The Evolution of the Determinants of Health, Health Policy, and Health Information Systems in Canada

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Abstract

The history of determinants of health in Canada influenced both the direction of data gathering about the health of Canadians and government policy to improve the health of Canadians. Two competing movements marked these changes. Health promotion grew out of the Lalonde Report in the 1970s. It recognized that determinants of health went beyond traditional public health and medical care and argued for the importance of socioeconomic factors. Research into inequalities in health was led by the Canadian Institute of Advanced Research in the 1980s. It produced evidence of health inequality along socio-economic lines and argued for policy efforts in early child development. Both movements have shaped current information gathering and policies that have come to be called "population health."

Introduction

In Canada, the notion of determinants of health was derived from the work of Thomas McKeown, who influenced two somewhat different movements which together are now known as "population health." Health promotion, the earlier of these movements, was first articulated by Hubert Laframboise in the widely circulated Lalonde Report of 1974.[1] The second, research into inequalities in health, grew out of the efforts of Fraser Mustard[2] and the Canadian Institute of Advanced Research.[2] Both have had a strong effect on how health information is gathered and disseminated in Canada, but have had a more limited influence on health policy. In this paper, we attempt to describe these movements and their information and policy consequences.

McKeown was active after the National Health Service in England had been established for more than a decade. The original promise of universal health care coverage to improve the health of the population and eventually reduce demand on services was not fulfilled: increased access to medical services resulted in increased demand. McKeown argued that there were a large number of influences on health apart from traditional public health and medical services, and that these influences should be considered in framing health policy and in any effort to improve the health of the population.[3]

Health promotion

The Lalonde Report marks the first stage of health promotion in Canada. It used McKeown's ideas to develop a framework called "the health field concept" and applied it to analyze and graphically display the then current state of health of Canadians. It concluded with a large number of health policy recommendations formulated using this new approach.

Determinants of health. As far as we know, McKeown was the first to use the term "determinants of health".[4] The Lalonde Report identified four major components of the health field concept: Human Biology, Health Care Systems, Environment, and Lifestyle.[1, pp.31-34] It proposed health education and social marketing as the tools to persuade people to adopt healthier lifestyles.

Health promotion advocates quickly recognized that an excessive emphasis on lifestyle could lead to a "blame the victim" mentality. Smoking, for example, was not merely a matter of personal choice, but also a function of one's social environment. As a result, physical and social environments were differentiated, with a growing emphasis placed on the latter. By 1996, as more distinctions and additions occurred, the four determinants of health described in the Lalonde Report grew to twelve.[5]

The Lalonde Report called attention to the fragmentation of responsibility for health. "Under the Health Field Concept, the fragments are brought together into a unified whole which allows everyone to see the importance of all factors including those which are the

responsibility of others".[1, pp.33-34] It was ahead of its time in identifying the need for intersectoral collaboration and recognizing that to properly address the determinants of health, multiple interventions are needed – a combination of research, health education, social marketing, community development, and legislative and healthy public policy approaches.

Policy response. Like earlier movements, health promotion promised to prevent illness and reduce the ever increasing demands for and costs of health care services: "If the incidence of sickness can be reduced by prevention then the cost of present services will go down, or at least the rate of increase will diminish".[1, p.37] Governments, worried by the escalating costs of health care, gratefully received and largely adopted the recommendations of the Lalonde Report.[6, p.8]

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Information systems. The graphic display of causes of death of Canadians by sex and age[1, pp.75-77] in the Lalonde Report was a forerunner of the *Report on the Health of Canadians.*[7] Statistics Canada instituted risk factor surveys such as the National Population Health Survey.[8-13] The National Longitudinal Survey on Children and Youth[14] was also developed. The growing emphasis on wellness rather than disease led to the inclusion of such indicators as self-reported health status. The first large linked databases were established at the Manitoba Center for Health Policy.

Comments. Multiple interventions, including public policies and legislation, had positive outcomes:

- Through health education messages and restrictions on advertising, the national smoking rate dropped from about 50% to around 25%.[15]
- Legislation increased the use of seatbelts[15] and bicycle and motorcycle helmets.[16]
- Drunk driving decreased in response to both education and stricter enforcement of impaired driving laws.[15]
- Diets changed – less red meat, more fish, less fat, more fruit & vegetables.[15]
- Physical exercise increased in response to nutritional information (e.g. the Canada Food Guide[17]) and exercise promotion (e.g. ParticipACTION[i18]).

