

THE CANADIAN POLIO EXPERIENCE

A Personal Journey through the Past

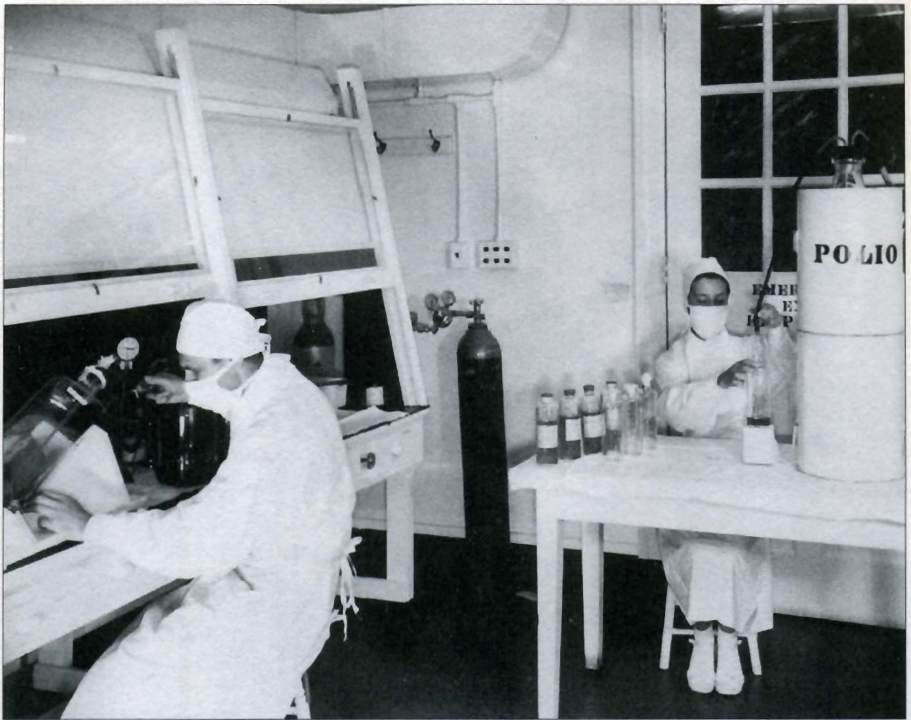
Christopher J. Ruddy

“Polio is the worst cold there is.”¹ So confided five-year-old Neil Young to his father, Scott Young, after encountering polio in Omemee, Ontario, in the late summer of 1951. Reading the personal polio story of Canadian music icon Neil Young, as told by his father in his 1984 *Neil and Me* dual biography, was the beginning of my personal polio story. Yet my story is not like those collected by Sally Aitken, Helen D’Orazio, and Stewart Valin in their *Walking Fingers: The Story of Polio and Those Who Lived with It*,² two of which are reprinted here. I never got polio, nor did anyone close to me, but it has clearly had a powerful effect on my life as a historian.

As a means of providing some historical context about the Canadian polio experience, but rather than simply writing a summary of the main elements of the epidemic and early vaccine eras, and in keeping with the flavour of the *Walking Fingers* extracts, I thought a personal approach would be more appropriate. I was also inspired by Michael Bliss’s confessional article in the premier issue of this journal about how he arrived at being a medical historian.³ Moreover, there are several recent summaries of the Canadian polio story available in print—including the *Walking*



A physiotherapist at the Sudbury General Hospital uses a doll at the end of walking bars to encourage two-and-a-half-year-old Gifford to walk. His valiant effort symbolizes what thousands of other Canadian polio survivors have also endured to overcome the crippling effects of this disease over the past century. *National Archives of Canada.*



Connaught Laboratories took on a Herculean role in 1953 and 1954 to supply all the poliovirus fluids used to make the Salk vaccine that was subjected to the largest field trial in medical history. *sanofi pasteur limited (Connaught Campus), Toronto.*

Fingers volume and articles in the *Canadian Journal of Public Health*—and on the Web,⁴ and it thus seemed redundant to repackage such pieces here. Rather, it may be of more interest to highlight key elements of the Canadian polio story as I discovered them by tracing the journey through the past that I have taken since 1988, when I first started researching this “middle-class plague.” This phrase, incidentally, is also the main title of my own book on the Canadian polio years that I expect will be finally published by the University of Toronto Press in 2006.

