The Muttart Fellowships

Improving Health Status through Inter-Sectoral Cooperation

Dr. John H. Hylton

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Improving Health Status through Inter-Sectoral Cooperation

A Muttart Foundation Fellowship Project
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Preface

Preface

While I have long had an interest in the field of population health, this project was made possible by a unique program offered by the Edmonton-based Muttart Foundation. This program, one of several offered by the Foundation, provides funding for executive directors of community organizations to take a sabbatical year away from their regular jobs so that they can focus on a personal development project that will also advance the work of the community sector. As a result of being selected for a fellowship, I was able to be away from my regular duties as the executive director of the Canadian Mental Health Association during 2000 so that I could work on this project. I am very grateful to the Foundation for providing me with this opportunity. I invite interested readers to visit the Foundation's web site at www.muttart.org.

My interest in the field of population health in no small part resulted from my work with the Royal Commission On Aboriginal Peoples. As an advisor to the Commission on health and social policy, I had the opportunity to work with a team of external experts and Commission staff to think critically about Canadian health care policy, about the effectiveness of Canada's health care system, and about the limitations of Western, curative medicine in addressing pressing health issues, particularly those facing Aboriginal people. This work resulted in Volume Three of the Commission's final report and my own first written work on the issue of health determinants.[1]

Nowhere in Canada is the impact of the social determinants on health more evident than in Aboriginal communities throughout the country. My experience working for the Commission served to underscore the importance of the much neglected public health perspective on health issues. It led me to believe that much more needed to be done to

1 Hylton, John H. (1994). *The Determinants of Health: The Implications of the Population Health Perspective for Aboriginal Health and Healing Policy.* Ottawa: Royal Commission On Aboriginal People.

promote partnerships involving front-line, community organizations who are daily involved in health determinants issues and the formal agencies and authorities that operate Canada's health care system. I am grateful for the guidance and support of the Royal Commission's Co-Chairs, Rene Dussault and George Erasmus, for the wisdom and dedication of the Commission's Co-Director of Research, Marlene Brant Castellano, to fellow advisor, collaborator and friend, John O'Neil, to the other staff members and advisors who made up the "health team" at the Commission, and to Fred Wien for introducing me to Fraser Mustard and the Canadian Institute For Advanced Research.

My convictions about the neglected importance of health determinants were strengthened as a result of my health care experience in Saskatchewan. Since 1995, I have served on the Regina District Health Board, the authority responsible for providing tertiary health services to the residents of southern Saskatchewan. Over the years, I have also been involved with many provincial committees and conferences dealing with health reform and healthcare issues. So often, in these forums, it seemed impossible to get beyond discussions of the immediate "downstream" crises associated with acute care services, and the staff, facilities, and equipment needed to make this part of the health care system work effectively. I extend thanks to my colleagues on the Regina District Health Board and to the members of the management team for their interest and support, and for tolerating my many absences during my sabbatical year.

For half of my sabbatical year, I was fortunate to take up an appointment as a Visiting Scholar at the University of California, Berkeley. I am very grateful to Dean James Midgely and Professor Steven Segal at the School of Social Welfare for hosting me. Their efforts to make me feel welcome and to make my time productive were genuinely appreciated. I am also very grateful to Professor John Frank at the School of Public Health for his advice and assistance. I was indeed fortunate to have had the advice of such a distinguished Canadian "ex-pat" during my time in California. Professor Emeritus Sheldon Messinger, long associated with the Centre for the Study of Law and Society, as always, was a friend full of exciting ideas and good humor.

My year away from my regular duties would not have been possible without the unflinching support of the Canadian Mental Health Association. The sacrifices of the organization on my behalf are very much appreciated. I would like to thank the members of the

executive and board, as well as the division office staff for their support. I would especially like to thank Dave Nelson who agreed to serve as acting executive director during my absence. Without this support, my leave would not have been possible.

Many organizations throughout Canada and the United States assisted me in my work. I was able to visit many of them in person, to use their resource centers, talk to their experts, copy their reference materials, and take away their publications and ideas. References to these organizations will be found throughout the text and in the appendices. I would especially like to recognize the assistance provided by the Canadian Institute For Advanced Research. Allowing me full access to their publications and working papers was of tremendous assistance in meeting the objectives for this project.

Finally, a year more or less living out of a suitcase sounds exotic, but as anyone who has been on a sabbatical knows, and as I have discovered for myself this past year, it is a time filled with challenges. This year placed many demands on my family, especially on my daughters Annie and Sara, and their mother Lin. I owe them a debt of thanks for their understanding, patience, and support throughout this past year.

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Chapter 1

Introduction

If you are one of tens of thousands of employees, volunteers, or board members involved in community health or social services agencies in Canada, if you are concerned about the health status of those you serve and those who live in your community, and if you are interested in forging new partnerships with the health sector to address your concerns, then this collection of ideas and tools is for you. And if you are a health administrator or trustee and you have an interest in collaborating more closely with the community sector on health issues, then the information presented here is also for you.

Over the past several decades, there have been remarkable breakthroughs in understanding the determinants of illness, health, wellness, and positive social adjustment. These ideas are being actively embraced by health departments and other funders throughout Canada. There are important implications for early intervention, multi-disciplinary approaches to service delivery, integrated services, and innovative partnerships involving service providers in different sectors.

The latest research on what makes us healthy has important implications for community-based organizations. The findings point to the significant health benefits of the kind of basic support services provided by many agencies in the community. Research is conclusively demonstrating that what we do in the community sector is often an important adjunct to the expensive, formalized "illness care" type services provided by doctors and hospitals, and, moreover, it is vital in promoting wellness and preventing illness, injury, and disability.

Although there are 175,000 voluntary organizations in Canada and some 70,000 registered charities, partnerships involving community organizations and the health system have been quite limited. In fact,

although there are many exceptions, most community organizations involved in social services, child care, and health services have longer standing and deeper ties to provincial social services departments than to provincial health departments or regional health authorities.

At a time when health care costs continue to spiral upwards, when the public's faith in the health care system has been shaken, and when many community agencies are finding it increasingly difficult to maintain (much less expand) their essential services, there is an opportunity to look to new approaches and "creative solutions." Now is the time for the health sector and community agencies to consider how they might work more closely together to achieve common goals.

Purpose

Despite new research and powerful new conceptual frameworks, the focus of health care policy has been very slow to evolve. As Evans and Stoddart have pointed out, there is a growing gap between the understanding of the determinants of health and the continuing primary focus of health policy on the provision of health care services.[2] The new ideas and the research that supports them are not denied. In fact, they are often embraced. But little account is taken of them in the formulation of health policy. This must change in order to address the full range of opportunities for improving health status.

Did You Know?

Voluntary Organizations

- There are 175,000 voluntary organizations in Canada. The range of their activities is immense—little league, home care, international aid, involving citizens in the democratic life of the country, assisting hospitals, and educational institutions.
- Community organizations build bonds, develop skills, and contribute to a strong social and economic fabric.
- Community organizations provide 1.3 million jobs, and have revenues and assets equivalent to that of the entire economy of British Columbia.

2 Evans, Robert G. and Stoddart, Gregory L. (1990). "Producing Health, Consuming Health Care," *Social Science Medicine 31 (12)*, pp. 1347-1363.

Charities

- There were 71,413 charities registered with Revenue Canada in 1994, and they had revenues of $90.5 billion.
- There are 14 types of charities. They range from arts and cultural organizations (4.5 per cent), educational organizations (10.3 per cent), health and hospital organizations (9 per cent), and organizations with religious affiliations (42.9 per cent), to social services type agencies (13 per cent), libraries and museums (2.3 per cent) recreational organizations (4.5 per cent), and service clubs (2.3 per cent).
- health-related organizations, including hospitals, receive the bulk of the revenue (38 per cent), followed by educational institutions (26 per cent) and social services agencies (13 per cent).
- 60 per cent of charitable revenues come from government, 26 per cent from earned income, and only 14 per cent from private giving.
- Saskatchewan has the most charities per capita, Ontario charities receive the largest revenues per capita, and Newfoundland charities are most dependent on government revenues

Source: Panel on Accountability and Governance in the Voluntary Sector (1999). *Building on Strength: Improving Governance and Accountability in Canada's Voluntary Sector.* Ottawa: *Panel on Accountability and Governance in the Voluntary Sector.* Hall, Michael and MacPherson, Laura (1997). *A Provincial Portrait of Canada's Charities*. Toronto: Canadian Centre of Philanthropy *Research Bulletin 4* (2,3).

Why has the system been slow to change? There is the old saying: "If the only tool you have is a hammer, every problem looks like a nail." The health care system has traditionally focused on illness care. While the successes achieved have been nothing short of miraculous in many instances, a system focused on "illness care" does not easily embrace broader concepts of health and health determinants. Funding strategies, financial incentives, measures of effectiveness, professional training and competencies, as well as traditional practices, all contribute to a continuing focus on dealing with illness and disability. Shifting the considerable momentum that has been built up—and which continues to be supported by drug manufacturers, equipment makers, hospital administrators, health care professionals and public expectations—will not be easy. Any attempt to shift the focus could easily be interpreted as a threat to the authority, predominance and financial interests of those who gain from maintaining and expanding the status quo.

The materials presented here are intended to assist advocates, particularly those who occupy leadership positions in the community sector, who wish to help the health sector shift the focus from "illness" to a broader vision of what can be accomplished in preventing disability and promoting health. Specifically, the materials are intended to serve as an introduction to the determinants of health field for those who are involved in the community sector. It is hoped these materials will be useful in informing staff and board members in community agencies about this new field of research. Additionally, the materials are designed to stimulate thinking about new services and new partnership opportunities involving community agencies and the health sector. Importantly, the materials are also intended to help community organizations "make their case" for an expanded role in improving the health status of the community. The objective is quite straight-forward. These materials are designed to contribute to the improved health status of communities in Canada by helping community agencies and the formal health system work more closely together to address the social determinants of health.

Organization

This manual provides an introduction to the determinants of health literature, suggests a range of policy and program implications for community agencies and the health sector to consider, and provides a number of tools specifically designed to help community organizations explore partnership opportunities with their health authorities. Chapter 2 discusses a brief overview of some of the most critical pressures on the health care system in Canada. It also describes recent "health reform" efforts. Chapter 3 provides a brief overview of the determinants of health literature. Chapter 4 discusses some of the main policy implications of the health determinants literature for community organizations and for the health sector. Chapter 5 outlines a number of practical suggestions aimed at helping community organizations develop partnership proposals.

There is also an annotated bibliography and suggestions for carrying out additional research and an extensive listing of related web sites. The appendix reproduces a number of graphs, charts, and conceptual models that provide additional information about the determinants

of health. These materials can be incorporated into staff training and board development exercises, and can also be incorporated into presentations and proposals.

There is now a very extensive literature on the determinants of health. The focus here is not on reproducing or even summarizing more detailed syntheses and analyses that are available elsewhere. There are no lengthy lists of citations as would be found in an academic piece. Rather, the focus is on providing the "highlights" that will be of particular interest to those involved in community work. The emphasis is on the implications for community organizations and on practical tools and suggestions that will help to translate important new ideas into meaningful community action.

Chapter 2

Chapter 2

Canada's Health Care System: the Need for Change

Public opinion polls consistently report that health care is Canada's most cherished institution. In Canada, there has been a long and distinguished history of providing one of the best health care services in the world. But constant squabbling about funding, and media headlines that focus on bed closures and waiting lists, have undermined public confidence in the system.[3] At the same time, there is a growing consensus among political leaders and health care experts that the current approach to health care is not sustainable and that fundamental changes will be required to preserve the publicly funded system of services that Canadians have come to revere so much.

Although pressures on the current system have been growing, no coherent vision of a new and improved system has emerged yet. Despite this, many reforms are proceeding in an attempt to reduce costs and improve services. In this chapter, these issues are examined.

Health Care Costs[4]

In 1999, publicly funded health care cost Canadian taxpayers over $50 billion. Within five years, it is estimated costs will increase by 24 per cent to $67 billion. Within 10 years, it is estimated costs will grow by a third to $85 billion. Within 25 years, the budget is expected to grow to $132 billion, nearly a 150 per cent increase. On average, health budgets already make up one-third or more of provincial budgets, and the percentage is growing.

3 See for example the December 2, 1996 issue of *MacLean's* magazine.

4 For further information see: *Provincial and Territorial Ministers of Health (2000). Understanding Canada's Health Care Costs: Interim report.* Ottawa: Provincial and Territorial Ministers of Health.

"Health costs are expected to increase much more quickly than inflation, the rate of growth in the economy, or the rate of population growth."

While the rate of growth in expenditures projected for the coming decade is far less that the 7 per cent average annual growth rate (in constant dollars) that occurred between 1977 and 1999 ($11 billion to $56 billion), costs are still expected to increase much more quickly than inflation, the rate of growth in the economy, or the rate of population growth.[5] In fact, since 1977, healthcare expenditures have exceeded the rate of growth in the economy by an average of 0.8 per cent each year. Since that time, healthcare costs have exceeded the growth in the economy by over 18 per cent.

Private spending, that is, out-of-pocket spending and spending through health insurance, also has been increasing. Moreover, it represents an increasingly larger percentage of total health costs in Canada.

Over the years, there have been significant shifts in the distribution of financial responsibilities for health care among governments in Canada. In 1977, for example, the federal government contributed about half the $11 billion spent on public health services in Canada. In 1999-2000, less than $10 billion of the total of $56 billion, about 18 per cent, was contributed by the federal government. While the new agreement entered into by the provincial-territorial and federal governments in 2000 will provide an additional $21 billion in federal contributions towards health care over the next five years, this injection will not significantly change the burden of increasing costs on the provinces and territories.[6]

In terms of efficiency, Canada's health care system ranks 30th in the world, but is seventh in terms of quality.[7] The relatively low

5 Edmonds, Scott (2000). "Health Care Needs $13B, provinces' report warns." *Canadian Press*.

6 For example, it has been pointed out that the $21.2 billion of new funding is to be spread over five years. This amounts to about $4.24 billion a year. In 1998, governments spent $406 billion, so the agreement only provides about a 1 per cent increase in government revenues. From the standpoint of total health care expenditures (public and private), the increase represents about $140 per capita on $2800 of existing expenditure, or about 5 per cent. See Watson, William (2000) "Take $23.4 billion and call me in the morning." *Financial Post*, September 20, p. C19.

7 McIlroy, Anne (2000). "Canada's health care ranked 30th by WHO." *Globe and Mail*, June 21, p. A2.

efficiency rating of the Canadian system occurs precisely because public expenditures account for only 70 per cent of total health care costs. In Canada, 17 per cent of health care costs are funded by individuals and 13 per cent by private insurance. Countries that have a higher percentage of public expenditure also operate more efficiently. In contrast, the United States system, which costs much more to operate, is ranked 37th in efficiency and 15th in quality.

Between 1990 and 1999, provincial spending on hospitals increased by16 per cent (in constant dollars) to $24 billion. This is remarkable given the trends in inpatient care. Since 1990, the number of hospital beds per capita has fallen by 50 per cent. During the same period, other areas of health spending have increased even more rapidly—physician expenditures by 30 per cent, pharmaceutical expenditures by 87 per cent, and other expenditures by 50 per cent. While spending on drugs has doubled since the early 1980s, expenditures on physician services have been declining as a percentage of total spending.[8]

Did You Know?

Private Health Spending

- About 80 per cent of health care spending in OECD countries, the more wealthy, developed countries of the world, is made up of public expenditures. The rest, such as out-of-pocket costs, and costs covered by health insurance, are considered to be private spending.
- Canada has the second highest rate of private expenditures among the G7, with only the United States having a higher percentage of private expenditures.
- Only about three quarters of health care costs in Canada are publicly funded, but the percentage is shrinking.
- In 1990, total expenditures on health care were $60 billion, whereas the corresponding figure in 1998 was $80 billion. However 75 per cent of spending was made up of public expenditures in 1990, whereas the percentage had decreased to 70 per cent by 1998. Meanwhile, private spending had increased from 25 per cent to 30 per cent of the total.

8 Priest, Lisa (2000). "Voters want cure for medicare." *Globe and Mail*, November 8, p. A9.

- Between 1995 and 1999, private spending increased from $21.6 billion to $26.2 billion, an increase of 21.3 per cent. Public spending increased from $53 billion to $59.8 billion, an increase of 12.8 per cent. In other words, private spending is growing at about twice the rate of public spending.

- In 1999, private spending amounted to about $850 per person in Canada.

Source: Gratzer, David (2000). "Neither magic nor money will cure health care ills." *National Post*, September 11, p. A14; Priest, Lisa (2000). "Voters want cure for medicare." *Globe and Mail*, November 8, p. A9. Canadian Public Health Association (2000). *An Ounce of Prevention: Strengthening the Balance in Health Care Reform*. Ottawa. Canadian Public Health Association.

The "big picture" is that costs have been increasing relative to available resources in the economy. As a result, more and more of Canada's total economic capacity is being allocated to the health care system. The inevitable result is that less is available for other priorities. Moreover, since most of the burden for funding these increased costs falls on provincial and territorial governments whose other chief program responsibilities include education, income security, and social services, it is almost certain that expenditures in these areas have and will continue to suffer in order to increase healthcare spending.

With little question, there will be continuing pressure on health care budgets in the future. Expenditures will increase for many different reasons besides inflation. For example, research is continuously discovering new and more effective methods of diagnosis and treatment. These new innovations increase demands and costs. Consider discoveries over recent years related to diagnosis (*e.g.,* MRIs and PETs) and treatment (*e.g.,* major joint surgery, neonatal and fetal technologies, dialysis, organ transplantation, genetic testing and therapy, cardiac catheterization, coronary by-pass surgery, angioplasty, bone marrow transplants, treatment for acquired brain injury, and stroke therapies). As we have seen, the costs of drugs is also escalating quickly. Moreover, there is an increasing prevalence of chronic (*e.g.,* heart disease, diabetes, and hepatitis) and new (*e.g.,* AIDS) diseases that are expensive to diagnose and treat. And the public increasingly expects rapid, comprehensive, and effective services.

Costs are also increasing because more and more of the population are elderly. Seniors make up 12.5 per cent of the population, but they consume 45 per cent of health care resources. Per capita expenditures on seniors are expected to grow from $6,000 to $14,000 (in constant dollars) over the next 25 years. One in four Canadians—8 million people—will reach retirement age in Canada by 2030.[9]

The growth of "disadvantaged groups" who have high health care costs also keeps pressure on health care expenditures. The growing gap between rich and poor in Canada, and the implications on health care, will be discussed more fully elsewhere. In addition, Aboriginal people have high health care needs and a rapidly growing population. Acute care costs per capita are double for Aboriginal people. Meanwhile, costs for many Aboriginal health and social programs have been "off-loaded" by the federal government onto the provinces and territories, creating even more pressure on these already stretched budgets.

Strategies To Cope[10]

Increasing cost pressures in recent years have led to a variety of initiatives to contain costs and improve the quality of services. Together these initiatives are often referred to as "health reform."

There are many common structural and philosophical features that underpin much of the health reform activity currently underway across Canada.[11] In particular, the following features may be noted:

Structural Reforms. A radical restructuring of health care is under way in Canada. New regional boards are being created and they are being given wide responsibility for overseeing health services within geographic catchment areas. Approaches to funding also are shifting. Instead of funding on the basis of historical funding patterns, many jurisdictions have moved towards block grant funding, sometimes based on "needs-based" funding formulas that

9 Lipovenko, Dorothy (1997). "Health care unprepared for grey wave." *Globe and Mail*, October 15, p. A3.

10 Some of these thoughts were expressed in an earlier paper. See Hylton, J. H. (1994). *Watch out for health reform*. Paper presented at the annual conference of the Canadian Public Health Association. Edmonton.

11 For an up-to-date and more comprehensive discussion of health reform, see Canadian College of Health Services Executives (1999). *Health Reform Update 1998-99*. Ottawa. Canadian College of Health Services Executives.

take into account the size and characteristics of the populations being served. Regional boards are assuming responsibility for hospitals, nursing homes, home care, and various other health services. Many jurisdictions are also exploring alternatives to the fee-for-service system for compensating physicians.

The Philosophy Of Reform. Accompanying the structural reforms, a new health care philosophy is being touted. This philosophy has a number of interrelated dimensions. Some say that access to services and access to health is not evenly distributed in our society and that poor access experienced by many disadvantaged groups puts their health in jeopardy. The current health system, reformers point out, is too focussed on illness care. They call for more emphasis on promotion, prevention, and "wellness." Furthermore, they say that services should be less institution-based and more community-based and that there should be a seamless continuum of integrated services to meet a variety of needs. There are also frequent calls to adopt a more holistic concept of health.

In practice, health reform has involved the following kinds of initiatives:

- Individual organizational structures (*e.g.*, hospital and nursing home boards, separate mental health and addictions programs) are being collapsed into regional structures, sometimes monolithic in their proportions.
- Coverage of some services under medicare is being reduced, for example, out-of-province medical coverage, chiropractic services, optometry services, and others.
- Services are being privatized or contracted out.
- Some programs are being eliminated entirely. Examples include prescription drug coverage and dental programs for children.
- In-patient beds are being reduced, and hospitals and nursing homes are being closed altogether.
- The number of seats in professionals training programs (physicians, nurses, *etc.*) has been limited and restriction on practice, as well as financial incentives, have been introduced to attract professionals to under-served areas and to keep them away from areas that are perceived to be "over-served."

- Programs to reduce the length of hospital stays, and to prevent hospitalization in the first place, have been introduced. These initiatives include expanded home care and other community support services, outpatient surgery, and day-of-admission surgery.

In many instances, these initiatives have raised serious questions about quality and access. Some say that the fundamental principles of Canada's healthcare system are being undermined.

Discussion

What are the implications of health reform? It is clear that many of the initiatives now being implemented will reduce costs or at least the rate of growth in costs. Indeed, some of these results are already evident. For example, the growth rate in expenditures during the later half of the 1990s was the lowest in several decades. The very restructuring of the health care system provides governments with opportunities for cost containment, since they can devolve responsibility to regional boards and block fund these boards, thereby fixing funding levels and forcing cost cutting.

What is much more difficult to discern is the effects of health reform on quality and volume of services. And it is even less clear what impact the reorientation of the health care system is having on health outcomes, including the health status of the general population.[12] Is the health system really being rebalanced to take account of "right" thinking and more efficient procedures or are changes being driven by cost considerations?

12 In this regard, a community report recently issued by the Regina District Health Board contained information about some worrisome trends. For example, the percentage of households reporting less than $10,000 of income rose from 6 per cent to 8 per cent from 1991 to 1996, even while the highest income group, those households earning over $70,000 per year increased from 17 per cent to 21 per cent. Meanwhile, the number of households spending more than 30 per cent of their income on housing rose from 34 per cent to 39 per cent during this same year. And despite an increase in expenditures of over 10 per cent between 1997-98 and 1999-2000 alone, life expectancy for most age groups actually declined. See Regina District Health Board (2000). *Annual Community Report* 1999-2000. Regina: Regina District Health Board.

Did You Know?

Canada Health Act

Canada's health care system is founded on five principles enunciated in the *Canada Health Act*:

1. Universality—everyone is covered.

2. Comprehensiveness—all medically necessary services are included.

3. Portability—coverage follows a person no matter where they move in Canada.

4. Accessibility—there are no obstacles, *e.g.,* financial, geographic, to accessing insured hospital and medical services.

5. Public Administration—provincial health insurance plans must be administered on a non-profit basis by the province.

Source: Canadian Policy Research Networks (1999). *Discovering the society we want.* Ottawa: Canadian Policy research networks. Available: www.cprn.org.

There is not much new about the "new" philosophy of health reform. The often cited World Health Organization definition of health is now over 40 years old. Moreover, the landmark report on health promotion, *A New Perspective On The Health Of Canadians*, was issued by Marc Lalonde, then Minister of Health and Welfare, in 1974. In 1986, Jake Epp, a Lalonde successor, also issued a progressive framework for health care in Canada—*Achieving Health For All: A Framework For Health Promotion*—that promoted many of the ideas being discussed today. Moreover, alternatives to health care institutions are hardly new. In fact, "deinstitutionalization" and many of its untoward consequences, date back many decades in the mental health field and in other areas of service. And Quebec pioneered integrated, community-based health and social services programs following the Castonguay Commission over 25 years ago.

The vast majority of health care resources in Canada continue to be channelled into formal health care services. So far at least, there is little evidence that the policy makers have truly embraced a broader vision of health based on the health determinants literature. If the health status of the community is to be improved, even while costs

on formal health care services are contained or reduced, it is becoming increasingly evident that the health system will have to move in directions far different than those now being pursued under the banner of "health reform."

There is a real danger that cost-cutting will reduce access to services while failing to provide new and more effective alternatives. This would result in fewer services being provided at ever higher costs, with nothing new to replace the services that have been reduced or discontinued. In fact, this is what has happened to other sectors that have undergone deinstitutionalization. In the mental health field, for example, large hospitals were replaced with a patchwork of community services that have allowed many to "fall through the cracks." Resources saved from closing hospital beds were never fully reinvested in alternate services. This hardly seems a long-term solution to increasing pressures on the healthcare system.

It is in this environment that opportunities exist for the community sector and the health sector to work towards a meaningful rebalancing of health care priorities and programs.

Chapter 3

Chapter 3

The Population Health Perspective

Throughout modern history, both in Canada as well as in other developed countries, thinking about what makes people healthy has tended to focus on "health care," or more accurately "medical care." Health policy has, in fact, been preoccupied with the provision of health care services, not with health per se. Some would argue that this remains true today. Understanding why this is so requires an examination of prevailing beliefs about what "health" is all about.

How We Think about Health and Health Care

In the traditional approach to thinking about health, people get sick or injured for a variety of reasons that are largely beyond anyone's control. The role of health policy is to ensure that there is an effective care system that can provide the diagnostic and treatment services necessary to make people well again. A healthy society is conceived of as one that provides the health care services necessary to return the injured and the ill to a state of health. Health is understood as the absence of disease or injury.

That health is mostly perceived to be about health care services is clearly evident in Canada's approach to health policy. The principles on which our health care system is founded, for example, include those set out in the *Canada Health Act*—universality, portability, comprehensiveness, accessibility, public funding, and public administration. These principles focus attention on health care services—the range of these services, how they are provided, to whom, and how they are administered and paid for. Consistent with this preoccupation, health systems in Canada mostly provide services for people who are sick or injured.

This concept of health care has been likened to a furnace controlled by a thermostat.[1] When the demand for heat (health services) increases, the thermostat releases the flow of fuel (resources) necessary to generate more heat. As long as there is enough fuel, the thermostat will ensure the furnace generates enough heat (services) to achieve the desired temperature state (health).This way of thinking about the health care system also emphasizes its reactive nature. It has been pointed out that the health care system and the "medical model" are principally concerned with the diagnosis and treatment of disease.[13] The emphasis is on investigating mechanisms of disease, improving treatment, and targeting those at risk. While there can be no disputing the tremendous advances have been achieved as a result of this orientation, there is little room in this model for a focus on promoting health or exploring the underlying conditions that make people sick in the first place. It is for these reasons that the health care system has often been referred to as the "sickness care" system.

One of the earliest challenges to the traditional conceptualization of health as the absence of disease and injury came from the World Health Organization (WHO). Some 50 years ago, WHO proposed that health be defined as a state of complete physical, mental, and social well-being, and not merely as the absence of disease or injury. Although this definition is frequently cited, its influence on health policy has, in fact, been the subject of considerable debate.

Interestingly, Canada has played a leading role in promoting a broader conceptualization of health and health determinants. In 1974, then Minister of Health, Marc Lalonde, released *A New Perspective On The Health of Canadians*.[14] This report, like the WHO definition of health, proposed a broader framework for understanding the determinants of health. Specifically, four sets of factors affecting health were identified: lifestyle, environment, human biology, and health care organization. The report contended that each component of the framework was important for achieving "health," not just health care services. As with the WHO definition, however, it appears that this broader conceptualization, while frequently cited, has not had the impact on public policy that many had hoped for.

13 Marmot, Michael (1995). "In Sickness and in Wealth: Social Causes of Illness. *MRC News*, Winter, pp. 8-12.

14 This report is available free of charge from the Health Canada's web site (www.hc-sc.gc.ca).

There have also been other key Canadian contributions towards a broader understanding of health and health determinants. In 1986, for example, Jake Epp, a Lalonde successor, issued a progressive framework for health care in Canada: *Achieving Health For All: A Framework For Health Promotion*. Also, in 1986, the Canadian Public Health Association, Health and Welfare Canada, and the World Health Organization developed the *Ottawa Charter for Health Promotion*. These documents are referenced and briefly summarized in the bibliography.

Following the Lalonde report, policy makers singled out the lifestyles component of the framework for particular attention. Recall the television commercials comparing the health of the 40–year–old Canadian with that of the 60–year–old Swede, the Participaction program, the Canada Food Guide, various anti-smoking campaigns, and other lifestyle oriented programs sponsored by federal and provincial governments. Although these programs were undoubtedly of considerable value in promoting public education, awareness, and lifestyle changes, they have also been criticized as part of a broader attempt on the part of governments to abdicate responsibility for health by tacitly "blaming-the-victim" for their own health care problems. At any rate, there has never been a similar focus by governments on the other components of the Lalonde framework, including issues related to the social environment. Even today, it is estimated that less than 3 per cent of health care spending is allocated to promotion or prevention activities, with the balance of resources continuing to be directed to traditional "illness care" services.[15] As one observer recently opined, only partly tongue in cheek: for a physician, health is a state of incomplete diagnosis.[16]

The population health perspective is an attempt to reorient thinking about health and health care to incorporate the latest findings about what contributes to improved health status. The focus of this research is on the health of populations rather than on individual risk factors. This framework might best be illustrated through the following deceptively simple story about the importance of asking why.[17]

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15 See for example, Pederson, Ann *et al*. (1994). *Health Promotion in Canada: Provincial, National, and International Perspectives*. Toronto: W.B. Saunders.

16 Lavis, John N. and Stoddart, Gregory L. (1999). *Social Cohesion and Health: Working Paper No. 47*. Toronto. Canadian Institute of Advanced Research, p. 6.

17 Federal-Provincial-Territorial Committee On Population Health (1999). *Toward a healthy future: Second report on the health of Canadians.* Ottawa: Minister of Public Works and Government Services.

Why is Jason in the hospital?

Because he has a bad infection in his leg.

But why does he have an infection?

Because he has a cut on his leg and it got infected.

But why does he have a cut on his leg?

Because he was playing in the junk yard next to his apartment building and there was some sharp, jagged steel there that he fell on.

But why was he playing in a junk yard?

Because his neighborhood is kind of run down. A lot of kids play there and there is no one to supervise them.

But why does he live in that neighborhood?

Because his parents can't afford a nicer place to live.

But why can't his parents afford a nicer place to live?

Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?

Because he doesn't have much education and he can't find a job.

Why…?

The population health perspective is concerned about "upstream" rather that "downstream" considerations. Rather than looking at the downstream consequences of threats to health, the focus is on the underlying "upstream" causes of health status, and what can be accomplished through "healthy public policy" to achieve better health outcomes.

Major Findings From The Health Determinants Literature

As the "why" story suggests, population health experts are interested in looking behind the "presenting problem" to understand the social, environmental, and economic gradients that affect health outcomes. While a vast literature has been amassed, particularly over the past two decades, it is possible to briefly summarize some of the main findings from this important body of research. Further references are provided in the annotated "Bibliography." The policy implications of these findings are discussed in the next chapter.

The main determinants of health status in a population relate to social environment, physical environment, genetic endowments, and health care.[18] The Canadian Public Health Association, for example, has estimated that access to quality health care services accounts for only 25 per cent of the variance in health status. The other important factors and their relative importance include: biologic endowment (10 per cent), the physical environment (15 per cent), and the social environment (50 per cent).[19] The Federal/Provincial/Territorial Advisory Committee on population health also identifies biologic and genetic endowment, physical environments, and health services as important health determinants. In terms of the social environment, the Advisory Committee identifies six sub-sets of social determinants: healthy child development, education, income and social status, employment and working conditions, social support networks, and personal health practices and coping skills.[20]

For the purposes of the present overview, research findings are grouped under: 1) wealth, 2) equity of income distribution, 3) social supports at work, at home, and in the community, 4) the quality of early life experience, 5) other health determinants, and 6) biologic pathways.

18 Evans, Robert G., Barer, Morris L., and Marmor, Theodore R .(1994). *Why are Some People Healthy and Others Not: The Determinants of Health of Populations*. New York: Aldine

19 Saskatchewan Public Health Association (1994). *The determinants of Health.* Saskatoon: Saskatchewan Public Health Association.

20 Federal/Provincial/Territorial Advisory Committee On Population Health (1994). *Strategies for Population Health: Investing in the Health of Canadians.* Ottawa: Minister of Supply and Services Canada; Federal/Provincial/Territorial Committee On Population Health (1999). Toward a healthy future: Second report on the health of Canadians. Ottawa: Minister of Public Works and Government services. Available: www.statcan.ca.

1. Wealth Influences Health Outcomes

Population health researchers have been interested in exploring the relationship between health and wealth. Using average per capita incomes from countries throughout the world and key health indicators such as infant mortality and life expectancy, they have been able to examine this association in sophisticated cross-national analyses. Few will be surprised to learn that health status in wealthy countries is higher than in poorer countries. Moreover, generally speaking, the wealthier the country, the better its health outcomes.

