



Making a Difference:
**Milestones in Public Health &
Biotechnology: Canadian Connections**

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**Lecture #8 – Transformations & Shifting
Targets (1970s-80s)**

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Living and Learning in Retirement, Course E

Class #2, November 3, 2017

Glendon College, York U., Room A002



Government
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**A NEW
PERSPECTIVE
ON THE
HEALTH OF
CANADIANS**

a working document

Marc Lalonde

Minister of National Health and Welfare

Previous lecture slides available via:

<http://healthheritageresearch.com/clients/LLiR/>

Introduction

- In class eight we explore how the eradication of smallpox underscored the belief that infectious diseases were safely under control and that other public health or “community medicine” issues could receive more attention.
- Biotechnology was also undergoing significant change during the 1970s, exemplified by the University of Toronto selling Connaught Labs in 1972.
- In 1975, the University of Toronto also closed its School of Hygiene, absorbing it into a new Community Medicine department.
- In 1976, amidst this period of transformation, the threat of infectious diseases re-emerged, both familiar and novel, including another potential influenza pandemic, which prompted an unprecedented effort in the US and Canada to undertake a mass vaccination program...

THIS IS PUBLIC HEALTH: A CANADIAN HISTORY Executive Summary

This is Public Health, A Canadian History explores the evolution of public health from its early foundation before Canada was a country until 1986, when the Ottawa Charter for Health Promotion launched what many considered to be a new era in public health. 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.

Canada, despite the tensions of jurisdictional boundaries. 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.

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*If ever product is worth while,
advertisements will be found everywhere.*
The Public Health Journal

Public Health Journal, November 1917

This history has been compiled by the Canadian Public Health Association (CPHA), to mark its 2010 centenary. Like the field of public health, CPHA has much to celebrate in addressing ongoing challenges over 100 years as the national voice for a very diverse field. This narrative is dedicated to those public health advocates and activists who have “fought the good fight,” struggling to advance community health long before Canadian health systems were in place.

This history underlines the importance of federal leadership in the implementation of successful public health initiatives in

THE GOVERNMENT INSPECTOR'S OFFICE
Hours from 9 to 4

THE GOVERNMENT INSPECTOR'S OFFICE
The government inspector's office, 1850

Canadian Public Health Association 1

C.J. Ruty, *This is Public Health: A Canadian History* (Canadian Public Health Association eBook, 2010) - <https://www.cpha.ca/history-e-book>

Connaught's Transformation

- **1971-72** – While Paul Fenje was preparing “the best dried smallpox vaccine in this galaxy,” as discussed in the last class, to meet the demands for the smallpox eradication program, coupled with sudden demand to meet a “high emergency” in Bangladesh, he was surely distracted by rumblings of change at Connaught Laboratories
- **Late 1960s** – “Winds of change” were blowing through University of Toronto, driven by the enormous expansion and transformation of the University to meet demands of “baby boomers”



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Connaught's Transformation

- **1971-72** - Connaught was increasingly regarded as a valuable asset to assist in the development of U of T
- There were several key factors at play:
 - Competing pharmaceutical firms complaining about Lab's non-taxable status;
 - Growing regulatory demands on biological products
 - Increasing legal liabilities;
 - Limited ability and desire of U of T administration to use educational funds to modernize Connaught's facilities and to expand its exports



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Connaught's Transformation

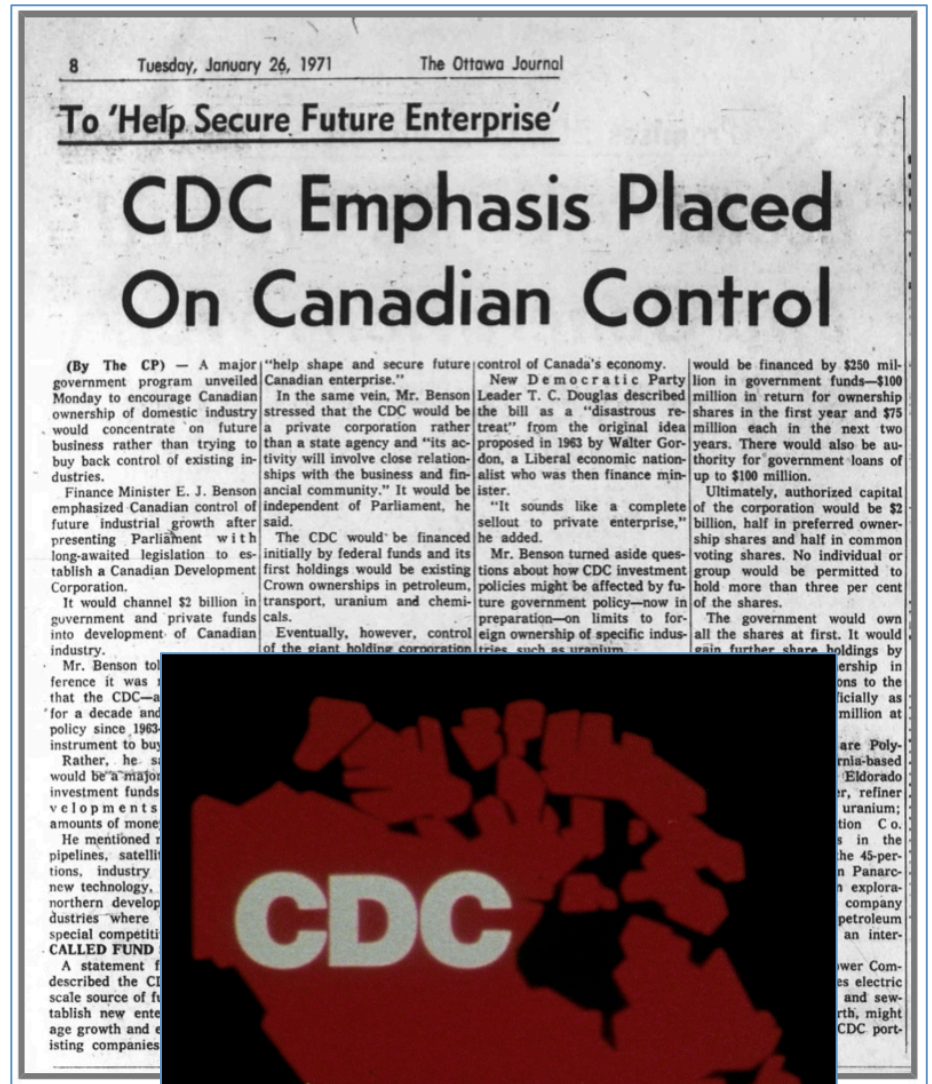
- **1972** - The University's new generation of leaders was less familiar with Connaught's unique public health mission and faced both a rapidly expanding student body and shrinking provincial funding
- Despite passionate arguments in support of Connaught's continued relationship with the University, particularly from the Lab's Director, Dr. J.K.W. Ferguson (right), these new leaders found themselves increasingly desirous of the capital Connaught's research fund had accumulated, as well the financial windfall its sale would bring



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Connaught's Transformation

- **1971** – Meanwhile, the federal government created the Canadian Development Corporation, a crown corporation designed “to help develop and maintain strong Canadian controlled and managed corporations in the private sector and to give Canadians greater opportunities to invest and participate in the economic development of Canada.”
- The CDC would own companies involved in petroleum, mining, natural resources, venture capital, and health care



Connaught's Transformation

- **June 30, 1972** – Connaught was the CDC's first acquisition, purchasing the Labs for \$26 million, and beginning a significant transformation process under a new name:

Connaught Laboratories Limited

The Varsity, Oct. 2, 1972

Monday, October 2, 1972

U of T embarrassed by 'corporate nature'

Connaught Labs sale to CDC closed Friday

By ERIC MILLS

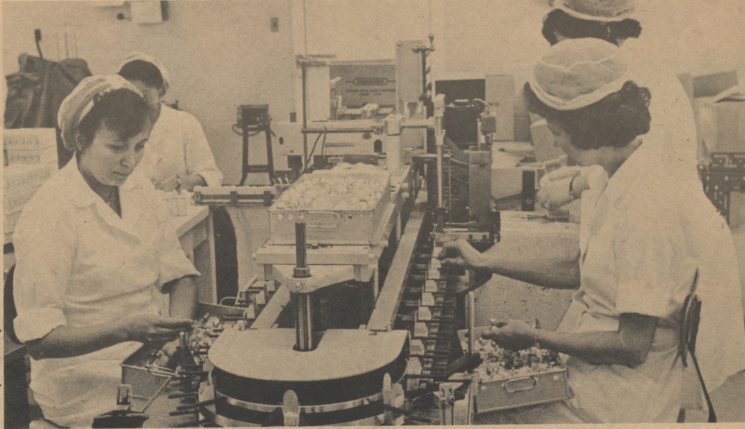
As of Friday, the University of Toronto became \$26 million richer and a medical research division poorer when it sold the Connaught Laboratories to the Canada Development Corporation.

U of T's former Board of Governors' intention to sell the Connaught Medical Research Laboratories, part of U of T since its inception as the Antitoxin Laboratory in 1914, was first announced last May by its chairman William Harris.

Under the terms of agreement released at that time, research in both human and animal disease will continue to be an important function of Connaught. Production of manufactured biological products will be continued, perhaps on an increased scale, under the profit-oriented CDC.

Connaught has been described as "a major commercial operation" engaged in the development, manufacture, and sale of biological products. Named Connaught under the terms of a grant from Colonel Albert Gooderham in 1917, the labs grew to do major work in the fields of diphtheria, smallpox, tetanus, whooping cough, and other diseases. It is perhaps best known as a major producer of inexpensive insulin.

The CDC, in its first purchase since its creation in 1971, acquires 165 acres of land at the main Dufferin division and 500



Women work at packaging drugs, which along with manufacturing, is a dominant activity.

Connaught Laboratories to be first CDC purchase

By N. JOHN ADAMS
The first acquisition of the Canada Development Corp. will be the Connaught Medical Research Laboratories, owned by the University of Toronto. Yesterday the university confirmed the board of governors has approved drawing up a detailed agreement based on a CDC purchase offer. John Sward, the university's acting president, said in a telephone interview the final

price will not be determined until sales figures are known for the current fiscal year, ending June 30. For the past two or three years, he said, sales of the laboratories' biological products have remained constant at between \$11- and 12-million. These products, principally insulin, are marketed in 96 countries. The other major factor affecting the price is the value

of the laboratories' capital assets. Mr. Sward said the laboratories own about 90 buildings, several of them small and most at a new site on Dufferin Street at Steeles Avenue West. Details other than the price are expected to be wrapped up within two or three weeks, Mr. Sward said. He could not say precisely when CDC would take control.

The planned acquisition will provide the first opportunity for Canadians to invest privately in a Canadian drug manufacturing operation. The other existing manufacturers are U.S. subsidiaries. The CDC offer guarantees that Connaught will continue to play an important role in public health. Scientific research will be continued, the present full staff of about 800 are guaranteed their jobs and

the complement of 200 scientists and researchers will be retained. Mr. Sward said CDC officials clearly indicated they do not seek to turn Connaught into a pharmaceutical manufacturing house, producing "headache pills, for example." The proposed agreement will entail close collaboration with the university including

the possibility of cross-apointments and cross-fertilization of ideas between laboratory and the university. The CDC offer includes an undertaking that Connaught will always be controlled by Canadians. The chairman of the U of T board's Connaught Committee, which recommended accepting the offer, is J. F. Brent, chairman of the board of IBM Canada Ltd, a wholly owned U.S. subsidiary.

The university could see no way under spending rules of the provincial Government to provide additional capital investment required by the laboratories in the face of rising costs and little sales growth. Mr. Sward said "The CDC offer is the best solution for the future health and development of Connaught." In addition, the university.



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Connaught's Transformation

- The transformation of Connaught Medical Research Laboratories into Connaught Laboratories Limited was politically controversial
- In particular, the Canadian Diabetic Association, worried about the potential impact Connaught's sale would have on insulin prices
- The CDA pointed out that Connaught sold its insulin to Canadians at prices that were 25 to 35% cheaper than American companies did south of the border
- However, the Ontario government did not interfere with the sale and the Chairman of the CDC assured diabetics that "insulin prices would not rise in the foreseeable future"

Diabetic Association opposes the sale of Connaught Labs

By MICHAEL KEATING

The Canadian Diabetic Association wants to halt the sale of Connaught Medical Research Laboratories because it fears the sale will increase the price of insulin to about 130,000 people who need it daily.

The association has petitioned the Ontario Government to stop the University of Toronto from selling the laboratories to the Canada Development Corp. until there is a full investigation.

According to Dr. A. M. Fisher, who retires today as an associate director of Connaught and is chairman of the executive committee of the diabetic association, the Toronto laboratory sells insulin to Canadians from 25 to 35 per cent cheaper than U.S. companies sell it in that country.

duced these at low prices would be cranged into a private company.

In an interview Dr. Charles Best, one of the co-discoverers of insulin at the U of T in 1921, also expressed concern over the change in Connaught.

Dr. Best, who is a former associate director of Connaught, said research done there in the past into such diseases as cancer and influenza probably wouldn't have been tackled if the institution had to worry about showing a profit.

For the past two months the CDC has been convincing governments it will continue to work with them and will not drastically increase the prices of its products.

When interviewed yesterday Anthony Hampson, chairman of CDC said "we have given a general undertaking to the U of T to continue to make

A. G. Rankin, U of T executive vice-president, said yesterday that the CDC has accepted conditions that Connaught remain in Canadian hands, retain its prime role in public health and maintain the same, high level of research. He said the university hopes to maintain close relations with the laboratories.

Although an agreement for the sale was signed on Tuesday, the exchange will not be complete until about mid-August when the balance sheets of June 30 are audited and a final price established.

Recently Connaught had sales of \$11-million to \$12-million a year in 65 countries and last year its assets were believed worth \$26-million. The sale price has been rumored at from \$25-million to \$35-million.