I was born in 1962, several months after the Sabin oral polio vaccine (OPV) was launched in Canada, and seven years after the Salk inactivated polio vaccine (IPV) was introduced with much fanfare on April 12, 1955. Thus, I had little direct experience with the pre-vaccine polio epidemic era, or its aftermath, except for vague memories of a few kids in

leg braces when I was in elementary school.

I hadn't thought much about polio until I read "Polio Was a Killer and Neil Had It" in Scott Young's *Neil and Me*. In 1984, I discovered Neil Young's music and remember being fascinated by his polio experience, in addition to the other health challenges he and his two boys had faced. In early 1988, I took a course in the history of science and medicine in Canada at the University of Western Ontario, and when it was time to pick a topic for a major essay, I immediately thought of centring the project on some aspect of Neil Young's health challenges. I enjoyed mixing my personal interests with essay topics during this period, so using Neil's personal experience with a disease, such as epilepsy, or cerebral palsy (which his two sons developed, even though they had different mothers), or polio, seemed like a fruitful basis for a historical essay.

While Scott Young had vividly described Neil's polio experience, especially by including a detailed narrative in *Neil and Me* that he wrote shortly after Neil had returned home from the Hospital for Sick Children, I couldn't only recount Neil's personal experience with this disease. I quickly discovered an almost complete absence of secondary historical literature on polio in Canada. Thus, I utilized primary research skills I had developed during courses and collected medical journal articles about poliomyelitis published in Canada in and around 1951, as well as medical books on the disease. I also spent time reading through and taking notes from microfilms of Toronto newspapers published during the summer and fall "polio season" of 1951 in search of reports about the epidemic that was occurring in many parts of Ontario.

According to Scott Young, Neil's polio case was the first in Omemee that year, and was the more famous because he didn't die, unlike the second. While the 1951 appearance of polio in Ontario was serious, it was not the worst polio epidemic the province had endured. It was actually more like a severe outbreak, which is how I described it in an essay, "Helpless: The 1951 Ontario Polio Outbreak—The Neil Young Case."⁵

My professor for the course, James T. H. Connor, suggested that I continue to research and write about the history of polio in Canada, as it was clear that there was very little published on the topic. Indeed, in his comments he wrote, "I think you might be able to expand on this whole idea sometime in another major project." He also confessed, "This essay



A class for young polio patients at Sick Kids, 1948. *The Hospital for Sick Children (Toronto), Hospital Archives.*

was graded while listening to my original 1970 pressing of *Déjà Vu*." This was the album on which Neil Young, as part of Crosby, Stills, Nash, and Young, originally recorded his "Helpless" song, which I felt was at least in part inspired by his childhood polio experience. Someone then suggested that the essay be published in the UWO student history journal, the *Mirror*.⁶

As a fan of Neil and a member of the Neil Young Appreciation Society, and after mentioning my essay to the editor of its fanzine *Broken Arrow*, I was asked to submit it for publication. It appeared in the August 1989 issue and was also reprinted in *Neil Young and Broken Arrow: On a Journey through the Past*.⁷ The unusually detailed text and footnotes (for a fanzine) attracted the interest of fellow fans who hadn't been aware of this part of Neil's personal history, or of the dramatic severity of epidemic polio before the first polio vaccine was available.

A year later, during a special directed projects course during my fourth year, I acted on Professor Connor's suggestion. Being in London, and aware of the severity of Ontario's worst polio epidemic in 1937, I decided to examine how this major public health crisis affected the London region. Through the London 1937 essay I was introduced to a selection of local and provincial government public health records, and I also developed an interest in how the popular press covered polio epidemics in Canada.

