, Western medicine had actually been counterproductive by setting up models that encouraged some underdeveloped nations to misuse what meagre health-care funds they had." The fundamental challenges were clean water and effective sewage systems and an estimated 5 million deaths and 10 million disabilities occurred each year among children due to diphtheria, pertussis, tetanus, polio, measles and tuberculosis.[38]

37 "The Role of the Canadian Public Health Association in International Health Programs," *Canadian Journal of Public Health* 65 (September-October 1974): 337–38

38 M. Korcok, "Health Problems of Developing Nations: Part I: A Western Solution?" *Canadian Medical Association Journal* 120 (February 17, 1979): 471–74

Sharon Martin

Promoted a Community Model of Public Health

Sharon Martin was influential on the BC steering committee that started "Healthy Community" activities in the mid-1980s and in her position with the Vancouver Health Department, helped shift the focus of programs to community development and healthy communities models, strongly promoting the involvement of community members and volunteers in public health programs for program delivery. Ms. Martin chaired the Working Group on Health Services Restructuring which developed CPHA's position paper on health reform.

—*CPHA Health Digest*, Vol. 20, No. 2, Summer 1996

The World Federation of Public Health Associations (WFPHA) was formed in the 1960s by the national public health associations of India, Japan, New Zealand, Pakistan, the United Kingdom, the United States and Venezuela and had grown to 28 of 58 existing national public health associations by 1978. CPHA joined WFPHA in the early 1970s and Executive Director Gerry Dafoe and Journal Editor Andrew Sherrington served on its executive for a number of years in the 1970s. CPHA hosted WFPHA's second international conference in Halifax in 1978 and attendance totalled 1,100 delegates from 30 countries, due in part to funding from the Canadian International Development Agency, WHO, and UNICEF. CPHA also received significant funding in 1985 from the Canadian International Development Agency (CIDA) for three years of block funding to support international activities.

Primary Health Care —Health for All by 2000

The Halifax conference focused on primary health care—a concept that emerged in the early 1970s to describe "a complex process involving a basic level of services with a broad health orientation and provided by a variety of health professionals who offer some form of continuity of care." A follow-up WHO International Conference on Primary Health Care in Alma-Ata, Russia in 1978 aimed to re-orient health care in the developing world

Trevor Hancock

Health Public Policy and Healthy Communities Visionary

Trained as a family physician in Britain, Dr. Trevor Hancock practised medicine in Canada for four years before beginning his career in public health. As a public health consultant, he has written and presented around the world on health promotion, sustainable development and healthy futures. Dr. Hancock developed the "mandala of health" model of health determinants with Fran Perkins and promoted the concept of sustainable development by organizing a conference on health and the economy. He was leader of the Green Party of Canada from 1983 to 1985. Dr. Hancock has written extensively on health futurism and was a founding member of Paradigm Health, a Toronto-based health futures think-tank.

—*CPHA Health Digest*, Vol. 14, No. 3, September 1990

towards primary health care, with "appropriate levels of technology within the scope and budget of a country to make such care available to most of the people, especially those in the rural areas." Primary health care was seen as "basic essential care made universally accessible to individuals and families in the community by means acceptable to them through their full participation and at a cost that the community and country can afford." The Conference produced the Declaration of Alma-Ata, which the WHO deemed valid for all countries, adopting it as a global strategy two years later for governments, health and development workers. The world community then committed to work towards *Health for All by 2000*.[39]

The New Public Health

The public health focus on lifestyles broadened considerably to encompass the social determinants of health in the early 1980s, after the publication of Thomas McKeown's *The Role of Medicine*, which argued that medical care had little to do with the improvements in life expectancy observed in Britain over the last 100 years. In 1981, Ilona Kickbusch and Robert Anderson of the World Health Organization's European Health Education Unit undertook a study tour in Canada—then considered "the world's Mecca for health promotion." The Department of National Health and Welfare was working towards initiating a ground-breaking Health Promotion Survey in 1985, to gather information about the lifestyle behaviours and preventive health practices of Canadians, including alcohol and tobacco consumption, exercise, safety and nutrition.[40]

Kickbusch and Anderson were interested Canadian health education initiatives like PARTICIPaction and they attended Beyond Health Care, the first conference on healthy public policy, which was held in Toronto in October 1984. Beyond Health Care was organized by public health practitioner and theorist, Dr. Trevor Hancock, and sponsored by CPHA, by the Health Promotion Directorate of Health and Welfare Canada to mark the 10-year anniversary of the Lalonde Report, by Toronto Public Health to mark its centenary, and by the City of Toronto to mark its 150th anniversary. The conference helped develop health promotion's emphasis on community-based health planning and participatory action research and launched the concept of healthy public policy. It also inspired Kickbusch to go on to develop WHO Europe's Healthy Cities movement, which focuses on health inequalities, urban poverty, the needs of vulnerable groups and the social, economic and environmental determinants of health.[41]

Health Promotion: The Epp Report and the Ottawa Charter

In November 1986, Health and Welfare Canada joined the WHO and CPHA in organizing the first International Conference on Health Promotion, which was held in Ottawa. The Minister of Health and Welfare, Jake Epp, presented the federal government's new perspective on health promotion in *Achieving Health For All: A*

39 C.W.J. Jeanes, "Primary Health Care," *Canadian Medical Association Journal* 120 (February 17, 1979): 417; "News From the Field," *Canadian Journal of Public Health* 67 (May-June 1976): 259; Andrew Sherrington, "Editor's Desk," *Canadian Journal of Public Health* 69 (March-April 1978): 91; Roger S. Tonkin, "Primary Health Care," *Canadian Journal of Public Health* 67 (July-August 1976): 289–94

40 J. Raeburn, "Ottawa Charter: Reflections from Down Under," *Promotion and Education14* (2007): 10

41 *Canadian Journal of Public Health* "Beyond health care," Supplement 1 (1985); Healthy Cities, accessed at www.euro.who.int/en/what-we-do/health-topics/environmental-health/urban-health/healthy-cities

Framework for Health Promotion (the Epp Report). It emphasized the clear relationship between health and economic status and that "health promotion implies a commitment to dealing with the challenges of reducing inequities, extending the scope of prevention, and helping people to cope with their circumstances. It means fostering public participation, strengthening community health services and coordinating healthy public policy. Moreover, it means creating environments conducive to health, in which people are better able to take care of themselves, and to offer each other support in solving and managing collective health problems."[42]

The Health Promotion conference brought together 212 invitees from 38 countries, including health and public health, governmental, academic and community representatives. Their goal was to build a framework, which became known as the Ottawa Charter for Health Promotion. The framework provides fundamental strategies for major progress in health promotion worldwide.

