

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

# Improving the Health of Canadians



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Canadian Institute for Health Information  
377 Dalhousie Street  
Suite 200  
Ottawa, Ontario, Canada  
K1N 9N8  
Telephone: (613) 241-7860  
Fax: (613) 241-8120  
[www.cihi.ca](http://www.cihi.ca)

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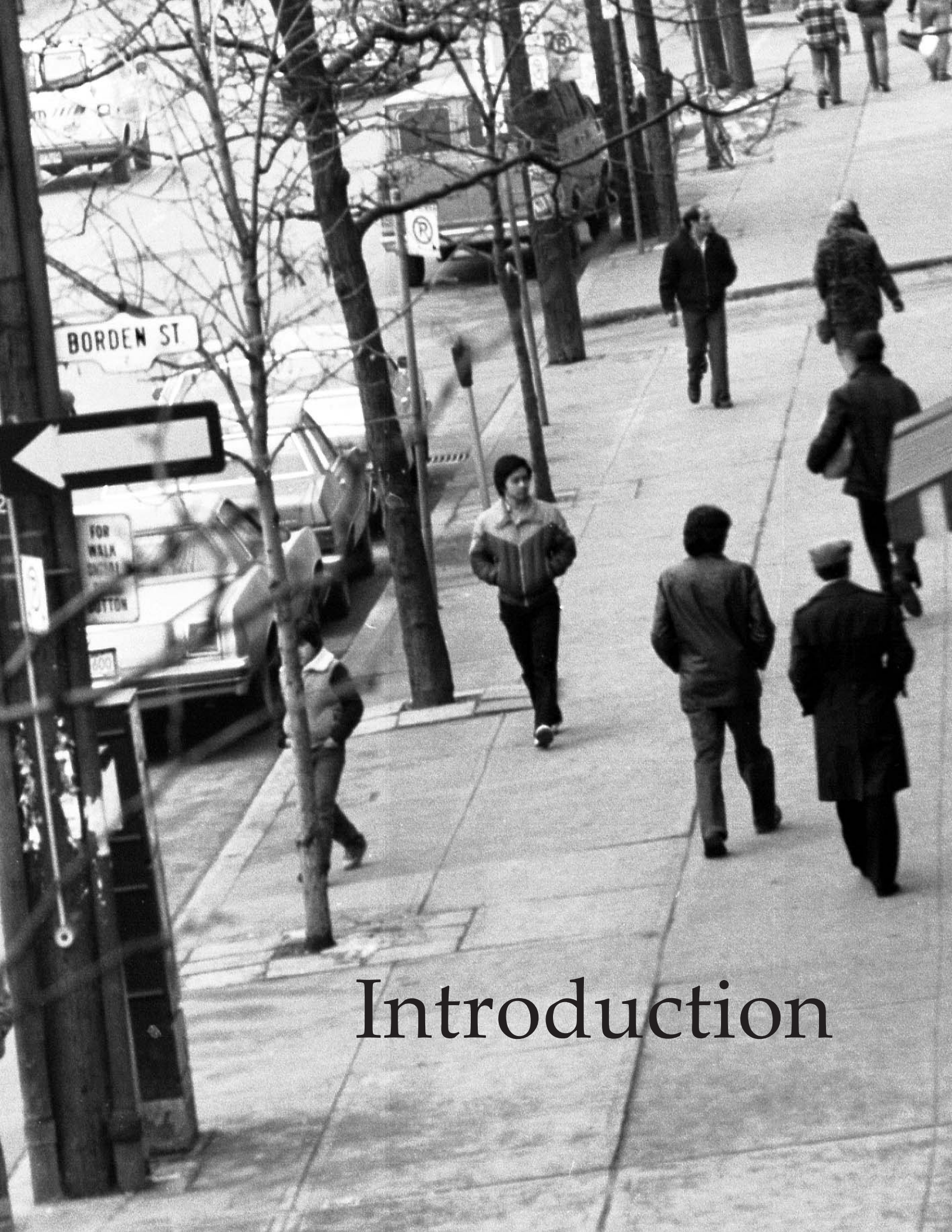
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Chapter

1



# Introduction

**Since medicare was introduced, health care has joined hockey and the maple leaf as a defining symbol for Canadians.** The ongoing and very public debate about how to improve our health care system has led to a series of recent provincial, territorial and federal commissions and reports. Each presented a number of recommendations for changing the system, but they all emphasized that we need to understand the broader factors that influence our health to achieve long-term health gains.

Roy Romanow creatively illustrated this perspective in a speech in May 2003 by giving a number of tips on what Canada needs to do to become “the healthiest nation on earth.”<sup>1</sup> His tips are adapted from a list originally prepared by researchers in Britain and are somewhat tongue-in-cheek.<sup>2</sup> Romanow’s tips acknowledge what most of us already know: that eating well, being physically active and not smoking or abusing drugs and alcohol can keep us healthy.

But the tips also highlight how social, environmental, economic and other factors are vitally important in shaping our health. These include what we inherit and learn from our parents (our genetics, biology and early development), how we live (our education, income and work), where we live (our housing, neighbourhoods and communities) and the quality of our environment (the air, land and water).

It is this combination of factors that together shape our health. They are our focus in *Improving the Health of Canadians*.

## What Makes People Healthy?

Canadians are among the healthiest people in the world. Our life expectancy is one of the highest internationally—over 79 years in 2001, up from 59 years in the early 1920s and 69 years in the 1950s.<sup>3,4</sup> Most Canadians also rate their health as very good or excellent.<sup>5,6</sup> And, compared with 20 years ago, older adults can, on average, look forward to better-quality and longer lives.

Yet we cannot afford to be smug. Not all Canadians enjoy good health. There are significant differences in health between men and women; between regions and neighbourhoods; and between people with

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## Not all Canadians enjoy good health.

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different levels of education, with different jobs and with different incomes. Some groups of people in Canada—like Aboriginal Peoples—are also generally in poorer health than the population as a whole.

Among the major health problems facing Canadians over the next 10 to 20 years will continue to be heart disease, cancer, mental health problems, AIDS, asthma, obesity and diabetes. These problems are related to our diet, exercise, substance-use patterns and other health behaviours. To a large extent, social, economic and cultural factors (including education, employment, income, housing, environmental factors, genetics, gender, early childhood development and community and social supports) influence these behaviours.

# Romanow's Tips for a Long and Healthy Life . . . and More

Roy Romanow gave a speech in May 2003 reflecting on his 2002 report, *Building on Values: The Future of Health Care in Canada*, and listed a number of tips on how to live a long and healthy life.<sup>1,2,7</sup> Although his report focused on health care, he reiterated that the health care system is only one of the ingredients that can determine people's health.

Following are a number of tips with examples of the facts underlying each one. Romanow's speech listed seven tips that we have summarized into six. We have added two other factors: one on behaviours and lifestyle and one on health differences between men and women. For more details on Canadians' health status, trends and differences, please watch for *A Snapshot of Population Health Trends in Canada 2004*, available later in 2004 on our Web site ([www.cihi.ca](http://www.cihi.ca)).<sup>8</sup>

## Tips for health







# Don't be poor

Rich people live longer than poor people and they're healthier at every stage of life.<sup>1</sup>

In 1996, life expectancy for high income women was 1.6 years longer than for low income women; life expectancy for high income men was five years longer than for low income men.<sup>9</sup>

In 2000–2001, Canadian adults aged 12 and over from the highest income households were twice as likely (34%) to report being in excellent health compared with those from the lowest income households (16%).<sup>10</sup>



# Get a good start in life

Make sure you nurture your sense of identity and self-esteem and surround yourself with interesting stimuli. Prenatal and early childhood experiences have a powerful effect on later health and well-being.<sup>1</sup>

One in four Canadian children are vulnerable to restricted growth and development because of behavioural problems or cognitive difficulties.<sup>11</sup>

In 1996, people living in the poorest urban neighbourhoods had an infant mortality rate 1.6 times higher than the rate for people in the richest urban neighbourhoods.<sup>9</sup>



# Graduate from high school

Graduate from high school and then go on to college or university: health status improves with your level of education.<sup>1</sup>

In 2000–2001, people who reported not completing high school were twice as likely to rate their health as fair/poor (19%), compared with people who had completed post-secondary education or higher (8%).<sup>10</sup>

People with less than secondary education were twice as likely to report problems with their functional health (27%), compared with people with post-secondary education or higher (13%).<sup>10</sup>

In 2002, Canadians with less than secondary education were nearly twice as likely to be current smokers (24%) as Canadians with a university education (13%).<sup>12</sup>



## Get a job

Don't work in a stressful, low-paid, manual job in which you have little decision-making authority or control: poor jobs equal poor health. Don't lose your job and become unemployed: unemployed people suffer from stress and isolation and can become poor.<sup>1</sup>

In 2000–2001, unemployed adults aged 20 to 64 years were nearly 3 times as likely to rate their health as fair or poor (17%), as were those people who were working (6%).<sup>10</sup>

In 2000–2001, unemployed adults aged 20 to 64 years were nearly twice as likely to report problems with their functional health (23%), as were people who were working (13%).<sup>10</sup>

In 2001, almost 3 times as many people reported having job-related stress as in 1991 (35% vs. 13%).<sup>13</sup>

Perceived overall stress increased from 44% of people in 1991 to 55% in 2001.<sup>13</sup>



# Pick your community

Be sure to live in a community where you trust your neighbours and feel that you belong: A civil and trusting community promotes health and long life.<sup>1</sup>

In 1994–1995, Canadian neighbourhoods with more affluent families, and neighbourhoods rated as safe and cohesive, were associated with better verbal abilities and behavioural competencies of preschoolers.<sup>14</sup>

In Vancouver in 2000, children from the least affluent neighbourhoods were six times more likely to be vulnerable on at least one dimension of development (language and cognitive, physical health and well-being, social competence, emotional maturity and communication skills and general knowledge) compared to children from the most affluent neighbourhoods (38% versus 6%).<sup>15</sup>

Life expectancy varies among Canada's provinces and territories, from a high of 83 years for women in British Columbia to a low of 71 years for women in Nunavut.<sup>8</sup>



# Live in quality housing

Live in quality housing, but not next to a busy street, in an urban ghetto, or near a polluted river: clean air, water, and soil are vital to your health, as are the human-made elements of our physical environment.<sup>1</sup>

Children who are regularly exposed to second-hand smoke (for example, in their homes) are more likely to suffer from respiratory problems such as asthma.<sup>16</sup> It has been reported that children who are exposed to second-hand smoke on a regular basis are at least 50% more likely to suffer damage to their lungs and develop respiratory problems like asthma.<sup>17</sup>

In 2002, the rate of child exposure to smoking at home was 20%, a decline from 33% in 1996–1997.<sup>8</sup>



# Look after yourself

Eat well, be active, and don't smoke or abuse alcohol or drugs: our choices and behaviours affect our health.

The smoking rate in Canada declined from 35% in 1985 to 22% in 2001.<sup>18</sup>

Canadians are consuming more soft drinks. In 1976, every Canadian consumed an average of 56 litres of soft drinks annually; in 2002, that number nearly doubled to 100 litres/person.<sup>19</sup>

In 2000–2001, over half of Canadians (56%) reported being physically inactive during leisure time.<sup>8</sup>



# Men and women are different

Women live longer than men, but women report being less healthy than men.

In 2001, life expectancy for women was five years longer than for men.<sup>8</sup>

In 2000–2001, over 4 million women compared with under 3 million men reported having two or more chronic conditions.<sup>20</sup>

In 2000–2001, over 500,000 more women than men reported having disabilities based on an assessment of their functional health.<sup>20</sup>

Women have lower rates of overweight and obesity than men (39% vs. 56%).<sup>8</sup>



## What's New and Unique About This Report?

*Improving the Health of Canadians* builds on the first and second versions of the *Report on the Health of Canadians* from the Federal, Provincial and Territorial Advisory Committee on Population Health.<sup>21, 22</sup> The 1999 report, *Toward a Healthy Future*, highlighted three broad priority areas for action:

- **Renewing and reorienting the health sector** to address challenges in health promotion, disease and injury prevention, as well as treatment services; to increase accountability of health services; and to influence change in sectors outside of health

But much remains the same. For instance, inequalities in health by education and income endure, and regional variations in health and its underlying determinants persist.

*Improving the Health of Canadians* is the first in a biennial report series produced by the Canadian Population Health Initiative (CPHI). It examines what we know about factors that affect Canadians' health, ways to improve our health and the implications of policy choices on health.

A wide range of potential topics falls within this scope; no one report could address them all. Instead, we chose to focus on examples that reflect four different perspectives on population health: core determinants of health, the life course, the experience of different population groups and the variety

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*Improving the Health of Canadians* examines what we know about factors that affect Canadians' health, ways to improve our health and the implications of policy choices on health.

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- **Investing in the health and well-being** of key population groups (children, youth and Aboriginal people) to address trends indicating decreased opportunities for optimal development
- **Improving health by reducing inequities in literacy, education and the distribution of incomes** to address the link between poor health and early death and low levels of income, education and literacy

Since the 1999 report, there have been some changes. For example, the federal, provincial and territorial governments have developed an early childhood development strategy and increased the level of some income benefits for low income families with children. Governments are also in the process of transferring control over the delivery of health care services to some First Nations communities and have begun to invest in new organizations that promote the health of Aboriginal Peoples.

of health conditions that exist. Specifically, *Improving the Health of Canadians* explores in depth one key issue from each of the perspectives that CPHI identified as critical to our nation's health at the beginning of the 21st century:

- **Income:** Social and economic conditions have a substantial effect on the health and well-being of Canadians. Income is important on its own, as it represents the resources available to people for the purchase of the necessities of a healthy life. Income is also a marker of people's opportunities to participate and be included in the society in which they live—a fundamental condition for health.
- **Early childhood development:** The beginning of life is a critical period for shaping a person's health. A good start in life is critical, because a poor start can threaten or delay development and result in a chain of poor outcomes in adulthood.

- **Aboriginal Peoples' health:** Aboriginal Peoples in Canada generally have much poorer health than other Canadians, and there are large differences in health status between Aboriginal communities. A number of initiatives are underway that may contribute to improved health for Aboriginal Peoples.
- **Obesity:** There is an increasing focus on the rise observed over the last two decades in the number of Canadians who are overweight and obese. This trend has important implications for health care and many other areas in Canadian society.

Every key message in *Improving the Health of Canadians* is based on a careful assessment of the best available evidence. Behind each key message is a wide range of research studies from a variety of sources and disciplines. But there are still important gaps in our knowledge base. Subsequent reports in the

## Summary: Bringing the Pieces Together

Canadians value and cherish the health care system for the services it provides when people need them. We also value our health care system for what it reveals about our respect, caring, and commitment to each other. (For more information about the health care system and how it is changing, please see the complementary *Health Care in Canada* report series, available at [www.cihi.ca](http://www.cihi.ca). For more information on the health of Canadians, see the series of reports from Statistics Canada, *How Healthy Are Canadians?*, available at [www.statcan.ca](http://www.statcan.ca).)

Each year, the health care system helps thousands of people across the country; but it is far from the only factor that affects overall health trends. Patterns of health and disease

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**To make continued improvements in health and to reduce health inequalities, social and economic solutions, public demand and political will are required.**

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series will aim to fill these gaps as research, experience and understanding evolve. They will also present and discuss issues of importance beyond those covered in this report to contribute to further improving the health of Canadians. Potential topics include place and health; inequalities in health; and the health of particular population groups, such as children, youth and women.

are largely a consequence of how we learn, live and work in our social, economic, political and physical environments. Any changes to upstream determinants of health may have short- and long-term effects on health and on the burden of illness. Equally, to make continued improvements in health and to reduce health inequalities, social and economic solutions, public demand and political will are required.

This understanding reinforces the fact that decisions made outside the health care system can have a profound influence on health, on health inequalities and ultimately on 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.

We wrote *Improving the Health of Canadians* for this full range of individuals and organizations, many of whom typically focus on outcomes other than health. There are other goals that we pursue as a country—economic growth and security, a clean environment, freedom, peace, happiness and overall well-being, to name a few. While health is by no means the sole contributor, it is an essential resource for these goals. And actions taken towards these and other goals can affect our health.

Accordingly, this report is addressed to all those who want to make a difference to health . . . or who want to understand the potential health consequences of actions taken with other goals in mind.

## For More Information

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Chapter

2

# Income



**Better social and economic conditions mean better overall health.** This connection seems relatively simple: the more comfortable and better off you are, the healthier you are likely to be and the longer you are likely to live.

This chapter looks at the connection between social and economic conditions and health. Although there is a complex cluster of factors involved, research examining this connection generally uses income as an indicator of social and economic conditions.

The first part of the chapter provides an overview of the health consequences of income. Definitions and determinants of low income, who experiences low income and trends in the distribution of income are all reviewed in the second part. The latter part of the chapter explores the evidence of some of the policies and programs in Canada and other jurisdictions that attempt to improve social and economic conditions.



## The Health Consequences of Income

Many research studies over the years have shown an association between income and health, using many different measures of income and health. For example, income has been measured as a characteristic of individuals, neighbourhoods and countries. Indicators of mortality (such as life expectancy and infant mortality), morbidity (such as number of illnesses and days of disability) and self-ratings of health status have all been used as health outcome measures.

Canada is a high income country and over the last 25 years, both life expectancy and average income in Canada have increased for all income groups. At low levels of income, Canadians tend to have poorer health. For example, a 1988 study using Canada Health Survey data showed that low income men who were employed had nearly double the number of health problems and over triple the number of disability days as high income employed men.<sup>4</sup> Years later, in 2000–2001, twice as many men and women in the highest income group rated their health as excellent compared with the lowest income group.<sup>5</sup>

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### People living in higher income countries generally live longer lives in better health than people in lower income countries.

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Internationally, a nation's level of income is broadly related to its level of health.<sup>1,2,3</sup> People living in higher-income countries (countries with higher average per capita incomes) generally live longer lives in better health than people in lower-income countries.<sup>2</sup>

This is probably partly because a certain level of income is required to purchase adequate nutrition, housing and other essentials crucial to personal health and security.<sup>3</sup>

The pattern is the same at the neighbourhood level. In 2002, Statistics Canada published a study looking at trends in health and neighbourhood income over the years 1971 to 1996.<sup>6</sup> During these years, life expectancy improved for all levels of income. Nevertheless, in all years, higher income neighbourhoods had longer average life expectancy than those with low income (see Figures 1a and 1b).

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### At low levels of income, Canadians tend to have poorer health.

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A country's income level may be reflecting the adequacy of these important basics for health. Perhaps beyond a certain income level these basics would be satisfied and life expectancy would not rise so quickly. This is, in fact, the case, as "the benefits of increasing income are subject to diminishing returns, flattening out as average incomes increase."<sup>3</sup>

#### What's a Quintile?

Quintile is a term used to describe one-fifth (20%) of a population distribution. An income quintile is 20% of the income distribution.

For the Statistics Canada study reported in Figures 1a and b and 2a and b, income quintiles represent 20% of the population ranked by income. Quintile 5 was labelled "poorest," quintile 1 "richest."

Figure 1a  
Life Expectancy  
at Birth,  
Males, by  
Neighbourhood  
Income  
Quintile,  
Urban Canada,  
1971 and 1996

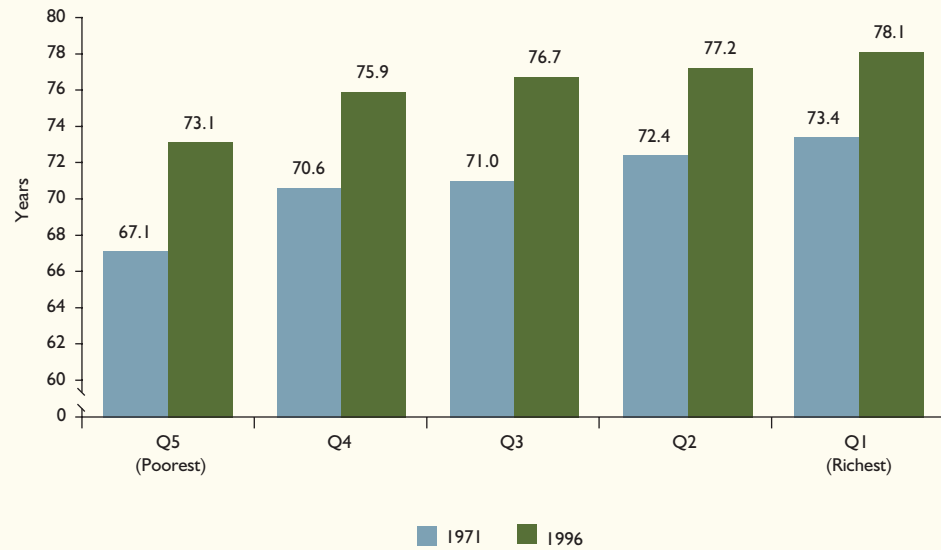
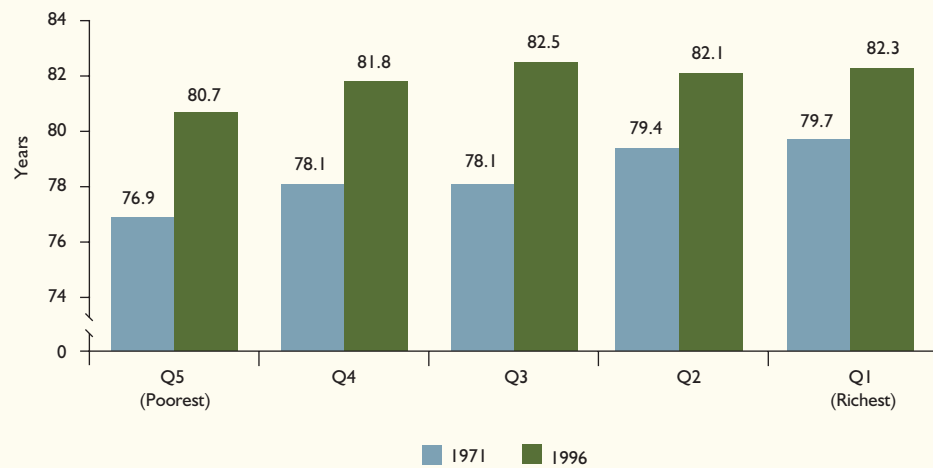


Figure 1b  
Life Expectancy  
at Birth,  
Females, by  
Neighbourhood  
Income  
Quintile,  
Urban Canada,  
1971 and 1996



Source: Wilkins R., Berthelot J.-M., Ng E. (2002). "Trends in mortality by neighbourhood income in urban Canada from 1971 to 1996". *Health Reports—Supplement*, 13, 1–28. Catalogue no. 82-003-XPE.

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.

Similarly, mortality rates for most causes of death declined for all neighbourhood income groups, but the lowest income neighbourhoods had the highest mortality rates throughout. Mortality rates for ischemic heart disease for men and women are shown in Figures 2a and 2b.

Figures 1a and b and 2a and b also show that differences in life expectancy and mortality rates between the neighbourhood income groups slowly declined between 1971 and 1996. Most of the decline in the gaps between income groups occurred in the 1970s and 1980s, and the gaps have not changed substantially since. Looking at the life expectancy numbers for men and women (Figures 1a and 1b), we see that 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.<sup>6</sup>

While these findings confirm that people in lower income groups tend to have poorer health, it is also apparent that “differences in health extend across the whole socioeconomic spectrum . . . [t]op people are, on average, healthier than those just below the top, who are in turn healthier than those just below them, and so on . . . [h]ealth inequalities are not just a problem of the poor.”<sup>3</sup> This relationship, found consistently in dozens of studies conducted in Canada and elsewhere over many years, has been labelled the “gradient” in health.

### Interpreting the Gradient in Health

A key British investigation, the Whitehall studies, established that gradients exist even among populations with adequate incomes

and secure jobs. Those who were higher in the civil service occupational hierarchy enjoyed better health.<sup>7</sup> These studies provide “some of the most powerful evidence for a gradient in health” because they have tracked the experiences of individuals over many years.<sup>3</sup>

The Whitehall studies looked at deaths from coronary heart disease by level of occupation among civil servants. The studies found that the higher the occupational level, the lower the mortality rate.<sup>8</sup> The usual risk factors for heart disease—blood pressure, smoking, cholesterol and others—explained few of the differences between occupational groups. However, factors related to position in the occupational hierarchy, like stress, control over work and coping skills, were found to be important.

Other attempts to explain the health gradient have looked at whether income inequality (that is the gap between high and low income groups) determines health, beyond the contribution of individual-level income. The theory is that in wealthy countries that have relatively small numbers of people with very low incomes, it may be the country’s level of income inequality that contributes to poorer health.<sup>9</sup> Some studies published to date support this theory, although findings are not consistent across countries or at different levels within countries (that is, states, provinces, cities and neighbourhoods).<sup>9</sup>

For example, one study looked at the association between income inequality and health for a large number of cities in five countries—the United States (US), United Kingdom (UK), Canada, Australia and Sweden.<sup>9</sup> When looking at all of the cities, the researchers found that higher income inequality was related to poorer health.

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The studies found that the higher the occupational level, the lower the mortality rate. Factors related to position in the occupational hierarchy, like stress, control over work and coping skills, were found to be important.

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Figure 2a  
Ischemic Heart Disease, Males, Age-Standardized Mortality Rates, by Neighbourhood Income Quintile, Urban Canada, 1971 to 1996

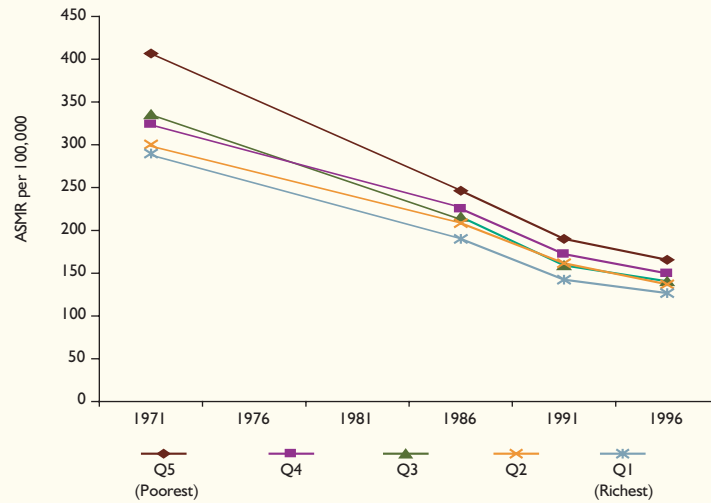
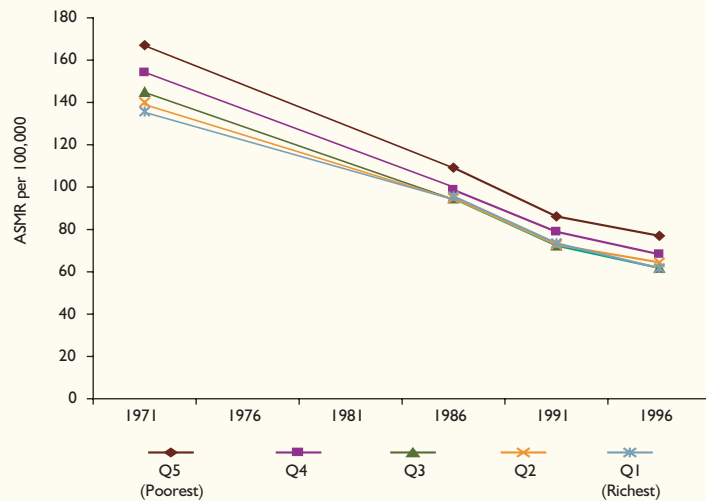


Figure 2b  
Ischemic Heart Disease, Females, Age-Standardized Mortality Rates, by Neighbourhood Income Quintile, Urban Canada, 1971 to 1996



Source: Wilkins R., Berthelot J.-M., Ng E. (2002). "Trends in mortality by neighbourhood income in urban Canada from 1971 to 1996." *Health Reports—Supplement*, 13, 1–28. Catalogue no. 82-003-XPE.

Differences in life expectancy between neighbourhood income groups slowly declined between 1971 and 1996.

When cities were grouped by country, however, only the two countries with the highest income inequality, the US and the UK, showed this association.

In another example, a study looked at income, neighbourhood income inequality and health for Toronto.<sup>10</sup> Low income and income inequality were associated with some

and/or unemployment.<sup>13</sup> People may not have the opportunities or means to be full and valued participants and contributing members of society.

In summary, according to studies interpreting the gradient in health, it would seem that income matters for health. The Statistics Canada study discussed above, and the

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**The fact that income inequality and health are associated in some cities and countries and not in others may be due to differences in other circumstances within those countries.**

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health measures (such as self-perceived health) but not others (such as reported number of chronic conditions). Individual low income was “detrimental to health” regardless of the level of neighbourhood income.<sup>10</sup> The study concluded that low income people living in low income neighbourhoods could be “subject not only to the effect of individual low income, but also to the effect of neighbourhood low income.”<sup>10</sup>

The fact that income inequality and health are associated in some cities and countries and not in others may be due to differences in other circumstances within those

persistent finding of a health gradient in Canada across many measures of health, confirm this. Internationally, researchers have suggested that there are two main interpretations of the association between income and health:<sup>14</sup>

1. People with *very low* levels of income are deprived. At any time they may have insufficient income to purchase adequate levels of life’s necessities (such as food and housing).
2. People with *relatively* lower levels of income may have their social participation restricted and opportunities to exercise control over their lives reduced.

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**According to studies interpreting the gradient in health, it would seem that income matters.**

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countries. One theory relates to differences between countries in public goods and services, like health care, education, social services, employment and income supports.<sup>3,8,11</sup> “It may well be that the impact of income inequality on health is not automatic but varies as a function of the institutional and societal arrangements that buffer the impact of income inequality on health.”<sup>11</sup> A second theory is that at relatively lower levels of income people experience “exclusion.”<sup>12</sup> Exclusion, both perceived and real, can result from the economic and social distance created by income inequalities

## Key Messages

- Overall health is improving for all income groups in Canada.
- People with low incomes are most vulnerable to poor health.
- As income levels increase, health improves.

## 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 employment, self-employment, investments and private pensions (referred to as “market” income), and from public

earnings over the last two decades. In some cases, they have even lost ground and are on a lower earnings track than older, more experienced groups.<sup>16</sup>

### Trends in Low Income

Low income levels in Canada have fallen every year over the last five consecutive years. Less than 8% of families of two or

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

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pensions, Employment Insurance, social assistance, tax credits and so on (referred to as “transfer” income).

Different households receive different proportions of market and transfer income. In general, the lower a household’s income, the more reliant that household is on transfer income relative to higher income groups.<sup>15</sup>

### Trends in Employment Income

Average employment earnings of Canadians were \$31,757 in 2000, representing an overall increase (in constant dollars) of almost 9% since 1980.<sup>16</sup> While the average increase in earnings has been modest, the number of earners in higher-income brackets (those earning over \$80,000 a year) soared during the 1990s, by as much as 69%.

Older Canadians with higher education and more work experience have made the most significant gains in earnings. Earners under 40 have not experienced increases in average

more people experienced low income in 2001, down from just under 11% in 1996 using the after-tax Low Income Cut-Off measure, LICO, (see Defining Low Income).<sup>17</sup> Likewise, 32% of female lone-parent families had low income in 2001, a third less than five years earlier.

Low income levels for children in low income families have fallen every year since 1996, and are now at their lowest since 1980. Figure 3 shows the number and proportion of children in low income families based on the before-tax low income cut-off.

Low wages can contribute to low income. Canada’s average minimum wage has declined in value by over 20% after adjusting for inflation since the mid-1970s. Full-time work at low or minimum wages is sometimes not enough to stay above the low income level.<sup>18</sup> Single households and single families with children are more vulnerable to low income because of their dependence on one potential earner.

**Defining Low Income**  
see page 44

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Earners under 40 have not experienced increases in average earnings over the last two decades.

---

Family breakup has particular consequences for women and children. Women who become lone parents between one year and the next are the most likely of any group to experience low income that year. One study

People experiencing low income are not the same people from month to month or year to year. One study reported that between 1993 and 1998, 8% of Canadians aged 16 to 59 were consistently found in low income

## Women who become lone parents between one year and the next are likely to experience low income that year.

found that 47% of women with children who were married one year and became lone mothers the next year experienced low income in that year.<sup>19</sup> This is partly the result of insufficient child and family support payments from the absent father.<sup>20</sup>

Although overall rates of low income have been improving, average incomes of low income families are still thousands of dollars below the LICO. For example, in 2000, the average income of low income two-parent families with children was more than \$10,000 below the low income line, and this gap increased by 6% over the 1990s.<sup>21</sup>

households.<sup>22</sup> The study also reported that particular population groups had much higher rates of persistent poverty: singles aged 45 to 59, lone parents with at least one child under 18, recent immigrants, people with a long-term disability and off-reserve Aboriginal people.