In one recent report, healthy life expectancy, that is, years of life without illness or injury, was reported for 191 countries using 1999 data.[21] The best health outcomes were reported in the wealthiest countries. Japan ranked first with 74.5 years, Australia was next at 73.2, and France was third at 73.1. Canada ranked 12th at 72 years, while the United States was 24th at 70 years. In contrast, sub-Saharan African countries (*e.g.,* Niger, Zambia, Malawi), among the poorest countries in the world, had healthy life-expectancies in the 29- to 30-year range. Sierra Leone was ranked last in the survey with an average healthy life expectancy of 26 years. In more healthy (and wealthy) countries, on average, only 9 per cent of the life span was impaired by poor health, whereas in the least healthy (and poorer) countries, 14 per cent of already shortened life spans were impaired by poor health.

Researchers have determined that there are many reasons for the association between health and wealth. Wealthy countries are better able to provide the necessities of life for their citizens such as nutritional food, adequate medical care, proper housing, and safe water. These have obvious health benefits that are not enjoyed by those living in poor countries. In poorer countries, overcrowding, poor nutrition, unsafe water, and unsafe health practices contribute to the spread of infectious diseases. In some countries, for example, healthy life expectancy is reduced by13 to14 years by AIDS alone.[22] Those in a weakened state because of poor living conditions or health practices are much more susceptible to a wide variety of health problems.

While it is generally true that better national health outcomes are associated with higher average wealth, this association breaks down at the upper end of the income scale, once per capita income exceeds

21 Yohemas-Hayes, Leanne (2000). "Canadians very healthy." *Regina Leader–Post*. June 5, p. A9.

22 *Ibid.*

about US$10,000 per year. Interestingly, even among the most wealthy countries, generally the more developed Western nations and Japan, significant differences in health outcomes are evident. For example, the United States is the wealthiest country in the world, but it ranks well below Japan, Canada, and a number of Western European countries in terms of life expectancy and other health outcomes. The reasons for these differences will be discussed in the next section.

Another area of inquiry has examined spending on health services and the extent to which increased spending is associated with improved health outcomes. While wealthy countries are able to spend more on health care services, the amount of spending among these countries does not account for differences in health outcomes. For example, the United States spends US$4,090 per capita on health care services compared to US$2,050 in Canada, about twice as much.[23] This accounts for about 14 per cent of GNP in the United States and about 9 per cent in Canada.[24] In fact, with about 5 per cent of the world's population, the United States spends half of all the money in the world that is spent on health care.[25] But Americans do not get more hospital or physician services, nor do they receive higher quality care than Canadians. In addition, follow-up studies of those who receive services show similar outcomes. Moreover, as we have seen, the United States has lower average life expectancy than Canada and many other countries.

To understand why wealth does not equate to health among wealthy countries, population health researchers have looked within wealthy countries to understand why the equation breaks down. They have discovered, for example, that the United States is the only major developed county in the world without a comprehensive public health system and that some 40 million Americans, mostly the working poor, are without any health care insurance. While Canada fares well in a comparison with the United States, it is worth noting that Japan spends much less on health care than Canada, about 6 per cent of GNP, yet achieves superior health outcomes. Such findings have led researchers to conclude that while a minimum level of income and

23 Fyke, Kenneth J. (2000). *Caring for Medicare: The Challenges Ahead.* Regina: Commission on Medicare.

24 Canada spent 9.2 per cent of GDP on health care in 1999, and 8.9 per cent in 1997. "Canada ranks fourth in GDP spending after France, Germany and the U.S." See Priest (2000). *Ibid.*

25 Suzuki, David (2000). "Life span. The long and short of it," *The Prairie Dog*, July 13, p. 6.

national wealth is essential to meet the necessities of life, to provide essential health care services, and to achieve the associated health benefits, beyond a certain threshold of income and wealth, other important factors that influence health status come into play.

2. Equity of Income Distribution Influences Health Outcomes

Population health researchers have determined that countries with the best health outcomes are wealthy countries where the wealth is more evenly distributed among all segments of the population. The counties with the worst health outcomes are those where the largest gaps exist between the rich and poor. Researchers often measure these differences by measuring the income gap between the richest in the society (say the top 10 or 20 per cent) and the poorest (the bottom 10 or 20 per cent). The size of the gap serves as a measure of inequality. The findings from this type of research are illustrated in comparative analyses of income distribution in Canada and the United States, two of the wealthiest countries in the world.

Did You Know?

Canada—United States Income Inequality

- In 1997, 11 per cent of the population in the United States had incomes of less than $10,000, compared to 7 per cent in Canada.
- This segment of the population paid 2.3 per cent in income taxes in the United States compared to 1 per cent in Canada
- Those with incomes over $150,000 made up 5.7 per cent of households in the United States and only 1.8 per cent of the households in Canada.
- Within this income group, taxes in Canada were paid at an average rate of 32 per cent, compared to 27.6 per cent in the United States.
- There were more poor people, and they paid more tax in the United States.
- In Canada, there were fewer rich people, and they paid more tax.
- Researchers believe these differences in income equality help to explain lower health status in the United States.

Source: Little, Bruce (2000). " More rich more poor in the U.S. than Canada." *Globe and Mail*, June 8, p. .B11.

Although American per capita income is higher than in Canada, the gap between rich and poor is far wider in the United States, and it is growing faster.[26] In 1997, for example, average earnings in the United States were CDN$36,500—29 per cent higher than the CDN$28,300 in Canada. However, while the top fifth of income earners in the United States had 25 per cent more disposable income than their Canadian counterparts, the bottom fifth had 25 per cent less purchasing power. In Canada, 3 per cent of families live in poverty, while the corresponding figure in the United States is 10.9 per cent.[27]

The importance of equity in income distribution for achieving good health outcomes has also been supported by studies that have examined health outcomes within countries. In one such study, it was found that differences in health outcomes among states in the United States could be explained, in part, by examining the equity of income distribution within each state. The states with the most equitable income distribution also enjoyed the best health outcomes.[28] Consistent with this pattern, Japan—which enjoys the best health outcomes of any developed country—also has the most equitable distribution of income.

Similarly, a recent study for the Rowntree Foundation in the United Kingdom found a direct link between income distribution, poverty, and premature deaths. In the poor parts of Glasgow, for example, premature deaths under the age of 65 were twice the national average. The study estimated 10,000 premature deaths (including 1,400 child deaths) could be prevented in Britain by reducing the income gap between the richest and poorest. Full employment, it was calculated, would save 2,500 premature deaths a year. Even by returning to the level of income inequity that existed in 1983, the study estimated 7,500 deaths among those under 65 could be prevented each year.[29]

A similar study in the United States has estimated a 1 per cent increase in income for the poorer half of households would reduce deaths by 21

26 Luciw, Roma (2000). "U.S wealth gap far wider than Canada's." *Globe and Mail*. July 29, p. A5..

27 Drohan, Madelaine (2000). "Taxes tell only half the story about quality of life." *Globe and Mail*, June 9, p. B11

28 Wolfson, Michael, Kaplan, George, Lynch, John, Ross, Nancy and Backlund (1999). "Relation between income inequality and mortality: Empirical demonstration," *British Medical Journal,* 319 . pp. 953-957.

29 Trueland, Jennifer (2000). "Reduction in 'health gap' could prevent 10,000 early deaths." *The Scotsman*, September 26, p.14.

per 100,000, saving literally hundreds of thousands of lives each year.[30] Still other researchers have estimated that a more egalitarian system of income distribution, combined with higher overall incomes could add two years to a country's life expectancy and avert as many as 140 deaths per 100,000 per year in some countries.[31]

Differences in health status among developed countries are already significant, however, the gaps are expected to grow even wider (see box). These types of findings have led the Canadian Public Health Association to conclude: "Per capita economic income growth is no longer as important a factor in determining overall health status as income distribution." [32]

Did You Know?

Projected Life Expectancies—International Comparisons

- Life expectancy in Canada is now 81.7 years, and it is expected to increase to 85.3 years by 2050.
- Japan's life expectancy is already 83 years, and it is expected to increase to 90.9 years by 2050.
- In the United States, current life expectancy is 80.5 years, and it is expected to reach 82.9 years by 2050.
- United States life expectancy in 50 years is projected to be less than the life expectancy now recorded in Japan.
- By 2050, United States life expectancy is expected to be fully eight years less than Japan's. This would be a difference of nearly 10 per cent in the life expectancies between these two highly developed and wealthy countries.

Source: Picard, Andre (2000). "Old age going to last longer, cost governments more." *Globe and Mail*, June 15, p. A5.

30 Ross, Nancy, Wolfson. Michael, Dunn, James, Berthelot, Jean-Marie, Kaplan, George, and Lynch, John (2000). "Relation between Income Inequality and Mortality in Canada and the United States. Cross-Sectional Assessment Using Census Data and Vital Statistics," *British Medical Journal*, 320, April, pp. 898-902.

31 Lavis, John N. and Stoddart, Gregory L. (1999). *Social Cohesion and Health: Working Paper No. 47*. Toronto: Canadian Institute of Advanced Research, p. 4.

32 Canadian Public Health Association (1997). *The Health Impacts of Social and Economic Conditions: Implications for Public Policy.* Ottawa: CPHA.

Rather than income distribution, some have suggested that differences in health outcomes among developed countries might be associated with genetic differences. While genetic makeup no doubt has some influence on health outcomes, a number of studies have ruled out genetics as a definitive explanation. For example, Japanese men who stayed in Japan, or who moved to Hawaii or California, had quite different rates of coronary heart disease that, in each case, were characteristic of the locales in which they were living. More remarkably, the life span of African American men in Harlem has been found to be shorter than that of men in Bangladesh. Therefore, whatever the strengths or vulnerabilities associated with particular genetic makeups, how this plays out appears to depend on a host of factors related to the physical and socioeconomic environments.[33]

Socioeconomic status appears to influence health outcomes starting very early in life. For example, a positive, enriched environment early in life, the kind of environment characteristic of many middle and upper income families, appears to provide a protective effect, both to threats to health early in life and to those that come later. Research has determined that the effects of perinatal stress (birth trauma) are more effectively overcome by children with high socioeconomic status than those with low socioeconomic status.[34] Similarly, the toxic effects of lead have been found to occur at a lower level of exposure for lower-class children than among higher-class children.[35]

Income relative to one's fellow citizens acts as an indicator of social status throughout the world. Those with relatively high incomes generally have better educations and higher social standing. Thus, better health outcomes achieved by the rich may not only or primarily be due to higher income per se. Indeed, high standing in a social hierarchy, or other factors correlated with high income (*e.g.,* better education) may have important health benefits in their own right. Research is helping to shed light on these questions.

33 Canadian Public Health Association (1997). *The Health Impacts of Social and Economic Conditions: Implications for Public Policy*. Ottawa: CPHA; Marmot, Michael and Wilkinson, Richard, eds. (1999). Social Determinants of Health. New York: Oxford University Press.

34 Frank, John W. (1995). "The Determinants of Health: A New Synthesis." *Current Issues In Public Health 1*, pp. 233-240.

35 Hertzman, Clyde (1994). "The Lifelong Impact of Childhood Experiences: A Population Health Perspective," *Daedalus*, 123 (4), pp. 167-180.

Researchers have been interested in understanding the health consequences of relative deprivation, stress, self-esteem, control of one's environment, perceived disadvantage, and a sense of security, and what biologic pathways link these psychological variables to health outcomes. Researchers believe that psychological needs are more fully addressed the higher one moves up in the social hierarchy and that having these needs met has much more pronounced implications for health than was previously thought to be the case. Research is showing that having these psychological needs met increases the host's ability to resist diseases and bounce back from threats to health. Alternatively, the long-term effects of being "psychologically deprived" and, in particular, exposure to prolonged stress, makes the host more susceptible to disease and disability.[36] Thus, "the important factor in explaining health differences appears to be not so much the material conditions but rather the social meanings attached to those conditions." [37]

3. Social Supports at Work, at Home, and in the Community

The finding that countries or parts of countries that distribute wealth more equitably are able to achieve better health outcomes has led researchers to examine the importance of psychological needs and how these equate with social status and position in a social hierarchy. One of the leading research projects to shed light on these issues involved a 10 year longitudinal study of 17,500 civil servants in the United Kingdom.[38] These "Whitehall Studies" were unique in that the subjects were all relatively well-paid civil servants with secure jobs who lived in the same area of England. Despite these similarities, however, when health outcomes were examined, those at higher grades consistently had better health outcomes. Moreover, a clear gradient was evident; health outcomes were better at each higher grade from the lowest level officials to the most senior. These differences were significant, the same patterns were evident across many diseases, and the gradients held true even when known risk factors were taken into account in examining various disease patterns.

36 Marmot, Michael (1995). "In Sickness and in Wealth: Social Causes of Illness." *MRC News*, Winter, pp. 8-12.

37 Canadian Public Health Association (1997). *The Health Impacts of Social and Economic Conditions: Implications for Public Policy.* Ottawa: CPHA, p. v.

38 Marmot, Michael (1995). "In Sickness and in Wealth: Social Causes of Illness." *MRC News*, Winter, pp. 8-12.

Among the results:

- Those at the lowest grade had six times more sick leave utilization than those at the highest grade.
- At age 45, there was a four-year difference in life expectancy between the bottom and the top grades.
- All cause mortality during a 10-year follow-up period was 5 per cent for the highest grade, and 15 per cent (three times higher) for the lowest grade.
- When known causes of leading diseases were taken into account, the differences among grades were not explained. For example, when the three leading risk factors associated with heart disease were examined, cholesterol levels, blood pressure, and smoking, they accounted for only about one-third of the differences in rates of heart disease across the grades.

Since similar patterns were evident for many diseases, the researchers concluded that the causative factors involved had to do not so much with individual risk factors associated with particular diseases as with basic protective factors that seemed to operate differently depending on one's place in the civil service hierarchy. This conclusion was supported by findings from historical research that had shown the wealth-health connection had transcended time and disease patterns. Even though the burden of disease in developed countries had shifted from infectious diseases to chronic diseases, a significant advantage had continued to be enjoyed by the wealthy throughout this transition.

Findings from the Whitehall studies and similar studies have led population health researchers to focus on detailed examinations of the quality of life at work. This research has uncovered a number of important findings regarding characteristics of the work environment that contribute to positive and negative health outcomes. The findings indicate that unemployment, job insecurity, and high levels of stress at work all contribute to negative health outcomes.

Since adequate and equitable income has been shown to contribute to positive health outcomes, it is hardly surprising that those without a job have worse health outcomes than the employed.[39] However, while income appears to account for part of this difference in health status, the social stigma associated with being unemployed and the loss of

39 Morris, J.K., Cook, D.G., and Shaper, A.G. (1994). " Loss of Employment and Mortality," *British Medical Journa*l, 308, pp. 1135-1139.

work-related social supports also seem to be important. For example, research has determined that retired individuals have poorer health outcomes than those who work, even when age and income are taken into account.

The context in which unemployment occurs also makes a difference as to how much health is affected. For example, several studies have shown that individuals who experience unemployment in areas or periods with low unemployment rates suffer more negative health consequences than individuals who experience unemployment in areas or periods with high unemployment. Researchers have concluded:

> Unemployment has been consistently linked to poor health. Regardless of how health was measured, studies have found that unemployed adults are at higher risk of suffering a decline in their health than their employed counterparts… In addition, adults who experience unemployment have consistently been found to die earlier than adults who did not experience unemployment, all other things being equal.[40]

The differences are significant. For example, during a five-year follow-up period, one study found that 93.3 per cent of unemployed people survived, while 95.7 per cent of employed people survived—a 2.4 per cent difference.[41]

Job insecurity, including the anticipation of unemployment, also can negatively affect health. The risk of heart problems and the use of sick leave are higher among individuals with insecure jobs than among those with secure employment. Moreover, many of the negative health consequences of unemployment are concentrated in the anticipatory phase before unemployment—that is, during the period after notification of job loss but before actual job loss occurs.[42]

In a recent study of employment-related health indicators, six indicators having to do with the availability of work (unemployment rate, *etc.*) were found to be associated with population health outcomes. A seventh, having to do with the nature of work and, in particular, job strain, was also found to be important.[43]

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40 *Ibid.*

41 Lavis, John N. and Stoddart, Gregory L. (1999). *Social Cohesion and Health: Working Paper No. 47*. Toronto. Canadian Institute of Advanced Research, p. 4.

42 *Ibid.*

43 Lavis, John, Mustard, Cameron, Payne, Jennifer, and Farrant, Mark (2000). *Work-Related Population Health Indicators: Working Paper No. 75.* Toronto: Canadian Institute For Advanced research.

With respect to job strain, a recent report from Health Canada has confirmed what population health researchers have known for some time, "Toxic stress in the workplace is a major threat to health and safety." [44] The review confirmed predictions by the World Health Organization that stress, anxiety, and depression will become the leading causes of disability in the workplace over the next 20 years.

Researchers have identified two types of jobs where levels of stress are particularly high. One type of job involves very high demands where there is little control over the pace and organization of work—the assembly line stereotype. A second type involves jobs that consistently demand great effort, but where there is little monetary reward or other type of recognition. This has led to the development of two conceptual frameworks for understanding job strain. In the first, the focus is on high effort—low reward jobs, while in the second, the focus is on high demand—low control jobs. In the first framework, more importance is accorded to "reward," while in the second, more importance is accorded to "control."

High demand, low control, social isolation, high levels of stress, low pay levels, inadequate recognition, and personal factors, such as an inability to cope with stress, appear to have more influence on health outcomes than usual risk factors for health problems such as high blood pressure and smoking.[45] Leading researchers have reported that: "A single measure of social environment—job control—explained more of the variation in health across job positions within a firm than all standard coronary heart disease risk factors taken together." [46]

A related body of health determinants research has examined the importance of social support networks, not only in the workplace, but in other social settings as well. It turns out that those with more ties to family, friends, and community have better health outcomes than those who have fewer such ties. Moreover, it seems that countries with more equitable income distribution achieve higher levels of social cohesion. This may help to explain their superior health outcomes. The more equitable countries are characterized by higher levels of overall trust,

44 Shain, Martin (2000). *Best Advice on Stress Risk Management in the Workplace.* Ottawa: Health Canada.

45 Frank, John W. (1995). "The determinants of health: A new synthesis." *Current Issues In Public Health,* 1, pp. 233-240.

46 Lavis, John N. and Stoddart, Gregory L. (1999). *Social cohesion and health: Working paper no. 47.* Toronto. Canadian Institute of Advanced Research, p. 24.

less crime and violence, and better social outcomes than the countries with large gaps between rich and poor.[47]

Social cohesion refers to the "networks, norms, and trust which bring people together to take action…the glue that binds people together." [48] Usually, social cohesion is measured at the individual level. For example, respondents are asked: Can you trust people? How many groups and associations do you belong to? Such studies consistently find that social cohesion contributes to positive health outcomes and that people who are isolated have an increased risk of death from a number of causes.

Jenson has proposed a conceptual framework for understanding social cohesion more fully. In his conceptualization, the extent of social cohesion is understood with reference to five continua: belonging—isolation, inclusion—exclusion, participation—non-involvement, recognition—rejection, and legitimacy—illegitimacy.[49]

In one of the classic studies of the importance of social supports, Berkman and Syme examined social relationships in Alameda County, California.[50] They discovered that those without social supports (marriage, family, friendships, associations with church or other groups), were 1.9 to 3.1 times more likely to die in a nine-year follow up period compared with those who had such supports.

In other studies, social supports have been found to be associated with survival from heart attack. For example, it has been reported that: "The causal role of psychosocial factors in coronary heart disease has been reviewed recently. The evidence from longitudinal studies involving more than 500 healthy subjects was strongest for social isolation, depression, and anxiety, and low control at work." [51]

47 Marmot, Michael and Wilkinson, Richard (eds.) (1999). *Social determinants of health*. New York: Oxford University Press.

48 Lavis, John N. and Stoddart, Gregory L. (1999). *Social cohesion and health: Working paper No. 47.* Toronto. Canadian Institute of Advanced Research, p. 4.

49 Jenson, J. (1998). *Mapping Social Cohesion: The State of Canadian Research*. Ottawa: Canadian Policy Research Network

50 Berkman, L.F. and Syme, S.L. (1979). " Social networks, host resistance and mortality. A nine-yea r follow-up study of Alameda County residents," *American Journal of Epidemiology* 109, pp. 186-204.

51 Marmot, Michael and Wilkinson, Richard (eds.) (1999). *Social determinants of health*. New York: Oxford University Press.

The health benefits of social cohesion have also been found to have strong economic consequences, such as reductions in lost productivity and savings in health care costs. In this sense, equity and social cohesion may actually contribute to the economic output of egalitarian countries. Countries that distribute more wealth more equitably are able to leapfrog the health status of other countries. The increasing gap in life expectancy between Japan and the United States, for example, might be explained partly as a function of the increased productivity of a more egalitarian Japanese society.

4. The Quality of Early Life Experience Determines Health

The importance of early childhood experiences, and the lifelong health consequences of these experiences, has been another important area of health determinants research. At the most obvious level, low birth weight babies, infants who suffer excess trauma at birth, infants who are deprived of proper nutrition, or those exposed to toxic levels of cigarette smoke, alcohol, or drugs (while in the womb, through breast feeding, or through environmental exposure) will suffer immediate health consequences. In addition, however, there may be lifelong health consequences. Researchers have determined that:

> Events during gestation, as indicated by birth weight and placental weight, and in infancy, as indicated by growth in the first year, are associated with risk of several important chronic diseases in later life—including cardiovascular disease, obstructive lung disease, and diabetes….(for example, standardized mortality rates) for cardiovascular disease were found to decrease from 119 for those weighing less than 5.5 pounds at birth to 74 for those weighing more than 8.5 pounds.[52]

Thus, the health trajectories of individuals differ markedly according to birth weight and early development, and the effects continue into mid- and later life.

The importance of a stimulating, nurturing environment early in life has also attracted a good deal of interest from researchers. For example,

52 Power, Chris (1996). " Transmission of Social and Biologic Risk across the Life Course." In David Blane, Eric Brunner and Richard Wilkinson, *Health and Social Organization: Towards a Health Policy for the 21st Century*. London: Routledge Publishers.

> We now know that development of the brain in the early years of life, particularly the first three years, sets the base of competence and coping skills for later stages of life.[53]

Nurturing by parents has a decisive and long-lasting impact on development, including capacity to learn, behavior, ability to regulate emotions, and risks for disease. Negative experiences and a disruptive childhood can have decisive and sustained negative effects.

The good news about these findings is the obvious implications for early intervention. Indeed, a number of studies have been carried out to show the important lifelong benefits that can be achieved with early intervention programs involving young children and youth at risk. The new understanding of brain development in the early years, and its effect on subsequent learning, behaviour, and health, has led a number of governments to take steps to provide support for better early child development, both in and outside the home.

One well-known early intervention program was carried out at the Perry School in the United States. In this program, at-risk children were randomly assigned to an early enrichment, pre-school program and then followed up years later. When those assigned to the program were compared with those who did not receive any early enrichment, the results were astonishing. Comparing the early enrichment students with the controls at age 27, more than 20 years after exposure to early enrichment, 29 per cent compared to 7 per cent of the controls had earnings of more than $2,000 monthly, 36 per cent compared to 13 per cent were homeowners, 71 per cent compared to 54 per cent had graduated high school or equivalent, 59 per cent compared to 80 per cent had received social services in the previous ten years, and 7 per cent compared to 35 per cent had five or more arrests.[54] In addition, half as many were ever classified as mentally retarded, a higher proportion went on to college, and there was half the rate of teenage pregnancies. The researchers concluded that the early intervention had multiple and long-term beneficial results.[55]

53 McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report.* Toronto: Government of Ontario. Available: www.childsec.gov.on.ca., p. 2.

54 Hertzman, Clyde (1998). "The Case for Child Development as a Determinant of Health." *Canadian Journal of Public Health, 89*, May-June, pp. S14-S19.

55 Frank, John W. (1995). " The Determinants of Health: A New Synthesis." *Current Issues In Public Health, 1,* pp. 233-240.

Some researchers have attempted to estimate the dividends from investments in early childhood development. In one such Canadian study, it has been estimated that for every dollar spent on early childhood education, there is a two-dollar dividend for society, in addition to benefit for child and family.[56]

As already alluded to, early life experience has lifelong consequences. For example, there is a two- to three-fold increase in dementia in the seventh decade of life among those with less than primary school education, compared with those who have completed more than secondary schooling. The effects are the equivalent of the less educated group being five years older. Thus, education protects against dementia and mental decline in later life.[57]

Researchers believe that dementia occurs because of a loss of connections between nerve cells in various parts of the brain. Education early in life likely enriches the network of connections, creating a reserve capacity that provides a protective effect later on. Thus, Sweden, with the highest literacy and numeracy rates among the poorest segments of society among OECD countries, also enjoys one of the best life expectancy rates of any developed country.[58]

Other long-term health outcomes associated with early life experience are more difficult to explain. For example, "the risk of death from heart disease in the fifth decade of life is strongly associated with the size of an individual's placenta at birth and weight gain during the first year of life."[59] These types of findings have led researchers to investigate the causal mechanisms or pathways that translate social environmental inputs into adverse body responses in a wide range of physiologic systems. Some of these theories, and the evidence supporting them, are discussed later in this chapter.

56 Federal/Provincial/—Territorial Council of Ministers on Social Policy Renewal (1999). *A national children's agenda: Developing a shared vision.* Ottawa: Minister of Public Works and Government Services.

57 Hertzman, Clyde (1998). "The Case for Child Development as a Determinant of Health." *Canadian Journal of Public Health, 89,* May-June, pp. S14-S19.

58 *Ibid.*

59 *Ibid,* p. 17.

5. Other Health Determinants

Many other determinants of health have also been examined by population health researchers. Some of these determinants have very important health outcomes. However, either because the effects of these determinants are relatively well-known or because they are of more limited interest to those involved in the community sector, only a brief listing is provided here. More information is readily available from the sources listed in the "Bibliography."

Other determinants include:

Alcohol and Drugs. The effects of excess consumption of alcohol and drugs on health status are well-known. In addition, there is increasing concern about the effects on unborn and newborn children. In some communities, there is a growing concern about Fetal Alcohol Syndrome and Fetal Alcohol Effect.

Smoking. The effects of smoking and second-hand smoke are becoming well-known. Smoking poses a very serious health hazard, not only to the smoker, but to the unborn child, young infants and children, and all those exposed to second hand smoke. Half of all long-term smokers die from tobacco-related illnesses, and half of those die in middle age, losing at least 20 years of productive life. Worldwide, smoking will contribute to the deaths of 4 million people this year and 10 million by 2030.[60] Increasing awareness of the health hazards of smoking have led to changes in smoking patterns. However, smoking patterns follow the socioeconomic gradient, with the rich smoking much less than the poor. The same patterns are evident in cross-national comparisons. Poorer nations have much higher rates of smoking than wealthy nations.

Food and Nutrition. Healthy food and a nutritional diet are essential for health. Policies and practices of governments and major corporations have a marked impact on the pricing and availability of nutritious food.

Transportation Systems. Vehicles and transportation systems may be designed so that they are more or less safe. Attention to safety will have a marked impact on health outcomes. Consider, for example, the health consequences of seat belts and air bags in automobiles. In addition, transportation policy is important. A good public transportation system, for example, will reduce the use of private

60 *The Globe and Mail* (editorial) (2000). "How to get the world to give up smoking." August 9, p. A12.

vehicles. As a consequence, traffic accidents will be reduced. In addition, environmental pollution associated with the burning of fossil fuels will be reduced and cleaner air will contribute to better health outcomes for the population as a whole.

Housing. Access to affordable housing is an important health determinant. For example, poor, unsanitary housing conditions contribute to the spread of infectious diseases. Expensive housing undermines the ability of those on low incomes to purchase the other necessities of life, such as food and clothing.

Exercise. The benefits of regular exercise are well-known.

Researchers continue to discover personal practices with health consequences. The list goes on and on, as new connections between our attitudes and behaviors and our health are discovered. For example, everything from washing hands, to controlling stress, meditating, taking vitamins, and adhering to a spiritual path, have been found to be associated with positive health outcomes.

6. Biologic Pathways

Why is early childhood development so important for long-term health outcomes? Researchers have determined that there are critical periods for brain development. Once these critical periods have passed, it is possible to compensate to some degree, but the full potential for neural development will not be achieved. Progress is being made in understanding how external stimuli pass through the sensing pathways to promote brain development. There is speculation (and growing evidence) that these mechanisms may affect health by influencing the development of coping mechanisms and immunologic and other physiologic systems.

The quality of sensory information provided to children early in life appears to have a profound impact on neural development. Moreover, prolonged stress can cause permanent damage to brain functioning and affect the ability to learn, as well as memory and behavior. Early nurturing can provide long-term protection against some threats to health, including the effects of stress.

Some of the pathways that link environment to biologic response are well-understood. For example, the pathways that link poverty with poor nutrition, over-crowding, and second hand smoke have been well-documented. In turn, increased exposure to infectious diseases

and reduced capacity to combat infections influence health status. And all of these factors have an impact on the functioning of the immune system. This increases susceptibility to heart disease, cancer, and other illness later in life. Similarly, the effects of long-term chronic stress are though to channel energies away from the development of adaptive functions that are needed to maintain health.

The precise patterns of neural development and the effect of environment are increasingly well understood. All the cortical neurons we will ever have are developed during the middle third of gestation. During this period, neurons are formed at the rate of 580,000 per minute. Infants are born with 100 billion cortical neurons—as many stars as in the milky way.[61]

Communication among these neurons takes place across microscopic gaps called synapses via chemical neurotransmitters in the brain. Through these synaptic connections, brain cells form neural circuits that support all brain functions, including sensory perception, motor skills, behavior, and cognitive skills. Infant brains produce trillions more synapses—connections between nerve cells—than are found in mature adult brains.

Synapses begin forming starting two months before birth. This process peaks during a period of synaptic exuberance between the ages of one and two years. Rapid synapse formation ends about age three, and gradually declines until reaching adult levels by about age 16. From about the first grade on, there is little change in the number of synapses. By the time children start school, the architecture of the brain has already been constructed.

There are critical periods in early development during which we acquire specific traits, behaviours and skills. Synapses reinforced through appropriate stimulation during these periods are retained and become permanent. Those not used or not used often enough are eliminated. Our genetic program:

> results in an oversupply, or redundancy, of synaptic connections. Stimulation and experience drive a competitive process among these synapses for a limited supply of neural growth factors. More active synapses attract more of the sustaining growth factors than inactive ones. Active synapses flourish—become stabilized—and inactive

61 What follows is a brief summary of a more detailed discussion that will be found elsewhere. See Bruer, John T. (1999). *The Myth of the First Three Years: A New Understanding of Early Brain Development and Lifelong Learning.* New York: The Free Press.

> synapses perish…this competition completes the brain's fine-wiring and increases sensitivity and specificity of our neural circuits.[62]

The more synaptic connections we use during these critical periods, the greater the "synaptic density" of the brain.

Did You Know?

Neural Pathways and Synaptic Exuberance

- David Hubel and Torsten Wiesel received the Nobel prize in 1981 for their research on the eyesight and brain development of kittens. They found that kittens deprived of visual input early in development remained permanently blind because the neural capacity needed to interpret visual signals was not developed during the critical period for development of that part of the brain.
- In monkeys, 2,500 synapses disappear every second in the visual area of each brain hemisphere between two and three-and-a-half years. The synapses not used are eliminated.
- During the 1950s and 1960s, Harry Harlow at the University of Wisconsin studied rhesus moneys. Those deprived of maternal nurturing suffered lasting adverse health effects, demonstrating that loving care is essential for long-term health.
- Babies are born with the ability to discriminate the sounds found in all human languages, but by six months of age, they have already focused on the particular sounds of their native language. Children experience a dramatic decline in their ability to learn a second language between ages six and 13. From birth to the end of high school, the average child learns 10 new words a day.
- Adults can have surgery to correct a cataract, but children will have permanent sight impairment if the cataract is not removed.
- Merzenich found that chronic middle ear infection during infancy interfered with appropriate auditory stimulation. This resulted in abnormal brain circuitry and later caused reading and language problems.

Source: Bruer, John T. (1999). *The myth of the first three years: A new understanding of early brain development and lifelong learning*. New York: The Free Press.

62 Bruer, John T. (1999). *The Myth of the First Three Years: A New Understanding of Early Brain Development and Lifelong Learning.* New York: The Free Press, p. 107.

Why is synaptic density important? Synaptic density dramatically affects brain functioning, including: intelligence, skills, ability to cope with stress, and susceptibility to a wide variety of diseases throughout the life course.

As we have seen, the social environment later in life also influences health outcomes. For example, the work environment, income, and social circumstances have consistently been shown to be associated with health outcomes. But how does the social environmental influence health? This question has also been addressed by population health researchers. Complete explanations are some years away, and much of what is known relies on animal studies. Nonetheless, research is increasingly providing evidence about the precise biologic pathways that link social and physical environment with health outcomes.

One of the most obvious and important pathways linking the social environment with health outcomes concerns the effect of environment on lifestyle. Among the unemployed, for example, lower incomes may influence the intake of nutritional food or participation in recreational activities. Unemployed people may be more inclined towards a sedentary lifestyle or they may more often take refuge in alcohol or drugs. All of these behavioral changes could be expected to contribute to poorer health outcomes.

In fact, research has determined that these types of pathways do exist. For example, after losing a job, unemployed adults gain weight and experience higher cholesterol levels and blood pressure levels that could be associated with a more sedentary lifestyle.[63] As a result, they die prematurely. But the effects of social environment on personal lifestyles appear to be only a partial explanation of observed differences in health outcomes.