During the late 1980s, health promotion adopted a 'settings' approach which concentrated on improving health in schools, workplaces, and communities. "Empowerment" became a central concept for the promotion of good health. This approach focused more on process than outcome, and while it enjoyed some success (notably in the healthy communities and cities movements, which continue to function in some jurisdictions), the lack of measurable outcomes and means of evaluating the effectiveness of the programs attracted substantial criticism.

[i] "ParticipACTION was established in 1971 by the Government of Canada (Health Canada) to support government health priorities--particularly the promotion of healthy, active living—in unique and innovative ways. The organization was strategically incorporated outside of government." www.participaction.com
It was shut down in 2000 due to financial difficulties.

During the early 1990s, when increasing health care expenditures led governments to looking for ways to cut health care spending, health promotion came under negative scrutiny:

- Health promotion policies did not generate the anticipated savings in health care costs because new therapeutic and diagnostic technologies inexorably drove costs up.
- Health promotion messages had better uptake among the more advantaged sectors of society, and consequently, inequities in certain risk behaviors (e.g. tobacco, diet, physical activity[15]) actually worsened.[19]
- Other unexpected developments resulted in new problems. Although people exercised more, they also spent more time watching television and driving in vehicles, and while the nature of their diet improved, people ate more. Similarly, after an initial decline, smoking rates leveled off at about 25%.[7]
- There was a growing perception that health promotion delivered inadequate 'bang for the buck', especially as certain programs (e.g. ParticipACTION, and the Canada Food Guide), after initial successes, failed to make continued improvements.

Price Waterhouse made a negative evaluation of the federal health promotion program in 1989. They concluded that, "the paradigm which envisages health as the product of 'anything and everything' does not readily lend itself to being actioned...".[20]

Inequalities in Health Research- (ca 1990- present)

Health inequities along social class lines have been an ongoing feature of epidemiological studies. Edwin Chadwick's mortality tables of 1842 indicated that child mortality could be correlated with the level of the father's occupation.[21] Many health outcomes can be seen as gradients when plotted against a wide array of socioeconomic determinants. In the case of cancer and heart disease, better health status has been closely correlated with socio-economic variables.[22]

Like Laframboise and his staff, Fraser Mustard and researchers at the Canadian Institute for Advanced Research (CIAR) were influenced by Thomas McKeown. McKeown had argued that health gains in the 19th and 20th centuries were largely attributable to reduced family size and better nutrition. The CIAR and others extended this analysis to identify social and economic factors that powerfully affect health of individuals and communities or nations.[23]

Why Are Some People Healthy and Others Not?[2] uses epidemiological evidence to explain how different factors influence health and concludes that social and economic environments have a far stronger impact on health than individual behaviors. The following are examples of studies that reach similar conclusions.

- The Whitehall study[22, 24] showed that the pronounced differences in disease incidence and mortality across all income and social groups were caused by factors in addition

to lifestyle and genetic makeup. They showed that decision making power and control are important mediators of health inequalities.[24]

- Economic development and the distribution of wealth in a society are important determinants of the health of the population.[25]
- Aspects of the workplace environment, both from a physical perspective and in terms of decision-making latitude (control), are important health determinants.[22]
- Early development is extremely important for a child's future schooling, higher education, employment, and health.[26] It is also critical in the development of future coping skills.[27]

The term "population health" was introduced by Mustard and the CIAR, and was for some time the subject of debate. In the end, Health Canada and many provincial governments assumed the term for much of their health promotion activity, although the main emphasis was not on reducing inequalities in health. Recently, research into inequalities in health has tried to incorporate many of the principles of health promotion, and the term 'population health' is increasingly being used to refer to a more unified approach.