## Trends in the Distribution of Income

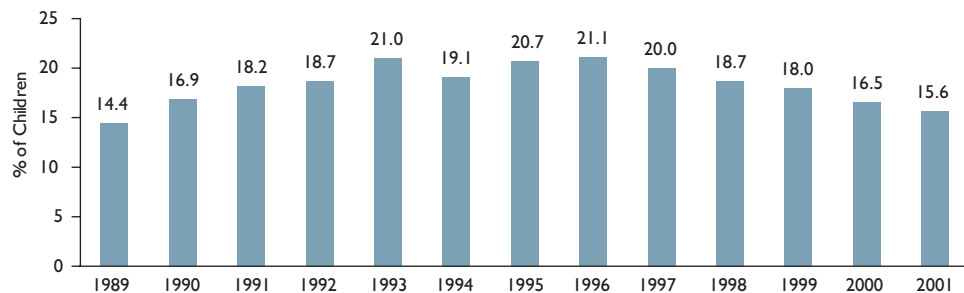
As was noted previously, some experts suggest that inequality in the distribution of income within countries is consequential for health. Figure 4 shows that inequality in the

### What's a Gini Coefficient?

A Gini coefficient is a number between zero and one that is a measure of inequality. The higher

the value of the coefficient, the greater the degree of inequality.

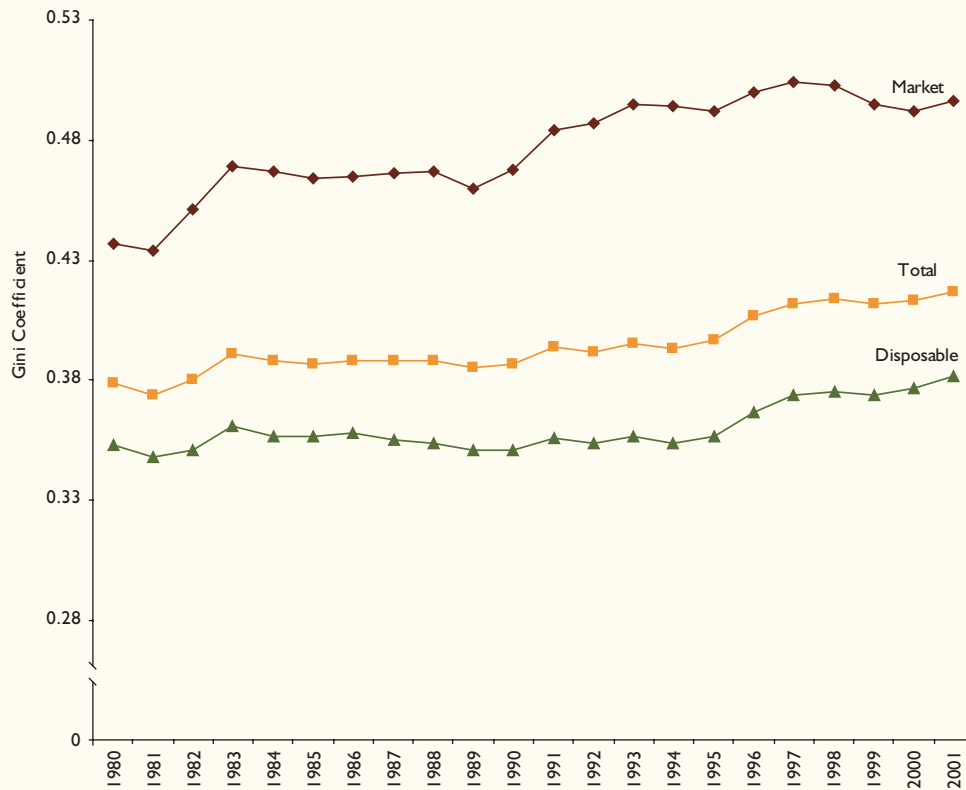
Figure 3  
Children  
0 to 18 years  
in Low Income  
Families  
(Before-tax  
LICO,  
1989–2001)



Source: Statistics Canada. (2003). Persons in low income before and after tax, showing rate and number, annual. CANSIM Table 202-0802.

The proportion of children in low income families has fallen every year since 1996.

Figure 4  
Income  
Inequality in  
Canada,  
1980–2001



**Market** income is employment income, self-employment income and income from investments.

**Total** income is market income plus government transfer income.

**Disposable** income is total income after taxes are deducted.

Source: Statistics Canada. (2003). Gini coefficients of market income, total income and after-tax income by selected economic family types. CANSIM Table 202-0705.

Since 1994, inequality in total and disposable income has risen more than inequality in market income.



distribution of income in Canada (measured by the Gini coefficient) increased between 1980 and 2001. The largest increase has been in market income inequality (income from employment and investments), but total income inequality (market income plus government transfers) and disposable income inequality (total income after taxes are deducted) have also increased.

## Key Messages

- On average, the incomes of Canadians are rising, but incomes are not rising for everyone.
- Low income rates are falling, but people in the lowest income group are still very poor compared with the rest of Canadians.
- Inequality in disposable incomes was relatively stable until 1994, but rose more than market income inequality between 1994 and 2001.
- With regard to overall wealth over the last 30 years, the rich have been getting richer and the poor have been getting poorer.

Inequality in disposable income was relatively stable between 1980 and 1994 and then began to increase. Since 1994, inequality in total and disposable income has risen more than inequality in market income.

The recent rise in disposable income inequality measured by the Gini coefficient is also apparent when looking at trends in the distribution of household income.<sup>17</sup> From 1993 to 2001, the average income (after

transfers were included and taxes deducted) of the highest 20% of families rose by \$21,900, a 24% increase from 1993. The rise in average income of the lowest quintile, however, was more modest: \$1,800, or just under 10% since 1993. The middle three quintiles had increases of 13% to 15% in their average after-tax income. The dollar gap between the highest and lowest quintiles went from \$72,800 in 1993 to \$92,900 in 2001, a rise of 28%.

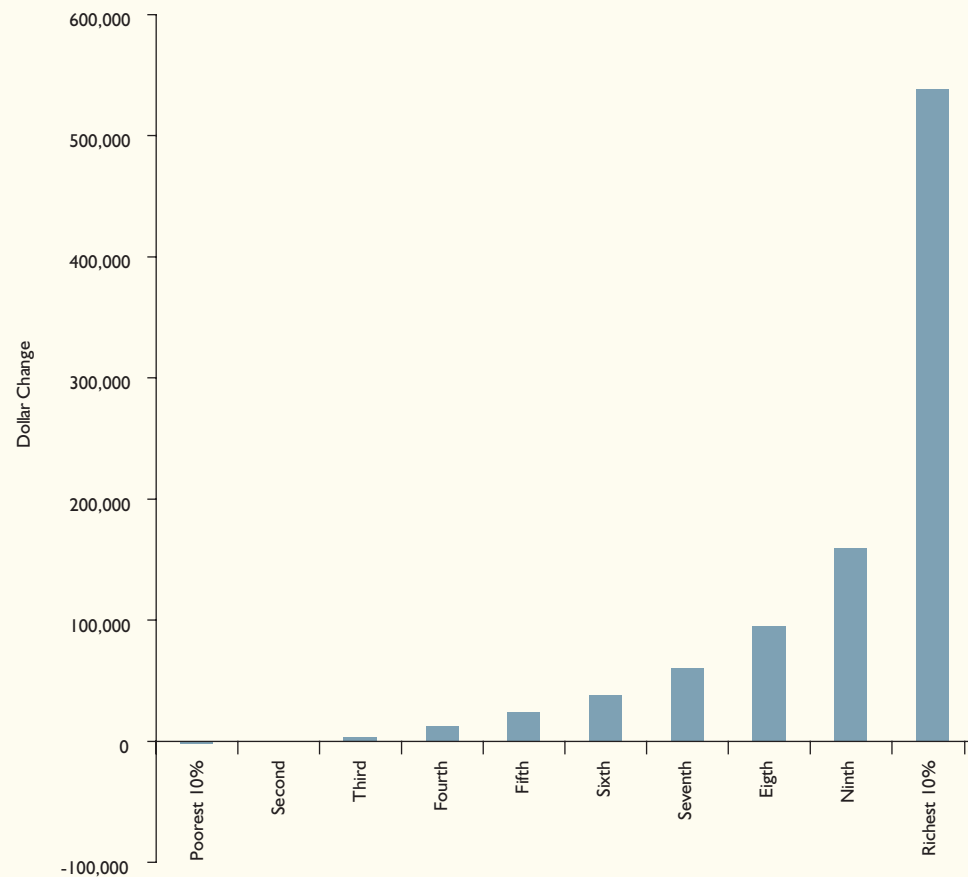
A 2000 study showed that neighbourhood income inequality is also increasing. The study examined eight Canadian cities from 1980 to 1995, using total income before tax.<sup>23</sup> Income inequality increased for all cities studied, reflecting declining average income in low income neighbourhoods and increasing average income in high income neighbourhoods. Similarly, using a segregation measure of income inequality, another study showed that between 1991 and 1996, segregation of low income households increased on five different measures in 15 of the 39 largest cities in Canada.<sup>9</sup>

Current income can be insufficient as an indicator of economic capacity because the same amount of current income may have different implications for those with different levels of wealth. Wealth is your *net worth* and is calculated by subtracting the total amount of your debts from the total amount of your assets. The lower your level of wealth, the fewer resources you have available 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. The poorest 10% had a reduction in net worth; that is their level of wealth declined. Figure 5 shows dollar change trends in average wealth for 10 income groupings based on an analysis of the 1999 Statistics Canada Survey of Financial Security. The distribution of wealth is more uneven than the distribution of income.

Figure 5  
**The Rich Got Richer and the Poor Got Poorer**

(Dollar change in average wealth by decile, 1970–1999)



Source: Kerstetter S. (2002). *Rags and Riches: Wealth Inequality in Canada*. Ottawa: Canadian Centre for Policy Alternatives.

The distribution of wealth is more uneven than the distribution of income.

## Policies and Programs

There are a number of policies and programs that contribute to reducing levels of low income, reducing income inequality and providing support to people with low incomes.<sup>24</sup> Examples of these policies and programs are listed below:

1. Programs that prevent and reduce low income and income inequality. These include cash transfer programs, regulatory provisions and income tax policies such as:
  - a. Benefits for seniors (for example, pensions)
  - b. Benefits for children and families (for example, income supports)
  - c. Social assistance programs
  - d. Earnings-related pensions; disability, maternal/parental leave, sickness, injury and Employment Insurance benefits
  - e. Regulatory provisions for minimum wages
  - f. Child support provisions
2. Programs that provide supports to people with low incomes to actively promote, create or maintain independence. These include the following:
  - a. Employment and self-sufficiency (for example, development of job skills)
  - b. Community economic development
  - c. Early childhood care and education
  - d. Prenatal nutrition support
  - e. Home and nurse visiting
  - f. Supports to infants, preschool and school-aged children

services paid for by governments, the amount of private income people need to pay for these services is greatly reduced.

The economic effect of taxes and income transfer programs are discussed with a focus on income support programs for seniors and for children and families. Programs such as these that reduce low income levels have not generally been studied for their effects on health, beneficial or otherwise. This absence of evidence does not mean absence of effect; rather the effect is not known because it has not been studied.

Community-based employment programs targeted to low income populations are discussed as an example of programs that provide support and promote independence to people already in low income. The programs reviewed did measure some health effects.

In Chapter 3, we discuss maternal/parental leave policies and community-based programs directed towards particular outcomes for low income families with children.

### Programs That Prevent and Reduce Low Income

While low income rates are affected by a variety of factors, one of the most important—especially from a public policy perspective—is the role of government. This includes the impact of taxes and transfers in redistributing income.<sup>25</sup>

Taxes and transfers can have a very significant effect on reducing low income. As can be seen in Figure 6, all countries have

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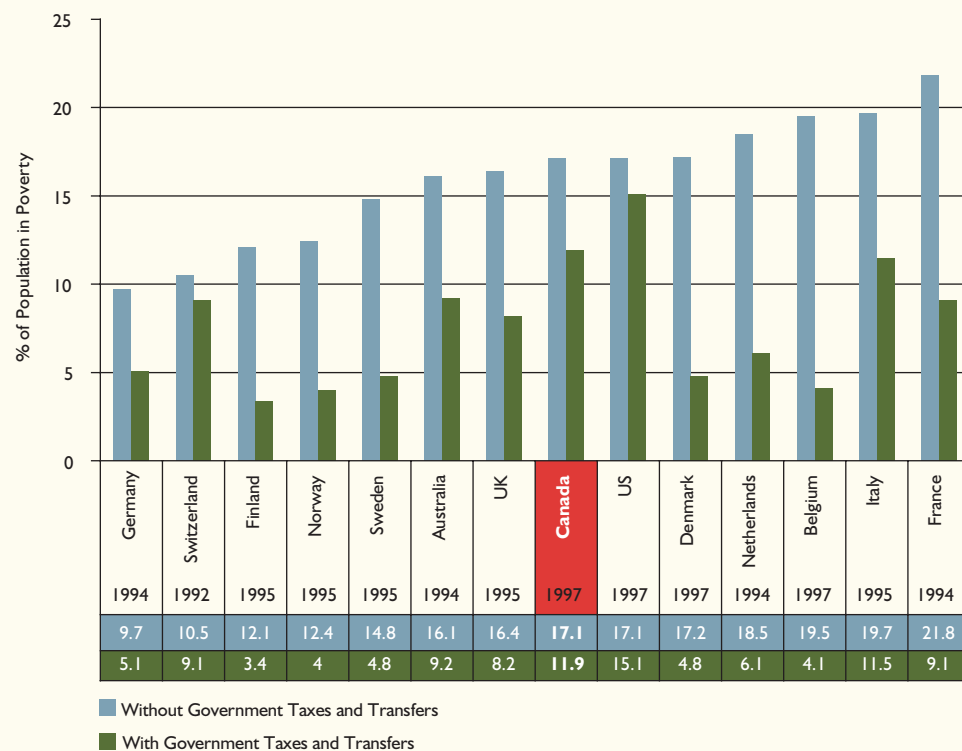
## Low income rates are affected by a variety of factors—including the impact of taxes and transfers in redistributing income.

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Other policies and programs can also contribute to reducing low income and income inequality. These include universal public programs such as health care insurance and public education. With these

reduced rates of low income after taxes are deducted and transfers are added to household incomes. Canada's rate is reduced by 30%, while Belgium reduces its low income rate by nearly 80%.

Figure 6  
Poverty With  
and Without  
Government  
Taxes and  
Transfers,  
Canada Versus  
Other  
Countries,  
Mid to Late  
1990s



Source: Moller S., Bradley D., Huber E., Nielson F., Stephens J. (2001). *The State and Poverty Alleviation in Advanced Capitalist Democracies*. Chapel Hill: Department of Sociology, University of North Carolina.

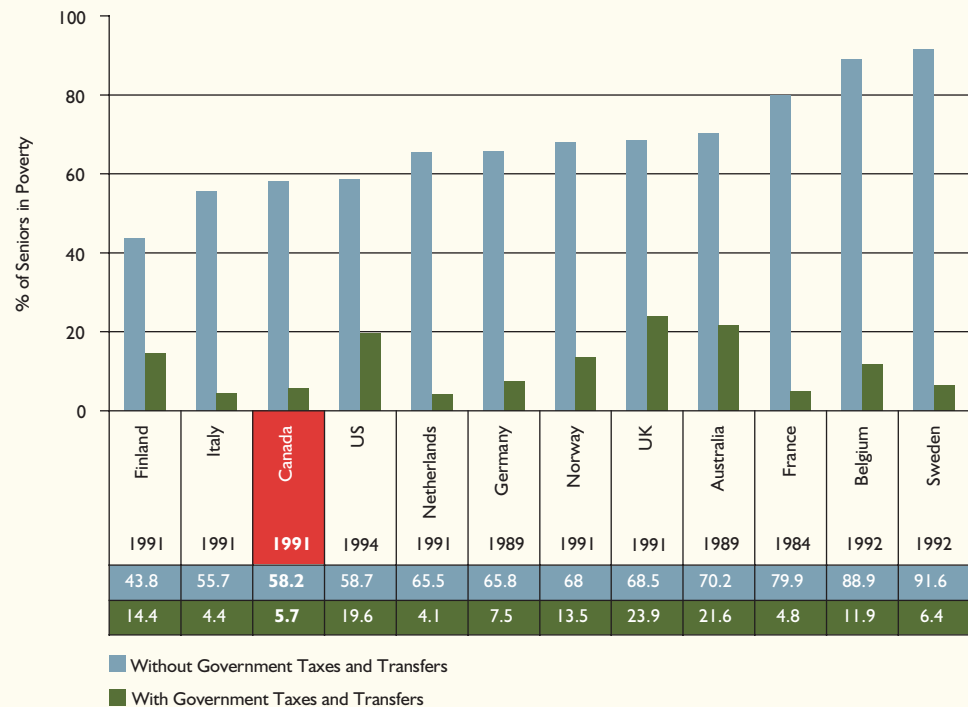
Taxes and transfers can have a very significant effect on reducing low income.

## Success in Reducing Low Income Among Seniors

Taxes and transfers have a remarkable impact on low income among seniors across a number of countries (see Figure 7). Based only on market income, the low income rate for seniors ranged from 44% (in Finland) to 92% (in Sweden) in the mid-1990s. The effect of taxes and transfers on the low income rate is marked—lowering the rates to between 4% and 24%. Canada ranked fourth lowest in its percentage of seniors with low incomes after government assistance, at 6%. Government programs reduced low income by 65% in the UK and by 94% in France. Canada's programs for seniors reduce low income by 90%.

Progress against low income among seniors is one of Canada's poverty-fighting success stories. Without government income programs such as Old Age Security, the Guaranteed Income Supplement and its provincial variants, and the Canada and Quebec Pension Plans, 58% of Canadians 65 and older would be poor. Because of public pensions, only 6% of seniors live on low incomes.

Figure 7  
Seniors in Poverty, With and Without Government Taxes and Transfers, Canada Versus Other Countries, Early 1990s



Source: Smeeding T. (1997). *Financial Poverty in Developed Countries: The Evidence from the Luxembourg Income Survey. Final Report to the UNDP.* (Working Paper no. 155.) Syracuse, New York: Maxwell School of Citizenship and Public Affairs, Syracuse University.

Progress against low income among seniors is one of Canada's poverty-fighting success stories.

### Child Benefits, Family Allowances, Taxes and Transfers

If earned income were the only source of income, low income rates would be substantially higher for families with children, as Figure 8 shows with data from the mid-1990s. This figure highlights the ways that policy choices have major effects. Some countries have made commitments to using family allowances or other taxes and transfers to protect children and their families from low income. Where generous child benefits exist, the capacity to reduce the low income rate of families is great. France and Sweden start with child low income rates similar to Canada's when only market incomes are considered. After the

Almost all European countries pay generous, universal family allowances, usually adjusted for the number of children and sometimes for their ages. Many of these have been in place for decades. Other countries are also turning to tax credits. The United Kingdom's Working Family Tax Credit provides an incentive for entering into employment by reducing families' tax as well as other costs, such as child care fees. The Tax Credit will be extended in 2003 to all low income earners, whether with children or not.

The importance of child benefits is evident when lone-parent families are examined. Table 1 shows that the rates of low income and the risk of low income are greater everywhere for children who live with

### Sweden has both the highest rate of lone parenthood and the lowest rate of low income for lone-parent families.

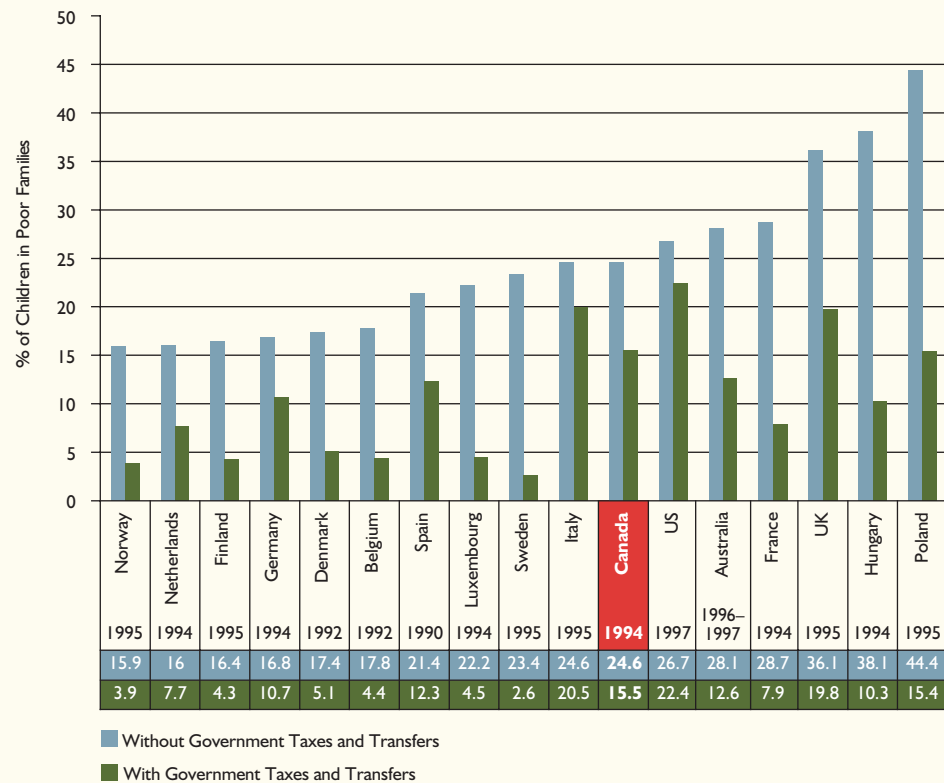
application of all taxes and transfers, however, the rate is very significantly reduced in both countries, to a level much lower than in Canada. The US also starts with a similar low income rate to Canada, but does not show the same decrease with the inclusion of government taxes and transfers.

only one parent. However, living with one parent is not in itself sufficient to account for low income rates for children, nor does a country's rate of lone parenthood necessarily correspond with low income rates. Sweden has both the highest rate of lone parenthood and the lowest rate of low income for lone-parent families. In France, the low income rate for children in lone-parent families is approximately half that of the UK, Canada,

|               | Share of All Children in Lone-Parent Families (%) | Low Income Rate<br>Income Below 50 % of National Median |                    |
|---------------|---|---|--------------------|
|               |   | Lone-Parent Families (%)                                | Other Families (%) |
| Netherlands   | 7.4   | 23.6  | 6.5                |
| France        | 7.7   | 26.1  | 6.4                |
| Germany       | 9.8   | 51.2  | 6.2                |
| <b>Canada</b> | <b>12.2</b>                                       | <b>51.6</b>   | <b>10.4</b>        |
| US            | 16.6  | 55.4  | 15.8               |
| UK            | 20.0  | 45.6  | 13.3               |
| Sweden        | 21.3  | 6.7   | 1.5                |

Source: UNICEF Innocenti Research Centre. (2000). *A League Table of Child Poverty in Rich Nations*. Innocenti Report Card No. 1. Florence: UNICEF Innocenti Research Centre. <[www.unicef-icdc.org](http://www.unicef-icdc.org)>.

Figure 8  
 Child Poverty  
 with and  
 Without  
 Government  
 Taxes and  
 Transfers,  
 Canada  
 Versus Other  
 Countries,  
 mid 1990s



Source: UNICEF Innocenti Research. (2000). *A League Table of Child Poverty in Rich Nations*. Innocenti Report Card No.1. Florence:UNICEF Innocenti Research Centre. <[www.unicef-icdc.org](http://www.unicef-icdc.org)>.

Policy choices have major effects.



Germany and the US. In Canada, Germany and the US, living with one parent is likely to mean a child is in a low income family. A number of countries pay a special benefit or a higher amount in family allowance to lone-parent families.<sup>26</sup>

Two 2003 reports have examined Canada's National Child Benefit program. In July 2003, the Federal, Provincial and Territorial Ministers Responsible for Social Services released their fourth report on the progress of the program in reducing the incidence and

## Programs That Provide Support and Promote Independence

### Community-Based Employment Support Programs

Some demonstration programs aimed at improving the employment prospects and earnings of parents receiving social assistance benefits have shown positive results. This is illustrated in the examples that follow.

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## Child benefits reduce low income in Canada.

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depth of low income among families with children.<sup>27</sup> A month earlier, the Institute for Research on Public Policy released a research report on family policy in Canada that contained analysis of Canadian child benefits.<sup>28</sup> Both reports found that child benefits in Canada reduce the incidence and depth of low income in Canada. The Institute's report is somewhat critical, however, suggesting that the impact of the benefit (that is the size of reductions) has been small.

With no interventions from government tax systems and transfer programs, lone-parent families would more likely experience low income. Taxes and transfers can substantially reduce this likelihood.

During the 1970s, a number of controlled, guaranteed-income experiments in the US and Manitoba demonstrated that varying levels of guaranteed income produced different employment impacts (some increasing work effort, some decreasing it) but reduced low income rates (because of the generous guarantees). Since the focus of these experiments was the effects on work effort, health was not extensively monitored. An experiment conducted in Gary, Indiana, however, which raised incomes for families with children to the low income line, tracked birth weight. It showed that increased family income resulted in increased birthweights of 0.3 to 1.2 pounds for babies in families of the income-supplemented group, likely due to improved nutrition for their mothers.<sup>29</sup>

More recently, two interventions using earnings incentives have been tested, in Canada and Minnesota, and these represent a different approach to encouraging self-sufficiency.<sup>30</sup>

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## An experiment conducted in Indiana showed that increased family income resulted in increased birthweights for babies.

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In Canada, British Columbia and New Brunswick were the sites of two pilot Self-Sufficiency Projects (SSP), which used a randomized control trial design to determine the effects of earnings supplements on helping single parents move off income assistance. The projects involved supplementing the wages of single parents who were either long-term income assistance “recipients” or recent “applicants” receiving income assistance.<sup>31,32</sup> The monthly income supplement was paid on top of earnings from employment for up to three years while the person was employed full-time and remained off income assistance. In both study groups, the SSP significantly increased

In addition to the socioeconomic improvements in living and working conditions, the SSP study also provided evidence of some positive effects on academic functioning, behaviour and emotional well-being. Elementary school aged children in the recipient program group performed better in school than children in the control group. Significant results were seen in higher math scores and fewer students below average in any subject, and these improvements were evident while parents received the supplement and after they were no longer eligible.<sup>31</sup> Program group parents gave their children higher ratings on school performance during and after receiving the

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### The Minnesota Family Investment Program evaluation concluded that financial incentives accounted for all of the positive effects on children’s behaviour and academic functioning.

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full-time employment, employment earnings and income, and reduced poverty and receipt of income assistance.

The greater economic effects were seen in the applicants study. At post-three-year follow-up, 43% of this program group had full-time employment, compared with 31% of the control group. Year 3 average annual earnings were \$2,405 higher than the control group, and the SSP reduced the proportion of families with incomes below the Statistics Canada Low Income Cut-Offs (LICOs) by 14 percentage points (64% compared with 78%). The severity of poverty was also reduced, with a decrease in the proportion of incomes at half to three-quarters of the LICOs (28% compared with 40%). The proportion of applicants who had full-time employment periods that lasted at least three years over the five-year study period was nearly 10 percentage points higher than the control group.

supplements. In the applicant study, there was a positive effect on maternal well-being as indicated by significantly lower scores on the depression scale. At three-year follow-up, the program group parents were also more likely to be in a common-law relationship, less likely to need formal child care and less likely to have changed child care arrangements in the previous six months.

After accounting for all financial costs and benefits, there was a net cost to the government of \$110 per year per program group applicant and \$540 per year per program group recipient.<sup>31</sup> This analysis does not include the non-financial benefits from improved outcomes for children or the cost of lost personal and family time as a result of employment. Researchers concluded that SSP was an effective policy for both recipients and applicants, and more so for the latter. Further, they suggest that if SSP were implemented as a program, it would be effective initially in reducing the current

income assistance caseload and its effectiveness would increase over time.<sup>32</sup> The report stresses the role of job readiness and the state of the local economy as additional factors affecting a person's ability to move into full-time employment.

The second initiative also used earnings incentives. As part of its welfare reform, Minnesota introduced the Minnesota Family Investment Program (MFIP), which followed a research design similar to that of the SSP study. The MFIP program offered financial incentives to reward work and reduce poverty, and in addition, required participation in employment services to improve skills and decrease dependence. The control group received the standard existing program, which reduced benefit amounts as employment earnings increased. The economic benefits were clear for program participants. Single-parent, long-term recipients were 35% more likely to be employed, their earnings increased by 23%, and the proportion of those living above the poverty line increased by 10 percentage points. The MFIP also increased employment in stable full-time jobs for participants and increased the likelihood of continuous health coverage for their children.<sup>33, 34</sup>

The MFIP had significant positive effects on family life and child well-being for single-parent long-term recipient families. At the end of the third year in the program, 11% of recipients were married compared with 7% in the control group. There was a 10 percentage point reduction in domestic abuse among the MFIP group, compared with the control group. MFIP children were less likely to have problem behaviour, had better school performance, and were more likely to be engaged in school. MFIP allowed single mothers of children under the age of 6 to work 20 hours a week, as opposed to the 30-hour work week required for recipients without young children. The report on the MFIP considered this to have contributed to positive effects on children. Long-term recipients who received the financial incentive without the mandatory employment services were 8 percentage

points less likely to be at risk of clinical depression and were less likely to use harsh parenting compared to the control group (the group not receiving the program).<sup>35</sup> The program's evaluation concluded that MFIP financial incentives accounted for nearly all of the program's effects on marriage, domestic abuse and mothers' depression, and for all of the positive effects on children's behaviour and academic functioning. Adding the

## Key Messages

- A mix of policies and programs that affect income and income distribution have the potential to affect health.
- Tax and income transfer programs have greatly reduced low income among seniors in Canada. This experience with seniors, and the experiences of other countries, show that government tax and transfer programs can greatly reduce rates of low income for children and families.
- 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.
- The examples of child benefits and employment support programs show that collaborative efforts across sectors, sustained over long periods of time, can be effective.

mandatory employment services component to the financial incentives contributed to almost all of the impacts on earnings. The authors highlight the importance of decreasing domestic abuse in terms of health and safety of the mother and also in terms of the need for further research regarding the effects of abuse on obtaining and maintaining employment. They conclude:

“Enhanced financial incentives are an important tool for increasing income and for improving the general well-being of families and children who are long term welfare recipients. The importance and magnitude of improving family and child well-being must be weighed against the higher cost associated with offering financial incentives.”<sup>35</sup>

As a result of the MFIP study, in 1998 Minnesota replaced its old income assistance program with a modified version called MFIP-S. The financial incentives are somewhat less generous than in the study and the single-parent long-term recipients are required to work 35 hours per week or participate in employment services within six months of welfare receipt.<sup>34</sup>

## Summary

This chapter has made clear that income is important for health. In market-based societies like Canada, income level is an important general marker of the capacity to pursue a good life. The more money one has, the greater are the opportunities: to get a good education; to purchase adequate food, clothing and housing; to buy recreational equipment and take vacations; and to generally make the choices necessary to participate and to feel and be included. Income helps to give our lives meaning by essentially contributing to the purchase of our life participation and human development opportunities.

As the comparative data on the impact of government tax systems and income transfer programs make readily apparent, public policy is important. Public policies can reduce low income and mitigate at least some of the negative health effects for those with low income, and thus contribute to improving population health. Canada’s policies and programs are very effective at reducing rates of low income among seniors and relatively less effective for children and families.

### Defining Low Income

There has been great debate for many years on the best way to measure low income in Canada. Statistics Canada has regularly published data on the number of Canadians in low income, using several different measures. These include the Low Income Cut-Off, the Low Income Measure and the Market Basket Measure.<sup>36</sup>

The most widely used measure of low income is the Low Income Cut-Off, commonly known by its acronym, LICO. The LICO defines a low income household as one that spends 20 percentage points more than the average family spends on shelter, food and clothing. Thus, if the average family spends 40% of its income on shelter, food and clothing, a family is considered low income if it spends 60% or more of its income on those three things. LICOs are calculated two ways, before and after deduction for taxes. Both of these measures include government transfers and are calculated for seven different family sizes and five different community sizes. For 2002,

for example, a family of four in a large urban centre (population 500,000 or more) had a before-tax LICO of \$36,247 and an after-tax LICO of \$30,576.<sup>37</sup>

The trend in low income in Canada is slightly different depending on which low income measure is used and from which source the income data come. For example, the Market Basket Measure (constructed from the costs of purchasing a basket of goods and services in five areas—food, clothing and footwear, shelter, transportation and other household needs—and determined for 48 different geographical areas in the 10 provinces) is sensitive to regional and local variations in prices for the market basket of goods and services included. Thus different communities may have different low income rates, even if they each have the same proportion of people below a particular income level.