It turns out that the social meanings associated with social status and psychological security are mediated through pathways that affect the bodies biologic processes, such as the endocrine and immunological systems. This is leading to whole new fields of inquiry, such as psychoneuroendocrinology, psychoneuroimmunology, and psychoneurocardiology. According to some of the leading researchers:

> Psychological processes arising from perceptions of one's status, economic insecurity, or relative deprivation….translate into important changes in nervous, endocrine and immune systems—changes which in turn lead to deteriorations in mental and physical

63 Morris, J.K., Cook, D.G., and Shaper, A.G. (1994). " Loss of Employment and Mortality," *British Medical Journal, 308,* pp. 1135-1139.

> health. In other words, perceptions, feelings, and stimulation are *biologic* events as well as social ones."[64]

Thus, for example, studies of those who have been through stressful events (for example, final exams or the loss of a loved one) show that immune system levels are depressed. In turn, the host's ability to resist disease and to bounce back from threats to health is impaired. The impact of prolonged exposure to stress and insecurity is thought to be particularly deleterious. Stress has been found to be related to an increase in blood pressure, changes to the levels of chemicals found in the brain, and alterations in hormone levels in the blood.[65]

The picture that emerges is of the lifelong interaction between the coping skills and capacities of the developing individual and (socioeconomic and psychosocial) conditions as they present themselves at the intimate, civic, and state levels."[66]

There has been particular interest in studying the human reaction to prolonged stress. An excellent summary of the current state of knowledge has been provided by Marmot and Wilkninson:[67]

> Stress has short-term effects on the human body and mind. The effects are positive if the situation is right, but everyone has his or her limits. We are now beginning to recognize that people's social and psychological circumstances can seriously damage their health in the long term. Chronic anxiety, insecurity, low self-esteem, social isolation, and lack of control over work appear to undermine mental and physical health.
>
> The power of psychosocial factors to affect health makes biologic sense. The human body has evolved to respond automatically to emergencies. This stress response activates a cascade of stress hormones which affect the cardiovascular and immune systems. The rapid reaction of our hormones and nervous system prepares the individual to deal with a brief physical threat. The heart rate rises; blood is diverted to muscles; anxiety and alertness increase. This response is highly adaptive: it may save life in the short term.

64 Lavis, John N. and Stoddart, Gregory L. (1999). *Social Cohesion and Health: Working Paper No. 47.* Toronto: Canadian Institute of Advanced Research.

65 Lavis, John N., Farrant, Mark, and Stoddart, Gregory L. (2000). *Barriers to Employment-Related Healthy Public Policy: Working Paper No. 76.* Toronto: Canadian Institute of Advanced Research.

66 Hertzman, Clyde (1998). "The Case for Child Development as a Determinant of Health." *Canadian Journal of Public Health, 89,* May-June, p. S16.

67 Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health.* New York: Oxford University Press.

> But if the biologic stress response is activated too often and for too long, there may be multiple health costs. These include depression, increased susceptibility to infection, diabetes, high blood pressure, and accumulation of cholesterol in blood vessel walls, with the attendant risks of heart attack and stroke. These health problems increase progressively down the social strata in industrialized countries.
>
> Psychosocial and stress mechanisms have been studied in a variety of non-human primates, both in the wild and in captivity. In monkeys there is also a social hierarchy in cardiovascular damage. Submissive animals have a higher prevalence of atherosclerosis and a pattern of metabolic changes similar to that linked with increased cardiovascular risk in humans. In baboons, those of lower status in the troop have a higher level of the stress hormone cortisol, and this is associated with lower levels of protective high-density lipoprotein cholesterol in the blood.

The clustering and accumulation of psychosocial disadvantage, perhaps beginning with a poor emotional environment in early childhood, is a neglected area of public health prevention and social policy.

Conclusion

Aaron Wildavsky, a prominent American public policy expert, has said:

> According to the Great Equation, medical care equals health. But the Great Equation is wrong. More available medical care does not equal better health. The best estimates are that the medical system (doctors, drugs, hospitals) affects about 10 per cent of the usual indices for measuring health: whether you live at all (infant mortality), how well you live (days lost to sickness), how long you live (adult mortality). The remaining 90 per cent are determined by factors over which doctors have little or no control, from individual lifestyle (smoking, exercise, worry), to social conditions (income, eating habits, physiological inheritance), to the physical environment (air and water quality). Most of the bad things that happen to people are beyond the reach of medicine.[68]

Population health experts are concerned about the 90 per cent. Over the past two decades, extensive research has determined what factors in the environment influence health outcomes and the precise mechanism involved. The picture that emerges is one of large set of

68 Quoted in: Hylton, John H. (1994). *The Determinants of Health: The Implications of the Population Health Perspective for Aboriginal Health and Healing Policy.* Ottawa: Royal Commission On Aboriginal People.

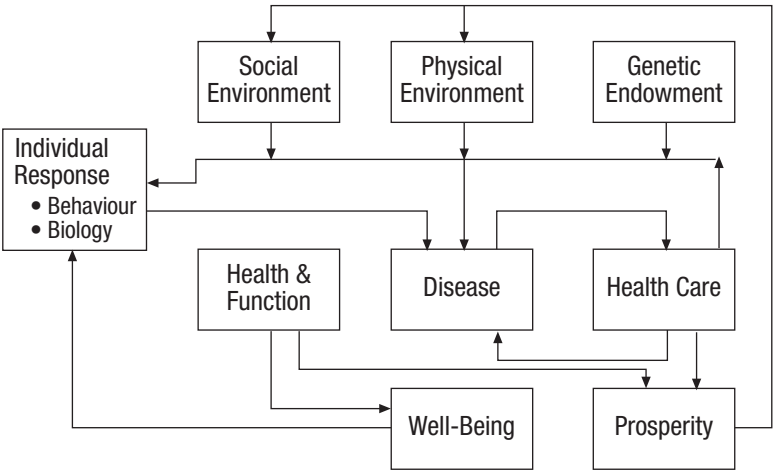
individual, social, and societal level variables that interact in complex ways to influence individual health outcomes and health status at the societal level.

In an attempt to summarize the complex interplay of variables, researchers have proposed a number of models to show the relationship of different types of variables to health outcomes. One of the most widely cited such models has been developed by Evans and Stoddart.[69] It is reproduced below as Figure 1.

The Evans and Stoddart model shows the interacting effects that individual response, the social environment, the physical environment, genetic endowment, prosperity, and health care resources have on health and well-being.

The major findings from population health research have extensive policy implications for community organizations and the health sector. An overview of some of the main implications is presented in the next chapter.

Figure 1
A Sophisticated Model of Health and Well being



Source: R.G. Evans, G.L. Stoddart "Producing Health, Consum,ing Health Care," Social Science and Medicine 31 (1990): 1347-64.

69 Evans, Robert G. and Stoddart, Gregory L. (1990). "Producing Health, Consuming Health Care," *Social Science Medicine*, 31 (12), pp 1347-1363.

Chapter 4

Chapter 4

Implications for Community Organizations and the Health Sector

This chapter examines the implications of the forgoing discussions about the determinants of health. The question to be addressed here is: knowing what we now know about health determinants, what should governments, health authorities, and community agencies be doing or doing differently? At the outset, it will be helpful to outline the "policy context" in which these decisions will have to be taken.

"Social Justice" in Canada

Canadians are justifiably proud of the country in which they live. Our pride is only increased when our many accomplishments as a nation are recognized internationally. In recent years, for example, Canada has been honored with the United Nations' top spot in the annual international human development survey. Canada has consistently ranked at the top of this index, which considers life expectancy, educational attainment, and per capita income.[70]

In terms of life expectancy, an indicator of the overall health status of the population, the progress in Canada has been nothing short of remarkable. In 1900, Canadians lived to an average age of 47. Nowadays, in no small part because of improved public health, sanitation, and disease prevention initiatives, as well as general improvements in living standards, most Canadians can expect to live into their 70s and beyond.[71] Canada has achieved a 95 per cent reduction

70 Knox, Paul (1997). "Canada still place to live, UN says." *Globe and Mail,* June 12, p. A1.

71 In 1996, for example, life expectancy was 78.6 years. See Canadian Public Health Association (2000). *An ounce of prevention: Strengthening the balance in health care reform.* Ottawa. Canadian Public Health Association. Available: www.cpha.ca.

in preventable diseases among children. Over the past 50 years alone, life expectancy in Canada has increased by 15 years.[72] This is a dramatic increase in life span over a short period, and represents a most notable accomplishment.

Yet, even in developed countries, there are more than 100 million people who live in poverty. Moreover, in Canada, as well as in many other countries, the gap between rich and poor has been widening. Ironically, at the same time the United Nations has recognized Canada's accomplishments, it has been investigating high poverty rates, extensive food bank usage, and poor treatment of Aboriginal people in this country.

Did You Know?

Rich-Poor Income Gap In Canada

- Income inequality grew during the 1990s. Crudely put, the rich got richer and the poor got poorer.
- Between 1994 and 1998, income from wages and salaries increased, but governments did less through tax transfers and transfer payments. As a result the income gap widened. Many provinces, notably Ontario and Alberta, restricted access to welfare and cut benefits to those who still qualified.
- In 1989, 30 per cent of Canadian families had after tax income of less than $35,038, but 37 per cent fell into this low income bracket in 1997.
- Among some poorer provinces (*e.g.*, Newfoundland, Nova Scotia, and Saskatchewan), the gap between rich and poor shrunk. The narrowest gaps were in the poorest provinces, not the richest. In Ontario, the gap grew by 24 per cent between 1994 and 1998.
- In 1970, seniors were 12 per cent of the population but 26 per cent of those in the bottom 10th of income earners. In 1995, 15 per cent of the population were seniors and only 6 per cent of the bottom income group. Meanwhile, single mothers were 7 per cent of family heads in 1970, but 12 per cent in 1995. Single mothers made up 24 per cent of the bottom income group in 1970, but 40 per cent in 1995.

72 National Forum on Health (1997). *Canada health action: Building on the legacy*. Ottawa: Minister of Public Works and Government Services; Suzuki, David (2000). "Life span. The long and short of it," *The Prairie Dog,* July 13, p. 6.

Source: Little, Bruce (1999). "Poverty is single and she has a child." March 8, p. A2: Canadian Press (2000). "Canadians getting poorer, report says." *Leader-Post,* January 27, p. F8; Little, Bruce (2000). " Here's how the rich-poor gap grew." *Globe and Mail,* June 19, p.A2.

Is Canada moving towards a more just and equitable society—one where the full potential for better health status and improved quality of life can be attained—or is Canada moving farther away from this ideal? An examination of trends in income distribution, child poverty, and inequities based on race and social status, indicates there are many challenges ahead for Canada.

Between 1989 and 1998, average incomes in Canada increased 1.7 per cent (in constant dollars) to $49,626. However, the average increase has only occurred because the rich have been getting richer faster and than the poor have been getting poorer. The highest fifth of income earners had average after–tax incomes of 96,175, up 6.6 per cent since 1989. Middle income earners saw their incomes decline by 1 per cent, and low income earners saw their incomes decline by 5.2 per cent. In 1998, the top 20 per cent earned $5.40 for every dollar earned by the lowest 20 per cent. This was a 12.5 per cent increase in the gap of $4.80 in 1994.[73] In 1998, 3.7 million Canadians were below Statistics Canada's low income cutoff and more than 1 million of these were under 18.[74]

The average salary of a CEO in Canada went up 15 per cent in 1995, 11 per cent in 1996, and 13 per cent in 1997 to $862,000. The average was $1.5 million when stock options and other perks were included. In contrast, the wages of most workers rose no more than 2 per cent per year during this same three-year period. In the 15 years after 1951, average family incomes rose from $23,000 to $54,000 in 1996 dollars. But between 1989 and 1996, families with children under 18 suffered a $4,000 decline in real income.[75]

73 Even in this period of relative economic prosperity, however, not all areas of the country benefited equally. Three provinces experienced declines in income: Quebec (-1.8 per cent), Nova Scotia (-3. 7 per cent) and Newfoundland (-6.1 per cent). See Little, Bruce (2000). "Average family enjoying best income in a decade." *Globe and Mail*, June 13, p. A1.

74 Statistics Canada's low-income cut-off is calculated by determining if more than 55 per cent of income is needed to meet the basic necessities of life, such as food, shelter, and clothing.

75 Philp, Margaret (1998). "Gap between Canada's rich and poor increasing, report says." *Globe and Mail,* October 22, p. A12.

The burden of poverty on Canada's children is particularly worrisome. Since 1989, the number of poor children in Canada has increased by 49 per cent. During this period, the number of children in families with low incomes has gone up by 48 per cent, the number in families experiencing long-term unemployment has increased 16 per cent, the number in working poor families has increased by 44 per cent, the number in families receiving social assistance has increased by 51 per cent, the number in two-parent families has increased by 45 per cent, and the number in lone-parent families has increased by 61 per cent.[76]

Government programs play an important but decreasing role in reducing poverty. For example, in 1997, 569,000 children were kept above the poverty line due to public investment. Without public investment, the rate of child poverty would have stood at 27.7 per cent in Canada, rather than at the actual level of 19.8 per cent.

Unemployment insurance is an important source of income for many low income families. In 1989, 74 per cent of employees were covered by unemployment insurance, however, because of changes in eligibility requirements and coverage periods, only 36 per cent were covered in 1998.

Did You Know?

Child Poverty In Canada

- One in three Canadians will experience poverty at some time during their lifetimes. Many people are a divorce, a job loss, or an illness away from poverty.
- The number of poor children has increased by some 463,000 since 1989.
- The most recent figures indicate child poverty is still increasing and now stands at 16 per cent to 23 per cent, depending on the province.
- Younger children are most at risk. The child poverty rate among those under two years is 24.4 per cent, and over 25 per cent for those aged three to five. In 1995, 57.2 per cent of single mothers under 65 with children 18 or under were poor. For single mothers under 25 years of age, 83 per cent were poor.

76 Campaign 2000 (2000). *Report card on child poverty in Canada—1989-99.* Toronto: Campaign 2000.

- 40 per cent of those who use food banks are children and food bank usage has doubled since 1989.

- 30 per cent of poor children, compared with 10 per cent of children generally, change schools three times before they are eleven; 33 per cent compared with 10 per cent of four- and five-year-olds display delayed vocabulary development; 25 per cent compared with 75 per cent participate in organized sports; and one in six of those in the 16- to 19-age range , compared with one in 25 of better –off youth, are not in school and not working.

- From 1989 to 1996, the number of people living in unaffordable housing rose by 91 per cent in Canada. There are 96,000 households on waiting lists for assisted housing. The fastest growing need is for emergency shelters for families with children. Some 12.2 per cent of the poor live in sub-standard housing needing major repairs. Some 20,000 new social housing units were built each year during the 1980s, whereas the average between 1994 and 1998 was 4450 units.

- 90 per cent of children in Canada had no child care space available to them in 1998.

Source: Canadian Public Health Association (1997). *The health impacts of social and economic conditions: Implications for public policy.* Ottawa: CPHA; Campaign 2000 (2000). *Report card on child poverty in Canada—1998-99.* Toronto: Campaign 2000; National Council of welfare (1997). *Healthy parents, healthy babies.* Ottawa: Minister of Public Works and Government Services.

Did You Know?

Child Poverty in Canada—International Comparisons

- In international comparisons, poverty is often calculated by looking at what proportion of the population have incomes that fall below half of the median income in the country. Using this measure, Canada ranks 17th among 23 industrialized nations in child poverty. Canada's rate of child poverty is higher than in countries such as Hungary and Poland.

- Although Canada ranks first on the United Nation's Human Development Index, it ranks ninth on the United Nation's poverty index, much lower than many other countries that have lower per capita income. In a recent international survey, 15.5 per cent of children in Canada were poor.

- In the world's wealthiest countries, one out of six children—47 million children in total—are considered poor. Mexico has the highest child poverty rate among developed countries (26.2 per cent), followed by the United States at 22.4 per cent. Sweden, has the best record at 2.6 per cent.

- Compared with Canada, the United States child poverty rate is 50 per cent higher. In Canada, 3 per cent of families live in poverty, whereas the corresponding figure in the United States is 10.9 per cent. Across North America, approximately 50 per cent of single parent families live in poverty—more than twice as many as in Western Europe.

- The high number of single parents who are unemployed or underpaid is a leading cause of child poverty in Canada.

- Although the percentage of single parent households is about the same in Canada and in Finland, in Canada 15.5 per cent of children live in poverty, whereas the corresponding figure in Finland is 4.3 per cent—less than a third of the percentage in Canada.

- In Norway, parents can receive 42 weeks of paid maternity leave at full pay or 52 weeks at 80 per cent. In Denmark, Finland, and Sweden, universal day care is available.

Source: Philp, Margaret (2000). "Canada ranks high in child poverty," *Globe and Mail,* June 13, p. A__; Globe and Mail Editorial Board (2000). "Poverty in the mirror. " June 13, p. A16; Little, Bruce (1999). " Poverty is single and she has a child." March 8, p. A2. Campaign 2000 (2000). *Report card on child poverty in Canada—1998-99.* Toronto:Campaign 2000; Drohan, Madelaine (2000). " Taxes tell only half the story about quality of life." *Globe and Mail,* June 9, p. B11. Hertzman, Clyde (1994). " The lifelong impact of childhood experiences: A population health perspective," *Daedalus,* 123 (4), pp. 167-180

Reflecting decreasing Employment Insurance payments between 1993 and 1996, the income of poor families receiving Employment Insurance went down by 44 per cent.[77]

Wage policies also have an important impact on poverty. In 1998, 37 per cent of single mothers were paid less than $10 per hour, whereas only 26.5 per cent of employees generally received such a low salary. The average wage needed to reach the poverty line for a single person without children varied from $10.18 to $11.96 per hour depending on the province. Meanwhile, minimum wages varied from $5.40 to

77 *Ibid.*

$7.15 an hour. The wage gap between minimum wage and what is needed to rise above the poverty line varied from $4.25 per hour to $6.06 per hour depending on the province. The largest gap ($6.06) was in Alberta, one of Canada's richest provinces.

Even within these growing gaps between rich and poor, there are some groups that fare much less well than others. For example, according to the most recent statistics, 23.4 per cent of all children in Canada are poor, but 52.1 per cent of Aboriginal children are poor, 42.7 per cent of visible minority children are poor, and 37 per cent of children with disabilities are poor.[78]

The life expectancy of Aboriginal people in Canada is seven years less than for other Canadians. Aboriginal children are twice as likely to be born prematurely or underweight or to die within the first year, they are three to four times more likely to die from SIDS (sudden infant death), 15 to 30 times more likely to be born with FAS/FAE (fetal alcohol syndrome or effect), three times more likely to be disabled, six times more likely to die by injury, poisoning, or violence, and five times more likely to commit suicide.[79]

These and other findings suggest that Canada may be moving farther away from the ideal of creating a more just and equitable society. There is a growing gap between rich and poor, governments are playing a reduced role in creating equitable incomes and opportunities, and already disadvantaged groups are being further disadvantaged. Meanwhile, many essential services that disadvantaged groups rely on for basic health, income, and social supports are being cut back or eliminated altogether. As the determinants of health literature clearly indicates, these growing inequities will have a significant long-term impact on health status and quality of life in this country. Moreover, the research indicates it is unlikely that the negative impact of these growing inequities can be overcome by more or better health services alone.

78 *Ibid.*

79 Federal/Provincial/Territorial Council of Ministers on Social Policy Renewal (1999). *A national children's agenda: Developing a shared vision.* Ottawa: Minister of Public Works and Government Services.

Policy Implications

It is evident that a number of important policy choices lie ahead for Canada. Discussions about government finances have shifted away from a preoccupation with deficits. Now the debates centre on the "fiscal dividend" and whether it should be used to pay down debt, reduce taxes, or increase government program spending. Canada is at the crossroads. Will fiscal flexibility be used to create greater equity, or will more and more wealth be concentrated in fewer and fewer hands in the hopes that advantages will "trickle down" to those most in need? The evidence clearly suggests that Canada has become more inequitable and that "trickle down" has not been working to reduce inequity.

There are far–reaching policy implications of determinants of health research. The purpose here is to indicate the nature and extent of these policy implications and to provide a guide to more detailed analyses that have been reported elsewhere.

For ease of discussion, discrete initiatives are listed below. In reality, however, these initiatives need to be woven together into comprehensive action plans that will address key policy objectives.

Policy Implications Related to the Health System

"A significant proportion of health care activity is ineffective, inefficient, inexplicable, or simply unevaluated."[80] Moreover, even where dramatic improvements in the extent, effectiveness, and accessibility of medical care have been achieved, the health inequities between socioeconomic classes have not been reduced.[81] Nor, as we have seen, does spending on health care equate with improved health outcomes. These realities have led population health experts to think critically about the role of formal health care services within a broader framework for addressing health determinants.

Critics who have examined the health system from a determinants-of-health perspective have made several common observations:

- The health system is too illness-focused and pays too little attention to prevention of illness and disability or the promotion of

80 Evans, Robert G. and Stoddart, Gregory L. (1990). "Producing Health, Consuming Health Care," *Social Science Medicine., 31 (12),* pp 1347-1363.

81 Canadian Public Health Association (1997). *The health impacts of social and economic conditions: Implications for public policy.* Ottawa: CPHA.

health. For example, Canada spends $8.7 billion to treat 2 million injuries that for the most part could be prevented, and highway and bicycle safety alone could result in 22,000 fewer injuries and $500 million in cost savings each year.[82]

- The health system is far too insular. It does not devote enough attention to the development of partnerships and coalitions that could address the determinants of health.

- At least some of what the health system provides by way of formal services is of dubious merit, and the value of many other services is uncertain.

- The health system is inefficient and, at any rate, it consumes too much of society's total fiscal capacity, with the result that there is not enough left over to support other vital services (early childhood development, income support, housing, *etc.*) that could have a dramatic impact on health outcomes.

The implications for reforming the health system, implications that are not always consistent with the directions currently being pursued under "health reform," include the following:

- The health system should seek a more appropriate balance between the proportion of resources devoted to "illness care" and the proportion devoted to prevention and promotion.

- The health system should more actively create and support partnerships with other organizations and sectors so that the determinants of health can be more effectively addressed.

- The health system should provide services that are proven to be effective, and these services should be provided as efficiently as possible.

- The health system should not seek to become "all things to all people." Its role should be more circumscribed, and the resources required should be in balance with the requirements of other sectors that also contribute to health and well-being.

While these may appear as "motherhood statements," the implications of these policies are quite profound. In particular, a different approach to prioritization and funding would be involved,

82 Canadian Public Health Association (2000). *An ounce of prevention: Strengthening the balance in health care reform.* Ottawa. Canadian Public Health Association.

one that would be in stark contrast to past approaches that have relied on service demands, public expectations, and political imperatives to justify more and more resources for illness care services.

Wealth and Income Inequality

Poor social and economic circumstances affect health throughout life. Poor families are unable to provide the same opportunities for early childhood development or education, and these families are more likely to experience the effects of insecure jobs, poor housing, and difficult family circumstances. These adverse circumstances often combine and cumulate over time, with the result that there is more and more disadvantage with each transition. Therefore, programs that prevent individuals, families, and communities from falling into disadvantage will produce important health gains. Programs that assist the disadvantaged to improve their lot, that offset earlier disadvantage, or that minimize the deleterious effects of disadvantage may similarly be expected to have important implications for health status.

Health determinants research has conclusively demonstrated the importance of alleviating poverty and achieving a more equitable distribution of income. Policy implications of these findings include:

- Increasing benefits under income support programs, such as social assistance and Employment Insurance;
- Increasing employment levels and moving towards full employment through job creation and other initiatives;
- Using the tax system to more effectively redistribute income so that at-risk families and children are more effectively supported;
- Moving towards a type of guaranteed annual income;
- Policies that provide better security of employment for vulnerable workers;
- Policies that increase the minimum wage so that low income individuals have a better chance of avoiding poverty;
- Programs that remove disincentives that discourage those receiving income support from seeking employment, for example, programs that reduce or eliminate the clawing back of wages earned by those receiving social assistance;

- Programs that provide access to adequate, affordable housing;
- Programs that increase ability to compete in the marketplace, including those that provide access to affordable and effective education, skills training, on-the-job training, and lifelong learning;
- Programs that prevent educational and job failure and that promote education and job security; and
- Programs that provide personal supports for independent living.

Determinants of health research has demonstrated that reducing relative poverty and narrowing income distribution have a much greater effect on improving well-being that increasing aggregate wealth or spending more on health services. Reducing inequity improves the quality of the social fabric. This affects quality of life and, ultimately, health status. In this sense, good health is ultimately a reflection of societal values.[83]

Social Supports at Work, at Home, and in the Community

As we have seen, research has identified the quality of social supports available at work, at home, and in the community as a important determinant of health outcomes. Those who have the benefit of supportive social environments are much more healthy than those who do not.

A number of programs and policies aimed at improving the quality of the social environment at work have been proposed. These include:

- Programs that reduce stress in the workplace and, in particular, that address the needs of those in high stress, high demand jobs, where repetitive work, low levels of control, or inadequate financial or other rewards may be issues. Many of these programs aim to ensure greater worker control and greater variety in assigned tasks.
- Initiatives to monitor absenteeism, injuries, and illnesses among employees, and that use this information to promote improved working conditions.
- Policies that increase job security, including those related to notice and layoff provisions, financial compensation in the event of job loss, training and re-training to improve prospects for

83 Marmot, Michael and Wilkinson, Richard (eds.) (1999). *Social determinants of health.* New York: Oxford University Press, p. 29.

reassignment or re-employment, and initiatives related to improving information exchange and dialogue about, for example, the impact of technological change, company restructuring, or other pending changes.

- Programs that provide for a safe physical environment, including ergonomic and other programs that reduce injuries.

- Programs that prevent unemployment and reduce the hardship and increase the supports for those who are unable to find work or become unemployed.

- Workplace wellness and other programs that promote a healthy work environment, participatory decision-making, and empowerment at work.

- Government regulations that promote stability of employment and safe working conditions, *e.g*, limits on work hours, required minimum salaries and benefits, minimum layoff provisions, and occupational health and safety rules, *etc*.

The evidence indicates that increased employment, more job security, and improved working conditions lead to greater productivity, a healthier working environment, improved job satisfaction, and better health outcomes.

At home and in the community, other types of policies and programs may be considered to improve the number and quality of social supports. Some of these overlap with the workplace-related initiatives listed above. Examples include:

- Programs that have the effect of restricting or eliminating discrimination, harassment and arbitrary treatment in employment, housing, and other areas of life, including programs that promote cultural sensitivity and cultural diversity;

- Programs that prevent violence and that promote environments where people feel accepted, safe, and secure;

- Programs that support existing voluntary organizations, associations, and networks, and that promote the establishment of new ones;

- Safety net type programs that promote material security and reduce material and financial insecurity;

- Programs that improve the quality of the social environment by fostering a sense of belonging and feeling valued, that combat isolation, that promote coping skills, and that improve capacity and self-esteem;

- Programs that reduce social isolation, such as recreational opportunities, outreach programs, and home visiting;

- Programs that recognize that vulnerable groups may face increased social isolation and deprivation, such as special initiatives for members of racial minorities and disabled people;

- Programs that increase social cohesion by creating opportunities for mutually supportive and trusting friendships and relationships to develop; and

- Programs that equip individuals and families with the emotional and practical resources needed to cope with daily stresses.

Social exclusion creates misery and costs lives. The most successful communities, whether in terms of health outcomes, productivity, or other indicators, are those that not only deal with material deprivation, but that create an environment of mutual trust and respect where everyone feels cared for, loved, and esteemed. These are communities that protect rights, prevent discrimination, promote opportunities and equality, and remove barriers to the achievement of a high quality of life.

Early Childhood Development

In recognition of the lifelong implications of a poor start in life, both for health outcomes and for other outcomes, determinants of health proponents want to see a much higher priority assigned to prenatal care and early childhood development. Among the suggestions put forward are the following:

- Programs to prevent low birth weight babies, such as nutrition programs, parent education and support programs, and programs that address the impact of smoking and alcohol on the unborn child and the newborn infant;

- Outreach programs, including home visiting, that provide support to mothers, especially those who are at high risk;

- Programs to achieve early brain development, such as infant stimulation programs and programs that will provide parents with education and support;

- Programs that develop educational and support materials and guidelines for parents to assist them in their parenting role and that deal with such issues as how to provide a warm, loving, and responsive environment such materials might include: how to discipline, the importance of talking, reading and singing, the importance of secure attachment to a caregiver, *etc.*;

- Programs that acknowledge and support the early childhood development roles of the family, the child care centre, the neighborhood, and the school;

- Programs that help the health system to improve access to health services, provide an integrated system of early child development, provide parenting education and skills development, develop injury prevention programs, and assess and act on environmental threats to health;

- Programs that end child poverty, including tax, employment, welfare, and wage policies that support adequate family incomes;

- Programs that deal with school drop-out and literacy problems and that promote the acquisition of second and subsequent languages;

- Health and safety education programs that improve health and safety at home and in the community;

- Programs that increase access and reduce cost to quality child care for working and stay at home parents; and

- Programs that foster the development of supportive community environments, for example, that integrate education, health, social and recreational services at the community level, that promote child-friendly spaces and systems, and that lead to inter-sectoral cooperation.

Did You Know?

Low Birth Weight

- Low birth weight refers to newborns weighting less than 2500 grams.

- 75 per cent of infant deaths can be explained by low birth weight.

- Low birth weight is a leading underlying cause of illness in infancy and childhood, as well as later in life.
- Low birth weight and poverty are directly related.
- Since 1989, the incidence of low birth weight babies in Canada has increased by 5 per cent.
- Since 1989, advanced medical technology has helped to decrease the rate of infant mortality by 14 per cent.
- Costs of caring for a low birth weight baby range from $500 to $5,000 per day and an average of $200,000 in the first two years.
- Some pre-natal programs costing as little as $500 per infant have proven effective.

Source: National Council of welfare (1997). *Healthy parents, healthy babies.* Ottawa: Minister of Public Works and Government Services; Campaign 2000 (2000). *Report card on child poverty in Canada—1998-99.* Toronto: Campaign 2000.

Many organizations concerned about child care and child development have called for the development of integrated family and child support policies in Canada that would address many of the specific elements listed above.

Other Areas of Healthy Public Policy

The availability of healthy and nutritious food at an affordable price is a political issue. Government policies and initiatives by other sectors can improve health outcomes. Programs that provide information about nutrition, that lend social support to promote healthy eating, and that reduce the costs and increase the availability of nutritious food, for example, can all make a difference. When these initiatives are targeted at those most vulnerable (for example, young infants and children at risk), the positive results can be particularly impressive. Policies that promote food quality and safety, and that encourage sustainable agricultural and food production are also important.

Transportation policy affects the availability and affordability of public transportation as well as the availability of alternatives to transportation that do not rely on the burning of fossil fuels (*e.g.*, bike paths). In turn, such policies influence the use of private vehicles. Choices affect the quality of the environment (*e.g.,* air pollution). In addition, transportation safety policy, and the design of vehicles and roads, for example, determine the risk to the public from traffic accidents.

Public policy can also have an impact on the accessibility and affordability of recreational opportunities. In addition, these policies can provide support to encourage physical activity and a healthy lifestyle.

Policies related to the availability and price of cigarettes and alcohol directly affect consumption rates as well as consumption patterns. In turn, health outcomes are affected.

The vast and growing inequities among countries in the world also requires a more effective response. One third of the planet does not have access to clean water and food or basic health care. One in three adult men in China will die from smoking in the next few decades. One in five people in the world live on less than US$1 a day.[84] These inequities are mostly due to causes we know how to solve. Solutions do not depend on new technologies, new drugs, or better medical procedures, but on a willingness to move to a more equitable system of wealth distribution among countries. Many lives can be saved by helping poorer nations with basic public and preventative health services, and with the basic support programs needed to address the necessities of life. In the long run, much more can be accomplished by a fairer sharing of wealth and by empowering disadvantaged nations to find their own solutions.

Conclusion

The determinants of health literature points to the need to move beyond a preoccupation with disability and disease and the curative health services required to address these needs. A broader conceptualization is needed, one that considers all the ingredients of well-being. As Chernomas has suggested:

> The current struggle for adequate funding for health care, crucial though it is, must be combined with the environmental movement's concerns for the quality of our air and water, the nutrition movement's concerns for the quality of our food, the labour movement's concern about the quality of our work, and the anti-poverty movement's concerns for income and wealth equity. Only by broadening in this way our understanding of the determinants of health and disease will we be able to effectively deal with the health concerns of Canadians.[85]

84 Knox, Paul (1997). "Canada still place to live, UN says." *Globe and Mail,* June 12, p. A1.

85 Chernomas, Robert (1999). *The social and economic causes of disease.* Ottawa: Canadian Centre for Policy Alternatives, p. i.

It is evident from the policy implications that have been discussed that the health system alone cannot address many of the broader issues that have a dramatic impact on health status. Rather it is only by many sectors working together, that the determinants of health can effectively be addressed. As The Canadian Public Health Association has noted: "The first priority of healthy public policy must be to ensure all Canadians have access to adequate amounts of nutritious foods, adequate housing, meaningful work, and adequate income, and that all Canadians have basic literacy skills and health knowledge."[86]

As Evans and Stoddart have suggested, current conceptual frameworks create an acute sensitivity to even the possibility that some new drug, piece of equipment, or diagnostic or therapeutic manoeuvre may contribute to health.[87] Yet, when it comes to the social determinants of health, this importance is not denied, but current conceptual frameworks do not allow for this knowledge to be effectively taken into account. Clearly, a broader framework is a pre-requisite to moving forward. One major challenge for the public health community and government will be to broaden the parameters of health policy discussions to include the broader social and economic issues.