However, as I concluded in the paper, "One can only suppose that London's experience with poliomyelitis in 1937 was representative of other localities across the province, at least generally. One suspects, however, that a more detailed study of the provincial situation would reveal some interesting differences between the way individual cities and towns managed their local experience with a disease such as poliomyelitis." I then added, "Hopefully this particular examination of the London area in 1937 is but the first step towards a fuller understanding of how poliomyelitis impacted upon Ontario and upon Canadian society generally."⁸ I did not know it at the time (March 1989), but that would be the course I would soon follow with this subject. I *did* know that my next polio history project, a master's thesis in history at UWO, would focus on the province of Ontario more broadly, although mainly on the cities of London and Toronto during the 1937 and 1953 epidemics, comparing their responses, with a focus on how the press coverage of the disease influenced how the medical profession managed the disease.⁹

Researching my master's, undertaken under the supervision of Professor Connor during 1989–90, and with the financial support of a Hannah Institute for the History of Medicine graduate scholarship, allowed me to look more closely at what I described as the "hopeful polio weapons" of convalescent serum and a preventive nasal spray, the potential value of which was much touted in the Toronto and London press during the 1937 epidemic. I also was able to contrast how the Canadian medical literature and the popular press in each city approached, described, and increasingly debated these therapeutics that were available to physicians, albeit only through the provincial government. More generally, I was also fascinated by the ironic aspects of polio, especially how it became a growing epidemic threat after the late nineteenth and early twentieth centuries precisely because of the improving public health and



The challenge of walking with two sets of braces. *Shriners Hospital, Montreal.*

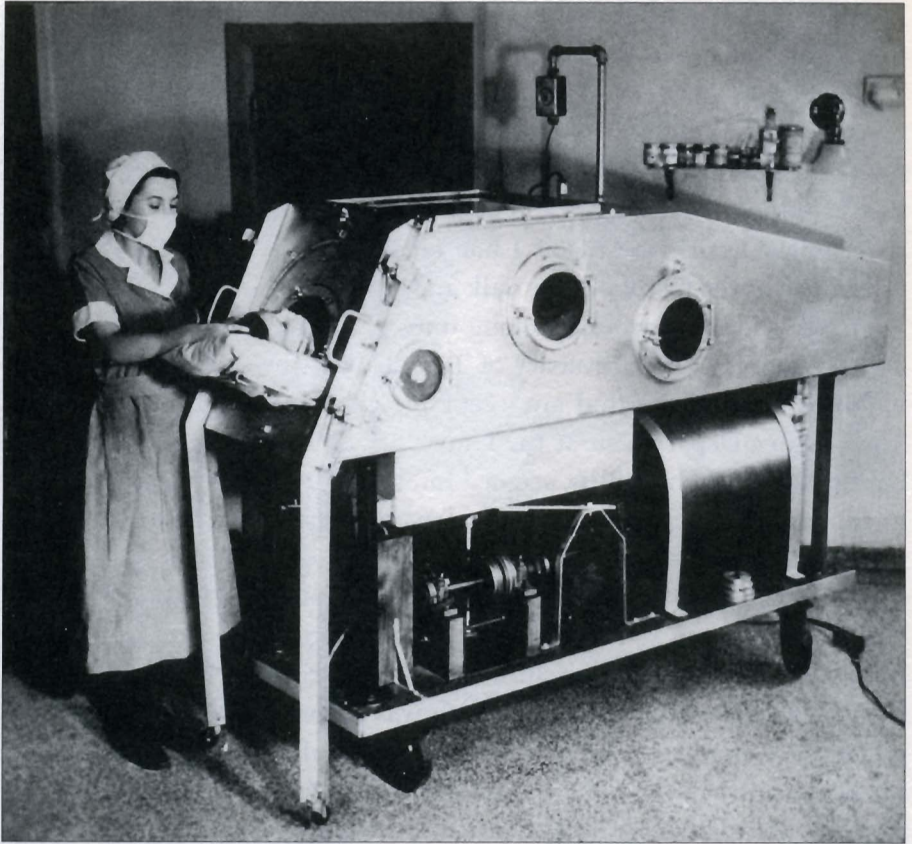
hygiene infrastructures that had proved so important to the control of most other infectious diseases.