## Information Gaps: Some Examples

|                                       |  |
|---------------------------------------|--|
| <p>What do we know?</p>               | <ul style="list-style-type: none"> <li>• The overall health of Canadians measured by life expectancy continues to improve year by year.</li> <li>• Life expectancy is still very different for different income groups.</li> <li>• Income affects health, in that health increases at virtually every higher level of income.</li> <li>• Average incomes are rising, but increases have been greater for higher income groups than for lower income groups.</li> <li>• Progressive taxes and social transfers offset most of the increase in income inequality until 1994. Total income inequality and disposable income inequality have risen more quickly than market income inequality between 1994 and 2001.</li> <li>• Cash transfer programs have been most effective in reducing rates of low income among seniors over the years.</li> <li>• Employment support programs and active measures to improve education and skills that foster greater self-reliance can be effective in improving economic and some health outcomes for low income people.</li> </ul> |
| <p>What do we still need to know?</p> | <ul style="list-style-type: none"> <li>• Deeper understandings of the relationships between income inequality and health.</li> <li>• More about relationships between income inequality and health measures other than mortality/longevity.</li> <li>• More about relationships between different measures of low income and health, and between different measures of income inequality and health.</li> <li>• More about the relationship between wealth and health.</li> <li>• More about income as a marker for other social and economic conditions and their relationship to health.</li> </ul>  |
| <p>What's happening in this area?</p> | <ul style="list-style-type: none"> <li>• The Canadian Population Health Initiative has funded research exploring explanations of the relationship between income inequality and health.</li> <li>• The Canadian Population Health Initiative has commissioned research examining low income and health.</li> <li>• There is ongoing assessment of poverty and low income in Canada, along with trends, minimum wages and income transfer programs, by a wide range of research and policy organizations.</li> <li>• Evaluation of low income support programs continues, particularly for self-reliance through employment, by the Social Research and Demonstration Corporation in Canada and the Manpower Demonstration and Research Corporation in the United States and others.</li> </ul>   |

## For More Information

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Chapter

# 3



# Early Childhood Development

Learning skills, coping skills, resiliency and other important human development outcomes depend on all of the determinants of health—social and economic conditions, physical environments, health behaviours and lifestyle, genetics and biological endowments, and health services—to contribute to human flourishing.<sup>1</sup>

These determinants are especially important during the early years in a person’s life, from conception to school age.<sup>2</sup> Biological and developmental factors, early life experiences, and exposure to various risk factors can profoundly shape adult health and development outcomes.<sup>3</sup>

This chapter begins with a brief overview of the evidence that early childhood development matters for health. The balance of this chapter discusses policies and programs that can support successful early childhood development.

## Importance of Early Childhood Development and Health

A good start in the first few years of life is critical for long-term health and well-being because of the development and learning that occur during this period. National and international evidence strongly demonstrates the importance of early childhood development.<sup>4</sup>

Successful early childhood development depends on several factors, including “good health (of both mother and child), good nutrition, good parenting, strong social supports, and stimulative interaction with others outside the home.”<sup>5</sup> Early childhood development sets the foundation for learning, behaviour and health, and helps build social capital and equality, all of which are crucial for increasing prosperity and reducing low income.<sup>6</sup>

cognitive development as measured at ages 7, 11 and 16. All cognitive and educational test scores improved significantly with increasing birth weight.<sup>12</sup>

Consistent with the findings presented in Chapter 2 on the relationship between income and health, research in the area of human development consistently discovers a gradient—that is, a relationship between social and economic factors and various developmental outcomes related to health and well-being. Based on analysis of the National Longitudinal Survey of Children and Youth (NLSCY), cognitive difficulties and behaviour problems are associated with lower family income and educational attainment.<sup>10</sup> These gradients, moreover, are found over the life course, with the early years being key.<sup>11</sup>

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

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**A good start in the first few years of life is critical for long-term health and well-being. In general, as family income falls, the likelihood that children will experience problems increases.**

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Without a good start in life there are a number of potential negative health effects. A poor start not only threatens or delays development but may also result in a chain of poor outcomes into the future.<sup>3,7,8,9,10</sup> The range of consequences of poor early childhood development can include restricted brain development; reduced language development, capacity to communicate and literacy; and poorer physical and mental health throughout life.<sup>6,10,11</sup> One study found that low birth weight was associated with lower

middle and high income families. Children’s likelihood of participating in organized sports activities was lower if they lived in low income families.<sup>13,14</sup> Data presented in Chapter 5 of this report also show that children in low income families have higher rates of overweight and obesity. In general, as family income falls, the likelihood that children will experience problems increases. Overall, lower-income children have poorer outcomes, and these outcomes tend to persist into adulthood.

**The National Forum on Health, 1997**

“There is mounting evidence that very early experiences have a lifelong influence on the

brain and body development and the learning of coping abilities.”

Source: National Forum on Health. (1997). *Synthesis Reports and Issues Papers*. Canada Health Action: Building on the Legacy. Ottawa: Health Canada Communications.

The Community Asset Mapping Project in Vancouver examined the developmental outcomes of kindergarten children by the neighbourhood in which the children lived. The neighbourhoods were classified by income level.<sup>15</sup> As it was noted in the report, *Early Development in Vancouver: Report of the Community Asset Mapping Project (CAMP)*, low income neighbourhoods had more children who scored lower on a wide range of outcomes: skills and general knowledge, emotional maturity, social competence, language and cognitive development, and physical health and well-being.

However, not all children at risk of developmental delay live in low income families. One researcher has estimated that one in four Canadian children are at risk of developmental delay based on a “vulnerability index,” which takes into account parental report on cognitive and behavioural problems exhibited by their children.<sup>10</sup> Researchers identified “children as vulnerable in the sense that, unless there is a concerted and prolonged effort to intervene on their behalf, their chances of leading healthy and productive lives are reduced.”<sup>6</sup>

### Federal/Provincial/Territorial Early Childhood Development Agreement

Canada has recognized the importance of early childhood development to health, and this is reflected in the federal, provincial and territorial *Early Childhood Development Agreement*, signed in September 2000.<sup>16</sup> The Agreement commits the two levels of government to improving children’s physical and emotional health, safety and security, readiness to learn, social engagement and responsibility. Under the Agreement, federal, provincial and territorial governments have also agreed to report regularly on child health and well-being outcomes.

The first outcomes report, presented in the fall of 2002, highlighted successes and areas for potential improvement.<sup>17</sup> For example, the data reported from 1999 revealed that four of five babies were born at a healthy birth weight; four of five children from birth to age three had been or were currently being breastfed; and nine of ten children from birth to age three indicated average to advanced motor and social development.

These same figures show where improvements could be made: one in five Canadian children are born at an unhealthy weight, putting them at increased risk for a number of health and developmental conditions. Breastfeeding is a practice that has many health and developmental benefits for children, but one in five Canadian children are never breastfed. For example, Chapter 5 highlights the protective effect that breast-feeding can have on the risk for obesity.

## Key Messages

- Early childhood experiences have an important impact on health throughout a person’s life.
- Some Canadian children face greater risks to health and development because of poorer life experiences, such as low income and inadequate parenting.
- Consequences of poor early childhood development can include restricted brain development; reduced language development, capacity to communicate and literacy; and poorer physical and mental health throughout life.

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## Early childhood development programs that comprehensively address children's basic needs can foster development of capable and productive adults.

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Overall, the 2002 *Early Childhood Development Agreement* report provides a positive overview of the health and development of young children in Canada.<sup>17</sup> However, within this good news story there are significant gradients in health and development outcomes among certain groups of Canadian children by household and neighbourhood income as well as other social and economic factors.<sup>10, 15, 18</sup>

### Policies and Programs That Foster Healthy Early Childhood Development

Early childhood development programs that comprehensively address children's basic needs can foster development of capable and productive adults. Early interventions can alter the lifetime trajectories of children who are born into low income families or are deprived of the opportunities for growth and development available to those children who live in families that are more fortunate.<sup>3, 9, 19</sup>

These facts are based on evidence from evaluations of large, publicly funded programs and of smaller, experimental project interventions. The short- and long-term benefits of early childhood development programs for children can be great, and early childhood development interventions help ensure children's progress in primary school, continuation through secondary school, and successful entry into the workforce.<sup>5, 6</sup> The economic returns from investing in young children are high—up to \$8 saved for every \$1 invested, based on US data.<sup>20, 21</sup> In Canada, it has been estimated that when costs and benefits are both accounted for, public spending of \$1 on high-quality child care will generate \$2 in benefits.<sup>22</sup> For example, investment in quality child care can generate two types of benefits: first, an increase in the

productivity of the parents, who become free to enter the labour force; and second, the future increase in productivity from the contribution of the children who have received early educational experiences.

Two reports show consistency and similarity in their interpretation of what we know of strategies and conditions for early childhood development.<sup>13, 23</sup> *Toward a Healthy Future: Second Report on the Health of Canadians* suggested strategies for ensuring healthy child development and *What is the Best Policy Mix for Canada's Young Children?* identified three enabling conditions for positive child outcomes.

What follows is an overview of some selected strategies that are in place in Canada and internationally that demonstrate some success in improving early child development. These strategies are presented under three categories that are adapted from the headings of the framework developed by the Canadian Policy Research Networks outlined in *What is the Best Policy Mix for Canada's Young Children?*:

- Adequate and equitable income for child development
- Effective parents and families
- Supportive community environments

The overview of policies and programs focuses on family and community level interventions that are directed at socialization and education for parents and for children from birth to age five.

There are a range of interventions and programs delivered through the primary health care system that are not part of this review: for example, immunization; home visits to new parents by nurses; and additional screening and medical monitoring of infants with low Apgar scores in hospital.

This report suggested the following strategies for ensuring healthy child development:

**Reduce Inequities Between Children Living in Different Socioeconomic Situations**

“Efforts to improve conditions that maximize all children’s healthy development and well-being will have a positive impact on all children, especially those living in the worst socioeconomic conditions. . . . All children require access to nurturing, stimulating, supportive, caring and safe environments.”

**Support Parents and Families**

“Parents are the most important people in children’s lives, and families are the focus of

child-rearing. . . . Efforts to give young people and young parents the information and support they need to be good parents are investments in the healthy development of children.”

**Accept and Share Responsibility**

“The public is highly supportive of efforts to help children meet their full potential, and the health of children is now solidly on the agenda of all governments. But governments cannot do it alone. . . . Community action is an important complement to government action. . . . When governments, businesses, communities, families and young people work together, children and youth have the best chance of growing up to be healthy, productive adults.”

*Toward a Healthy Future: Second Report on the Health of Canadians*<sup>13</sup>

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Two reports show consistency and similarity in their interpretation of what we know of strategies and conditions for early childhood development.

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Research by the Canadian Policy Research Networks identified three broad areas that contribute to positive child outcomes:

- **“Adequate income**, preferably earned income, can be assured by recognizing the cost of raising children, significantly reducing the cost of child care for employed parents, and providing additional income support to families with low earned incomes, social assistance payments or maintenance payments.”
- **“Effective parenting** can be supported through improved paid and unpaid parental leaves, flexible employment hours and schedules, improved access to health and

developmental programs and community resource centres, and enhanced availability of developmental child care and preschool for both employed and stay-at-home parents.”

- **“Supportive community environments** can be provided for children through access to reliable education, health, social and recreational services, by providing integrated delivery for all of these services, by creating ‘child friendly’ spaces and systems, and by collaborating across sectors to promote better outcomes for all children.”

*Three Enabling Conditions for Positive Child Outcomes*<sup>23</sup>



## Adequate and Equitable Income for Child Development

Policies and programs to ensure that families have adequate and equitable income address potential effects of income and income inequality on child development.

A major Canadian policy that contributes to raising family incomes is the Child Tax Benefit. Child and family benefits in Canada and other countries have been discussed in more detail in Chapter 2 of this report.

Community-based employment programs targeted to low income populations are also reviewed in Chapter 2. Examples of other policies and programs that contribute to preventing or reducing the effects of low income are listed in Chapter 2 as well.

## Effective Parents and Families

Policies and programs can encourage, foster and support effective parenting and strengthen families in various ways. These policies and programs include parental leave, early childhood care and services for low income children and families, centre-based early childhood education and care, and early detection of at-risk children and families through home visiting.

## Parental and Family Leaves

One of the first interventions to support parenting is the provision of leaves for family reasons, particularly for the arrival of a new child.<sup>24, 25, 26</sup> Maternity and parental leave policies are one element in a set of public and workplace policies and supports that can help parents balance work and family life. Basic leaves are important, although studies also indicate that positive parenting may require more flexibility and leaves that can be taken throughout childhood.<sup>27</sup>

Maternity leaves were first developed in some countries at the beginning of the 20th century. The programs were developed in recognition of the health effects that giving birth has for mothers as well as the health advantages that breastfeeding has for children. Currently, more than 100 countries, including almost all industrialized countries, have some form of maternity or parental leave.<sup>26</sup> Most ensure women the right to at least two or three months of leave around the time of childbirth. Current trends are to prolong the length of leave, to encourage fathers to share the parental leave and to increase flexibility.

Sweden and the Netherlands are two countries whose parental and family leave policies in support of parenting are noteworthy because of their commitment to flexibility.<sup>28, 29</sup> Other countries have more restrictive and less flexible policies than Canada. For example, in the US, parental leave policies “are atypical of the rest of the world’s industrialized countries.”<sup>26</sup>

## What’s Happening in Canada on Parental Leave Policies?

The federal government’s decision to extend parental leave, for those eligible to receive it from Employment Insurance,\* brings Canada in line with some of the best practices in this area for length of leave. It has also changed parental behaviour in the directions generally considered positive for children’s development.

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\* To be eligible, parents must have worked a minimum of 600 hours in the last 52 weeks and paid Employment Insurance premiums through their employer. Self-employed persons are not eligible. Benefits are paid at a rate of 55% of average earnings, to a maximum of \$413 per week. Maternity benefits are paid for 15 weeks, and parental benefits are paid for a further 35 weeks, for a total of 50 weeks of benefit.

**Parental Leaves in Sweden<sup>28</sup>**

The basic leave is 360 days, covered at 80% of the previous salary (with a ceiling of approximately \$3,500 per month). In addition, a series of particular arrangements provide other benefits.

- 30 days are paid at 90% of salary.
- Since January 1, 2002, a 13th month has been added, but it is reserved for the “other” parent, as a way to encourage them to take parental leave.
- A further 90 days (for a total of 450) can be taken, but at a reduced rate.
- The leave can be taken at any time until the child is eight years old.
- The leave does not have to be taken in a continuous block.
- Parents have the right to work part time (25% reduction of hours) until their youngest child is eight.
- This parental leave does not include the 60 days per year per child of leave to care for a sick child.

**The Work and Care Act in the Netherlands<sup>29</sup>**

Reforms in 2001 in the Netherlands have led to an integration of different types of leave to care for children and other relatives in one encompassing framework: *The Work and Care Act*, adopted in December 2001. In addition to a paid maternity leave of sixteen weeks, a paid paternity leave of two weeks, and an unpaid parental leave (for a maximum of six months on a part-time basis), families can claim:

- emergency leave of short duration at full wages to cover an unforeseen emergency situation at home
- short-term leave of a maximum of 10 days per year to take care of sick children or the employee’s partner
- career break leave of 6 months paid at 70% of the minimum wage (although the duration could be longer depending on the employer).

The government also gave employees the opportunity to use their holiday entitlements in a more flexible manner (they can be used, without loss of entitlement, over a period of five years).

**Parental Leave in Sweden and the Netherlands**

## Maternity and parental leave policies can help parents balance work and family life.

A 2003 report from Statistics Canada found:<sup>30</sup>

- “After the extension of parental benefits from 10 to 35 weeks, employed mothers in receipt of benefits increased (or planned to increase) their time away from work from six months in 2000 to 10 months in 2001.”
- “One quarter of all mothers with benefits in 2001 were back to work within eight months. These women were more likely to have a non-permanent or low-paying job, or a spouse who claimed parental benefits.”
- Average “time taken off work by mothers who did not receive maternity or parental benefits and returned to work remained at four months for 2001.”

- “More new mothers received maternity or parental benefits in 2001 than in 2000 (61 percent versus 54 percent).” The reduction in the number of hours required for benefits and women’s increased labour force participation may have contributed to this change.
- After the extension of parental benefits, fathers’ leave claims “jumped from 3 percent in 2000 to 10 percent in 2001.”

Some provinces also guarantee additional forms of family leave relevant to children.<sup>31, 32, 33, 34</sup>

**Family Leave Relevant to Children (Selected Provinces)**

**British Columbia:**<sup>31</sup> An employee is entitled to up to five days of unpaid leave per employment year to meet responsibilities related to the care, health or education of any member of the employee's immediate family. "Immediate family" includes spouse, child, parent, guardian, sibling, grandchild or grandparent of an employee, or anyone who lives with the employee as a member of the family.

**Quebec:**<sup>32</sup> An employee is entitled to up to five days of unpaid leave per employment year to meet responsibilities related to the care, health or education of a minor child. An employee is also entitled to five days of leave at the moment of birth or adoption of a child. After two months of employment, the first two days are paid. However, if the employee is adopting the child of his or her spouse, only two days of unpaid leave are available.

**Ontario:**<sup>33</sup> Employees in companies that regularly employ at least 50 people have the right to take up to 10 days of unpaid time off work every calendar year because of illness, injury, certain emergencies or other urgent matters. This is known as emergency leave. An employee can take an unpaid emergency leave of absence for family reasons such as illness, injury, medical emergency or other urgent matters relating to a family member.

**New Brunswick:**<sup>34</sup> The province requires employers, at the request of an employee, to grant leaves of absence without pay of up to three days during a 12-month period to meet responsibilities related to the health, care or education of a person in a close family relationship with the employee.

## Early Childhood Care and Services for Low Income Children and Families

A second group of policies and programs related to effective parents and families includes early childhood care and services for low income families, which have been shown to support positive all-round developmental outcomes in children.<sup>29</sup> Living in poverty tends to compromise the immediate and long-term health and development of children. Providing access to high-quality early childhood services can help mediate some of the negative effects of having a disadvantaged background.<sup>35</sup> There are several child care services that focus on low income children and families.

with infants and toddlers. From 68 programs in 1995, it now includes over 700 community-based programs serving more than 60,000 children from birth to age five.

Early Head Start is a program for both the parents and the child, and offers both parenting skills and comprehensive child development services through centre-based, home-based and combination program options.

An evaluation of Early Head Start found that three-year-olds enrolled in the program performed significantly better on a range of measures of cognitive, language, and social-emotional development than a randomly assigned control group.<sup>36</sup> Parents also scored

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## Providing access to high-quality early childhood services can help mediate some of the negative effects of a disadvantaged background.

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### Early Head Start

Head Start has been a flagship program in the United States since the 1960s. Its successor, Early Head Start, began in 1995 and is designed to provide high-quality child and family development services to low income pregnant women and families

significantly higher than control group parents on many aspects of the home environment and parenting behaviour. In addition, Early Head Start programs were related to improvements in parents' progress toward work and toward the planning of subsequent births. Positive outcomes were particularly large in families that enrolled during pregnancy.

Programs were centre-based, home-based or a combination, all with parental involvement. Children in centre-based programs most often showed enhanced cognitive and social-emotional development. There were also positive correlations with effective parenting, but few with parents' economic self-sufficiency.

### Abecedarian Early Childhood Intervention, USA

This experimental study examined the effectiveness of providing intensive preschool services to children in low income families from birth to age five. Because the study was experimental in design, it involved two groups of children, one participating in the program, the other in a control group. Both groups received medical and nutritional services. The children participating in the program had access to the out-of-school

program had positive long-term benefits and showed itself to be a sound investment for the public sector—roughly US\$4 in benefits for every \$1 invested. The benefits were not only for the individual participants, but also for society as a whole. They included higher productivity, higher educational attainment, higher income levels and improved general health, which in turn reduced demands on income support and health care programs.<sup>37</sup>

### Centre-Based Early Childhood Education and Care

The third group of policies and programs related to effective parents and families is centre-based early childhood education and care. Child care is the service most frequently provided to foster successful balancing of work and family life.<sup>27</sup> Child care is important not only because it allows

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## Experts agree that the best child care is an accessible and educationally strong day care or preschool system.

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care centre from 7:30 a.m. to 5:30 p.m. The program had low teacher-to-child ratios for both infants and older children. The curriculum focused on language development but not to the exclusion of other forms of child development.

When compared with the control group during the preschool years, the children in the program had consistently higher scores on standard intelligence measures. At ages 8 and 12, they had significantly higher IQ scores and had higher scores on math and reading achievement tests. At age 15, the IQ differences were smaller, but the reading and math score differences remained significant. At age 21, the program participants were more likely to have attended four-year college than those in the control group and the differences in intelligence and achievement remained.

When the benefits of this program were compared with the costs, program evaluators found that this type of intensive preschool

parents to balance their work and family responsibilities, but also because it can be a key contributor to ensuring positive developmental outcomes.

Experts agree that the best child care is an accessible and educationally strong day care or preschool system. Research consistently identifies three characteristics of quality child care: low child-to-adult ratios, highly educated staff with specialized training and facilities and equipment that provide stimulating activities.<sup>38</sup> These dimensions constitute a clear separation between child care aimed at early childhood development and “custodial” day care (child-minding). “Research has linked quality care, defined in these terms, with linguistic, cognitive, and social competencies of infants.”<sup>38</sup> For example, it was found that children cared for in facilities outside the home, “either regulated or unregulated, have superior vocabulary skills to those who do not participate in care arrangements,” compared to children in unregulated care in the home.<sup>38</sup>

Children from low income households tend to benefit most from quality child care settings. Time spent in centre-based care can raise levels of school-readiness among participants (for example, cognitive development and language growth) compared with those children spending more of their time in home-based settings.<sup>35</sup>

For example, researchers in British Columbia looked at children who attended licensed child care in their preschool years and children who did not, and compared their teachers' ratings of their academic skills when these children were in their first few years of school. The researchers found that children who participated in centre-based licensed child care programs in their preschool years had higher ratings of academic skills than children who did not participate in centre-based licensed child care programs.<sup>17</sup>

### The OECD and Early Childhood Education and Care

In 2001, the Organisation for Economic Co-operation and Development (OECD), examined the evidence on early childhood education and care (ECEC) and recommended more investments in such programs.

“Early childhood education and care has experienced a surge of policy attention in OECD countries over the past decade. In part, policy interest has been motivated by research showing the importance of quality early experiences to children’s short-term cognitive, social, and emotional development, as well as to their long-term success in school and later life. In addition, equity concerns have led policy makers to focus on how access to quality early childhood services can mediate some

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## Canada is moving to further invest in early childhood education and care.

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The quality of children’s environments affects their development. Participation in a quality child care program is particularly helpful for disadvantaged children, who often have more limited home environments and start school with less of a base than that already acquired by children their age from a more advanced milieu.<sup>39</sup> Research has demonstrated that the high cost of child care hinders labour force participation by low income parents.<sup>39</sup> In numerous studies, mothers from otherwise disadvantaged backgrounds report positive effects for their children when they take up a job.<sup>39</sup>

Accessibility and quality are two characteristics that have been associated with effective programs for children.<sup>3</sup> Specific strategies put forward by the Organisation for Economic Co-operation and Development (OECD) and the US are presented, along with a look at Canada’s child care policies.

of the negative effects of disadvantage and contribute to social integration. . . . In sum, policy makers have recognized that equitable access to quality early childhood education and care can strengthen the foundations of lifelong learning for all children and support the broad educational and social needs of families.”<sup>40</sup>

*Early Childhood Education and Care: Lessons from OECD Countries* summarizes recent trends in OECD countries to improve early childhood education and care and, based on this inventory, the key elements of policy that are likely to promote equitable access to quality early childhood education and care.<sup>40</sup>

A 2003 paper from the OECD notes, “participation in good quality ECEC programs not only does no harm but has positive impacts on children with regard to cognitive, social, and emotional development, school readiness, and school performance.”<sup>25</sup>

### US Centers for Disease Control

“Publicly funded, center-based early childhood development programs are strongly recommended to reduce cognitive developmental delay” among low income children aged three to five.<sup>41</sup> This

recommendation comes from the *U.S. Centers for Disease Control and Prevention Community Guide*. The Community Guide conducts systematic reviews of the scientific literature and makes evidence-based recommendations, including:<sup>41</sup>

“A systematic review of published studies, conducted on behalf of the Task Force on Community Preventive Services by a team of experts, found that early childhood development programs are effective in improving preparedness to learn: children who participated in these programs are more likely to be promoted with classmates and less likely to be placed in special education classes than children who were not in such programs. Based on strong evidence from this review, the Task Force issued a recommendation that this intervention be implemented.”

The OECD undertook a systematic comparison of early childhood education and care in 12 countries; Canada did not participate. The report identified “seven current cross-national policy trends” in early childhood education and care:

1. Expanding provision toward universal access
2. Raising the quality of provision
3. Promoting coherence and coordination of policy and services
4. Exploring strategies to ensure adequate investment in the system
5. Improving staff training and work conditions
6. Developing appropriate instructive frameworks for young children
7. Engaging parents, families and communities

The report listed eight key elements of policy that are likely to promote equitable access to quality early childhood education and care.

1. A systematic and integrated approach to policy development and implementation
2. A strong and equal partnership with the education system
3. A universal approach to access, with particular attention to children in need of special support
4. Substantial public investment in services and infrastructure
5. A participatory approach to quality improvement and assurance
6. Appropriate training and working conditions for staff
7. Systematic attention to monitoring and data collection
8. A stable framework and long-term agenda

According to the OECD report, pursuing these kinds of policies would lead to inclusion and form part of a wider multi-stakeholder effort to reduce child poverty, promote gender equity, improve schooling, respect diversity and increase the quality of life for parents and children.

**Early  
Childhood  
Education  
and Care:  
Lessons  
from OECD  
Countries<sup>40</sup>**

### What's Happening in Canada on Child Care Policies?

The Canadian federal budget of February 2003 announced an injection of \$935 million over five years to assist provinces, territories and First Nations to increase access to quality child care (especially for low income and single-parent families). Like many other OECD countries, Canada is moving to further invest in early childhood education and care because of the important developmental benefits.<sup>38</sup>

Despite the importance of quality care for disadvantaged children, less than half of Canadian four-year-olds from low income families attended licensed day care centres or pre-kindergarten programs, based on

ECEC in Canada. . . . The range of early childhood education and care services and access to them vary enormously by region and circumstances. However, no region of Canada yet provides a system of well-designed and funded early childhood education and care services to meet the needs of a majority of families and children.<sup>42</sup>

Although all provinces and territories (and some municipalities) provide subsidies for some or all costs in regulated child care for low income parents, the subsidies do not usually cover the whole fee, and exclude many eligible parents.<sup>42</sup> The result is that overall child care is a fee-paying service in Canada, and many families are not able to

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## The Canadian public expects governments to ensure that quality child care is available, accessible and affordable.

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1994–1995 data, from the National Longitudinal Survey of Children and Youth.<sup>38</sup> More recent research is needed to better understand the current situation regarding access to care.

The Childcare Resource and Research Unit at the University of Toronto recently provided an overview of early childhood education and care in Canada.

“Each of Canada’s jurisdictions has its own approach to early childhood education and care. Each has a number of programs for ‘care’, ‘education’ and for meeting other objectives such as ameliorating the effects of poverty and supporting parents. Overall, Canada does not have a national strategy for early childhood education and care (ECEC). . . . These programs, regulated child care and kindergarten (supplemented by family resource programs that are primarily intended to support parents, an assortment of cash payments to parents to pay for care, and maternity and parental leave), constitute

access high quality services due to costs.<sup>27</sup> The supply of quality child care, then, does not meet demand, and what is available to families is costly.<sup>27</sup>

A report on a survey of public perceptions of quality child care was released in 2003 by the Canadian Child Care Federation and the Child Care Advocacy Association of Canada. Nine out of 10 respondents indicated that quality child care is important to a child’s development. Of respondents, 56% rated child care in Canada as either “excellent” or “good,” while 40% rated child care as “fair” or “poor.” The Canadian public, according to 90% of survey respondents, expects governments to ensure that quality child care is available, accessible and affordable to everyone, through a nationally coordinated system of child care.<sup>43</sup>

## Early Detection and Intervention Programs

The fourth group of policies and programs related to effective parents and families explored in this chapter is early detection and intervention programs. This section highlights examples of early detection and intervention programs aimed at benefiting disadvantaged women and families.

### Montreal Diet Dispensary

The Montreal Diet Dispensary Program was begun in the 1960s to improve pregnancy outcomes in socially disadvantaged urban women. The Montreal Diet Dispensary (now also a project of the Canada Prenatal Nutrition Program) works with high-risk, poor women, including pregnant teenagers, in the Greater Montreal Area. The program begins with an initial home visit to establish a relationship and continues with education and motivation of the women through counselling. The goal is to improve the diets of these women to allow them to meet the high nutritional demands of pregnancy and reduce the chances of their baby being born with a low birth weight.

Of Montreal Diet Dispensary clients, 94% receive food supplements. In 1991, only 5% of babies born to Montreal Diet Dispensary clients had low birth weight—less than half the norm for that population.<sup>44</sup> In addition, there were reductions in problems associated with low birth weight babies and in subsequent health costs. A study based on the 1997 program budget has shown that for every \$1 spent on a Montreal Diet Dispensary client, \$8 was saved in health care costs. The study estimated that the \$6 million required to provide intervention for all of the low income pregnant women at a given time at a provincial level could be entirely recovered through reduced health care costs within 12 to 14 months.<sup>45</sup>

### Canada Prenatal Nutrition Program

The Canada Prenatal Nutrition Program (CPNP) is a comprehensive nutrition program that aims to reduce the incidence of unhealthy birth weights, improve the health of the infant and the mother, and promote breastfeeding.<sup>46</sup> More than 95% of projects target pregnant women facing risk (teens; Aboriginal women; recent immigrants; women in low income groups or in geographic isolation; women who use tobacco, alcohol, or other substances; and women who have poor access to services). Program delivery models are designed based on the needs of the community, and therefore they vary between communities. Communities are encouraged to participate in the design and delivery of the program and can select from a variety of program elements which include food supplementation, breastfeeding support, one-to-one nutrition counselling, vitamin supplements and dietary assessment, education and counselling on lifestyle issues, food preparation training, peer support, community kitchens, home visits, drop-in programs and assistance with access to services.

Data collected across 350 CPNP projects between 1996 and 2002, shows that 79% of participants started breastfeeding.<sup>46</sup> Health Canada indicates that although estimates from surveys are not directly comparable, CPNP breastfeeding rates appear to be higher than for similar at-risk groups in the general population. Strategies used to facilitate successful breastfeeding include: “peer and professional support models and collaborative partnerships with local community breastfeeding initiatives.”<sup>47</sup>



## Home Visiting

Various studies have shown that well-designed home visiting programs can improve physical, social and emotional

these new mothers: lower rates of postnatal depression, less anemia, better eating habits and higher rates of breastfeeding or use of quality substitutes.<sup>48</sup>

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## Well-designed home visiting programs can improve physical, social and emotional well-being of families.

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well-being of families.<sup>27</sup> A number of public agencies include home visiting in their basket of services. Home visiting is one of the oldest forms of public policy for families, promoted in the late 19th and early 20th centuries by social workers including Jane Adams in Chicago and Florence Nightingale in Britain. Home visiting was introduced as a way of lowering infant mortality rates and generally improving the conditions of poor families.

Home visiting is most often used with families identified as “at risk,” such as those headed by young single mothers, families with few economic resources and families that lack access to other community services. Such programs have a variety of

## Supportive Community Environments

Programs implemented to create supportive community environments tend to be varied, in large part because they are targeted to certain geographic areas (spatially defined communities) or to certain population groups (communities defined by some other criterion, such as income).

Moreover, some programs are non-government initiatives, in which the direct public policy influence can be limited. They are mounted by agencies such as the United Way, YMCA/YWCA,

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## Many local community projects depend on major contributions from volunteers.

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goals, which include promoting parenting skills, preventing child abuse and neglect, promoting healthy development and improving parents' lives by providing information about education possibilities or family planning.

An example of these programs is one created and implemented by the Montreal-Centre Regional Health and Social Services Board. Their home visiting program for low income, pregnant women who have not completed high school, called *Naître égaux — Grandir en santé* (Born Equal, Growing up Healthy), began in 1994. It involves both prenatal visits and provision of healthy food. An evaluation showed significant improvements among

community service organizations like Kiwanis and Rotary, research units, and so on, often in partnership with governments. These initiatives are sometimes supported by foundations (such as members of Community Foundations of Canada or private family foundations like McConnell, Bronfman, Laidlaw, Donner, and Atkinson), and sometimes also depend on major contributions from volunteers. These initiatives may receive only a limited portion of their funding support from the public sector.

A 2003 review, commissioned by CPHI, of a number of community mobilization programs in Canada found that all relied to a great extent on community initiative itself.<sup>27</sup> The authors concluded that reviewing these programs is difficult because many are mounted as pilot projects, with limited evaluation. Two examples of projects fostering supportive community environments are presented below.

### **Better Beginnings, Better Futures Research Project**

Better Beginnings, Better Futures began in Ontario in 1990 as a “25-year longitudinal prevention policy research demonstration project to provide information on the effectiveness of prevention as a policy for children.”<sup>49</sup> Programs were set up in socially and economically disadvantaged neighbourhoods in eight sites in Ontario: Guelph, North Kingston, Southeast Ottawa, an inner-city neighbourhood in Toronto, Walpole Island, Cornwall, Highfield and Sudbury.

