Patterns of health and disease are largely
a consequence of how we learn, live and work

Summary Report

Improving the Health of Canadians

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CPHI SPC
Canadian Population Health Initiative | Initiative sur la santé de la population canadienne
Part of the Canadian Institute for Health Information
Partie intégrale de l'Institut canadien d'information sur la santé

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About the Canadian Population Health Initiative

The Canadian Population Health Initiative (CPHI), a part of the Canadian Institute for Health Information (CIHI), was created in 1999. The mission of CPHI is twofold: to foster a better understanding of factors that affect the health of individuals and communities, and to contribute to the development of policies that reduce inequities and improve the health and well-being of Canadians.

As a key actor in population health, CPHI

- Provides analysis of Canadian and international population health evidence to inform policies that improve the health of Canadians
- Funds research and builds research partnerships to enhance understanding of research findings and to promote analysis of strategies that improve population health
- Synthesizes evidence about policy experiences, analyzes evidence on the effectiveness of policy initiatives and develops policy options
- Works to improve public knowledge and understanding of the determinants that affect individual and community health and well-being

About the Canadian Institute for Health Information

Since 1994, the Canadian Institute for Health Information (CIHI), a pan-Canadian, independent, not-for profit organization, has been working to improve the health of the health system and the health of Canadians by providing reliable and timely health information. The Institute's mandate, as established by Canada's health ministers, is to develop and maintain a common approach for health information in this country. To this end, CIHI provides information to advance Canada's health policies, improve the health of the population, strengthen our health system, and assist leaders in the health sector to make informed decisions. CIHI is assisted in fulfilling this mandate in partnership with Statistics Canada.

Preface

Improving the Health of Canadians is the first in a biennial report series produced by the Canadian Population Health Initiative. It examines what we know about factors that affect the health of Canadians, ways to improve our health and the implications of policy choices on health. It builds on earlier reports on the health of Canadians from the Federal, Provincial and Territorial Advisory Committee on Population Health.

This *Summary Report* provides an overview of the full report. We encourage you to refer to the detailed research findings and data that underlie this document. Graphs, tables and full references are available in *Improving the Health of Canadians*, which can be accessed free of charge at www.cihi.ca.

Acknowledgements

The Canadian Population Health Initiative (CPHI) and the Canadian Institute for Health Information (CIHI) acknowledges with appreciation the contributions of many individuals and organizations to the development of *Improving the Health of Canadians* (please see the main report for details).

We would also like to acknowledge the contribution of Ann Silversides and Susan Swanson to the production of the *Summary Report*.

Table of Contents

For More Information

The full text of *Improving the Health of Canadians*, the *Summary Report* and *Report Backgrounders* are available in both official languages on the CIHI Web site at www.cihi.ca. To order additional copies of the report, please contact:

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We welcome comments and suggestions about this report and about how to make future reports more useful and informative. For your convenience a feedback sheet, "It's Your Turn", is provided at the end of the full report. You can also e-mail your comments to cphi@cihi.ca.

There's More on the Web!

The print version of this report is only part of what you can find at our Web site (www.cihi.ca). On the day that *Improving the Health of Canadians* is released and in the weeks and months following, we will be adding more population health information to what is already available. For example, it will be possible to:

- Download copies of the main report, summary report and report backgrounders in English and French
- Sign-up to receive updates and information through CPHI's e-newsletter
- Learn about upcoming reports, including *A Snapshot of Population Health Trends in Canada* and *Public Views on the Determinants of Health*
- Learn about upcoming CPHI events

Introduction

Since medicare was introduced, our health care system has joined hockey and the maple leaf as a defining symbol for Canadians. We are proud that when Canadians become ill, income is not a barrier to basic health care. But recent federal and provincial reports on the health care system have acknowledged that improvements in the overall health of Canadians will also come from investments outside the health care system. The reports emphasized that we need to understand the broader factors that influence our health to achieve long-term health gains.

Overall, Canadians are relatively healthy. Indeed, our life expectancy (over 79 years in 2001) is one of the highest in the world. But, as you will read, there are surprising differences in health status within the Canadian population—inequalities that affect both children and adults.

Improving the Health of Canadians focuses on four different perspectives on the health of our population: core determinants of health, the life course, the experience of different population groups, and the variety of health conditions that exist. It explores in depth one key issue from each of these perspectives, which the Canadian Population Health Initiative has identified as critical to our nation's health at the beginning of the 21st century:

Income
Income largely determines Canadians' ability to purchase the necessities of a healthy life. It also is a major determinant and a marker of people's opportunities to participate and to be included in the society in which they live, a fundamental condition for health.

Early Childhood Development
Early childhood is a critical period for shaping a person's health. A poor start can threaten or delay development and result in a chain of poor outcomes extending into adulthood.

Aboriginal Peoples' Health
Aboriginal Peoples in Canada generally have much poorer health than other Canadians, and large differences exist in health status between Aboriginal communities.

Obesity
The number of Canadian adults and children who are overweight or obese has risen over the past two decades. This trend has important implications for health and health care.

As *Improving the Health of Canadians* explains, tackling these issues will necessitate a close look at decisions made outside the health care system. These include decisions about how to run the economy and choices about spending collective wealth on public programs such as education, social and income supports and health care. Many of the choices are made outside of the health sector—for example, by departments of finance, education, social services, human resources, housing and justice. The choices of community groups, schools, corporations and others also play an important role.

Improving the Health of Canadians is addressed to all those who want to make a difference to Canadians' health or who want to understand the potential health consequences of actions taken with other goals in mind.

Income

Better social and economic conditions mean better overall health. Researchers examining this connection generally use income as a marker of social and economic conditions and use mortality (life expectancy and infant mortality) and morbidity (illness and disability) as measures of health status. The chapter on income in *Improving the Health of Canadians* is divided into three parts: an overview of the health consequences of income, a discussion of trends in the distribution of income in Canada and who experiences low income, and an exploration of some policies and programs that aim to improve social and economic conditions.