Ron Adrian Draper

Major Contributions to the Art and Science of Health Promotion

Ron Draper was the force behind the First International Conference on Health Promotion, held in Canada in 1986 and which resulted in the Ottawa Charter for Health Promotion. The first Director General of Health Canada's Health Promotion Directorate, he was the major factor in bringing Canada to a position of world leadership in this field and, indeed, in establishing the whole concept and practice of health promotion globally.

—Trevor Hancock, Health Promotion International, 1998

OTTAWA CHARTER FOR HEALTH PROMOTION

The Ottawa Charter's framework for health promotion involves enabling people to increase control over their health, a process in which individuals, communities, health professionals and institutions, and governments all have a role. It recognizes that health cannot be separated from people's daily reality and the social and economic determinants of health, such as access to money, power and esteem. Researchers are still examining how these factors affect the health of individuals and groups and how social facts may become biological facts. The public health reformers who fought for sewers and sanitation, nutrition, injury prevention and family planning remain at the roots of Canada's health promotion movement.[43]

42 Jacqueline Low and Luc Thériault, "Health Promotion Policy in Canada: Lessons Forgotten, Lessons Still to Learn," *Health Promotion International* 23 (2) (2008): 201

43 A. Robertson, "Shifting discourses on health in Canada: from health promotion to population health," *Health Promotion International* 13 (2) (1998): 155–166

Epilogue

By John M. Last[1]

In his presidential address in 1972, CPHA President Vince Matthews (1922–1988) spoke to the title "What's past is prologue" and, alluding to the future, ended his inspiring speech on the state of public health and public health services in Canada by saying, "You ain't seen nothing yet!" His title fits well with the contents of this book, and his concluding phrase is a fitting one to apply to this epilogue. Vince Matthews did not live to see how far we have come since he spoke. He would have relished this book, and so would many other women and men of Canadian public health, some mentioned by name in this book, others not. In past years when public health leaders in Canada gathered, conversations sometimes turned to the need for a history of public health in Canada. This history has started to tell that story, but it ends when major developments in Canadian public health were just beginning, and the story was becoming more interesting than ever before.

This book provides a chronological history of public health in Canada from its early colonial period until 1986. This entire period could be viewed as prologue to advances in public health sciences and practice that were beginning around the time that this history ends. It would have been unwise, however, to write the "history" up until the present day, because it is difficult and sometimes impossible to determine until years later how significant particular events and the people involved in them have been in the grand scheme of things. It is also difficult, sometimes impossible, to write impartially about events and the people who made these events happen, or attempted to prevent them from happening. It is preferable to delay until it is easier to determine which developments have had lasting significance. The British *Dictionary of National Biography (DNB)* has a 50-year rule, whereby no one is included until 50 years after the person's death. For the release of Cabinet Papers and other confidential government documents, a 20- or 30-year rule is often used. Fifty years would be too long for a history of public health in Canada. Much of great importance has happened since 1960. The second half of the 20th century was a remarkable period of scientific discoveries, technical developments, innovative conceptual thinking, and re-orientation of values and beliefs about family roles and responsibilities, gender and racial differences, racial equality. These profound changes have accompanied and contributed to improved population health and have affected many aspects of public health practice, as well as clinical medical and nursing practice, in some ways bringing these previously diverging branches of the health sector closer together. Some of the discoveries, technical developments, and concepts

1 With contributions from Gerry Dafoe, Margaret Hilson, Trevor Hancock, Jamie Hockin, Cory Neudorf, Klaus Seeger and Erica Di Ruggiero

since 1960 are mentioned in this book and others must be mentioned in this epilogue, 50- or 20-year rule notwithstanding. In this epilogue we mention some events that have occurred since 1986 that seem very likely to influence the future development of public health services in Canada, and the health of the Canadian people. Whether their mention in this epilogue displays exceptional insight or merely hubris will be for future historians to judge.

The past, described in detail in previous chapters, can be briefly summarized. Beginning late in the 19th and early in the 20th century, public health services began to take shape in Canada, with some inspirational leaders helping to guide their development. Wherever they were made, important discoveries about ways to promote, improve, protect and preserve the health of the Canadian population have for the most part been applied promptly, especially in the major cities. Sometimes, for example with fluoridation of public water supplies and access to facilities that ensure reproductive choice for women, application has been patchy, incomplete and varied among provinces, cities and rural regions, but in general Canada has kept pace with the other wealthy industrial nations and in some respects has led the charge.