To ensure comparable research findings across all sites, the government funded the Better Beginnings, Better Futures Research Coordination Unit. The research is designed to assess both short-term (five years) and long-term (10 years or more) outcomes for children and families, and to determine the processes and activities that local projects employ in their attempts to build capacity, integrate services and create more civic neighbourhoods for young children. The research unit has prepared a *Short-Term Findings Report* that includes outcome measures for over 1,400 children, their families and their neighbourhoods in the Better Beginnings sites during the first five years of program implementation, comparing them to several control sites and assessing the costs of operating the programs.<sup>49</sup>

## Key Messages

- Addressing three broad areas of intervention would likely improve early childhood development outcomes in Canada:
  - Ensuring adequate income
  - Supporting effective parents and families
  - Creating supportive community environments
- A number of programs and services have been shown to be effective, within the following four broad categories:
  - Family strengthening programs (for example, parental leave, early intervention programs)
  - Centre-based early childhood education and care programs
  - Early detection and intervention programs with outreach (for example, home visiting)
  - Community mobilization programs
- Canada’s parental leave policy is in line with some of the best practices internationally in terms of length of leave; however, Canada’s early childhood education and care programs vary considerably across the country.

A number of lessons have been learned from the experience in the eight sites. Key short-term findings were identified in seven areas:

- **Program development:** “[M]any new or improved programs for children and families, parents, schools and communities in the eight participating sites” were created.<sup>49</sup> These programs, while “typically found in middle-class neighbourhoods,” had been missing in the participating sites.<sup>49</sup>
- **Resident involvement:** Local residents had key roles in project management and decision-making, program development and program staffing.<sup>49</sup> Resident involvement contributed to reduced program costs, increased acceptance of programs, and “enhanced skills and greater employability on the part of involved residents.”<sup>49</sup>
- **Service integration:** “Significant partnerships have been established” with other “programs in social services, health and education.”<sup>49</sup> This has enabled sharing of resources and “collaboration on other family and child initiatives.”<sup>49</sup>
- **Child outcomes:** “The most frequent and consistent patterns of positive child outcomes were in the area of emotional, behavioural and social functioning.”<sup>49</sup>
- **Parent and family outcomes:** One site in particular, Highfield, had the strongest parent outcomes. “[P]arents reported

produced the difference between this site and others . . . Highfield made consistent, ongoing attempts to involve parents in their programs and in school events, and to discuss issues that arose for their children or their families.”<sup>49</sup>

- **Neighbourhood outcomes:** Some sites showed “improvement in general neighbourhood satisfaction, and improvement in housing satisfaction.”<sup>49</sup> Two sites, Guelph and Kingston, “reported improvements in community cohesion, decreased levels of deviance (alcohol and drug use, violence and theft)” among other improvements.<sup>49</sup>
- **School outcomes:** At one site “parents showed improved ratings concerning both their children’s teacher and school.”<sup>49</sup> The researchers highlight the “value of programs designed to actively forge parent-school connections and involvement” as potentially contributing to these increased ratings.<sup>49</sup>

In summarizing the findings from the evaluation, the researchers emphasized the contribution of the Better Beginnings, Better Futures program to fostering active community involvement of local residents (“a tremendous accomplishment in disadvantaged neighbourhoods”) and meaningful partnerships with other service organizations (“to respond to the locally identified needs of young children and their families, and to the needs of the neighbourhood and broader community”).<sup>49</sup>

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## Program outcomes include active involvement of community residents and meaningful partnerships with service organizations.

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fewer tension producing events, less tension juggling child care and other responsibilities, more social support, reduced alcohol consumption and increased exercise.”<sup>49</sup> The researchers “point to a distinctive feature of the Highfield program that could have

### Waterloo Region Community Action Program for Children (CAPC)

This program seeks to provide services in ways that depend on community involvement. With funds from Health Canada and with another 42 partners, it aims to direct resources to where the community has identified the most need—to preschool children who live in conditions of risk. Programs are community-based: that is, programs are designed to be accessible, include an outreach component to groups within the community, incorporate community input into decision-making and are responsive to community needs by developing community partnerships.

The program offers a variety of activities: child-focused activities (such as preschool sessions), parent-focused activities (such as workshops and support groups), family-focused activities (such as groups for children and parents) and community-development activities (such as educational workshops on a variety of topics for community members).<sup>50</sup>

An evaluation committee was created as a sub-committee of the Regional Action Team made up of representatives from the local areas, the program coordinator and a member at-large. In 2000, the Centre for Research and Education in Human Services in Kitchener-Waterloo evaluated this CAPC program, using program reports, participant intake forms and satisfaction questionnaires. It also had data on descriptions of participants involved, their roles and their level of satisfaction. The responses from participants demonstrated generally high satisfaction with the quality of CAPC in their community. Almost three-quarters of the participants, saw the programming as “excellent.” Participants reported that the program was having an impact on their children, their parenting skills and on community connectedness.<sup>50</sup>

Community involvement was a key ingredient of both the Better Beginnings, Better Futures Research Project and the Waterloo Region Community Action Program. Community involvement has also been identified as a principle of an effective program.<sup>3</sup>

## Summary

Early childhood development is critical to successful and fulfilling human development. Reports from researchers, commissions and governments reinforce the importance of early childhood development for a number of health and development outcomes over the life course. As well, a number of programs show effectiveness in contributing to enhanced health and development outcomes for children. Many interventions demonstrate effectiveness in supporting families with children at risk of developmental delay.

While Canada's length of parental leave is now in line with best practices, early childhood education and care programs vary considerably. Across Canada, there is a patchwork of policies and programs, and not all the needs of all children and families are being met. For example, the United Nations Committee on the Rights of the Child has encouraged the Canadian federal government to make child care a priority.<sup>51, 52</sup>

Although the programs that were reviewed in this chapter do demonstrate effectiveness, more and better research is needed. Many of the evaluations and assessments of programs to date are stronger on information that describes implementation and operational

processes, and weaker on providing information on the impact of programs on children's development and other outcomes, and on how the costs and benefits of different approaches compare.

More research is also needed on generalizability, as many of the programs have been applied to particular populations of children and families (those populations that are disadvantaged in some way). It is not clear whether the findings from these studies would apply to all children and families.

The evidence base for early childhood development policies and programs is promising. While more will be learned in the future from additional research in the areas discussed in this chapter, certain characteristics and principles of effective programs have been identified. These include quality; appropriate scope, comprehensiveness, duration, timing and intensity; availability and accessibility; community-driven; and accountability.<sup>3, 53</sup> Further research could enhance understanding of how best to improve the development, implementation, operation and evaluation of interventions that support healthy outcomes.

## Information Gaps: Some Examples

|                                       |   |
|---------------------------------------|---|
| <p>What do we know?</p>               | <ul style="list-style-type: none"> <li>• Early childhood development is crucial to health and well-being over the long-term.</li> <li>• A number of policies and programs have been shown to be effective in improving early childhood development outcomes; some of the key characteristics of these programs include quality, accessibility and community involvement.</li> <li>• Quality centre-based, early childhood education and care can improve children's academic skills and long-term developmental outcomes.</li> <li>• Nutrition programs, such as the Montreal Diet Dispensary, can improve children's start in life.</li> <li>• The evidence shows that economic returns to investing in young children can be high. The benefits generally outweigh the costs for the programs reviewed. For example, programs demonstrate reduced costs for health and social services later in life. Intensive child care programs, while costly, can be effective and can provide long-term benefits that exceed initial program costs, especially for high-risk children.</li> </ul> |
| <p>What do we still need to know?</p> | <ul style="list-style-type: none"> <li>• The relative effectiveness of different policies and programs that aim to improve early childhood development.</li> <li>• The effectiveness of programs intended for all children, regardless of income level or risk.</li> </ul>  |
| <p>What's happening in this area?</p> | <ul style="list-style-type: none"> <li>• Federal/Provincial/Territorial Ministers Responsible for Social Services reached an agreement in 2000 on a framework: for improving access to affordable, quality, provincially and territorially regulated early learning and child care programs and services; and for reporting regularly on child outcomes, with the next report due in 2004.</li> <li>• The Canadian federal budget of February 2003 announced an injection of \$935 million over five years to assist provinces, territories and First Nations to increase access to quality child care.</li> </ul>  |

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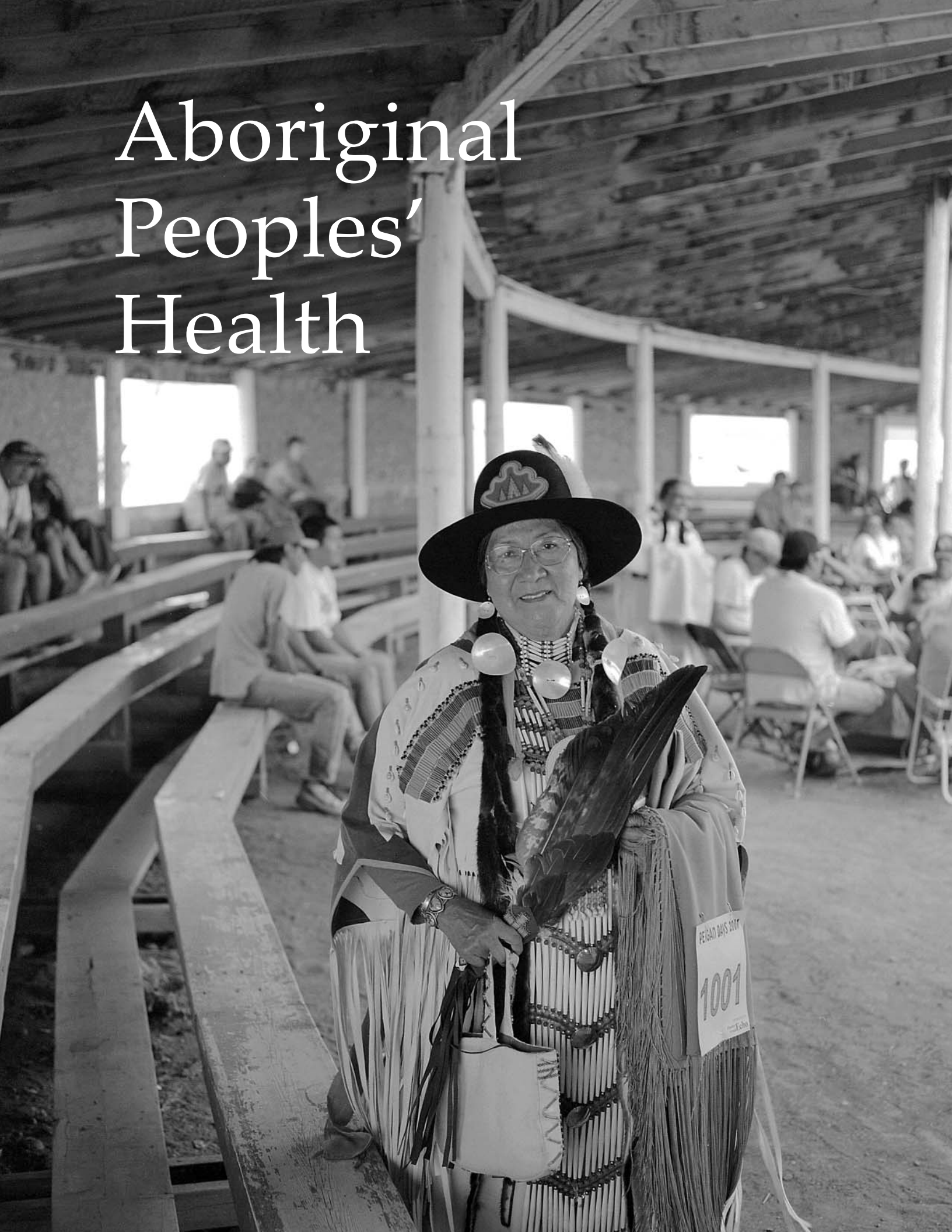


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Chapter

4

# Aboriginal Peoples' Health



**Social, economic and environmental conditions have had a profound impact 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, the provision of services such as health and education—are just some of the factors that have had a significant impact on the lives, cultures and health of Aboriginal Peoples and communities.

The contemporary health and well-being of Canada's Aboriginal Peoples must be viewed in this broad historical and social context. There are many different views among Aboriginal researchers about what affects the health of Aboriginal Peoples.<sup>1</sup> Many factors are similar to those that affect Canadians in general, but some particular factors that are often cited include colonialism and the legacy of the residential school system, the effects of climate change and environmental contaminants on the health of Inuit, and community control and self-determination.

This chapter opens with a brief demographic and health status overview of Canada's Aboriginal Peoples. Key determinants shaping the health of Aboriginal Peoples are presented. The last part of the chapter provides an overview of policy trends and future directions.

## Canada's Aboriginal Peoples

The term "Aboriginal" in Canada refers to Métis, First Nation and Inuit Peoples, as recognized in section 35 of the *Constitution Act*, 1982. According to the 2001 Census there

are over 1 million people with Aboriginal ancestry in Canada, approximately 4% of the Canadian population.

entitled to certain rights and benefits under the law. This population is referred to as Registered First Nations in this report. In 2000, 58% of Registered First Nations lived on-reserve and 42% lived off reserve.<sup>4</sup>

The First Nations population is younger than the overall Canadian population. For

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### The term "Aboriginal" in Canada refers to Métis, First Nation and Inuit Peoples.

are over 1 million people with Aboriginal ancestry in Canada, approximately 4% of the Canadian population.

Métis, First Nation and Inuit Peoples are distinct from each other and each has a unique history. There is also significant intra-group diversity. Most of the existing Canadian data on Aboriginal Peoples are derived from the Registered Indian population. This can present significant challenges in trying to understand the overall health of Aboriginal Peoples in Canada.

#### First Nations

According to the 2001 Census, First Nations people comprise approximately 62% of Canada's Aboriginal people.<sup>2</sup> There are more than 600 First Nations communities, which

example, 35% of First Nations people in 2001 were under 14 years of age, whereas 19% of the non-Aboriginal population was in this age group.<sup>2</sup>

#### Inuit

Inuit comprise approximately 5% of Canada's Aboriginal Peoples. Between 1996 and 2001, the Inuit population grew by 12%. In contrast, the total non-Aboriginal population grew by only 3.4% over this period. Seventy percent of all Inuit are at least conversationally fluent in Inuktitut and 65% of Inuit in the Arctic speak Inuktitut at home.<sup>2</sup>

The majority of Inuit live primarily in 55 communities spanning two provinces and two territories.<sup>2,3</sup> All but one of these

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### Most of the existing Canadian data on Aboriginal peoples are derived from the Registered Indian population.

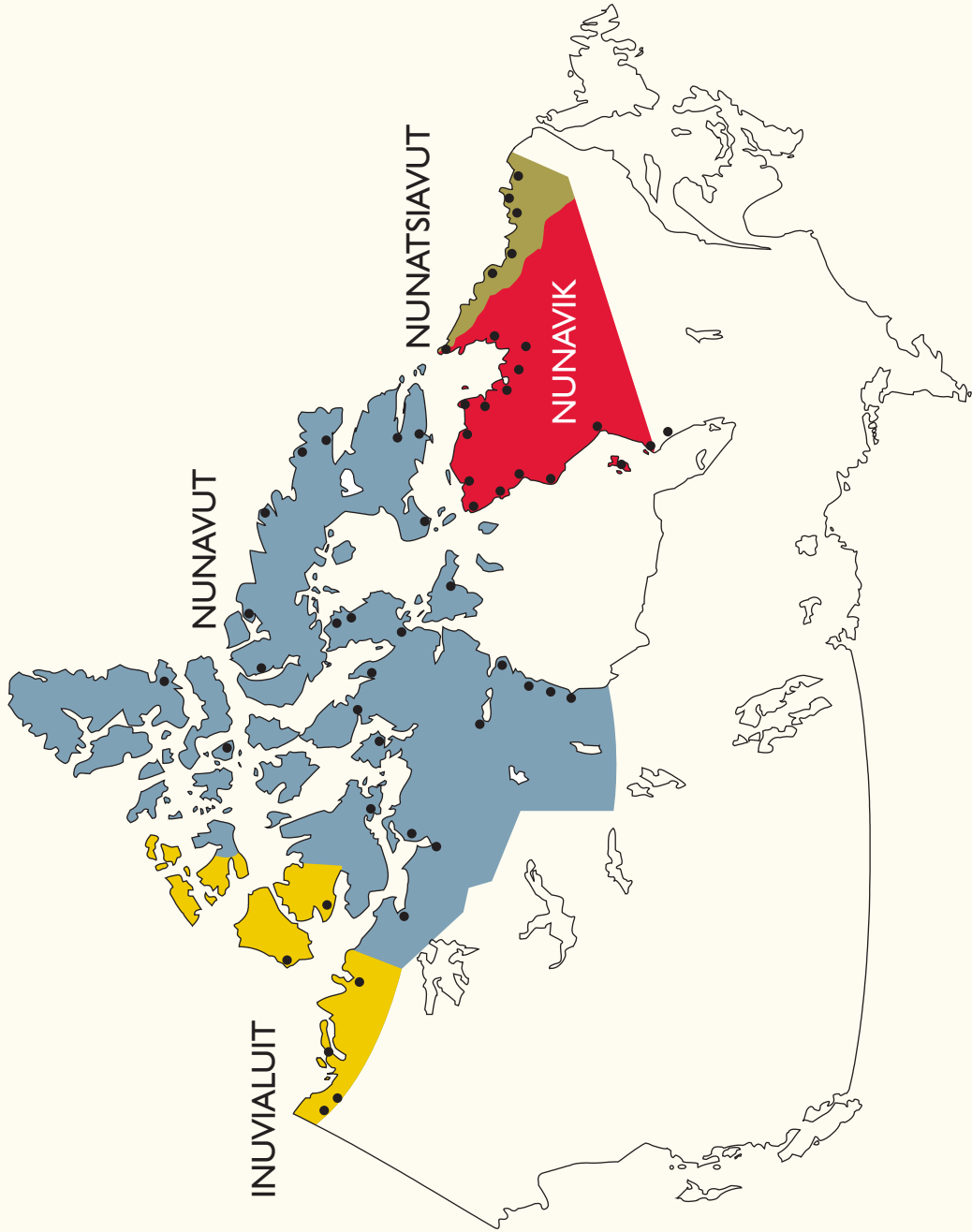
**Population Health Data on Canada's Aboriginal Peoples**  
see page 100

fall into approximately 50 culturally and linguistically distinct groups, tied to traditional land bases.<sup>3</sup> First Nations people include those who are registered under the Indian Act and known as Registered Indians or Status Indians, as well as those who are not registered and are referred to as non-status Indians. Status Indians are entitled to have their names included in the Indian Register (an official list maintained by Indian and Northern Affairs Canada) and are

communities are coastal, and virtually all are accessible by air only. Inuit communities are divided into four regions of Canada (see Figure 1):<sup>2</sup>

- Nunavut—one half of all Inuit
- Inuvialuit (Western Arctic)—about 9% of Inuit
- Nunavik (Northern Quebec)—21% of Inuit
- Nunatsiavut (Northern Labrador)—10% of Inuit

Figure 1  
Inuit  
Regions and  
Communities  
in Canada



Source: Inuit Tapiriit Kanatami. (2003). *Inuit of Canada*. Ottawa: Inuit Tapiriit Kanatami.

The land-based economy represents more than economic activity—it is an integral part of the cultural and social processes of the Inuit way of life.<sup>5</sup> Inuit have achieved success in negotiating land claims agreements, with the only remaining claim to be settled in Labrador, where an Agreement in Principle has been reached with the Government of Newfoundland and Labrador.<sup>6</sup>

## Métis

Métis people comprise approximately 30% of Canada's Aboriginal people, according to the 2001 Census.<sup>2</sup> The Métis people are a distinct Aboriginal People in Canada, set apart from First Nations and Inuit by language and cultural heritage. While ancestors of today's Métis were European men and First Nations women, their offspring forged a unique and identifiable collective of people, with a language of their own—Michif, social and political traditions and a group identity persisting before and after widespread European settlement. At present, there are few specific data, including health data, on the Métis population.

## The Distinction between Aboriginal Peoples

The distinction between groups of Aboriginal Peoples is an important part of Aboriginal reality. The distinctions have policy implications for research, for resources and for improving Aboriginal Peoples' health. Figure 2 shows the origins and historic, cultural and linguistic distinctions between Aboriginal Peoples in Canada.

Culture, language and tradition are integral to the holistic view of health held by Canada's Aboriginal Peoples.<sup>7</sup> As in many Indigenous cultures around the world, well-being is

understood as a complex inter-relationship between physical, mental/intellectual, spiritual and emotional factors.<sup>8</sup> Such elements are not arranged in a hierarchy of human needs but as equally important and necessary components of "being alive well" (the Cree concept for health).<sup>9</sup> Well-being flows from maintaining balance and harmony between all areas and with nature. This means that spiritual needs are as important as, for example, thirst.<sup>10</sup>

Given this holistic approach to health and well-being, it is not surprising that there is a close relationship between the legacy of contact between Aboriginal Peoples and non-Aboriginals, the history of assimilation policies, and the health status of Aboriginal Peoples today.<sup>11</sup> Sixty-three percent of First Nations respondents to a 2002 public opinion poll and 57% of Métis respondents identified the loss of land and culture as significant contributors to poorer health status.<sup>12,13</sup> Similarly, the 1997 First Nations and Inuit Regional Health Survey found that 80% of respondents agreed that a return to traditional ways is good for promoting wellness.<sup>14</sup>

## Key Messages

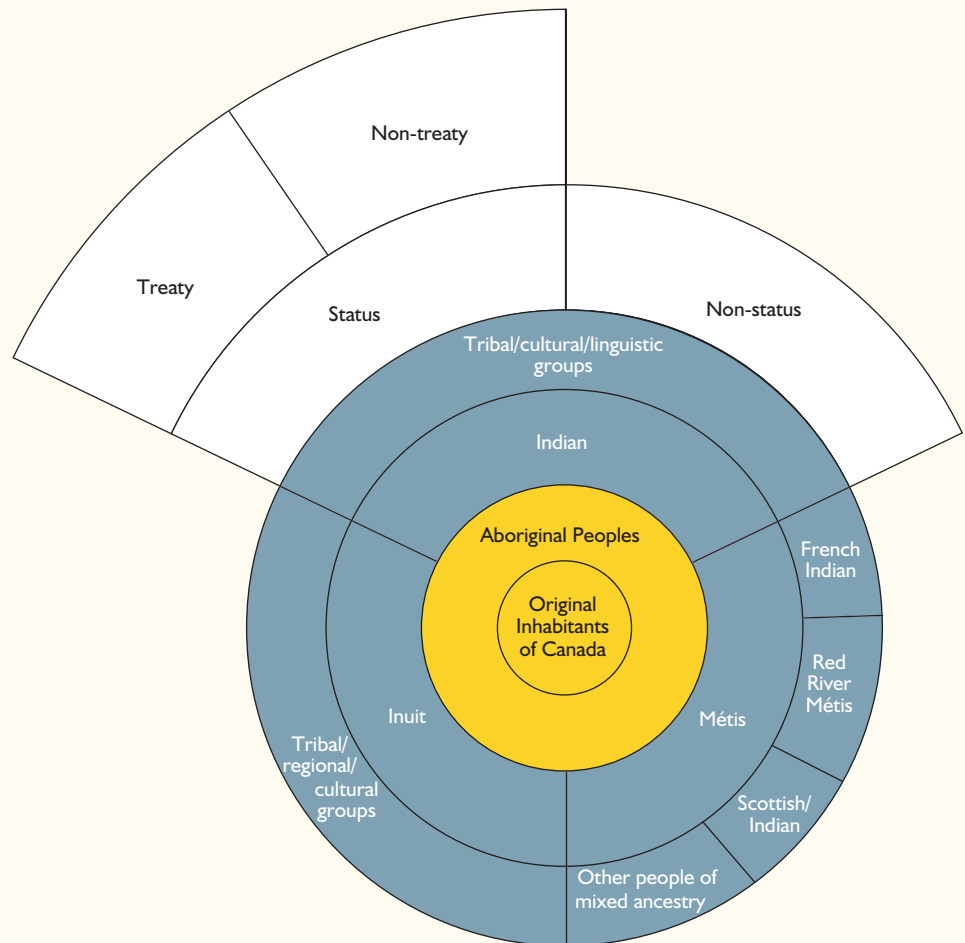
- There are more than 1 million people of Aboriginal ancestry in Canada—over 4% of the Canadian population
- Aboriginal Peoples are composed of First Nations, Métis and Inuit
- Aboriginal Peoples recognize cultural identity as fundamental to their health and well-being

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**Distinctions between groups of Aboriginal Peoples have policy implications for research, for resources and for improving Aboriginal Peoples' health.**

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Figure 2  
Aboriginal Peoples  
in Canada



Source: Manitoba Round Table on Environment and Economy. (1998). *Priorities for Action: Towards a Strategy for Aboriginal People Living in Winnipeg*. Final report, conclusions, findings and recommendations of the Manitoba Round Table on Environment and Economy Urban Aboriginal Strategy Public Consultation Process. Winnipeg: Manitoba Conservation, Government of Manitoba. <[www.gov.mb.ca/conservation/susresmb/pub/](http://www.gov.mb.ca/conservation/susresmb/pub/)>.



## Health Status of Canada's Aboriginal Peoples

Life expectancy has risen for Aboriginal Peoples, but on this and on virtually every health status measure and for every health condition, the health of First Nations, Inuit and Métis is worse than that of the overall Canadian population. The following tables and figure present some indicators of Aboriginal health.

Table 1 shows that the average lifespan of Inuit women, for example, is over 14 years less than the average for Canadian women, while for males the comparable gap is over 6 years. On average, First Nations and Inuit live 5 to 10 years less than Canadians.

There are also gaps for particular causes of mortality. For example, Inuit have infant mortality rates that are triple the all-Canadian rate. For suicide, First Nations on-reserve have double the rate of deaths compared to the all Canadian rate. For Nunavut, where 85% of the population is Inuit, the rate of deaths by suicide is over six times the Canadian rate.

Another indicator of the burden of illness is Potential Years of Life Lost (PYLL). PYLL between ages 0 and 74 is an indicator used to illustrate the effects of premature death on the population. Hence, PYLL tends to highlight those causes of death that occur in younger individuals. Figure 3 illustrates PYLL for First Nations people on-reserve.<sup>7</sup> PYLL for this population are higher for nearly all causes of death, with the exception of cancer and circulatory diseases, than for all Canadians.

The largest cause of PYLL for First Nations on-reserve is injuries. This group has 4,909 years of life lost per 100,000 population, compared with 1,271 years of life lost in the Canadian population as a whole.<sup>7</sup> The injuries category includes incidents such as suicide and self-inflicted injury, motor vehicle accidents, drowning and submersion, death from fire, homicide, and accidental poisoning by drugs, among others. The leading causes of death due to injuries for First Nations individuals under 45 are motor vehicle accidents, suicide, drowning and fire.

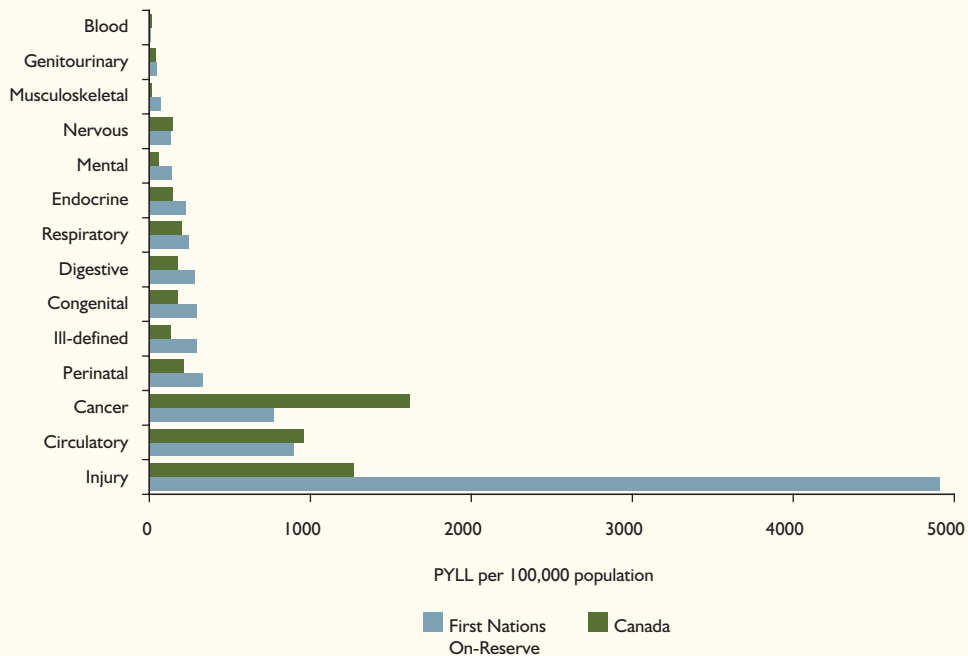
### Key Messages

- Life expectancy for Aboriginal Peoples has improved.
- The health status of Aboriginal Peoples, measured by life expectancy and many other health indicators, is much worse than the health status of Canadians as a whole.
- 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.

| Table 1<br>Health Status:<br>Life Expectancy,<br>Infant Mortality,<br>Deaths by Suicide<br>and Self-Rated<br>Health |                                 | Aboriginal Peoples<br>(non-reserve) | Canada           | First Nations<br>(on-reserve <sup>f, g</sup> )<br>Status Indians <sup>i</sup> | Inuit <sup>b, m</sup><br>(Nunavut <sup>h</sup> ) | Métis           |
|---|---------------------------------|-------------------------------------|------------------|---|--|-----------------|
|   | <b>Life Expectancy at Birth</b> |                                     |                  |   |  |                 |
|   | Female                          | n.a.                                | 82 <sup>d</sup>  | 77 <sup>i</sup>   | 68 <sup>d</sup>                                  | n.a.            |
|   | Male                            | n.a.                                | 76 <sup>d</sup>  | 69 <sup>i</sup>   | 70 <sup>d</sup>                                  | n.a.            |
| <b>Infant Mortality (per 1,000 live births)</b>   |                                 |                                     |                  |   |  |                 |
|   |                                 | n.a.                                | 5.3 <sup>j</sup> | 8.0 <sup>g</sup>  | 15 <sup>j</sup>                                  | n.a.            |
| <b>Deaths by Suicide (deaths per 100,000)</b>   |                                 |                                     |                  |   |  |                 |
|   |                                 | n.a.                                | 13 <sup>g</sup>  | 28 <sup>g</sup>   | 79 <sup>m</sup>                                  | n.a.            |
| <b>Self-rated Health Status (%)</b>   |                                 |                                     |                  |   |  |                 |
|   | Excellent/Very Good             | 56 <sup>b</sup>                     | 61 <sup>e</sup>  | 40 <sup>f</sup>   | 56 <sup>b</sup>                                  | 58 <sup>b</sup> |
|   | Good                            | 26 <sup>b</sup>                     | 27 <sup>e</sup>  | 33 <sup>f</sup>   | 32 <sup>b</sup>                                  | 25 <sup>b</sup> |
|   | Fair/Poor                       | 17 <sup>b</sup>                     | 12 <sup>e</sup>  | 27 <sup>f</sup>   | 12 <sup>b</sup>                                  | 17 <sup>b</sup> |
| All data are crude rates. Data sources are referenced at the end of the chapter.                                    |                                 |                                     |                  |   |  |                 |

Life expectancy has improved for Aboriginal Peoples but the health status of Aboriginal Peoples is worse than the health status of Canadians as a whole.

Figure 3  
**Potential Years of Life Lost (PYLL) by Cause of Death, First Nations On-Reserve and Canada, 1999**



Source: Health Canada. (2003). *A Statistical Profile on the Health of First Nations in Canada*. Ottawa: Health Canada.