Determinants. The inequalities in health researchers argue that not all determinants of health are of equal importance. Marmot and others emphasize a subset of determinants that link such areas as control over work to health status.[22]

Policy response. The health promotion movement stressed the need for intersectoral collaboration if policies were to deal with the many determinants of health. In Canada, there are initiatives that can be traced to these combined ideas about population health. Many of them have been initiated through the system of joint federal provincial/ territorial committees:

- All provinces have set health goals that encompass the varied determinants of health:[28] Their objectives include improvements in working and living conditions, health behaviors, early child development, access to effective health care services, and aboriginal health
- All provinces except Ontario have regionalized the delivery of health services[29] (a policy recommended by Lalonde) and focus more on addressing the broad determinants of health.[5] Regional health care managers are engaging in intersectoral activities to address the multiple determinants. Edmonton is working with the Board of Education to address obesity.[30] Montreal's health department is collaborating with universities[31] and municipal officials to translate research knowledge about child and family poverty into action).
- Funding for research into population health has increased considerably. In 1999, the Canadian Population Health Initiative received $20M over 4 years to fund further population health research. More recently, the Canadian Institutes for Health Research (CIHR) has included population health as one of its four 'pillars' which also include biomedical, clinical, and health services research. Five of its thirteen institutes have a clear population focus: population and public health, aboriginal health, gender

and health, aging and health, and child development. $70 millon has been provided from Human Resources Development Canada (HRDC) for the assessment of income supplementation for unemployed single parents through a randomized controlled social experiment.[32]

- The Child Tax Benefit illustrates the government's recognition of the effects of poverty on children and families.[33] The importance of early child development has been addressed through the Children's Agenda which attracted $2B in federal funding in 2000.[34] Quebec has introduced a subsidized day care program with the specific objective of making professional early childhood education available to all children.[35, 36] Several jurisdictions are monitoring the adequacy of children's early development by means of early development indicators.[37, 38]
- Where programs such as tobacco reduction have broadened their strategies to accommodate a population-based approach (e.g. restrictions on advertising, package warnings, restrictions on sales to minors, restriction of smoking in public, and work places and cessation programs), there has been some success. The Canadian smoking rate has dropped to 20%, and is even lower in British Columbia and Ontario.[39] Several academic institutions have responded to these positive changes by establishing institutes or centers for population health research.

Information systems. There are now regular reports on population health and the determinants of health at the regional, provincial, and national levels (Capital Health Annual Report,[40] such as the BC Report on the Health of British Columbians,[41] Report on the Health of Canadians,[7] and Maclean's Health Reports.[42])

Several large, linked (and in some cases, longitudinal) databases have been established nationally as well as in British Columbia, Manitoba, and Quebec, and have created powerful sources for population health research. The Canadian Community Health Survey (formerly the National Population Health Survey} has been enhanced to provide more locally relevant data. The National Longitudinal Study on Children and Youth, funded by HRDC, is another important source of data for understanding population health and developing policies based on the new-found understanding. The Canadian Institute for Health Information, in partnership with Statistics Canada, has developed a Population Health Indicators Framework:

INSERT TABLE 2 HERE

There are now data to support some 80-90 indicators across all four domains of this framework at the regional or provincial level. These data have been published as part of the *Report on the Health of Canadians* prepared under the auspices of the Federal Provincial Territorial Committee on Population Health (FPT ACPH) and *Health Care in Canada* (CIHI and StatsCan) 2000 and 2001 (available electronically at the CIHI and STC websites). These data, because they are standardized, support the development of reports on population health and the health care system across Canada at both the regional and provincial level. They also allow for international comparisons to be made of the health of the Canadian population and the performance of the Canadian health care system.

Comments. There is a great deal of interest, activity, and resources being deployed in pursuit of population health concepts. To some extent, this is due to a bandwagon effect that has surrounded the term "population health." But despite several modest successes (tobacco, child development), the population health approach, while providing a deeper understanding of the socioeconomic gradient in health status, has not yet resulted in adequate corresponding policy development to effectively reduce inequalities in health.