In its first purchase since it was formed by the federal Government more than a year

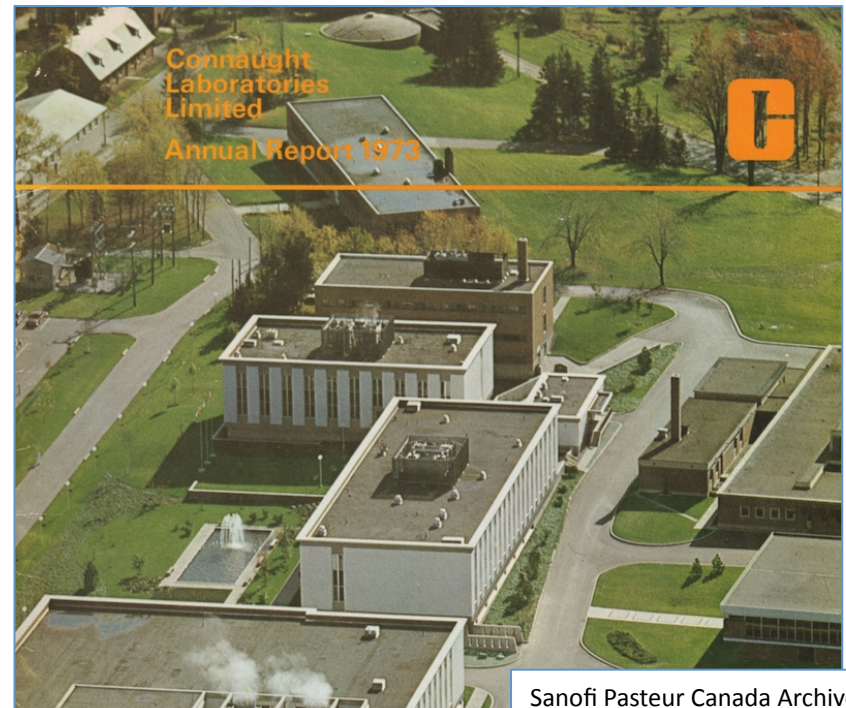


Sanofi Pasteur Canada Archives

Connaught's Transformation

- However, from the perspective of its staff, senior scientists and administration, the transition was relatively smooth, although not without some discontent and general concern about the organization's future as a profit-driven company
- Several long-serving employees took the opportunity to retire, such as Ferguson, who was succeeded as Director during the transition period by Dr. Robert J. Wilson

- Wilson, while overseeing Connaught's smallpox eradication work, later became Scientific Director and Chairman of the CLL Board



Connaught's Transformation

- **June 1973** – A year after Connaught's sale, the official opening of Building 90, specially designed for the production of bacterial vaccines (diphtheria, tetanus, pertussis), symbolized the transition
- It was approved before the sale, was a major upgrade from previous production "converted stables" facilities, and it would be named after Dr. Peter Moloney, who had played such a major role in Connaught's development of bacterial vaccines, especially diphtheria toxoid



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Honouring Peter J. Moloney (1891-1989)

- Despite officially retiring from Connaught in 1961, Peter Moloney continued working at the Labs as a consultant into his 90s.
- **Sept. 30, 1977** - The naming of Building 90 in his honour was made official at a special event at Connaught, at which Dr. Moloney was also given a monetary gift from the company for his extraordinary service
- **1919** - A specialist in immunochemistry, Moloney joined initially joined Connaught to work on the purification of diphtheria antitoxin
- **1922** - Shortly after the first human trials of insulin, Moloney's expertise was also called upon to assist with its concentration and purification to enable larger scale production

CONTOX

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Tribute to Dr. Moloney

Early birds arriving at work on the morning of September 30, were treated to a sight on the lawn beside building 93 that caused much interest and speculation. Sometime during the interval between Thursday evening and Friday, a huge tent with decidedly raffish turquoise roof stripes had risen there like a huge mushroom. Since September had been a damp month, there was the possibility of growth — still, what a size! Those who sought their social calendars that day were reminded that the tent was for the celebration of the events to honour Dr. Peter

including many of Dr. Moloney's family and his former colleagues and students, gathered in the tent. It became evident that there was a warm and special feeling in the air for him.

Dr. R.J. Wilson began the ceremonies with a brief preface. Executive Vice President Alun Davies announced that the company was giving a monetary gift to Dr. Moloney and also that building 90 would be named the Moloney Building. Both sparked their remarks with items from the treasury of Moloney stories and quips. Dr. J.D. Hamilton, member of the Board of Directors of Connaught, followed with an address highlighting Dr. Moloney's career and explaining the reasons why

anecdotes about his family, revealed his deep Ontario roots and the heartland of his own gentle philosophy. He held those assembled spellbound.

Refreshments followed and many stayed to mingle and renew old acquaintance and wish Dr. Moloney well on his current endeavours. The following week the Toronto Star and the Globe & Mail both made mention of Dr. Moloney and his achievements. Here is the text of Dr. Hamilton's address:

PETER JOSEPH MOLONEY, O.B.E., B.A., M.A., Ph.D., LL.D., F.R.S.C.

The occasion that brings

and then to Connaught Laboratories Limited. Honoured by other institutions for his scientific achievements, today it is the turn of his friends in Connaught Laboratories, the institution to which he has devoted his whole scientific career, to say "Peter, we thank you".

To give perspective to our celebration, I am going to review, briefly, the awards that Dr. Moloney has received. The first, in 1946, was the O.B.E. for a major contribution to the war effort: production of a potent polyvalent gas gangrene antiserum. This was done in collaboration with Dr. E.M. Taylor, who was also honoured with the O.B.E. in 1964, at the 5th Congress of the International Diabetes Federation in Toronto. Dr. Moloney was presented with the Banting Medal, and in that same year, the Charles Mickle Fellowship of the University of Toronto; it is the most prestigious award within the purview of the Faculty of Medicine. In 1967 he received a Gairdner award, one of the few Canadians to be so rewarded. He was presented with the Best Medal and the Hoechst Prize in 1971 at the 5th Canadian Hoechst Workshop on Diabetes. This was, of course, the 50th Anniversary of the discovery of insulin, an occasion when the University of Toronto held a special convocation to mark the event. Dr. Moloney, on that occasion received, with other distinguished scientists, the degree of Doctor of Laws, Honoris causa. This was his fourth degree from the University of Toronto; B.A. in Philosophy in 1912, M.A. in Chemistry, 1915, Ph.D. in 1923.

ZENA CHERRY

Connaught honors vaccine researcher

Dr. Peter J. Moloney is in his 86th year and still engaged in bacterial vaccine research at the Connaught Laboratories.

He is and always has been a dynamic and innovative scientist.

To say thank you for his major contributions to several areas of research, there was a party for him and a triple presentation on Friday in a pretty turquoise and white striped marquee on the Connaught grounds at 1775 Steeles Ave. As secretary June Milne explained, "Every one of us prayed all day long and that's why the rain held off. It came down very hard immediately after the doings."

ter, Mary, Sister St. Henry of Yamasa, Dominican Republic. Two other sons, Henry A. Moloney of Inverness, N.S., and Peter B. Moloney of Parry Sound, were unable to come.

The doctor lives with the staff at St. Michael's College, his alma mater, and walks to work every day at the Connaught Division on Spadina Crescent, and then walks home again. He told me, "My ambition is to go on with what I'm doing — it's a great privilege to be able to do the work you want to."

Globe & Mail, Oct. 5, 1972, p. 12

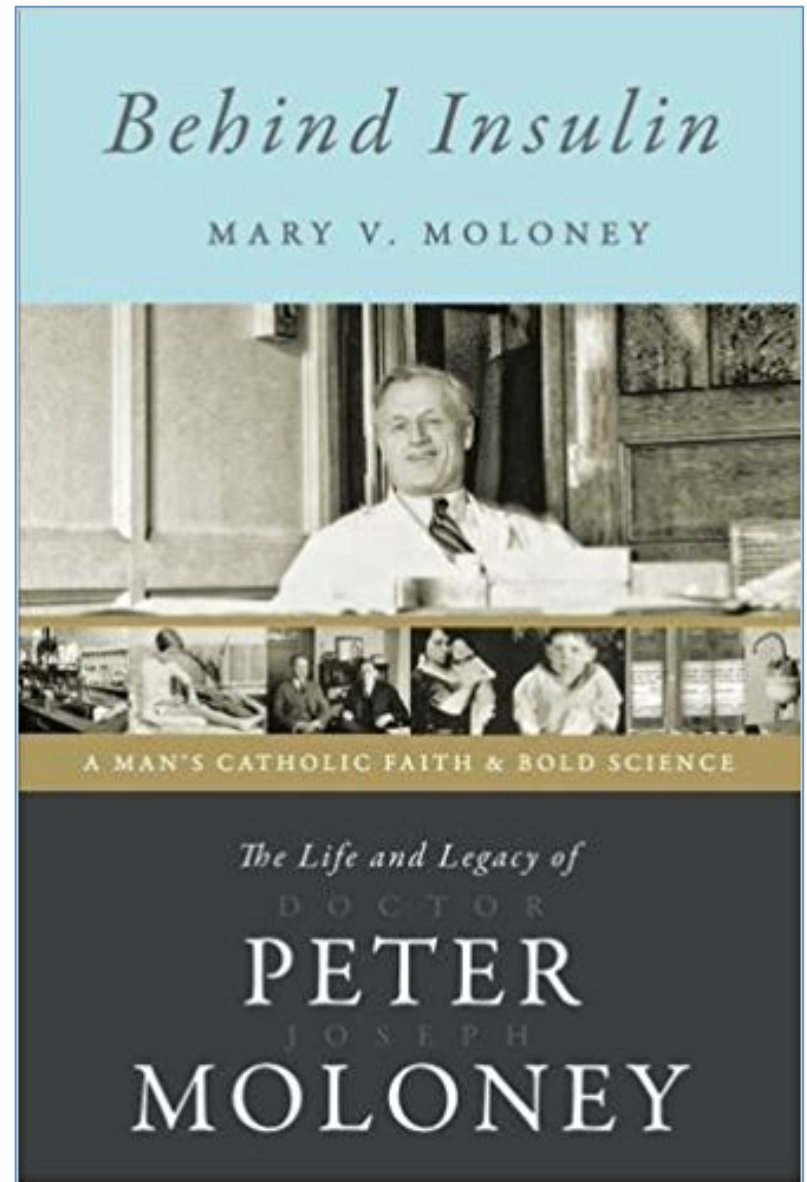
Honouring Peter J. Moloney (1891-1989)

- **1924-30** – Moloney then played a vital role in the development and production of diphtheria toxoid, particularly developing the “Moloney Test”, designed to test for a potential allergy to the toxoid
 - **1940s-1950s** – Moloney played a critical role in improving the production of heparin, and also penicillin
 - **1950s-1960s** – He developed Sulphated Insulin, specially designed for diabetics who had become resistant to regular insulin
- Peter Moloney led a very productive, though quiet life, centred on balancing science with a strong spiritual faith, earning his seventh patent at age 90, and living into his 99th year



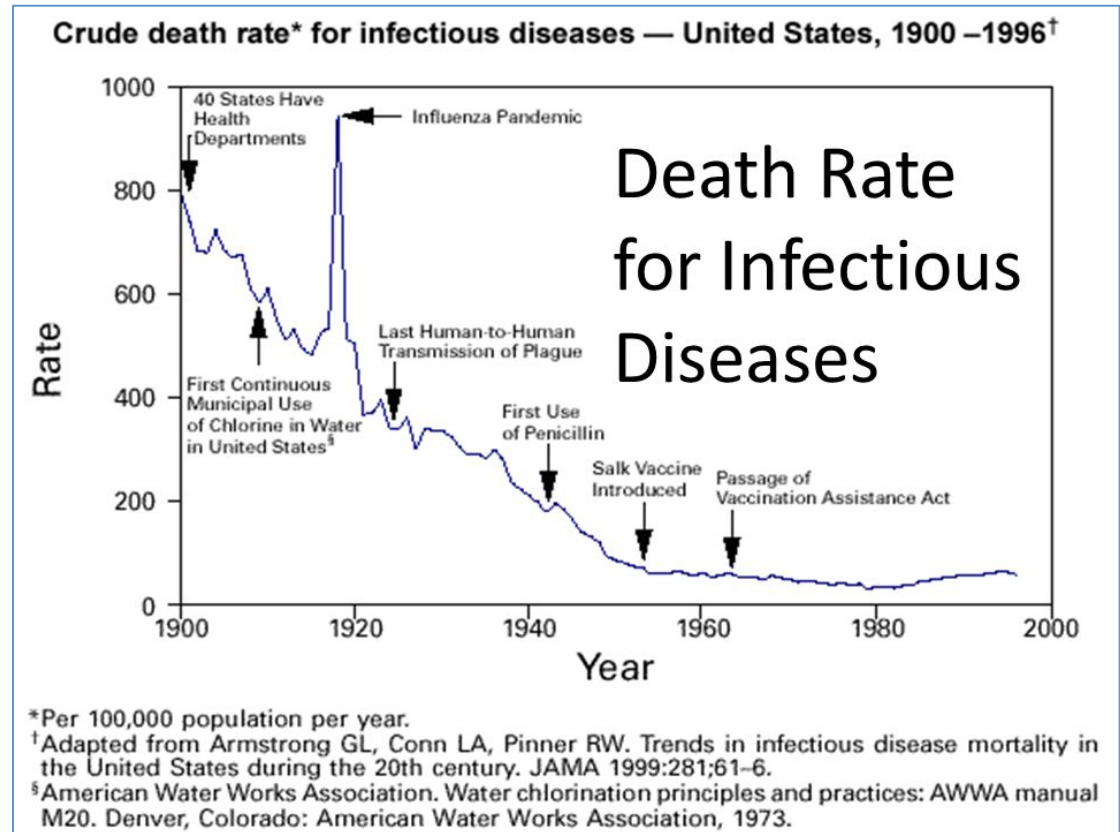
Honouring Peter J. Moloney (1891-1989)

- To learn more about the life and legacy of Dr. Peter Moloney, a new book assembled by his grand-daughter, Mary V. Moloney, was recently published,
- *Behind Insulin: The Life and Legacy of Peter Moloney*,
- <http://www.lulu.com/ca/en/shop/mary-v-moloney/behind-insulin-the-life-and-legacy-of-doctor-peter-joseph-moloney/ebook/product-22921924.html>
- Mary Moloney also created a website dedicated to Dr. Moloney's life and work,
- <http://drpetermoloney.com/>