The Health Consequences of Income

In general, people living in higher income countries live longer lives in better health than people living in lower income countries. However, beyond a certain threshold, the benefits of increasing national income to health diminish.

Over the last 25 years, both life expectancy and average income in Canada have increased, but health status differences between income groups persist. At low levels of income, Canadians are most vulnerable to poor health.

The size of the gap between low and high income groups may also affect health. There is some evidence that the smaller the income gap within a nation or a city, the better the overall health of the population. However, other research suggests that the impact of income inequality on health is not automatic. Some experts propose that health varies depending on how institutional and societal arrangements—for example, the availability of public education and public health care—buffer the impact of income inequality.

It took the poorest fifth of urban Canadians until the mid-1990s to reach the life expectancy experienced by the richest fifth 25 years earlier.

Higher income individuals have a longer life expectancy than middle income individuals, who in turn have a longer life expectancy than lower income individuals.

The persistent and widely found difference in health status between income groups is called the health gradient. A key British investigation, the Whitehall studies, found that even within a population of civil servants where everyone had steady incomes and secure jobs, health status was better for higher income employees and was affected by other factors related to position in the job hierarchy, such as stress, control over work and coping skills.

Who Experiences Low Income in Canada?

To understand who may be at risk for poorer health, it is important to understand overall income trends in Canada. Canadians receive income from two main sources: "market" income (employment income, income from investments, etc.) and "transfer" income (public pensions, Employment Insurance, social assistance, etc.). In general, the lower the family income, the more reliant the family is on transfer income. On average, the incomes of Canadians are rising, but incomes are not rising for everyone.

Low income levels in Canada fell every year from 1996 to 2001:

- Less than 8% of families of two or more people experienced low income in 2001, down from just under 11% in 1996.
- Similarly, 32% of female lone-parent families had low incomes in 2001, a third less than five years earlier.
- The percentage of children in low income families has fallen every year since 1996, and in 2001 was at its lowest since 1980.
- Although overall rates of low income have been falling, average incomes of low income families are thousands of dollars below the Low Income Cut-Off level (Statistics Canada's most widely used measure of low income), and the amount of this gap increased 6% during the 1990s.

To understand who may be at risk for poorer health, it is important to understand overall income trends in Canada.

The average employment earnings of Canadians in 2000 were $31,757, an overall increase of almost 9% since 1980. However, focusing on the average obscures important differences:

- The number of higher income earners (over $80,000) soared during the 1990s. These earners were mostly in older age groups.
- Younger income earners (under 40 years of age) experienced no increase in average earnings in the last two decades, and some lost ground.

The same people do not necessarily experience low income from month to month or year to year. However, according to one study, certain groups are more likely to persistently experience low income: single parents with at least one child under 18, people with a long-term disability, off-reserve Aboriginal people, recent immigrants and single people aged 45 to 59.

The number of people at low levels of income is decreasing, but many people in the lowest income group are still very poor compared with the rest of Canadians.

Inequality in Disposable Incomes Is Increasing

Inequality in disposable incomes (income after taxes and transfers) was relatively stable between 1980 and 1994 and then began to increase. Since 1994, inequality in total and disposable income has risen more quickly than inequality in market income.

With regard to overall wealth over the last 30 years, the rich have been getting richer and the poor have been getting poorer.

The recent rise in inequality in disposable income is apparent when looking at trends in the distribution of household income. From 1993 to 2001, the average income (after transfers were included and taxes deducted) of the highest fifth of families rose by $21,900, a 24% increase from 1993. The rise in average income of the lowest fifth of families, however, was more modest, $1,800 or just under 10%, since 1993. The dollar gap between these two income groups increased from $72,800 in 1993 to $92,900 in 2001, a rise of 28%.

Current income is not sufficient as an indicator of economic capacity. People with more wealth (more assets) also have more resources when faced with job loss, long-term disability, family breakdown or other crises. Over the last 30 years, the wealthiest 10% of Canadian households increased their net worth by more than half a million dollars, while the poorest 10% experienced a reduction in net worth.

Policies and Programs

There are a number of policies and programs, in areas such as health care and education, which contribute to reducing levels of low income, reducing income inequality and providing support to people in low income, including:

- **Programs that prevent or reduce low income and income inequality,** such as cash transfer programs, regulatory income provisions and income tax policies. For example: public pensions for seniors, benefits for children and families, social assistance programs, earnings-related programs such as disability and sickness benefits, minimum wage laws and child support provisions.
- **Programs that provide supports to people already in low income** to actively promote, create or maintain independence. For example: job skills and community economic development programs; early childhood care and education; prenatal nutrition support; home and nurse visiting; and supports to infants, preschool and school-aged children.

Public policy is important. Policies and programs that affect income and income distribution have the potential to affect health.

Policies and Programs That Prevent or Reduce Low Income

Tax policy and income transfer programs have greatly reduced low income rates among seniors in Canada. This experience with seniors, and the experience of other countries, show that government tax and transfer programs could greatly reduce rates of low income among other groups, such as children and families.

Such policies, especially if combined with interventions to boost effective parenting and early childhood development (see "Early Childhood Development"), have the potential to improve the health of children and families.

Seniors

Canada has had more success in reducing low income rates among senior citizens, and compares favourably with other countries in this area. Canadian programs reduced low income rates for seniors by 90% in the early 1990s.

Families With Children

Child benefits, family allowances, transfers and taxes are used in many countries to reduce low income rates for families with children. Some countries have made stronger commitments than Canada. For example, in the 1990s, child poverty rates before transfers and taxes were roughly similar in Canada (24.6%), France (28.7%) and Sweden (23.4%). Through transfers and tax policies, France and Sweden succeeded in lowering these rates (to 7.9% and 2.6%, respectively) significantly more than Canada, where the rate was reduced to 15.5%.

While low income rates are affected by a variety of factors, government policy plays a key role.