At the time of the Lalonde Report and the Ottawa Charter, Canada was among the countries leading the world in health promotion. Over the past decade, as the public dialogue has been dominated by concerns about the costs and delivery of health care services, inadequate attention has been paid to important emerging health issues, especially those that relate to inequalities. For example, family poverty, epidemic obesity, early childhood development, and aboriginal peoples' health are major health issues for which there is no coordinated national plan. In the meantime, countries like the UK and Sweden have developed plans to address many of these issues and others such as teen age pregnancy, education, unemployment, access to health care, housing, and crime. This has been achieved through the involvement of other government departments such as education, justice, economic development, finance, housing, and social security.

Several recent Canadian health commissions[43-46] have emphasized the importance of addressing the determinants of health and incorporating population health concepts and approaches into the health care system in order to improve the health of individuals and

communities and reduce inequities. The Commission on the Future of Health Care[46] will soon release its recommendations for improving the public health care system. This will be the latest in a long series of reports following a series of provincial commissions addressing problems in health care. It should clear the way for the public and the policymakers to turn their attention towards some of the neglected health issues mentioned above. With effective political leadership, collaborative efforts between government, the private sector, and voluntary organisations, and the development of policies based on the best available evidence, Canada may once again join the countries leading the way in health promotion and population health.

References

1. Lalonde M. A New Perspective on the Health of Canadians. Ottawa: Minister of Supply and Services; 1974.
2. Evans RG, Barer ML, Marmor TR, editors. Why Are Some People Healthy and Others Not?: The Determinants of Health of Populations. New York: Aldine de Gruyter; 1994.
3. McKeown T. The Role of Medicine: Dream, Mirage or Nemesis? Oxford: Basil Blackwell; 1979.
4. McKeown T. An Interpretation of the Modern Rise in Population in Europe. Population Studies 1972;XXV11(3).
5. Nickoloff B, Health Canada. Towards a Common Understanding: Clarifying the Core Concepts of Population Health: A Discussion Paper. Ottawa: Health Canada; 1996.
6. Glouberman S. Towards a New Perspective on Health Policy. Ottawa, Ontario: CPRN; 2001.
7. Federal Provincial and Territorial Advisory Committee on Population Health. Report on the Health of Canadians. Toronto: Meeting of Ministers of Health; 1996.
8. Statistics Canada. National Population Health Survey; 1994.
9. Statistics Canada. National Population Health Survey; 1996.
10. Statistics Canada. National Population Health Survey; 1998.
11. Statistics Canada. National Population Health Survey; 2000.
12. Statistics Canada. National Population Health Survey; 2002.

13. National Population Health Survey. Ottawa: Statistics Canada and Health Canada.

14. National Longitudinal Survey on Children and Youth. Ottawa: Human Resources Development Canada and Statistics Canada.

15. Groff P, Goldberg S. The Health Field Concept Then and Now: Snapshots of Canada.; 2000.

16. Statistical Report on the Health of Canadians. Charlottetown: Federal, Provincial and Territorial Advisory Committee on Population Health; 1999.

17. Health Canada. Canada's Food Guide to Healthy Eating.

18. Participaction. Participaction:Our History and Evolution; 1971-.

19. Wilkinson RG. Testimony before the UK Select Committee on Health. London; 2000.

20. Discussion Paper on Phase I of a Study of Healthy Public Policy at Health and Welfare Canada. Ottawa: Policy, Planning and Information Branch, Program Evaluation Division; 1992. p. 24, as quoted in McKay 2000.

21. Chadwick E. Report on the Sanitary Condition of the Labouring Population of Great Britain. London: W. Clowes, for H.M. Stationery Off; 1842.

22. Marmot MG, Bosma H, Heminway H, Brunner E, Stansfeld S. Contribution of Job Control and Other Risk Factors to Social Variations in Coronary Heart Disease Incidence. The Lancet 1997;350:235-39.

23. McKay L. Health Beyond Health Care: Twenty Five Years of Federal Health Policy Development. Ottawa: CPRN; 2000.

24. Marmot MG, Kogevinas M, Elston MA. Social/Economic Status and Disease. Annual Review of Public Health 1987;8:111-35.

25. Wilkinson RG. Unhealthy Societies: The Afflictions of Inequality. London: Routledge; 1996.

26. Jenkins J, Keating D. Risk and Resilience in Six and Ten Year-old Children. Toronto: University of Toronto.

27. Keating DK, Hertzman C, editors. Developmental Health and the Wealth of Nations. New York: The Guildford Press; 1999.