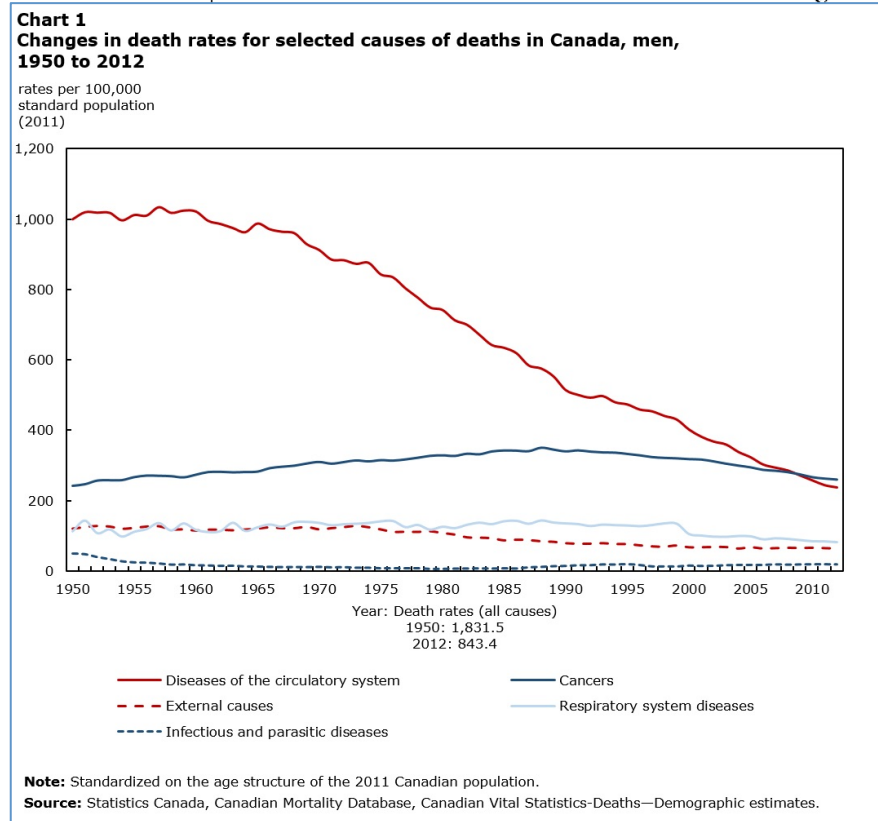
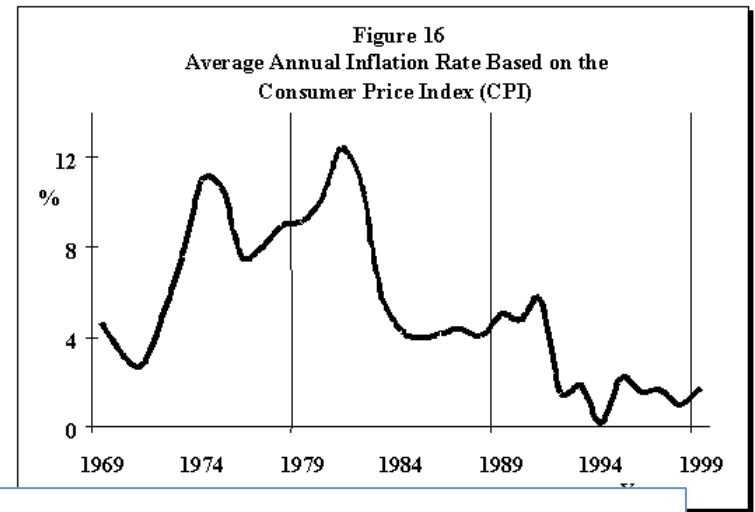
From Public Health to Community Medicine

- The transformation of Connaught Labs during the early 1970s reflected several broader changes taking place in Canadian public health, including a lesser emphasis on infectious diseases; the rapid decline of polio and the inevitable eradication of smallpox symbolic of a long war essentially won
- There were still some infectious disease battles to fight, but they seemed relatively small by comparison



From Public Health to Community Medicine

- In a context of growing economic constraints on the health care system, especially due to high inflation, it was increasingly recognized that the substantial declines in mortality over the last 100 years were largely due to improvements in living standards rather than medical advancements
- This brought a rethinking of health systems, with Canadian innovation and leadership in new approaches to community health and health promotion



From Public Health to Community Medicine

- In response to persistent concerns, particularly about the environment, chronic diseases, and the high toll of car accidents, there 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
- **Early 1970s** - Notable initiatives included:

- Auto emission controls and unleaded gas
- The 1971 Motor Vehicle Safety Act
- Mandatory seatbelt legislation
- ParticipACTION
- Breast Self-Examination

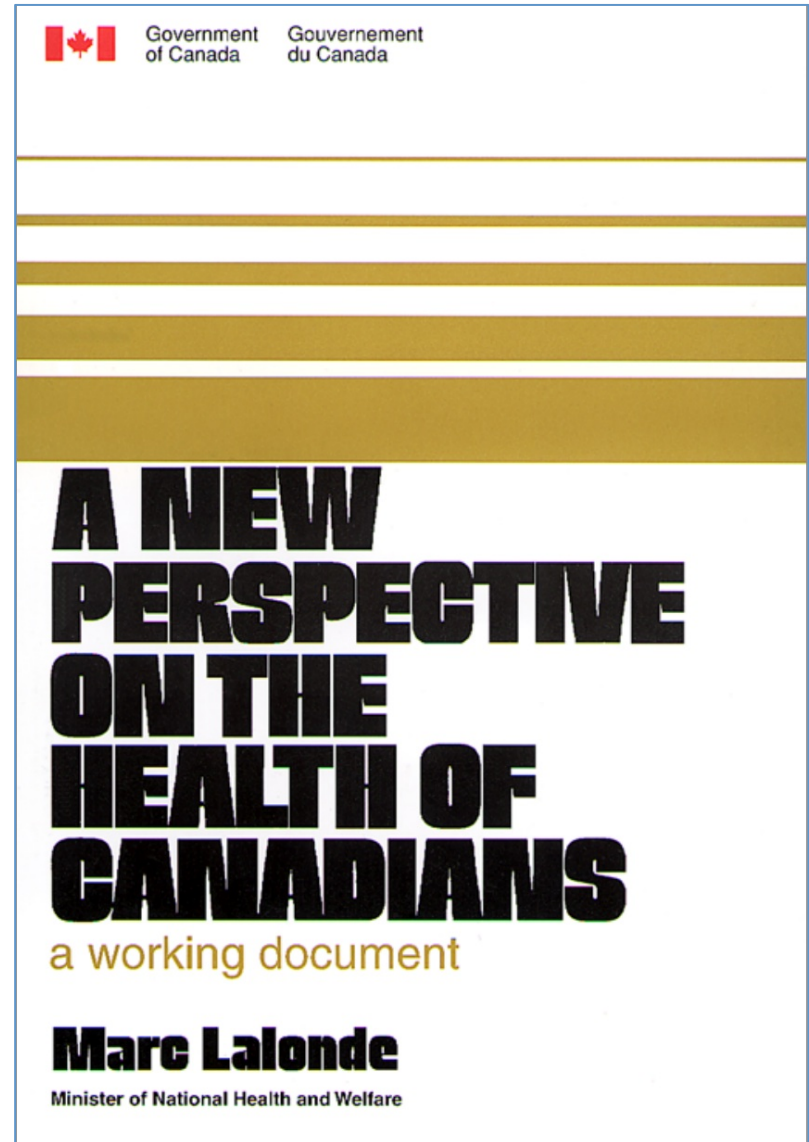


PARTICIPACTION



From Public Health to Community Medicine

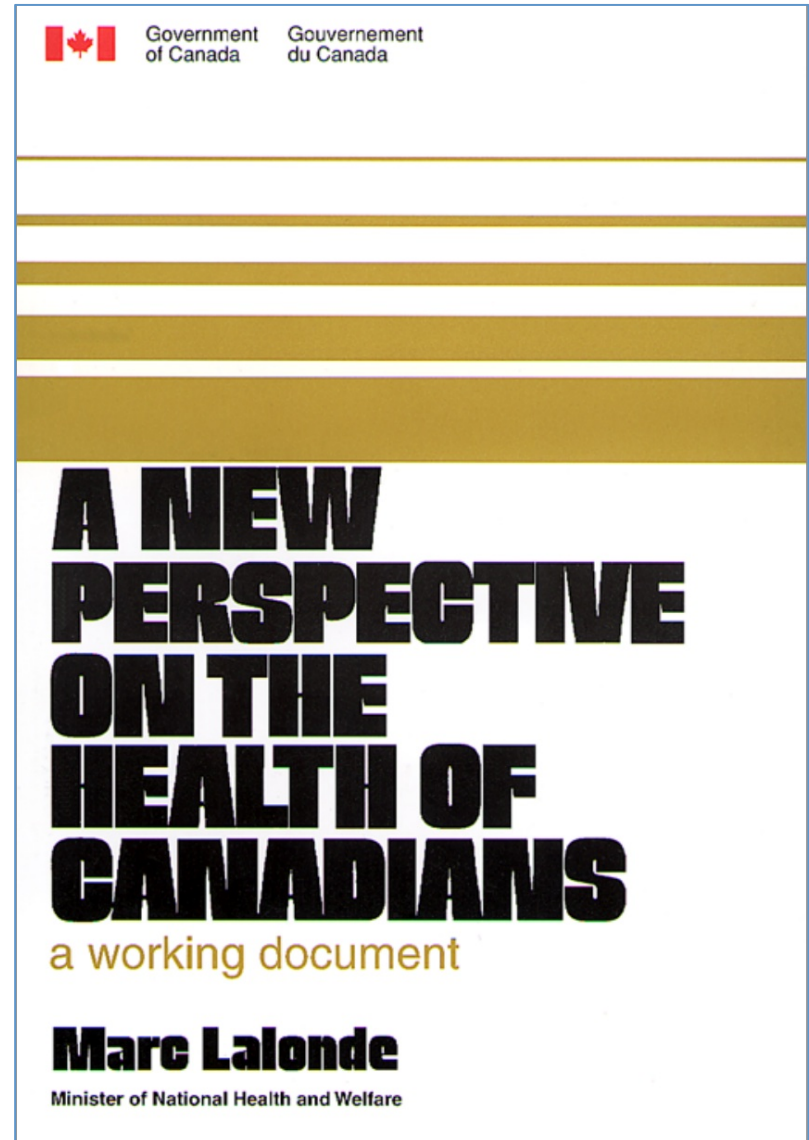
- **1971-74** – A landmark codification of a new approach to individual and community health was *A New Perspective On The Health of Canadians: A Working Document*, by the Minister of National Health & Welfare, Marc Lalonde, published in May 1974
- Initially, the “Lalonde Report” garnered limited attention 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



From Public Health to Community Medicine

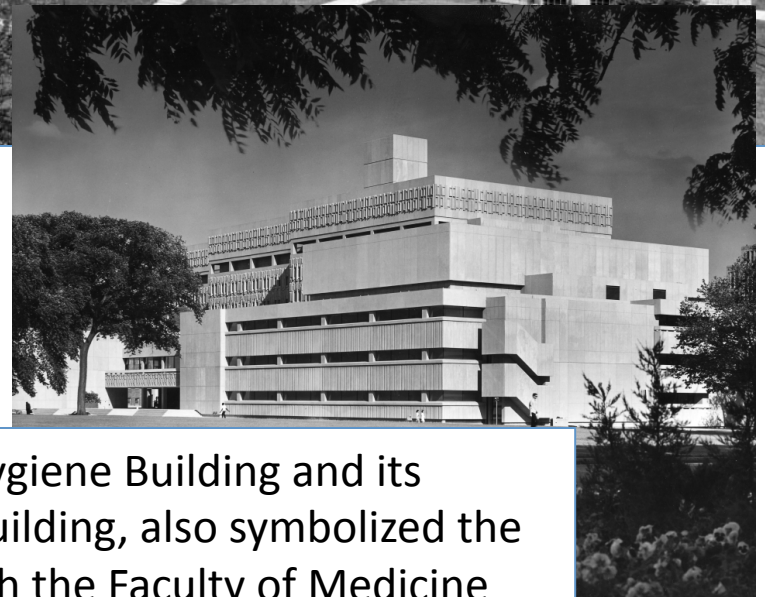
- The Lalonde Report encapsulated and galvanized a broader approach to public health and gave health promotion a stronger focus, although some felt that the focus on personal responsibility for lifestyle choices tended to “blame the victim” and ignore the social, economic and political contexts shaping individual behaviours

Major Causes of Mortality (1971)	No. of Deaths	% of All Deaths	Predominant Ages
Ischaemic heart disease	48,975	31.1%	40 and over
Cerebrovascular disease	16,067	10.2%	Age 65 and over
Respiratory diseases and lung cancer	15,677	10.0%	Under 1 year and 55 and over
Motor Vehicle and all other accidents	12,031	7.6%	All ages
Cancer of the gastro-intestinal tract	7,947	5.1%	50 and over
Cancer of the breast, uterus and ovary	4,816	3.1%	40 and over
Diseases specific to the newborn	3,299	2.1%	Under 1 week
Suicide	2,559	1.6%	15 to 65
Congenital anomalies	1,967	1.3%	Under 1 year
TOTAL	113,338	72.1%	
ALL DEATHS	157,272	100.0%	



From Public Health to Community Medicine: UofT Closes School of Hygiene

- Amidst the significant changes going on in public health, the School of Hygiene, once the centre of public health in Canada, no longer occupied that place
- **1955-72** - Since the School and Connaught formally split their shared administration, and then UofT sold the Labs, the School had essentially stagnated, with limited space and increasingly dated facilities and curriculum, and a lack of graduate degrees was increasingly problematic



- Architecturally, the difference between the Hygiene Building and its closest neighbor, the new Medical Sciences Building, also symbolized the School's weakening stature in relationship with the Faculty of Medicine

From Public Health to Community Medicine: UofT Closes School of Hygiene

- **June 30, 1975** – After numerous reports and efforts by several Directors of the School, including Dr. Andrew J. Rhodes (who had played such a key role in Connaught’s polio vaccine development), there was irresistible momentum for a rearrangement and reunification of public health and medicine within the University of Toronto, and the School of Hygiene’s doors were closed



- **July 1, 1975** – Integrating several departments from the School, but not others, the doors of the new Division of Community Medicine opened in the UofT’s Faculty of Medicine

Canadian Journal of Public Health, Nov-Dec. 1974, p. 463

Community Health: A New Approach in the University of Toronto

G.H. BEATON¹

June 30, 1975, will mark the end of forty-eight years of operation of the School of Hygiene, University of Toronto, thirty-one of them as an autonomous academic body. When the doors open on July 1, 1975, this will mark the beginning of a new Division of Community Health in the Faculty of Medicine in the University.

The change marks more than an administrative rearrangement and reunification of activities in public health and medicine in a single academic organization. Rather,

major health problems of the community are now under control in the Canadian setting (albeit still requiring vigilance and continuing action to keep them under control). New types of health problems and new approaches to their control are emerging as priority areas.

The staffing patterns and programs of the School of Hygiene have evolved with these changes. There is little resemblance between the Diploma in Public Health offered in 1974 and that which was presented in 1927 when the School opened

appropriate to current problems and priorities was:

“Public health is the planning, carrying out, and evaluation of health measures and system services that both maintain and improve the health of a population group and prevent or control diseases within that population group.”

This definition, while retaining the essential emphasis upon prevention rather than treatment, and upon population rather than the individual, gives increased

Public Health Transitions

- **1975** - In addition to the closing of the School of Hygiene, the passing of an era in Canadian public health was also symbolized by the death of two icons of the profession
- **Oct 25, 1975** – Dr. Robert D. Defries, best known as Director of the School and Connaught from 1940 to 1955, passed away at age 86
- **Nov 1955** - He won the American Public Health's highest honour, the Lasker Award
- From his position as head, “and to a considerable extent the creator” of Connaught Labs and the School of Hygiene, Defries “played a unique part in the development of preventive medicine and public health in Canada.”
- **1965** - Canadian Public Health Association established “The R.D. Defries Award,” which was the highest recognition of merit the Association could bestow.



Sanofi Pasteur Canada Archives

Robert Defries Was director at Connaught

Dr Robert Defries, former director of the Connaught Medical Research Laboratories and the School of Hygiene at the University of Toronto, died Saturday at his Toronto home. He was 86.

Dr. Defries was director of the two U of T bodies from 1940 until he retired in 1955, playing a major role in their development over a period of 40 years. Under his leadership, Connaught was active in research and production of immunizing agents, anti-toxins, penicillin, polio vaccine, human blood fractions and other products. From 1940 to 1961 he was scientific adviser to the Dominion Council of Health, and edited the journal of the Canadian Public Health Association for about 35 years.