86 Canadian Public Health Association (1997). *The health impacts of social and economic conditions: Implications for public policy.* Ottawa: CPHA, p. 2.

87 Evans, Robert G. and Stoddart, Gregory L. (1990). "Producing Health, Consuming Health Care," *Social Science Medicine, 31 (12),* pp. 1347-1363.

Chapter 5

Chapter 5

Developing Partnerships with the Health Sector: Some Practical Considerations

The previous chapters have discussed the importance of closer collaboration between the community sector and the health sector, summarized the determinants of health, and examined the policy implications for community organizations and the health system. In addition, the "Bibliography" and "Appendix" gather together a variety of more detailed reference materials, tools, and suggestions.

This chapter discusses a number of practical issues that community organizations must address to develop more effective partnerships with their health departments and authorities. Specific suggestions are discussed for approaching health officials and for gaining their interest, cooperation, and support. Without this "buy in," it will be much more difficult to develop partnerships, improve community services, and achieve improved health status.

The intent here is not to repeat what will be found in standard texts on planning and community development. Nor will what follows be a substitute for what funders themselves have to say in their specific guidelines for submitting proposals. Rather, the intent here is to consider matters specific to the current Canadian health care environment that further the health determinants perspective. The objective is to contribute some ideas that will be useful in developing meaningful and multi-faceted partnerships between community organizations and local, regional, and provincial health authorities.

Walking a Mile in the Moccasins of a Health Care Administrator[88]

While it goes without saying that they will have to have their act together—sound, well-thought-out, and practical proposals—the biggest challenge community organizations often face in working with the health sector is "getting the attention" and support of key officials and decision makers. Health care in Canada has become highly politicized. Constant crises related to the needs of patients and the needs of those who provide services to them are the norm. There are increasing demands for services, but fewer resources to go around. While some of these issues were briefly touched on in the introduction, it will be helpful to more fully discuss the environment within which health care decisions are currently being made.

So much has been written about deficits and public debt in Canada that the figures do not need to be repeated here. Regular updates are furnished by the media, and the news is never good. Suffice it to say that Canadian governments have accumulated large debts, and despite a good deal of rhetoric on the subject, most Canadian governments are experiencing tremendous difficulties in reducing annual shortfalls, much less addressing their accumulated debt problem.

As a consequence of the public debt and a recession from which the country may only now be emerging, the public policy agenda in Canada has been largely dominated by talk of jobs, free trade, monetary policy, interest rates, and the economy. Discussions of social programs, even in provinces with social democratic governments, are mostly concerned with "refining," "streamlining," "reforming," and "coordinating" programs so that they cost less. To say that this has lead to public concern, particularly in the area of health reform, would be an understatement.

It seems that there is a direct, negative co-relation between the depth of a government's financial woes and its lack of creativity in overcoming its fiscal challenges. Perhaps this is because deficits and restraint become a too easy reason to dispense with new ideas. Perhaps it is because finance ministers and their officials, and financial officers in local and regional governments, often hold more

88 Some of what follows has been adapted from a more detailed analysis that will be found elsewhere. See John H. Hylton, ed. (1994). *Aboriginal Self-Government in Canada: Current Trends and Issues.* Saskatoon: Purich.

sway in times of restraint, even though they may not be the best equipped to come up with creative alternatives. Or perhaps it is because the idea of cutting back something that is already in place becomes so ingrained in the psyche of the public and public administrators that there is no time or energy left over to think about building something new and better. Whatever the reasons, however, times of restraint do not generally seem to give rise to creative new institutional arrangements.

While pressure seems to have eased off somewhat in recent years, increased budget flexibility has not yet been translated into major new resources for services. On the contrary, there is considerable pressure to use the "fiscal dividend" to pay down debt and reduce taxes. Even when new resources are made available for services, long-neglected traditional areas of service seem to get much more attention than creative new ideas for reforming and re-balancing service systems.

There can be little doubt that proposals for new community health sector collaboration will not easily succeed in the current environment. Governments, and the public, may automatically assume that community initiatives will require more resources. Political leaders may have other, "more pressing," priorities. In other words, the very political will and public support needed to succeed may be jeopardized by fiscal realities.

Social activists have long argued that budget deficits are used as an excuse to downplay social programs by those who do not support these programs in the first instance. It is not at all difficult to envision similar dynamics coming into play in relation to proposals for re-balancing the health system.

Resistance to change manifests itself in many ways and for many different reasons. There are winners and losers whenever policy choices are made, and, however dysfunctional the current institutional arrangements, many benefit from them. They will resist change, particularly change that has the potential to affect their personal security or status. These are real concerns; they are legitimate; and they must be addressed.

Whether personally affected or not, there are those who resist change for any reason. Some say that "we do not deal with change well!" Still others may earnestly believe that the status quo, or some variation, can be made to work.

The fact of the matter is that by the time most health departments and health boards have dealt with acute care issues, waiting lists, facility issues, new equipment, and the concerns of acute care service providers, including physicians, nurses, and others, little time, money, or energy is left over to deal with any other issues. While this may seem a grim picture, it is the reality in virtually every part of the country. Community agencies will have to be keenly aware of this environment if they expect to have any hope of engaging health authorities in meaningful dialogue about common concerns.

Some Good News: Renewed Interest in Community Development[89]

In the last several decades, there is some evidence of a shift in the strategies adopted by governments to deal with community problems. These broad trends favour increased collaboration between government and the community sector.

In the past, it was common for the public to look to professionals, experts, and government officials, to "solve" their problems, and authorities believed that, in many instances, they had "the answers" to pressing community concerns. Governments declared wars on crime, wars on drugs, and wars on poverty. "Master plans" were developed for stimulating economic growth and creating jobs. Royal Commissions told us how to "fix" what was ailing the country. We were told any problem we had could be dealt with by consulting a professional.

What these examples have in common is a centralist, "top-down" approach to addressing community concerns. In this model of planning, the experts in federal, provincial, and territorial capitals not only defined the problems, but they told us how they should be resolved. In most instances, the community was not asked to participate in the development of solutions since, after all, that was the role of the experts. Rather, the community's role was to accept the solutions and pay the bills.

89 This discussion is a brief summary of a more detailed analysis of these trends published elsewhere. See: Hylton, John. H. (1993). *The La Loche Report.* Regina: Saskatchewan Municipal Government.

While this traditional approach to governing is still widely employed, a lot has changed over the past several decades. Increasingly, governments have had to face the fact that the best ideas and the brightest experts have been unable to solve many of the country's most daunting challenges. Moreover, the "top-down" approach has created many problems of its own. In particular, it has not been very effective in responding to the range of unique circumstances facing different regions of the country, or different cultures, and it has often been very costly.

The Economic Council of Canada (ECC) has been a vociferous critic of the "top-down" approach to government policy development and service delivery. In an analysis of national economic development programs, the ECC has identified community economic decline in all regions of Canada and in all industrialized countries. Moreover, uneven patterns of unemployment and income have continued to exist, despite a long history of government policy measures designed to eliminate them. And inequities continue to exist even when the economy is buoyant. The ECC notes:

> despite decades of intervention by government, these gaps in opportunity have not only persisted but, in many cases widened… top-down, bureaucracy-driven plans for regional development have fallen into disrepute and policy makers know they need to consider new approaches.[90]

In a similar vein, Wismer and Pell have referred to the growing pessimism about the effectiveness of centrally sponsored "solutions":

> At one time leaders told us that publicly sponsored economic development efforts were bringing us closer and closer to a national goal of full employment…these days we hear little about full employment…the truth is that governments have no solutions for us.[91]

While these examples deal with economic development, similar critiques have developed in relation to government social programs.

With respect to the cost of the "top-down" approach, the average taxpayer has come to question the value of many public expenditures. While most see an important role for government, it is a circumscribed

90 Economic Council Of Canada (1990). *From the Bottom Up: The Community Economic Development Approach.* Ottawa: author, pp. 1-3.

91 Wismer, Susan and Pell, David (1981). *Community Profit: Community-Based Economic Development in Canada.* Toronto: Is Five Press.

role, in areas where the effectiveness of government programs can be clearly demonstrated. There is no appetite for growing deficits, or for increased taxation to fund questionable government initiatives.

In part, the fiscal crisis faced by governments accounts for their interest in exploring new approaches to planning and service delivery. Continued expansion of government programs, or even the maintenance of key programs, has become increasingly difficult as government deficits spiralled out of control during the 1990s. The difficulties encountered by governments in recessionary times are enormous. They often feel that their choices are not about whether to cut budgets, but how much to cut and in what areas.

Public attitudes and expectations also have changed. In the face of economic de-industrialization, environmental degradation, loss of local control, social degradation, and the erosion of local identity, the public has a heightened interest in becoming involved in finding local solutions to local problems.[92] Moreover, the community has become cynical about governments, and about experts. They no longer believe that governments and experts will, or can, solve their problems. In fact, governments that claim to have "the solution" are no longer credible with the public.

In this environment, governments have become loathe to make independent decisions about new initiatives or program reductions. More and more, they have been asking communities to enter into a partnership, so that solutions can be developed on the basis of community input or even community control. Governments recognize that the quality of decisions can be improved if there is community participation in the decision-making process. They have also seen the value of supporting communities to find their own unique solutions to pressing problems. And they have come to appreciate that they can distance themselves from unpopular decisions, if the community shares the responsibility for setting priorities and directions.

In the new approach, governments no longer see themselves as the only vehicle for the delivery of programs needed by the community. In fact, increasingly, powers and resources are being devolved to the community level, so that services can be designed and delivered by the communities themselves. In fact, the creation of regional health authorities may be seen as one manifestation of this trend. Moreover, incentives are being created for communities to design more effective solutions and to contain expenditures.

92 Nozick, Marcia (1992). *No Place like Home: Building Sustainable Communities*. Ottawa: Canadian Council on Social Development.

While the new approach implies significant new roles for the community, there are also far reaching implications for government. With communities taking increasing responsibility for services, governments are moving away from their traditional service delivery role. Instead, governments are concerning themselves with the challenge of facilitating and supporting community planning. In addition, they have recognized that there will continue to be an important need for the central development of standards, for auditing and evaluating of programs, and for mechanisms to ensure the fair and equitable distribution of resources. In fact, these roles take on even greater importance in a decentralized service delivery structure.

As a result of the concerns about centralized approaches to addressing community problems, there has been increasing interest in revisiting community development approaches that were popular in the 1960s and 1970s. These approaches are based on a belief that new solutions will have to come from ordinary people in society. They involve the "empowerment of individuals and their communities to better meet their economic and social needs." [93] As Fairbarn *et al.* have pointed out:

> community development involves processes of education and empowerment by which local people take control and responsibility for what used to be done to them…where other strategies of government and corporate business tend toward centralization, community development depends fundamentally on the greatest possible decentralization of power, knowledge, control, and wealth.[94]

Similarly, Nozick has described the community development process as involving three steps—self-awareness, community action, and linking with others outside the community.[95]

Whether the initiatives relate to social or economic concerns, or a combination of the two, community development requires a measure of community control. Nozick has described what this community control means:

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93 Benett, Edward (1992). "Community-Based Economic Development: A Strategy for Primary Prevention." *Canadian Journal of Community Mental Health, 11(2),* p. 3.

94 Fairbairn, Brett, Bold, June, Fulton, Murray, Ketilson Lou Hammond, Ish, Daniel (1991). *Co-operatives and Community Development: Economics in Social Perspective.* Saskatoon: University of Saskatchewan, pp. 12-13..

95 Nozick, Marcia (1992). *No Pace like Home: Building Sustainable Communities.* Ottawa: Canadian Council on Social Development.

> community control means that the decision-making process and organizational structures within a community are especially designed to give all members of the community the power and means to manage their own affairs. Since society is primarily organized on a top-down basis, community control will necessarily require a transformation from hierarchical to non-hierarchical structures so as to allow the maximum participation by community members in the decision-making and development process.[96]

Although the health sector has been slower than others (*e.g.,* education, justice, and social services) to adapt to these changes, the implications of these trends for community-health sector collaboration are nonetheless quite clear. Governments are interested in community development, they are interested in devolving power from central authorities, they are interested in community involvement and control, and they are interested in bottom-up planning and priorization. These trends will offer positive encouragement and support to community organizations that are seeking to develop closer ties with the health sector.

Strategies for Gaining Support

Whether or not community agencies wish to develop specific funding proposals, and whether or not they are successful, they have a broader interest in cultivating partnerships with the health sector that involve community participation in addressing the social determinants of health. Rather than putting forward specific funding proposals, some community agencies may wish to focus on developing these kinds of relationships.

There are a number of avenues that community organizations can pursue to draw greater attention to the social determinants of health and to open discussions about the need for collaborative action. For example, community agencies might ask:

- Does the health authority know what "upstream programs" it now provides, how much they cost, how much this represents of the entire health authority budget, and whether funding has been increasing or decreasing? If so, can this information be made available to community representatives? If not, why not? And would the health authority be interested in working with the community to get answers to these questions?

96 *Ibid.,* p. 99.

- Does the health authority know how effective its current "upstream programs" are? Is there an opportunity for better data collection or evaluation? Is there a role for the community in this process?

- Would the health authority be willing to regularly monitor and report on its upstream programs? Would it be willing to have a program audit or prepare a report card?

- Would the health authority be willing to commit a portion of its budget to an "Upstream Programs" funding envelope. Would it be willing to establish future targets for increased funding?

- What does the health authority see as an appropriate balance of funding between "upstream" and "downstream" programs? Is this a question it has considered? If not, why not? If it has, how has this decision been made, when was it last reviewed, and is it an area open for further discussion with the community?

- With regard to pressing "downstream issues" (increasing demands for acute care and other curative services), does the health authority ask "why"? Would it be willing to convene meetings, conferences, task forces, or advisory committees to consider the causes of existing pressures and what might be done to prevent illness and promote health?

- Does the health authority have a long-term plan to examine how upstream initiatives could help to deal with downstream pressures? If not, why not? Is there a role for the community in developing such a strategy?

- Has the health authority conducted a needs assessment that would permit it to determine the nature and extent of needs for prevention and promotion programs? If not, why not? Might there be a role for the community in such an exercise?

Of course, community organizations may also wish to develop specific funding proposals to present to their health departments or health authorities to address the social determinants of health. As the discussion of policy implications in the previous chapter suggests, the range of issues that might be addressed in such proposals is extremely broad. Moreover, once familiar with the population health perspective, agencies themselves will have many creative ideas.

In developing their proposals, community organizations will wish to be mindful of the application guidelines and funding criteria issued by the health authority. In addition, however, given the current health care environment and the health determinants perspective, there are a number of other issues that the organization may wish to address:

- Has the community organization collected good, objective evidence about the problems to be addressed by the agency's proposal? If such evidence is not available, how does the community organization propose to deal with this gap?

- Are there good reasons from the research literature or otherwise to believe that the action proposed in the community organization's proposal will actually address the problems that have been identified?

- Does the proposal focus on an "upstream," prevention, and promotion focus, or is it concerned about dealing with problems once they have already occurred?

- Does the proposal demonstrate that the community organization is credible, that is, that it is the appropriate organization to undertake the actions that have been proposed and that it will be able to follow through to meet the commitments that have been outlined? Does the health authority clearly understand the community organization's history, mandate, and current services and why it would be well-positioned to carry out the proposed actions?

- Is a strategy for evaluating the effectiveness of the proposed actions outlined?

- Does the proposal demonstrate that there is widespread community concern about the problems that have been identified and widespread community support for the solutions that are being advocated?

- Has the agency used community development principles to identify issues and solutions? Have key stakeholders had an opportunity to be involved in identifying problems and solutions? Are they partners in or supporters of the proposed initiative?

- Does the proposal demonstrate that research and best practices have been appropriately adapted to the specific circumstances of the community? Is the proposal culturally sensitive and culturally relevant?

- Does the proposal show how pressing issues that the health authority is already dealing with can be dealt with more efficiently or effectively through collaboration with the community sector?

- Does the proposal outline the long-term benefits of strengthened ties between the community and the health sector in addressing the social determinants of health?

As community organizations are well aware, it is often difficult to obtain funding even for the most worthwhile projects. Moreover, much of the funding currently available provides only a short-term "fix," not a long-term solution. Given the current environment in health care, it would be naive to think that new partnerships between community organizations and the health sector will solve these problems. The fact of the matter is that most health authorities do not set aside funds for community initiatives, and any new funding for such initiatives generally has to be found within existing allocations. Therefore, developing new relationships will not happen easily or quickly.

Conclusion

In the past decade, community organizations and charities have come under many new pressures. The sector has been required to adapt to changing economic and social realities, increasingly diverse populations, more complex community problems, and changing government and public expectations.[97] Moreover, as governments have withdrawn from many areas of service, the pressure has increased on community organizations that provide basic health and social services. This is requiring the sector to broaden, deepen and adapt its approaches in a variety of ways.

In countless opinion polls, "health" consistently ranks as Canadians' top priority. Yet, current approaches to service delivery are not sustainable. This is the case, in part, because so little effort is being devoted to preventing illness and promoting health. The health system struggles to cope with ever increasing demands for acute and long-term care services, even while it is mostly unable to step back and assess what could be done now to reduce the demands for such services in the future.

97 Hall, Michael, and Parmegiani, Marcus (1998). *Public Opinion and Accountability in the Charitable Sector.* Toronto: Canadian Centre of Philanthropy Research Bulletin 5 (2).

Health determinants research is providing a valuable new perspective on these issues. This research underscores the important health benefits of the types of "front line" support services that many community organizations have long provided. The findings provide strong support for the view that an expansion in key community services, as well as closer ties involving the health sector and community organizations, can result in improved health status.

The health sector and the voluntary sector are natural allies and there is a tremendous opportunity to expand the range of collaborative action. New partnerships may take time to develop, but the long-term benefits will be worth the struggle. Through such partnerships, there is a much better prospect that the health care system will be rebalanced and the community sector will be strengthened. By jointly addressing the social health determinants of health in this way, health outcomes for communities can be improved.

Bibliography

Bibliography

Introduction

A vast literature on population health has developed over the last decade. This guide is intended to identify some of the leading articles, books, and government publications that may interest those involved in community health and social service organizations.

To make it easier to locate materials, related materials are grouped under subject headings. Each section has its own brief introduction to indicate the types of materials found within it. In addition, citations are accompanied by brief annotations. Within each section, references are listed alphabetically. Many publications are available on-line and, where available, an Internet address is provided. The guide is organized as follows:

General Critiques of the Canadian Health Care System

The Current Status of Health and Health Care In Canada

Canadian Materials of Historical Interest

A General Introduction to Public Health and Population Health

Wealth and Health

Social Supports at Work, at Home, and in the Community

Early Childhood Development

Biological Pathways

Health Promotion

Community Development

International Development

Suggestions for Further Research

Some materials listed here are readily available at local bookstores and public libraries. Other materials, however, are much more specialized. Unless you live in a major centre which has a large university with a medical or health administration program, you will probably have to order them from your bookstore or through an interlibrary loan service. Some materials are available from The Muttart Foundation.

The emphasis in this guide is on leading and recent contributions to the field. Many other publications also are available. Therefore, at the end of this guide, a number of suggestions are provided for further library research. For example, a number of bibliographies and lists of publications have been prepared, and some of them are available free of charge. In addition, several key organizations provide on-line access to computerized library catalogues and other databases.

General Critiques of the Canadian Health Care System

Health care in Canada has been the subject of much debate, particularly over the past two decades. Documents in this section refer to general analyses and critiques of the system. Typically, they are wide-ranging reviews that touch on many problems and possible solutions. Although prepared by health policy experts, they are largely intended for the general public.

Armstrong, Pat, Armstrong, Hugh, Choiniere, Jacqueline, Feldberg, Gina, and White Jerry (1994). *Take care: Warning signals for Canada's health system.* Toronto: Garamond Press.

This is a general analysis of health care issues in Canada from the viewpoint of health care workers and their unions. It examines how budget cuts, free trade, and gender issues have impacted the quality of health care.

Armstrong, Pat, and Armstrong, Hugh (1996). *Wasting away: The Undermining of Canadian Health Care.* Toronto: Oxford University Press.

A more recent and comprehensive version of the 1994 book, this analysis also provides a labour perspective on health care reform in Canada. It traces the history of medicare in Canada and discusses the

political economy of the current system. The main argument in the book is that major reforms are still based on the medical model and are chiefly aimed at who pays for services. This will result, the authors contend, in an ever more uneven distribution of services.

Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report.* Ottawa: Conference of Provincial and Territorial Ministers of Health.

One of numerous documents produced by the provincial and territorial ministers of health over the years to provide a general analysis of health care issues and trends in Canada from a provincial/territorial perspective. Typically, these reports are strong on advice for the federal government and emphasize funding issues, particularly the need for the federal government to contribute more. These reports are usually readily available on the Internet at provincial and territorial ministry of health web sites. Try www.gov.ns.ca.

Decter, Michael B. (1994). *Healing medicare: Managing Health System Change the Canadian way.* Toronto: McGilligan Books.

Decter is a former deputy minister of health in Ontario and a respected health policy analyst. In this book, he reviews the current status and future prospects of the health care system in Canada from the standpoint of two fundamental shifts: 1) a shift in assessing the determinants of health, with an increasing focus on factors other than medical care services, and 2) heightened emphasis on system "outputs" rather than system "inputs," in no small part brought about because of the health care funding crisis.

Decter, Michael B. (2000). *Four Strong Winds: Understanding the Growing Challenges to Health Care.* Toronto: Stoddart.

An updated and expanded version of the earlier book, this analysis focuses on four strong influences that are shaping the Canadian health care system: 1) powerful new ideas (including the population health perspective), 2) public expectations and accountability, 3) advances in technology, and 4) financial constraints. The book also reviews health reform trends in Canada and provides interesting case studies of reforms in three American cities.

Gratzer, David (1999). *Code Blue: Reviving Canada's Health Care System.* Toronto: ECW Press.

Dr. Gratzer is a recently graduated physician working in Toronto. He was awarded the 2000 Donner Prize for this best-selling Canadian public policy book. He believes the current medicare system is fundamentally flawed and that more resources will not solve the problem. He advocates more individual choice as to how services are provided, as well as introducing more competition into the provider system.

National Forum on Health (1997). *Canada Health Action: Building on the Legacy.* Ottawa: Minister of Public Works and Government Services.

The National Forum on Health was appointed in 1994 to advise the federal government on ways to improve the health system and the health of Canadians. The report focuses on long-term and systemic issues aimed at informing national health policies. The work of the Forum was divided into four key areas: values, striking a balance, determinants of health, and evidence-based decision-making.

Rachlis, Michael, and Kushner, Carol (1994). *Strong Medicine: How to Save Canada's Health Care System.* Toronto: Harper Collins.

This is yet another general analysis of Canadian health care issues and trends by respected health policy analysts. The focus is on saving medicare: what's good about medicare, what's bad, and how to fix what's bad so that the system can get back on track. The authors endorse the principles of the *Canada Health Act,* but feel that major changes are required in the way that services are organized and paid for.

Sutherland, Ralph, and Fulton, Jane (1994). *Spending Smarter and Spending Less: Policies and Partnerships for Health Care in Canada.* Ottawa: The Health Group.

The focus in this book is on health care spending. It describes current spending patterns in detail and analyzes the factors that have been pushing costs up. The authors proceed from the premise that health care spending must be controlled and, in fact, this may be desirable from the standpoint of achieving greater efficiency and effectiveness. They develop many ideas for controlling costs and for targeting resources to areas of service that will have the greatest impact. A final section discusses considerations related to implementing the recommended reforms.

The Current Status of Health and Health Care in Canada

These are profile-type documents that provide current descriptions and historical trend data. Issues covered include overviews of health indicators, services, and spending patterns.

Canadian Institute For Health Information (2000). *Health Care in Canada: A First Annual Report.* Ottawa: Canadian Institute of Health Information.

The Canadian Institute is a relatively new organization. Based on a partnership involving provincial, territorial, and federal governments, its aim is to collect better and more consistent information about health and health care in Canada. In this first annual report, it presents a statistical profile of services, expenditures, and morbidity and mortality.

Canadian Institute of Child Health (1994). *The Health of Canada's Children,* 2nd Edition. Ottawa: Canadian Institute of Child Health.

This is a very informative overview of the health status of children in Canada. It provides comprehensive information about mortality rates as well as the incidence of various illnesses and disabilities. It also provides historical trend information. In addition, the report presents information about children with special needs, such as Aboriginals and those with disabilities.

Federal/Provincial/Territorial Committee on Population Health (1999). *Toward a Healthy Future: Second Report on the Health of Canadians.* Ottawa: Minister of Public Works and Government services.

This report provides an overview of the current health status of Canadians. The report is decidedly influenced by a population health perspective and deals extensively with such issues as income, education, social environment, and personal health practices. Statistical appendices are also available. The report and appendices are available online at www.statcan.ca.

National Forum on Health (1997). *Canada Health Action: Building on the Legacy.* Ottawa: National Forum on Health.

The National Forum on Health was appointed by the Prime Minister to examine future directions for health care in Canada. Their report provides a useful overview of current service and expenditure trends as well as an analysis of the pressures on the system that current planning must anticipate

Statistics Canada (1999). *How Healthy are Canadians: A Special Report.* Health Reports, Vol. 11, 3.

This report provides an overview of current health status indicators. The information is based on census and other surveys completed by Statistics Canada.

Canadian Materials of Historical Interest

Canada has played a leading role in developing health promotion and population health concepts and frameworks. The documents in this section are some of the seminal documents that have led to new ways of thinking about healthcare issues and which have won Canada accolades from the international community.

Canadian Public Health Association, Health and Welfare Canada, and the World Health Organization (1986). *Ottawa Charter for Health Promotion.* Ottawa: International Conference on Health Promotion.

This is one of the most widely recognized international frameworks for health promotion practice.

Epp, Jake (1986). *Achieving Health for All: A Framework for Health Promotion.* Ottawa: Health and Welfare Canada.

A follow-up to the Lalonde report (see below), this document, also issued by a Canadian Health Minister, underlines the importance of health promotion.

Lalonde, Marc (1974). *A New Perspective on the Health of Canadians.* Ottawa: Health and Welfare Canada. Available: www.hc-sc.gc.ca.

This landmark, internationally acclaimed report issued by then Health Minister Marc Lalonde proposed a broader framework for understanding the determinants of health. Specifically, four sets of factors affecting health were identified: lifestyle, environment, human biology, and health care organization. The report suggested that each component of the framework was important for achieving "health," not just health care services.

A General Introduction to Public Health and Population Health

Scholarly Treatments

These books and articles provide a general overview and introduction to the public health and population health fields from scholars and researchers in the field. Included are references to some of the standard textbooks used in university training, as well as some of the more recent syntheses of the determinants of health research literature.

Detels, R. Holland, W., McEwnw, J, and Omenn, G., eds. (1996). *Oxford Textbook of Public Health,* 3rd edition. Oxford: Oxford University Press.

Last, J.M., and Wallace, R.B. (1992). *Maxcy-Rosenau-Last Public Health and Preventive Medicine,* 13th edition. Norwalk: CT.: Appleton and Lange.

These are two of the most widely used, comprehensive, and encyclopedic textbooks on public health.

Evans, Robert G., Barer, Morris L., and Marmor, Theodore R. (1994) *Why are some People Healthy and Others Not: The Determinants of Health of Populations.* New York: Aldine.

This edited collection is the culmination of nearly two decades of research by scholars and researchers associated with the Canadian Institute for Advanced Research, one of the leading research institutes involved in social determinants research. It contains excellent overviews of previous research, as well as many of the latest findings from around the world. It is a must-read for anyone with a serious interest in the field.

Frank, John W. (1995). "The determinants of Health: A New Synthesis." *Current Issues in Public Health 1,* pp. 233-240.

This is a short and readable summary of the population health framework written by one of the leading authorities. It discusses five themes: 1) the limits to medical care, 2) macro-socioeconomic and cultural factors that affect health, 3) the micro-level factors in the immediate social environment of the individual that affect health, 4) the importance of early childhood development, and 5) findings with respect to the biologic pathways through which social circumstances exert influence on health status.

Hayes, Michael, and Dunn, James R. ((1998). *Population Health in Canada: A Systematic Review.* Ottawa: Canadian Policy Research Networks.

This report provides a detailed historical account of the evolution of interest in the population health perspective in Canada. It traces developments from the earliest university courses on the subject, through the establishment of the Canadian Institute of Advanced Research (CIAR) programs on population health, right up to the most recent government reports on the subject. It also contains indepth reviews of some of the key contributions to the field, as well as a list of related publications produced by CIAR.

Kue Young, T. (1998). *Population Health: Concepts and Strategies.* New York: Oxford University Press.

This is an excellent general overview and introduction to the field of population health. It describes some of the basic techniques involved in measuring health status, assessing health risks, inferring causation, and planning and evaluating population health interventions. The text is rich with concrete examples and illustration.

Liley, Susan (2000). *An Annotated Bibliography on Indicators for the Determinants of Health.* Ottawa: Health Canada. Available: www.hc-sc.gc.ca.

This is a useful summary of mostly Canadian materials, focusing on indicators of health status. The bibliography includes references to government and research institute efforts in this regard, as well as to some more obscure documents produced from community-based efforts to address the determinants of health.

Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health.* New York: Oxford University Press.

Wilkinson, Richard and Marmot, Michael, eds. (1998). *Social Determinants of Health: The Solid Facts.* Geneva: World Health Organization. Available www.who.dk.

Marmot and Wilkinson's book provides a detailed overview of the findings from the determinants of health literature from mostly United Kingdom scholars and researchers. It provides one of the most comprehensive reviews of the literature currently available. The book is organized into chapters that discuss specific areas of concern, such as work, poverty, income, and the social environment. In each area, policy implications for governments are examined. The Wilkinson and Marmot book is really a pamphlet that provides a succinct, user-friendly summary of the book. It is available free of charge from the World Health Organization Regional Office for Europe web site at: www.who.dk.

Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality.* London: Routledge.

Richard Wilkinson is one of the leading authorities in the field. In this book, he examines health inequities between and within societies from a health determinants perspective. His analysis shows that more egalitarian societies are also more cohesive, and that more cohesive societies are characterized by a higher quality of life, less illness, and longer life expectancy.

Government and Other Reports

These reports from governments and associations have been prepared to outline the "health determinants" perspective on health care issues and to gain general support for this perspective. On the whole, they are much less technical that the scholarly syntheses of the literature listed above. Their audience is the general public and policy makers.

Canadian Public Health Association (1997). *The Health Impacts of Social and Economic Conditions: Implications for Public Policy.* Ottawa: CPHA.

This report provides an overview of the health determinants literature pertaining to social and economic conditions, education

and work, and supportive social and physical environments. This is not a technical report, but a report designed for general consumption. A major emphasis of the report is on the policy implications of research in health determinants.

Canadian Public Health Association (1996). *Action Statement for Health Promotion in Canada.* Ottawa: Canadian Public Health Association.

This report examines implications for health promotion. It suggests a framework for action that includes: reforming the health system, enhancing knowledge and skills, focusing on vision and values, strengthening communities, building alliances, and advocating for healthy public policy.

Determinants of Health Working Group (1997). "Synthesis report." In National Forum on Health, *Canada Health Action: Building on the Legacy.* Ottawa: Minister of Public Works and Government Services.

National Forum On Health (1996). *What Determines Health?* Ottawa: Minister of Public Works and Government Services.

The National Forum on Health was appointed by the Prime Minister to examine future directions for health care in Canada. These reports provide an overview of key findings from health determinants research, as well as detailed discussions about the implications for government policy.

Federal/Provincial/Territorial Advisory Committee On Population Health (1994). *Strategies for Population Health: Investing in the Health of Canadians.* Ottawa: Minister of Supply and Services Canada.

This document synthesizes the major findings from the health determinants literature and discusses policy implications that governments should consider.

Health Canada (1996). *Towards a Common Understanding: Clarifying the Core Concepts of Population Health.* Ottawa: Health Canada.

This is a working report that attempts to clarify what is meant by population health and what the population health perspective entails.

Premier's Council on Health Strategy (1991). *Nurturing Health: A Framework on the Determinants of Health.* Toronto: Government of Ontario.

Saskatchewan Provincial Health Council (1995). *Your Health, my Health, our Health: Our Individual and Collective Responsibilities,* a draft discussion paper on the determinants of health. Regina: Saskatchewan Provincial Health Council.

These are two examples of provincial government efforts to summarize the determinants of health literature and examine implications for provincial health policy.

Wealth and Health

References in this section discuss the connection between wealth and health. The studies document the higher health status of developed nations, but also discuss the importance of equitable distribution of wealth for achieving the best health outcomes.

Adler, N., Boyce, T., Chesney, M. A., *et al*. "Socioeconomic status and health: The challenge of the gradient." *American Psychologist* 1994;49:15-24.

This paper examines the gradient between socio-economic status and health outcomes. It presents research findings that attempt to explain why this association has been consistently found.

Frank, John W., and Mustard, Fraser (1994). "Historical perspective on how prosperity has influenced health and well-being." *Daedalus, 123,* pp. 1-19.

This paper summarizes and analyses the historical evidence linking improved prosperity with better health outcomes.

Hertzman C., (1995). "Determinants of Health in Central and Eastern Europe." *Environment and Health in Central and Eastern Europe.* Washington: The World Bank.