While low income rates are affected by a variety of factors, government policy plays a key role. Through taxes and income transfer programs, during the 1990s, Canada reduced its overall rate of low income by 30% from the probable rate in the absence of such government policies. During the same period, the United States reduced its rates by only 11%. However, many other countries reduced rates further. Belgium reduced low income rates by nearly 80% during the same period.

Canada has had varied success in reducing low income rates for specific populations.

Lone-Parent Families

The importance and impact of child benefits is particularly evident when lone-parent families are considered. With no interventions from government tax systems and transfer programs, lone-parent families would be more likely to experience low income. Taxes and transfers can substantially reduce this likelihood.

Programs That Provide Support and Promote Independence

Community-based employment support programs can be effective in providing support to low income people and in increasing employment and income levels of social assistance recipients.

Demonstration projects aimed at improving earnings and employment opportunities of parents on social assistance have shown positive results. For example, guaranteed income programs have reduced low income rates and, in some cases, increased employment. Researchers found that a project in Gary, Indiana, improved the birth weight of babies born to families receiving special income supplements, likely by improving nutrition for their mothers.

The examples of child benefits and employment support programs provided in the chapter on income in *Improving the Health of Canadians* show that collaborative efforts across sectors, sustained over long periods of time, can be effective.

This chapter makes clear that income is important for health. As comparative data on the impact of government tax systems and income transfer programs show, public policy in these areas is important in affecting income distribution.

Early Childhood Development

The early years of life, from conception to school age, are critical to human development. A person's early life experiences have an important impact on their learning skills, coping skills and resiliency, as well as their health as an adult. Early experiences are affected by genetics but also by the broader determinants of health, including social and economic conditions and the physical environment. Programs that effectively address children's basic needs can significantly improve their opportunities to grow and develop.

Importance of Early Childhood Development and Health

Successful early childhood development depends on several factors, including good nutrition, good health (for both mother and child), good parenting, strong social supports and stimulating interaction with others outside the home.

Canada's Early Childhood Development Agreement

Canadian policy makers have acknowledged the importance of early childhood development to health, and this is reflected in the *Early Childhood Development Agreement*, signed by federal, provincial and territorial governments in September 2000. Under the Agreement, governments have committed to improving children's physical and emotional health, safety and security, readiness to learn, social engagement and responsibility. They have also agreed to report regularly on outcomes. The first report, published in the fall of 2002, revealed that four out of five babies were born at a healthy birth weight and four out of five children from birth to age 3 were being, or had been, breastfed. As well, nine out of ten children up to age 3 indicated average to advanced motor and social development. However, there is clearly room for improvement. Expressed another way, the same statistics reveal that one in five children may face health consequences as a result of unhealthy birth weight, one in five are never breastfed and one in ten experience below-average motor and social development.

Early childhood experiences have an important impact on health throughout a person's life.

The importance of early childhood development is underscored by the fact that a poor start not only threatens or delays development, but also may result in a chain of poor outcomes into the future. Poor early childhood development can result in restricted brain development; reduced language development, capacity to communicate and literacy; and poor physical and mental health throughout life.

As the chapter on income demonstrates, family income affects children's health. Rates of poor health, hyperactivity and delayed vocabulary development have been shown to be higher among children in low income families than among children in middle and high income families. These poorer outcomes often persist into adulthood.

However, income is not the only predictor of developmental delay. Children with cognitive and behavioural problems in families at any level of income may have reduced chances of optimal development.

Policies and Programs That Foster Healthy Childhood Development

Early interventions can alter the lifetime trajectories of children who are born into low income families or who are deprived of the opportunities for growth and development available to children who live in families that are more fortunate. These facts come from evaluations of large, publicly funded programs and of smaller, experimental project interventions. Studies in the United States and Canada show that the economic returns of investing in young children can be high.

Addressing three broad areas will likely improve early childhood development outcomes in Canada:

1. Adequate and equitable income
2. Effective parents and families
3. Supportive community environments

A number of programs and services have been shown to be effective in improving early childhood development outcomes.

Adequate and Equitable Income

Programs and policies to help ensure that families have adequate and equitable income can address potential effects of income and income inequality on child development. Child and family benefits in Canada and other countries are discussed in more detail in the chapter on income.

Effective Parents and Families

A variety of policies and programs can encourage and support effective parenting and hence strengthen families. Four approaches are discussed below:

- **Parental and family leaves**
  The federal government's decision to extend parental leave to 35 weeks from 10 weeks (for those eligible to receive it from Employment Insurance) brings Canada in line with some of the best practices in terms of length of leave. The policy has changed parental behaviour in directions generally considered positive for children's development. In 2001, the average time that employed mothers in receipt of maternity or parental benefits spent (or planned to spend) away from work increased to 10 months from 6 months in 2000. As well, more new mothers received parental benefits in 2001 than in 2000, which may be related to the reduction in the number of hours required to receive benefits from Employment Insurance. Fathers were also more likely to take leave: claims jumped from 3% to 10%. Time taken off work by mothers who did not have maternity or parental benefits remained at four months.

  Some provinces guarantee additional forms of family leave relevant to children.

- **Early childhood care and services for low income children and families**
  High-quality early childhood services can mediate some of the negative effects experienced by children of a disadvantaged background. Examples from the United States include Early Head Start and the Abecedarian Early Childhood Intervention.
  - Early Head Start is a large initiative (over 700 programs) that offers high-quality programs to low income families and children, including parenting skills and comprehensive child development services through centre-based, home-based and combination program options. Three-year-olds enrolled in its programs perform much better than control groups in cognitive and emotional development, and children in centre-based programs benefit the most.
  - The Abecedarian Intervention compared low income children receiving intensive preschool services with a control group. Children in the program and control groups were followed up periodically. Children from the program consistently had higher scores on standard intelligence and achievement measures and, by age 21, were more likely to have attended four-year college.