Born and raised in Toronto, Dr. Defries supported the promotion of Christian ideals through student groups at the university, medical missionary groups, and his church, Bloor Street United, where he was an active member.

The R.D. Defries Award

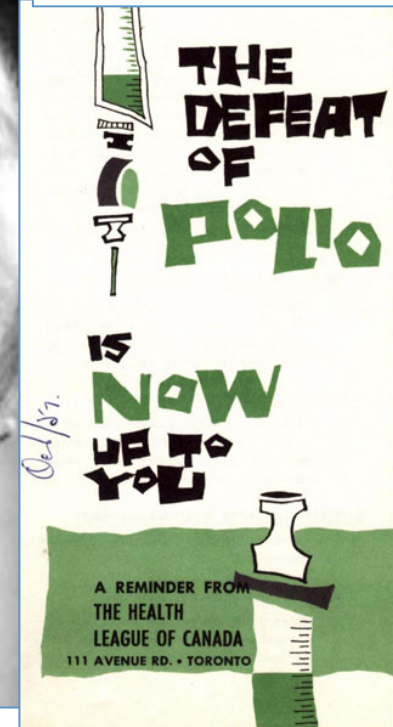
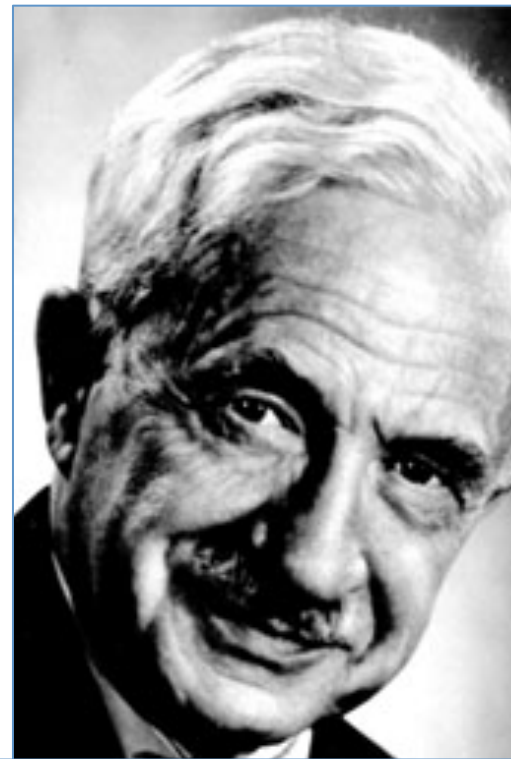


La Médaille R.D. Defries

Globe & Mail, Oct. 27, 1975, p. 5

Public Health Transitions

- **Nov 7, 1975** – Dr. Gordon Bates, best known as the founder and leader of the Health League of Canada, passed away at age 89
- He was a rough and tumble crusader for public health, starting during WWI with the vexatious issue of venereal disease prevention, and then with promoting diphtheria toxoid, and also the fluoridation of water



- It upset Bates greatly that the public seemed so little interested in public health.
- “People will gladly give millions to treat the victims of disease but they won’t spend thousands to prevent illness.”

Health League of Canada

GORDON BATES¹, M.D.

THE Health League of Canada shares the distinction with such organizations as the Canadian Tuberculosis Association, the Canadian Public Health Association and the Canadian Mental Health Association, of being one of the oldest voluntary health organizations in Canada.

The Health League was organized in 1919 at the suggestion of the then “Dominion” Government, following what would be termed today a federal-provincial health conference to develop a co-ordinated health

sible a large Council representing many interests.

Venereal Diseases

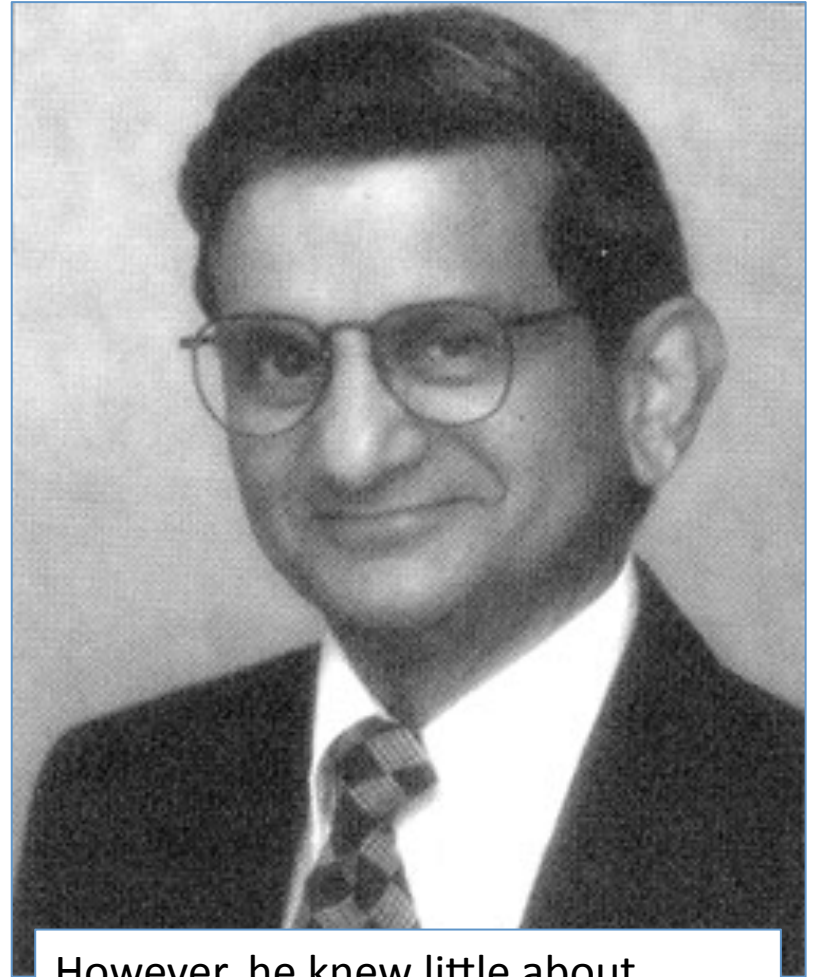
The Health League’s first program concerned the prevention and treatment of venereal disease. The League co-operated with the government in establishing treatment centers in many cities in Canada and in the drawing up of legislation in the various provinces for making treatment compulsory for infected persons and for the tracing of con-

da. This Co *Canadian Journal of Public Health*, Jan-Feb. 1970, p. 60

y, public dis- was under-

Public Health Transitions: Community Medicine Specialty

- Dr. Chandrakant P. Shah would personify the transformation taking place in public health/community medicine during the early 1970s, and play a key leadership role in furthering its evolution in Toronto and nationally
- He was trained as a pediatrician, and while teaching at the University of British Columbia during the late 1960s, was drawn into public health unexpectedly after working on an epidemiological study on the prevalence of handicapped children in the care of the Children's Aid Society of Vancouver



However, he knew little about epidemiology and decided to audit several courses

Public Health Transitions: Community Medicine Specialty

- During the 1960s, UBC's medical school had been at the forefront of efforts to redefine public health as community medicine/community health, including modernizing the defining elements of the Royal College's specialty of public health medicine certification, originally established in 1946
- The numbers of physicians seeking the public health specialty certification remained low until the late 1950s when the the UBC medical school and the BC Department of Health together created a means for physicians to earn the certification in a pragmatic, progressive and professional way

Canadian Journal of Public Health

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PUBLIC HEALTH — A SPECIALTY IN MEDICINE

IN 1948 the Royal College of Physicians and Surgeons of Canada added Public Health to the list of specialties which had been approved for certification. In the same year the American Medical Association approved the inclusion of Public Health as a specialty in medicine and established requirements to be administered by the Advisory Board for Medical Specialties. The inclusion of Public Health constituted one of the most important and far-reaching decisions that have been made in medicine. The fact that in both Canada and the United States, public health was one of the last fields to be added indicates that there were wide differences of opinion about its inclusion among the specialties of medicine. These differences arose fundamentally from the varying conceptions of public health and its administration. The public nature of the services rendered by medical officers of health, in contrast to the relationships in private practice, and the defining of the qualifications for the office of medical health officer and other personnel by governmental and other authorities, seemed to remove the necessity for certification as a specialist by the national medical societies. There was, however, a general recognition of the fact that public health constituted a specialty in the field of medicine.

TABLE II

Public Health

	No. of appns. received	No. of appns. approved	No. of Applicants examined	No. of Applicants Successful
1951	11	9	6	4
1952	8	8	4	3
1953	4	4	2	1
1954	4	4	3	3
1955	3	2	1	1
1956	21	19	15	13
1957	4	4	3	3
1958	8	7	6	3
1959	9	9	8	7
1960	2	2	1	1
1961	1	1	1	1
TOTALS	75	66	50	40

Royal College of Physicians & Surgeons of Canada Archives

Public Health Transitions: Community Medicine Specialty

- Many physicians who earned their public health certification in B.C., which enabled them to take up positions as local medical health officers, also taught in the UBC medical school and several, particularly Dr. Donald O. Anderson, played a leading role in promoting redefining public health in Canada as community medicine

Certification in Public Health — Training for Obsolescence¹

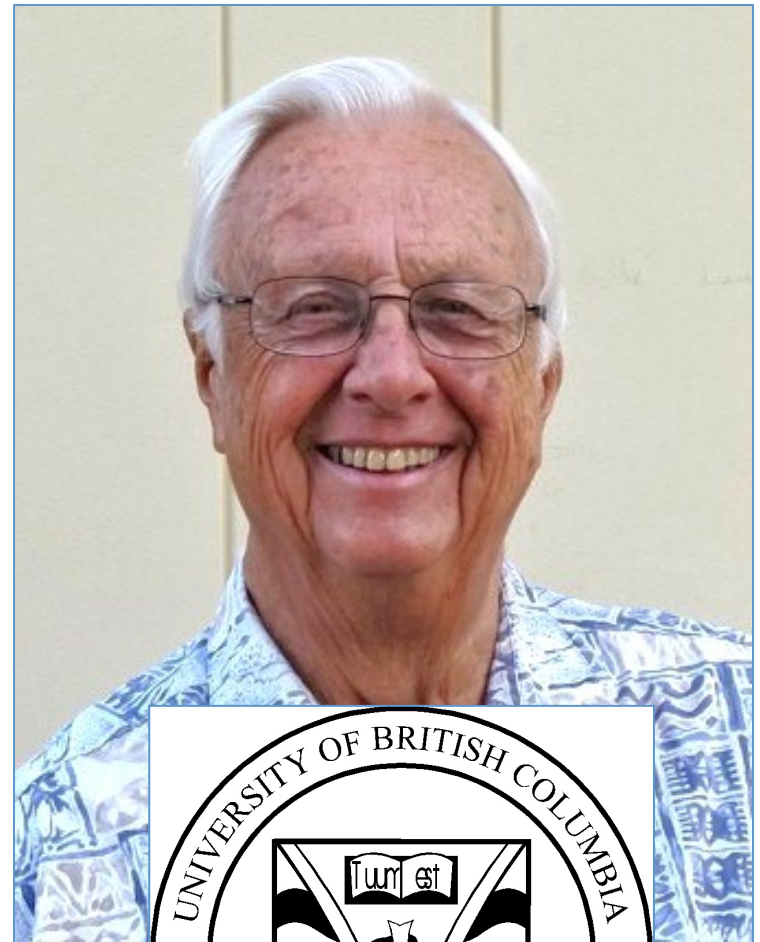
DONALD O. ANDERSON, M.D., F.R.C.P.(C)²

Changes in the nature of employment of persons trained in public health, in the Royal College training program, and in the teaching objectives of departments of preventive medicine, have been considered by the Specialty Committee in Public Health of the Royal College of Physicians and Surgeons of Canada. A recommendation has been made to the Council of the College to retain the specialty of public health within the Royal College but to permit two new flexible options for certification after a minimum of two years of clinical training; one of these options involves the recognition of a new specialty in preventive medicine

operating public health agencies seemed surprisingly unconcerned and particularly slow to resuscitate the patient.

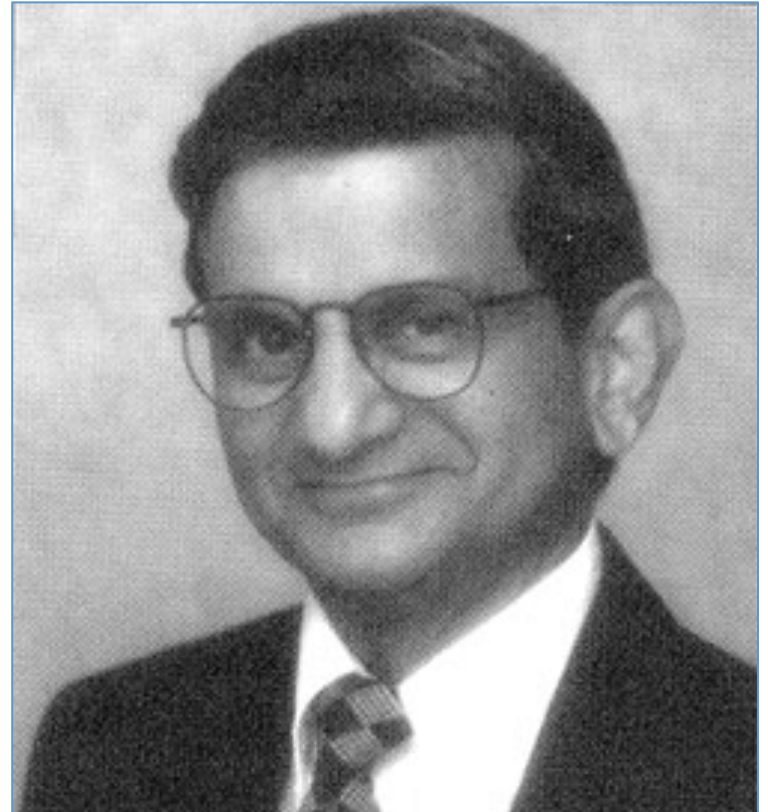
It is worth emphasizing right at the outset that the entire field of public health practice is itself in transition (2). Thus, to institutionalize at this time a rigid training program might severely restrict options for career development. The required training program should be different if the future certificant is to serve as a physician manager of a health district, a manager of a community health center or of other innovative medical care programs, a community epidemiologist or a consultant to provincial, regional, or area