While the master's thesis allowed me to more closely research the press, the medical literature, and the Toronto, London, and provincial records related to the Ontario polio epidemics of 1937 and 1953, it was clear that I could do more. In particular, I had not focused as much on Ontario government health records as I had on the city level, nor had I looked very much at the history of the Salk and Sabin vaccines in Canada.

After shopping around among universities in Ontario in search of a PhD program, the University of Toronto was the school at which my wife was also able to find an acceptable graduate program in geology. The History Department at the University of Toronto, and, in particular, Professor Michael Bliss, seemed interested in my previous work and in supporting and supervising my plans for a national study of polio in Canada for my dissertation.

My PhD program started in Toronto in September 1990, almost immediately after my MA thesis defence in London. However, I would have little time to focus on researching my thesis during the first two years of the program, the major part of which was preparing for comprehensive exams in Canadian history, Canadian medical history, the history of medicine, and early modern British history. I also had to work as a teaching assistant in undergraduate Canadian history courses, although other than the history of science and medicine in Canada course, and a course in Ontario history during my master's, I had not taken a Canadian history course since Grade 10. Now I was not only majoring in Canadian history for my comprehensive exams, I was also teaching this subject in undergraduate tutorials and marking student essays and exams. Despite this crash course, I quickly learned more than I expected about the history of Canada, much of which proved useful for understanding the broader social, economic, political, and international context in which the Canadian polio experience developed.

In my dissertation I planned to tackle the history of polio on a truly national scale and over almost a century of time, but in particular, the 1927 to 1962 period, in a fairly chronological structure. Such national Canadian historical studies were not particularly fashionable at the time. Most historians preferred to focus on particular regions of the country,



This cylindrical cage, which allowed the patient to breathe and, in many cases, to survive, was a miraculous technological gadget for those imprisoned within it for a number of weeks or months, if not for the rest of their lives. *The Hospital for Sick Children (Toronto), Hospital Archives.*

narrower time periods, and confined thematic analyses of such issues as class, gender, or economics. Professor Bliss, one of the few historians calling for more national perspectives, supported my approach, which was a significant leap from the provincial master's thesis. By the time I was free to begin full-time research in the fall of 1992 (thanks to graduate scholarships from the Hannah Institute), I was ready to venture into several new research directions. My initial focus was to find out how provincial and federal health departments approached and responded to major polio epi-

demics.

After spending considerable time in the Ontario Archives, followed by almost a full month in the provincial archives of Manitoba, Saskatchewan, and Alberta, and then taking several trips to the National Archives in Ottawa, I quickly realized how seriously Canadian governments took the growing problem of polio during the pre-vaccine and pre-medicare eras. Specific provincial polio treatment and hospitalization policies were developed after major polio epidemics in most provinces. There was even a *Poliomyelitis Sufferers Act* in Alberta, first enacted in 1938, which provided for free polio treatment and hospitalization to all polio patients.

Time and financial constraints prevented similarly intense research trips to British Columbia, Quebec, and the Maritimes, although the comparatively lower incidence of polio in these regions allowed me to focus my research resources in Ontario and the Prairies, where Canadian polio epidemics were most intense. My research trips to the National Archives, and considerable interprovincial correspondence available there, among other published and unpublished sources, provided substantive documentation on how the other provinces managed the disease. Fortunately, my Hannah scholarship allowed me to be quite liberal with ordering photocopies during my research trips, especially since this was before I bought my first laptop computer, and my handwriting was not the neatest.

As important as the provincial and federal government records were to the development of my understanding of the Canadian polio story, the most significant body of primary documents I was able to access was the archival collection held at Connaught Laboratories in Toronto, which was a self-supporting part of the University of Toronto from 1914 through 1972. After 1989, Connaught Laboratories Limited was the Canadian component of Pasteur Mérieux Serums and Vaccines, based in Lyon, France.