- **Centre-based early childhood education and care**
  High-quality, centre-based early childhood education and care programs show clear benefits for children, and children from low income households benefit the most. According to research, the three defining features of quality care are low child-to-adult ratios, highly educated staff with specialized training, and facilities and equipment that provide stimulating activities. The Organisation for Economic Co-operation and Development (OECD) has recommended more investments in early childhood education and care. Similarly, the US Centers for Disease Control have strongly recommended publicly funded, centre-based early childhood development programs to reduce cognitive developmental delays among low income children aged 3 to 5.

While Canada's parental leave policy is now in line with best practices in terms of length of leave, the country lacks a national coordinated strategy for early childhood education and care. Across Canada, there is a patchwork of policies and programs and not all of the needs of all children and families are being met.

Many developed countries invest more than Canada does in child care and early childhood development. Canada has no national early childhood education and care policy or strategy; as well, access to care and quality of care vary considerably within the country. However, like many other OECD countries, Canada is moving to invest more in early childhood education because of the developmental benefits. Municipalities, provinces, territories and others have introduced a variety of programs. The Canadian federal budget of February 2003 also announced $935 million over five years for provinces, territories and First Nations to help increase access to quality child care, especially for low income and lone-parent families.

- **Early detection and intervention programs** Canada has some long-standing examples of policies and programs for early detection and intervention aimed at benefiting disadvantaged women and children. For example, the Montreal Diet Dispensary was begun in the 1960s to improve pregnancy outcomes in socially disadvantaged urban women. In 1991, only 5% of babies born to dispensary clients had low birth weight; this is less than half the norm for that population. A study based on the 1997 program budget showed that for every $1 spent on a dispensary client, $8 was saved in health care costs.

  Home visiting is one of the oldest forms of public policy for families. One example, Naître égaux — Grandir en santé (Born Equal, Growing Up Healthy) in Montreal, led to significant improvements among new mothers—lower rates of postnatal depression, less anemia, better eating habits, and higher rates of breastfeeding or use of high-quality substitutes. The nation-wide Canada Prenatal Nutrition Program was launched in 1994 to reduce the rate of infants born with unhealthy weights, improve the health of the infant and mother, and promote breastfeeding. More than 95% of projects target pregnant women facing risk. Projects vary depending on local community needs, and early results indicate an improvement in breastfeeding rates.

Supportive Community Environments

Community mobilization programs in Canada vary, largely because they are designed to meet the specific needs of certain areas or certain populations. Such programs—both public initiatives and private ones—all rely to a great extent on community initiative. The Better Beginnings, Better Futures research project and the Waterloo Regional Community Action Program for Children are two examples of projects that foster supportive community environments.

- Better Beginnings, Better Futures began in Ontario in 1990 as a 25-year research project to demonstrate the effectiveness of prevention as a policy for children. It was established in eight sites in the province. Outcomes were measured related to children, parent and families, neighbourhoods and schools. Findings from the evaluation emphasize the contribution of the program in creating active community involvement of local residents and meaningful partnerships with other service organizations.
- The Waterloo Region Community Action Program for Children directs resources towards preschool children living in conditions of risk and includes activities for children, parents and families as well as community development activities. Generally, participants rated the program as "excellent", and reported the program had an impact on their children, on their parenting skills and on community connectedness.

Early childhood experiences are critical to successful and fulfilling human development. The evidence base for early childhood development policies and programs is promising. Experts have found that effective programs tend to share certain characteristics and principles: quality; appropriate scope, comprehensiveness, duration, timing and intensity; availability and accessibility; community involvement; and accountability.

Effective strategies, policies and programs for ensuring healthy early childhood development could be put in place at the same time as further research is conducted to enhance our understanding of how best to improve interventions that support healthy outcomes.

Aboriginal Peoples' Health

Social, economic and environmental conditions have had a profound effect on the health of Aboriginal Peoples in Canada. Treaty negotiations, the loss of land from Aboriginal Peoples to settlers, the organization of power and governance, and the provision of services such as education and health have all had a significant impact on the lives, cultures and health of Aboriginal Peoples and communities. Key determinants of health for Aboriginal Peoples are similar to those that affect all Canadians, but Aboriginal researchers also often cite particular factors. These include colonialism and the legacy of the residential school system, community control and self-determination, and the effects of climate change and environmental contaminants on the health of Inuit.

Canada's Aboriginal Peoples

The term "Aboriginal" in Canada refers to First Nations, Métis and Inuit Peoples. According to the 2001 Census, there are more than 1 million people of Aboriginal ancestry in Canada—approximately 4% of the Canadian population. Most of the existing data on the health of Aboriginal Peoples are derived from the Registered Indian population only. This presents challenges in trying to understand the overall health of Aboriginal Peoples in Canada.

Aboriginal Peoples Are Composed of First Nations, Métis and Inuit

First Nations

First Nations Peoples, who fall into about 50 culturally and linguistically distinct groups, make up about 62% of Canada's Aboriginal population. They include those registered under the Indian Act (Status or Registered Indians) as well as those not registered (Non-status Indians). In 2000, 58% of Registered First Nations lived on reserve.

Inuit

Inuit comprise about 5% of Canada's Aboriginal population. The majority live in 55 communities, almost all of which are coastal communities accessible only by air. About half of Inuit live in Nunavut, with the balance in the Western Arctic, Northern Quebec and Northern Labrador. Inuit culture and language is strong, with 65% of Inuit in the Arctic fluent in Inuktitut.

Métis

Métis people comprise about 30% of Canada's Aboriginal population. Ancestors of today's Métis were European men and First Nations women, but their offspring forged a unique identity, with a language of their own, Michif. At present there are few specific data, including health data, for the Métis population.

Aboriginal Peoples Recognize Cultural Identity as Fundamental to Their Health and Well-Being

Culture, language and tradition are integral to the holistic view of health held by Canada's Aboriginal Peoples. As in many Indigenous cultures around the world, health and well-being are understood as a complex inter-relationship between physical, mental/intellectual, spiritual and emotional factors.