Canadian Journal of Public Health, Sept-Oct., 1972, p. 405



Public Health Transitions: Community Medicine Specialty

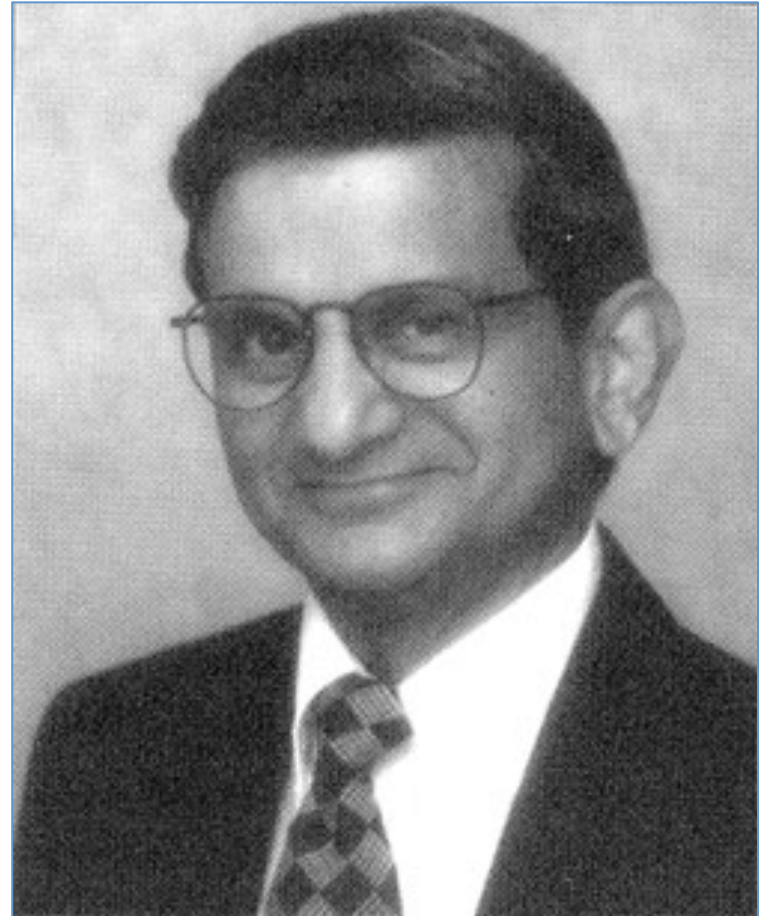
- **1971** - While at UBC, Dr. Shah audited courses taught by Dr. Anderson, and by Dr. Robert Morgan, who would shortly thereafter be appointed Chairman of the Department of Preventive Medicine and Biostatistics at the University of Toronto
- The courses sparked an interest in public health for Shah and he and Morgan got along well, prompting Morgan to invite Shah to move to Toronto and join his Department
- Feeling embarrassed about his limited public health credentials, Shah undertook further training, including at Harvard to earn a Masters in Health Administration



Shah soon realized how public health as a discipline had unjustly become too much of a “catch-all” and there was a need to better define “public health,” especially if he was going to be teach it

Public Health Transitions: Community Medicine Specialty

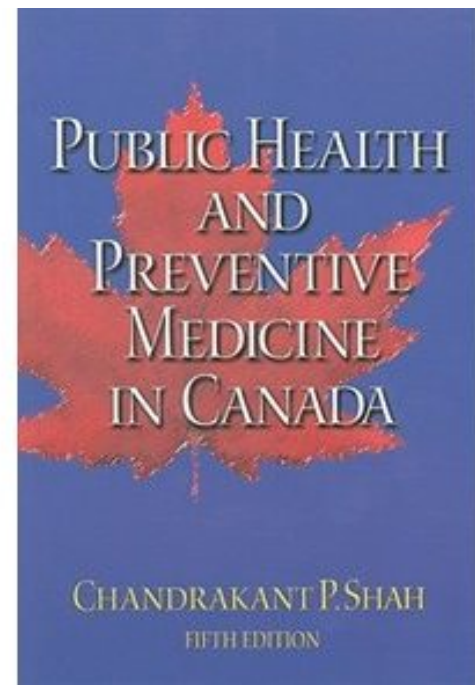
- In his immersion into the world of public health, Shah also recognized how, especially in the Toronto context, public health had become a second career choice for a physician and that there was no clear way for it to be first option
- **1976** – With the Royal College’s new Community Medicine training regulations approved, the integration of the School of Hygiene into the new Division of Community Health opened up an opportunity to start a community medicine residency program in Toronto



- Shah was well placed to take on the job of Program Director, although he had no budget, no staff, and no residents until Dr. Gary Humphries (who would later be the MOH in Peterborough), started the program when Shah managed to secure funding from the Armed Forces

Public Health Transitions: Community Medicine Specialty

- Funding community medicine residents would be Shah's biggest challenge as the UofT program found its footing
- The program would remain essentially a one-man operation while Shah served as Program Director, which he did until 1988.
- Shah also facilitated the establishment of satellite residency programs at the University of Saskatchewan, Dalhousie University in Nova Scotia, and at Memorial University in Newfoundland
- He is best known as the author of *Public Health and Preventive Medicine in Canada*, the seminal textbook first published in 1986



Whither Infectious Diseases...?

- **1976** – In the midst of the significant transformations in public health/ community medicine, maintaining control over well known infectious disease threats became an issue
- In particular, there seemed to be a “careless” attitude among immigrant parents towards immunization against diphtheria, tetanus, pertussis, and especially polio, where a considerable debate had developed over whether the Salk or Sabin vaccine was the most effective and safe.
- Stepped up immunization programs were clearly needed, including among adults

Globe & Mail, May 15, 1976, p. 6

Taking too many chances with polio

In 1953, 61.5 of every 1,000 Canadians fell victim to poliomyelitis, a virus which attacks the nervous system, often resulting in paralysis, deformity or death. Children were especially hard hit. That was Canada's last outbreak of polio. In 1955, Dr. Jonas Salk developed the first effective vaccine for polio and a major inoculation program was undertaken. There have been only two confirmed cases of polio in Ontario in the past 12 years.

But that does not mean the disease is dead. Ontario Ministry of Health officials

fear that parents in Ontario have been lulled into a dangerous complacency regarding polio. Children are not being inoculated with the regularity they once were. Dr. Bette Stephenson, acting Minister of Health, recently warned that Ontario may face a mild outbreak of the disease in five to 10 years unless children and young adults continue to receive regular booster inoculations. Her remarks followed the discovery by a University of Ottawa virologist of strains of polio virus in the Ottawa sewerage system.

Dr. Stephenson estimates that as many as 30 per cent of children in Ontario have not been inoculated and so the Ministry is contemplating a campaign to sell immunization. The Scarborough Health Department will operate a number of vaccination clinics in shopping malls this summer.

There are two kinds of polio vaccine: the Salk vaccine which is an inactive polio virus administered through injection; and the Sabin vaccine which is a live virus administered orally. The Salk is used by Ontario and requires a booster injection at least once every five years. Ontario's 43 district health departments operate polio inoculation programs through the school system, but many health officials are worried about preschool children who often receive no booster shots after their infant inoculation.

Woman dies of diphtheria

A 57-year-old woman patient of the Queen Street Mental Health Centre died of diphtheria yesterday in Toronto Western Hospital.

Milton Fisher, administrator of the centre, said the woman was discharged on Aug. 2, but was readmitted on Aug. 5. The next day she complained of a sore throat and was treated with antibiotics. She became acutely ill, was transferred to Toronto Western Hospital last Saturday and died early yesterday of complications.

After doctors at Toronto Western Hospital confirmed she had diphtheria, staff at the centre began taking throat swabs from all other patients and staff in the northern service building, where the woman had been.

Tests on a male patient proved positive, although he had no symptoms and is still

well. He also was transferred to Toronto Western Hospital, where he is in isolation.

Tests also proved positive in a third patient, a man attending the centre's day-care program. He was in York Finch Hospital for treatment of injuries sustained outside the hospital when he was tested. He also has no symptoms.

Mr. Fisher said hospital authorities are working closely with the Toronto medical officer of health, Dr. George Moss.

He said Dr. Moss has not placed the northern service building in quarantine, but access to it is being restricted. Staff members, however, are working their usual shifts and going home afterwards.

He said tests will probably be done on all patients in the hospital to determine who is immune to diphtheria, so that others can be immunized if

necessary. The northern service building has about 50 patients. There are about 325 inpatients and 300 outpatients at the centre.

Diphtheria is a highly infectious bacterial disease, passed from person to person. It can also be carried in food or milk. Thirty years ago, 229 people in Canada died from diphtheria. Once immunization became widely used, diphtheria deaths almost disappeared, but localized epidemics have recurred when immunization has been neglected.

The last Toronto case reported in The Globe and Mail was on March 24, 1973. At that time, it was the first case treated at the Hospital for Sick Children in at least four years. There were no cases in 1972, one death in 1971, two deaths in four cases in 1970 and one death in 1969.

Globe & Mail, Aug. 13, 1976, p. 2

Whither Infectious Diseases...?

- But it was also critical, as one public health leader stressed, that the federal and provincial governments “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
- “Surely there should be a well planned operation ready for such an occurrence at our international airports in Toronto”

Editorial

Canadian Journal of Public Health, Jan-Feb., 1976, p. 7



W. Harding le Riche

ARE THE 1976 OLYMPICS A HEALTH HAZARD?

ASPECTS OF COMMUNICABLE DISEASE AND IMMUNIZATION

The 1976 Olympic Games in Montreal should be examined in relation to the possible introduction of disease. A realistic look at this problem does not suggest a cataclysm from disease as a result of these Games. The athletes who come to them from all over the world obviously will be healthy because if they were not healthy they would not be able effectively to represent their countries. Therefore it is improbable that they themselves will be carrying any serious communicable disease. As a matter of fact the athletes may themselves acquire communicable disease in Canada if they mix with some of the Canadian population. Here the

biggest danger is sexually transmitted disease. Other diseases which the athletes and visitors to Montreal might acquire could be food poisoning, if the catering services are not well organized. Although we have every reason to believe that there will be sound supervision of the food supplied both to the public and to the athletes at the Olympic Games, we still have rather unpleasant memories of fallen beef which was supplied during the 1967 Centennial Celebrations. Incidentally this did not seem markedly to influence the health of those who visited Montreal at that time.

As most of the visitors who come to the Olympics will probably come from the United States and Canada itself, they will not bring exotic diseases into the country. However, there may be some problems. There will be a small number of visitors from other parts of the world, particularly tropical areas, who may be harbouring particular diseases. If one or two of them are found to have cholera on arrival they can easily be accommodated and dealt with. Cholera is not a very infectious disease on the Canadian scene, as such patients will be appropriately treated in hospital. Similar treatment could be provided for other gastrointestinal diseases such as typhoid, and other forms of salmonellosis and shigellosis.

More recently, an attempt has been made to alarm the public by citing Lassa fever as a potential source of danger at the Olympics. This disease occurs, as far as we know, only in West Africa and it is

Whither Infectious Diseases...?

- **1976** - The holding of the summer Olympics in Montreal focused such concerns, both about the potential import of diseases from athletes and visitors traveling to Canada from all over the world, and also the threat the athletes themselves faced by mixing with Canadians attending the Olympics, particularly from sexually transmitted diseases
- While it was felt that cholera or typhoid fever occurring among international visitors could easily be dealt with, there was growing concern about the importation of newly emergent and exotic diseases, such as Lassa Fever

Globe & Mail, Jan. 17, 1976, p. 15

'Not one cent' spent for health problems during Olympics

By JOAN HOLLOBON
Millions have been spent on an Olympic stadium but "not one cent" for health care during the games, a Montreal specialist on tropical diseases said yesterday.

Dr. Stanley K. K. Seah said the Olympic organizing committee, COJO, has asked certain Montreal hospitals to cooperate during next summer's Olympic Games, but hospital facilities in the city are already stretched.

Dr. Seah said the Parasitology Research Unit at Queen Mary Veterans' Hospital, which he heads, has not been asked to participate, but "I'm sure a good proportion of people brought to hospital during the games will be people with imported diseases, such as malaria and parasitic diseases... it's going to be a big problem."

Dr. Seah is assistant professor of medicine and medicine at McGill University and on full-time staff at the General Hospital as well as being a consultant at the Montreal Children's Hospital, the Montreal Chinese Hospital and Queen Mary Veterans' Hospital. He is a consultant in internal medicine and infectious diseases, including tropical and parasitic diseases, at the General Hospital.

immigrants and visitors entering Canada from the tropics.

At least 30,000 visitors will probably attend the Olympic Games, many from tropical countries, and none will undergo health checks because they are visitors, not immigrants, Dr. Seah said.

He said governments in Canada should recognize the problem so that adequate services are available. Elaborate centres are not necessary.

"All you need is a good microscope and a good technician," but technicians also time to train. Also, Canadian doctors need further training.

Dr. Seah suggested governmental lack of awareness of the problem stemmed from the minor emphasis put upon it by Canadian medical schools, which rarely devote more than about six hours to parasitic diseases. As a result, graduates rarely think about the possibility of tropical diseases when they are patients in their practices.

Countries smaller than Canada, such as the Netherlands and Belgium, have schools of tropical medicine but Canada has never had colonies and has therefore been less aware of the problem, even though many parasites also exist here, he said.

Dr. Seah said a school of tropical medicine is needed, but would take a long time to plan and develop, whereas existing centres could be upgraded effectively and more quickly.

When the Queen and other important visitors come to Canada, the workers responsible for preparing their food undergo stool tests to make sure they harbor no intestinal parasites, but this should be done routinely to protect everyone. However, existing laboratories which carry out such tests would be swamped, he said.

Dr. Seah said there is no law in Canada that forces anyone to take treatment, even if a parasitic disease is diagnosed. Also, not all parasitic diseases are directly transmissible from one person to another; for example, tapeworms require an animal host, such as cattle or pigs, while schistosomes have an intermediate host in snails. However, there is a theoretical possibility that both hepatitis

Olympic diseases safeguards called inadequate by professor

By STAN OZIEWICZ
Safeguards against infectious diseases that might be brought by visitors to the Olympics this summer have not been developed adequately by the Ontario Government, a University of Toronto sociology professor says.

Stephen Berkowitz, who specializes in health economics and health care delivery systems, and is also a research assistant for the Institute for Policy Analysis, said yesterday it is incredible that plans are not more highly developed seven weeks before the Olympics.

Last week acting Health Minister Bette Stephenson told the Legislature the Ontario Government is considering establishing two isolation units to deal with any cases of lassa fever.

Mr. Berkowitz is unimpressed. "Either they have contracted for the supply of these units or not. I was concerned that the response in the Legislature was so vague."

Lassa fever is a viral disease for which there is no specific treatment. There is a high mortality for serious cases.

John C. Sutherland, a member of the Isolation Working Group, a provincial body of health officials studying units in various parts of the province, said the group has submitted a report to the committee on health care. He said that there have been made tent-like isolation units said there are no isolation units in the world.

"With up to 12

accommodation unit, if someone does enter Canada infected with lassa fever and associates with the Olympic Village, then the possibility of the rapid spread of the disease is a serious

Globe & Mail, May 26, 1976, p. 5



Whither Infectious Diseases...?

- **Aug 1976** – Such a case of Lassa Fever, a 57-yr-old woman, did arrive at Toronto airport from London, UK, sparking an intense effort to contain potential spread in Etobicoke General Hospital
- Fortunately, she ultimately proved not to be contagious



Aug 1976 – “Etobicoke General Hospital for 11 days has been site of a gripping medical drama that has captured attention across the country. In the hospital is Canada's first apparent case of Lassa fever. The case closed hospital to visitors. First three floors reopened yesterday.” (*Toronto Star*)

Globe & Mail, Aug. 12, 1976, p. 1

Woman returning from Europe may be first Lassa fever victim

By JOAN HOLLOBON
Canada's first case of Lassa fever is suspected in a patient at Etobicoke General Hospital.