This report documents the deteriorating health conditions of those living in Central and Eastern Europe. The factors associated with this decline, focusing on worsening social and economic conditions, are discussed.

Kaplan, G., Pamuk, E., Lynch, J., Cohen, R., and Balfour, J. (1996). "Inequality and Income Mortality in the United States, Analysis of Mortality and Potential Pathways." *British Medical Journal*, 312, pp. 999-1003.

This study found a significant correlation between the average household income of the less well-off and all-cause mortality. Differences among states were also examined. Income inequality was found to be associated with health outcomes. The authors conclude that economic policies that influence income and wealth inequality may have important health outcomes.

Kawachi, I., Kennedy, B., Lochner, K., and Prothrow-Stith, D. (1997). "Social capital, income inequality and mortality." *American Journal of Public Health, 87,* pp. 1491-8.

Growing gaps between rich and poor affect the social organization of communities and the resulting damage to the social fabric has important implications for public health.

Lynch, J., Kaplan, G. (1997). "Understanding how Inequality in the Distribution of Income Affects Health." *Journal of Health Psychology, 2 (3)*, pp. 297-314.

This paper reviews the evidence regarding how income distribution may be linked to health through material, psychological, social, and behavioural pathways.

MacIntyre S. (1997). "The Black Report and Beyond: What are the Issues?" *Social Science and Medicine, 44,* pp. 723-745.

The Black report was a seminal government commission in the United Kingdom that examined socio-economic differentials in health outcomes. This paper provides a summary and analysis of the report.

Marmot, M. G., Davey-Smith, G. (1989). "Why are the Japanese Living Longer?" *British Medical Journal, 299*, pp. 1547-51.

This paper examines many factors associated with improved life expectancy in Japan. The authors find that the Japanese growth in wealth, combined with a narrowing of differences in income between

the richest and poorest, has had a profound impact on health outcomes.

Pincus, T. and Callahan, L. F. (1995). "What Explains the Association between Socio-economic Status and Health: Primarily Access to Medical Care or Mind-Body Variables? *ADVANCES: The Journal of Mind-Body Health, 11,* pp. 4-36.

This paper examines a number of theoretical frameworks for understanding socioeconomic disparities in health.

Ross, Nancy, Wolfson, Michael, Dunn, James, Berthelot, Jean-Marie, Kaplan, George, and Lynch, John (2000). "Relation between Income Inequality and Mortality in Canada and the United States. Cross-sectional Assessment Using Census Data and Vital Statistics." *British Medical Journal, 320,* pp. 898-902.

This study shows that Canada has lower income inequality and better health outcomes than the US. For working age people, the study shows a 1 per cent increase in the income to the poorer half of households would reduce deaths by 21 per 100,000.

Wolfson, Michael, Kaplan, George, Lynch, John, Ross, Nancy and Backlund (1999). "Relation between Income Inequality and Mortality: Empirical Demonstration." *British Medical Journal, 319*, pp. 953-957.

This is a study of states in the United States examining income levels and mortality. Although somewhat technical, the findings show that the states with the most equitable income distribution (the smallest gaps between rich and poor) also reported the best health outcomes.

Social Supports at Work, at Home and in the Community

These reports and research papers, mostly from academic journals and research institutes, synthesize and analyze the research that bears on the health consequences of social supports in the work environment, at home, and in the community.

Berkman, L.F., and Syme, S. L. (1979). "Social Networks, Host Resistance and Mortality. A Nine-Year Follow-up Study of Alameda County Residents." *American Journal of Epidemiology, 109*, pp. 186-204.

This paper reports on one of the classic studies of social supports. It involved a sample drawn from Alameda County, California. The nature and extent of individuals' supports were examined (family, friendships, involvement in community networks, *etc.*). The presence of these supports was found to be highly associated with health outcomes.

Berkman, L., Vaccarino, V., and Seeman, T. (1993). "Gender Differences in Cardiovascular Morbidity and Mortality: the Contribution of Social Networks and Support." *Annals of Behavioural Medicine, 15,* pp. 112-118.

This paper examines the importance of social networks and supports in predicting mortality risk from a number of causes.

Jenson, J. (1998). *Mapping social cohesion: The state of Canadian Research.* Ottawa: Canadian Policy Research Networks.

This paper summarizes research, but also proposes a way of understanding social cohesion. The framework proposed involves thinking about a number of related dimensions of social cohesion: belonging—isolation, inclusion—exclusion, participation—non-involvement, recognition—rejection, legitimacy—legitimacy.

Johnson, J.V., Stewart, W., Hall, E., Fredlund, P., and Theorell, T. (1996). "Long-term psychosocial work environment and cardiovascular mortality among Swedish men." *American Journal of Public Health, 86,* pp. 324-331.

Low control and low support at work have negative health outcomes.

Lavis, John N. and Stoddart, Gregory L. (1999). *Social Cohesion and Health: Working Paper No. 47.* Toronto. Canadian Institute of Advanced Research.

In this paper the authors explore the hypothesis: social cohesion produces health. Social cohesion is defined, and an ambitious review of relevant research is undertaken. This review touches on the issue of work environment (including the Whitehall Studies), as well as the importance of supports in family life and the community.

Lavis, John, Mustard, Cameron, Payne, Jennifer, and Farrant, Mark (2000). *Work-Related Population Health Indicators: Working Paper No. 75.* Toronto: Canadian Institute For Advanced research.

This is more of a technical report. It contains an up-to-date summary of the research linking work variables with health outcomes, and explores the types of measures of employment and work environment that might be useful in further studying these relationships.

Marmot, Michael (1995). "In Sickness and in Wealth: Social Causes of Illness." *MRC News,* Winter, pp. 8-12.

This is a report of the famous Whitehall studies. British civil servants—17,500 in all—had their health status assessed, and they were followed over a period of 10 years. Health outcomes were markedly influenced by civil service grade. Those with higher grades have better health outcomes. These findings lead to a good deal of speculation about the health impacts of the social meanings attached to position within a social hierarchy.

Morris, J.K., Cook, D.G., and Shaper, A.G. (1994). "Loss of Employment and Mortality." *British Medical Journal, 308,* pp. 1135-1139.

This paper summarizes the evidence linking unemployment with negative health outcomes.

Shain, Martin (2000). *Best advice on Stress Risk Management in the Workplace.* Ottawa: Health Canada.

According to this report, "toxic stress" in the workplace is a major threat to health and safety. The report predicts stress, anxiety, and depression will become the leading causes of disability in the workplace over the next 20 years. This is a "user friendly" guide for employers and employees designed to help deal with stress and working conditions in the workplace.

Siegrist, J.(1996). "Adverse health effects of high-effort/low-reward conditions." *Journal of Occupational Health Psychology, 1,* pp. 27-41.

A number of theoretical models are proposed for understanding the adverse health effects of stressful experiences at work. The evidence in support of these models is also discussed. High effort—low reward jobs are found to have particularly adverse health outcomes.

Symes, S.L. (1994). "The social environment and health." *Daedalus,* Fall, pp. 79-86.

One of the pioneers in determinants of health research, Syme outlines some of the major research findings pointing to the impact of the social environment on health.

Theorell, T., Karasek, R. (1996). "Current Issues Relating to Psychosocial Job Strain and Cardiovascular Disease Research.." *Journal of Occupational Health Psychology, 1*, pp. 9-26.

An excellent review of the literature pertaining to work conditions and health outcomes.

Wilkinson, R.G. (1994). "The Epidemiological Transition: From Material Scarcity to Social Disadvantage?" *Daedalus,* Fall, pp. 61-78.

This paper points out that even though the major causes of death have changed as a result of a "epidemiological transition" from infectious to chronic diseases, the advantaged in society still enjoy decidedly better health outcomes than the disadvantaged. The reasons for this are discussed.

Early Childhood Development

One of the most important areas of health determinants research has involved early childhood development. It turns out that early developmental opportunities have a marked influence on health throughout the life course. References in this section provide overviews and analyses of this important area of research.

Government Reports and Position Papers

References in this section are to various plans and position papers produced by government organizations, quasi-government organizations, and private foundations and research institutes. These documents often summarize existing research, but the main emphasis is on examining program and policy implications.

Carnegie Corporation (1996). *Years of Promise. A Comprehensive Learning Strategy for America's Children.* New York: Carnegie Corporation.

This report sets out the case for early childhood development. It is considered one of "the bibles" in the field, since it helped to spark a

good deal of interest among interest groups and governments in the United States.

Carnegie Corporation (1994). *Starting Points. Meeting the Needs of our Youngest Children.* New York: Carnegie Corporation.

One of the seminal reviews of brain development and early childhood development literature. Its focus is on making the case for increased investments in early childhood development and enrichment.

Clinton, Hillary R. (1996). *It Takes a Village.* New York: Touchstone Books.

This book by the former First Lady, is an interesting lay persons summary of early childhood research and its implications. The book grew out of the White House's interest in early childhood development issues.

Conference of Federal/Provincial/Territorial Ministers of Health (1999). *Investing in Early Childhood Development: The Health Sector Contribution.* Ottawa: Minister of Public Works and Government Services.

This report provides a conceptual framework for early childhood development, suggesting roles for the family, the child care centre, the neighborhood, and the school. The role of the health system is identified as providing: access to health services, an integrated system of early child development, parenting education, skills development and support, injury prevention, environmental health, evaluation, and research.

Federal/Provincial/Territorial Council of Ministers on Social Policy Renewal (1999). *A National Children's Agenda: Developing a Shared Vision.* Ottawa: Minister of Public Works and Government Services.

This document, prepared for public distribution, sets out a "national children's agenda." The agenda calls for programs and policies that will improve support for families, foster early childhood development, provide economic security, create opportunities for early and continuous learning, support adolescent development, and create supportive and violence-free communities. A number of promising initiatives are also described.

Healy, J. (1987). *Your Child's Growing Mind: A Parent's Guide to Learning from Birth to Early Adolescence.* Garden City, N.Y.: Doubleday.

This is a parent's guide that summarizes findings from early childhood development research and examines implications for parenting.

McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the real Brain Drain: The Early Years Study Final Report.* Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

This study was undertaken on behalf of the Ontario government to provide options and recommendations with respect to the best ways of preparing young children, including those at-risk, for scholastic, career, and social success.

National Centre For Clinical Infant Programs (1992). *Head Start: The Emotional Foundations of School Readiness.* Arlington: National Center.

This is a report that makes the case for early childhood intervention, especially programs designed to prepare at-risk kids for school.

National Council on Welfare (1999b). *Children First: A Pre-Budget Report by the National Council of Welfare*. Ottawa: Minister of Public Works and Government Services.

This is a Canadian report that advocates for a national children's agenda.

National Council On Welfare (1999a). *Preschool Children: Promises to Keep.* Ottawa: Minister of public Works and Government Services.

This Canadian report examines the status of children in Canada. It examines poverty, employment, and income support issues, as well as issues specifically related to child development. It provides a review of existing programs and supports. Recommendations focus on improving early childhood care and education.

National Council of Welfare (1997). *Healthy Parents, Healthy Babies*. Ottawa: Minister of Public Works and Government Services.

This report examines the problem of low birth weight babies, and shows the links with poverty. It documents the high costs in social and economic terms and advocates for better programs to support at-risk mothers when they are pregnant and after the birth of their babies. Proposed initiatives deal with smoking, nutrition, alcohol, access to pre-natal care, social support, infant stimulation, and parent education. The report advocates for the establishment of parent-child development centers.

Office of Child Development (1997). *Better Beginnings.* Pittsburgh: University of Pittsburgh.

This is a useful review of child development research and policy implications.

Ounce of Prevention Fund (1996). *Starting Smart: How Early Experiences Affect Brain Development.* www.bcm.tmc.edu/civitas/links/ounce.html

This is a useful review of research and policy readily available on-line.

Organization For Economic Development and Cooperation (1996). *Successful Services for our Children and Families At -Risk.* Paris: OECD.

This report provides many specific examples of programs and services as well as overviews of various governments' policy and legislative frameworks. It includes examples of policies and programs from Europe, Asia and North America.

The Scientific Literature

References in this section are to the technical and scientific research that has shown the importance of early childhood development on immediate and life-long health status

Barker, David (1997). "Fetal Nutrition and Cardiovascular Disease in later Life." *British Medical Bulletin, 53*, pp. 96-108.

One of the pre-eminent leaders in the field, Barker discusses the biological pathways linking fetal nutrition with later (adult) health outcomes.

Canadian Institute of Advanced Research and Centre for Studies of Children at Risk (1995). *Healthy Children Healthy Communities: A Compendium of Approaches from across Canada.* Toronto: Canadian Institute of Advanced Research.

This is a compendium of different early childhood initiatives from across Canada that have shown great promise.

Dodic, M., Peers, A., Coghlan, J.P., and Wintour, M. (1999). "Can Excess Glucocorticoid, in Utero, Predispose to Cardiovascular and Metabolic Disease in Middle Age?" *TEM, 10,* pp. 86-91.

This is a technical paper that examines one example of the lifelong impacts associated with early childhood development.

Elford, J.,Whincup, P., and Shaper, A.G. (1991). "Early Life Experiences and Adult Cardiovascular Disease: Longitudinal and Case Control Studies." *International Journal of Epidemiology, 20,* pp. 833-844.

This is a thoughtful British critique of research dealing with lifelong impacts, or the so-called "latency" effects of early life experiences.

Forsen, T., Eriksson, J.G., and Tuomilehto, J. *et al.* (1997). "Mother's Weight in Pregnancy and Coronary Heart Disease in a Cohort of Finnish Men: Follow-up Sudy." *British Medical Journal, 315,* pp. 837-840.

This is an effort to explain the rise and fall of coronary heart disease over the last century as resulting from changes in perinatal influences on the fetus.

Hertzman, C. (1994). "The Lifelong Impact of Childhood Experiences: A Population Health Perspective." *Daedalus,* Fall, pp. 167-180.

This is an excellent summary of some of the key literature.

Hertzman, C. and Weins, M. (1996). "Child Development and Long-Term Outcomes: A Population Health Perspective and Summary of Successful Interventions." *Social Science and Medicine, 43,* 1083-1095.

Another excellent summary of the literature, this article also examines successful early childhood intervention programs.

Hertzman, Clyde (1998). "The Case for Child Development as a Determinant of Health. *Canadian Journal of Public Health, 89,* May-June, pp. S14-S19. File 30?

This is yet another excellent summary of the leading research in the field.

Mustard, Fraser J. (2000). *Early Childhood Development and the Brain. The Base for Health, Learning, and Behaviour throughout Life.* Toronto: The Founder's Network.

This is a recent synthesis of evidence respecting early childhood development prepared for the World Bank by one of the leading (Canadian) experts in the field.

Power C, Bartley M, Davey Smith G and Blane D. "Transmission of Social and Biological Risk across the Life Course." In D. Blane, E. Brunner, and R. Wilkinson, eds. *Health, and Social Organization; Towards a Health Policy for the Twenty-First Century.* London: Routledge, pp. 188-203.

This is a summary of the high-quality evidence available from the "1958 British Birth Cohort." Studies of this cohort have resulted in some of the most important findings from determinants of health research.

Skonkoff, Jack P., and Phillips, Deborah A. (2000). *From Neurons to Neighborhoods: the Science of Early Childhood Development.* Washington: National Academy Press.

This is an overview of the latest research on the science of early childhood development is provided.

Schweinhart, L. S., Barnes, H. V., and Weikart, D. P. *et al*. (1993). *Significant Benefits: the High/Scope Perry Preschool Project Through Age 27. Monographs of the High/Scope Educational Research Foundation, Number 10.* Ypsilanti, MI: The High/Scope Press.

This is a report of a follow-up study of young children who participated in an early intervention program at the Perry School.

It provides among the most convincing evidence of the significant benefits of early childhood intervention.

Steinhauer, Paul (1998). "Developing resiliency in children from disadvantaged populations." In *National Forum on Health, Determinants of Health: Children and Youth.* Quebec: Editions Multimondes, pp. 48-102.

This Canadian paper looks at biological, psychological, familial and social factors related to resiliency. Resiliency is unusually good adaptation in the face of severe stress, and/or an ability to rebound to pre-stress levels.

Strobino, D., O'Campo, P., Schoendorf, K., (1995). A strategic framework for infant mortality reduction: implications for "Healthy Start," Milbank Quarterly, 73, pp. 507-32.

This is an excellent review of practical implications arising from research on the effects of early childhood development. It develops a research-based strategic framework for dealing with high-risk pregnancies and low birth weight babies. It also addresses threats to health early in life (*e.g.*, SIDS).

Werner, E. (1996). "Vulnerable but invincible: high risk children from birth to adulthood." *European Child and Adolescent Psychology, 5*, pp. 47-51, Supplement 1.

This is a summary of the lifework of an extraordinary sociologist, Emmy Werner who worked in the plantation villages on the Hawaiian island of Kauai. This work has come to be known as the "Kauai Longitudinal Study." It points the way towards specific "core elements" of any program or policy to improve disadvantaged children's outcomes. The focus is on building strong "substitute" human relationships for the offspring of families with parenting difficulties.

Biologic Pathways

Citations in this section refer to the scientific evidence relating to neural development and biological pathways linking social environment with health outcomes.

Brunner E. "Socio-economic Determinants of Health: Stress and the Biology of Inequality." *British Medical Journal 1997;314:*1472-6.

This paper shows how psychological variables, operating through the life course, influence a variety of biological variables. The physiological and metabolic consequences are discussed, primarily relying on primate studies. Implications for human stress are discussed.

Cohen, S., and Herbert, T.B. (1996). "Health Psychology: Psychological Factors and Physical Sisease from the Perspective of Psychoneuroimmunology." *Annual Review of Psychology, 47*, pp. 113-142.

Psychoneuroimmunology is a branch of social determinants research that is concerned with the manner in which psychological factors in the social environment influence neural development and, ultimately, immunological functioning and health. This paper reviews research in the area.

Conlan, Roberta, ed. (1999). States of Mind: New Discoveries about how our Brains Make Us Who We Are. New York: John Wiley & Sons.

This is an excellent recent review of the latest research on neurobiology and brain science.

Education Commission of the States (1996). *Bridging the Gap between Neuroscience and Education.* Denver: Education Commission of the States.

This book examines the implications of findings from neurobiological research for educational practice.

Friedman, S., Klivington, K., and Petersen, R., eds. (1986). *The Brain, Cognition and Education.* Orlando: Academic Press.

This is a one of many analyses that examines the implications of brain research for education practice.

Julesz, B. and Kovacs, I., ed. (1995). *Maturational Windows and Adult Cortical Plasticity.* Reading, Mass: Addison-Wesley.

This book addresses the issue of critical periods for brain development. It examines the implications of early brain development on life long health and functioning.

Kaplan, Howard (1991). "Social Psychology and the Immune System: a Conceptual Framework and Review of the Literature." *Social Science and Medicine, 33,* pp. 909-923.

This paper attempts to develop a model to show how social psychological variables impact on the functioning of the immune system.

Keating, Daniel P., and Hertzman, Clyde (2000). *Developmental Health and the Wealth of Nations: Social Biological and Educational Dynamics.* New York: Guilford Publications.

This is the most recent synthesis by two of the field's leading researchers.

Kotulak, R. (1996). *Inside the Brain: Revolutionary Discoveries of How the Mind Works.* Kansas City, MO.: Andrews McMeel.

Kotulak is a Pulitzer prize-winning journalist. In this book, he provides a lay-person's guide to the latest research about brain development and functioning.

Krasnegor, N.A., Lyon, G.R., and Goldman, P.S., eds. (1997). *Development of the Prefrontal Cortex: Evolution, Neurobiology and Behaviour.* Baltimore: Paul H. Brooks Publishing.

This book summarizes what we know about how the brain develops.

Liang, S-W. and Boyce, T. (1993). "The Psychobiology of Childhood Stress." *Current Science, 5,* pp. 545-551.

This paper discusses the influence of early life on life-long health status.

McEwen, Bruce S. (1994). *The Hostage Brain.* New York: Rockefeller University Press.

This is a valuable overview of research on neurobiology.

Reiss, D., Plomin, R., Hetherington, E.M.(1991). "Genetics and Psychiatry: an Unheralded Window on the Environment." *American Journal of Psychiatry, 148,* pp. 283-291.

Some of the latest data from behavioural genetics supports the view that there are environmental causes for abnormal development and psychopathology. This paper summarizes the evidence supporting this view.

Sapolsky, R (1995). "Social Subordinance as a Marker of Hypercortisolism: some Unexpected Subtleties." *Annals of the New York Academy of Science, 771,* pp. 626-639.

This is a fascinating summary of what field and lab studies of other primates tell us about social hierarchies, "stress," and biopathways for health effects.

Sternberg, E.M., and Gold, P.W. (1997). "The Mind-Body Interaction in Disease." *Scientific American, 7,* pp. 8-15.

The brain and immune system continuously signal each other, often along the same pathways. This helps to explain how state of mind influences health.

Suomi, S.J. (1997). "Early Determinants of Behaviour: Evidence from Primate Studies." *British Medical Journal, 53,* pp. 170-184.

This paper contains a synthesis of what primate studies can tell us about the life-long effects on health and functioning of early experiences in life.

Tarlov, A. (1996). "Social Determinants of Health: the Sociobiological Translation." In D. Blane, E. Brunner, and R. Wilkinson, eds. *Health and Social organization. Towards a Health Policy for the Twenty-First Century.* London: Routledge, pp. 71-93.

This is an excellent summary of the literature that discusses differential vulnerabilities to disease associated with social hierarchy.

Shore, R. (1997). *Rethinking the brain. New insights into early development.* New York: Families and Work Institute.

This is one of many books and articles emphasizing the implications of brain research for early childhood development.

Health Promotion

References in this section are to reports that discuss health promotion practice. Most of the scientific basis for health promotion practice is found in the research on public health and health determinants. Books and articles discussing health promotion tend to focus on the practical aspects of translating research into action. Many of the best documents are Canadian.

Canadian Public Health Association (1996). *Action Statement for Health Promotion in Canada.* Ottawa: Canadian Public Health Association.

CPHA's action statement resulted from a two-year consultation process involving many individuals and organizations across Canada. Its sets out a vision for health promotion in Canada, defines what health promotion is, and identifies a number of priority areas for action, including: healthy public policy, stronger communities, and reforming the health system.

Hamilton, Nancy, Bhatti, Tariq (1996). *Population Health Promotion: An Integrated Model of Population Health and Health Promotion.* Ottawa: Health Canada.

This brief report examines the implications of population health research for health promotion practice in Canada. It provides a good historical review of developments in Canada and discusses key documents (e.g., Lalonde, Ottawa Charter) that have contributed to interest in health promotion.

Health Canada (1995). *Health Promotion in Canada: Twenty Years after Lalonde.* Ottawa: Health Canada.

This is a brief summary of health promotion practice in Canada.

Marshall, Joanne, Maley, Oonagh, Kirby, Penney, Boucher, Beatrice (1998). *Annotated Bibliography of Selected Health Promotion Titles. Geneva:* World Health Organization. Available online at www.fis.utoronto.ca/people/marshall/hpbib.htm

This is a comprehensive annotated bibliography of health promotion research prepared by staff at the University of Toronto for the World Health Organization. It contains references to books, WHO publications, government and agency publications, journal articles

(and the related Internet addresses), as well as health promotion web sites. A tremendous resource.

Pederson, Ann, O'Neill, Michael, and Rootman, Irving, eds. (1994). *Health Promotion in Canada: Provincial, National and International Perspectives.* Toronto: W. B. Saunders.

The leading lights in Canada and abroad have contributed chapters to this edited collection. You will find history, conceptual frameworks, critiques, and recommendations in this rich and comprehensive collection.

Saskatchewan Health (1999). *A Population Health Promotion Framework for Saskatchewan Health Districts.* Regina: Saskatchewan Health.

This is one of a number of provincial health department documents that examine the implications of health promotion practice for provincial health services.

Wallerstein, Nina (1992). "Powerlessness, Empowerment, and Health. Implications for Health Promotion Programs." *American Journal of Health Promotion,* 6 (3), pp. 197-212.

This paper discusses the role of powerlessness as a risk factor for disease and the role of empowerment as a health-enhancing strategy. A model of empowerment education is proposed for health promotion practitioners.

Community Development

Materials in this section discuss community development principles and practice. They provide lots of useful suggestions for assessing community needs, developing an action plan, gaining community support, building momentum, and evaluating progress. While the focus of these materials is on community development around health related issues, other examples from the community development literature are also provided.

Bennett, Edward (1992). "Community-Based Economic Development: A Strategy for Primary Prevention." *Canadian Journal of Community Mental Health, 11 (2),* pp. 11-33.

This article explores the fascinating prospect that community economic development can be used as a primary strategy for preventing health problems by fostering economic growth, employment, and prosperity at the community level.

Canadian Policy Research Networks (1999). *Discovering the Society We Want. Ottawa: Canadian Policy Research Networks.* Available: www.cprn.org.

This is a very useful kit of information designed to help facilitators organize and conduct community discussion groups on key issues facing the future of Canada. The guide is designed to help members of the community identify key issues and take action on them. Among the issues addressed: What kind of life do we want for our children? What kind of social safety net do we want our society to provide? What kind of health care system do we want? What kind of government do we want? Are our income-support and job-creation programs useful and affordable? There is a guide to organizing dialogue groups, as well as issue specific fact sheets and discussion guides dealing with each of these questions.

Cowater International (1995). *Guiding Principles for Community Development.* Ottawa: Department of Justice.

This document describes how and why community development works, its guiding principles and practices, as well as its policy implications. Descriptions of case studies are also provided.

Economic Council of Canada (1990). *From the bottom up: The Community Economic Development Approach.* Ottawa: Economic Council of Canada.

This report discusses the failure of "top-down" national and regional economic development strategies, the need to adopt economic development strategies that are based on community development principles, and the health and other benefits that can be derived from adopting this approach to economic development.

Minkler, Meredith, ed.(1998). *Community Organizing and Community Building for Health.* New Brunswick, New Jersey: Rutgers University Press.

This is the definitive collection of papers on community organization from a determinants of health perspective. It contains a wealth of conceptual models and tools, and discusses a wide range of key issues concerning the community's role in improving health status.

Nozick, Marcia (1992). *No Place like home: Building Sustainable Communities.* Ottawa: Canadian Council On Social Development. Available: www.ccsd.ca.

This is a very useful guide to community development research and practice, with a distinctly Canadian slant.

Putnam R.(1993) "The prosperous community: social capital and public life." *The American Prospect* (Spring): 35-42.

This prominent commentator advances the novel idea that communities don't become "civic" because they become rich. On the contrary, they become rich because they are "civic."

Social Planning Council of Winnipeg (1998). *An Integrated Community Approach to Health Action: A Practical Guide to Building Healthy Communities.* Winnipeg: Social Planning Council. Available: www.spcw.mb.ca.

Social Planning Council of Winnipeg (1998). *An Integrated Community Approach to Health Action: Evaluation Findings and Lessons Learned.* Winnipeg: Social Planning Council. Available: www.spcw.mb.ca.

These two reports provide practical advice about community development in the health sector. They summarize the lessons learned from a three year pilot project in Manitoba focused on addressing the interrelationship of poverty and poor health conditions. The guides discuss how to build community capacity so that community members can be empowered to improve their quality of life. Several specific initiatives are described.

International Development

The few references in this section will direct interested readers to some of the key documents and organizations that focus on international health and development issues.

Gwatkin, Davidson, and Guillot, Michel (2000). *The Burden of Disease among the Global Poor: Current Situation, Future Trends, and Implications for Strategy.* Washington: The World Bank.

This world bank report focuses on communicable diseases. It argues that the greatest impact on life expectancy can be achieved by reducing rich-poor gaps in health and thereby impacting on the spread of infectious diseases.

National Research and development Centre For Welfare and Health (1997). *Equity in Health through Public Policy.* Helsinki, Finland: National Research and Development Centre.

This is a western European perspective on healthy public policy and health promotion.

Oxfam (1996). *The Oxfam Poverty Report.* Oxford, U.K.: Oxfam.

This report documents the widening gap between rich and poor and the persistence of poverty. In 1960, for example, the richest fifth of the world's population had average incomes 30 times greater than the poorest fifth. In 1990, it was 60 times greater. According to the report, "If poverty were an infectious disease, which could be caught by the rich as well as the poor, it would have been eradicated long ago." The report outlines a comprehensive agenda for change, including improvements to social welfare, taxation, aid, and international trade.

Wang, Jia, Jamison, Dean T., Bos, Wdward, Preker, Alexander, and Peabody, John. (1999). *Measuring Country Performance on Health: Selected Indicators for 115 Countries.* Washington: The World Bank.

As the title suggests, this report provides health-related indicators for countries throughout the world—life expectancy, infant mortality, education, per capita income, and GDP.

The World Bank (1999). *Population and the World Bank: Adapting to Change.* Washington: The World Bank.

The World Bank has been moving towards a greater emphasis on social development. It has been attempting to balance its goals of poverty reduction and human development with more traditional concerns about public finance and macroeconomics. Its Health Nutrition and Population Program is particularly relevant to those looking for information about health determinants from an international perspective.

The World Bank (1993). *World Development Report 1993: Investing in Health.* New York: Oxford University Press.

This is one in a series of reports that annually tracks development indicators for countries throughout the world.

The World Bank (1999). *Annual report 1999.* Washington: The World Bank.

This is the World Bank's annual report. It describes the mission and programs of the bank. Seventy per cent of the bank's lending is focused on the alleviation of poverty.

The World Bank (1999). *Safe Motherhood and The World Bank: Lessons from 10 years of experience.* Washington: The World Bank.

This report examines pregnancy and childbirth issues from an international perspective. Pregnancy and childbirth are leading causes of death among women of reproductive age in developing countries. The World Bank's is the largest external source of assistance to promote safe motherhood.

World Health Organization (1999). *The World Health Report 1999: Making a Difference.* Geneva: World Health Organization.

WHO is the pre-eminent international health organization. This annual report describes health status and health challenges throughout the world, and outlines the organizations accomplishments and strategic plans.

World Health Organization (1978). *Primary Health Care: Report of the International Conference on Primary Health Care, Alma-Ata, USSR.* Geneva: World Health Organization.

This is a watershed-type document with regard to the history of interest in primary health care. It documents the gross inequalities in health status that exist within and between countries. Based on a belief that

health is essential to social and economic development, it identifies primary health care as a key to the attainment of health. All WHO member states became signatories to the declaration, and it is credited with giving global impetus to primary health care and health promotion.

Suggestions For Further Research

Extensive resources on the population health field are available to assist you with further research. These include bibliographies, research reports, reviews of the literature, scientific papers, kits of materials for use with a variety of constituencies, and many other resources. Increasingly, materials are available on the Internet, often free of charge. What follows are a few suggestions that will lead you to many other possibilities.

Catalogues of population health publications are available from several key organizations involved in the public health field. These are available free in "hard copy" format or on the Internet. Among the most useful are the catalogues of the Canadian Public Health Association (www.cpha.ca), the World Health Organization (www.who.dk), and the Pan American Health Organization (www.paho.org). The latter two organizations, as well as the World Bank, are extensively involved in international development through several allied organizations, including the International Development Association and the Human Development Network.

A number of organizations with extensive public health library resources now provide on-line access to their library catalogues. These will allow you to conduct on-line searches by subject heading, topic, or author. Most of these sites will also allow you to download key documents. Two of the best sites are maintained by the World Health Organization (www.who.dk) and the World Bank (www.worldbank.org).

Some universities in Canada maintain extensive public health-related holdings. Often, they are able to complete customized searches of their databases and lend materials on inter-library loan. One example is the University of Manitoba's Centre for Health Policy and Evaluation (www.umanitoba.ca/centres/mchpe). Their web site also has many links to other health policy research related sites. Most university libraries will also maintain subscriptions to some of the key journals in the population health field. These

include the J*ournal of Health Promotion and Practice, the Canadian and American Journals of Public Health, Social Science and Medicine, the Journal of Epidemiology and Community Health, the American and International Journals of Epidemiology, Health Policy, the International Journal of Health Planning and Management, the Bulletin of the World Health Organization, Health Transition Review,* and many other journals referred to often in the references provided earlier.

There are numerous government and quasi-government organizations that have extensive population health and health-related resources. Health status and other health information is available from provincial department of health web sites (*e.g.,* www.moh.hnet.bc.ca), from Health Canada (www.hc-sc.gc.ca) from Statistics Canada (www.statcan.ca), from Human Resources Development Canada (www.hrdc.gc.ca), and from the Canadian Institute of Health Information (www.cihi.ca). Many relevant documents are available to be downloaded from these sites. The Health Canada site has a very extensive collection of population health information, including copies of Health Canada documents, a list of population health projects underway across Canada, and an annotated bibliography (www.hc-ca.gc.ca/hppb/phdd/index.html).

There are a number of nonprofit research and policy institutes in Canada that have a particular interest in population health. These include, for example, the Canadian Institute for Advanced Research (www.ciar.ca), the Caledon Institute of Social Policy (www.caledoninst.org), the Institute for Research on Public Policy (www.irpp.org), Canadian Policy Research Networks (www.cprn.org), the National Council on Welfare (www.ncwcnbes.net), the Canadian Centre for Policy Alternatives (www.policyalternatives.ca), and the Canadian Council on Social Development (www.ccsd.ca). A particularly useful site is the Founders Network, associated with the Canadian Institute for Advanced Research (www.founders.net). It contains hundreds of digitized graphs, charts, and tables on key population health research findings and implications that can be downloaded over the Internet.