In the 1970s, Canadian conceptual thinking about determinants of good health led the world; the concepts were set out in *A New Perspective on the Health of Canadians*[2] (the Lalonde Report). These concepts helped to reorient public health towards promotion of improved health, without taking emphasis away from protecting health and preventing disease by control of environmental hazards and enhancing immunity by using an increasing array of vaccinations. The health promotion concepts are embodied in the Ottawa Charter for Health Promotion,[3] a statement of principles that was refined into final form and signed at a conference organized by CPHA and co-sponsored by the World Health Organization (WHO) and Health and Welfare Canada, in Ottawa in 1986. Coinciding with this conference, the Minister of Health and Welfare, Jake Epp, released *Achieving Health for All: A Framework for Health Promotion*[4] (the Epp Report). Ron Draper (1935–1997), first Director-General of the Health Promotion Directorate, was instrumental in crafting this report and the WHO document that became the Ottawa Charter. He was a world leader in health promotion principles and practice in the 1970s and 1980s. Further refinements of conceptual thinking and practical applications of health promotion and protection and prevention of disease and injury were made at subsequent WHO conferences on health promotion in Adelaide in 1988 and most recently in Bangkok in 2005, but the credit for the original concept belongs in Canada and primarily to Canadians, Ron Draper especially. All Canadians, not just those in the health sector, can be proud of this achievement, which found immediate application in the Healthy Cities movement. Toronto was a Healthy City in the vanguard of the WHO Healthy Cities movement, not only because of the drive, diligence and dedication shown by Trevor Hancock and his colleagues who

2 Marc Lalonde, *A New Perspective on the Health of Canadians: A Working Document* (April, 1974) Ottawa: Government of Canada, available from: http://www.phac-aspc.gc.ca/ph-sp/pdf/perspect-eng.pdf

3 Ottawa Charter for Health Promotion, First International Conference on Health Promotion (21 November 1986) WHO/HPR/HEP/95.1, available at: www.who.int/hpr/NPH/docs/ottawa_charter_hp.pdf

4 Jake Epp, *Achieving Health for All: A Framework for Health Promotion* (1986) Ottawa: Health and Welfare Canada

launched the movement at the Beyond Health Care conference in Toronto where the Healthy Cities concept was launched, but also because the mayor and other elected municipal officials collaborated, establishing the first Healthy City office in Canada, the first municipal food policy council, and other initiatives such as improving facilities for walking and cycling. Toronto's Healthy City office ensured that health impacts were considered in municipal departments, and encouraged and supported neighbourhood actions, bridging environmental, social and economic dimensions. This achievement has been insufficiently celebrated in Canada or anywhere else. This history provides an opportunity to celebrate it and to give due credit to those who led the charge, and countless others who worked in and supported these activities. Working with Ron Draper, Trevor Hancock and others, Dr. Ilona Kickbusch of the World Health Organization took the concepts and methods back to Europe where they were applied to good effect in the WHO Europe Healthy Cities project which began in 1986, whence it spread around the world.

Canadian individuals and Canadian organizations have long played an important part in international health. Norman Bethune's role as a war surgeon first in the Spanish Civil War, then as a member of the Chinese communist forces under Mao Zedong, and his death from blood poisoning during the Long March are well known. Many lower profile Canadian doctors and nurses have dedicated their lives to more effective though less flamboyant activities than war surgery, contributing by strengthening capacity in public health systems and services, notably by protecting and restoring the health of infants and children in developing countries. As an example of dedication and devotion to this cause, consider the work of Drs. Donald and Elizabeth Hillman, McGill University-trained pediatricians who worked for many years in East Africa, Uganda, Tanzania, Kenya, Zambia and later in Malaysia and Kuwait, among other places. Their work was recognized when both received the award of Officer of the Order of Canada. Their recognition by thousands who are alive today in Africa because of their work, and by many students and young doctors and nurses who have seen them as role models and are following in their footsteps are ultimately more significant distinctions. Many other dedicated Canadian doctors and nurses like the Hillmans are quietly going about the business of improving the health and lives of the least fortunate people of the world, in low income countries, in refugee communities, in war zones, and in regions afflicted by natural disasters. There is never a shortage in the world of communities and regions in need, nor, it seems, a shortage of dedicated, altruistic Canadian nurses, veterinarians, sanitary engineers, health educators, and physicians able and willing to provide help where and when it is needed. Many nurses, physicians, and other health professionals have had distinguished careers in public health, working for Canadian non-governmental organizations (NGOs) such as CUSO, for international NGOs such as the International Committee of the Red Cross/Red Crescent and Médicins Sans Frontières, and for religious missions, enhancing Canada's reputation as a nation that does good work in the world.

The international immunization program against all vaccine-preventable diseases in developing Commonwealth and Francophone nations launched by CPHA and other NGOs in 1986, in partnership with WHO and UNICEF became the Canadian International Immunization Initiative

and in 2010 when this epilogue was written, was still ongoing. CPHA's role in these international activities was recognized in 1992, when CPHA was awarded WHO's Sasakawa Award, the first time ever that a Canadian organization received this prestigious distinction. Further recognition came when the CPHA's Director of International Health Programs, Margaret Hilson, was appointed an Officer in the Order of Canada in 2004.

The Canadian Public Health Association and other public health workers have been active over the past three decades in many environmental health programs and projects across Canada and sometimes beyond. Examples include investigation and control of environmental arsenic as a contaminant of gold-mining in and near Yellowknife, NWT, and in Bangladesh where arsenic in high concentration occurs as a soil contaminant, and made the Canadian-funded water-pumps (initiated by the International Development Research Centre) to provide clean drinking water a potential source of lethal arsenic poisoning. The Bangladesh arsenic problem was still being dealt with in 2010. Other important environmental problems in which CPHA and other organizations and individuals have been involved include industrial fluoride contamination in Newfoundland and (primarily affecting First Nations communities) on both sides of the Canada-USA border near Cornwall-Massena. An unusual environmental health problem was investigation of impacts of low-level supersonic training flights by NATO aircraft over parts of Labrador; possible impacts both on wildlife and on the sparse human population in the region have been studied. Another environmental health challenge was development of vector control programs to reduce the risk to humans from West Nile Virus disease, notably in Winnipeg and southwestern Ontario. Initially these vector control programs had unfortunate ecological adverse effects, but with more careful management, harm to ecologically and economically important insects has been reduced. Yet another environmental health problem was control of outbreaks of listeriosis in meat processing plants. Public health inspectors in Canada accepted the use of Hazard Analysis Critical Control Points (HACCP) in Canadian food safety programs. Public health inspectors and environmental public health professionals were the first in Canada in the early 1990s to adopt the HACCP program for assessing and inspecting all retail food establishments. The HACCP concept was first used in the space program and was developed by NASA. A very important step forward in enhancing environmental health in Canada was enactment of the *Ontario Tobacco Control Act* (1994) and similar legislation in provinces across Canada. This legislation decreased smoking in public places, increased the rate of tobacco smoking cessation in general and reduced uptake of smoking by teenagers.