The largest cause of potential years of life lost for First Nations on-reserve is injuries — four times the rate for all of Canada.

|  |   | Aboriginal Peoples <sup>c</sup><br>(non-reserve <sup>a, b</sup> )  | Canada <sup>g, h</sup> /<br>Non-Aboriginal <sup>a, c</sup>  | First Nations<br>On-Reserve <sup>g, h</sup><br>Off-Reserve <sup>b</sup><br>Status Indians <sup>c</sup> | Inuit <sup>b, c</sup><br>(Nunavut <sup>k</sup> ) | Métis <sup>b</sup><br>Métis and<br>Non-status<br>Indian <sup>c</sup> |
|--|---|--|---|--|--|--|
|  |   | <b>Body Weight (Body Mass Index, % of population)</b>  |   |  |  |  |
| Table 2<br><b>Health Conditions:<br/>Body Weight,<br/>Chronic and Infectious<br/>Diseases and Health<br/>Behaviours:<br/>Smoking</b> | Overweight  | 34 <sup>a</sup>  | 32 <sup>a</sup>   | 35 <sup>b</sup>  | 35 <sup>b</sup>                                  | 35 <sup>b</sup>  |
|  | Obesity   | 25 <sup>a</sup>  | 14 <sup>a</sup>   | 24 <sup>b</sup>  | 22 <sup>b</sup>                                  | 23 <sup>b</sup>  |
|  | <b>Chronic Diseases Prevalence Rates (%)</b>      |  |   |  |  |  |
|  | Diabetes  | 9 <sup>a</sup>   | 3 (M) <sup>h</sup><br>3 (F) <sup>h</sup>   4 <sup>a</sup>   | 11 (M) <sup>h</sup><br>17 (F) <sup>h</sup>   | 2 <sup>b</sup>                                   | 6 <sup>b</sup>   |
|  | Arthritis and Rheumatism                          | 26 <sup>a</sup>  | 16 <sup>a</sup>   | 18 (M) <sup>h</sup><br>25 (F) <sup>h</sup>   | 9 <sup>b</sup>                                   | 20 <sup>b</sup>  |
|  | Heart Problems                                    | 7 <sup>b</sup>   | 4 (M) <sup>h</sup><br>4 (F) <sup>h</sup>                    | 13 (M) <sup>h</sup><br>11 (F) <sup>h</sup>   | 5 <sup>b</sup>                                   | 7 <sup>b</sup>   |
|  | High Blood Pressure                               | 15 <sup>a</sup>  | 8 (M) <sup>h</sup><br>11 (F) <sup>h</sup>   13 <sup>a</sup> | 22 (M) <sup>h</sup><br>26 (F) <sup>h</sup>   | 8 <sup>b</sup>                                   | 13 <sup>b</sup>  |
|  | <b>Infectious Diseases (Rate per 100,000/yr.)</b> |  |   |  |  |  |
|  | Tuberculosis                                      | 21 <sup>c</sup>  | 1.3 <sup>c</sup>  | 30 <sup>c</sup>  | 92 <sup>c</sup>                                  | 5.6 <sup>c</sup>   |
|  | Chlamydia   | n.a.   | 82 (M) <sup>g</sup><br>194 (F) <sup>g</sup>                 | 532 (M) <sup>g</sup><br>1366 (F) <sup>g</sup>  | 1410 (M) <sup>k</sup><br>2918 (F) <sup>k</sup>   | n.a.   |
| <b>Health Behaviours (% of population)</b>   |   |  |   |  |  |  |
| Smoking  | 42 <sup>a</sup>                                   | 22 <sup>a</sup>  | 38 <sup>b</sup>   | 61 <sup>b</sup>  | 37 <sup>b</sup>                                  |  |
| Shaded cells indicate age adjustment.  |   |  |   |  |  |  |
| All other data are non-age adjusted.   |   |  |   |  |  |  |
| See data sources referenced at the end of the chapter for more details.  |   | Note that many of these comparisons ideally require age adjustment for true comparability, since the age structures of the Aboriginal and Canadian/non-Aboriginal populations are different. Data for doing this, however, are not consistently available. |   |  |  |  |

Diversity within the Aboriginal population is also apparent. For example, rates of diabetes are higher for First Nations.

Comparable PYLL data by age group for Métis or Inuit currently do not exist. However, in Nunavut the potential years of life lost due to unintentional injury is nearly four times the national rate (2,686 years lost per 100,000 population compared to 725) and PYLL due to suicide is more than seven times the Canadian rate (3,359 versus 450), based on 1996 data.<sup>15</sup> A small reduction in injury rates among First Nations populations on-reserve and in Nunavut would significantly decrease PYLL.

## Key Determinants of Health

There are a range of determinants of Aboriginal Peoples' health that contribute to the health status of Aboriginal Peoples. This section presents evidence on selected key determinants. Table 3 compares social and economic determinants for non-reserve Aboriginal Peoples, Canada / non-Aboriginal people,

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### Poorer social and economic conditions faced by Aboriginal Peoples could be contributing to their lower health status relative to non-Aboriginal people in Canada.

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Table 2 highlights selected indicators of health conditions and behaviours for Aboriginal Peoples in comparison to the all-Canadian or non-Aboriginal population. With the exception of diabetes and arthritis and rheumatism among the Inuit, non-reserve Aboriginal Peoples, on-reserve First Nation Peoples, Inuit and Métis fare worse on all of the indicators presented. Aboriginal Peoples have a higher burden of chronic and infectious disease and higher rates of obesity. At least twice as many Aboriginal Peoples smoke compared with non-Aboriginal people.

Diversity within the Aboriginal population between First Nations on-reserve, Inuit and Métis is also apparent in Table 2. Rates of diabetes are higher for First Nations than Inuit or Métis. Tuberculosis rates for Inuit are three times the rates for First Nations and 70 times higher than the rate for non-Aboriginal Canadians. Similarly, chlamydia rates are far higher in Nunavut than for First Nations on-reserve and the prevalence among these two populations is 6 times higher than the prevalence in the all-Canadian population.

Registered First Nations, Nunavut and Métis. This is followed by evidence on four frequently cited determinants of Aboriginal health: the relationship between housing and health, the legacy of residential schools, climate change and contaminants affecting Inuit and community control/self-determination.

## Selected Social and Economic Determinants of Aboriginal Peoples' Health

Table 3 shows that the social and economic status of Aboriginal Peoples is lower than that of non-Aboriginal Canadians on virtually every measure. Educational attainment is lower, fewer people are employed, and average incomes are lower. The poorer conditions faced by Aboriginal Peoples could be contributing to their lower health status relative to non-Aboriginal people in Canada.

| Table 3<br>Education,<br>Work Status<br>and Income   |   | Aboriginal Peoples | Non-Aboriginal Canadians | First Nations * | Inuit ** | Métis ** |
|--|---|--------------------|--------------------------|-----------------|----------|----------|
|  | <b>Highest Degree, Certificate or Diploma (% 15 Years and Over)</b> |                    |                          |                 |          |          |
| No Degree, Certificate or Diploma  | 52  | 33                 | 55                       | 66              | 46       |          |
| High School Graduation Certificate   | 18  | 23                 | 17                       | 11              | 20       |          |
| Trades or College Graduation (or Univ Cert. Below Bachelor's)  | 25  | 29                 | 24                       | 21              | 28       |          |
| Bachelor's Degree Graduation   | 4.4   | 16                 | 4.1                      | 1.9             | 5.3      |          |
| <b>Work Status (% 15 Years and Over)</b>   |   |                    |                          |                 |          |          |
| Unemployment Rate  | 19  | 7                  | 22                       | 22              | 14       |          |
| Worked Full Year, Full Time  | 26  | 37                 | 23                       | 23              | 31       |          |
| <b>Income (% 15 Years and Over)</b>  |   |                    |                          |                 |          |          |
| Low Income in 2000   | 34  | 16                 | 40                       | 24              | 28       |          |
| <p>Source: Statistics Canada. (2003). <i>2001 Census</i>. Custom Tabulation. Data are not age-standardized.</p> <p>* Based on the 2001 Census where "North American Indian" was the response category. Responses that identified with multiple Aboriginal groups are not included.</p> <p>** Responses that identified with multiple Aboriginal groups are not included.</p> |   |                    |                          |                 |          |          |

The social and economic status of Aboriginal Peoples is lower than that of non-Aboriginal Canadians on virtually every measure.

## Housing and Health

The Canada Mortgage and Housing Corporation uses the term “core housing need” to classify housing that does not meet accepted standards of adequacy, suitability or affordability.\* In 1996, 34% of off-reserve First Nation households, 27% of Métis

Figure 4 presents findings from a 1999 Health Canada study showing an association between rates of tuberculosis and the number of people per room in a dwelling.<sup>7</sup> Throughout the 1990s, the age-standardized rate of tuberculosis in First Nations communities was at least seven times higher than the rate for Canada as a whole

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## Throughout the 1990s, the rate of tuberculosis in First Nations communities was at least seven times higher than the rate for Canada as a whole.

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households and 33% of Inuit households were found to be in core housing need. This compares with 18% of non-Aboriginal households in core housing need.<sup>16</sup>

More specifically, Aboriginal Peoples often live in homes that are crowded.† The 2001 Census reported 17% of Aboriginal people living in crowded conditions compared to 7% of the total Canadian population.<sup>8</sup>

Research has found associations between poor housing conditions and a host of health problems but for First Nations and Inuit communities there is not enough evidence to support a direct causal link.<sup>7</sup> For example, poor construction, insulation and ventilation can lead to mould growth, which can lead to health problems such as respiratory and immune system complications.<sup>7,17</sup> A 1997 study found that household crowding, a lack of piped water and inadequate sewage disposal were significantly associated with an increased incidence of shigellosis (a highly infectious diarrheal disease) for First Nations people living on-reserve.<sup>18</sup>

(62 per 100,000 in 1999 versus 5.9 per 100,000 in 1999).<sup>7</sup> The 2001 Aboriginal Peoples Survey reported that 53% of Inuit lived in crowded conditions; 3.6% had tuberculosis.<sup>8</sup>

## The Legacy of Residential Schools

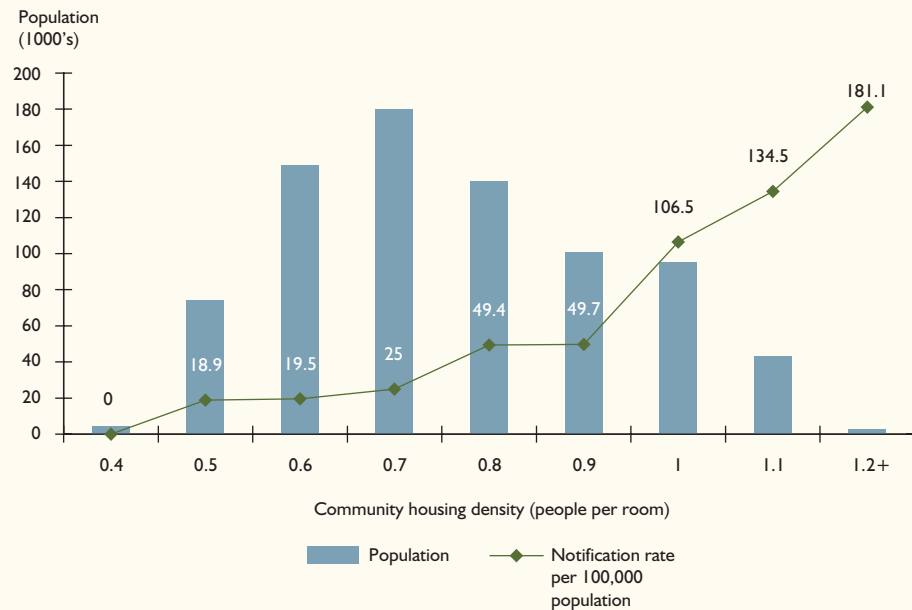
The Aboriginal Healing Foundation estimates that there are 93,000 former residential school students alive today.<sup>19</sup> The residential school system officially began in 1892.<sup>19</sup> Most of these schools ceased to operate by the mid-1970s; however, the last federally run residential school in Canada closed in 1996.<sup>20</sup> As noted in the Royal Commission on Aboriginal Peoples, the residential school system was based on the policy of assimilation, which was designed to “civilize” Aboriginal Peoples through the socializing power of education.<sup>11</sup> Children were removed from their homes and placed in isolated institutions funded by the federal government and operated largely by churches (Anglican, Roman Catholic, Methodist and Presbyterian).<sup>19</sup> Researchers have documented the conditions within residential schools and they were considered, in most cases, places of “physical, emotional

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\* Canada Mortgage and Housing Corporation’s full definition of “core housing need” is “housing that falls below at least one of the adequacy, suitability or affordability standards, and occupants would have to spend 30% or more of their income to pay the average rent of alternative local market housing that meets all three standards.” Homes in “adequate condition” do not require major repairs; “suitable homes” have enough bedrooms; and “affordable homes” are those where rent is less than 30% of before-tax household income.

† The Aboriginal Peoples Survey defines crowding as one or more people per room.

Figure 4  
Total  
Population  
and  
Tuberculosis  
Notification  
Rates, by  
Community  
Housing  
Density,  
1997 to 1999



Source: Health Canada. (2001). *Tuberculosis in First Nations Communities, 1999*.  
Ottawa: Minister of Public Works and Government Services.

There is an association between rates of tuberculosis and number of people per room in a dwelling.



and intellectual deprivation.”<sup>19</sup> They also note that children were forbidden to speak their own language and practise their traditions and beliefs.<sup>11, 19, 21</sup> This forced assimilation led to a loss of culture and language that weakened the collective identity of Aboriginal Peoples.<sup>11</sup> In 1998, the federal government acknowledged in an apology that, “some children were the victims of physical and sexual abuse.”<sup>22</sup>

Research studies have been unable to isolate the specific effects of residential schools on the long-term health outcomes of former residential school students.<sup>21</sup> Other factors affecting health (for example, inadequate education, employment and income) make it difficult to assess the specific impact of

## 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, however, because it affects a cornerstone of Inuit life and culture: the harvesting and eating of traditional or “country” food. Research findings show substantial nutritional benefits from traditional food even though only 6% to 40% of total dietary energy comes from this source.<sup>23</sup> It has more protein, iron and zinc than imported food, and shifting away from this traditional diet has been linked to diabetes, cardiovascular disease and obesity.<sup>23</sup>

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**Climate change research suggests that considerable changes are already occurring in the northern regions of Canada. Several features of climate change could have direct negative impacts on Inuit health.**

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attendance at residential schools.<sup>21</sup> Nevertheless, researchers suggest that the population health consequences of the residential school experience have been considerable.<sup>3, 11, 19, 21</sup>

The residential school system has left an intergenerational legacy where traditional means of educating and parenting were lost, and in many cases extended families were destroyed.<sup>21</sup> Two recent surveys from the National Aboriginal Health Organization found that 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.<sup>12, 13</sup>

Climate change research suggests that considerable changes are already occurring in the northern regions of Canada. For example, an average warming of 1.5°C has been recorded in the Western Canadian Arctic over the past 40 years.<sup>24</sup> Central Arctic temperatures have increased by 0.5°C over the same period. The globally averaged surface temperature is projected to increase 1.4°C to 5.8°C in the period 1990 to 2100 according to the Intergovernmental Panel on Climate Change, a major international scientific collaboration established in 1988 by the World Meteorological Organization and the United Nations Environment Programme.<sup>25</sup>

Several features of climate change could have direct negative impacts on Inuit health:

- Exposure to thermal extremes, altering rates of illness and death related to heat and cold<sup>26</sup>
- Changes in weather patterns, increasing the impact of natural disasters and the frequency of extreme climatic events. This can potentially lead to increases in injuries and homelessness.<sup>27</sup>
- Increased exposure to ultraviolet rays, increasing risk of skin cancers and eye damage<sup>27</sup>

Inuit are also threatened by environmental contaminants that have bioaccumulated in Arctic wildlife.<sup>28</sup> Research has found the following potential impact of contaminants on Inuit health:

- 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 the tolerable daily intake or provisional tolerable daily intake levels set by Health Canada and the World Health Organization. High-end consumers (95th percentile) had intake levels 6 times higher for mercury and over 20 times higher for chlordane and toxaphene.<sup>29</sup>
- In 2003, Inuit mothers had levels of oxychlordane and *trans*-nonachlor pesticides that were 6 to 12 times higher than those in Caucasians, Dene (First Nations) and Métis or other ethnicities.<sup>23</sup>
- Inuit mothers have markedly higher levels of mercury in their blood than other ethnic groups.<sup>23</sup>
- Inuit mothers have higher levels of polychlorinated biphenyls than Caucasian, Dene (First Nations) and Métis mothers.<sup>23</sup>

While researchers continue to monitor the state of the Arctic environment, Inuit continue to harvest and consume traditional food partly because there is concern that shifting to store-bought food could also threaten the health of Inuit.<sup>23</sup> Hunting, fishing and gathering wild resources and the subsequent sharing of these resources through-out the community have been identified as important contributors to the health and well-being of Inuit.<sup>23</sup>

## Community Control/ Self-Determination

The Royal Commission on Aboriginal Peoples (RCAP) and *Gathering Strength: Canada's Aboriginal Action Plan*, the federal government response, recognized the importance of Aboriginal Peoples gaining control of their destinies.<sup>30, 31</sup>

*“Lack of control over important dimensions of living in itself contributes to ill health. Aboriginal People want to exercise their own judgement and understanding about what makes people healthy, their own skills in solving health and social problems.”<sup>30</sup>*

Research has provided evidence to substantiate the link between the degree of control held by a community and individual health status.<sup>32</sup> In a 1998 study on youth suicide in British Columbia First Nations, researchers found that “communities that have taken active steps to preserve and rehabilitate their own cultures are shown to be those in which youth suicide rates are dramatically lower.”<sup>32</sup>

“Cultural continuity” is the concept used to describe efforts to preserve and promote cultural practices and to control and manage available resources in the face of acculturative forces.<sup>32</sup> In this study, the degree of cultural continuity in individual First Nations communities within British Columbia was related to the number of suicides in those communities.<sup>32</sup> The following markers were used to create the index of cultural continuity: 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 (see Figure 5).

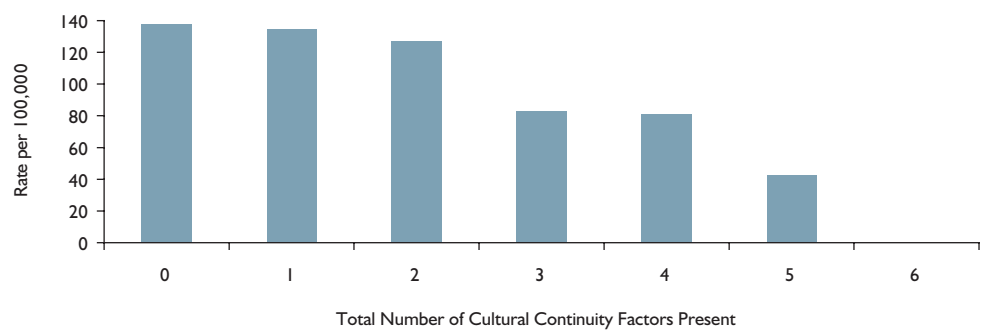
Another study identified “internal moral authority” as a key variable in ensuring community health.<sup>10</sup> Internal moral authority is the existence of a collectively agreed upon and enforced set of standards of acceptable behaviour. The study reported that establishing internal moral authority enabled one community, Hollow Water First Nation in Manitoba, to bring an end to high rates of physical and sexual abuse.<sup>10</sup>

A 13-step healing process called Community Holistic Circle Healing (CHCH) is now in place in Hollow Water for victims of sexual abuse, offenders, families of victims and offenders and the community.<sup>33</sup> Agreements have been negotiated with federal and provincial policing, justice, corrections, social and health services to support the role of the CHCH. The healing process has been used with over 100 abusers since its inception in 1989.<sup>34</sup> There is a strong emphasis on accountability of abusers to their victims, the families and the community. A cost-benefit analysis of CHCH by the Solicitor General of Canada and the Aboriginal Healing

## Key Messages

- In general, the social, economic and environmental conditions of Aboriginal people are worse than those of non-Aboriginal people. These include education, work status, income, housing, water and sewage systems and nutritional options that are readily available and affordable
- 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 frequently cited factors affecting the health of Aboriginal Peoples

Figure 5  
Youth Suicide Rates among B.C. First Nations, by Number of Cultural Continuity Factors Present in the Community



Source: Chandler M. J., Lalonde C. (1998). Cultural continuity as a hedge against suicide in Canada's First Nations. *Transcultural Psychiatry*, 35, 191-219.

In a study on youth suicide in British Columbia First Nations, researchers found that youth suicide rates were lower in communities that had taken “active steps to preserve and rehabilitate their own cultures.”

Foundation found significant financial savings: “combined, for every \$2 the provincial and federal government spends, the community receives [from] \$6.21 to \$15.90 worth of services and value-added benefits.”<sup>34</sup> An additional benefit to governments and the community is the low recidivism rate: less than 2% during the past 10 years (2 out of 107) offended again.<sup>34</sup> This compares with a recidivism rate for sexual

## The Royal Commission on Aboriginal Peoples and the Federal Government Response

In 1996, the Report of the Royal Commission on Aboriginal Peoples (RCAP) was released with 440 recommendations. The RCAP report proposed a broad agenda for fundamental changes to the relationship between

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offenders in Canada as a whole of 13%, and for any form of recidivism, a rate of approximately 36%. The analysis also found considerable change in the community. For example, there were more people completing their education, better parenting skills, greater empowerment of individuals in the community, an increased sense of safety, a return to traditional ceremony, and a decrease in violence.<sup>34</sup>

## Policy Trends and Future Directions

There have been many policy developments since the release of the Royal Commission on Aboriginal Peoples in 1996. The recommendations of the Commission and the federal government response, national and local / community level policy trends as well as future directions for improving Aboriginal health status are provided.

Aboriginal Peoples and non-Aboriginal people and governments in Canada. Action was called for in four areas: healing, economic development, development of human resources and institution building.<sup>11</sup> The RCAP health strategy was based on four principles:

- “Equitable access to health services and equitable outcomes in health status
- Holistic approaches to treatment and preventive services
- Aboriginal control over services
- Diversity of approaches that respond to cultural priorities and community needs”<sup>11</sup>

In response to the Royal Commission, the federal government released Gathering Strength: Canada’s Aboriginal Action Plan. In the plan, the government stated:

“This means developing practical arrangements for self-government that are effective, legitimate and accountable; that have the strength to build opportunity and self-reliance; and that can work in a coordinated manner with other governments.”<sup>31</sup>

Acknowledging that health comes from shared prosperity, a clean and safe environment, a sense of control over life circumstances, high-quality health care and healthy lifestyle choices, the federal government plan stated that better health will grow out of long-term structural changes. In the short term, a number of actions (very similar to RCAP's health strategy) were identified to improve the health system for Aboriginal Peoples:

- Pass the levers of control to Aboriginal People
- Take a holistic approach to personal and social health
- Provide diverse services that respond to the cultures and priorities of Aboriginal People and to the special dynamics of Aboriginal ill health
- Bring equality in health status to Aboriginal People<sup>31</sup>

## What Has Happened Since 1996?

### National Level Policy Trends

Three key changes focusing on population health have occurred nationally: the creation of institutions by and for Aboriginal Peoples, new relations and roles within programs to address Aboriginal health issues, and new mechanisms to gather information on Aboriginal health status.

The new institutions include the following:

- The National Aboriginal Health Organization, created in 2000, is a body designed and controlled by Aboriginal People. Its mandate is to influence and advance the health and well-being of Aboriginal Peoples through knowledge-based strategies.

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**Three key changes have occurred nationally: the creation of institutions, new relations and roles within programs, and new mechanisms to gather information on Aboriginal health status.**

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Funding of \$350 million was dedicated to the Aboriginal Healing Foundation (described below), an expanded Headstart Program (preschool education centres), a Housing Innovation Fund, additional water and sewer projects and support for the creation of the National Aboriginal Health Organization (NAHO). There is also acknowledgement of the need to improve health data on Aboriginal Peoples.<sup>35</sup>

- The Institute of Aboriginal Peoples' Health, one of the 13 institutes of the Canadian Institutes of Health Research, was established in June 2000. It supports research to address the special health needs of Canada's Aboriginal Peoples.
- The Aboriginal Healing Foundation, created in 1998, is the first national Aboriginal organization to support healing processes that specifically address the impact of the residential school system.

The processes and types of programs addressing the needs of Aboriginal Peoples have shifted over the last seven years, and more of them have taken a partnership approach. For example, the Aboriginal Diabetes Initiative is led by a national steering committee comprising six Aboriginal organizations.<sup>36</sup> Also, the federal government has initiated programs to address homelessness, including the Urban Aboriginal Strategy.

Developments have also addressed the lack of health data on Aboriginal Peoples:

- The First Nations Regional Longitudinal Health Survey was conducted first in 1997 and repeated in 2002–2003. It is the first such health survey conducted entirely by and for Aboriginal Peoples.
- The second key development is the Aboriginal Peoples' Survey by Statistics Canada. Conducted first in 1991, the 2001 survey has an Inuit supplement and a Métis supplement.

### Local/Community Level Policy Trends: Transfer of Authority

At the local/community level, the most significant development is the shift in authority in delivering services from the federal, provincial and territorial governments to First Nations, Inuit and, to a lesser extent, the Métis. The transfer of authority has occurred in two ways. One is through the settlement of self-government and land claim agreements (for First Nations and Inuit). Between April 1970 and September 2003, a total of 1,216 self-government, land claim and other claims were under negotiation with the federal government.<sup>37</sup>

The other way this change is occurring is on a piecemeal basis through transfer agreements that shift authority over the delivery of programs by sector, primarily in social services and health. Provinces have been transferring responsibility for foster care for children to Aboriginal Peoples since

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## Programs addressing the needs of Aboriginal Peoples have shifted over the last seven years.

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- In 2002, a First Nations Statistical Institute was proposed by the federal government with the mandate and authority to provide statistical information and analysis of social and economic conditions of First Nations Peoples.

It should also be noted that there are many positive developments at the provincial/territorial level in research capacity building and Aboriginal–academic partnerships.

the 1980s. As of March 2001, 83% of First Nations communities were involved in the First Nations Inuit Health Branch Health Transfer Program for health services.<sup>35</sup> This includes promotion and prevention programs such as community nursing, community health representatives, health education, nutrition, environmental health services, alcohol and drug abuse prevention and prenatal nutrition.<sup>35</sup>

Through a 2002 case study analysis, the National Aboriginal Health Organization identified a number of communities where the transfer of control over health services has created “responsive, sustainable,

the federal government to the band; better utilization of physicians, hospitals and prescription drugs; integration of doctor-based services with the community health programs; and the establishment of links with

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## NAHO identified a number of communities where the transfer of control over health services has created “responsive, sustainable, accessible and client-focused” health systems.

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accessible and client-focused” health systems.<sup>38</sup> Two examples are provided here. The first is a community-level, comprehensive model of an Aboriginal health system. The second is a regionally based, partial assumption of authority in the Métis settlements in northern Alberta.

### Eskasoni First Nation

The Eskasoni First Nation in Nova Scotia took control over health services in their community by creating community-based, integrated services. The Eskasoni Primary Care Project was implemented in 1999, involving multi-sectoral collaboration between the Eskasoni Band Council and three partners: the federal government (Health Canada’s Health Transition Fund), the provincial government and Dalhousie University’s Department of Family Medicine. A new facility was built to house the Eskasoni Health Centre.<sup>39</sup> A 30-year tradition of a family doctor holding regular clinics on a fee-for-services basis was changed to an integrated public health/primary care model with salaried physicians. Under the new model, access to health services expanded to five days per week. The primary care team was diversified to include a primary care nurse, community health nurses, prenatal care coordinator, health educator/nutritionist and pharmacist.<sup>38</sup>

According to an evaluation report, the Primary Care Project initiated a number of new initiatives including “the continuing transfer of health care administration from

the regional health centre.”<sup>40</sup> The Project also improved the efficiency and effectiveness of programs.<sup>40</sup> After nine months under the new primary care model, a project evaluation found the following changes:<sup>41</sup>

- The per-capita number of physician visits decreased from 11 per year in 1997 to 4 per year in 2000
- Outpatient/emergency visits at the regional hospital were estimated to have declined by 40% from 1997 to 2000.
- At present, 96% of all pregnancies are followed from prenatal care through delivery and post-natal care (in 1997 most women received no prenatal care and presented to hospital with no patient history or indication of continuity of care)
- Physician referrals to the team health educator/nutritionist for diabetic management and prenatal care increased between July 1999 and January 2001 by 850%
- The cost of prescribed items decreased by 7% despite a 10% increase in population
- There was a saving of \$200,000 in the medical transportation budget due to the increased availability of health services in the community

Of patients surveyed, 89% believed that the quality of health services in Eskasoni had improved in 2000 in comparison with five years earlier.<sup>41</sup> Long term benefits and costs are yet to be determined.

### Métis Settlement Health Project

In northeastern Alberta, a project called Health for All, funded by Health Canada's Health Transition Fund, improved health services to Métis Settlements in the Lakeland Regional Health Authority.<sup>40</sup> A Community Health Council for the four Eastern Métis Settlements was established in 1997 to work with the regional health authority on this project.<sup>39</sup>

Not enough time has elapsed for the program to identify changes in health status, but preliminary assessments suggest:<sup>42</sup>

- Improved access to mental health and other health authority services<sup>43</sup>
- Improved rates of immunization, breastfeeding and oral health<sup>39</sup>
- Increased knowledge of health issues<sup>43</sup>
- Improved and earlier identification, testing and treatment of diabetes<sup>44</sup>
- Up to 83% of clients felt that on-site nursing service was very important and helpful in improving personal or family health<sup>38</sup>

According to the 2002 case study, "the Settlements increased their capacity to take charge of their own needs."<sup>38</sup> Permanent funding for four on-site settlement nurses was secured based in part on these early successes. Evaluations suggest that primary

Other First Nations have had similar success in gaining authority over health services. For the Kahnawake First Nation in Quebec, the Nisga'a in British Columbia, as well as Inuit in Labrador and in Nunavik, a health authority was established and given partial or full authority for administering health services. An advantage in the Nisga'a case is block funding, which allows for administrative flexibility to change programs and be responsive to community needs. Benchmarks and goals are tools used by the community to monitor effectiveness, and a strong budgetary system is designed to track value-for-money on a program-specific basis.<sup>38</sup> The following key factors were identified as contributors to positive change in Aboriginal health systems:<sup>38</sup>

- Aboriginal ownership and control
- A focus on primary care
- Linkages with the provincial health system
- Integrated service delivery
- A holistic focus and integration of traditional approaches with mainstream care

Many experts suggest that transfer of authority is an important and necessary step in improving the health of Aboriginal Peoples. Further assessments of these changes will need to be made to understand the nature and extent of health outcome effects.

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health care, public health and home care programs in the communities have been improved through community involvement and partnerships. The collaborative partnership established over a five-year period between the Métis Settlements and the Lakeland Regional Health Authority enabled joint action to be taken to improve the health status of Métis settlement residents.<sup>39</sup>



## Future Directions for Improving Health Status

A range of programs from federal departments, provincial and territorial governments and Aboriginal governments and organizations at the local level address various determinants of health. There is, however, very little information on the specific effects of the programs on health status.<sup>35</sup>

The challenge to improving the health of Aboriginal Peoples involves many issues and questions. One of these faces many communities: How can a balance be struck between the need to address urgent social and health problems and the need to address underlying determinants of health?

At a First Nation, Inuit and Métis health forum held in June 2002, composed of leading thinkers and decision-makers from across the country, participants proposed a health system based on the following vision:<sup>38</sup>

- A paradigm shift from an illness-based model to one that is population-based and stresses prevention and individual decision-making and responsibility for health
- A holistic framework where health services are interconnected with social services, education, housing, economic development, justice/policing and other community services
- Local governance and Aboriginal involvement in all aspects of the health system, from design and implementation to administration and evaluation
- Decisions regarding services and traditional medicine to be determined by community needs and preferences
- Long-range planning, supported by stable, long-term financing

Reports on the reform of Canada's health system released in late 2002 also addressed the health needs of Aboriginal Peoples and called for a new approach to addressing Aboriginal health.<sup>45, 46</sup> The report of the Standing Senate Committee on Social Affairs, Science and Technology (the Kirby report) and the report from the Commission on the Future of Health Care in Canada (the Romanow report) reiterated the problems identified by Aboriginal Peoples. Particular problems identified included the fragmentation of services due to jurisdictional barriers and access issues due to divisions among Aboriginal

### Key Messages

- A number of initiatives are underway that may improve health for Aboriginal Peoples:
  - Creation of new institutions
  - Increased investments and development of programs and community infrastructure
  - Investment in Aboriginal research and the development of information infrastructure and tools
  - Transfer of authority and control to Aboriginal Peoples
- A better understanding of health and what works to improve the health of Aboriginal Peoples is required

Peoples, leaving some, such as the Métis and non-status Indians, in a jurisdictional void. The Kirby report called for the federal government to take a leadership role in developing a comprehensive national action plan on Aboriginal health. The Romanow report echoed this idea, recommending that existing resources be consolidated to create an Aboriginal Health Partnership. The goal would be to tackle “the root causes of health problems for Aboriginal people” through a focus on improving the health status of Aboriginal Peoples and overcoming administrative and jurisdictional barriers to health care services.<sup>46</sup>

## Summary

Based on the best available data, Aboriginal Peoples have lower health status than Canadians as a whole. Although many individuals are doing well, as a population Aboriginal Peoples die earlier and suffer a greater burden of illness than other Canadians. A review of key determinants of health shows that Aboriginal Peoples are worse off on social and economic measures. In addition to housing, three other influences important for Aboriginal Peoples' health are addressed in this

impact of this development along with the broad range of programs addressing determinants of health requires greater evaluation. The creation of national Aboriginal institutions has established some of the necessary infrastructure to move forward on this work in partnership with non-Aboriginal people and organizations.

Two needs arise from this review—better data for surveillance and evaluation, and action to address the determinants of health.