There are numerous sites that focus on specific areas of population health research and policy. For example, the Carnegie Corporation web site (www.carnegie.org), has very extensive holdings related to early childhood development and family support, including downloadable copies of their highly acclaimed “Starting Points” and

"Years of Promise" documents. Other sites with this type of information include the web sites of the National Head Start Association (www.nhsa.org), the Ounce of Prevention Foundation (www.ounce.org), the I Am Your Child Foundation (www.iamyourchild.org), and the Zero to Three Foundation (www.zerotothree.org). Similar Canadian sites include that of the Centre for Studies of Children at Risk (www-fhs,mcmaster.ca/cscr), the Canadian Institute on Child Health (www.cich.ca), and the Invest in Kids Foundation (www.investinkids.ca).

A number of organizations specialize in workplace health and wellness issues. Two of the more prominent include the Health Work and Wellness Institute of Canada (www.healthworkandwellness.com) and the Institute for Work and Health (www.iwh.om.ca).

Other sites of interest include the Canadian Health Network (www.canadian-health-network.ca), which provides general health information and advice on a wide range of topics, and the Canadian Centre for Philanthropy site (www.ccp.org), which provides extensive information about the voluntary sector in Canada.

Appendix

Appendix

Tools for Understanding, Teaching, and Advocating

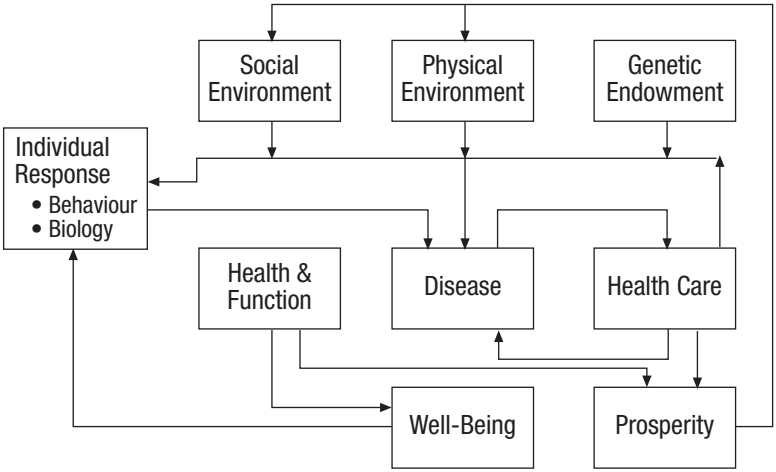
This appendix contains a number of charts, models, graphs and tables that have been taken from key government publications and research reports on the determinants of health. These materials have been culled together with several related purposes in mind:

- To provide a deeper and broader understanding of determinants of health research
- To provide a visual "picture" of the conceptual frameworks that have been developed to summarize research, as well as policy and program implications
- To provide tools that community organizations can use for in-service education purposes
- To provide visual aids that community organizations may wish to include in presentations and proposals they are making to other organizations, including health authorities.

Some of the items included in this appendix, as well as many other tables and graphics are available in digitized form on the Founders Network web site (www.founders.net). This is a sister organization of the Canadian Institute for Advanced Research, a pre-eminent organization involved in determinants of health research. With virtually hundreds of slides in digitized form, this is the single best source for this type of information on the Internet. Some similar material is available from other web sites. Please consult the "Suggestions For Further Research" section in the Bibliography for a listing of other sites.

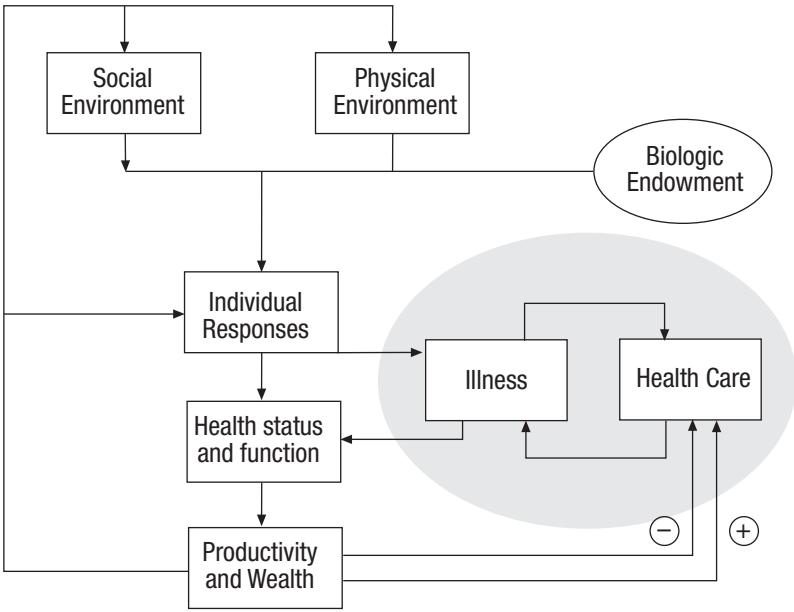
The Impact of Health Determinants on Health Status

Figure 1
A Sophisticated Model of Health and Well-Being



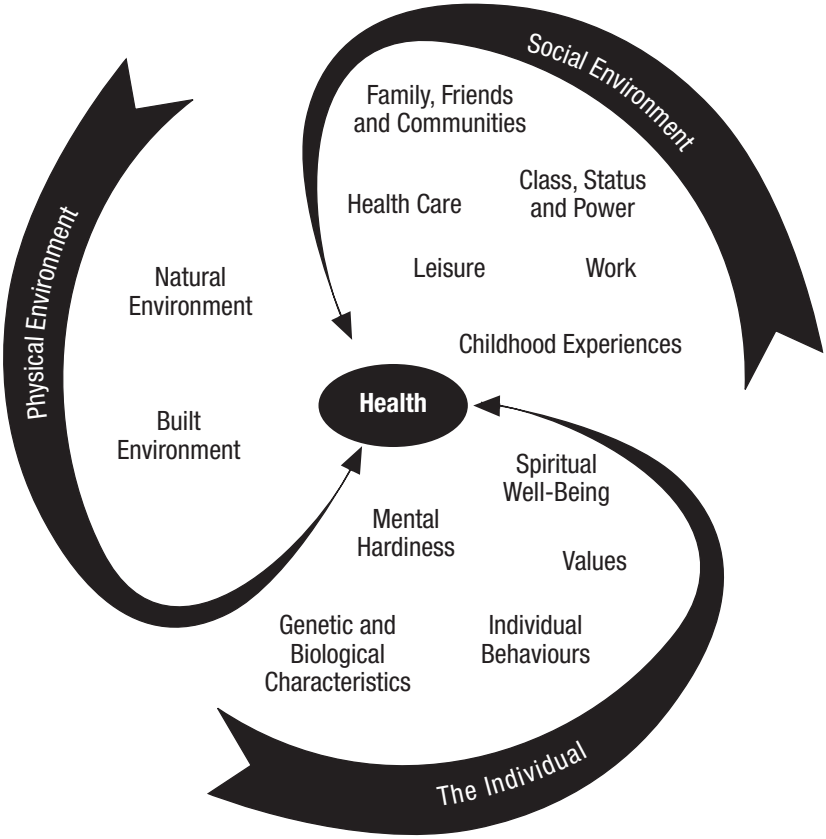
Evans, Robert G. and Stoddart, Gregory L. (1990). "Producing Health, Consuming Health Care," *Social Science Medicine*, 31 (12), pp. 1347-1363.

Figure 2
Determinants of Population Health



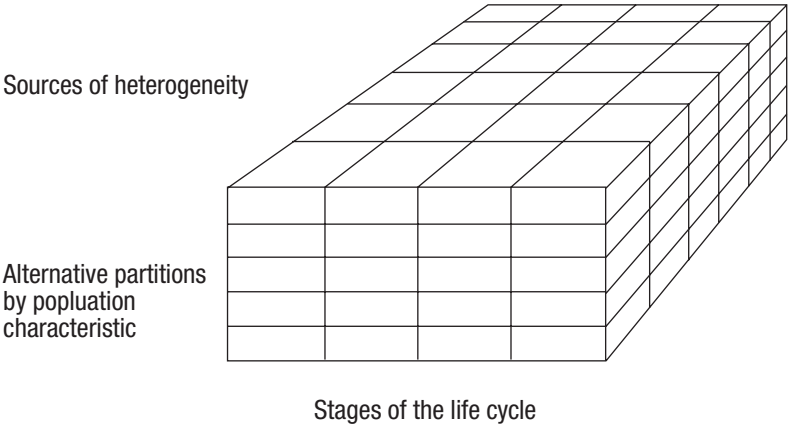
Frank, John W. (1995). "The Determinants of Health: A New Synthesis." *Current Issues In Public Health*, 1, pp. 233-240.

Figure 3
The Dynamics of Health



Saskatchewan Provincial Health Council (1995). "Your Health, My Health, Our Health: Our Individual and Collective Responsibilities," a draft discussion paper on the determinants of health. Regina: Saskatchewan Provincial Health Council.

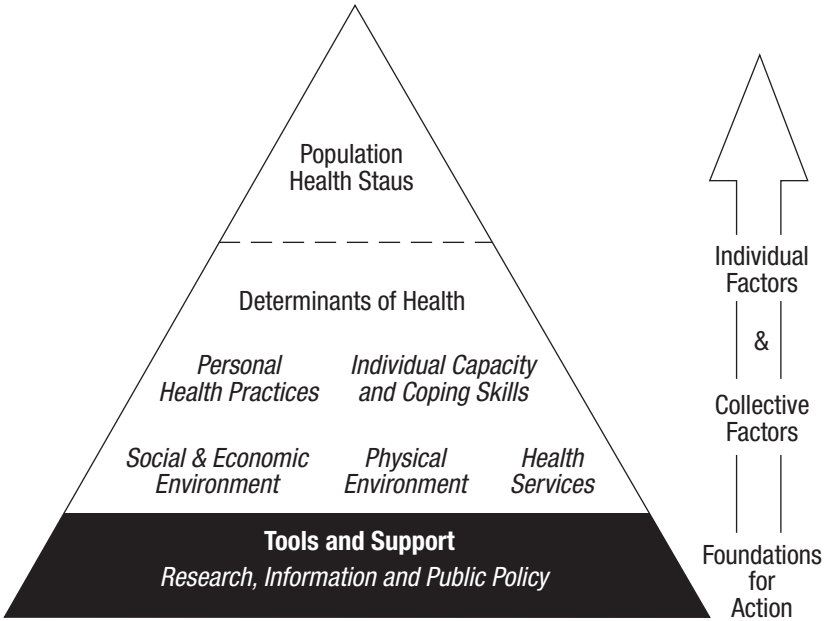
Figure 4
Model for Investigation of Heterogeneities in Population Health Status



Stages of the life cycle	*Characteristics*	*Sources of heterogeneity*
1 Perinatal: preterm to 1 year	1 Socioeconomic status	1 Reverse causality
2 Misadventure: 1-44 years	2 Ethnicity/migration	2 Differential susceptibility
3 Chronic disease: 45-74 years	3 Geographic	3 Individual life-style
4 Senescence: 75+ years	4 Male/female	4 Social environment
	5 Special populations	5 Differential access to/response to health care services

Evans, Robert G., Barer, Morris L., and Marmor, Theodore R. (1994) *Why are Some People Healthy and Others Not.* New York: Aldine.

Figure 5
Framework for Population Health



Hamilton, Nancy, Bhatti, Tariq (1996). *Population Health Promotion: An Integrated Model of Population Health and Health Promotion.* Ottawa: Health Canada.

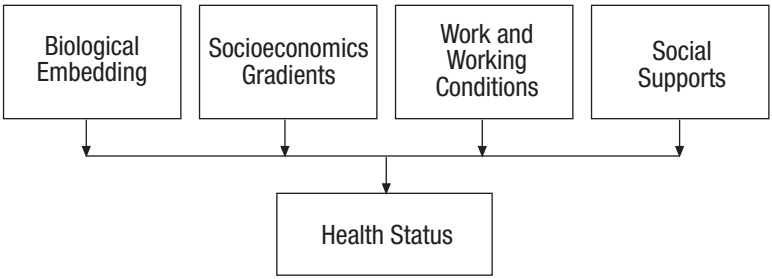
Figure 6
Determinants of Population Health (Table 3–A)

Income and Social Status	Health Status improves at every step up the income and social ladder.
Social Support	Supports from families, friends and communities have effects as strong as risk factors such as smoking and physical activity.
Education	Health status improves with level of education. Education increases opportunities for income and job security.
Employment and Working Conditions	Increased control over one's work environment and fewer stresses increase health.
Social Environments	The combination of employment, social status, social support networks, education and social factors in the workplace work together to affect health.
Physical Environments	Air, water and soil quality in natural environment and housing, workplace safety, community and road design affect health outcomes.
Biology and Genetic Endowment	A person's predisposition to disease or disability affects health.
Gender	Health experiences of men and women are different (for example, child birth). Women's and men's use of the health care system and social experiences also differ.
Personal Health Practices and Coping Skills	People's health behaviours and coping skills are key influences.
Child Development	Health at birth is affected by mother's health, income and living conditions. Early development has significant effects on brain growth.
Health Services	Quality, affordability and accessibility of health services affect population's growth.
Culture	Health practices, use of health services, life in community are all affected by culture.

National Council On Welfare (1999a). *Preschool Children: Promises to Keep*. Ottawa: Minister of Public Works and Government Services.

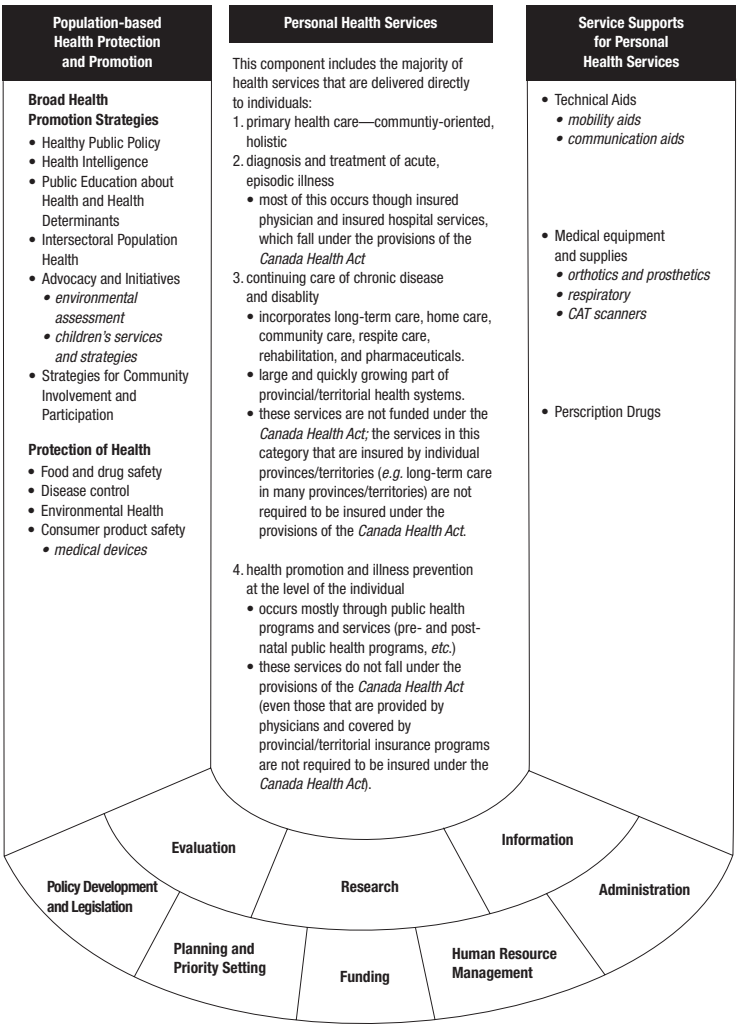
Figure 7-8
Population Health Framework

Environment	Lifestyle
"All matters related to health external to the human body and over which the individual has little or no control." Including the physical and social environment.	The aggregation of personal decisions, over which the individual has control, affect health. Self-imposed risks created by unhealthy lifestyle choices can be said to, or cause, illness or death.
Human Biology	**Health Care Organization**
All aspects of health, physical and mental, developed within the human body as a result of organic make-up contribute to health.	The quantity, quality, arrangement, nature and relationships of people and resources in the provision of health care influence health.



Hayes, Michael and Glouberman, Sholom (1999). P*opulation Health, Sustainable Development and Policy Future*. Ottawa: Canadian Policy Research Networks.

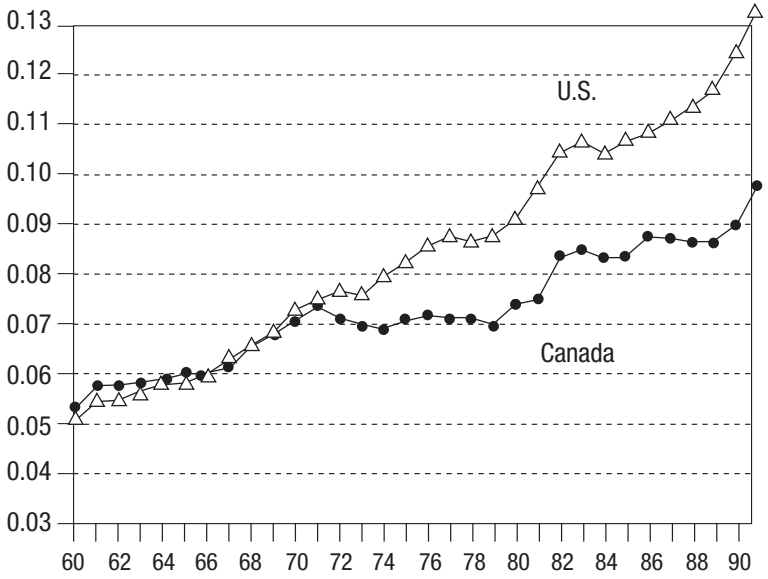
Figure 9
Major Components of Canada's Future Health System



Conference of Provincial/Territorial Ministers of Health (n.d.). A renewed vision for Canada's health system. Ottawa: Conference of Provincial/Territorial Ministers of Health.

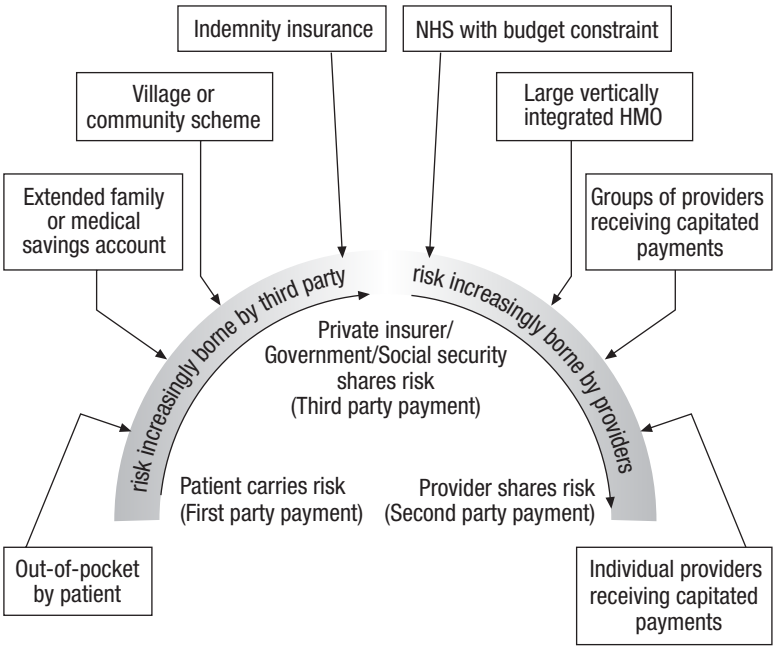
Health Spending

Figure 10
U.S. and Canada Total Health Spending as a Proportion of GDP, 1960-1991



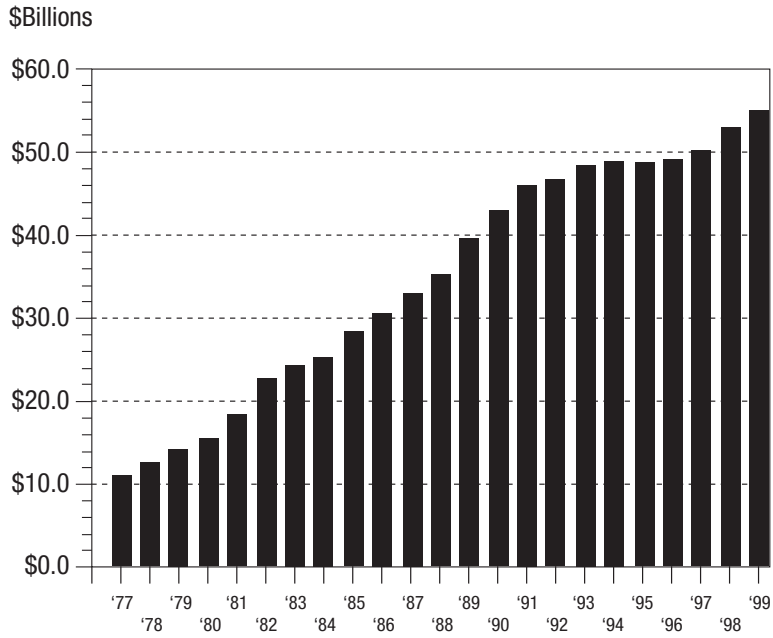
Rachlis, Michael, and Kushner, Carol (1994). *Strong Medicine: How to Save Canada's Health Care System*. Toronto: Harper Collins.

Figure 11
Who Bears the Risk of Health Care Costs: The Impact of Different Financing Schemes and Provider Payment Systems



World Health Organization (1999). *The World Health Report 1999: Making a Difference*. Geneva: World Health Organization.

Figure 12
Growth in Provincial/Territorial Health Spending

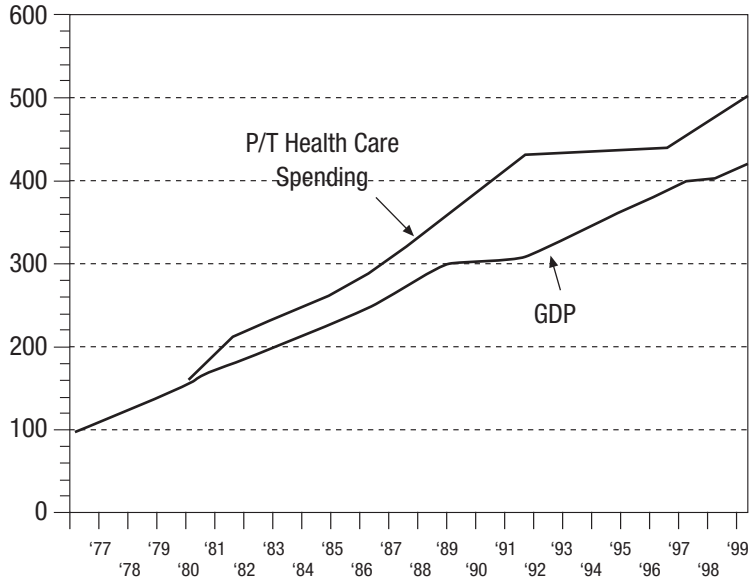


Source: CIHI

Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

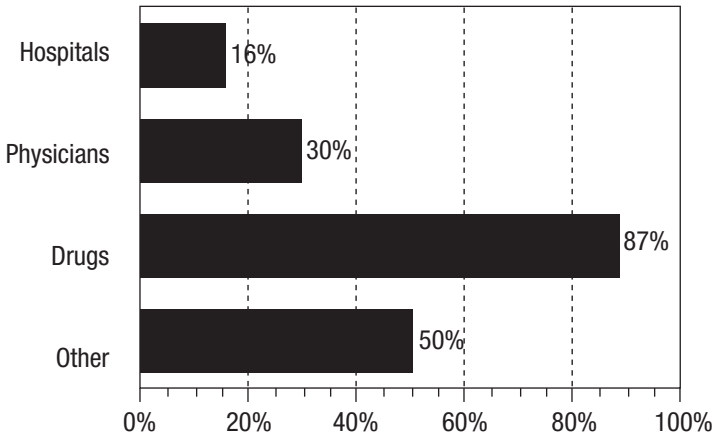
Figure 13
Provincial/Territorial Health Care Spending Tends to Grow Faster than GDP

1977-2000



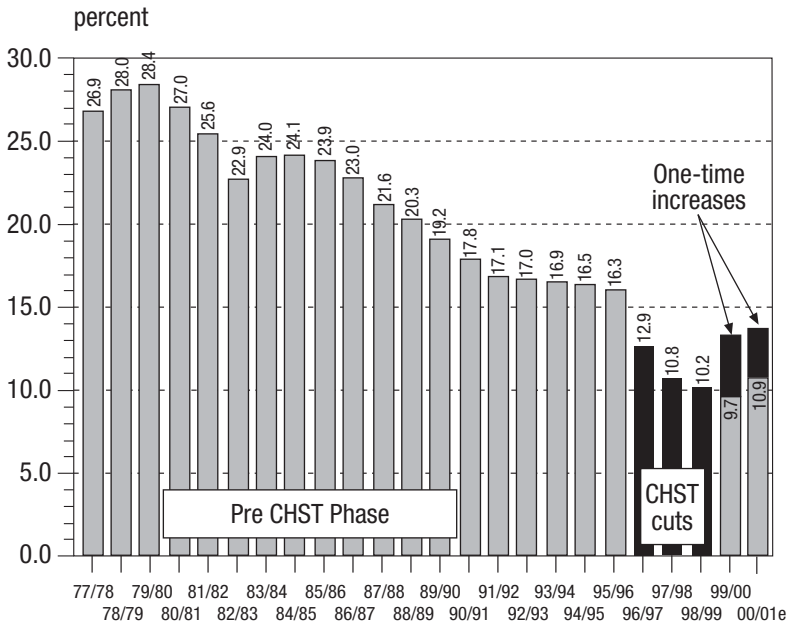
Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

Figure 14
Percent Change In Provincial/Territorial Health Spending



Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

Figure 15
Federal Health Transfers as Proportion of Provincial/Territorial Health Care Costs



Health costs in 2000/01 assumed to grow at 5 per cent per annum.

Source: Canadian Institute for Health Information; federal Department of Finance; BC Ministry of Finance & Corporate Relations

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Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

Figure 16
Share of Operating Health Spending by Age Group (per cent)

	1999/00	2004/05	2009/10	2014/15	2019/20	2024/25	2016/27
0-14	7.4	6.5	5.8	5.3	5.0	4.6	4.5
15-44	26.4	24.4	22.3	20.6	18.9	17.3	16.6
45-64	20.9	22.8	24.2	23.5	21.9	19.8	19.0
65+	45.3	46.3	47.7	50.6	54.2	58.3	59.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

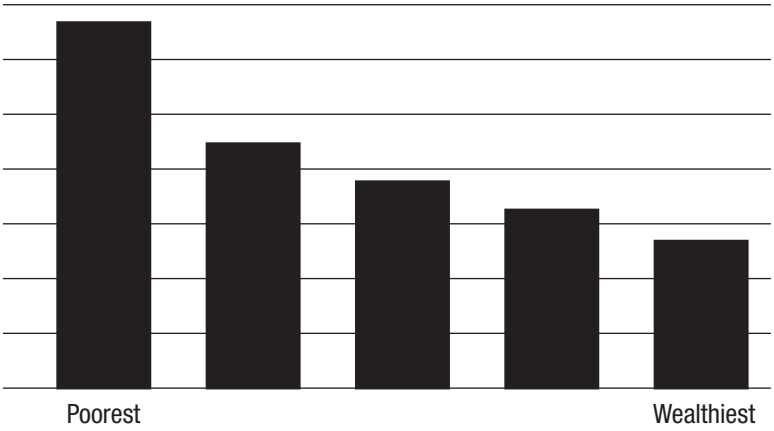
Figure 17
Average Annual Growth Rate in Operating Expenditures by Program Areas, Canada 1999/00 to 2026/27 (per cent)

	1999/00 to 04/05	2004/05 to 09/10	2009/10 to 14/15	2014/15 to 19/20	2019/20 to 24/25	2024/25 to 26/27	1999/00 to 26/27
Hospitals	4.9	4.8	4.7	4.7	4.9	4.9	4.8
Physicians	4.4	4.4	4.3	4.2	4.2	4.1	4.3
Drugs	4.9	5.0	5.2	5.3	5.4	5.3	5.2
Other Institutions	4.6	4.9	5.5	5.6	5.7	5.6	5.3
Other Professionals	4.5	4.4	4.5	4.5	4.5	4.4	4.4
Other Programs	4.2	4.1	4.4	4.4	4.4	4.4	4.3

Conference of Provincial and Territorial Ministers of Health (2000). *Understanding Health Care Costs: Interim Report*. Ottawa: Conference of Provincial and Territorial Ministers of Health.

Wealth and Health

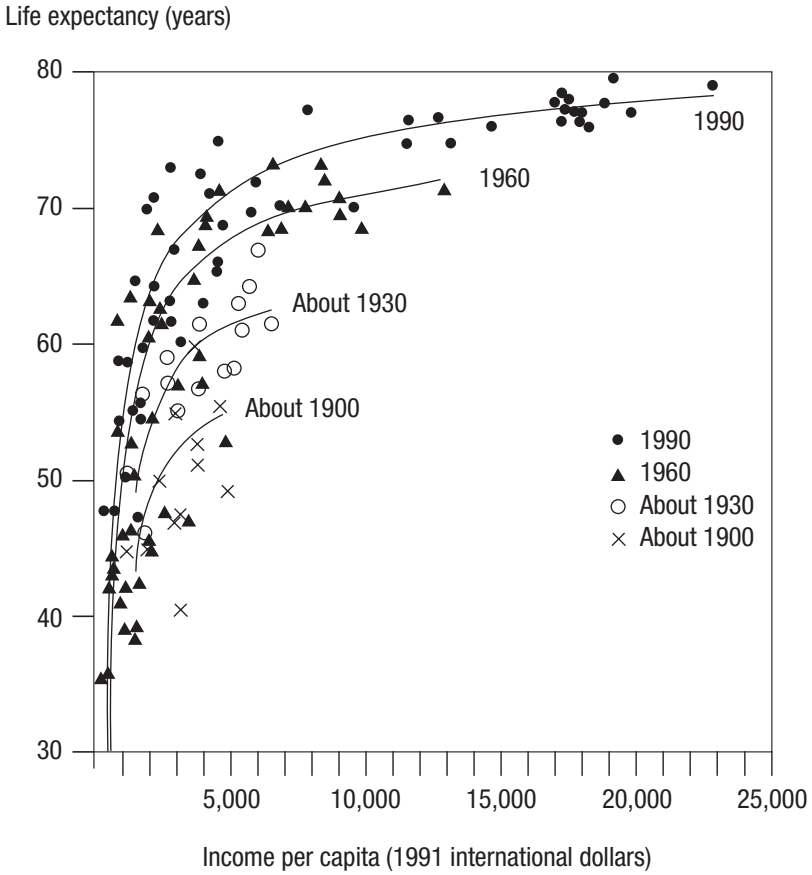
Figure 18
Premature Deaths per 1000 Winnipeg Residents by Relative Affluence of their Neighbourhoods



Source: Manitoba Centre for Health Policy and Evaluation, 1994.

Federal-Provincial-Territorial Advisory Committee On Population Health (1994). *Strategies for Population Health: Investing in the Health of Canadians*. Ottawa: Minister of Supply and Services Canada.