Since at least the 1970s and to some extent earlier, most Canadian provinces have tried several variations of organization and provision of public health services, usually with the stated or unstated aim of containing and if possible reducing costs. Repeated reorganization and "reform" of community and public health services have punctuated the half century from the 1960s to 2010. Sometimes governments have cut staff and services as part of the reorganization in drastic and in what some consider over-zealous endeavours to save tax-payers' money. The outbreak of lethal and disabling *E coli* O157:57 in Walkerton, Ontario in 2000 and cryptosporidiosis in North Battleford, Saskatchewan demonstrated yet again that essential public health

services cannot be cut without risking harmful consequences. Sometimes budgetary belt-tightening is the result of conflicting priorities for funds from provincial health "envelopes" that include the costs of staff and infrastructure in hospitals, emergency medical services, and family physicians. At times provincial and federal health departments appear to have confused essential public health services and infrastructure with community-based personal health care, i.e. medical care, even considered them one and the same.

Personal care services and public health services have, however, joined forces in one important and particular way in recent decades. A historically significant development of lasting public health importance that began in the 1970s linked public health services and personal care services in a new way. The Canadian Task Force on the Periodic Health Examination was established in 1974, originally as a way to find out whether the popular general practice procedure known as the annual check-up was worth its cost to the recently established public health insurance program. This task force merits mention because the screening procedures used in clinical preventive medicine from fetal development to palliative care and care of the elderly play an increasingly prominent role in population health: they have become an essential part of the complete range of materials for public health services—a connecting link between public health services and personal preventive care services. The task force gave birth to the new tools of evidence-based medicine and evidence-based public health and evaluated the methods and procedures used for early detection of a wide range of life-threatening and disability-inducing conditions. The Canadian task force was emulated in the United States and both groups have worked closely together since the mid-1980s and are now recognized as an integral part of public health services and they systematically evaluate the evidence on which recommendations and advisory notices on screening procedures and early detection methods are based.

Since the 1980s, a series of unfortunate events cascaded to produce pressure for a greater emphasis on the health of the Canadian people, steady and reliable funding for infrastructure, and greater numbers of skilled professional staff in all the professions involved in providing public health services. These events included the increasing prominence of the HIV/AIDS pandemic. In 1993, in response to the global spread of AIDS, the Lac Tremblant Declaration from the Expert Working Group on Emerging Infectious Disease Issues called for action on surveillance, research, outbreak response and laboratory capacity targeting emerging diseases, as well as a national immunization strategy. In the late 1980s, the public health catastrophe of HIV/AIDS and hepatitis C infection among recipients of contaminated blood and blood products afflicted many thousands of people in several countries, including Canada. The appointment of Mr. Justice Horace Krever to study the safety of the donated blood supply in Canada led to a series of recommendations, including a call to improve public health services.[5] One organizational response was the consolidation in 2000 of many public health activities of Health Canada, including the Laboratory Centre for Disease Control and the Health Promotion Directorate, into the Population and Public Health Branch.

5 *Krever Commission Report* (1997) Ottawa: Public Works and Government Services Canada

The Canadian public was alarmed by the occurrence of outbreaks and epidemics of several other infectious diseases, including West Nile Virus disease and an outbreak of *E Coli* O157:H7 in 2000 at Walkerton, Ontario caused at least seven deaths and about 2,500 cases, some of whom had permanent damage to liver and or kidneys. Contaminated groundwater had not been properly tested, professional staff were reduced and existing water-testing facilities downgraded on the grounds that the private sector could do this more efficiently (i.e., at lower cost) than government bureaucrats (i.e., trained water quality scientists).

In 2003, an epidemic of a new disease, severe acute respiratory syndrome, commonly known as SARS, caused about 330 definite cases and 32 deaths in Toronto and had serious economic consequences when WHO issued a travel advisory, warning people of the risk of travel to Toronto. The SARS epidemic was estimated to have led to economic losses of $35 million a day in Toronto. Microbiologists discovered that SARS was due to a corona-virus transmitted mainly by droplet spread at close quarters and Dr. David Naylor's subsequent inquiry resulted in a 2003 report by the National Advisory Committee on SARS, which recommended for the establishment of an independent "Agency for Public Health," among other things.[6]

In response to Naylor's recommendations, the Public Health Agency of Canada was established in September 2004 confirmed as a legal entity in December 2006 by the *Public Health Agency of Canada Act*. Although Naylor's vision of the proposed agency was more arms-length than the government department that was created, an important aspect is that the post of Chief Public Health Officer is also the Deputy Minister, with a mandate to communicate directly with Canadians and with government on important public health matters. The Annual Report of the Chief Public Health Officer is also a legislated requirement of the office and the first of these reports focused on health inequalities and was presented to Parliament in 2008.[7]

In 2000, the Canadian Institutes of Health Research were established, with a bold vision to transform health research in Canada by excelling "according to internationally accepted standards of scientific excellence, in the creation of new knowledge *and its translation* into improved health for Canadians, more effective health services and products and a strengthened Canadian health care system"—a vision that clearly distinguished it from its predecessor, the Medical Research Council. Through its creation, the government called for CIHR to support interdisciplinary and integrative health research that not only included biomedical and clinical research but also research respecting health systems, health services, the health of populations, societal, cultural and environmental influences on health. As part of the organization's transformation, thirteen virtual institutes were created, including the globally unique Institute of Population and Public Health (IPPH).