Lassa fever is a West African disease that kills 30 to 50 per cent of its victims.

The patient is a 56-year-old St. Catharines widow who arrived from England on British Airways Flight 601, which landed at Toronto International Airport at 1:15 a.m. on Aug. 2.

Canadian health authorities are preparing to track down 407 other passengers and 18

crew members from Flight 601, which was a jumbo Boeing 747.

The Centre for Disease Control at Atlanta, Ga., one of only two places in the world capable of making tests for Lassa fever, told the hospital last night that the diagnosis is probable.

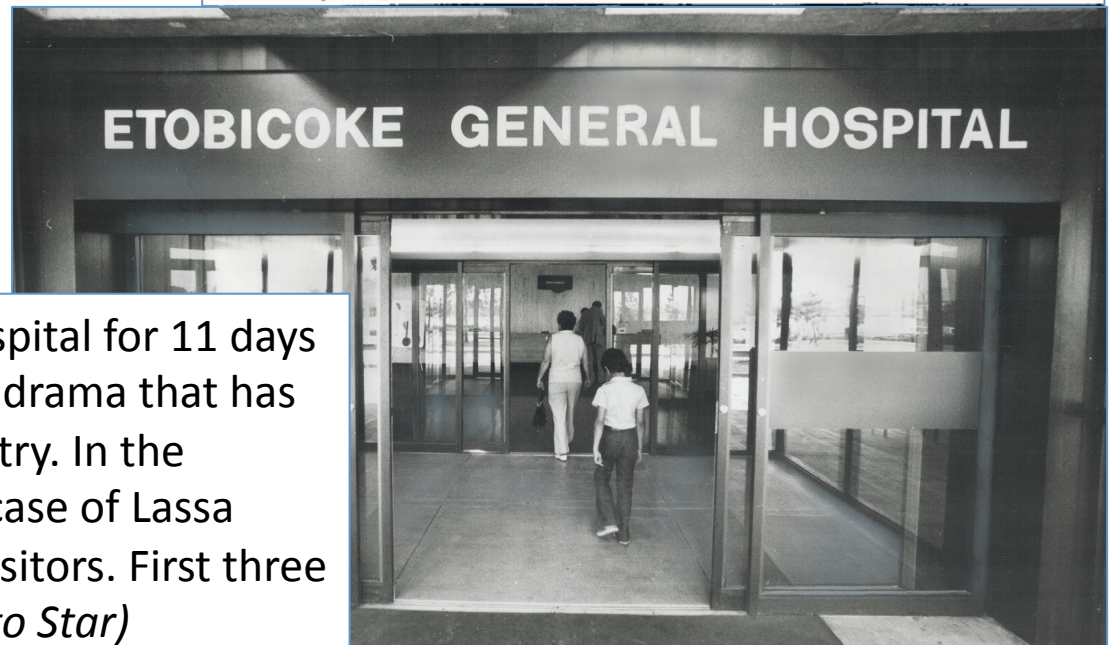
The centre has determined that the woman's blood contains antibodies to Lassa fever, showing she has been in contact with it at some time. To make the diagnosis certain, the Atlanta laboratory must grow the virus.

This cannot be expected before next weekend and only then will it be known if the woman is shedding virus in saliva or urine, creating the danger of infection to others.

The woman is critically ill, but showed slight improvement yesterday.

Dr. Paul O'Brien, pathologist at Etobicoke General Hospital, said that if the patient is shedding virus, “rigorous measures” will be necessary. He said other staff and patients who have been in

LASSA — Page 2



Another Swine Flu Pandemic?

- The Lassa Fever scare took place amidst fears that another major influenza pandemic could strike, further undermining what had become the prevailing perception that infectious diseases were no longer a serious public health threat
- **Feb 1976** - A new strain of Influenza A virus, popularly referred to as “swine flu,” caused an outbreak in among 273 of the 1,321 new army recruits at Fort Dix, New Jersey, with one death
- There were fears that the strain isolated from the fatal case was related to the one responsible for the 1918–19 pandemic, and that the young and middle-aged population had little or no immunity to it

Chicago Tribune, Feb. 20, 1976, p. 15

Chicago Tribune

Fear 1918 killer flu making a comeback

New York News

WASHINGTON—Government scientists are afraid that four cases of influenza at Fort Dix, N.J.—one of them fatal—may signal the reemergence of the same virus that led to 500 million illnesses and 20 million deaths in the worldwide pandemic of 1918-19.

In a speaker telephone conference with reporters here, Dr. H. Bruce Dull of the federal Center for Disease Control in Atlanta said the Fort Dix virus—like the 1918 variety—has properties in common with the swine influenza agent.

“Whether this is significant or is merely a curiosity is unknown at this time,” he said, “. . . but it does have that aura from the past.”

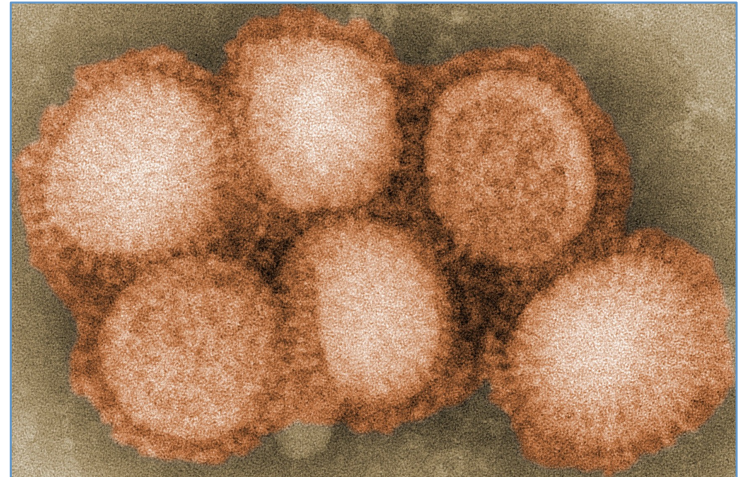
THE PROTEINS IN the jackets of human influenza viruses are constantly changing or mutating as one strain runs its course and then hybridizes with the

jacket proteins of some species of animal flu virus, Dull explained.

What is worrisome, he said, is that—except for two cases known to have had contact with pigs which the Fort Dix cases did not—the swine proteins have not been isolated from human infections since the late 1920s when the 1918 strain entirely disappeared.

Should the new virus, which belongs to the so-called type A family, become a serious public health problem, Dull said, people under 50 probably would face greater risk than older ones because they can have had no previous exposure.

THIS IS A REVERSAL of the usual situation, he said, but does not necessarily eliminate the risk for the elderly since they are the most likely to develop complications if they do come down with the disease.



Another Swine Flu Pandemic?

- **March 1976** – Taking advantage of a rare opportunity to mount a pre-emptive strike, U.S. President Ford committed his government to a unprecedented \$135 million plan to immunize every American citizen, or some 220 million people, against swine flu before November
- In Canada, federal health minister Marc Lalonde, decided to follow the U.S. lead and approved an expedited swine flu immunization program in Canada, ordering some 12 million shots, primarily targeted at the chronically ill and people over 65 years of age
- Connaught Labs was asked to provide vaccine, but limited time and equipment led to a plan to import vaccine in concentrated bulk form from vaccine companies in Europe and Australia, and then Connaught would process, test and fill it

Everyone in U.S. to get flu shots under Ford's plan

WASHINGTON (AP) — President Gerald Ford yesterday announced a \$135-million plan to vaccinate every U.S. resident against a deadly flu virus by next November.

"We cannot afford to take a chance with the health of this country," Mr. Ford said. He emphasized that at this point

Flu kills 23 elderly
Page F3

Concern first arose after a flu outbreak at Fort Dix, N.J., that killed a 19-year-old army trainee Feb. 4 and spread to about 500 other personnel on the post.

That was the first documented evidence that swine flu virus can be transmitted from person to person, although it had been suspected for some time. Isolated cases in the past have been traced to people living on farms with pigs, which frequently suffer from colds and influenza.

12 million flu shots for Canada

OTTAWA (CP) — The Government announced yesterday that selective immunization against swine influenza will be made available to about 12,000,000 Canadians next fall with priority for the chronically ill and people 65 or older.

Health Minister Marc Lalonde said the vaccination program, to cost about \$9-million, would also be made available to people between 20 and 50. Priority in this group will be given to those responsible for essential services.

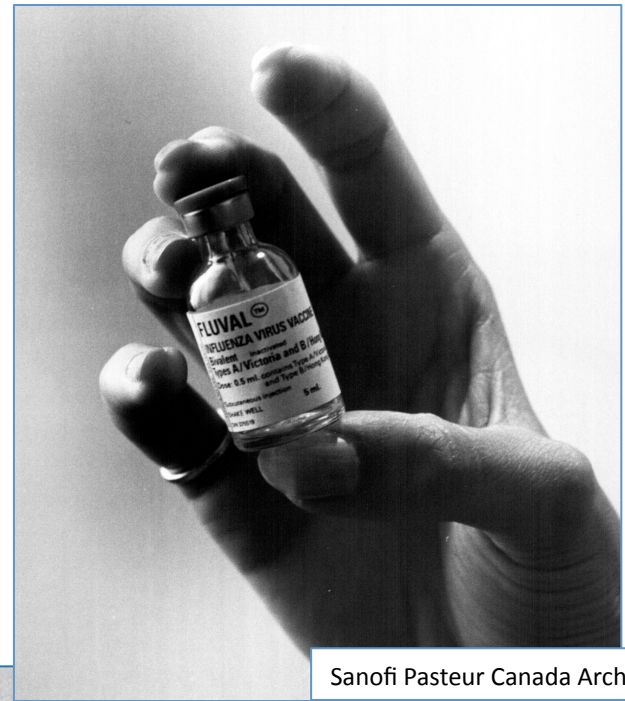
He said in the Commons he is acting on recommendations of the national advisory committee on immunizing agents, a group of experts in epidemiology.



Globe & Mail, March 31, 1976, p. 1

Another Swine Flu Pandemic?

- Fortunately the “Swine Flu” emergency did not materialize
- Nevertheless, this unprecedented initiative encountered numerous obstacles related to production challenges and insurance and liability complications should the vaccine be linked to adverse reactions
- In the end, out of the 10 million doses that were ultimately produced, only about 800,000 received the influenza vaccine in Canada
- **Dec 1976** – A lack of flu cases, coupled with a possible link reported in the U.S. between the vaccine and cases of an ascending type of paralysis known as Guillain-Barré syndrome, brought most Canadian swine flu immunization programs to a halt



Sanofi Pasteur Canada Archives



Post Swine Flu: Connaught Expands into U.S.

- **1976-77** – One of the U.S. producers of influenza vaccine for the “swine flu” initiative was Merrill-National Laboratories in Swiftwater, Pennsylvania (Pocono Mountains)
- This initiative took place in a context of the U.S. vaccine industry undergoing a major change, with several producers leaving the business for a variety of reasons
- **1977** - Merrill-National was one such producer, but in a unique arrangement, the Swiftwater site was donated to the Salk Institute for Biological Studies, which Jonas Salk had established as a non-profit, research institute in La Jolla, California in 1960
- Part of the Swiftwater site would be for the Salk Institute to develop and produce new vaccines

Sanofi Pasteur US Archives

Rx Industry Gears Up For Flu Program

Following President Ford's announcement that every man, woman and child be inoculated against swine influenza during the 1976/77 flu season, the nation's pharmaceutical industry began gearing up for this massive effort. Merrell-National Laboratories expects to be one of the major suppliers of influenza vaccine for this nationwide program.

Public health officials have warned that the entire population under 50 may be susceptible to the swine-like virus that killed 348,000 Americans in 1918-19.

Dr. John Lawlis, Merrell-National Vice President Biological Operations, was one of the four pharmaceutical industry representatives called to meet with President Ford and Drs. Albert Sabin and Jonas Salk prior to the announcement of the President's decision. Merrell has been in close contact with the Bureau of Biologics of the Food and Drug Administration and the U.S. Center for Disease

Control throughout all developments regarding the potential influenza threat.

A swine virus is now in production at our Swiftwater biological facility, where some of the world's most advanced technology is available for the production of influenza vaccine. Vaccine has been provided to the government for use in clinical studies to determine proper dosage. Until the final dosage is established and more production experience with the new virus is gained, we are unable to project the quantity of doses we will be able to supply or when it will be available.

Concern over the possibility of an epidemic of swine type A influenza virus began when eleven cases were reported at Ft. Dix, New Jersey. One of the young Army recruits died and tests of the serum of 308 persons showed that 68 of them had antibodies to the virus.

In 1918 and 1919, an influenza epidemic of as-

tounding virulence swept the world with an estimated 200 million cases of illness and 20 million deaths. About 500,000 of these deaths were in the United States. The virus strain responsible for that epidemic is now believed to have been similar to swine influenza virus.

Doctors speaking at the Ford press conference cautioned that the swine flu vaccine would not prevent patients from catching other strains of the flu. They estimated that the swine vaccine would be 70 to 90 per cent effective. Dr. Albert Sabin noted that people who are allergic to eggs or those who develop hives or asthma from vaccine should avoid the vaccine. Age levels for vaccinating children are being discussed by a pediatric advisory committee, according to Dr. David Sencer, Director of the Center for Disease Control in Atlanta. The logistics of the immunization program are the responsibility of the Center for Disease Control.

inside...