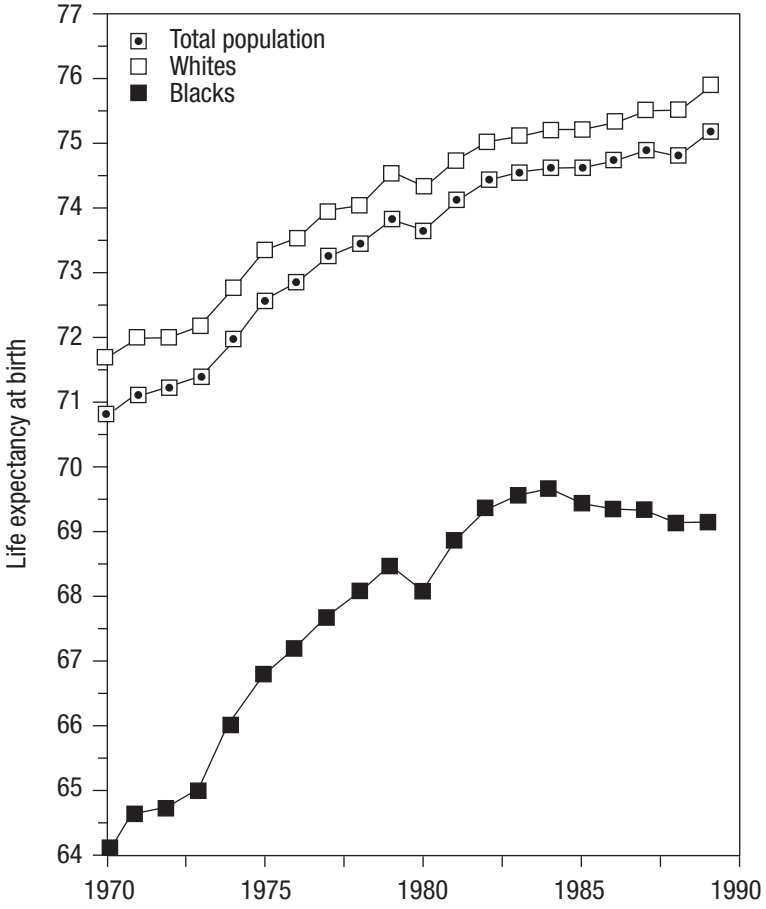
Figure 19
Life Expectancy and Income Per Capita for Selected Countries and Periods



Source: World Bank, World Development Report, 1993

Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

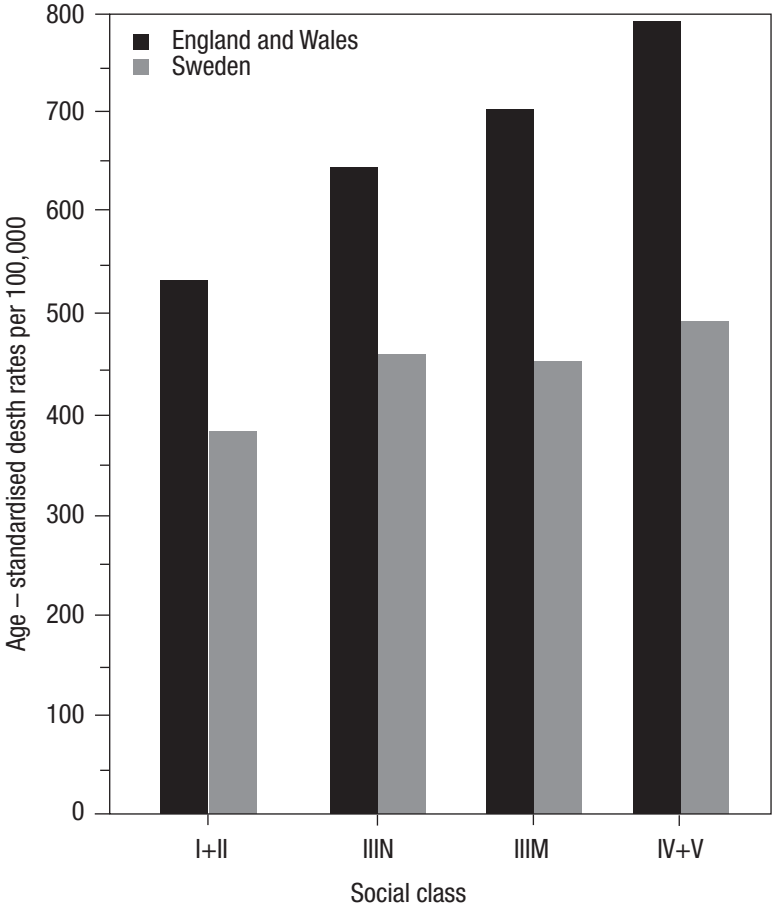
Figure 20
Trends in Life Expectancy among Blacks and Whites in the USA



Source: Kochanek et al. 1994

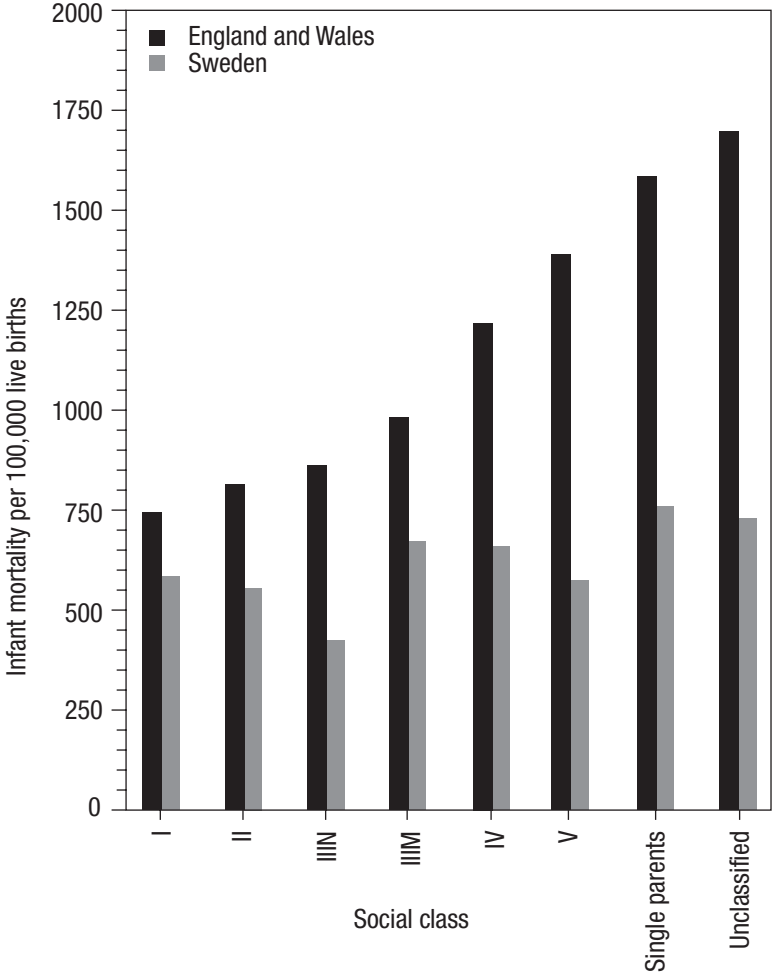
Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Figure 21
Social Class Differences in Mortality of Men 20-64: Sweden compared with England and Wales



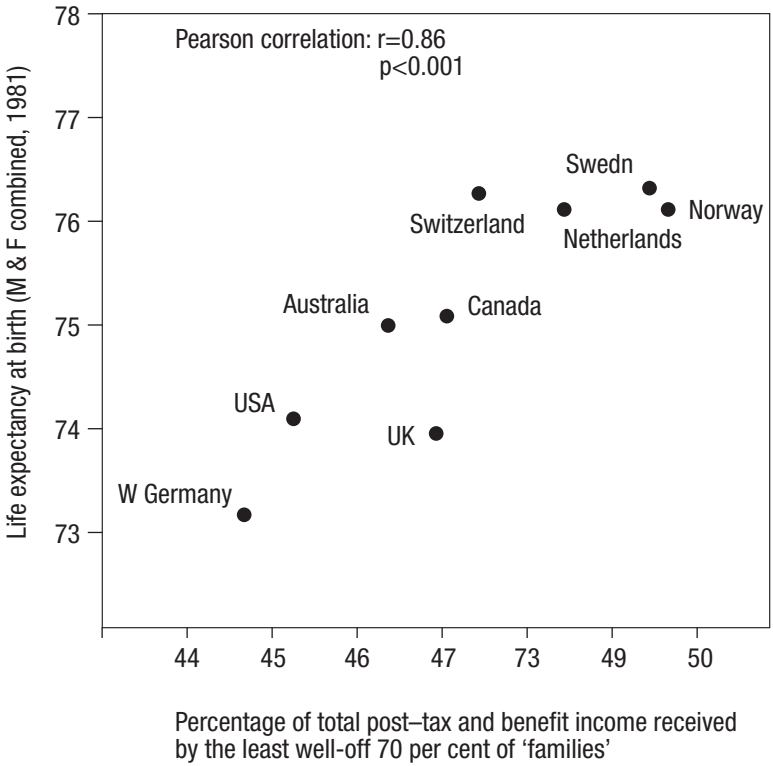
Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Figure 22
Social Class Differences in Infant Mortality in Sweden compared with England and Wales



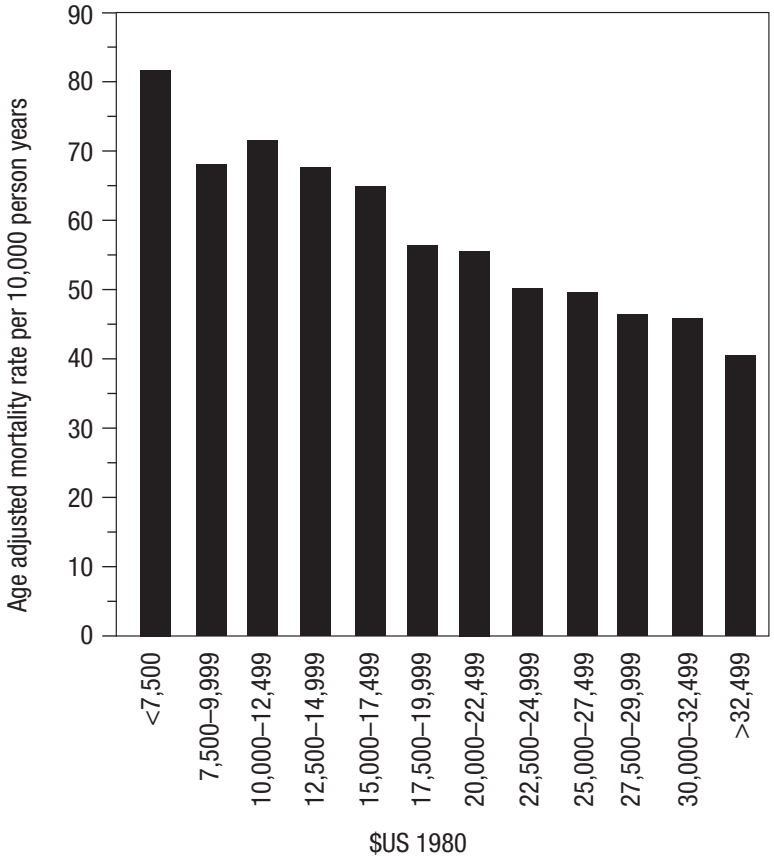
Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Figure 23
Percentage of Total Post-Tax and Benefit Income Received by the Least Well-Off 70 Percent of Families (by country).



Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

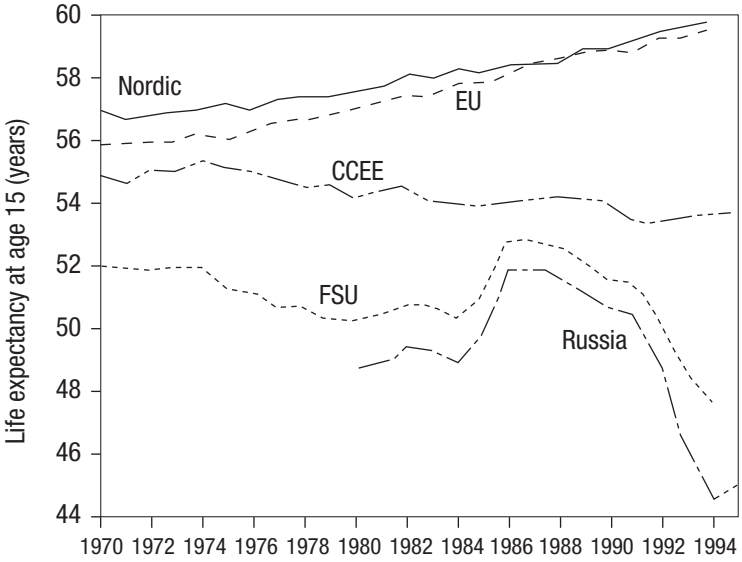
Figure 24
Income and Mortality Among White US Men



Source: MRFIT data from G. Davey Smith, J.D. Neaton and J. Stamler, Socioeconomic differentials in mortality risk among 305,099 white men

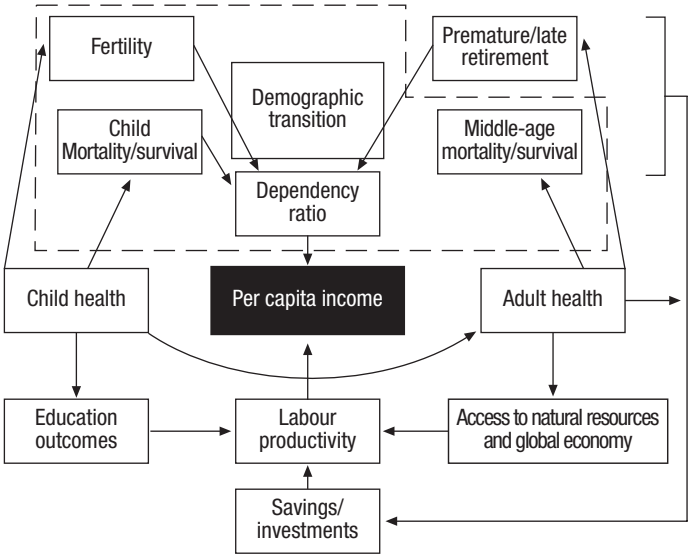
Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Figure 25
Life Expectance Trends in the EU, Nordic Countries, and Countries of the Former USSR and Central and Eastern Europe, 1970-1995.



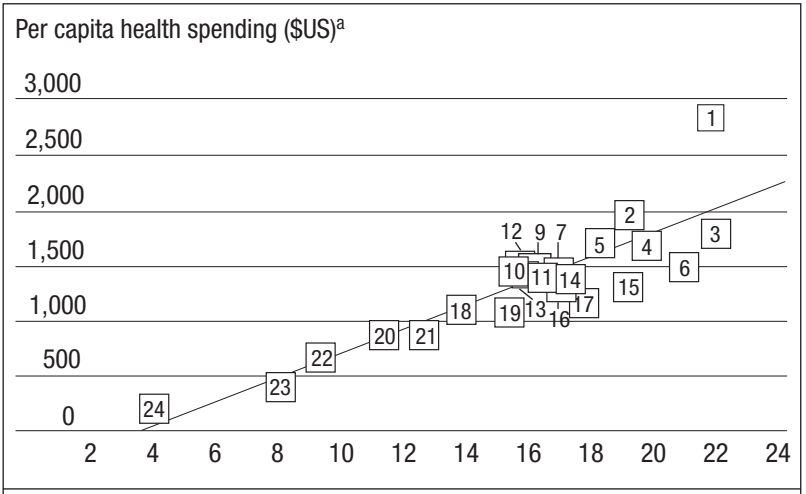
Wilkinson, Richard (1996). *Unhealthy Societies: The Afflictions of Inequality*. London: Routledge.

Figure 26
Links Between Health and Income



World Health Organization (1999). *The World Health Report 1999: Making a Difference*. Geneva: World Health Organization.

Figure 27
Per Capita Total Health Spending and Per Capita Gross Domestic Product in Twenty-Four OECD Countries, 1991



1. United States
2. Canada
3. Switzerland
4. Sweden
5. Iceland
6. France
7. Norway
8. Germany
9. Luxembourg
10. Netherlands
11. Austria
12. Finland
13. Italy
14. Japan
15. Australia
16. Belgium
17. Denmark
18. United Kingdom
19. New Zealand
20. Ireland
21. Spain
22. Portugal
23. Greece
24. Turkey

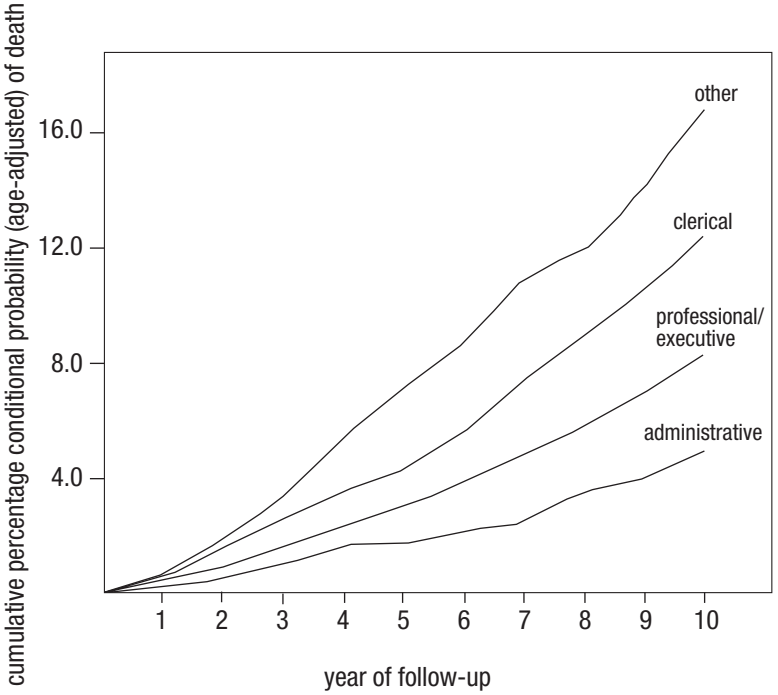
Per capita GDP (thousands $US)a

[a] In 1991 US dollars adjusted for purchasing power parity.

Source: OECD Health Systems: Facts and Trends (Paris: Organisation for Ecomomic Cooperation and Development, 1993); and S. Letsch et al. "National Health Expenditures, 1991," Health Care Financing Review (Winter 1992).

Rachlis, Michael, and Kushner, Carol (1994). *Strong Medicine: How to Save Canada's Health Care System*. Toronto: Harper Collins.

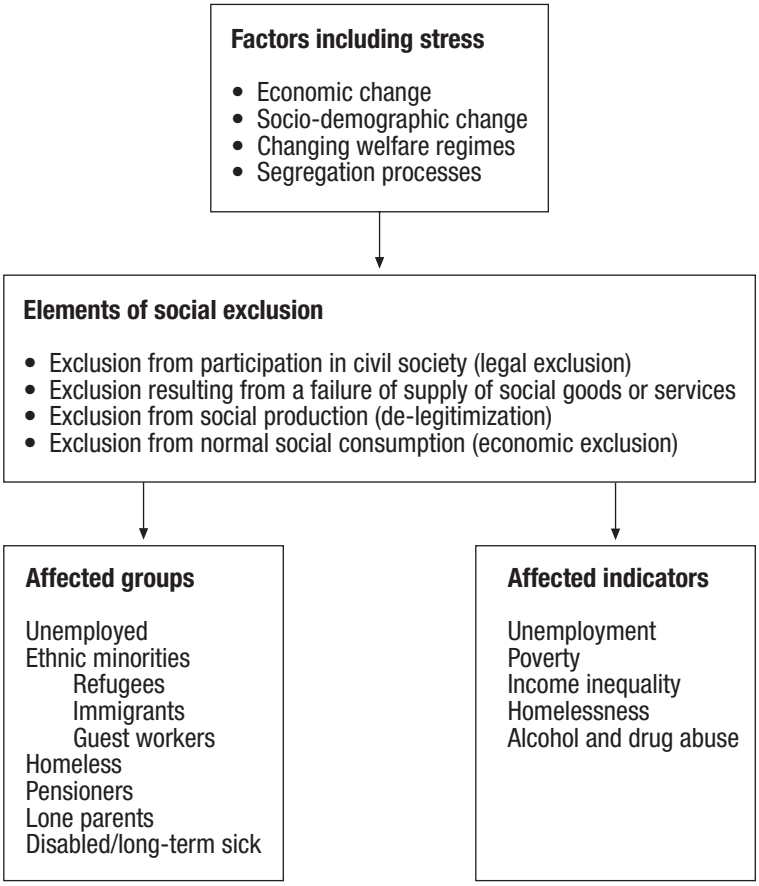
Figure 28
Whitehall Study: All Cause Mortality Among Total Population by Year of Follow-up



Source: Marmot (1986) p.23

Evans, Robert (1994). "Health hierarchy and hominids: Biological Correlates of the Socio-Economic Gradient in Health: Working Paper No. 39." Toronto: Canadian Institute For Advanced Research.

Figure 29
Poverty, Social Exclusion, and Minorities



Source: The process and outcome of social exclusion in Europe (adapted from White 1998)

Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health. New York*: Oxford University Press.

Health Status Indicators

Figure 30
Indicators of Health Status, System Capacity and Expenditures in OECD Countries, 1994

	Life Expectancy		Premature Mortality	Demography	Hospital Inputs	Health Manpower	Total Expenditure on Health	
	Females at Birth	Males at Birth	Infant Mortality Per 100	Population 65 and over	Beds: Inpatient Beds	Practising Physicians	Total Exp. on Health Share:	Total Exp. on Health Val./Capita
	Years	Years	Live Births	% Tot. Pop.	/1,000 Pop.	/1,000 Pop.	% of GDP	PPP$
Australia	80.9	75.0	0.59	11.8	*8.9*	n/a	8.5	1606
Austria	79.7	73.3	0.63	15.0	9.4	2.6	9.7	1965
Belgium	79.8	73.0	0.76	*15.6*	7.6	3.7	8.2	1653
Canada (rank)	***81.2* (5)***	***74.9* (6)***	***0.68 (18)***	**11.9 (17)**	***6.0* (13)***	**2.2 (15)**	**9.8 (2)**	**2010 (3)**
Denmark	77.6	*72.3*	0.56	15.5	5.0	2.9	6.6	1362
Finland	80.2	72.8	0.46	14.2	10.1	2.7	8.3	1357
France	81.8	73.7	0.58	14.7	9.0	2.8	9.7	1866
Germany	*79.3*	*73.8*	0.56	15.2	*9.7*	3.3	9.5	1869
Greece	*79.9*	*74.9*	0.79	*14.8*	5.1	4.0	5.2	598
Iceland	80.8	77.1	0.34	11.1	n/a	3.0	8.1	1577
Ireland	78.2*	72.7	0.59	11.5	5.0	2.0	7.9	1201
Italy	81.2	74.7	0.66	n/a	*6.7*	*1.7**	8.3	1561
Japan	83.0	76.6	0.42	14.0	15.5	1.8	6.9	1473
Luxembourg	*79.4*	72.2	0.53	n/a	*11.8*	2.2	5.8	1697
Mexico	75.8	69.4	1.70	4.1	0.8	1.3	5.3	395
Netherlands	80.3	74.6	0.56	13.1	11.3	n/a	8.8	1641
New-Zealand	*78.9***	*73.1***	*0.73*	11.5	*7.2**	2.1	7.5	1226
Norway	80.6	74.8	0.52	16.0	n/a	*3.3*	7.3	1604
Portugal	78.2	71.2	0.81	14.4	4.3	2.9	7.6	938
Spain	81.0	73.3	0.60	14.8	n/a	*4.1**	7.3	1005
Sweden	81.4	76.1	0.44	17.4	6.5	3.0	7.7	1348
Switzerland	81.6	75.1	0.51	15.1	n/a	3.1	9.6	2294
Un. Kingdom	79.5	74.2	0.62	*15.7***	*5.1*	*1.5**	6.9	1211
United States	79.0	72.3	0.79	12.4	*4.4**	*2.5*	14.3	3516

Source: OECD (1996)

*N.B. numbers in italics are 1993 data; *indicates 1992 data; **indicates 1990 data. Rankings use most recent.*

National Forum on Health (1997). *Canada Health Action: Building on the Legacy*. Ottawa: Minister of Public Works and Government Services.

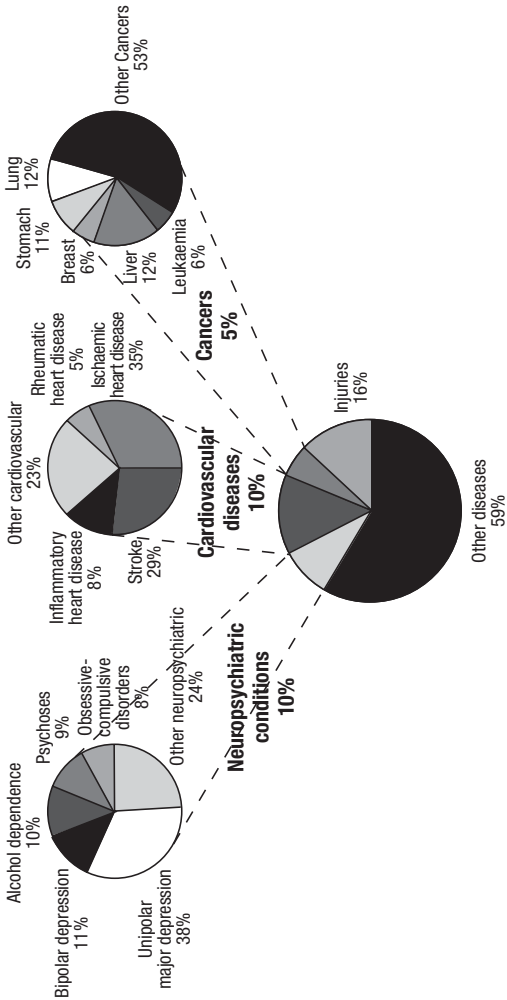
Figure 31
Recent Health Status Indicators in Canada and the United States

	Canada	United States
Infant mortality	0.68% 1990	0.91% 1990
Low birthweight (<2,500 grams)	5.1% 1989	7.05% 1989
Very low birthweight (<1,500 grams)	0.84% 1989	1.28% 1989
Life expectancy at birth		
Male	73.4 years 1988	71.5 years 1988
Female	80.3 years 1988	78.3 years 1988
Life expectancy at 65 years		
Male	15.0 years 1988	14.9 years 1988
Female	19.6 years 1988	18.6 years 1988

Source: G.J. Scheiber, J.P. Poullier, L.M. Greenwald "US health expenditure performance: An International comparison and data update"; Statistics Canada, 1991; National Center for Health Statistics, Health United States, 1991.

Rachlis, Michael, and Kushner, Carol (1994). *Strong Medicine: How to Save Canada's Health Care System*. Toronto: Harper Collins.

Figure 32
The Emerging Challenges: DALYs (Disability Adjusted Life Years) Attributable to Noncommunicable Diseases in Low and Middle Income Countries



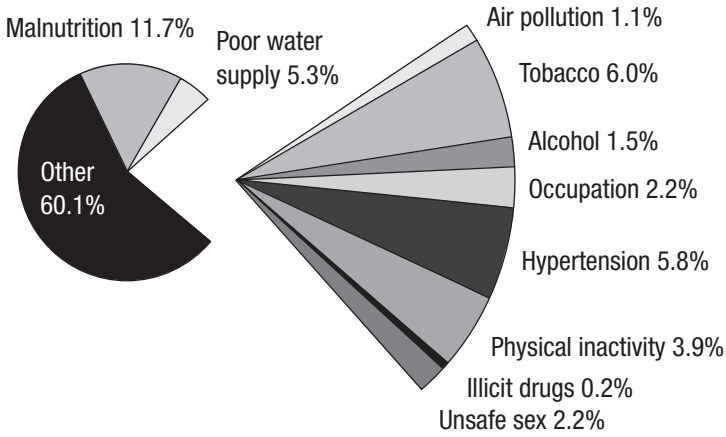
World Health Organization (1999). *The World Health Report 1999: Making a Difference*. Geneva: World Health Organization.

Figure 33
Rank of Selected Conditions Among all Causes of Disease Burden, Estimates for 1998

Disease or injury	Rank in cause-list		
	World	High income countries	Low and middle income countries
Unipolar major depression	4	2	4
Alcohol dependence	17	4	20
Bipolar disorder	18	14	19
Psychoses	22	12	24
Obsessive-compulsive disorder	28	18	27
Dementia	33	9	41
Drug dependence	41	17	45
Panic disorder	44	29	48
Epilepsy	47	34	46

World Health Organization (1999). *The World Health Report 1999: Making a Difference*. Geneva: World Health Organization.

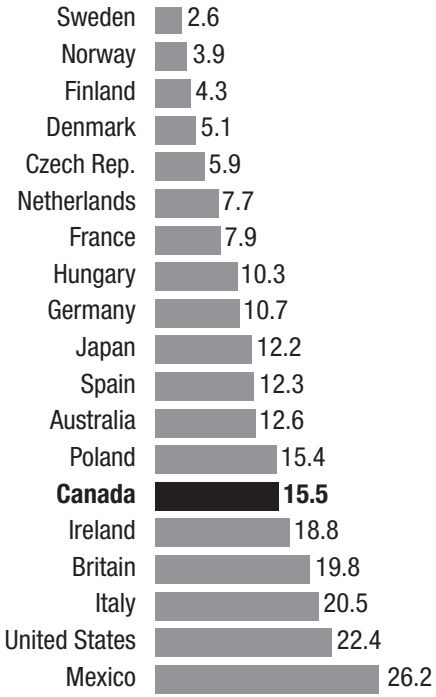
Figure 34
Global Burden of Deaths Attributable to Risk Factors, 1990



Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health.* New York: Oxford University Press.

Child Poverty

Figure 35
Percentage of Children Living Below National Poverty Lines



Philp, Margaret (1998). "Gap between Canada's rich and poor increasing, report says," *Globe and Mail*, October 22, p. A12.

Figure 36
Unfavourable Birth Outcomes by Neighbourhood Income, 1986

	Poorest Neighbourhoods	Richest Neighbourhoods	Ratio of Poorest to Richest
Birth weight under 2,500 grams	6.9%	4.9%	1.41
Birth weight under 1,500 grams	1.16%	0.82%	1.41
Premature births, less than 37 weeks	7.4%	5.7%	1.32
Small for gestation age	21.1%	8.0%	1.52
Deaths in first year of life	9.9%	6.0%	1.66

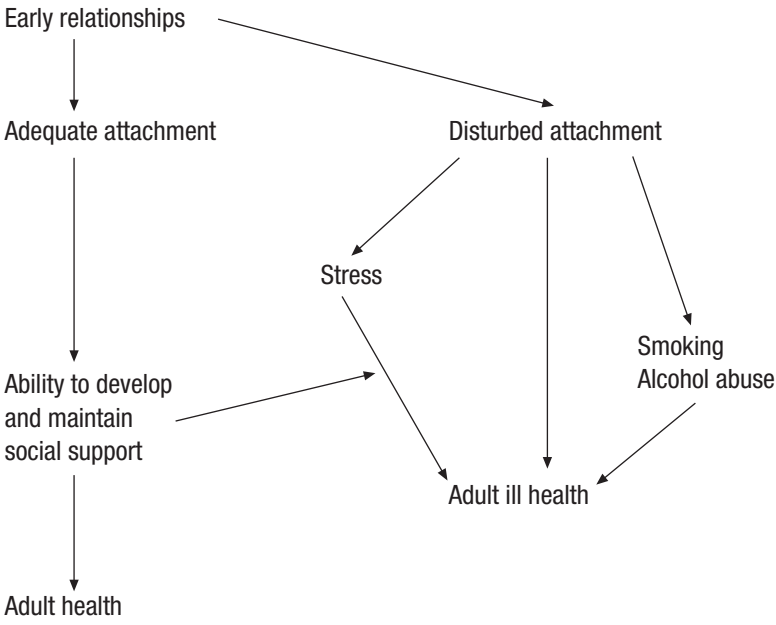
National Council of Welfare (1997). *Healthy Parents, Healthy Babies.* Ottawa: Minister of Public Works and Government Services.

Figure 37
1996 Poverty Trends, Children and Families

	Number of Children Under 18 Living in Poverty	Poverty Rate for Children Under 18	Single-Parent Mothers Under 65 With Children Under 18	Couples Under 65 With Children Under 18
1980	984,000	14.9%	57.7%	9.4%
1981	998,000	15.2%	54.8%	9.7%
1982	1,155,000	17.8%	60.9%	11.3%
1983	1,221,000	19.0%	61.7%	12.3%
1984	1,253,000	19.6%	62.8%	12.6%
1985	1,165,000	18.3%	62.5%	11.3%
1986	1,086,000	17.0%	58.8%	10.8%
1987	1,057,000	16.6%	59.0%	10.1%
1988	987,000	15.4%	56.7%	8.9%
1989	934,000	14.5%	52.9%	8.5%
1990	1,105,000	16.9%	60.6%	9.6%
1991	1,210,000	18.3%	61.9%	10.7%
1992	1,218,000	18.2%	58.4%	10.1%
1993	1,415,000	20.8%	59.8%	12.4%
1994	1,334,000	19.1%	57.3%	11.3%
1995	1,441,000	20.5%	57.2%	12.6%
1996	1,481,000	20.9%	61.4%	11.9%

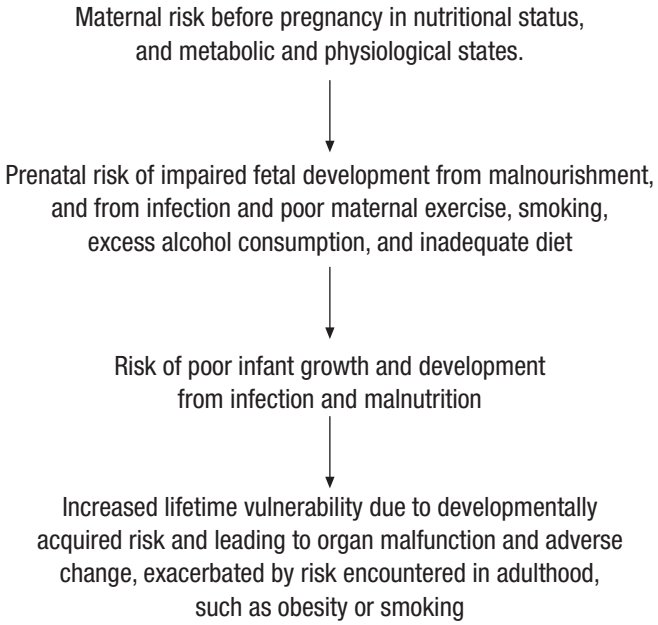
National Council On Welfare (1999). *Preschool Children: Promises to Keep*. Ottawa: Minister of public Works and Government Services.