IPPH's mission was to support research into the complex interactions (biological, social, cultural, environmental), which determine the health of

6 *Learning from SARS: Renewal of Public Health in Canada* (2003) Ottawa: Health Canada, available at: http://www.phac-aspc.gc.ca/publicat/sars-sras/naylor/

7 David Butler-Jones, *Report on the State of Public Health in Canada: Addressing Health Inequalities (*2008) Ottawa: Public Health Agency of Canada, available at: http://www.phac-aspc.gc.ca/publicat/2008/cpho-aspc/index-eng.php

individuals, communities, and global populations and its application into public health policies and practices. Its inaugural scientific director, Dr. John Frank led the institute until mid-2008 and was responsible for several initiatives to bolster research capacity to address public health problems and their underlying determinants (i.e. reducing health disparities, the impacts of physical and social environments on health and global health were among the institute's priorities). The institute was also among several leaders signaling the fragility of the public health system in Canada by undertaking a multi-stakeholder led study of the organization and funding of public health services in comparative nations, which was initiated several months before SARS. The recommendations of this report entitled *The Future of Public Health in Canada: Developing a Public Health System for the 21st Century* were ratified at an institute-led think tank at the 2003 CPHA conference in Calgary. Since July 2008, the institute has been led by Dr. Nancy Edwards (Professor at the University of Ottawa) and is further demonstrating the potential for research to be relevant to pressing public health problems. The institute's current mission and strategic research priorities are closely aligned with several global and national calls to action to reduce health inequities within and between countries and to place greater emphasis on research oriented towards the policies and programs that lead to population health improvements and the promotion of health equity.

Conclusion and Some Recommendations

It is tempting to suggest that in the last quarter century public health in Canada has "come of age" but it would be unwise to yield to this temptation, which has often seduced prominent people in the learned professions, the arts, and commerce. *Fin de siècle* intellectuals in 19th century Paris, London and New York believed their society had "come of age" if not achieved perfection in science, the arts, and social organization and rejected critics who pointed to blemishes such as high infant death rates and the absence of female suffrage. We have come a long way since those days, but there is further to go in the unknowable future and some obvious challenges confront us. For instance, public health systems and services, one of the most important foundations of a stable, healthy society, have a low public profile, are taken for granted, hardly known let alone appreciated by the society they serve and protect and often only noticed when that society is threatened by a public health emergency like a lethal epidemic. Too often these vital systems and services are at the mercy of ill-informed elected officials and under perpetual threat from politicians who are elected with false promises to cut taxes. When that threat is carried out, essential infrastructure is eroded and disasters like the *E Coli* outbreak in Walkerton, Ontario can occur. The professions that comprise public health services need to speak louder and advocate more forcefully than sometimes in the past. The first Chief Public Health Officer for Canada, Dr. David Butler-Jones, has proved to be an excellent advocate. He and all who succeed him in the future will have to guard against threats to the health of the Canadian people, and also against threats to politicize the position or muzzle it. A politically influential Canadian Public Health Association that speaks for the entire public health workforce in Canada could help by standing in solidarity should that danger ever arise and help defend Canadians against inappropriate politically motivated actions.

To be credible, CPHA must represent the entire public health work-force. At present this is not the case. Most recent graduates of the proliferating graduate training programs across Canada identify with the discipline they majored in, not with public health. Some have never heard of CPHA and very few have joined because they perceive CPHA as irrelevant to their professional work. Changing this perception is a challenge to which CPHA must respond vigorously.

Despite the hazards of making predictions, it seems safe to say that recent advances in biology, ecology, communications and information technology are likely to find many applications in public health practice. Genomics and genetic engineering are already being applied in vector control by releasing genetically modified vector species that are infertile or are incapable of carrying the pathogen they might otherwise transmit. Closer linkages between ecosystem health and human health must be developed to safeguard ecosystem sustainability. Applications of electronics in information processing and storage for instance on computer chips for use in personal care and in public health are increasing at a spectacular rate. It is necessary to achieve agreement and consensus between health information specialists and technologists on one hand, and guardians of privacy on the other hand, about essential information required to identify individuals, and essential steps in safeguarding individual privacy. This, and other ethical issues and problems, are insufficiently understood and seldom discussed in public health practice.

Public health's strength is well-trained, knowledgeable, skilled and dedicated people to protect and improve the health of Canadians and others around the world. So the recent surge in graduate programs in public health bodes well for strengthening and renewing the public health workforce, and creating a cadre of new professionals who will exert a positive effect for decades into the future. That impact will depend upon governments—because the "public" in public health means not only the public good but the public sector in which most public health workers are employed. Governments must increase their investment in public health above the present inadequate level.

Preventing disease and injury and promoting personal and community health and well-being will remain a central concern of public health in the decades to come. This must be complemented by an equal focus on the environmental, social, economic and cultural determinants of health, consistent with the tradition of public health and its recent evolution. Some major areas of work focused on these broad determinants are likely to be particularly important in the 21st century:

A focus on maternal health, infant and early child development as part of a long-term investment in human development that will bring improved health over the lifetime and an array of other social and economic benefits to families, communities and society as a whole.

A focus on health and the built environment is critical in a rapidly urbanizing world, in lower and middle income countries as well as in Canada, where we are 80% urbanized and where we spend 90% of our time indoors. The influence of built environments on safety, indoor and outdoor air pollution, physical activity, food access, mental health and social cohesion, among other issues, must become a focus of more research and active intervention.