28. Toward a Healthy Future: Second Report on the Health of Canadians. Ottawa: Federal, Provincial and Territorial Advisory Committee on Population Health, Health Canada, Statistics Canada, CIHR, CHP; 1999.

29. Health Care in Canada 2000: A first annual report. Ottawa: Canadian Institute for Health Information; 2000. p. 72.

30. Capital Health. The Supersize Generation: Responding to the obesity epidemic. Paper presented at: Strategic Planning Workshop; June 27, 2001; Edmonton.

31. Department of Public Health, Montreal-Centre. Paper presented at: Seminar to Launch the Metropolitan Monitoring Centre on Social Inequality and Health; May 29, 2001; Montreal.

32. Morris P, Michaelopoulos C. The Self-Sufficiency Project at 36 Months: Effects on children of a program that increases parental employment and income. Ottawa: Social Research and Demonstration Corporation; 2000.

33. Equality, Inclusion and the Health of Canadians - Submission to the Commission on the Future of Health: Canadian Council on Social Development; 2001.

34. Investing in Children and Youth: A National Children's Agenda: National Children's Alliance; 1998.

35. Rapport d'enquete sur les besoins des familles en matière de services de garde éducatifs. Quebec: Institut de la Statistique Quebec; 2001. p. 108.

36. Social Inclusion Through Early Childhood Education and Care (Working Paper Series): The Laidlaw Foundation; 2002.

37. Helping Communities Give Children the Best Possible Start. Ottawa: Human Resources Development Canada; 1999.

38. Ministry of Children and Family Development Service Plan 2002/2003 to 2004/2005: British Columbia Ministry of Children and Family Development; 2002.

39. Statistics Canada. Tracking Tobacco Use Monitoring Survey (CTUMS); 2001.

40. Capital Health. Report of the Medical Officer of Health: How Healthy Are We? Edmonton; 2002.

41. British Columbia Ministry of Health. A Report on the Health of British Columbians: Provincial Health Officer's Annual Report; 1999.

42. The Maclean's Health Reports. Maclean's; Annual beginning in 1999.

43. Fyke KJ. Caring for Medicare: Sustaining a Quality System. Saskatchewan: Commission on Medicare; 2001.

44. Emerging Solutions: Report and Recommendations. Quebec: Commission d'etude sur les services de sante et les services sociaux (The Clair Commission); 2001.

45. The Health of Canadians - The Federal Role: The Standing Senate Committee on Social Affairs, Science and Technology (The Kirby Commission); 2001.

46. Romanow R. Commission on the Future of Health Care in Canada; 2001.

Table 1: Important Dates In the Development of Health Promotion in Canada

1971 The Long-Range Planning Branch is established in Health Canada.
1974 A *New Perspective on the Health of Canadians* (The Lalonde Report) is published.
1978 The Health Promotion Directorate is formed within Health Canada which initiates a series of government policies to apply the recommendations of the Lalonde Report. .
1982 Cabinet approves a permanent health promotion policy and program. This results in specific initiatives dealing with, for example, tobacco, alcohol, drugs and nutrition and developmental work in core programs including school and workplace health, heart health, child health as well as a national health promotion survey.
1984 *"Beyond Health Care*," Conference is sponsored jointly by the Toronto Board of Health, the Canadian Public Health Association and National Health and Welfare. Two key ideas of health promotion were born: healthy public policy and the healthy city.
1986 The Epp Report, *Achieving Health for All: A Framework for the Health of Canadians* is published [7].
1986 The First International Conference on Health Promotion is held in Ottawa in collaboration with the WHO and the Canadian Public Health Association *Ottawa Charter for Health Promotion* is issued.

Table 2: Health Indicators Framework

Health Status				
Well-being	Health Conditions	Human Function	Deaths	
Determinants of Health				
Health Behaviours	Living & Working Conditions	Personal Resources	Environmental Factors	
Health System Performance				
Acceptability	Accessibility	Appropriateness	Competence	
Continuity	Effectiveness	Efficiency	Safety	
Community and Health System Characteristics				
Community	Health System	Resources