Figure 38
Social Support and Social Cohesion



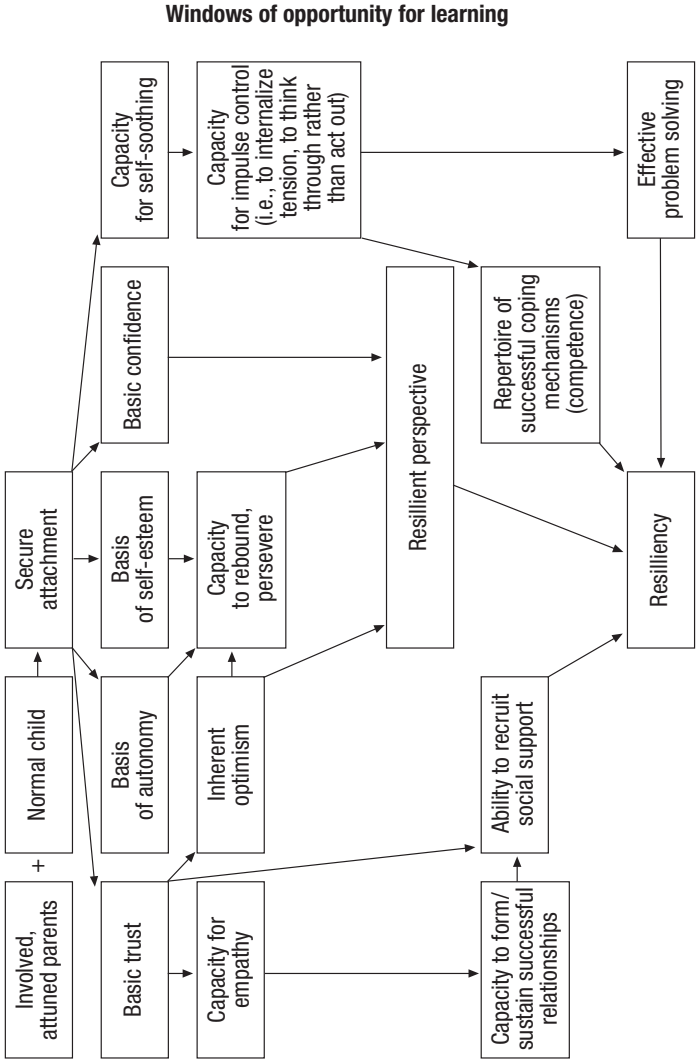
Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health*. New York: Oxford University Press.

Figure 39
Summarized Health Risk Arising From Biological Programming



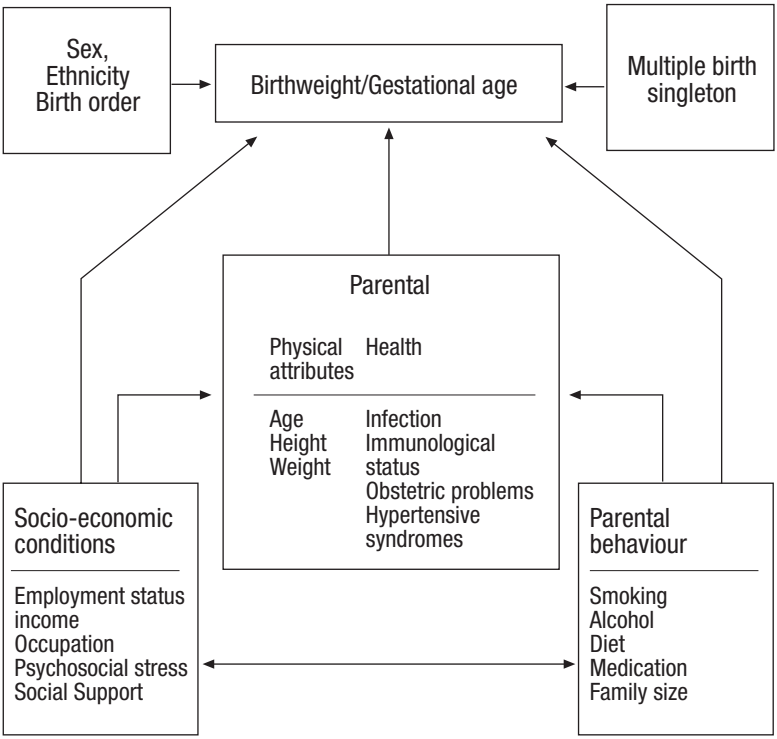
Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health*. New York: Oxford University Press.

Figure 40
Secure Attachment as a Precursor of Resiliency



Steinhauer, Paul (1998). "Developing resiliency in children from disadvantaged populations." I*n National Forum on Health, Determinants of Health: Children and Youth.* Quebec: Editions Multimondes, pp. 48-102.

Figure 41
Main Factors Influencing Birthweight: Summary and Inter-Relationships



Power, Chris (1995). "The health of our children: Children's physical development. Working paper no. 62." Toronto: Canadian Institute of Advanced Research.

Figure 42
Regulated Child Care Spaces in Canada

	Full-day and part-day child care in centres	School-age care	Regulated care in family homes	Total regulated spaces	% of children 12 and under with regulated spaces
Newfoundland	3,705	497	none	4,202	4%
Prince Edward Island	3,292	568	28	3,888	16%
Nova Scotia	10,476	data not available	169	10,645	7%
New Brunswick	7,838	data not available	114	7,952	6%
Quebec	52,911	40,670	17,871	111,452	9%
Ontario	128,955	data not available	18,898	147,853	8%
Manitoba	12,480	3,255	3,111	18,846	10%
Saskatchewan	3,727	926	2,613	7,266	4%
Alberta	43,262	none	7,826	51,088	10%
British Columbia	31,462	13,360	14,972	59,794	10%
Northwest Territories[1]	1,182	data not available	104	1,286	7%
Yukon[1]	649	189	222	1,060	17%
Total	299,939	59,465	65,928	425,332[2]	8%[3]

1. Figures for the number of children in Yukon and Northwest Territories were unavailable when the University of Toronto's Childcare Resource and Research and Research Unit created this table. Figures in the last column use the number of children in the 1996 census.

2. Does not equal the sum of all types of services. Some facilities offer more than one service and the license capacity for a particular facility does not always equal the sum of spaces by service. Total includes Quebec unregulated school-board-operated spaces.

3. The two territories have been excluded from the national proportion. Quebec's unregulated school-board operated spaces included.

National Council On Welfare (1999). *Preschool Children: Promises to Keep*. Ottawa: Minister of public Works and Government Services.

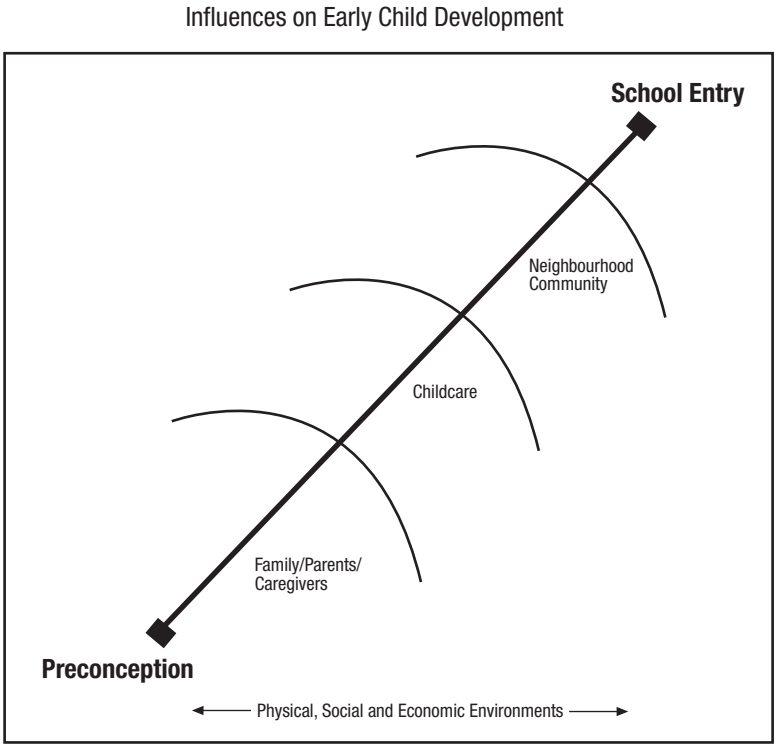
Figure 43
Investing in Early Childhood Development: The Health Sector Contribution, September 1999

Health Sector Activities Within an Integrated System of Services for Children and Families

	Preconception	Prenatal	Birth	to 3 years	to 6 years
Examples of Services	• Sexual health education • Family life education • Counselling and support for healthy lifestyles	• Prenatal education/ support • Prenatal screening • Environmental assessment (nutrition, voilence, isolation)	• Screening (physical and psychosocial) • Breastfeeding support • Discharge planning • Immunization • Home visiting	• Immunization • Support and education to parents and childcare • Monitoring and assessment • Referral to health and social services (housing, childcare, etc.)	• Ongoing assessment, monitoring and support • Consultation and coordination with other service providers
Examples of Results	• Planned, healthy conception • Reduction in unplanned pregnancies • Healthy lifestyle choices	• Prevention of alcohol, tobacco and drug use • Healthy pregnancies • Full-term pregnancy	• Healthy birthweights • Secure attachment • Safe and supportive environment	• Children achieve developmental milestones • Families are linked to services and support	• Children achieve developmental milestones • School readiness

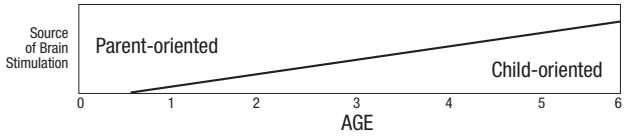
Conference of Federal/Provincial/Territorial Ministers of Health (1999). *Investing in Early Childhood Development: The Health Sector Contribution.* Ottawa: Minister of Public Works and Government Services.

Figure 44
Influences on Early Childhood Development



Conference of Federal/Provincial/Territorial Ministers of Health (1999). *Investing in Early Childhood Development: The Health Sector Contribution.* Ottawa: Minister of Public Works and Government Services.

Figure 45
Framework for Early Childhood Development and Parenting



Components of Early Childhood Development & Parenting Centres

At the hub:
- Parent support (including non-parental care arrangements) & education
- Play-based, problem solving learning guided by early educators & parents
- Toy & resource libraries, family events, nutrition programs & information & referral services
- Prenatal & postnatal supports

Linked to:
- Home-based satellites
- Home visiting network
- Specialized Services

Services

- Specialized Services for Young Children & Families
- Universal Public Health
- Universal Medical Service

Incentives to Support Early Child Development & Parenting

- Maternity/Parental Leave
- Private Sector Tax Incentives
- Social Venture Capital Fund

Outcome Measures

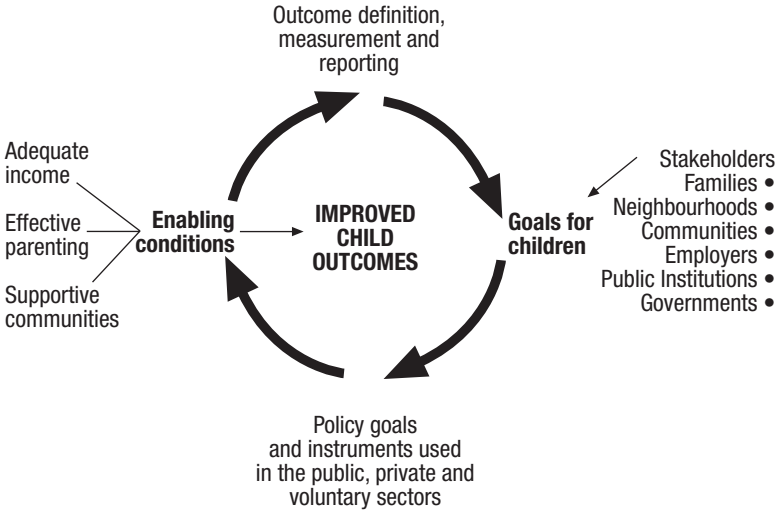
- Birthweight Newborn Screening

Readiness to learn

- National Longitudinal Survey of Children & Youth

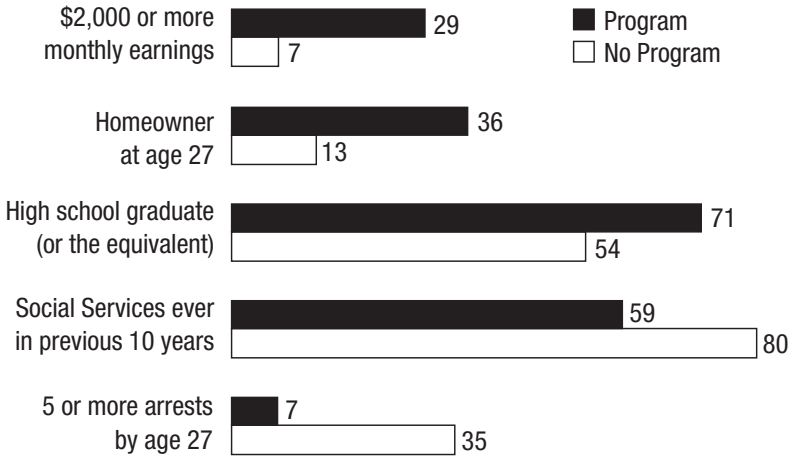
McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report*. Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

Figure 46
Components of Societal Strategy for Children



Stroick, Sharon M., Jenson, Jane (1999). *What is the Best Policy Mix for Canada's Children?* Ottawa: Canadian Policy Research Networks.

Figure 47
High/Scope Perry Preschool Project — Major Findings at Age 27



Note: All findings are significant at $p < 0.05$, two-tailed
Source: Schweinhart et al.

Hertzman, Clyde (1998). "The Case for Child Development as a Determinant of Health." *Canadian Journal of Public Health*, 89, May-June, pp. S14-S19.

Figure 48
Major Findings at Age Nineteen in the Perry Preschool Study

Category	Number Responding	Preschool Group	No Preschool Group	P
High school diploma/GED	121	67%	49%	0.034
College or vocational training	121	38	21	0.029
Functional competence (average or above)	109	61	38	0.051
Ever classified as mentally retarded	112	15	35	0.014
Years in special education	112	16	28	0.039
Ever detained or arrested	121	31	51	0.021
Females only: teen pregnancies, per 100	49	64*	117*	0.076
Employed at age 19	121	50	32	0.031
Receiving welfare at time interview	121	18	32	0.044

Total n=123
*These numbers should be interpreted as 0.64 and 1.17 teen pregnancies per person.

Source: David P. Weikart, "Early Childhood Education and Primary Prevention." Prevention in Human Services 6 (1989): table 1.

Hertzman, C. (1994). "The Lifelong Impact of Childhood Experiences: A Population Health Perspective," *Daedalus*, Fall, pp. 167-180.

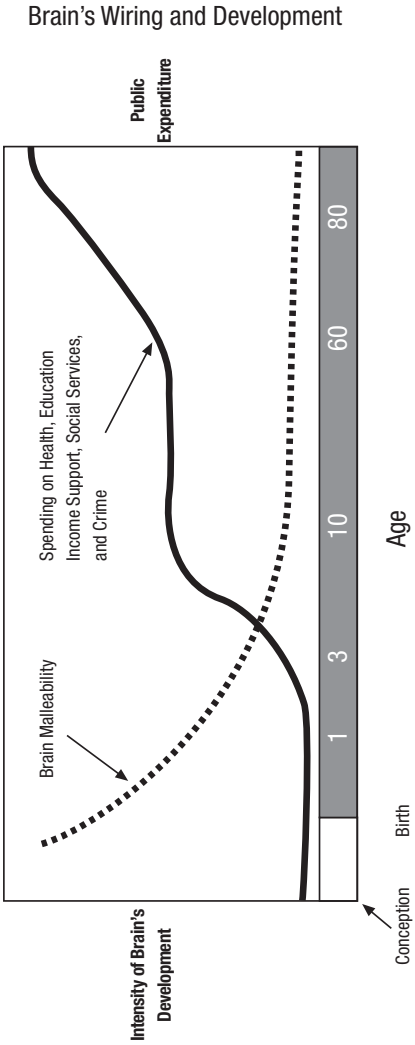
Psychobiology and Brain Development

Figure 49
Windows of Opportunity for Learning

Windows of opportunity for learning	
Motor Development	Prenatal to 5+ years
Emotional Control	Birth to 2+ years
Vision	Birth to 2+ years
Social Attachment	Birth to 2+ years
Vocabulary	Birth to 3 years
Second Language	6 months to 10 years
Math/Logic	1 year to 4+ years
Music	3 years to 10 years

National Council of Welfare (1997). *Healthy Parents, Healthy Babies.* Ottawa: Minister of Public Works and Government Services.

Figure 50
Brain Development: Opportunity and Investment



McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report*. Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

Figure 51
Key Facts about Brain Development

Key Facts About Brain Development

The brain development that takes place before age one is more rapid and extensive than we previously realized.

Brain development is much more vulnerable to environmental influence that we ever suspected.

The influence of early environment on brain development is long lasting.

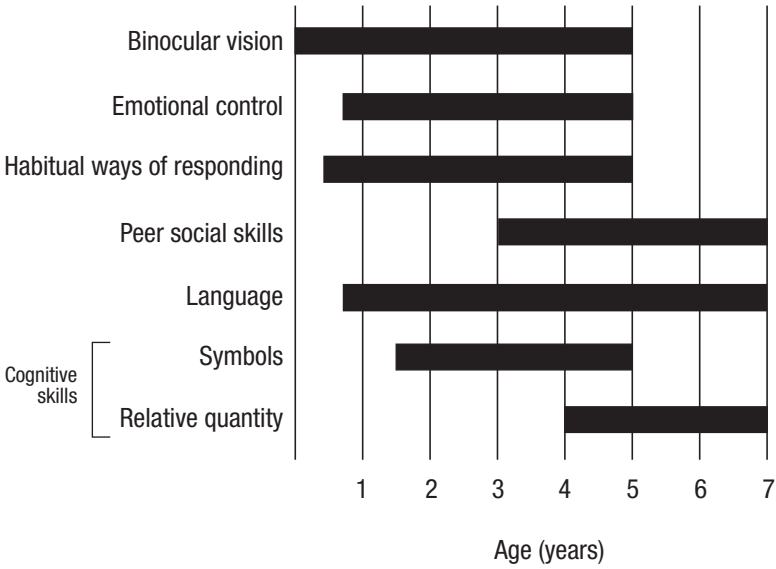
The environment affects not only the number of brain cells and number of connections among them, but also the way these connections are "wired".

We have new scientific evidence for the negative impact of early stress on brain function.

Adapted from Starting Points, Carnegie Corporation of New York, 1994

McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report*. Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

Figure 52
Critical Periods for Some Aspects of Brain Development and Function



Source: Adapted from Doherty 1997

McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report*. Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

Figure 53
Rethinking the Brain

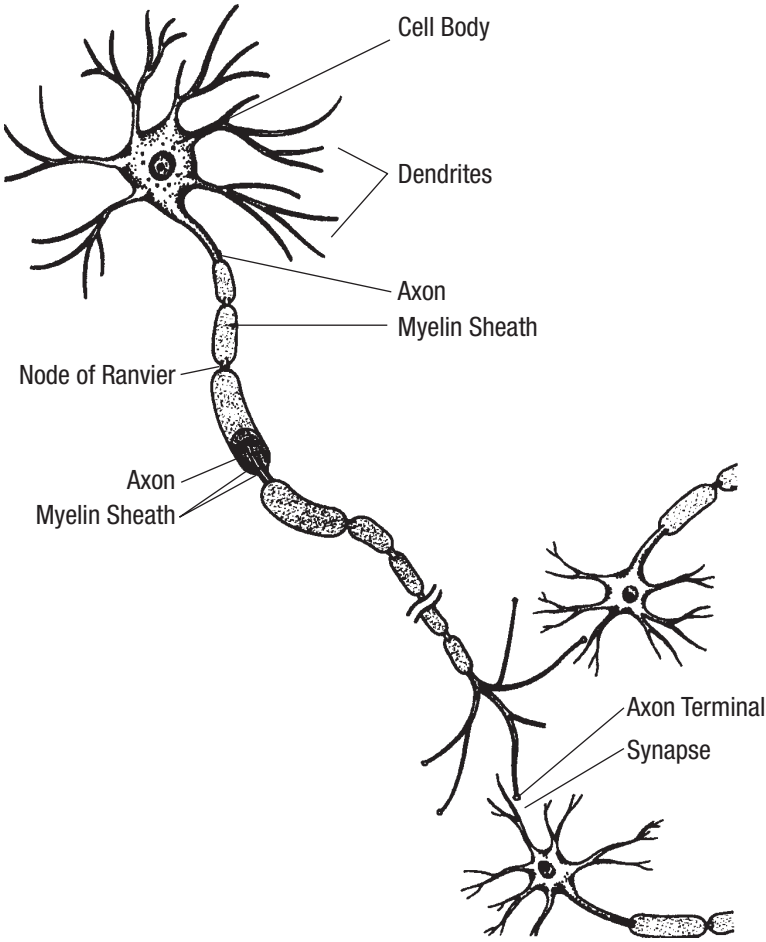
Rethinking the Brain

Old Thinking	New Thinking
How a brain develops depends on the genes you were born with.	How a brain develops hinges on a complex **interplay** between the **genes** you are born with and the **experiences** you have.
The experiences you have before age three have a limited impact on later development.	Early experiences have a **decisive impact** on the architecture of the brain, and on the nature and extent of adult capacities.
A **secure relationship** with a primary care giver creates a favourable context for early development and learning.	Early **interactions** don't just create the context, they **directly affect** the way the brain is **"wired"**.
Brain development is **linear**: the brain's capacity to learn and change grows steadily as on infant progresses towards adulthood.	Brain development is **non-linear**: there are prime times acquiring different kinds of knowledge and skills.
A toddler's brain is much **less active** than the brain of a college student.	By the time children reach age three, their brains are **twice as active** as those of adults. Activity levels drop during adolescence.

Source: Shore, R. (1997) Rethinking the Brain

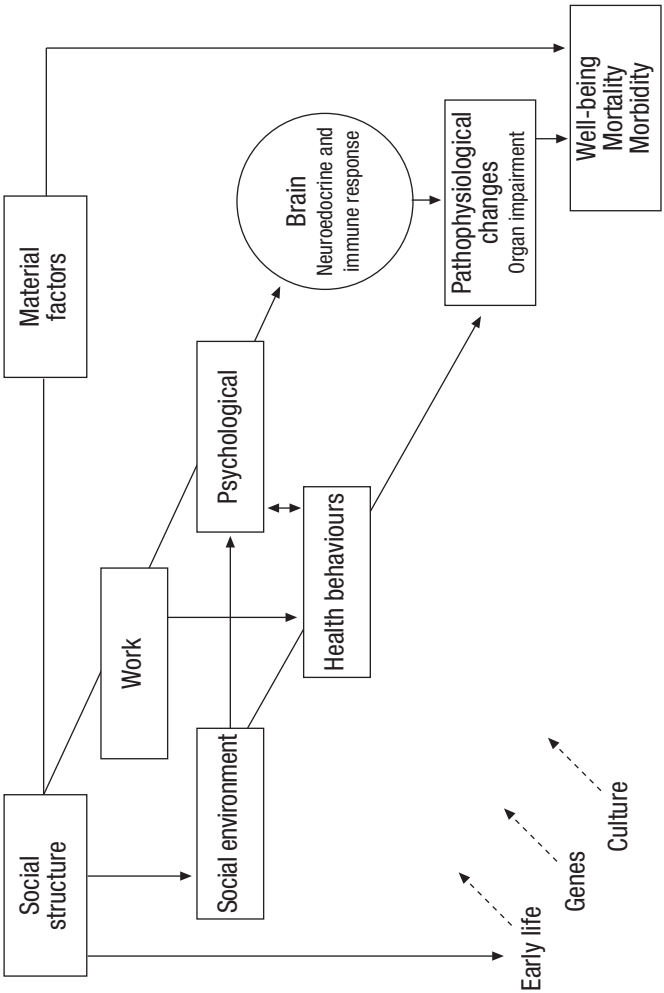
McCain, Margaret N. and Mustard, J. Fraser (1999). *Reversing the Real Brain Drain: The Early Years Study Final Report*. Toronto: Government of Ontario. Available: www.childsec.gov.on.ca.

Figure 54
A Mature Neuron



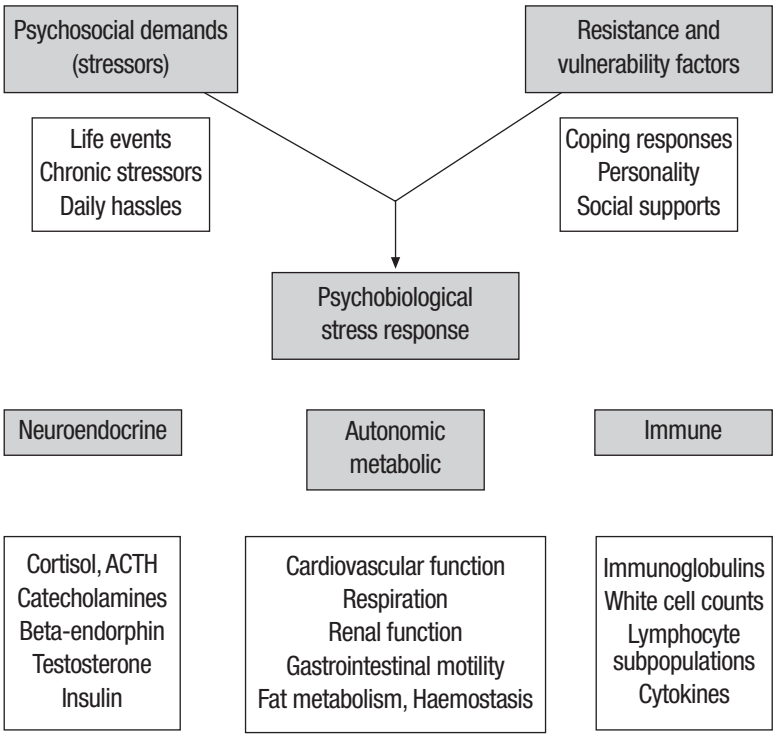
Bruer, John T. (1999). *The Myth of the First Three Years: A New Understanding of Early Brain Development and Lifelong Learning*. New York: The Free Press.

Figure 55
Social Determinants of Health



Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health*. New York: Oxford University Press.

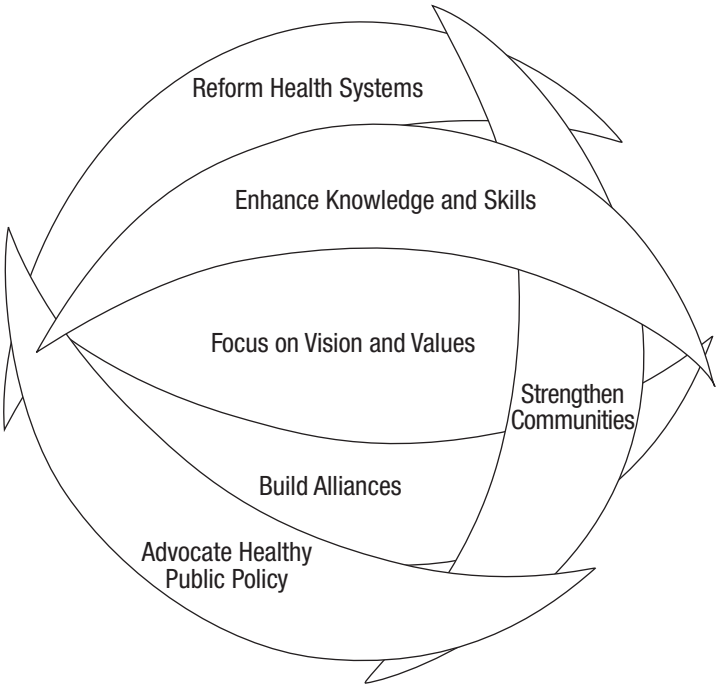
Figure 56
The Psychobiological Stress Response



Source: from Steptoe 1998

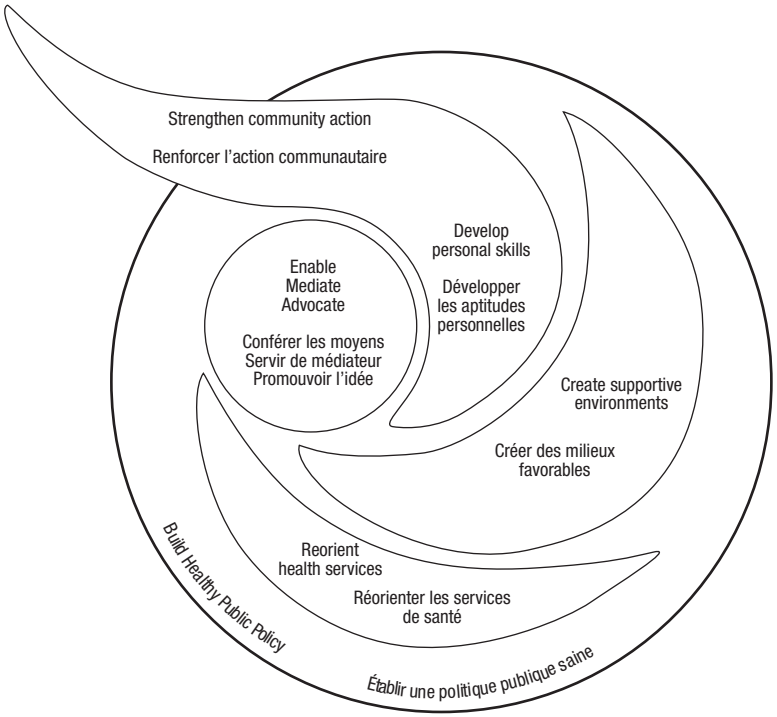
Marmot, Michael and Wilkinson, Richard, eds. (1999). *Social Determinants of Health*. New York: Oxford University Press.

Figure 57
Action Statement for Health Promotion in Canada



Canadian Public Health Association (1996). *Action Statement for Health Promotion in Canada*. Ottawa: Canadian Public Health Association.

Figure 58
The Ottawa Charter

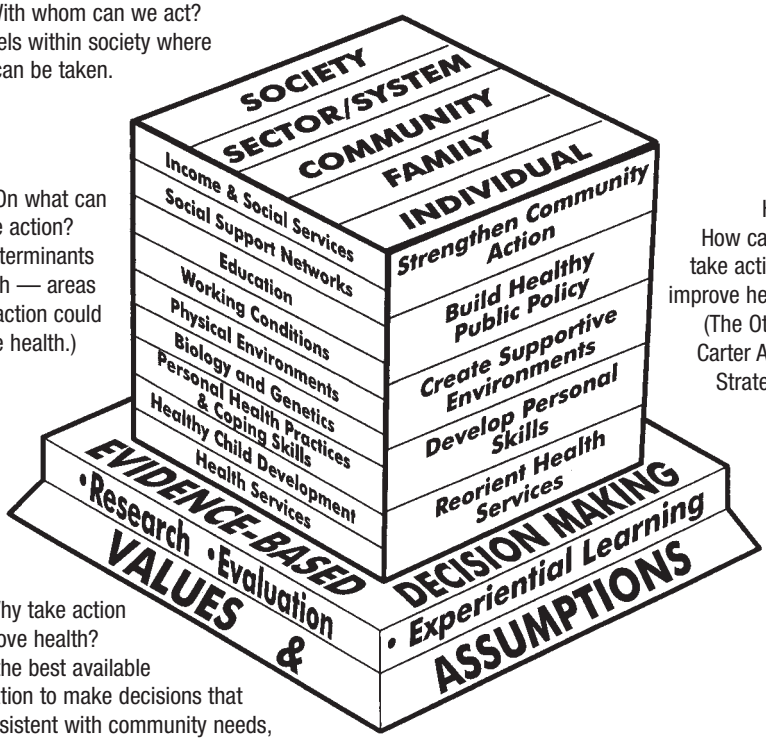


Hamilton, Nancy, Bhatti, Tariq (1996). *Population Health Promotion: An Integrated Model of Population Health and Health Promotion*. Ottawa: Health Canada.

Figure 59
Population Health Promotion Model

WHO: With whom can we act? The levels within society where action can be taken.

WHAT: On what can we take action? (The determinants of health — areas where action could improve health.)



HOW: How can we take action to improve health? (The Ottawa Carter Action Strategies)

WHY: Why take action to improve health? (Using the best available information to make decisions that are consistent with community needs, values and resources.)

Hamilton, Nancy, Bhatti, Tariq (1996). *Population Health Promotion: An Integrated Model of Population Health and Health Promotion*. Ottawa: Health Canada.

John Hylton
1999 Muttart Fellow

John Hylton is an Ottawa–based health administrator, university educator, and consultant specializing in health, public policy, justice, and Aboriginal issues. He has been a senior advisor to many government commissions and inquiries throughout Canada, including the Royal Commission on Aboriginal Peoples, and the Manitoba Aboriginal Justice Inquiry. His publications on public policy issues include eight books and numerous articles and chapters in both national and international publications.

Prior to joining the Canadian Mental Health Association in Saskatchewan as Executive Director in 1988, Dr. Hylton held academic appointments at the University of Regina (where he remains an Adjunct Professor), as well as a number of senior positions with the social services and justice departments of the Saskatchewan government.

Among his many involvements in the health care field, Hylton was an elected member of the Regina District Health Board. This health district provides a wide range of tertiary care health services to the residents of Southern Saskatchewan. He also served on the board of the Saskatchewan Association of Health Organizations and the Health Insurance Reciprocal of Canada.

Dr. Hylton is currently the President and CEO of the Council for Health Research in Canada. The council is a national, nonprofit, non-governmental organization that advocates for health research and evidence–based healthcare in Canada.

Dr. Hylton is a graduate of St. Francis Xavier University, Carlton University, and the University of California at Berkeley.