A focus on health equity as identified by the 2008 report of the WHO Commission on Social Determinants of Health, which Canada supported. The reduction of inequalities in access to basic determinants of health such as clean water, food, shelter, education, health and social services, an adequate income and safe and healthy living and working conditions, both in Canada and globally, will be fundamentally important in addressing the gradient in health and reducing the gap in health between rich and poor. This will also require addressing the health implications of globalization, an issue also highlighted by the WHO Commission. Within Canada, urgent attention must be given to correcting the iniquitous status of First Nations Canadians, many of whom live in shamefully inadequate housing on remote reservations, sending a signal that they are "out of sight, out of mind."

A focus on the ultimate determinant of the human health, ecosystem health is needed. CPHA explored this issue with its 1992 report on "Human and Ecosystem Health," but the global situation has considerably worsened since then, as numerous UN and other official reports attest. Four broad areas of global environmental change, climate and atmospheric change, pollution and ecotoxicity, resource depletion, and loss of habitat, species and biodiversity, and their synergistic interactions, represent significant threats to human health now and in coming decades. Human well-being and human survival—the fundamental concerns of public health—will require a transition to a more environmentally sustainable way of life. This shift, which public health will need to facilitate and support, will likely bring many health benefits, but the transition itself will be challenging.

A focus on appropriate application of scientific discoveries and technical developments is required in public health practice. Some innovations, for instance in methods for collection, processing, storage, and retrieval of relevant biomedical, social, economic and other information are applied promptly—even occasionally too promptly—in forward-looking health departments. In other settings, such developments are lagging behind or lacking altogether.

It can safely be said that what's past is prologue—and the details will no doubt be unfolded and fully described in future instalments of the history of public health in Canada.

Glossary

Aboriginal
Aboriginal peoples refers generally to the Indigenous inhabitants of Canada who are made up of three main groups recognized under the Constitution—Inuit, First Nations and Métis people. Within these broad groups are a number of distinct languages and cultures. Today, the term First Nations replaces Indian, the word historically used by the Canadian government to describe the Indigenous peoples with whom the Canadian or British government had entered into treaties. The Métis are distinct Aboriginal peoples whose early ancestors were of mixed heritage (First Nations, or Inuit in the case of the Labrador Métis, and European). Inuit replaces the term Eskimo and refers to the Indigenous peoples of the North.
—Royal Commission on Aboriginal Peoples

antibiotic
Also referred to as "antimicrobial," a class of substances produced by living organisms, such as fungi, capable of inhibiting the growth of pathogenic bacteria.

antigen
A substance, such as protein, living tissue or organ, which is alien to the body and induces a specific immune response.

antitoxin
A substance such as a serum or medication that inhibits or prevents the action of a toxin. Examples include tetanus and diphtheria antitoxins, which prevent the harm that would otherwise be done by the toxins these organisms produce.

anthrax
A bacterial disease of humans and animals caused by *Bacillus anthracis,* which can enter the body via the skin, inhalation or ingestion.

arsenical
A class of chemicals containing arsenic compounds. Arsenic, an acute and chronic poison, was formerly used in medicinal compounds, including Paul Ehrlich's "magic bullet" used to treat syphilis in the early 20th century.

asthma
A recurrent, chronic disease of the lungs characterized by narrowing of small airways.

attenuate
To weaken, dilute, reduce or eliminate the harmful effects of a pathogenic organism or its antigens for use in vaccines.

bacillus
Rod-shaped bacterium, originally used to describe all bacteria with this shape but now confined to a single genus of spore-forming organisms.

barbituate
A derivative of barbituric acid that acts as a sedative or hypnotic by depressing the respiratory rate, blood pressure, temperature, and central nervous system.
—*Mosby's Medical Dictionary*

bulbar
Bulbar polio occurs when the polio virus attacks the brainstem, and the nerve centres that control swallowing and talking are damaged. Secretions collect in the throat and may lead to suffocation.
—Britannica Online Encyclopedia

botulism
A food-borne illness caused by ingesting the toxin of *Clostridium botulinium*, typically in vegetables or meat prepared without adequate hygienic precautions.

Canadian Journal of Public Health
The *Canadian Journal of Public Health,* under various names, was the impetus for CPHA's founding. First published as the *Canadian Journal of Public Health* in 1910, then as the *Canadian Therapeutist and Sanitary Engineer*, then as the *Public Health Journal of Canada* and then as *Public Health Journal* (all in 1910). It was renamed *Canadian Public Health Journal* (1929 to 1942) and then became the *Canadian Journal of Public Health* (1943 to present).

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chancroid
A sexually-transmitted disease causing painful, ulcerating genital lesions.

cholera
An acute bacterial enteric disease that causes profuse watery diarrhea. Without treatment, fluid loss often results in death.

cohort effect
Cohort refers to the population group born in a particular period, generally a year or a decade, i.e., a birth cohort. A cohort effect is any effect associated with being a member of a group born at roughly the same time and bonded by common life experiences (e.g., growing up in the 1980s).
—Encyclopedia.com

community health
Although often equated with "public health," it means a community in which there are no pervasive health problems, no systemic poverty, unemployment, or social pathology.

congenital
Existing at or dating from birth, i.e., congenital deafness.

convalescent serum
Liquid components of blood plasma taken from someone who has recuperated from a particular infection, which may be of use in treating someone with the same infection. dental caries

dental caries
Tooth decay.

diabetes
A systemic disease in which carbohydrate metabolism is disrupted by an insufficient supply of insulin to meet the body's needs.

diphtheria
An acute bacterial disease that primarily affects the upper respiratory tract, causing obstruction of the airway. The causal organism, the diphtheria bacillus, also produces a toxin that causes paralysis of respiratory muscles and myocarditis.

epidemic
The occurrence in a specific population of deaths or cases of a condition in numbers greater than usual expectation for a given time.

epidemiology
A science based on observation, inference, and experiment, to evaluate therapeutic and preventive regimens aimed at controlling health conditions.