## The Need for Better Data

Noted throughout this chapter is the lack of consistent, comprehensive and comparable data on Aboriginal Peoples. Data from the 2002–2003 First Nations Regional Longitudinal Health Survey and the 2001 Aboriginal Peoples Survey help fill this gap. The latter will include special reports on residential schools as well as data from supplemental surveys for Inuit and Métis. Nonetheless, there remains a need to stabilize and expand the current data infrastructure. Given the divergent histories and experiences of Canada's Aboriginal Peoples, First Nations data alone do not provide an adequate indicator of the health status of all three recognized Aboriginal groups.

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## Aboriginal Peoples die earlier and suffer a greater burden of illness than other Canadians.

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chapter: the impact of residential schools, the impact of climate change and environmental contaminants, and the relationship between community control/self-determination and health outcomes.

Over the past seven years, national commissions have recommended significant changes in public policy and directions. The shift in authority for health services was highlighted as an example of progress in improving health status. However, the

The National Aboriginal Health Organization has recommended that mechanisms be developed to systematically collect and analyze longitudinal Aboriginal health information.<sup>47</sup> Specifically, five priority information needs have been identified:<sup>35</sup>

1. Development of health information systems for Métis
2. Estimates of current and projected demographic changes
3. Information about the ongoing incidence and prevalence of the full range of identified diseases and conditions (there is currently an emphasis on communicable and some chronic diseases)
4. Investigation of new trends and emerging issues
5. Monitoring of environmental quality (water, air, land and food sources)

The National Aboriginal Health Organization has also identified key issues for Aboriginal health information systems:<sup>35</sup>

- Ownership of information
- Confidentiality in small communities
- Identification of the population through ethnic identifiers
- Jurisdictional differences among governments that collect information on Aboriginal Peoples
- New relationships among researchers, Aboriginal organizations and federal and provincial/territorial governments
- Human capacity and infrastructure development to collect and use information

Information needs are particularly pertinent “as more Aboriginal organizations gain control over health programs and require health information to respond to community health needs.”<sup>35</sup> The ability to establish benchmarks will allow communities to monitor the impact of gaining authority over service delivery. Better information will also enable communities to monitor and evaluate the effectiveness of programs designed to improve health status.

## The Need to Address the Determinants of Health

For health gains to be achieved, Aboriginal communities need the resources and capacity to be able to move beyond responding to crises and begin to address the determinants of health. An Inuit report stated that:

“Until housing shortages are gone, until there is an economy that can support the growing number of young people reaching working age, until the education system can produce more high school graduates, and until a wide range of post-secondary opportunities are available in the north, the situation is unlikely to change.”<sup>48</sup>

Similarly, a Manitoba report found that higher utilization of health care services by First Nations people meant “the system appears to be responding to the needs of those in poorer health, which is good news. The bad news is that poorer health is not likely due to a lack of health care services.”<sup>49</sup>

Certainly the data on health determinants suggest that ongoing improvements to the health status of Aboriginal Peoples will require action on the broader factors that lead to ill health. Frequently cited examples include social and economic status (educational attainment, employment and income), environmental conditions, and self-determination.

## Information Gaps: Some Examples

|                                       |  |
|---------------------------------------|--|
| <p>What do we know?</p>               | <ul style="list-style-type: none"> <li>• The health status of Aboriginal Peoples has been improving but is substantially lower than the Canadian average.</li> <li>• Aboriginal Peoples are worse off than other Canadians on social and economic measures that have profound implications for their health.</li> <li>• There are some preliminary indications to suggest that the transfer of authority over service delivery will lead to better health outcomes.</li> <li>• Much remains to be done to improve the health of Aboriginal Peoples.</li> </ul>   |
| <p>What do we still need to know?</p> | <ul style="list-style-type: none"> <li>• More reliable data about health status and the determinants of health of Aboriginal Peoples.</li> <li>• The impact of assuming authority over health and other services:             <ul style="list-style-type: none"> <li>- Are communities with authority over services better able to address the determinants of health and re-allocate resources based on their priorities?</li> <li>- Did these changes lead to improvements in health status?</li> </ul> </li> </ul>  |
| <p>What's happening in this area?</p> | <ul style="list-style-type: none"> <li>• More data will be available as the 2001 Aboriginal Peoples Survey from Statistics Canada is released in full and when the 2002–2003 First Nations Regional Longitudinal Health Survey is released.</li> <li>• The Canadian Population Health Initiative is funding further research on the relationship between cultural continuity and youth suicide in British Columbia.</li> <li>• The Canadian Population Health Initiative is undertaking a review of policy response to select recommendations from the Royal Commission on Aboriginal Peoples.</li> <li>• The Canadian Institute for Health Research, Institute for Aboriginal Peoples' Health is building a network of national and regional research centres through their Aboriginal Capacity and Developmental Research Environments Program. A Survey Research Centre for Aboriginal Health is also being established to collect data from research surveys to be used to develop policies and programs that will help eliminate health disparities.</li> </ul> |

**Population  
Health Data  
on Canada's  
Aboriginal  
Peoples**

A large part of the available data on Aboriginal people in Canada tends to be about Registered Indians, that is, First Nations people included in the Indian Register, and often only the on-reserve portion of this population. Indian and Northern Affairs Canada and Health Canada collect these data. In 2003, Health Canada released *A Statistical Profile on the Health of First Nations in Canada*. While useful for understanding this population, these data do not provide complete information on the health status of all three recognized Aboriginal groups, nor do they provide a full picture of First Nation people (for example the non-status or off-reserve First Nation populations may be missed).

Although all citizens are covered in the Census, First Nations living on-reserve are not covered in the majority of national surveys dealing with population health issues in Canada. The on-reserve First Nation population is excluded, for example, from the Canadian Community Health Survey, the National Population Health Survey, the National Longitudinal Survey of Children and Youth, the Survey of Income and Labour Dynamics, and the Labour Force Survey. The exclusion of the territories in some of these

surveys means the Inuit population is not fully captured. There is also inconsistency in the ability to identify Aboriginal Peoples and specific Aboriginal Peoples—First Nation, Métis, Inuit—within these surveys.

Two national surveys have collected data specifically on Canada's Aboriginal population. Statistics Canada conducted the Aboriginal Peoples Survey in 1991 and again in 2001. It covers the non-reserve Aboriginal population, with specific information on Inuit, Métis and First Nation (North American Indian) populations. Initial findings from the 2001 survey are included in this report. The First Nations Regional Longitudinal Health Survey is the first such survey to be conducted by Aboriginal people for Aboriginal people. The first round in 1997 provided information on First Nations communities (on-reserve) and the Labrador Inuit population. Data from this survey are used in this report. Data on First Nations communities collected in the second wave in 2002–2003 will be available in 2004. This will comprise a large and comprehensive data source for the on-reserve First Nation population.

## Data Sources for Tables 1 and 2

Data sources for Aboriginal (all and non-reserve):

- a Tjepkema M. (2002). The health of the off-reserve Aboriginal population. *Health Reports—Supplement* 13, 1–16. Catalogue no. 82-003-XIE. Data for the Aboriginal and non-Aboriginal population are from the 2000/2001 Canadian Community Health Survey. These data are age-standardized to the Canadian population as used by the 2000/2001 Canadian Community Health Survey.
- b Statistics Canada. (2003). *Aboriginal Peoples Survey 2001: Initial Release—Supporting Tables*. Ottawa: Minister of Industry. Catalogue no. 89-595-XIE. Not age-standardized. Custom tabulations for Overweight, Obesity, and Smoking figures.
- c Health Canada. (2003). Reported new active and relapsed tuberculosis cases and incidence rate per 100,000 by birthplace—Canada and provinces/territories—2000. *Tuberculosis in Canada—2000*. Ottawa: Minister of Public Works and Government Services.  
<[www.hc-sc.gc.ca/pphb-dgspsp/publicat/tbcan00/pdf/tbcan\\_2000\\_e.pdf](http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/tbcan00/pdf/tbcan_2000_e.pdf)>.

Data sources for Canada and Non-Aboriginal from references a, g, h and the following:

- d Statistics Canada. (2003). CANSIM Table 102-0025 Life expectancy—abridged life table, at birth and at age 65, by sex, Canada, provinces and territories, annual (years). Life expectancy at birth for Nunavut should be interpreted with caution due to a small underlying count.
- e Statistics Canada. (2003). Canadian Community Health Survey 2000/01. Not age-standardized; Canada as a whole, age 12 and over.  
<[www.statcan.ca/english/freepub/82-221-XIE/00502/tables/html/1115.htm](http://www.statcan.ca/english/freepub/82-221-XIE/00502/tables/html/1115.htm)>.

Note that source *a* compares the Aboriginal and non-Aboriginal population within the Canadian Community Health Survey; sources *g*, *h* and *e* are for the Canadian population as a whole.

Data sources for First Nations:

- f National Aboriginal Health Organization. (2003). *Public Opinion Poll on Health Care, First Nations Views on their Health and Health Care, Preliminary Results*. Conducted in 2002 of 1,209 First Nation adults living on, or near, a reserve. Results are accurate within +/- 2.83%, 19 times out of 20.
- g Health Canada. (2003). *A Statistical Profile on the Health of First Nations in Canada*. Ottawa: Health Canada. Data for First Nations on-reserve are collected by First Nations and Inuit Health Branch regional offices and provincial health departments. First Nations population figures are from the Indian Registry, estimating the on-reserve population as of December 1999 for all provinces except for British Columbia and Alberta where the on-reserve and off-reserve populations are included. These data are not age-standardized. Canadian rates for Chlamydia are from Health Canada data.
- h Young T. K., O'Neil J., Elias B., Leader A., Reading J., McDonald G. (1997). "Chronic disease." In First Nations and Inuit Regional Health Survey National Steering Committee (Eds.) *First Nations and Inuit Regional Health Survey—National Report 1999*. St. Régis, QC: First Nations and Inuit Regional Health Survey National Steering Committee. Data are from the First Nations and Inuit Regional Health Survey. Diabetes, arthritis and rheumatism, heart problems, cancer and hypertension are age-sex-specific and age-adjusted to the Canadian population as used by the 1994 National Population Health Survey. Rates for all Canadians are from the 1994 National Population Health Survey. All data points obtained in custom tabulation from author.
- i Indian and Northern Affairs Canada. (2001). *Basic Departmental Data*. Projected life expectancy at birth, Registered Indian Population for 2000.

Data sources for Inuit are from references *b* and *m* and from data for Nunavut (85% of population is Inuit):

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Chapter

5

# Obesity



**Obesity is a widespread problem in Canada with important public health implications. The World Health Organization (WHO) has recognized the rise in obesity rates as a worldwide epidemic requiring immediate action.<sup>1</sup>**

What is behind the current rise in obesity in the Canadian population, and how can the trend be reversed? The behavioural determinants of 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, broad factors, including the ways in which our communities provide access to recreation facilities, may affect our activity levels.

Beyond the choices that an individual makes, a wide range of social factors contribute to diet, physical activity, body weight and levels of obesity in the population. Experts have suggested that broad societal and environmental forces, such as globalization of food markets, shifts to less physically demanding work, urbanization, increasing use of automated transport, labour-saving technology in the home and passive leisure, underlie the obesity epidemic.<sup>2</sup>

This chapter presents evidence about obesity and health and the trend in obesity rates, food consumption and physical activity and describes some international and Canadian policy and program approaches to the problem.

## Obesity and the Burden of Disease in Canada

Obesity has a major impact on the burden of disease in Canada. A substantial body of research has linked obesity with major preventable chronic diseases, including

Research also shows that obesity is not just a problem for adults in Canada, but is also having an impact on children's health. For example, obese children and adolescents have a greater occurrence of hypertension and high cholesterol levels, two known risk factors for cardiovascular disease.<sup>8</sup> Previously seen only among adults, Type 2 diabetes is

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### Obesity has a major impact on the burden of disease in Canada.

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Type 2 diabetes, cardiovascular diseases, hypertension, stroke, gallbladder disease and some cancers.<sup>3, 4, 5</sup>

For example, an analysis of factors related to diabetes shows increasing risk with increasing weight for both men and women 45 to 64 years of age (see Table 1). Compared to healthy weight adults, overweight and obese adults in Canada were at a 1.5 to 10

now increasingly found among obese children, particularly adolescents.<sup>9</sup> Any degree of overweight, especially among younger adults, has the potential to increase the likelihood of premature death. For example, US research has shown that a very obese 20-year-old white male (BMI  $\geq 45$ ) could have a "22% reduction in remaining years of life" compared to someone with a normal weight.<sup>10</sup>

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### Obesity is not just a problem for adults in Canada, but is also having an impact on children's health.

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times greater risk for diabetes.<sup>6</sup> These estimates of risk take into account differences in a range of social, demographic and lifestyle factors, such as education, income and physical activity levels.

Information from the US in 1998 indicates that current patterns of overweight and obesity could account for 14% of cancer deaths in men and 20% of those in women.<sup>7</sup> Obesity also has been shown to increase the risk of other health conditions, such as gallbladder disease, osteoarthritis, psychosocial problems and injuries due to falls.

**How Do We Measure Obesity?**  
see page 140

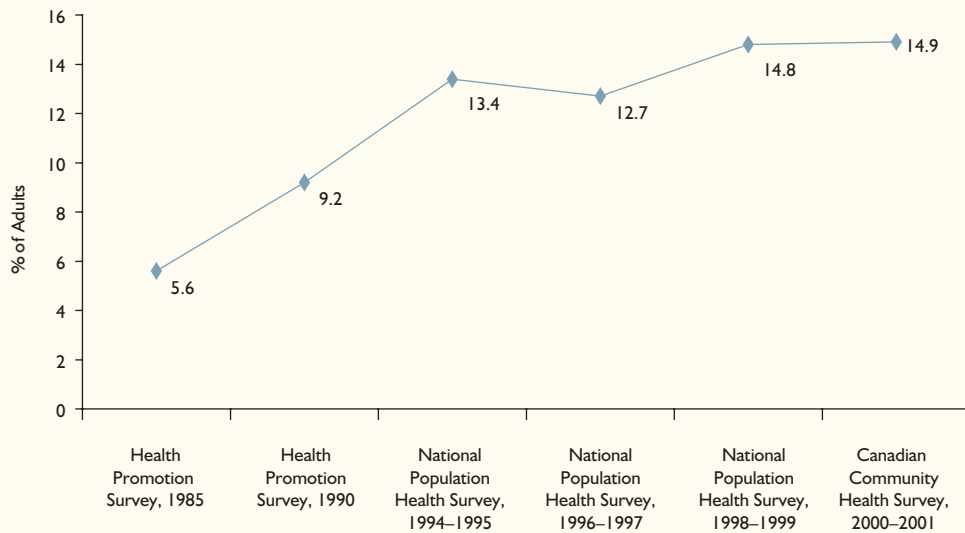
#### Key Messages

- Obesity is linked to a wide range of chronic diseases in adults and children.
- Obesity can substantially reduce life expectancy.

| Table 1<br>Overweight and Obese Adults (45 to 64 Years) at Greater Risk for Diabetes*  |                              | Males (Risk**) | Females (Risk**) |
|--|------------------------------|----------------|------------------|
|  | <b>Body Mass Index (BMI)</b> |                |                  |
|  | Normal Weight (18.5–24.9)    | 1.00           | 1.00             |
|  | Overweight (25.0–29.9)       | 1.54           | 2.10             |
|  | Obese (30.0 +)               | 3.32           | 6.29             |
|  | Class I (30–34.9)            | 2.87           | 5.39             |
|  | Class II (35–39.9)           | 4.70           | 8.08             |
|  | Class III (40+)              | 6.63           | 10.44            |
| <p>* Adjusted for age, education, income, marital status, language, ethnicity, region, physical activity level, fruit and vegetable consumption and smoking patterns</p> <p>** Risk refers to odds ratio.</p> <p>Source: Canadian Fitness and Lifestyle Research Institute. (2004). <i>Socio-demographic and Lifestyle Correlates of Obesity</i>. Ottawa: Canadian Institute for Health Information. Analysis of 2000–2001 Canadian Community Health Survey.</p> |                              |                |                  |

Overweight and obese adults in Canada were at a 1.5 to 10 times greater risk for diabetes.

Figure 1  
**Obesity Increasing Among Canadian Adults, 1985 to 2000–2001\***

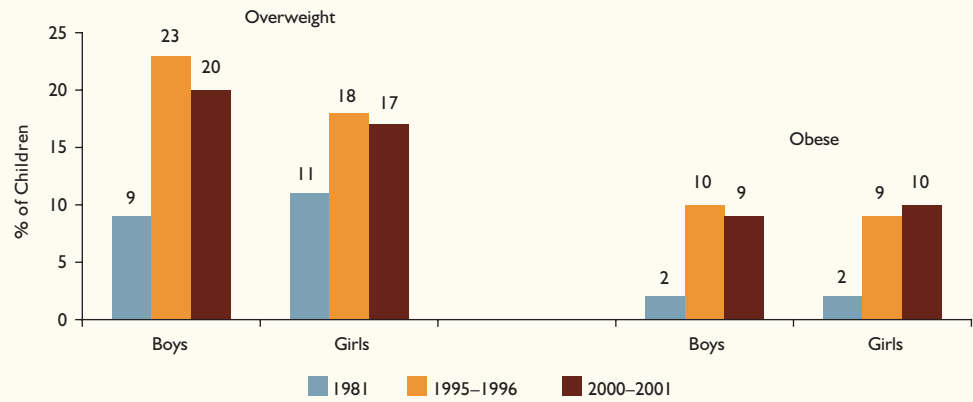


\* Health Promotion Surveys, adults aged 20–98 years; National Population Health Surveys, adults aged 20–64 years; Canadian Community Health Survey, adults aged 20–64 years. All heights and weights are self-reports.

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In 2000–2001, more than 6 million adults aged 20 to 64 were overweight, and nearly 3 million were obese.

Figure 2  
Overweight and Obesity Among Children (7 to 13 Years)\*, 1981 to 2000–2001

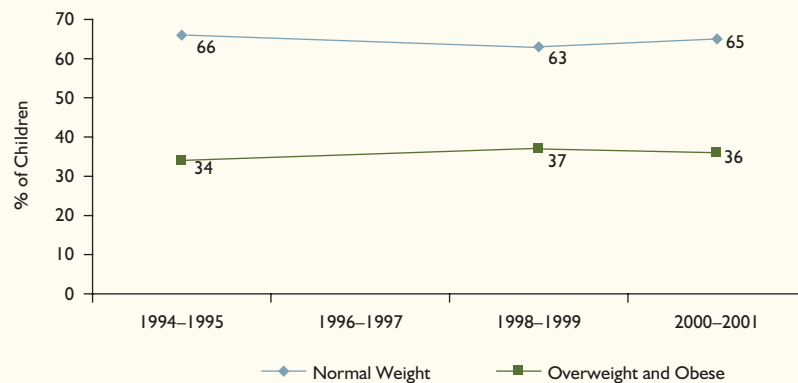


\* Based on heights and weights reported by parents

Sources: Tremblay M. S., Katzmarzyk P. T., Willms J. D. (2002). Temporal trends in overweight and obesity in Canada, 1981–1996. *International Journal of Obesity*, 26(4), 538–543. Statistics Canada. (2003). 2000–2001 *National Longitudinal Survey of Children and Youth*, Custom tabulation.

Between 1981 and the mid-1990s, rates of overweight and obesity rose among children. Rates may have stabilized in the last few years.

Figure 3  
Overweight and Obesity Among Children (2 to 11 Years)\*, 1994–1995 to 2000–2001



\* Based on international definitions for child overweight and obesity; heights and weights reported by parents

Sources: Statistics Canada. (2002). National Longitudinal Survey of Children and Youth: Childhood obesity. *The Daily*, October 18, 2002. Statistics Canada. (2003). 2000–2001 *National Longitudinal Survey of Children and Youth*, Custom tabulation.



## How Big Is the Problem of Obesity in Canada?

### Obesity Rates Are Increasing in Adults

Over the past two decades, the prevalence of obesity increased over two-and-a-half times among Canadian adults (see Figure 1).<sup>12, 13, 14, 15</sup> Based on self-reported data in 2000–2001, more than 6 million adults aged 20 to 64 were overweight, and nearly 3 million were obese.<sup>15</sup>

Rates for overweight and obesity differ between men and women. In 2000–2001, more men (56%) than women (39%) reported being overweight or obese.<sup>15</sup>

### Obesity Rates in Children Have Also Increased

Rates of both overweight and obesity have also increased for Canadian children. Figure 2 shows that between 1981 and 2001, overweight and obesity among children aged 7 to 13 rose by 1.5 to 5 times.

New analysis commissioned by the Canadian Population Health Initiative suggests that rates among children may have stabilized in the last few years. Rates of overweight and obesity were similar over the period 1994–1995 to 2000–2001 for children 7 to 13 (see Figure 2) and for children 2 to 11 (see Figure 3).

In 2000–2001, close to 5% of children 12 to 19 years old were considered obese, with the prevalence among boys (6%) being twice that of girls (3%);<sup>16</sup> 17% of the boys and 10% of the girls were overweight. The prevalence of overweight was higher among 12- to 15-year-old boys (18%) compared with 16- to 19-year-olds (15%); girls had similar prevalence of overweight for both age groups (10%).<sup>16</sup>

### Key Messages

- Over the past two decades, rates of overweight and obesity have more than doubled for Canadian adults.
- Over the past two decades, rates of overweight and obesity have nearly tripled among Canadian children, although the latest data suggest that rates of obesity among children may have stabilized.
- There are geographic differences in obesity rates, but nearly all provinces and territories contain a number of regions with obesity rates higher than the national average.
- Rates of overweight and obesity vary by income, but the relationship is different for men compared with women.
- Rates of overweight and obesity appear to be much higher among Aboriginal peoples.

## What Is the Picture of Obesity Across Canada?

Obesity rose in all provinces and territories between 1994–1995 and 2000–2001 (see Figure 4). While Figure 4 gives the overall provincial and territorial averages for Canadian adults, Figure 5 shows adult obesity rates for different health regions across Canada for 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%. Some of the territories and provinces had most of their health regions with higher than average obesity rates—the Northwest Territories, Nunavut, Saskatchewan, Manitoba, Newfoundland and Labrador, Prince Edward Island, Nova Scotia and New Brunswick.

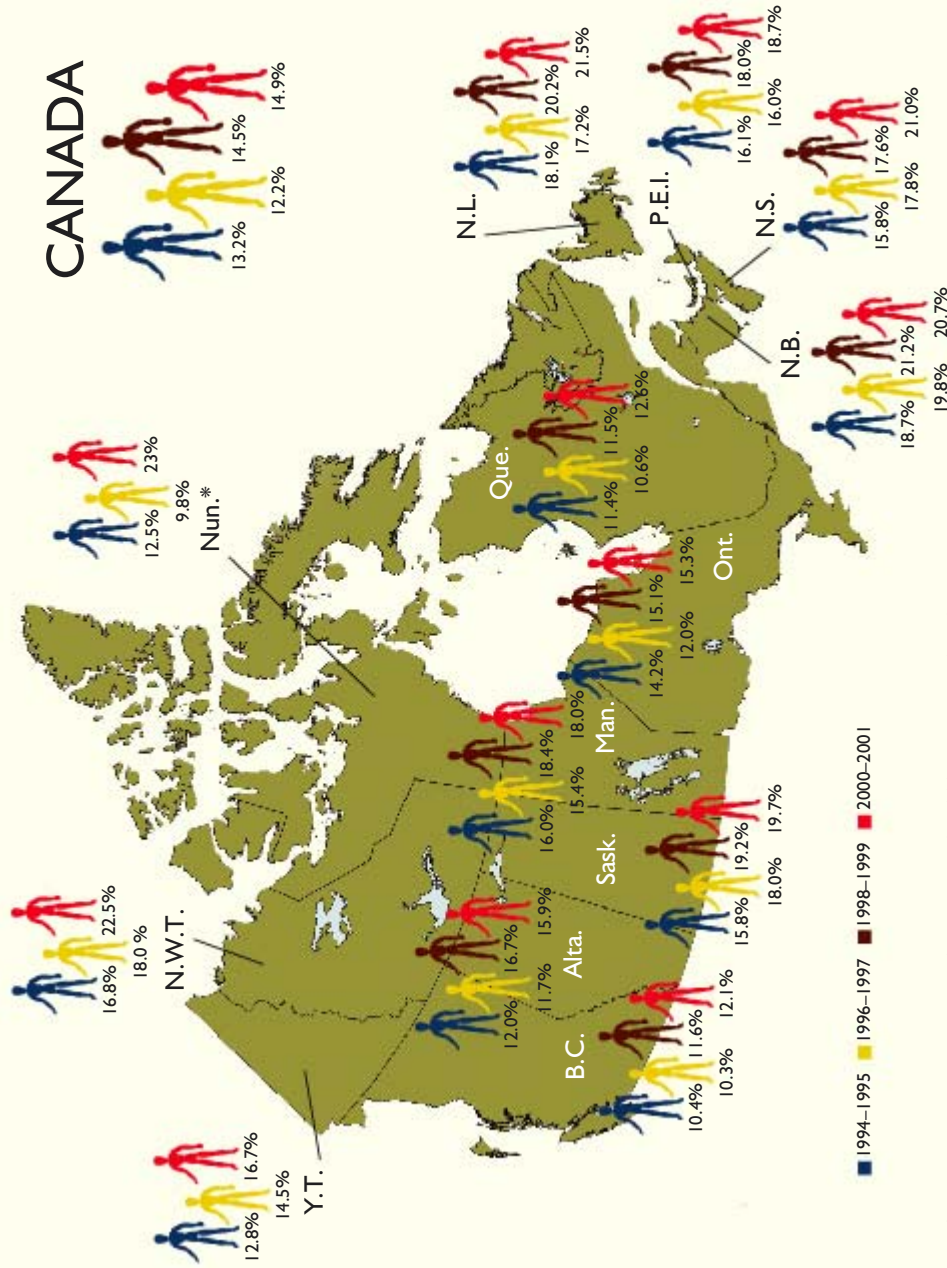
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### Obesity rose in all provinces and territories between 1994–1995 and 2000–2001.

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Children in Atlantic Canada were also at greater risk of being overweight, while those in the Prairie provinces (Manitoba, Saskatchewan and Alberta) were at lower risk of being overweight relative to children in the rest of the country.<sup>17</sup>

Figure 4  
**Obesity  
 (BMI ≥30)  
 Among Adults  
 (20 to 64 Years)  
 in Canada,  
 1994–1995 to  
 2000–2001**



\* Data for Nunavut in 1994–1995 and 1996–1997 should be interpreted with caution.

Sources: Statistics Canada (2001) Body mass index (BMI) international standard by sex, household population aged 20 to 64 excluding pregnant women, Canada and provinces, 1994–1995 to 1998–1999. *Health Indicators*.

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Statistics Canada. (2002). Body mass index (BMI). International standard, by sex, household population aged 20 to 64 excluding pregnant women, Canada, provinces, territories, health regions and peer groups, 2000–2001. *Health Indicators*.

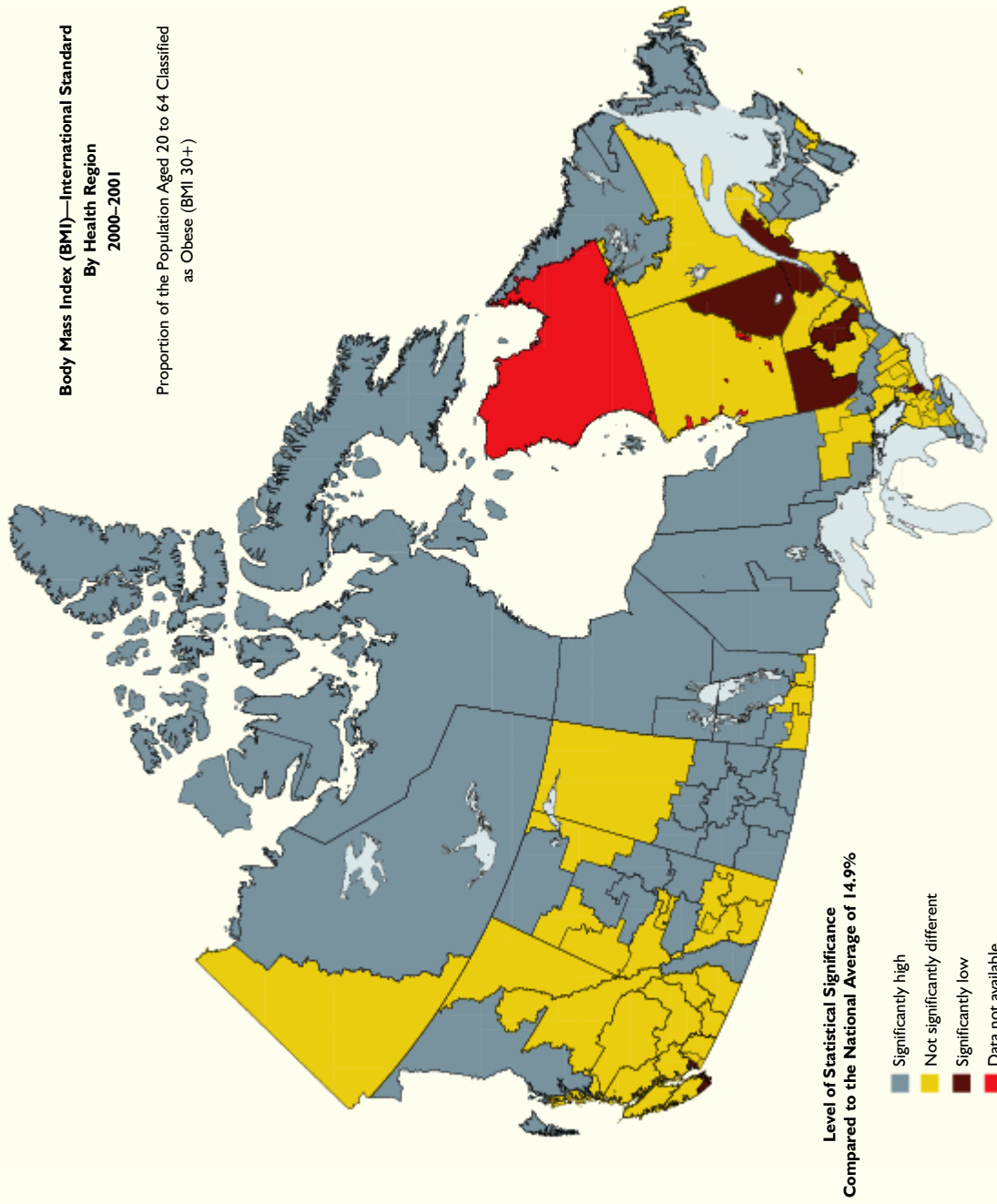
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Figure 5  
Obesity  
(BMI  $\geq 30$ ) by  
Health Region  
in Canada,  
2000–2001



Source: Statistics Canada (2001). Body mass index (BMI) international standard by health region, 2000–2001. Proportion of the population aged 20 to 64 classified as obese (BMI 30+). *Health Indicators*. <[www.statcan.ca/english/freepub/82-221-XIE/01103/pdf/1226m.pdf](http://www.statcan.ca/english/freepub/82-221-XIE/01103/pdf/1226m.pdf)>. Catalogue no. 82-221-XIE.

## How Are Income and Obesity Related?

For men, in 2000–2001, rates of overweight and obesity increased with increasing income level (see Figure 6). Women in the high income group, in contrast, were less likely to be overweight and obese. Other income groups for women have relatively similar rates.

In 1998–1999, children age 2 to 11 in low income families were 1.5 times as likely to be obese as children in families not in low income.<sup>18</sup>

## What Is the Situation Among Aboriginal Peoples?

The self-reported obesity rate was 25% for off-reserve Aboriginal people in 2000–2001.<sup>19</sup> Although comprehensive data are not available for people living on reserves, some evidence from selected First Nations communities reveals even higher rates on reserves. For example, one small study of adults in two Ojibwe communities found a 29% prevalence of obesity.<sup>20</sup> These rates are nearly twice the overall Canadian rate for adults. Along with the concern about high rates of Type 2 diabetes in Aboriginal communities (see Chapter 4, Aboriginal People's Health), these numbers suggest that addressing obesity among Aboriginal peoples in Canada is particularly urgent.