March/April, 1976

MERRELL-NATIONAL

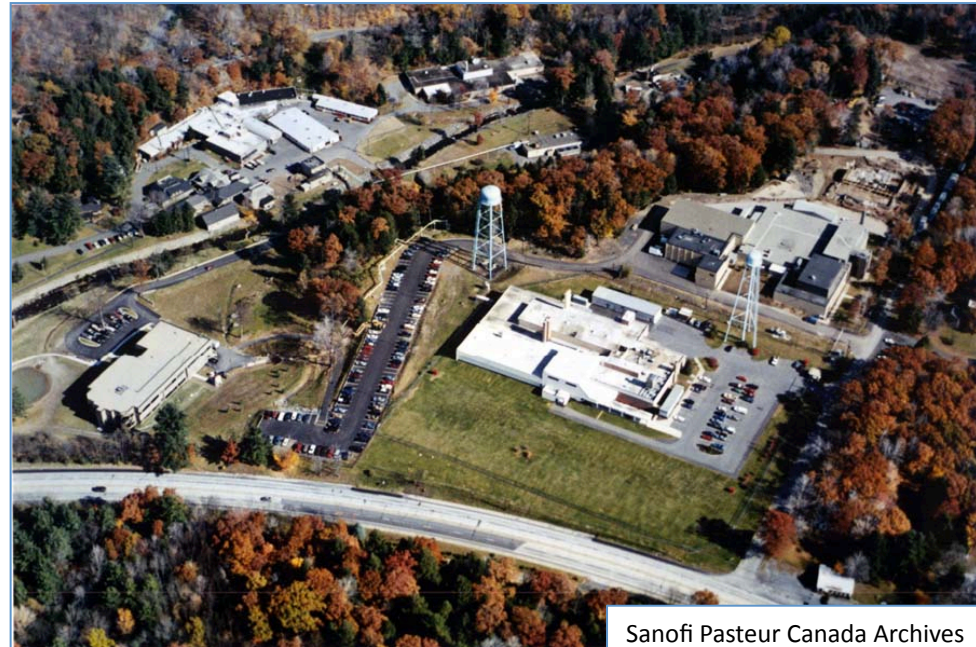
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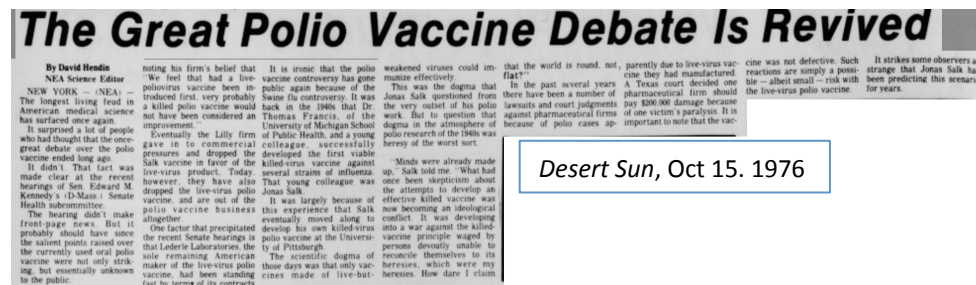
J. Widmer, *The Spirit of Swiftwater* (1997)

Post Swine Flu: Connaught Expands into U.S.

- **1977-78** – As a non-profit, the Salk Institute could not sell such products without losing its non-profit status
- Salk then took advantage of his long relationship with Connaught Laboratories and his desire to increase the availability of the inactivated polio vaccine (IPV) in the U.S
- The Sabin oral polio vaccine had all but displaced IPV, but persistent safety concerns about OPV drove Salk's campaign to ensure Americans had the safer IPV option



Sanofi Pasteur Canada Archives

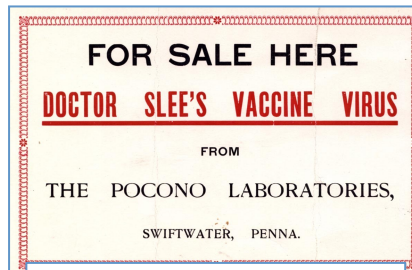


Desert Sun, Oct 15, 1976

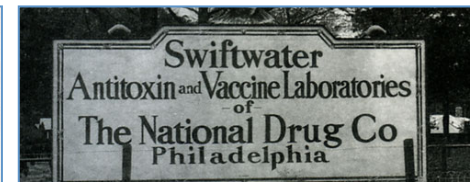
- The idea of Connaught acquiring the Swiftwater vaccine plant also provided an attractive opportunity to distribute other products in the U.S. and take advantage of the site's long experience with other vaccines, such as influenza vaccine

Post Swine Flu: Connaught Expands into U.S.

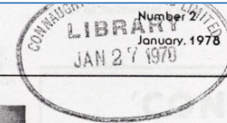
- **Jan 1, 1978** – Connaught purchased the 50-acre Swiftwater site from the Salk Institute for \$1.99 million; became known as Connaught Laboratories Incorporated
- **1897** – Swiftwater site began as a smallpox vaccine farm
- While others prepared smallpox vaccine in the U.S., Dr. Richard Slee set out to prepare it at a higher standard.
- Slee was born of Canadian parents who had migrated to Brooklyn, NY, from Bond Head, Ontario
- **1897-1977** - Swiftwater site would grow, close, be sold and re-open, and undergo many changes before Connaught took over



Sanofi Pasteur Canada Archives



J. Widmer, *The Sprit of Swiftwater* (1997)



In the lobby of the Influenza Vaccine Production Plant at Swiftwater, Dr. Don Metzgar, Vice President of Operations, welcomes the touring group which includes, from lower left clockwise: Kim Aagaard, Marvin Samson, E.S.I., Alun Davies, Douglas Fullerton, Dr. Fred de Hoffmann, Douglas Kendall, Dr. James Sorrentino, H. Anthony Hampson, Dr. John Lawlis and John Scott.

Swiftwater Get-together

On December 6, a tour and get-acquainted luncheon was held at Swiftwater to bring together the representatives of the various corporations involved in the historic change-over of the biologicals establishment.

Representatives of the Salk Institute, Merrell-National, Richardson-Merrell Inc., Connaught and the C.D.C. as well as senior staff of the Swiftwater plant met over an informal luncheon in the Pocono Manor.

Following lunch Mr. John Scott, President of Richardson-Merrell, emphasized what he saw as the positive aspects of the future for Swiftwater site. He stressed that this was a milestone for the company.

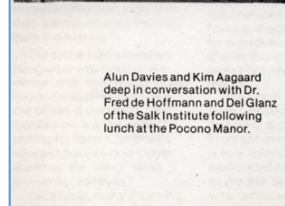
Alun Davies said he was still a bit overwhelmed at the speed with which this unique arrangement was wrapped up and he said he thought there were going to be very exciting years ahead for the new Connaught Laboratories, Inc.

Dr. Frederic De Hoffman of the Salk Institute saw this as a truly historic occasion and a bit of a homecoming. He mentioned the hard work that Howard Campbell of Merrell-National had put into making the whole thing come about.

Dr. Jonas Salk in a very moving and quietly impressive address stressed how truly extraordinary it was for three groups to come together in this way. Dr. Salk was most enthusiastic about the opportunities for all the people involved in this convergence of groups to become a new community whose whole will be much greater than the sum of its parts. He was thrilled about the possibility of multiplying what was already exemplary and what benefits it would bring to the world.



Dr. Jonas Salk and Dr. R.J. Wilson peer closely at the egg-inoculation machine in the influenza plant. This machine inoculates 36 eggs at one time.



Alun Davies and Kim Aagaard deep in conversation with Dr. Fred de Hoffmann and Del Glanz of the Salk Institute following lunch at the Pocono Manor.



Eric Tischler, Manager of Production Services in Swiftwater, demonstrates syringe unit while Dr. Salk demonstrates pretty good dart form with the unit he's holding.



Photos: V.I.P. STUDIOS, MT, POCONO

Contox, Jan 1978

Persistent Polio...

- **1978** – While Connaught’s acquisition of the Swiftwater site was completing, polio re-emerged in Canada
- **April-Aug 1978** - Localized polio outbreaks in Ontario, Alberta and British Columbia raised alarms among doctors and the public, but in the end, the outbreaks further bolstered the profile of IPV and its effectiveness in protecting Canadians from polio

Globe & Mail, Aug. 7, 1978, p. 1

Polio is confirmed in Ontario; Dutch carrier, 17, cited in B.C.

A Norwich man, in hospital since last Monday, has become Ontario's first polio victim in five years.

The Ontario Ministry of Health confirmed Saturday that Reick Van Vliet, 24, in isolation at Victoria Hospital in London, Ont., has type 1 poliomyelitis or paralytic polio, affecting his legs. The last previous case of polio reported was in 1973. Mr. Van

Details on Pages 15 and 17

three suspected cases — all brothers — reported to the medical officers of health in London-Middlesex and Oxford Counties last Monday and Tuesday.

His brother James, 14, is also in Victoria Hospital suffering from paralysis of the legs, although the diag-

The third brother, an adult, is at home under observation.

The ministry discovered the cases after a province-wide investigation last Tuesday following an announcement by Alberta health authorities on Monday that an 8-year-old boy near Lethbridge had polio, the province's first case in 15 years.

5th polio case suspected in Norwich area

By MARINA STRAUSS and KIRK MAKIN

A known carrier previously thought not to be sick with the disease is suspected of being Ontario's fifth polio victim. The person's name has not been released.

Yesterday, two other Ontarians were confirmed as polio victims, bringing the number of confirmed cases in the province to four.

James Van Vliet, 14, whose two brothers have also been stricken, has been confirmed by lab tests as suffering from the disease. A provincial health official would not identify the other victim confirmed yesterday.

All four, however, are from the Oxford County area.

The ministry has also instructed local health authorities in the area to keep those who were in contact with the polio victims under quarantine, whether tests show them to be carriers or not.

In Toronto, more special clinics opened to accommodate the crowds yesterday as Metro residents contin-

ued to line up for polio immunization shots. But at least one municipal health officer is wary of this use of emergency procedures.

"We need a better approach than that to reach a lot more people," said MacDonald Warren, medical officer of health for Etobicoke, which opened up a clinic this week. "It should be done as part of a maintenance program and not in terms of an alarm program."

Polio is "always there," he said, since the disease can be contracted at any time through, for example, rivers and streams where sewage has been released. A disease like smallpox, he noted, is communicated from one person to another through no environmental intermediary, thus making it easier to control.

Concern to get fast protection against polio mushroomed in Metro after two cases of the disease were confirmed in Ontario in the past week and two more are suspected. Two cases have been confirmed in Alberta and one in British Columbia.

All the victims are members of the Netherlands Reformed Congregation whose religious beliefs prohibit vaccination.

Dr. Warren urged everyone to keep track of their immunization records and get regular shots against polio. Health officials say boosters must be obtained every five years for maximum protection.

Dr. Warren suggested that school immunization, rather than being voluntary, should be mandatory which, he said, is the case in some parts of the United States. But he added, "I don't really want to challenge our system. The reasons for doing it our way seem to be valid. I don't like to coerce people."

He said he did not think a blanket obligatory immunization program would work. "I don't think people would accept that regimentation."

Ontario Health Minister Dennis Timbrell said this week he is not prepared to introduce mandatory immunization for Ontario's residents, although he acknowledged that the province's voluntary immunization

program has "not been very successful."

Meanwhile, seven clinics operating in Metro were bustling yesterday as most reported more people than the day before clamoring to get shots. North York's three clinics received 1,700 people on its first day, a spokesman said, and the Etobicoke clinic probably topped the 247 people who showed up Tuesday, Dr. Warren said. The city of Toronto is also operating three clinics.

"It's mostly adults coming," said Christine Denn, assistant supervisor at the Parkdale district office at 1115 Queen St. W. Many hadn't had a booster shot since the last mass vaccination program in 1955-56, she said.

"This really hit home," said Miss Denn, whose clinic yesterday was expecting more than the 180 people who got shots on Tuesday. "Polio is something very concrete, very real... Even with diphtheria, most people weren't around. They don't remember the suffering. But they do with polio."

Globe & Mail, Aug. 10, 1978, p. 5

Persistent Polio...

- **1978** – After the polio scare had passed, it was clear that all 11 paralytic polio cases (eight in Ontario, one in Alberta and two in British Columbia) involved individuals who, for strict religious reasons, had not been immunized against polio
- Each Canadian case could be traced to a recent polio outbreak in the Netherlands which had resulted in 110 cases and one death among members of the same religious group, all of whom had refused the vaccine

- In the Netherlands and in Canada, no cases occurred outside of this religious group, despite regular travel between both countries
- The three polio immunization strategies — OPV-only in B.C.; IPV+OPV in Alberta; and IPV-only in Ontario and in the Netherlands — each proved equally effective in controlling the outbreaks

Poliomyelitis outbreaks in the Netherlands and Canada

The outbreaks of poliomyelitis due to the type 1 poliovirus in the Netherlands and in three Canadian provinces (Ontario, Alberta and British Columbia) that occurred between April and August 1978 revealed important epidemiologic and laboratory data that will undoubtedly enhance our knowledge in the prevention of this disease.¹ The epidemic in the Netherlands began in mid-April and lasted 6 months. Of the 110 cases reported 80 were of paralytic poliomyelitis; one death occurred.² The ages ranged from less than 1 year to 14 years in 65 patients and from 15 to 44 years in 45 patients. All the patients had refused vaccination for religious reasons.

In December 1978 I and my colleagues reported the data available at that time.¹ Since then the data have been updated. Of six cases of paralytic poliomyelitis that occurred in Norwich, Ont. five were from one family; four brothers and one sister, aged 14 to 25 years, were affected (R. Andreychuk: personal communication, 1979). The sixth patient, a 15-year-old boy, was a friend of the family. Coxsackievirus A9 as well as type 1 poliovirus were cultured from throat and rectal swabs from the girl and the friend of the family. The onset of illness in each case was in late July or early August 1978. In Lethbridge, Alta. paralytic poliomyelitis occurred in an 8-year-old boy in July 1978,³ and in the upper Fraser Valley in British Co-

the virus strains isolated from patients with and patients without paralysis in Canada and the Netherlands were found to be similar in their antigenic composition and were considered wild.¹

Although two types of poliomyelitis vaccine are available in Canada, the recent outbreaks clearly demonstrate that paralytic poliomyelitis has by no means been eradicated. As long as there are members of the population who are not adequately immunized, wild strains of poliovirus will continue to circulate. It is reassuring that in both outbreaks only unvaccinated persons were affected. The epidemic did not spread to the surrounding communities either because the prompt oral administration of poliovirus vaccine, in monovalent type 1 or trivalent form, blocked the spread of the epidemic virus, or because the immunity of the population, induced by either orally administered vaccine or inactivated poliovirus vaccine administered subcutaneously, proved to protect children and adults. The three routine immunization schedules for infants and children used in the past (orally administered vaccine in British Columbia, inactivated poliovirus vaccine in Ontario and the Netherlands, and inactivated poliovirus vaccine followed by orally administered vaccine in Alberta) were equally effective in the control of the epidemics.