Health Status of Canada's Aboriginal Peoples

The following facts give some indication of Aboriginal health status:

- The average lifespan of Inuit women is over 14 years less than the average for non-Aboriginal women, while for males the comparable gap is over 6 years. On average, First Nations and Inuit live 5 to 10 years less than non-Aboriginals.
- Infant mortality rates among First Nations on reserve and Inuit are two to three times the all-Canadian rate.

The life expectancy for Aboriginal Peoples has improved, but their health status, as indicated by life expectancy and many other health measures, is much worse than that of Canadians as a whole.

- In Nunavut, the potential years of life lost (PYLL) due to unintentional injury is nearly four times the national rate, and PYLL due to suicide is more than seven times the Canadian rate, based on 1996 data.
- Injuries are the biggest contributor to premature death amongst the on-reserve First Nations population, at a rate four times that of the Canadian population as a whole.

Key Determinants of Health

In general, the social, economic and environmental conditions of Aboriginal Peoples are worse than those of non-Aboriginal people. These conditions can have a profound effect on health. They include education, work status, income, housing, water and sewage systems, and access to affordable nutritional options.

Selected social and economic determinants:

- **Education, employment and income**
  Average educational attainment is lower for Aboriginal Peoples, fewer Aboriginal Peoples are employed and their average incomes are lower. The poorer social and economic conditions faced by Aboriginal Peoples could be contributing to their lower health status relative to non-Aboriginal people in Canada.

- **Housing**
  In 1996, 34% of off-reserve First Nations households, 27% of Métis households and 33% of Inuit households were found to be in core housing need—that is, living in housing that did not meet Canada Mortgage and Housing Corporation's accepted standards of adequacy, suitability or affordability. This compares with 18% of non-Aboriginal households in core housing need. Poor housing conditions are associated with a host of health problems. Aboriginal Peoples often live in crowded homes. Rates of tuberculosis (TB) increase with the number of persons per room in a dwelling. In the 1990s, the TB rate for First Nations communities was at least seven times the overall Canadian rate.

Aboriginal Peoples identify the legacy of residential schools as a unique determinant of health. Climate change and environmental contaminants, as well as community control and self-determination, are also factors affecting the health of Aboriginal Peoples.

- **The legacy of residential schools**
  The Aboriginal Healing Foundation estimates that there are 93,000 former residential school students alive today. The residential school system officially began in 1892 and, although most ceased operation in the mid-1970s, the last federally run residential school in Canada closed in 1996. Children were removed from their homes and placed in isolated institutions funded by the federal government and operated largely by churches. Most researchers who documented the conditions within residential schools found them to be places of physical, emotional and intellectual deprivation, resulting in intergenerational impacts on families and Aboriginal culture. In two recent surveys from the National Aboriginal Health Organization, 68% of First Nations respondents and 62% of Métis respondents identified the adverse effects of residential schools as a significant contributor to poorer health status.

- **Climate change and contaminants affecting Inuit**
  The state of the physical environment and the effects of global climate change affect all Canadians. The environment is particularly important for Inuit because it affects a cornerstone of Inuit life—the harvesting and eating of traditional or "country" food. Research suggests that considerable changes are already occurring in the North that could have direct negative impacts on Inuit health, including exposure to thermal extremes, changes in weather patterns and increased exposure to ultraviolet rays.

Inuit are also affected by environmental contaminants that have accumulated in Arctic wildlife. For example, a 1997 study found that over 50% of Inuit in one community on Baffin Island had dietary exposure levels of mercury, toxaphene and chlordane exceeding tolerable daily intake levels set by Health Canada and the World Health Organization. In 2003, Inuit mothers had levels of pesticides that were 6 to 12 times as high as those in other ethnicities.

- **Community control, self-determination**
  The federal government has recognized that some Aboriginal Peoples' lack of control over important dimensions of living can contribute to their ill health. A study of First Nations communities in British Columbia found youth suicide rates were dramatically lower in communities actively working to preserve and promote cultural practices. The study used six indicators of control: community self-government, control over their traditional land base, presence of band-controlled schools, community control over health services, presence of cultural facilities, and control over police and fire services. In communities without any of these features, the youth suicide rate was 138 per 100,000 population. In communities with all six, there were virtually no suicides.

  Similarly, a Manitoba First Nation community, Hollow Water, which took control of the problem of sexual abuse, was successful in improving community well-being by reducing repeat sexual offences. A healing process that emphasizes accountability of abusers to their victims, the families and the community was set up in 1989. Since then, only 2 of 107 clients offended again. This rate is considerably less than the 13% rate of repeat sexual offenders for Canada as a whole. Other changes in the community include more people completing their education, better parenting skills, an increased sense of safety, a return to traditional ceremony, and a decrease in violence.

Policy Trends and Critical Needs

The 1996 Royal Commission on Aboriginal Peoples and the federal government response, *Gathering Strength: Canada's Aboriginal Action Plan*, recognized that better health would grow out of long-term structural changes. In the short term, the government recommended changes to the health care system, such as handing over control to Aboriginal people. Funding of $350 million was dedicated to a number of interventions: the creation of new institutions, an expanded preschool education program, additional water and sewage projects, a Housing Innovation Fund, and improvements to health data.

A number of initiatives are underway that may contribute to improved health for Aboriginal Peoples.

Policy developments since 1996 include action at the national and local levels.

National Level

- **Creation of new institutions**
  The National Aboriginal Health Organization, created in 2000, is a body designed and controlled by Aboriginal people. The same year, the Institute of Aboriginal Peoples' Health (one of the 13 institutes of the Canadian Institutes of Health Research) was created. The Aboriginal Healing Foundation was established in 1998 to address the impact of the residential school system.

- **Initiatives to address the lack of health data on Aboriginal Peoples**
  The First Nations Regional Longitudinal Health Survey of 1997 and 2002–2003 was the first such health survey conducted entirely by and for Aboriginal Peoples. The Aboriginal Peoples' Survey by Statistics Canada (first conducted in 1991) added an Inuit and a Métis supplement in 2001. In 2002, the federal government proposed a First Nations Statistical Institute.