eugenics
Coined in 1883 by British biologist Francis Galton, meaning good breeding, eugenics became a prominent feature of public health theory, whereby those regarded to be excellent genetic stock such as outstanding scholars and athletes, were encouraged to reproduce. Others were deemed unfit to reproduce because of low intelligence, mental disorders, or certain classes of chronic illness and disability such as tuberculosis and alcoholism.
—John Last

First Nations
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—Royal Commission on Aboriginal Peoples

flu
Also called "flu" and "grippe," an acute infectious disease primarily of the respiratory tract caused by the influenza virus. "Epidemic influenza" often has a high case fatality rate.

fluoridation
The planned, systematic addition of carefully measured amounts of sodium fluoride to drinking water supplies.

fumigation
The process of applying or injecting pesticide fumes into a closed space with the aim of disinfecting it or ridding the space of pests, such as insects or rats.

gonorrhea
A common sexually-transmitted infection that can be virtually symptomless in women but that causes a painful urethritis in men.

health promotion
The policies and processes that enable people to increase control over and improve their health, addressing the needs of the population as a whole.

hepatitis
Inflammation of the liver, can be caused by virus or bacterial infections and various chemicals, including alcohol.

hygiene
The principles and practices dealing with preservation of good health, which involves values that determine individual and collective behaviour, including a commitment to cleanliness in food handling, sanitary waste disposal, the elimination of vermin and prevention of pollution.

immunization
Also called vaccination, the artificial induction of active immunity by introducing the specific antigen of a disease-causing organism, usually by injection or orally.

Indians
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industrial hygiene
The art and science devoted to recognition, evaluation, and control of the environmental factors and stresses that occur in, or are related to, the workplace and working conditions, that may cause impaired health and well-being.

influenza
Also called "flu" and "grippe," an acute infectious disease primarily of the respiratory tract caused by the influenza virus. "Epidemic influenza" often has a high case fatality rate.

inoculation
A synonym for "vaccination," the artificial induction of active immunity by introducing the specific antigen of a disease-causing organism, usually by injection or orally.

insulin
An essential hormone produced by the pancreas which is required in the metabolization of carbohydrate and fat.

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iron lung
A lay term for the type of respirator invented by American Philip Drinker, which works by encasing the body in an airtight cylinder within which the air pressure is alternately raised and lowered to assist with inhalation and exhalation when respiratory muscles are paralyzed.

Journal of Public Health
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League of Nations
An international organization created at the end of World War I to protect peace and security through arbitration of international disputes.
—Canadian Encyclopedia Online

Lower Canada
A British colony created in 1791, in what is now the province of Quebec.
—Canadian Encyclopedia Online

malaria
A severe mosquito-borne protozoan infection of the blood and blood-forming organs, causing recurrent bouts of high fever due to the destruction of red blood corpuscles by malaria parasites.

measles
A highly-infectious virus disease with very high case rate fatalities among infants and young children if they are not vaccinated.

meningitis
Inflammation of the lining of the brain and spinal cord caused by bacteria or viruses. This life-threatening disease can occur in epidemics and as a complication of other infectious diseases. It can be prevented with type-specific vaccines.

mental hygiene
Also called mental health, the branch of health care concerned with the prevention and treatment of diseases of the mind.

Métis
Aboriginal peoples refers generally to the Indigenous inhabitants of Canada who are made up of three main groups recognized under the Constitution—Inuit, First Nations and Métis people. Within these broad groups are a number of distinct languages and cultures. Today, the term First Nations replaces Indian, the word historically used by the Canadian government to describe the Indigenous peoples with whom the Canadian or British government had entered into treaties. The Métis are distinct Aboriginal peoples whose early ancestors were of mixed heritage (First Nations, or Inuit in the case of the Labrador Métis, and European). Inuit replaces the term Eskimo and refers to the Indigenous peoples of the North.
—Royal Commission on Aboriginal Peoples

morbidity
Sickness, the condition of being unwell.

neuralgia
Chronic nerve pain.
—MayoClinic.com

obstetrics
The medical specialty concerned with caring for pregnant women, the management of their labour and delivery, and their care during the postpartum period.

orthopedic
Applies to the surgical specialty that deals with fractures, dislocations, and other lesions of bones and joints, emphasizing the correction of bone deformities.

pandemic
An epidemic that transcends national boundaries and extends over much or all of the world.

pasteurization
Heat treatment of milk, dairy products and other foodstuffs to kill potentially harmful microorganisms.

pasteurize
To heat-treat milk, dairy products and other food to kill potentially harmful microorganisms.

pathologist
A specialist in pathology, the scientific study of changes in body tissues and organs associated with the occurrence and progression of diseases.

penicillin
The first effective antibiotic derived from a fungus or mold, a discovery made in 1928 by Alexander Fleming.

pertussis
Also called whooping cough, a debilitating bacterial respiratory disease of children that is often prolonged, and can cause emphysema.

physiology
The science concerned with the way the body and its organs and tissues function.

plague
One of the most dangerous contagious diseases, it s caused by a bacterium that is transmitted to humans by the bites of rat fleas.

pneumonia
An inflammatory disease of lung tissue caused by bacteria or viruses in which the alveolar spaces fill with fluid and impair the ability to exchange air efficiently.

polio
Also known as poliomyelitis, a contagious virus disease transmitted by the fecal-oral route. Usually associated with symptomless development of antibodies, it can cause acute inflammation and disruption of spinal nerve functioning, resulting in paralysis of the muscles controlled by those nerves. Paralytic poliomyelitis can be prevented by vaccination with killed organisms in the Salk vaccine or ingestion of live attenuated Sabin vaccine.