With the current poliomyelitis immunization programs periodic sero-

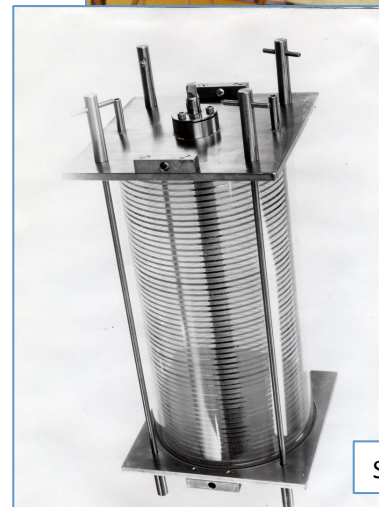
antibodies to all three serotypes of poliovirus. Serologic surveys performed in 1971-72 in New Brunswick⁴ and in 1976 in Manitoba⁵ demonstrated that 83% to 97% of children and young adults had antibodies to the various poliovirus serotypes. Preliminary data from the Canada health survey conducted from May to December 1978 on approximately 2000 blood samples collected randomly from children and adults aged 6 to 44 years in all provinces indicate that 90%, 95% and 89% of the serum samples contained antibodies to types 1, 2 and 3 respectively (T. Stephens: personal communication, 1979). An even higher percentage of samples from persons in Ontario, Alberta and British Columbia contained antibodies to type 1 poliovirus (91% in Ontario and Alberta, and 94% in British Columbia). Thus, the serologic data confirmed the epidemiologic finding that the "herd immunity" induced by immunization prevented the spread of epidemic virus throughout the population. However, this finding should not result in recklessness or complacency in immunization programs. On the contrary, efforts by professional groups and government agencies should be renewed to eliminate the susceptibility of nonvaccinated Canadians through extensive immunization. This goal may be achieved with intense routine immunization programs for infants and children and with selective immunization of non-

Canadian Medical Association Journal, Apr. 21, 1979, p. 905

JOHN FUREZ, MD
Director, bureau of biologics

Canadian Polio Vaccine Progress

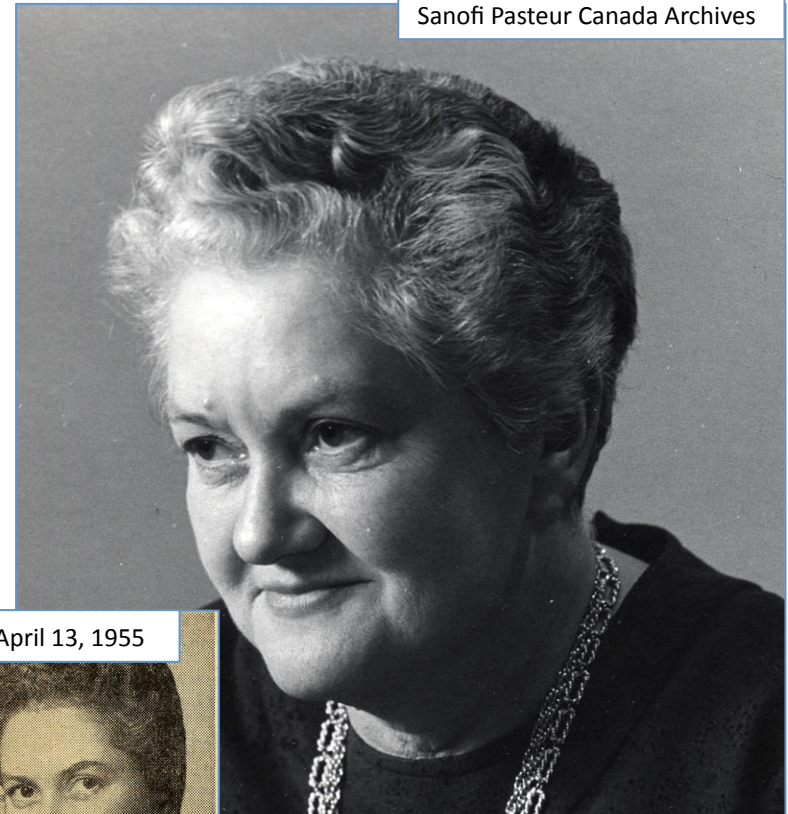
- While Canada experienced what would be its last polio scare, Connaught had upgraded its Salk polio vaccine production technology
- **1970** - Work began at on a new technology for the large-scale cultivation of tissue cultures, eventually known as the Multiple Surface Cell Propagator, or MSCP.
- Developed by Wolf Parisius at Connaught, the MSCP was based on an apparatus in which the cells are grown on narrowly spaced glass discs mounted on a steel shaft and turning inside a glass cylinder both ends of which are sealed with steel plates



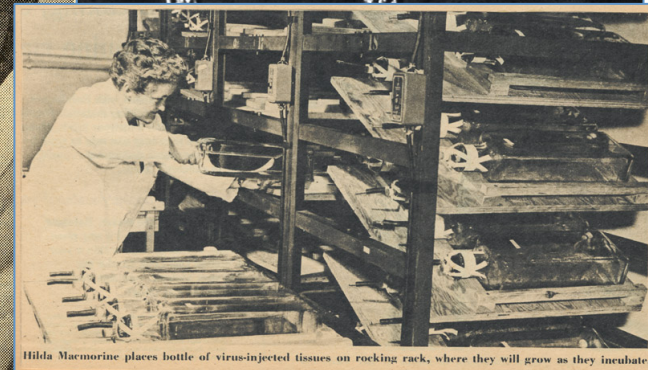
- One MSCP unit had a growth surface area equal to between 31 and 55 of the Povitsky bottles used in the original “Toronto Method” of rocking bottle cultures

Canadian Polio Vaccine Progress: Hilda Macmorine, Polio Pioneer

- During the 1970s, overseeing Connaught's polio vaccine production – Salk IPV and Sabin OPV – and R&D into production improvements, was Dr. Hilda M.G. Macmorine
- Born in 1916, Hilda's long career at Connaught was defined by her energetic performance and inventive mind
- She ably rose through the ranks of the company, starting as a technical assistant in Media Production in 1940, to overseeing all viral vaccine production in the 1970s



Globe & Mail, April 13, 1955



Hilda Macmorine places bottle of virus-injected tissues on rocking rack, where they will grow as they incubate.

Miss H. M. G. MacMorine, a senior research assistant at Connaught Laboratories, collaborated with Drs. Rhodes, Farrell and others in the painstaking search for a fluid in which polio virus would thrive.

Weekend Magazine, April, 1954,

Canadian Polio Vaccine Progress: Hilda Macmorine, Polio Pioneer

- **1955** - Hilda earned a Ph.D. in the midst of the busiest period in Connaught's history.
- She was a key player in the original polio vaccine work, overseeing the preparation of "Medium 199," working with Dr. Leone Farrell on the "Toronto Method", and was closely involved with designing Connaught's Salk polio vaccine production facility
- Her resourceful nature and diligent work ethic would soon lead to her appointment as head of the entire polio vaccine production unit until her retirement in 1981



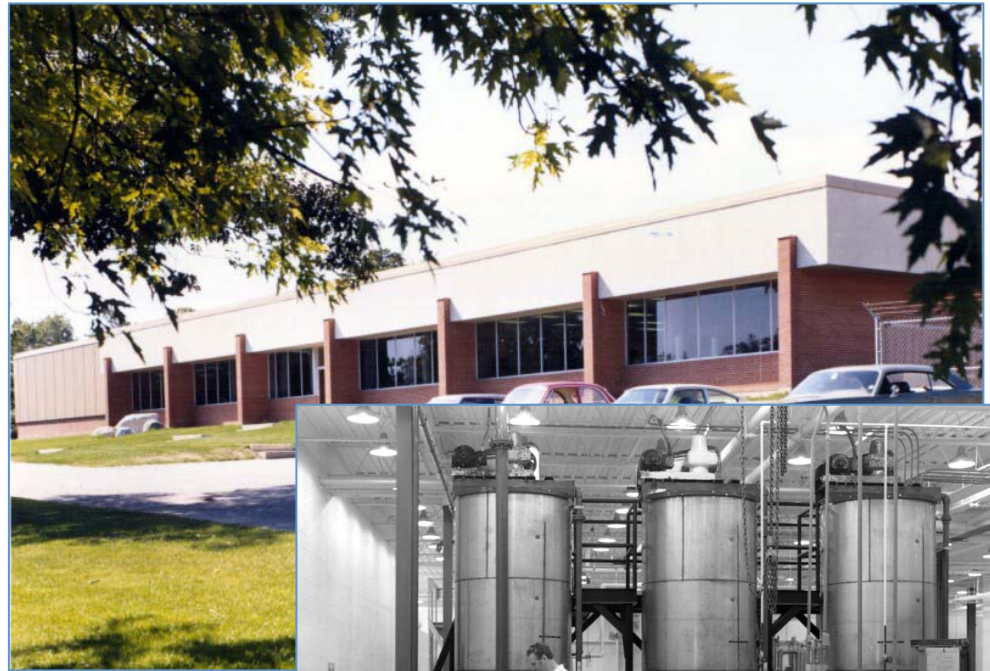
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Contox, April 1981, p. 4

Connaught's Transformation: The End of Insulin...

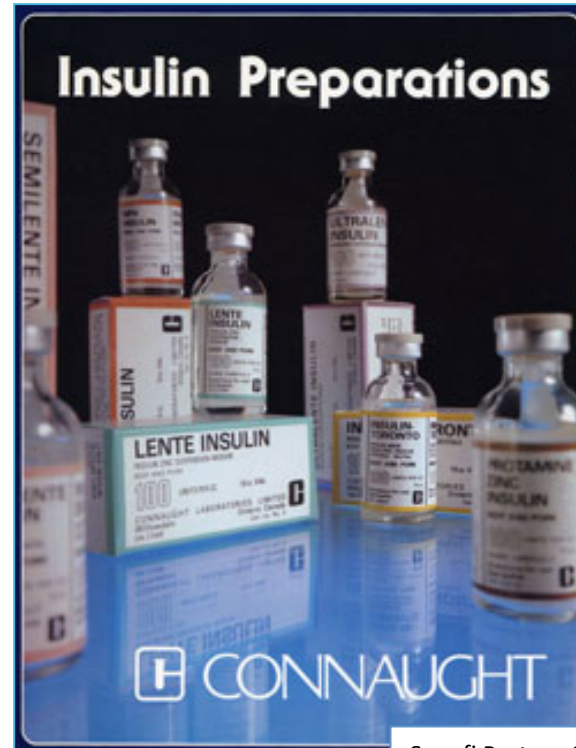
- **1972-84** - The process started by the University of Toronto's sale of Connaught Labs reached a major milestone with insulin
- **1970-71** – The decade began on a high note, with the opening of the “Defries Building”, a modern new facility at Connaught's Dufferin Division site for the production of insulin, on the eve of major celebrations of the 50th anniversary of its discovery



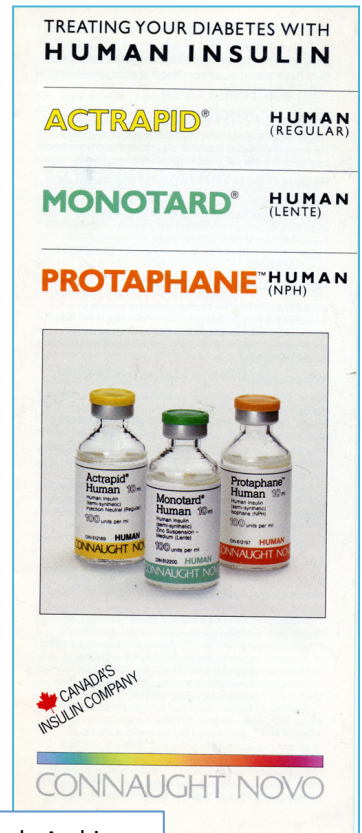
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Connaught's Transformation: The End of Insulin

- **1970s-80s** - Connaught faced increased economic pressures that forced insulin price increases, along with competitive pressures generated by advances elsewhere in the development of synthetic human forms of insulin
- **April 1980** - Eli Lilly entered Canadian Insulin market, ending Connaught's 57-year monopoly
- **Jan 1984** - With growing global insulin competition "forcing Connaught up against a wall," the Labs formed an alliance with Novo Laboratories of Denmark, which held 40% of global insulin market



Sanofi Pasteur Canada Archives



- Novo leased Connaught's Insulin Plant, while a new company, Connaught-Novo, managed insulin distribution and further research into new insulin products
- Connaught's direct role in insulin production, which began in 1922, thus ended...

A New Plague Emerges...

- **1981-84** – While the first years of the 1970s were characterized by a confidence that the infectious diseases war had been essentially won, as the 1980s began it was clear that not only had the war not ended, the emergence of AIDS would take the infectious disease war to a new level
- However, the story of this new war, the Canadian public health and biotechnology response to it, and how it continued through to SARS some 20 years later, will be told in the next class...

Syndrome reduces immunity in gay men

BOSTON (AP) — A wave of pneumonia and cancer that is killing homosexual men across the United States has been traced to a mysterious breakdown in the body's disease-fighting system that turns harmless germs into killers, U.S. researchers say.

The condition — so new it does not have a name — has been reported in 180 people in 15 states since it was first spotted last July, and 75

Globe & Mail, Dec. 10, 1981, pT10; Aug. 11, 1981, p. 5

Young gays sensitive to rare cancer: study

By JOAN HOLLOBON

Young homosexual men appear susceptible to a rare cancer generally found in older men or in people taking drugs that suppress their body defence systems, according to studies in New York, Los Angeles and San Francisco.

This association has not yet been found in Toronto, but continent-wide studies are planned.

Dr. Bijan Safai, chief of dermatology at Memorial Sloan-Kettering Hospital in New York, said in a report in The Medical Post that his team has seen 10 cases of Kaposi's sarcoma in homosexual men, since the first case was diagnosed 18 months ago.

This compares with a total of 40 cases in non-homosexuals of all ages in six The New York Cancer Registry

causing it to swell and become visible.

"Often people will have them for a couple of years before they see a doctor. You know, if you get a bruise it sometimes develops some depth and takes a long time to go away? That's really what it (a Kaposi's tumor) looks like, so people really aren't concerned for long periods of time," Dr. Quirt said.

He said people generally seek medical advice because more of the skin growths develop, a characteristic of the tumor.

Dr. Quirt said that fortunately Kaposi's sarcoma is generally very sensitive to radiation treatments so anti-cancer drugs are usually unnecessary. In the rare cases where a growth progresses after radiation

Globe & Mail, March 13, 1982, p. 18

Disease an epidemic: MD

MONTREAL (CP) — A new syndrome primarily affecting homosexual men has reached epidemic proportions, says an immunologist attending a conference of the American Academy of Allergy here this week.

"It's like nothing we've ever seen before," said Dr. Andrew

spotted 2½ years ago now have died, he added, and the overall mortality rate is more than 40 per cent.

Dr. Saxon said examination of the patients' T-cells — the cells that normally fight off viruses, funguses and some unusual cellular parasites — shows they

tis carinii pneumonia), an unusual kind of skin cancer (Kaposi's sarcoma), and other uncommon diseases.

There is no treatment for the underlying problem, and the physician can only treat the infections as they occur. But most viruses are not treatable, and

THE GLOBE AND MAIL, THURSDAY, JUNE 9, 1983 25

AIDS spreading, MDs say

The deadly new disease Acquired Immune Deficiency Syndrome — AIDS — is spreading in Canada, says a report in the Canadian Medical Association Journal.

There now are 25 confirmed cases and signs that incidence of the disease is accelerating here as it has in the United States, say doctors from the Quebec AIDS Committee, Comité SIDA du Québec. There now are more than 800 confirmed cases in the United States.

In Canada, cases of AIDS have been reported in Toronto, Montreal, Windsor and Vancouver.

With AIDS, the body's defence mechanisms break down and are unable to cope with viral and bacterial attacks they normally would fend off easily. The researchers say more than 70 per cent of AIDS victims have died within two years of being diagnosed.

Noting that in the past three years there has been an exponential increase in the number of cases reported, the researchers say Canadian doctors should be aware of the signs and symptoms of the disease.

"Vigilance by physicians is of utmost importance," says the committee, led by Dr. N. J. Gilmore of Montreal's Royal Victoria Hospital.

They point out that while AIDS can be difficult to recognize in its early stages, "failure to recognize it or to start treatment promptly can be catastrophic."

AIDS has so far been confined to certain groups in the population, the researchers say. Male homosexuals and bisexuals account for 75 per cent of cases, intravenous drug abusers for 13 per cent and Haitian immigrants to North America for about six per cent.

—CP