Local and Community Level

- **Transfer of authority and control to Aboriginal Peoples**
  The most significant local-level development is the shift in authority in delivering services to Aboriginal Peoples (primarily First Nations and Inuit) by the federal, provincial and territorial governments. One way this has occurred is through the settlement of self-government and land claims. The other is on a piecemeal basis through transfer agreements, primarily in social services and health. As of March 2001, 83% of First Nations communities were involved in the First Nations and Inuit Health Branch Health Transfer Program. Through a 2002 case study analysis, the National Aboriginal Health Organization reports that the transfer of control over health services has been successful in a number of communities. Key factors for success include Aboriginal ownership and control, a focus on primary care, linkages with the provincial health system, integrated service delivery, and a holistic focus and integration of traditional approaches with mainstream care. Two examples are provided:

  - The Eskasoni First Nation in Nova Scotia took control of health services in 1999, with changes including construction of a new health centre; diversification of a primary care team to include a primary care nurse, community health nurses, a prenatal care coordinator, a health educator/nutritionist and a pharmacist; and a shift from a fee-for-service family doctor to salaried physicians employed by the band. The result has been a reduction in emergency visits, savings in the medical transportation budget because more cases are handled locally, greatly improved prenatal care, and a more than eightfold increase in referrals to the health educator/nutritionist. Long-term benefits and costs are yet to be determined.
  - A Community Health Council was established in 1997 for the four Eastern Métis Settlements in northeastern Alberta to work with the regional health authority on improving health services. Preliminary assessments indicated improved access to mental health and other services; improved rates of immunization, breastfeeding and oral health; increased knowledge of health issues; and improved and earlier identification, testing and treatment of diabetes.

The health of Aboriginal Peoples is poorer than the Canadian average. Data on health determinants suggest that improvements to the health of Aboriginal Peoples will require action on the broader determinants of health, including housing and environmental problems and barriers to education, employment and self-determination. A key challenge is to balance the need to address urgent social and health problems and the need to address the underlying determinants of health. There are also priority information needs, including information on the incidence and prevalence of a range of identified conditions and diseases, and information on the health of Métis and Inuit Peoples.

A better understanding of health and what works to improve health for Aboriginal Peoples is required to inform decisions on appropriate policies and programs.

Obesity

Over the past two decades, there has been a significant increase in rates of obesity in the Canadian population. The World Health Organization has recognized the rise in obesity rates as a worldwide epidemic requiring immediate attention. The behavioural explanations for overweight and obesity are well known—consuming too much food and not being active enough. But heavy marketing and ready availability of inexpensive foods and beverages high in calories and low in nutrients can influence our food choices. Similarly, our activity levels can be affected by broad factors, such as community access to recreation facilities. In short, the available evidence suggests that a number of broad societal and environmental forces such as globalization of food markets, shifts to less physically demanding work, urbanization, increased use of automated transport, labour-saving technology in the home and passive leisure underlie the obesity epidemic.

Obesity and the Burden of Disease in Canada

Research has linked obesity with major preventable chronic diseases, including Type 2 diabetes, cardiovascular diseases, hypertension, stroke, gallbladder disease and some cancers. New research for this report shows that the risk of developing diabetes is up to 10 times as high for obese middle-aged adults as for middle-aged adults of normal weight. Likewise, information from the US suggests that current patterns of overweight and obesity could account for 14% of cancer deaths in men and 20% in women. Meanwhile, obese children and adolescents have an increased occurrence of hypertension and high cholesterol levels, two risk factors for heart disease.

How Big Is the Problem of Obesity in Canada?

Adults

Based on self-reported data in 2000–2001, more than 6 million adults aged 24 to 64 were overweight and nearly 3 million were obese. Rates differed between men and women in 2000-2001: more men (56%) than women (39%) reported being overweight or obese.

Children

Between 1981 and 2001, rates of overweight and obesity among children aged 7 to 13 rose by 1.5 to 5 times. For example, only 2% of girls were obese in 1981, but by 2001 that figure was 10%. Meanwhile, 9% of boys were overweight in 1981, but by 2001 that figure had climbed to 20%. The latest data suggest that rates of obesity among children may have stabilized.

Obesity is linked to a wide range of chronic diseases in adults and children. It has been shown to substantially reduce life expectancy.

Geographic Differences in Rates Exist

Adults

Obesity rose in all provinces and territories between 1994–1995 and 2000–2001. With two exceptions, Quebec and Yukon Territory, every province and territory had health regions where the obesity rate was significantly higher than the national average obesity rate of 14.9%. In some provinces and territories, most health regions had higher than average obesity rates—the Northwest Territories, Nunavut, Saskatchewan, Manitoba, Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick.

Children

Children in Atlantic Canada were at greater risk of being overweight, while those in the Prairie provinces were at lower risk, compared with the rest of the country.

Over the past two decades, rates of overweight and obesity have more than doubled for Canadian adults, and nearly tripled among Canadian children. The latest data suggest that rates of obesity among children may have stabilized.

Rates of Overweight and Obesity Vary by Income, but the Relationship Is Different for Men Than for Women

Among men, the likelihood of being overweight or obese increases with income. Sixty-one percent of men with an annual income of $80,000 or more were overweight or obese, compared with 49% of men who earned $15,000 or less.

Among women, the opposite trend is evident. Only 34% of women with an income of $80,000 or more were overweight or obese, compared with 43% of women in the lowest income category.

Among children aged 2 to 11, those in low income families were 1.5 times as likely to be obese as children not in low income families, in 1998–1999.

Rates of Overweight and Obesity Appear to Be Much Higher Among Aboriginal Peoples

Based on self-reported heights and weights in 2000–2001, about 25% of off-reserve Aboriginal adults are obese, and there is some evidence from selected First Nations communities of even higher rates on reserves. These rates are almost twice that of Canadian adults overall. Along with concerns about high rates of Type 2 diabetes among Aboriginal Peoples, such high rates suggest that tackling obesity in this population is particularly urgent.