## Trends in Food Consumption and Physical Activity in Canada

### Do Canadians Have a Healthy Diet?

Canada does not conduct routine dietary surveillance. The only national nutrition survey in Canada spanning all age groups was conducted 30 years ago (Nutrition Canada, 1970–1972). During the 1990s, provincial nutrition surveys of adults gathered specific, detailed information on food intake, and a small national survey was conducted in 1997–1998.<sup>21, 22, 23, 24, 25</sup> The general finding from all the surveys was that reported overall energy intake was lower, reported total fat consumption was down, and there was a reported reduction in the percent of energy from fat, compared to 30 years ago. For example, the national survey reported that fat intake as a percentage of energy decreased approximately 10 percentage points for adults.<sup>25</sup> The mean reported intake in 1997–1998 was consistent with the acceptable range for fat of 20 to 35% of total energy.<sup>25, 26</sup>

This trend is consistent with long-term nutrition survey data from the US and the United Kingdom (UK) showing a decline in overall energy intake since the 1960s

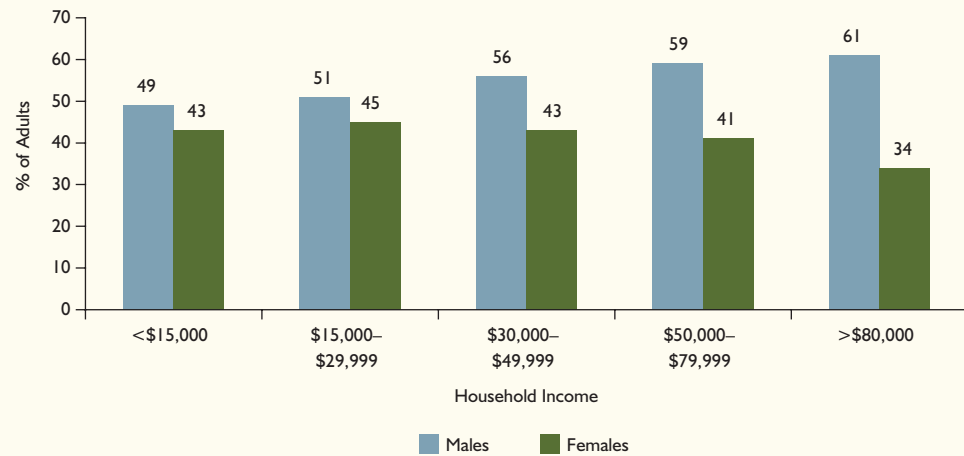
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**Canada does not conduct routine dietary surveillance, making it difficult to assess the extent to which energy intake is increasing or decreasing.**

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(which has levelled off gradually in recent years), leading to speculation that decreased physical activity rather than increased energy intakes accounts for rising levels of overweight and obesity.<sup>27, 28</sup>

Figure 6  
Overweight and Obesity (BMI > 25) by Income Among Canadian Adults (20 to 64 Years), 2000–2001



Source: Canadian Community Health Survey, 2000–2001, Public Use Microdata File, Statistics Canada, Canadian Population Health Initiative analysis.

For men, rates of overweight and obesity increased with increasing income.

For women, those in the high income group were less likely to be overweight and obese.

Another crude way to examine trends in eating is to analyze the disappearance of foods or food availability. Food

There is general agreement among experts that increased consumption of fruits and vegetables is one of the indicators of healthy

**Food Availability, Consumption and Disappearance**

Crude estimates of energy intake come from ecological data. Ecological data estimate types of foods and nutrients available for consumption from food disappearance data [(production + imports + starting inventory) – (exports + manufacturing uses + ending inventory)].<sup>30</sup>

Per capita disappearance data overestimates consumption, as it does not account for spoilage or waste. However, assuming spoilage and waste remain constant over time, ecological data are valid indicators of trends in consumption over time.

disappearance statistics presented in Statistics Canada's *Food Statistics 2002* report show evidence opposite to the above-mentioned nutrition surveys.<sup>29</sup> According to Statistics Canada, the total amount of energy consumed per capita per day increased over 18% between 1991 and 2002. The report points to an increase in the consumption of fat as the cause for this overall increase, as the proportion of energy consumed from carbohydrates was approximately the same, and the proportion of protein consumed has remained consistent.<sup>29, 30</sup> Lack of Canadian surveillance data on dietary habits makes it difficult to assess the extent to which energy intake is increasing or decreasing.<sup>31</sup>

eating. Although Canada lacks surveillance data on dietary patterns, some information—including the consumption of fruits and vegetables—can be obtained from surveys. *Canada's Food Guide to Healthy Eating* recommends 5 to 10 servings of fruits and vegetables per day.<sup>32</sup>

In the 2000–2001 Canadian Community Health Survey, about one in three Canadians reported eating fruits and vegetables 5 to 10 times per day.<sup>6</sup> Men's likelihood of consumption (28%) was lower than women's (39%). Obese men and women are slightly less likely to eat vegetables and fruit 5 to 10 times daily than those with normal weights.<sup>35</sup>

**Canada's Food Guide to Healthy Eating**

*Canada's Food Guide to Healthy Eating*, last published by Health Canada in 1992, is designed to provide Canadians with guidance on a healthy diet.<sup>32</sup> The Food Guide strives to meet both energy and nutrient requirements, recognizing that energy needs vary. It reflects the dietary guidelines from the *Nutrition Recommendations* (1990)<sup>33</sup>, which describe the dietary pattern that would supply recommended levels of essential nutrients while reducing the risk of chronic disease. Recommended servings per day and portions sizes are given for four food groups: grain products (5 to 12 servings), vegetables and fruit (5 to 10 servings), milk products (2 to 4 servings), and meat and alternatives (2 to 3 servings).

*Canada's Food Guide to Healthy Eating* translates the *Nutrition Recommendations* and *Canada's Guidelines for Healthy Eating*<sup>34</sup> into concrete advice to the Canadian public. The following guidelines were developed as the key messages to be communicated to healthy Canadians over two years of age:

- Enjoy a variety of foods.
- Emphasize cereals, breads, other grain products, vegetables and fruit.
- Choose lower-fat dairy products, leaner meats and food prepared with little or no fat.
- Achieve and maintain a healthy body weight by enjoying regular physical activity and healthy eating.
- Limit salt, alcohol and caffeine.

Figure 7a

### Annual Per Capita Consumption of Soft Drinks

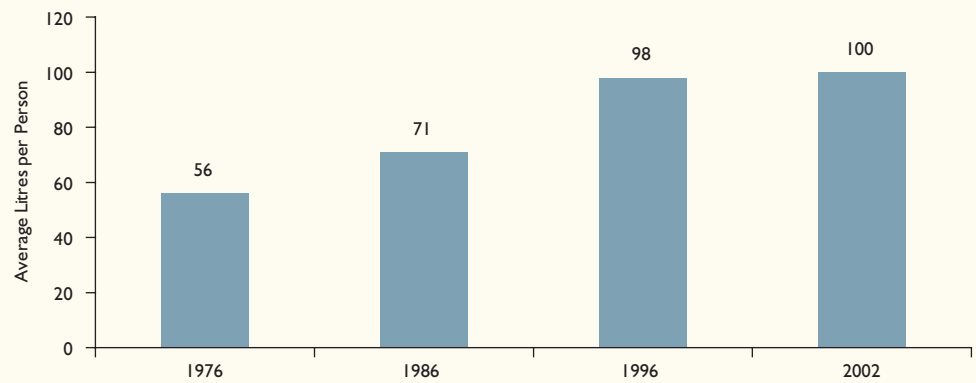
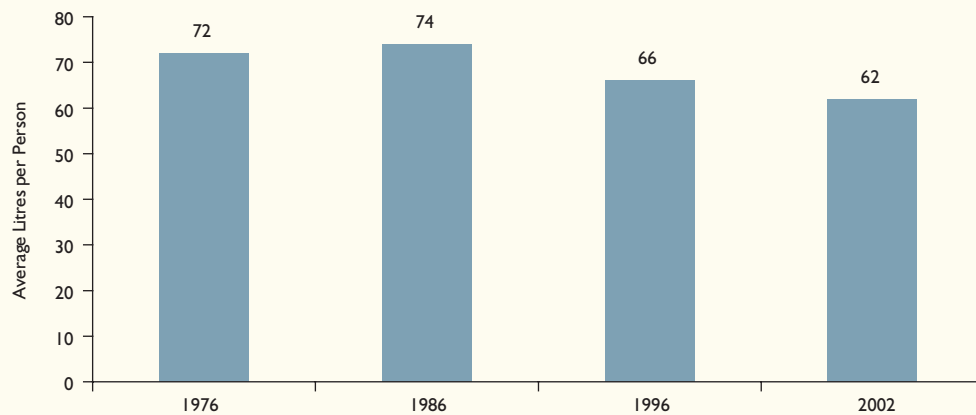


Figure 7b

### Annual Per Capita Consumption of Fluid Milk



\* Based on food disappearance data adjusted for retail, household, cooking and plate loss

Source: Statistics Canada's Agriculture Division, Agriculture and Agri-Food Canada. (2003). Report on food disappearance data. *Canada Food Stats*, 2(2).  
[www.statcan.ca/english/freepub/21-020-XIE/21-020-XIE02001.pdf](http://www.statcan.ca/english/freepub/21-020-XIE/21-020-XIE02001.pdf). Catalogue no. 21-020-XIE.

Another trend that has been linked to obesity is the increasing consumption of soft drinks.



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## Healthy foods often cost more than foods high in fat, sugar or starch.

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Another trend that has been linked to obesity is the increasing consumption of soft drinks.<sup>44</sup> As a nation, Canadians are following this trend (see Figures 7a and 7b). In 1976, on average every Canadian consumed 56 litres of soft drinks annually; in 2002, that number had risen to 100 litres per person, an increase of nearly 80%.<sup>29</sup> During the same period, overall milk consumption declined, although the proportion of lower-fat milk products consumed rose.

### What Factors Influence Food Consumption Patterns?

Research conducted in the US shows that having supermarkets in the local neighbourhood is positively associated with meeting dietary guidelines for fruits and vegetables, even when controlling for individuals' educational attainment and ability to afford healthy foods.<sup>36</sup> It is not known if the smaller grocery stores, commonly found in low income neighbourhoods, carry a sufficient assortment of fruits and vegetables to support healthy food choices.<sup>37</sup>

Healthy foods often cost more than foods high in fat, sugar or starch. Canadian studies have reported that food costs are higher in lower-income neighbourhoods and that transportation to inexpensive food markets can be challenging for low income families.<sup>38</sup> In many remote communities, including First Nations, access to affordable, nutritious market food is limited by geographic isolation.<sup>39</sup>

Affording nutritious food is a challenge for low income families because other expenses take priority over food. For example, housing and transportation are often necessary fixed expenses that must be met before food can be purchased.<sup>40,41</sup> All of these conditions can make choosing a healthy diet difficult.

Exposure to food advertising can also influence choices towards foods high in fat, sugar or starch and lower in nutritional value. Research shows that heavily advertised foods are generally overconsumed relative to recommendations, while foods that are advertised less frequently are underconsumed.<sup>42,43</sup>

#### Food Advertising and Healthy Diet

In New Zealand, analysis of 269 food advertisements from 42 hours of children's television programming revealed that 63% were for foods high in fat and sugar, and 14% were for fast foods.<sup>43</sup> A hypothetically constructed diet of the advertised foods would exceed recommendations for fat, sugar and

sodium and fail to meet requirements for fibre and several micronutrients. The authors concluded, "food advertisements targeted at children generally reflect the dietary pattern associated with an increased risk of obesity and dental caries in childhood; and cardiovascular disease, diabetes and cancers in adulthood."<sup>43</sup>

#### Soft Drink Vending Bans on the Rise in US

Dramatic increases in soft drink consumption among US children and youth in recent years have led to a growing movement in the US

against soft drinks in schools, including bans on soft drink vending machines.<sup>44</sup>

## How Active Are Canadians?

Regular physical activity protects against overweight, obesity and several chronic diseases. Physical inactivity and sedentary lifestyles increase the risk of a range of chronic diseases, as well as premature death and disability. Physical inactivity, especially in occupation and leisure contexts, promotes overweight and obesity.<sup>45</sup>

### Adults Are Inactive

In 2000–2001, 44% of Canadians reported being active or moderately active during leisure time, which means that 56% of

## Children Are Also Inactive

In Canada, physical activity rates increased for children aged 12 to 19 years between 1994–1995 and 2000–2001:<sup>49, 50</sup> 75% of boys and 61% of girls reported being active or moderately active in 2000–2001, up slightly since 1994–1995. Between 1995 and 2000, time spent on physical activity increased for 5- to 12- and 1- to 4-year-olds, and stayed the same for teenagers (see Figure 8). However, in 2000–2001, 82% of Canadian youth aged 12 to 19 were still not sufficiently active to meet international guidelines for optimal growth and development.<sup>6</sup>

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**In 2000–2001 56% of Canadians were physically inactive.**

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Canadians were physically inactive. According to data from the 1998–1999 National Population Health Survey, the five most popular physical activities reported by Canadian adults were walking (69%), gardening and yard work (48%), home exercise (29%), swimming (24%) and bicycling (24%).<sup>48</sup>

### What Is the Picture of Physical Inactivity Across Canada?

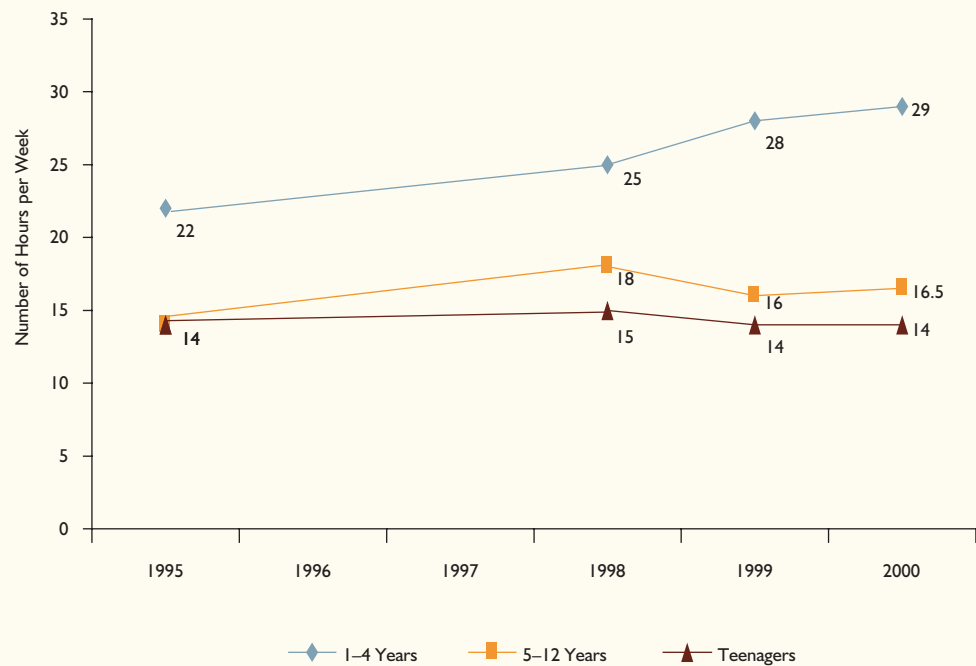
There are variations in levels of inactivity among adults in different regions in the country. As reported in the 2000–2001 Canadian Community Health Survey, New Brunswick, Newfoundland and Labrador, Quebec, and Prince Edward Island have the highest levels of inactivity, while British Columbia, Alberta and the territories have the lowest (see Figure 9).

Physical activity refers to any form of movement produced by skeletal muscles that increases energy expenditure in all aspects of daily living. The precise amount of physical activity needed to prevent unhealthy weight gain is unknown. Health Canada recommends at least 30 minutes of moderate intensity physical activity on most days to reduce cardiovascular diseases and overall mortality.<sup>46</sup> Their *Physical Activity Guide to Healthy Active Living* for adults recommends accumulating 30 to 60 minutes of moderate physical activity most days, preferably daily. The greatest benefit occurs when one moves from being sedentary to becoming moderately active.<sup>45</sup>

*Canada's Physical Activity Guide for Youth* recommends that inactive children and youth increase the amount of time they currently spend being physically active by at least 30 minutes per day and decrease the time they spend in sedentary activities by 30 minutes.<sup>47</sup> Over several months, the *Guide* suggests that children and youth should accumulate at least 90 minutes more physical activity per day and reduce sedentary activities like video games and television watching by 90 minutes per day.

**How Much Physical Activity Is Enough?**

Figure 8  
Average Hours per Week Spent in Physical Activity by Canadian Children

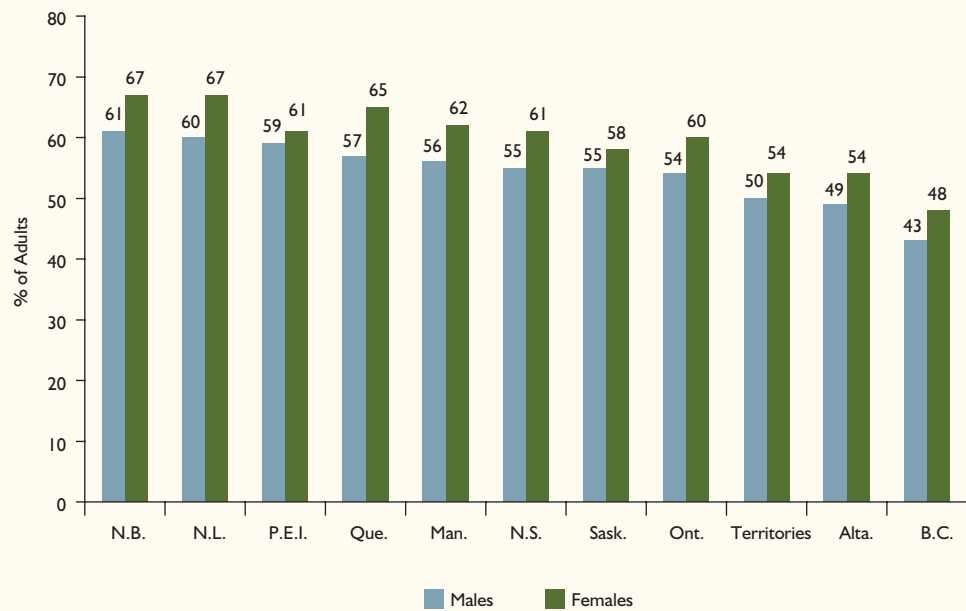


Source: Canadian Fitness and Lifestyle Research Institute. 2000 *Physical Activity Monitor*, 1999 *Physical Activity Monitor*, 1998 *Physical Activity Monitor*, 1995 *Physical Activity Monitor*.  
<[www.cflri.ca/cflri/pa/surveys/2000survey/2000survey.html](http://www.cflri.ca/cflri/pa/surveys/2000survey/2000survey.html)>.

Physical activity rates for children are stable or increasing.

But in 2000–2001, four out of five Canadian youth aged 12 to 19 were not active enough to meet international guidelines for optimal growth and development.

Figure 9  
 Inactivity (%)  
 Among Adults  
 (20 Years  
 and Older)  
 by Province/  
 Territory,  
 2000–2001



Source: Canadian Fitness and Lifestyle Research Institute. (2004). *Socio-demographic and Lifestyle Correlates of Obesity*. Ottawa: Canadian Institute for Health Information. Analysis of 2000–2001 Canadian Community Health Survey.

### How Is Income Related to Physical Activity?

Physical activity of men and women is also related to family income level. Lower-income adults tend to be less active than higher-income Canadians (see Figure 10).<sup>6</sup> A similar pattern is observed for children.<sup>51</sup>

### How Much Activity During Leisure Time?

Examining the major types of activities that people engage in during leisure time can help to indicate how active people are. According to the 1998 General Social Survey (GSS), television viewing is the primary leisure time

### How Much Activity at Work?

Some of the reasons that Canadians cite as barriers to physical activity may provide clues about how to increase physical activity levels in the population. The 2001 Physical Activity Monitor reported that two out of five working Canadians said that constant tight deadlines at work are an important reason why they are not more active. Those in management positions (54%) were much more likely to cite lack of time due to work as a barrier than those in labour or trade occupations (37%). The same survey found that the likelihood of having no days absent from work increased as workers' physical activity levels increased.<sup>48</sup>

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## Examining activities that people engage in during leisure time can help to indicate how active people are.

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activity among Canadian adults.<sup>52</sup> In 1998, Canadians 15 years and older spent an average of 15 hours per week watching television, compared to only 7 hours per week spent in active leisure pursuits. In 2001, average weekly television viewing time for men and women 18 and over was 21 and 25 hours, respectively.<sup>53</sup>

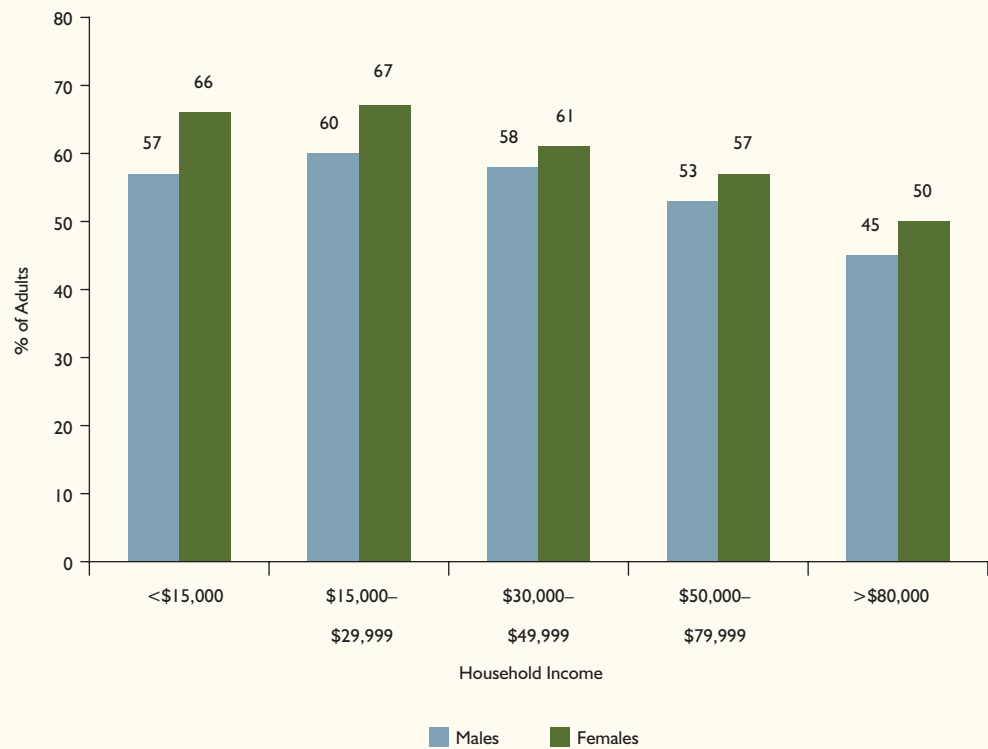
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## Television viewing is the primary leisure time activity among Canadian adults.

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Increasing time spent using the Internet, personal computers and video games may contribute to the trend of being less active during leisure time. One study suggested that television viewing and video game use may be associated with increased risk of being overweight or obese among 7- to 11-year-old Canadian children compared to children who participate in physical activity or sports.<sup>54</sup>

Figure 10  
Inactivity  
Among  
Canadian  
Adults by  
Household  
Income,  
2000–2001



Source: Canadian Fitness and Lifestyle Research Institute. (2004). *Socio-demographic and Lifestyle Correlates of Obesity*. Ottawa: Canadian Institute for Health Information. Analysis of the 2000–2001 Canadian Community Health Survey.

Lower-income Canadians tend to be less active than higher income Canadians.

## How Much Activity at School?

Physical activity opportunities for school-aged children and youth are often linked to school settings. Daily physical education programming in schools is an important means of making physical activity opportunities available to all children and youth.<sup>55</sup>

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## In Canada only 16% of schools actually were providing physical education on a daily basis.

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In Canada, in 2001, approximately half (54%) of all schools reported having a policy to provide daily physical education classes to students, although only 16% actually were providing physical education on a daily basis.<sup>56</sup> The average amount of class time per

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## Over half of Canadian parents believe their children get enough physical activity through physical education at school.

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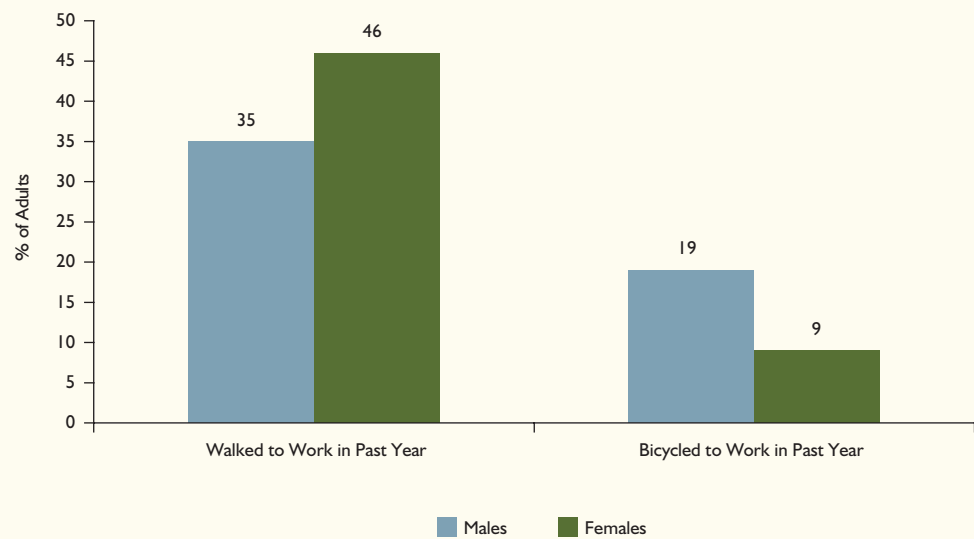
week devoted to physical education ranged from less than one hour (40 minutes) for junior elementary students to 75 minutes for senior secondary students. The number of weeks of physical education classes offered to students decreased for higher grades. For example, secondary schools offered physical education classes for 35 weeks per year compared with 40 weeks per year among elementary schools.<sup>56</sup>

In 2000, one in five parents (21%) reported that their children received daily physical education classes, 27% of parents reported that their children received physical education on three to four days per week, less than half (41%) reported one to two times per week while 10% reported that their children did not receive any physical education class at school. However, over half (56%) of Canadian parents believe their children get enough physical activity through physical education at school.<sup>57</sup>

## How Much Active Commuting to Work and School?

Active commuting (walking or cycling to work for at least 10 minutes) is one way to increase physical activity, yet active commuting is less common than vehicle travel among Canadians. One-third (33%) of Canadians live within cycling distance (8 km) and 14% within walking distance (2.5 km) of their work.<sup>58</sup> According to the 2001 Physical Activity Monitor, men and women's active commuting patterns differ. Men are more likely than women to bicycle and women are more likely than men to walk (see Figure 11).<sup>48</sup> More than a quarter (28%) of Canadians living within 2.5 km of any destination never choose walking as a mode of transportation. Seventy-two percent of Canadians living within 8 km of any destination never choose cycling as a mode of transportation.<sup>58</sup>

Figure 11  
Active  
Commuting  
to Work



Source: Canadian Fitness and Lifestyle Research Institute. (2001). Increasing physical activity. Supporting an active workforce. *Physical Activity Monitor*. <[www.cflri.ca/pdf/e/2001pam.pdf](http://www.cflri.ca/pdf/e/2001pam.pdf)>.



In 2001, a majority of Canadians indicated an interest in increasing walking (82%) and cycling (66%), but reported barriers to active commuting. For instance, half thought of cycling as dangerous because of traffic, and over two-thirds indicated that they would cycle 30 minutes or more to work if cycling lanes were available.<sup>58</sup>

In Canada, in 1998, only 37% of 5- to 13-year-olds and 33% of 14- to 18-year-olds walked to school, and 2 to 4% bicycled. Half of parents (53%) cite the distance to neighbourhood schools as a barrier to walking. Concern for children's safety also contributes to children being more frequently driven or bussed to school.<sup>58</sup>

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## Twenty-eight percent of Canadians living within 2.5 km of any destination never choose walking as a mode of transportation.

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Likewise for children and youth, traveling to and from school offers an opportunity for physical activity through walking or cycling.

### Can Community Design Affect Active Travel?

There is growing interest in the relationship between the growth of urban sprawl and increased automobile travel, and the influence of these trends on physical activity patterns.<sup>59</sup> As suburban areas of low-density population develop on the boundaries of high-density cities and towns, it is common—often mandated by zoning—for different land uses (housing, retail, office, recreation) to be kept separate from one another. As land uses become separate, distances between them increase, roads are more often available than cycling paths or sidewalks and vehicle travel becomes preferred.<sup>59, 60</sup>

Research has shown that neighbourhood physical characteristics such as the availability of walking routes, traffic speed and safety from crime are associated with the likelihood of walking to work.<sup>61</sup> Neighbourhoods with crime rates that create barriers to safe and affordable activities, such as walking, may discourage outdoor activities and encourage sedentary indoor pursuits such as television viewing.<sup>42</sup>

### Key Messages

- There is a lack of comprehensive surveillance data on the dietary habits of Canadians.
- There is a discrepancy in the available energy intake data. Food disappearance data shows that energy consumption has increased 18% for Canadians in the last decade, but survey data indicate a decrease in total energy intake.
- Over half of Canadian adults (56%) are physically inactive. Four out of five Canadian youth are not active enough to meet international guidelines for optimal growth and development.

## Addressing the Problem of Obesity: What Works?

In addressing the problem of obesity, the challenge is to create a multifaceted public health approach capable of producing long-term reductions in rates of overweight and obesity. A range of policy instruments is needed to have an impact on the prevalence of obesity.

whether an “ideal” BMI has been achieved.<sup>62</sup> Weight reduction can be promoted by several strategies. Some effective and potential solutions to the problem of obesity in Canada have been identified, and they are presented and discussed in the latter half of this chapter. Approaches to obesity that are primarily targeted at individuals are not discussed in this chapter. Some of these approaches include diet programs, behavioural management,

### A range of policy instruments is needed to have an impact on the prevalence of obesity.

Institutions, systems and structures in society, and groups as diverse as international trade organizations, food and agriculture industries, professional associations, labour unions, consumer groups, business leaders, media, parent groups, school boards and community organizations will all need to be engaged in efforts to reduce obesity in the population.

Reducing health risks associated with overweight and obesity can be achieved with even modest reductions in body weight (as little as 10%) regardless of

drug therapy, surgery, weight reduction programs and weight loss products.

We begin with population-based solutions labelled as *effective*—these are policies and programs recommended by experts after systematic reviews of the literature. *Potential* solutions are presented next. These solutions include policies and programs that have shown promise in contributing to reductions in rates of obesity, but are not yet proven in the same way.

#### Causative Factors

- High intake of foods high in fat, sugar or starch
- Sedentary lifestyles
- Heavy marketing of fast food outlets and energy-dense, micronutrient-poor foods
- Adverse economic conditions in developed countries (especially for women)

#### Protective Factors

- High intake of dietary fibre
- Regular physical activity
- Home and school environments that promote healthy food and activity choices
- Breastfeeding

Joint  
FAO/WHO  
Expert Group  
Conclusions  
About  
Obesity<sup>45</sup>

## Effective Solutions to the Problem of Obesity

The Joint Food and Agriculture Organization of the United Nations (FAO) and the World Health Organization (WHO) Expert Consultation Group on Diet, Nutrition and the Prevention of Chronic Diseases recently reviewed the latest available scientific evidence on dietary and lifestyle patterns in chronic diseases and made recommendations

## Encouraging Breastfeeding

Research supports the importance of healthy infant nutrition in preventing many chronic diseases. There is increasing evidence to suggest that a lower risk of developing obesity may be directly related to the length of “exclusive” breastfeeding (that is, infant nourishment exclusively from breast milk), although this effect may not be apparent until later in childhood.<sup>45, 63</sup>

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### According to the FAO/WHO, priority should be directed at the prevention of obesity in infants and children.

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for strategies and policies to deal with public health challenges related to diet and health. Based on rigorous analysis and rating of evidence they identified causative and protective factors linked to obesity.

According to the FAO/WHO, priority should be directed at the prevention of obesity in infants and children.<sup>45</sup> The FAO/WHO report synthesized existing evidence and reported that a handful of strategies are considered effective in preventing obesity. Based on the *Joint FAO/WHO Expert Consultation Report*, reports from the US Task Force For Community Preventive Services and several other published systematic reviews, five strategies appear to be effective in preventing obesity, either by increasing physical activity or improving diet or both. Four out of the five strategies focus on family and school contexts, the other focuses on community.

In Canada, in 1996–1997, 78% of women reported initiating breastfeeding.<sup>70</sup> Breastfeeding initiation rates vary from a low of 53% in the Atlantic provinces to a high of 87% in British Columbia.<sup>71</sup> Younger mothers, single mothers and mothers with lower levels of education and income tend to have lower rates of breastfeeding. Although Canadian rates of breastfeeding are slowly increasing, the average duration of a few weeks is far from the six months or more that is recommended as optimal. For example, about 40% of mothers who breastfed reported doing so for less than three months.<sup>71</sup> While breastfeeding initiation rates have been documented in Canada, the rates and duration of exclusive breastfeeding are not known. In one study in Quebec, in 1998, only 6% of the children were exclusively breastfed at four months of age.<sup>77</sup> In the US, in 1998, 10% of the children were exclusively breastfed at six months of age.<sup>73</sup>

#### Evidence-Based Strategies for Population-Based Actions to Reduce Obesity

- Breastfeeding (growing evidence)<sup>45, 63</sup>
- Regular physical education (strong and growing evidence)<sup>64, 65</sup>
- Reducing television viewing time (growing evidence)<sup>66, 67, 68, 69</sup>
- Comprehensive school health programs (strong evidence)<sup>65</sup>
- Community wide interventions (strong evidence)<sup>64, 75</sup>

In 1993, Sweden compared favourably among western countries with an exclusive breastfeeding rate of 61% for infants up to four months of age.<sup>74</sup>

Interventions to promote exclusive breastfeeding of infants can be targeted at individuals (with, for example, pre- and post-natal counselling and coaching), home and family (through education and support) and communities (with dedicated breastfeeding areas, peer support groups, etc). Public health professionals and health care providers can play an important role in ongoing efforts to promote breastfeeding, but employers, businesses and local governments can also contribute to creating environments that encourage and support breastfeeding. Enhancing public health infrastructure could improve coordination of comprehensive, intersectoral efforts to promote breastfeeding.