The materials I collected from the provincial and federal archives were publicly available, although I often needed permission to access them because, as I was the first historian to use them, they had yet to be reviewed. Others could have done the same to access them. For the archival materials available at Connaught, I received valuable cooperation

from the librarian, Hugh McNaught, and the director of Public Affairs, Don McKibbin. Both had a strong interest in preserving and sharing the history of the company and thus welcomed my interest in researching the history of polio, especially Connaught's central—though little-known—role in the development of the Salk vaccine. Hugh and Don had also each joined Connaught in the late 1980s and had been active in starting a Connaught Heritage Committee, a main focus of which was finding and preserving historical artifacts and documents of the lab's work in order to eventually set up a Connaught Museum.

My experience in 1992–93, while reviewing and photocopying (for free, thanks to Hugh) an extensive collection of well-organized files documenting Connaught's polio research and vaccine development, was quite different from Michael Bliss's experience with Connaught a little more than a decade earlier when he was researching the history of insulin. At that time Connaught's archives had not yet been assembled, organized, or catalogued, a project undertaken through the leadership of a former director of Connaught, Dr. R. J. Wilson, in 1982, which was when Bliss's *Discovery of Insulin* was published. His book thus has relatively little to say about Connaught's significant role in the early development and large-scale production of insulin.

While I was able to develop a detailed understanding of how Canadian scientists at Connaught contributed to unravelling the mystery of the poliovirus, and, more importantly, developed key technologies to make the Salk vaccine possible, of broader significance was recognizing Connaught's central place in the evolution of Canada's public health system. My polio-related research at Connaught, supplemented with the documentation at the National Archives and in provincial archives, was the key to developing a cohesive national understanding of the Canadian polio story.

From 1914, and especially between 1927 and 1955, Connaught, and the intimately connected School of Hygiene at the University of Toronto (they shared administrations and facilities), educated almost every local, provincial, and federal health officer, or deputy minister across Canada, not to mention epidemiologists, virologists, and other public health personnel working in Canadian health departments. They generally knew each other and tended to share the public health vision of the founder

and first director of Connaught and the School, Dr. John G. FitzGerald, and his successor in both positions, Dr. Robert D. Defries.¹⁰ Defries, in particular, personally oversaw Connaught's essential role in supplying all the bulk poliovirus fluids used to prepare the vaccine used in the massive Salk vaccine field trial in the United States (and parts of Canada) in 1954–55.

As important as Defries was to the Canadian polio story—and as was true south of the border with Franklin D. Roosevelt's personal encounter with polio in 1921, his rise to the presidency despite it, and his establishment of the National Foundation for Infantile Paralysis—Paul Martin's personal and family experience with this disease was critical to its management and control in Canada. The extract from *Walking Fingers*, published in this issue, provides details about these events from the perspective of Paul Martin Jr., who, like his father, also contracted polio, which struck him in 1946 when he was eight years old, just a few months before his father became minister of national health and welfare.

The personal polio experiences of both Paul Martins and of FDR underscored what is perhaps the central element in my understanding of the distinctive impact of polio during most of the twentieth century. Polio was, and in many ways remains, a distinctly middle-class plague, the public-health, political, and scientific response to which was driven by its sudden and long-term personal, social, and economic threat to the children and families of this dominant segment of the population. This distinctive aspect of poliomyelitis was recognized in Canada as early as 1912 by child health authority Dr. Helen MacMurchy: "Often the vigorous and healthy are attacked and those who have comfortable homes and good care . . . Theirs is the sad fate of the disabled, who must go on life's rough way never able to walk as well again, never to skate at all, or to dance or to run. It is hard." Indeed, as she noted, the head of one of the largest industrial corporations in the country, as well as a professor at Queen's University, fell victim in 1910 during Canada's first major outbreak of polio, or, at the time, more popularly and misleadingly called "infantile paralysis."¹¹

I discovered MacMurchy's 1912 *Maclean's* article, "Paralysis: The New Epidemic," after I had defended my PhD in 1995,¹² when I was first able to dedicate significant time, thought, and energy to transforming my

dissertation into a publishable book. I had undertaken an initial revision for the University of Toronto Press shortly after I completed the thesis, but was unable to satisfy external reviewers that it was ready for publication. By the fall of 1999 when I returned to the manuscript, I decided to begin the Canadian polio story in 1910, rather than in 1927, and also take it up to the present. I managed to capture the early part of the story during the summer and fall of 1999, but could not tackle the post-1962 material until 2004, thanks to the support of another key person at what is now the Connaught Campus of sanofi pasteur limited, Dr. Luis Barreto, vice-president of public affairs, who has a particular interest in the history of polio and eradication of the disease. Building on a historical consulting relationship I had developed with Connaught since 1995, I was able to obtain some financial support from Dr. Barreto so I could focus on the revisions and new research and writing. He also ensured that I continued to have free access to the Connaught Archives, including a much more extensive collection of off-site documents than I had used in my original dissertation.