Trends in Food Consumption and Physical Activity in Canada

There is a lack of comprehensive surveillance data on the dietary habits of Canadians. As well, there are contradictions in the available energy intake data.

According to self-reported dietary intakes, Canadians are consuming fewer calories and less fat, which is consistent with survey data from the US and the UK. However, according to Statistics Canada reports that examine food disappearance statistics, daily energy consumption increased by 18% among Canadians in the last decade, primarily from increased consumption of fat. Other dietary habits possibly linked to obesity are eating less than the recommended amounts of fruits and vegetables and increased consumption of soft drinks. Lack of comprehensive surveillance data on dietary habits makes it difficult to assess the extent to which energy intake is increasing or decreasing.

Factors That Influence Food Consumption

Availability of food products likely has an impact on consumption. Price is also a factor, since healthy foods often cost more than foods high in fat, sugar or starch. As well, research suggests that heavily advertised foods are generally over-consumed relative to recommendations for a healthy diet, while less advertised foods are under-consumed.

Over half of Canadian adults (56%) are not physically active. Four out of five Canadian youth are not active enough to meet international guidelines for optimal growth and development.

Physical Activity and Health

Regular physical activity protects against overweight, obesity and several chronic diseases. Physical inactivity and a sedentary lifestyle increase the risk of chronic diseases and of premature death and disability. Health Canada recommends that adults get 30 to 60 minutes of moderate physical activity on most days. *Canada's Physical Activity Guide for Youth* recommends that inactive children and youth begin by increasing their physical activity by 30 minutes a day and, over several months, accumulate 90 minutes of physical activity a day.

Adult Inactivity Differs by Province and by Income

British Columbia, Alberta and the territories have the lowest rates of inactivity, while Quebec, New Brunswick, Prince Edward Island, and Newfoundland and Labrador have the highest rates.

Physical inactivity in men and women is also related to family income level. Lower-income adults tend to be less active than higher-income Canadians. A similar pattern is observed for children.

Physical Activity for School-Aged Children and Youth Is Often Linked to School Settings.

While 54% of all Canadian schools reported in 2001 that they had a policy to provide daily physical education classes, only 16% were actually doing so. The average class time devoted to physical education each week ranged from 40 minutes for junior elementary students to 75 minutes for senior secondary students. Data from 1995 to 2000 indicate that activity rates for children are stable or increasing somewhat. However, in 1998, only slightly more than a third of students walked to school (37% of 5- to 13-year-olds, and 33% of 14- to 18-year-olds).

Addressing the Problem of Obesity: What Works?

A mix of interventions will likely be required, given the complexity of the causes and solutions for overweight and obesity.

Effective Solutions to the Problem of Obesity

Effective solutions to the problem of obesity are possible—considerable evidence exists to support various interventions. An international expert working group from the United Nations and the World Health Organization recently concluded that obesity is caused by high intake of foods high in fat, sugar or starch; sedentary lifestyles; heavy marketing of fast food outlets and high-calorie, low-nutrient foods and beverages; and adverse economic conditions. Protective factors include high intake of dietary fibre, regular physical activity, breastfeeding, and home and school environments that promote healthy food and activity choices. According to the working group, priority should be given to prevention of obesity in infants and children.

There is a need for action to promote healthier diets and increased physical activity for children and adults in Canada.

Based on a synthesis of evidence from various sources, five strategies appear to be effective in preventing obesity, either by increasing physical activity or by improving diet or both.

1. **Encouraging breastfeeding**
   There is increasing evidence that the longer the time spent in "exclusive" breastfeeding (the baby is nourished only by breast milk), the lower the risk of developing obesity in later childhood. While 78% of Canadian women reported starting to breastfeed in 1996–1997, other studies showed that about 40% of those who breastfed did so for less than three months. In contrast, in 1993 Sweden reported an exclusive breastfeeding rate of 61% up to four months of age. Breastfeeding can be promoted through one-on-one counselling, education, and community and workplace support.

2. **Reducing television viewing time**
   Television viewing is the most common sedentary activity of children, and obesity rises with increased time spent watching television. Studies have demonstrated that decreasing the time they spend watching television can reduce obesity rates in children and adolescents.

3. **Promoting regular physical education**
   Research indicates that physical education classes taught in school are effective at improving physical activity levels and physical fitness. The Canadian Association for Health, Physical Education, Recreation and Dance recommends 150 minutes a week in physical education. However, only one in five Canadian schools now provides daily physical education, and Quebec is the only province requiring physical education in its curriculum until graduation. Practices are changing, however, in some parts of the country. In 2003, for instance, the province of Alberta announced that it would mandate daily physical education classes for grades 1 to 12 by 2005.

4. **Implementing comprehensive school health programs**
   According to experts, a comprehensive school health program should include the following linked components: health instruction and services, food service, school environment, extracurricular activities, physical education classes and parental involvement. A comprehensive school-based program in Singapore contributed to a reduction in the prevalence of obesity from 14% to 10% over a 10-year period. Alberta is adopting a comprehensive school health program based on a heart health model, and the Kahnawake Schools Diabetes Prevention Project has launched a similar initiative for Mohawk students. Two specific examples of promising activities in a comprehensive school health program are supervised groups of children walking or cycling to school and provision of low-cost or free fruits and vegetables to school children. Research suggests that price decreases may be more powerful than health messages in increasing consumption of healthy foods.

5. **Implementing community-wide programs**
   Transportation, recreation and land use planning all have an impact on healthy living. The US Task Force on Community Preventive Strategies recommended large-scale visible campaigns to increase physical activity, community events, and environmental and policy changes such as the creation of walking trails. The In Motion strategy was launched in Saskatoon in 1999 to promote active living and healthy eating. The proportion of the population active enough to receive health benefits rose to 49% in 2002 from 36% in 1999.