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privy
An outhouse.

prophylactic
Relating to prophylaxis, the preventive management of disease in individuals and populations.

prophylaxis
The preventive management of disease in individuals and populations.

public health engineer
Also called “sanitary engineer,” a professionally trained engineer specializing in sanitary disposal of sewage, design and working of sewage treatment plants, and/or provision of pure, safe drinking water and other aspects of envrionmental surveillance and control, including air quality and solid waste disposal.

Public Health Journal
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public health nurse
A member of the nursing profession with specialized training in the theories and practices of public health. Public health nurses provide maternal, infant and early child care services, health education, contact tracing in communicable disease surveillance and control, and home visits to the elderly and infirm, among other specialized roles.

quarantine
Isolation of an animal or person who is a known contact of a case of a contagious disease in order to prevent transmission of the disease to others.

rabies
An almost invariably fatal virus disease transmitted in saliva of an infected animal. In humans, a long incubation period may precede symptoms of apprehension, followed by delirium, fever, convulsions and death. Once known as *hydrophobia*, from an aversion to or fear of water.

risk
The probability that an event will occur. In the nontechnical sense, the word covers several meanings and measures of probability, and these often obscure the technical meaning and confuse "risk" with "hazard," which can mean any potentially harmful agent or factor. In technical discussions, as in actuarial estimates and environmental risk asssessment, the use of the word "risk" is best confined to contexts in which a probability of an event can be estimated or calculated.

sanatorium
A specialized hospital for the care and treatment of tuberculosis.

sanitary
Referring to sanitation, a set of public health policies and actions to provide safe drinking water and hygienic disposal of human, animal, domestic and industrial waste, thus minimizing the risks of transmitting fecal-oral diseases.

sanitary inspector
Also called a health inspector, or sanitarian, a technically trained specialist who detects environmental risks to health due to deficiencies in sanitation, ventilation, food handling, and hygiene.

sanitation
A set of public health policies and actions to provide safe drinking water and hygienic disposal of human, animal, and domestic and industrial waste, thus minimizing the risks of transmitting fecal-oral disease.

scarlet fever
Also called scarlatina, a contagious disease formerly common among children and young adults, caused by an infection, with a rash on the face and limbs, and often followed by rheumatic fever. Without treatment, it was often serious and even fatal, but it has become rare and mostly innocuous.

septic
Contaminated with bacteria, or relating to a septic system to dispose of sewage.
—Oxford Canadian Dictionary

sexually transmitted disease
The term "venereal disease" was replaced by "sexually-transmitted disease" (STD) in the 1970s because the new term was less disreputable and more encompassing. (The term "sexually-transmitted infection" (STI) is used today to include infection that may not always lead to disease.)

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smallpox
Also known as variola, this highly contagious virus disease occurred in devastating epidemics with mortality rates as great as 30% to 40% until a smallpox (cowpox) vaccine was successfully tested in 1796–98 by British country doctor Edward Jenner. Smallpox was declared globally eradicated in 1980 by the World Health Organization.

social hygiene
A movement associated with the prevention of venereal diseases, that included values and morals related to the repression of vice and prostitution and the restriction of sexual activity to married persons for the purpose of procreation.

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syphilis
The most serious and deadly sexually-transmitted infection until the appearance of HIV/AIDS in the 1980s. The first and worst venereal disease, it first appeared in Europe in the late 14th or early 15th century where it occurred in florid epidemic form that was acute and often rapidly fatal, to a more chronic form with a latent period, then tertiary syphilis, affecting the central nervous system, cardiovascular system, and sometimes other organs. Several decades after the 1950s, syphilis was well-controlled and became uncommon, but has entered a period of resurgence, mainly among persons with compromised immune systems because of HIV/AIDS infection.

TB
A bacterial disease caused by *Mycobacterium tuberculosis*. An estimated one-third of the world's population is infected with tuberculosis (TB) but only a small proportion have active disease, most commonly of the lungs although other organs may be affected. Formerly referred to as the white plague, because of the pale complexion of those afflicted.

tetanus
A generalized disease due to a toxin which usually invades the body in a laceration or compound fracture that was inadequately cleaned; the tetanus toxin causes muscle spasms and rigidity of voluntary muscles.

toxoid
A bacterial or other toxin that has been treated with formaldehyde to reduce its toxicity without reducing its antigenic property. Diphtheria vaccine and tetanus vaccine are prepared from toxoids.

tuberculosis
A bacterial disease caused by *Mycobacterium tuberculosis*. An estimated one-third of the world's population is infected with tuberculosis (TB) but only a small proportion have active disease, most commonly of the lungs although other organs may be affected. Formerly referred to as the white plague, because of the pale complexion of those afflicted.

typhoid
Also called enteric fever, typhoid is a serious systemic disease usually transmitted by the fecal-oral route or by water or food contaminated with *Salmonella typhi*. Typhoid formerly had a case fatality rate of 10% to 20% but it responds well to antibiotics and sanitation and safe drinking water have virtually eliminated it in modern, urban settings.

typhus fever
A serious epidemic disease, transmitted by the body louse, with a high mortality rate if untreated. Typhus fever is typically associated with dirty, verminous clothing and overcrowding.

undulant fever
Known today as "brucellosis," a communicable disease caused by *Brucella* organisms, occuring in goats, cows and other domestic animal, transmitted to humans in milk or by direct contact.

unvaccinated
A person or animal who has not received the specific antigen of a disease-causing organism.

Upper Canada
A British colony created in 1791, in what is now the province of Ontario.
—Canadian Encyclopedia Online

vaccination
Also called immunization, the artificial induction of active immunity by introducing the specific antigen of a disease-causing organism, usually by injection or orally.

vaccine
The biologically active antigen that is injected or taken orally to immunize (vaccinate) individuals against communicable diseases.

VD
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venereal diseases
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vital statistics
Data on births, deaths, marriage and divorce compiled by government authorities at the national, regional or local level to identify public health problems and progress.

Editors

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