Thus, recognizing polio as a particularly middle-class threat—not only during the epidemic and early vaccine eras, but also as a threat that drove the global polio-eradication program, as well as the grassroots and voluntary efforts to manage the challenges of post-polio syndrome—has shaped how I now understand this disease, particularly in the Canadian context. For readers of the personal polio stories collected in *Walking Fingers*, and those selected for publication here, I hope my personal journey through the past as a polio historian, and how I have grown to understand polio's broader Canadian impact since first reading about Neil Young's case, will help them better appreciate how polio has affected and continues to shape the lives of thousands of individual Canadians.

Notes

1. Scott Young, *Neil and Me* (Toronto: McClelland and Stewart, 1984), 36.
2. S. Aitken, H. D'Orazio, and S. Valin, eds., *Walking Fingers: The Story of Polio and Those Who Lived with It* (Montreal: Véhicule Press, 2004).
3. M. Bliss, "Growth, Progress, and the Quest for Salvation: Confessions of a Medical Historian," *Ars Medica* 1 (Fall 2004): 5–14.
4. See, for example, C. J. Ruttly, "The Twentieth-Century Plague," *Beaver* (April–May 2004): 32–37; C. J. Ruttly, L. Barreto, R. Van Exan, and S. Gilchrist, "Conquering the Crippler: Canada and the Eradication of Polio," *Canadian Journal of Public Health* 96 (March–April

- 2005), special insert; www.healthheritageresearch.com/poliohistory.html.
5. C. J. Ruty, "Helpless: The 1951 Ontario Polio Outbreak: The Neil Young Case" (essay, University of Western Ontario, April 7, 1988).
 6. C. J. Ruty, "Helpless: The 1951 Ontario Polio Outbreak: The Neil Young Case," *Mirror* 9 (1989): 82–109.
 7. C. J. Ruty, "Helpless: The 1951 Ontario Polio Outbreak: The Neil Young Case," ed. A. Jenkins, *Neil Young and Broken Arrow: On a Journey through the Past* (Mid Glamorgan, Wales: Neil Young Appreciation Society, 1994), 95–112.
 8. C. J. Ruty, "The 1937 Ontario Poliomyelitis Epidemic: Its Infection, Spread, and Management in the London Region" (essay, University of Western Ontario, March 31, 1989).
 9. C. J. Ruty, "A Grim Terror More Menacing, More Sinister than Death Itself: Physicians, Poliomyelitis, and the Popular Press in Early 20th Century Ontario" (master's thesis, University of Western Ontario, 1990).
 10. James FitzGerald, "Sins of the Fathers," *Toronto Life* (February 2002): 66–72; J. FitzGerald, "The Troubled Healer," *University of Toronto Magazine* (Spring 2002): 86–93; C. J. Ruty, "Robert Davies Defries," in *Doctors, Nurses, and Medical Practitioners: A Bio-Bibliographic Sourcebook*, ed. L. N. Magner (Westport: Greenwood Press, 1997), 62–69.
 11. Helen MacMurchy, "Paralysis: The New Epidemic," *Maclean's* (November 1912), 110.
 12. C. J. Ruty, "Do Something! Do Anything! Poliomyelitis in Canada, 1927–1962," (doctoral thesis, University of Toronto, 1995).

Christopher J. Ruty, PhD, is a Toronto-based medical historian in private practice and owner of Health Heritage Research Services (www.healthheritageresearch.com). Among his clients has been the Connaught Campus of sanofi pasteur.