Other Potential Solutions for the Problem of Obesity

Some governments, schools and private firms are also considering or initiating many other potential solutions—solutions that are promising but not yet proven effective in addressing obesity. *Improving the Health of Canadians* describes a number of these solutions, such as adopting successful elements from tobacco control programs, providing leadership, collaborating on a pan-Canadian healthy living strategy, strengthening surveillance, enhancing public health capacity, supporting healthy schools, working with the food industry to monitor and regulate food marketing and nutrition information, and enhancing community planning and land use.

A few examples:

- Advertising controls could build on successful elements of tobacco programs. Advertising in Canada is generally self-regulated, except in Quebec, where the Consumer Protection Act prohibits advertising to children. A similar prohibition is in place in Sweden. Several European Union states are considering restrictions on the advertising of high fat and high sugar foods, similar to bans on tobacco.
- Better surveillance information about the weight, diet and physical activity of Canadians will be helpful.
- New regulations that require mandatory labelling of nutritional information on pre-packaged food in Canada will help consumers make informed choices.
- Community planning and land use can help to increase physical activity and improve access to healthy foods. For example, low-density residential development typically discourages walking and cycling, while features such as trails and bike lanes encourage it. Likewise, low income neighbourhoods and remote communities may need specific help to ensure a supply of affordable fruits and vegetables and to make neighbourhoods safe for walking and playing.

To reduce rates of overweight and obesity, it will be necessary to make comprehensive changes to social and environmental factors that promote excessive energy intake and sedentary lifestyles. Responsibility for solutions needs to be shared across sectors and levels of government, with business and industry, with voluntary organizations and with citizens.

Summary and Conclusion

As recent federal, provincial and territorial reports have pointed out, solutions to the inequalities in health identified in *Improving the Health of Canadians* require new choices focused on prevention and health promotion. Good jobs, adequate incomes, supportive family and community environments, effective child and family services, and improved health behaviours can all contribute to reducing inequalities in health.

Three Themes of a New Message

Improving the Health of Canadians is signalling that it is time to promote change—there are new choices to be made and these choices can benefit our health. These choices are framed by three themes:

- Expanding public knowledge
- Reducing health inequalities
- Working together

Surveys suggest that Canadians generally look for answers to health problems through the health care system and lifestyle rather than believing that improvements to health will be achieved by addressing the broader factors that influence health such as early childhood development, work, income and the environment.

Research done by the Canadian Population Health Initiative on public views of the determinants of health reveals that Canadians recognize the importance of some determinants of health, specifically health-related behaviours and lifestyle and environmental issues, like air and water pollution. However, only one in three Canadians mentioned broader determinants related to social and economic conditions, like income and housing, and related to community characteristics, like supportive networks. Clearly, there is work to be done to improve Canadians' understanding about the full range of factors that contribute to health improvements.

Inequalities in health in Canadian society are largely avoidable, not inevitable. Factors such as early childhood development, work, income and the environment can be influenced and changed. Canadians, at both the individual and the societal level, can make choices that could influence social, economic, environmental and other conditions to reduce health inequalities.

And while personal responsibility for health is important, it is also true that sometimes people need additional support and resources to make healthy choices.

Finally, experts suggest that change requires our best collaborative efforts to create, apply and sustain multiple strategies. Many actors must work together on comprehensive and coordinated policies and programs. Creating an integrated approach will require broad involvement across sectors (for example, finance, environment, human resources, sport and recreation, industry) and at all levels of society (individuals and families, communities, regions, provinces/territories and the nation). This means involving the private, public and non-profit sectors, and being vigilant about the impact that policies and programs have on health.

Choices about what programs will best improve health involve balancing universal and targeted approaches. The discussion on policies and programs throughout the report suggests that most likely a mix of the two will be required—a balanced portfolio of universal approaches that reach all Canadians, and targeted approaches that reach vulnerable groups. A mix of universal and targeted approaches can also recognize the need for flexibility in policy making depending on the population group or specific location.

Public Demand, Political Will

The Romanow Commission on the Future of Health Care in Canada named its report *Building on Values* to bring attention to the importance of values and principles that Canadians apply to health and health care. These values are fundamental to our understanding of health and health care—universality, equity, solidarity, fairness, quality and efficiency, and wellness and trust. They were revealed in a process of dialogue with Canadians that was conducted for the Commission.

The report on this dialogue, the *Report on the Citizens' Dialogue on the Future of Health Care in Canada*, suggested that values and beliefs have shifted, and that Canada is on the edge of a major societal shift from a disease-based to a wellness-based way of thinking about health. The authors suggest that this represents a remarkable opportunity for public policy reform across governments.

Effective and potential solutions for improving the health of Canadians call for sustained efforts over a long period. It is likely that some policies and programs can improve health in the short term, while others will take longer in order for sustained change and improved health to occur.

Future Priorities

Improving the Health of Canadians reveals how little we know about some basic issues. This is most apparent when examining the health of Aboriginal Peoples in Canada. The information gaps for this population group are considerable. Better data and surveillance for monitoring the health of all Canadians are also needed, as the October 2003 report of the National Advisory Committee on SARS and Public Health pointed out. Making data easily available and integrating available administrative data, survey data, Census data and geographic information systems in a privacy-sensitive manner will support all sectors concerned with the health of Canadians in making evidence-based decisions. This is a particular challenge that the Canadian Population Health Initiative, as part of the Canadian Institute for Health Information, is well placed to address, together with our partners at Statistics Canada and Health Canada, in academia, and in the provinces, territories and regions.

The Canadian Population Health Initiative has a mandate to contribute to this process and will continue to synthesize the best available evidence from research, policies and programs that have an impact on the health of Canadians. CPHI is committed to making this evidence available and accessible to decision makers across sectors and at all levels.

This publication is part of CPHI's ongoing inquiry into the patterns of health across this country. Consistent with our broader findings, it reflects the extent to which the health of Canadians is socially determined, interconnected, complex and changing. CPHI is committed to deepening our understanding of these patterns.

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