### Reducing Television Viewing Time

Television viewing is the most common sedentary activity of children, and obesity rises with increased time spent watching television.<sup>67</sup> Studies have demonstrated that obesity in children and adolescents can be

### Promoting Regular Physical Activity in Schools

Schools can provide opportunities for children and youth to engage in healthy eating and health-enhancing physical activity through the curriculum and out of classroom hours (before school, during lunchtime and breaks and after school).

A review of published studies by the US Task Force on Community Preventive Services found that physical education classes taught in schools are effective at improving both physical activity levels and physical fitness among school-aged children.<sup>75</sup> Based on these findings, the Task Force recommended implementing “programs that increase the length of, or activity levels in, school-based physical education classes based on strong evidence of effectiveness.”<sup>76</sup>

Currently, fewer than one in five (16%) of Canadian schools are providing daily physical education.<sup>56</sup> Quebec is the only province requiring physical education in its curriculum until graduation. In other provinces, physical education becomes optional as early as Grade 8.<sup>77</sup> However,

## Obesity in children and adolescents can be reduced by decreasing the time they spend watching television.

reduced by decreasing the time they spend watching television.<sup>67, 68</sup>

current practices are changing in some parts of the country. In 2003, for instance, the province of Alberta announced that it would mandate daily physical education classes of 20 to 30 minutes for Grades 1 to 12 by 2005.<sup>78</sup>

The Canadian Association for Health, Physical Education, Recreation and Dance (CAHPERD) has developed recommendations for the provision of daily and quality physical education for students from kindergarten to secondary school graduation. CAHPERD recommends not only compulsory daily physical education, but

also intramural and interscholastic physical activity opportunities for all students. In total, CAHPERD recommends 150 minutes per week spent in physical education programs to meet standards for Quality Daily Physical Education (QDPE).<sup>79</sup>

**Quality Daily Physical Education**

Addressing obesity in Canadian children through physical education has policy implications for provincial education and finance ministries. In addition to provincial governments initiating comprehensive physical education policies in schools and providing resources, there is a critical role for teacher training programs, professional associations, school boards and parent organizations.

### Implementing Comprehensive School Health Programs

A comprehensive school health approach extends beyond health and physical education to include school policy, the physical and social environment at school and the links between schools, families and communities.

- Extracurricular activities
- Physical education classes
- Parental involvement

The Trim and Fit Program in Singapore, a comprehensive school-based obesity prevention program, measured body weight outcomes and incorporated nutrition education and physical activity into the school curriculum. Other components of the program included teacher training, improved food provision and weight monitoring. Over a 10-year period since the program's launch in 1992, the prevalence of obesity in schoolchildren fell from 14% to 10%.<sup>80</sup>

Examples of comprehensive school health programs are also emerging in Canada, although evidence of their effectiveness is

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## Physical education classes taught in schools are effective at improving physical activity levels and physical fitness among school-aged children.

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There is some evidence that a comprehensive school health program can be an effective approach for promoting physical activity and healthy eating and possibly reducing obesity.<sup>55, 65</sup> Reviews of research on school-based programs suggest that to achieve results, such programs should be multifaceted and involve interacting components, including:<sup>55, 65</sup>

- Health instruction
- Health services
- School environment
- Food service

still being gathered. For example, Alberta Learning and school boards throughout the province are currently in the process of adopting a comprehensive school health program, based upon the Calgary Comprehensive Schools Heart Health model.<sup>82</sup> The curriculum and school environments specifically promote "heart healthy" eating, physical activity and tobacco reduction. The Kahnawake Schools Diabetes Prevention Project (KSDPP) is another promising comprehensive Canadian initiative specifically focusing upon enhancing health curriculum, school-based physical activity and healthy food policies for Aboriginal (Mohawk) students.<sup>83</sup>

#### Comprehensive School Health Programs Can Work

The Kiel (Germany) Obesity Prevention Study (KOPS), a closely-watched, comprehensive intervention, encourages consumption of fruits and vegetables and lower fat food choices, increased physical activity and decreased television viewing through instruction of children and parents, as well as daily opportunities for

physical activity and individualized counselling for obese children through partnership with a sports-based agency. KOPS is a longitudinal intervention. Early results (one year post-intervention) show improvements in health-related behaviours and nutrition.<sup>81</sup>

Another aspect of a school-based approach involves offering “safe routes to school” programs. Go for Green is a national, non-profit active living and environment program that includes an Active & Safe Routes to School component. It features parent-

worksites found that when prices of low-fat snacks in vending machines were reduced, purchases of these snacks by both adults and adolescents increased.<sup>89</sup>

## Comprehensive school health programs can be an effective approach for promoting physical activity and healthy eating and possibly reducing obesity.

supervised Walking and Cycling School Buses that gather groups of children together to walk or cycle to school.<sup>84</sup> There has been no evaluation of Go for Green to date.

One more approach that has been initiated as part of a comprehensive school health approach involves promoting healthy food choices through changes in school nutrition policies.<sup>85</sup> Providing low-cost or free fruits and vegetables to schoolchildren is a promising approach that has been tried for several years in Norway (in co-operation with the Fruits and Vegetables Marketing Board)<sup>86</sup> and is currently being piloted in US schools by the US Department of Agriculture.<sup>87</sup> Research suggests that price decreases may be more powerful than health messages in increasing consumption of healthy foods.<sup>88</sup> A study in US schools and

### Implementing Community-Wide Programs

Local governments can have a major role in providing supportive environments because they hold primary responsibility for many areas that have a direct impact on healthy living: for example, transportation, recreation and land-use planning. Businesses and industries—particularly restaurants, grocery stores and fitness centres—are key contexts for enabling and encouraging healthy living. Local media can greatly influence the understanding and adoption of healthy living practices by acting as crucial partners for community members who are addressing social, economic, environmental and political factors related to healthy, active living.

A review of research on the effectiveness of community interventions by the US Task Force on Community Preventive Services recommends a broad range of community-based interventions to increase physical activity and improve health and fitness based on strong evidence of effectiveness.<sup>75</sup>

Community-wide campaigns were strongly recommended by the Task Force based on evidence reviewed. These involve:

- Large scale, visible campaigns with messages directed at large audiences
- Community-based events and strategies
- Environmental and policy changes such as the creation of walking trails

The Task Force also issued a strong recommendation, based on evidence, for:

- Creating or improving access to places for physical activity (walking trails, exercise facilities, access to existing nearby facilities) combined with distribution of information
- Implementing social support interventions in community settings for physical activity (walking groups, buddy systems, contracts for physical activity)<sup>64</sup>

### Community Interventions Can Work

An example of a community-wide intervention program is the North Karelia Project conducted in Finland, which aimed at creating a community infrastructure supportive of “heart healthy” behaviours, with a primary emphasis on diet. Over a 20-year period, fat consumption was reduced, with a stabilizing impact on obesity levels.<sup>90</sup>

Comprehensive community programs have been shown to increase physical activity, but there is little evidence that they lower obesity rates. Community-wide programs to address unhealthy weights are likely to have minimal impact unless they are accompanied by broader environmental changes in areas like urban design, transportation and food pricing, and advertising.<sup>94</sup> For community-wide programs to succeed, local governments need to work with all sectors including businesses, non-government organizations and citizens, but also with senior levels of government.

## Key Messages

- There is a need for action to promote healthier diets and increase physical activity for children and adults in Canada
- Effective solutions include breastfeeding, regular school-based physical education, comprehensive school health programs, reduced television viewing time and community-wide interventions

### Saskatoon In Motion

In 1999, Saskatoon and District Health (now called the Saskatoon Health Region) declared active living a priority in its planning strategy to improve health through health promotion and illness prevention. The region developed a comprehensive, community-wide active living strategy focusing on physical activity and involving community partners: University of Saskatchewan, College of Kinesiology; City of Saskatoon, Community Services Department; and ParticipACTION Canada.<sup>91</sup>

In Motion aims to have all citizens of the Saskatoon region make regular physical activity part of their daily lives. It includes a public awareness campaign on the importance of physical activity, school and workplace wellness promotion; peer leadership for older adults; physician referrals for physical activity counselling; and physical activity and healthy

eating programs targeted at the Aboriginal community. The intent of In Motion is to embed understanding and behaviour changes into the culture and fabric of the community. Community-wide surveys will determine the impact of In Motion on how physically active the Saskatoon region has become.<sup>91</sup>

Preliminary evaluation results show that “43% of residents who were aware of In Motion indicated the program has increased their awareness of how physical activity can benefit their health.”<sup>92</sup> The proportion of Saskatoon’s population active enough to receive optimal health benefits rose from 36% in 2000 to 49% in 2002, with increases seen in light, moderate and vigorous activities.<sup>93</sup> Research and evaluation will provide additional information about the impact of In Motion on the level of physical activity within each of the target areas.<sup>92</sup>

## Potential Solutions to the Problem of Obesity

### Applying Lessons from Tobacco Control

Lessons that can be applied to obesity have been learned from experience with smoking prevention, a public health issue with important similarities:

- The issue represented a public health crisis.
- Prevention worked from a basis of evidence.
- Economic costs of the problem were high.
- Projections of savings acted as an impetus for change.
- Coalitions brought individuals, sectors and organizations together for a common goal.
- Media advocacy created the public will for change.
- Governments became involved in environmental and policy change.<sup>95</sup>

Tobacco control programs continue to target social environments and public policy to bring about broad social change, an important lesson for obesity prevention.<sup>95</sup>

### Health Agencies Can Provide Leadership

Health agencies at federal, provincial/territorial and local levels are key to implementing integrated, multi-sectoral obesity prevention strategies because they are uniquely positioned to examine policies across sectors and to assess the health impacts and relative costs and benefits of relevant policies. They can work with agencies responsible for education, finance, food and agriculture, transport, sports, industry and planning to ensure that policies are consistently health promoting.

Leadership is needed to co-ordinate efforts across sectors. In many cases, it is the role of health ministers to develop and implement comprehensive disease prevention initiatives that engage relevant government and non-government sectors in coordinated action. In Sweden, for example, the health minister leads a national steering group that co-ordinates work at national, regional and local levels on 11 public health targets, including increased physical activity and “good eating habits and safe foodstuffs.”<sup>96</sup> All public agencies and authorities in Sweden whose operations and tasks affect public health must take into account the impacts of their activities on public health.

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**In Sweden, the health minister leads a national steering group that co-ordinates work at national, regional and local levels on 11 public health targets, including increased physical activity and “good eating habits and safe foodstuffs.”**

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## A Healthy Living Strategy Could Help to Prevent Obesity

In Canada, the Federal/Provincial/Territorial Integrated Pan-Canadian Healthy Living Strategy is a cross-cutting policy initiative designed to improve health outcomes and reduce disparities in health status that could be the basis for a comprehensive strategy to prevent obesity. In 2003, roundtable consultations across the country, a web-based forum and a national symposium guided the development of initiatives to support healthy living in the context of healthy communities. The Strategy is intended to achieve agreement on priorities and mechanisms for developing and implementing a plan of action.<sup>97</sup>

Based on the evidence reviewed in this chapter, success for the Healthy Living Strategy is more likely if the strategy is comprehensive, establishes targets for system change, builds an action plan that identifies roles and responsibilities across sectors in and outside of government and provides resources for intersectoral action.

the nutrition component of the CCHS would support better monitoring and tracking of information on food and nutrient intakes.<sup>98</sup> The partnership between the two organizations to monitor health outcomes provides a model for developing ongoing surveillance of physical measures relevant to obesity and chronic disease. The participation of other partners may help to ensure further understanding of the current situation across Canada and to promote appropriate action based on the survey's results.

## Enhancing Public Health Capacity

The public health system is critical to comprehensive prevention strategies. Public education and health promotion regarding diet and physical activity are major public health tools. *Canada's Food Guide to Healthy Eating, Canada's Physical Activity Guide to Healthy Active Living* (children, youth, adults, older adults) and the Vitality program are examples of national public health initiatives to promote healthy eating and/or active

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## There has been a long-felt need for better food and nutrition surveillance data in Canada.

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### Strengthening Surveillance

Surveillance of measured body weight, diet, physical activity and chronic disease outcomes is essential for comprehensive policy and program development and accountability. In 2004, the Canadian Community Health Survey Cycle 2.2 Nutrition Focus will obtain self-reported and measured heights, weights and waist circumferences as well as detailed information on what Canadians are eating.

There has been a long-felt need for better food and nutrition surveillance data in Canada. The partnership between Health Canada and Statistics Canada in conducting

living.<sup>32, 46, 47</sup> Across Canada, governments, health regions and public health authorities are actively engaged in education and promotion for obesity and chronic disease prevention. These efforts will be enhanced with a strong public health system. The capacity of the public health system is an important indicator of the ability to implement and maintain a comprehensive strategy for obesity prevention.

## Informing Policy with Research

Research is an important tool for making informed policy choices. In Canada, the Federal Minister of Health has committed \$15 million to scientific investigation of obesity through the Institute of Nutrition, Metabolism and Diabetes of the Canadian Institutes of Health Research (CIHR).<sup>99</sup> Areas of investigation include determinants of obesity, prevention strategies, and food and nutrition practices. Evaluating the effectiveness of programs and policies to prevent obesity is a key research objective to support future policy development.

## Education Can Play a Key Role

### Investing in Schools

Reducing child obesity should be a priority for a comprehensive, population-based strategy for obesity reduction, and education policies are central. School environments can make it possible for children to be physically active and have healthy food choices available. Schools that have adequate funding do not need to rely

## Requiring Quality Daily Physical Education

Curriculum policy is another important instrument in education. Evidence strongly supports the value of regular physical education to children's long-term health.<sup>101, 102</sup> Mandating curriculum requirements for quality daily physical education could be a key means of ensuring that Canadian school children have sufficient physical activity and can be an important element of a comprehensive obesity prevention strategy.<sup>56</sup>

## Industry and Corporations as Part of the Solution

### Working with the Food Industry to Monitor and Regulate Food Marketing

Monitoring and regulating marketing approaches adopted by the food industry could be an important strategy to prevent obesity. Marketing of foods high in fat, sugar or starch such as soft drinks, candy and potato chips, especially to children, is a possible contributor to the rising rates of obesity.<sup>45</sup>

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**Some food manufacturers have publicly announced their intent to change marketing and advertising practices towards children for the foods high in fat, sugar or starch that they produce.**

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on external revenues from unhealthy food services and snack vending machines,<sup>100</sup> and they can better afford to provide physical activity opportunities for all students in and out of the classroom.<sup>56</sup>

Some food manufacturers in the US have publicly announced their intent to change marketing and advertising practices towards children for the foods high in fat, sugar or starch that they produce.<sup>103</sup>

In Canada and many other countries, most advertising is self-regulated.<sup>104</sup> Child-directed advertising in the broadcast media is regulated by the voluntary *Broadcast Code for Advertising to Children*, administered by the self-regulatory body, Advertising Standards Canada (ASC). The Code maintains that, “advertising which is directed to children must not exploit their credulity, lack of experience or their sense of loyalty, and must not present information or illustrations that might result in their physical, emotional or moral harm.”<sup>105</sup> Unlike the rest of Canada where most advertisements are self-regulated, Quebec’s *Consumer Protection Act* prohibits advertising to children in the province.

Some countries have laws that prohibit advertisements targeting children. For example, in 1991, Sweden took the step of prohibiting, by law, television advertising to children under the age of 12.<sup>106</sup> The case for restricting advertising of high energy-dense foods to young children is building, and calls for advertising restrictions on high-fat, high-sugar foods have been proposed, similar to bans on tobacco.<sup>107</sup> European Union Member States, Greece and Denmark, as well as a number of other countries, are currently considering this approach.<sup>108</sup>

### Monitoring and Regulating Nutrition Information

Regulating nutrition information provided by food manufacturers to consumers is one measure that can help people make informed choices. Recently, Health Canada has introduced new regulations that require mandatory labelling of nutritional information in most pre-packaged foods sold in Canada. The new regulations require manufacturers of pre-packaged foods to provide nutritional information in a consistent way on their food products, and the regulations also permit, for the first time in Canada, diet-related health claims for foods. Providing this new information is intended to help Canadians make informed food choices, compare products and assess the nutritional value of foods and thereby promote better health.<sup>109</sup>

### Planning and Land Use Can Contribute

#### Community Design Can Contribute to Health

Research has not yet assessed the contribution of physical planning, design and infrastructure to the growth of sedentary lifestyles underlying obesity trends. However, it is apparent that certain planning and design features promote physical activity (for example, recreation facilities, trails, bike lanes, traffic calming), while others discourage it (for example, decentralized, low-density residential development, growth of arterial roads and freeways, separation of commercial and residential land uses).<sup>59, 60, 110</sup>

For a comprehensive obesity prevention strategy, community planning and design could be possible features of the policy architecture. Messages and guidelines that encourage physical activity, accompanied by physical infrastructure that supports active living, could help improve the effectiveness of health promotion.

#### Healthy Official Plans Can Be a Tool

Increasingly, Canadian municipalities are adopting the health of the community as a goal for their official plans. For instance, in the early 1990s, the 21 municipalities of the Greater Vancouver region developed a Livable Region Strategic Plan (LRSP) as its official regional growth strategy. The LRSP provides a framework for making regional land use and transportation decisions in partnership with member municipalities, the provincial government and other agencies.<sup>111</sup> So far, the protected green zone has increased by approximately 60,000 hectares.<sup>111</sup>

To determine if the plan is promoting active commuting patterns, the LRSP is monitoring a variety of indicators related to physical activity, including number of vehicles per household and the proportion of children walking or bicycling to school. Gathering evidence on the impacts of planning and design practices should be a priority for research.

### The Needs of Low Income Neighbourhoods and Remote Communities

Low income neighbourhoods and remote communities may face particular challenges in efforts to reduce obesity. A number of

Direct measures to reduce rates of low income in families with children should help to ensure these families have sufficient resources to purchase healthy food and participate in physical activity opportunities (see Chapter 2 for a discussion of income supports for families with children).

## Making neighbourhoods safe for families and children to walk and play will minimize an important barrier to physical activity.

possible approaches have been suggested, although few have been assessed for overall costs and benefits. For example, ensuring that schools can provide intramural programs, including equipment and transportation, and that there are food stores that offer a range of affordable fruits and vegetables in low income neighbourhoods, should contribute to conditions for reducing obesity. Making neighbourhoods safe for families and children to walk and play should minimize an important barrier to physical activity.

Likewise, subsidizing the costs of transporting healthy foods to remote Aboriginal communities could help eliminate the cost barrier and encourage healthy eating among residents of these areas. Other possibilities include examining the potential for local food production.

## Summary

Experts agree that long-term obesity reduction will require changes to the societal and environmental factors that promote excessive energy intake and sedentary lifestyles, to give individuals and families healthy choices that are easier to make.

The factors contributing to rising obesity levels are many and involve many actors. As the discussion in this chapter has outlined, there are many policies and programs that could contribute to a reversal of obesity trends in Canada. Responsibility for implementing solutions will need to be shared across sectors and levels of government, with business and industry, with voluntary organizations and with citizens.

## Key Messages

- A mix of interventions will be required, given the complexity of the causes and solutions of overweight and obesity.
- A number of sectors working together on complementary strategies can contribute to reversing the trends.
- Sectors that could provide leadership include health, education, the private sector and local governments.

### How Do We Measure Obesity?

Obesity prevalence trends are reported based on WHO guidelines that use Body Mass Index (BMI) calculated from weight (kg) and height (metres) ( $\text{kg}/\text{m}^2$ ), to classify adults 18 and over as:<sup>1</sup>

- Underweight ( $\text{BMI} < 18.5 \text{ kg}/\text{m}^2$ )
- Normal weight ( $\text{BMI} = 18.5\text{--}24.9 \text{ kg}/\text{m}^2$ )
- Overweight ( $\text{BMI} = 25.0\text{--}29.9 \text{ kg}/\text{m}^2$ )
- Obese ( $\text{BMI} > 30 \text{ kg}/\text{m}^2$ ).

This BMI classification system has recently been adopted in Canada<sup>11</sup> and is intended for use with adults, aged 18 and older. For children, standardized BMI cutoffs have also been developed, and these can be useful for surveillance.<sup>12</sup> Measured heights and weights, instead of self- or parent-reported data, are preferred due to the lower reliability of reported estimates.

#### Calculating BMI

Metric: A person weighing 84 kg (185 lb.) who is 1.93 m (76 in.) in height has a BMI of 22.5 ( $84/1.93^2$ )

Non-Metric:  $\text{BMI} = [\text{weight (185 lb.)} / \text{height (76 inches)}^2] \times 703 = 22.5$

Source: National Institutes of Health. (1998). Clinical Guidelines on the identification, evaluation and treatment of overweight and obesity in adults. National Institutes of Health. National Heart, Lung and Blood Institute. NIH Publication no. 98-4083

BMI has limitations as it classifies obesity based upon weight and height only and does not consider body composition (adiposity versus lean weight) or fat distribution on the body. Therefore, BMI may not be an accurate predictor of risk among very muscular individuals, pregnant women, youth who have not yet met their full height potential, or those over 65 years of age.<sup>11</sup> Health risks may also vary among different ethnic groups for the same BMI.<sup>11</sup> However, BMI allows for meaningful comparisons between populations and is relatively easy to ascertain from measured or self-reported data.

Despite its limitations, BMI is a widely used indicator that has utility for policy and clinical practice.<sup>11</sup> Measurement of waist circumference is another simple, practical method for estimating body fat that predicts health problems associated with obesity.<sup>1</sup> Waist/hip ratio is also effective.

In Canada there is no systematic surveillance using measured stature and body mass. National BMI data are based on self-reported height and weight, usually obtained through Statistics Canada self-report surveys, such as the *National Population Health Survey* (NPHS) and the *Canadian Community Health Survey* (CCHS). In 2004, however, the CCHS Cycle 2.2 Nutrition Focus will collect physical measures for height, weight and waist circumference as well as self-reported height and weight.

## Information Gaps: Some Examples

|                                       |  |
|---------------------------------------|--|
| <p>What do we know?</p>               | <ul style="list-style-type: none"> <li>• Obesity and overweight have increased in Canadian adults and children.</li> <li>• Obesity is linked to many major chronic diseases in Canada.</li> <li>• The main causes of rising obesity are increased intake of foods high in fat, sugar or starch, and sedentary lifestyles. Diet and physical activity are influenced by factors such as heavy marketing of unhealthy foods, income disparities (especially for single women) and social environments that discourage regular physical activity.</li> <li>• To prevent obesity, conditions must be created for Canadians to adopt healthier diets and be more physically active.</li> <li>• Solutions supported by evidence include comprehensive school health programs, community-wide healthy living programs, physical education, reduced television viewing and breastfeeding.</li> </ul> |
| <p>What do we still need to know?</p> | <ul style="list-style-type: none"> <li>• What are measured height and weight and the resultant BMI of Canadians? How well do they correspond to self-reported BMI?</li> <li>• What are the relative contributions of physical activity and diet to observed trends?</li> <li>• What are the key social, environmental and economic factors underlying the current obesity trends?</li> <li>• What are bodyweight trends among Aboriginal Canadians?</li> <li>• Why are residents of certain provinces and regions less physically active? Why do some have less healthy eating patterns?</li> <li>• What are the actual impacts on obesity prevalence of preventive policies and programs that improve diets and increase physical activity?</li> <li>• Which preventive policies and programs work best?</li> </ul>   |
| <p>What's happening in this area?</p> | <ul style="list-style-type: none"> <li>• Federal/provincial/territorial Healthy Living Strategy is being developed.</li> <li>• <i>Canadian Guidelines for Body Weight Classification in Adults</i> was issued in 2003.</li> <li>• <i>Canada's Physical Activity Guide to Healthy Active Living</i> was published in 1998, for older adults in 1999 and for children and youth in 2002.</li> <li>• <i>Canada's Food Guide to Healthy Eating</i> is currently being reviewed.</li> <li>• 15 million dollars were invested in obesity research through CIHR's Institute for Nutrition, Metabolism and Diabetes.</li> <li>• European Union Member States, Greece and Denmark are considering restricting television advertising to children; legislation is already in place in Sweden and Quebec.</li> </ul>  |

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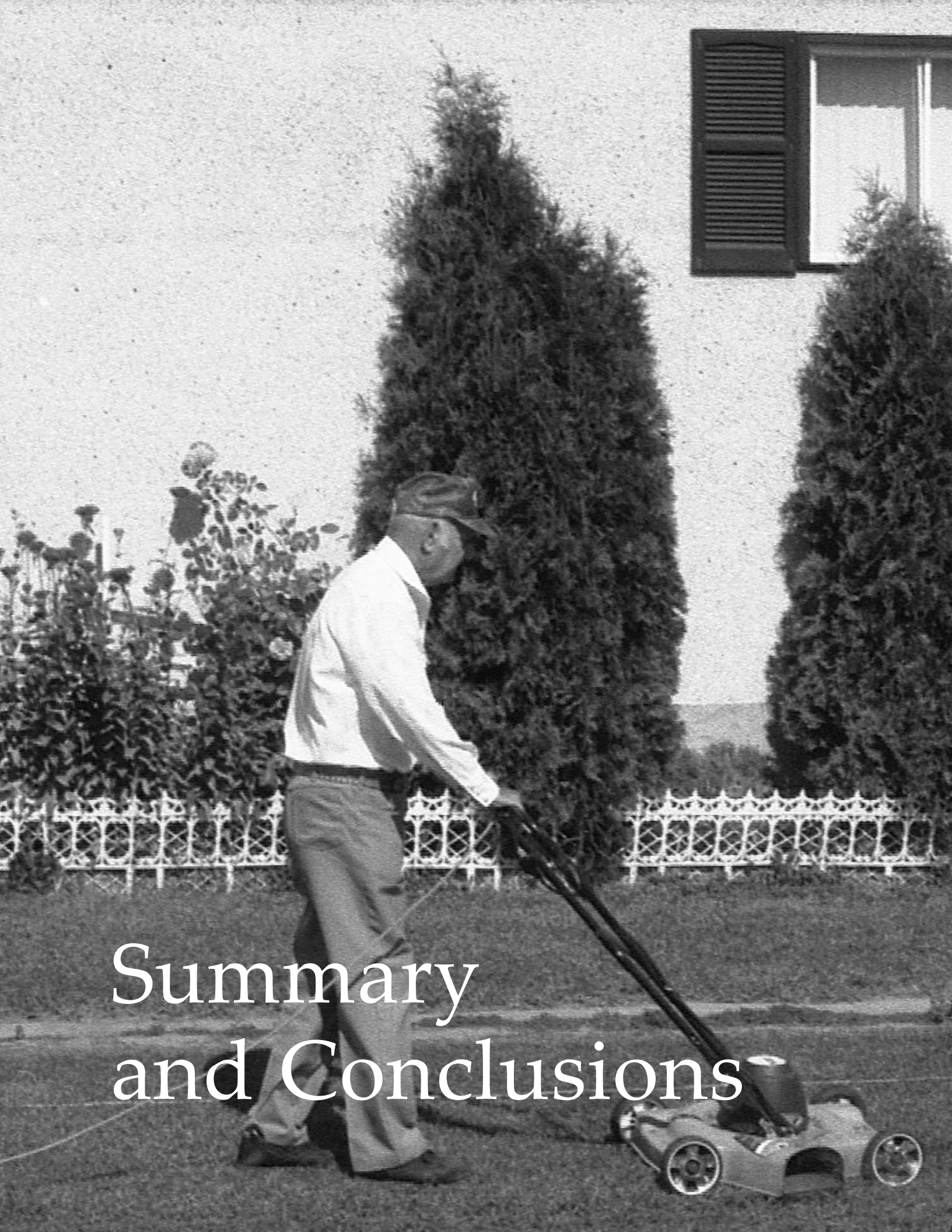
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Chapter

6



# Summary and Conclusions

**Canadians cherish their health.** This value is often publicly expressed in the importance that we attach to our health care system, a national icon and a defining feature of what it means to be a Canadian. And our health system is one of the reasons Canada is such a healthy place to live.

But the success of Canada's health system is not enough to create and sustain health for everyone in Canada. Some of us are doing well, but many of us could do better. Opportunities to improve health remain.

Embedded in the chapters in this report is a fundamental premise that the health of Canadians varies because of social, economic and environmental conditions. Accordingly, improving the health of Canadians requires social, economic and environmental solutions.

Improving our health requires an expansion of knowledge and shifting attitudes about health and health care, a concrete focus on ways to reduce health inequalities and a dedication to working together. Improving our health also requires public demand and political will to create and sustain change.



## What Was Presented in *Improving the Health of Canadians*?

*Improving the Health of Canadians* explored in depth four key topics that the Canadian Population Health Initiative identified as critical to our nation's health—income, early childhood development, Aboriginal peoples' health and obesity. Each chapter reviews what we know from the research evidence and describes some of the policies and programs in Canada and elsewhere that address these topics.

**Income matters for health.** People with very low levels of income are deprived, and they may have insufficient income to pay for the necessities of life, like food and housing. But even when income covers basic necessities, people can face severe

families with children made since the late 1990s may have contributed to lowering poverty rates, particularly for lone parent families. Some other countries, such as France, Sweden and the Netherlands have been more successful than Canada at reducing levels of poverty for their citizens, particularly for families with children.

Programs that have reduced poverty, like pensions for seniors, have rarely been analyzed for their effects on health. However, this absence of evidence does not mean absence of effect; it just has not been studied. We can be reasonably certain that reducing poverty will improve health. Canada can learn from other countries, such as Sweden and the UK, which have implemented comprehensive health plans to address inequalities in health, with goals of reductions in poverty levels as central to the plans.

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## Each chapter reviews what we know from the research evidence and describes some of the policies and programs in Canada and elsewhere.

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barriers to personal development, participation and control over their lives. So, while it is true that Canadians with low incomes are less healthy on average than those with middle incomes, it is also true that those with high incomes are healthier than the middle income group. The explanations for this are complex and not fully understood; but it is clear that adequate income combined with other factors such as an adequate education, meaningful employment, good housing and a supportive social and physical environment together create conditions that optimize individual and population health.

Canada continues to substantially reduce poverty among seniors through public pensions and other income support programs. Improvements to benefits for

**Early childhood development is key to a healthy life.** A good start in life is more likely to be achieved with sufficient income, supportive parents, a safe and stimulating environment and adequate community resources. Without these things, threatened or delayed development can be a consequence. This can result in a chain of poor outcomes into adulthood. For example, a poor start can mean reduced language development, literacy level and capacity to communicate. These reduced capacities are linked to health and have lifelong consequences.

This report has documented that a number of programs and services can be effective in fostering healthy early childhood development. In particular, publicly funded, centre-based early childhood development programs have been strongly recommended

by the *Guide to Community Preventive Services* (the Guide is a systematic review program of the US Centers for Disease Control and Prevention). These programs were recommended because of their contribution to reducing cognitive developmental delay and improving preparedness to learn, particularly for low-income children aged three to five. We have seen in Chapter 3 that some other countries have made more substantive public investments in early childhood development programs than Canada has.

**The discussion on Aboriginal Peoples' health** provided evidence that there have been important improvements in the health of Aboriginal Peoples in Canada. Over the last 50 years, rates of infant mortality have declined substantially, and life expectancy has risen dramatically. However, Aboriginal Peoples continue to endure social, economic and environmental conditions that are worse, on average, than those experienced by other Canadians. Partly as a result of this, the health status of Aboriginal Peoples is still much worse than other Canadians. For example, injuries are a major cause of death, and this burden falls unduly on younger Aboriginal people.

Some of the initiatives that are intended to contribute to improved health among Aboriginal Peoples are also described. These include institution building, community infrastructure development, and transfer of authority and control (over land, resources and services) from non-Aboriginal to Aboriginal Peoples. Changing health outcomes is not the sole rationale for all of these initiatives, but the effect of modifying and enhancing key determinants of health for Aboriginal Peoples is probably contributing to health improvement—especially given the perspective of Aboriginal Peoples on the determinants of health that was described in the chapter. These initiatives will require additional monitoring over time to fully assess their effects on health.

**The fourth topic covered in this report was obesity.** Evidence was presented showing that the levels of overweight and obesity in Canadian adults have risen since 1985. More adults than ever before, currently nearly 9 million, are overweight or obese. And levels have risen among children as well. The impact of obesity is major—increasing risk for many chronic diseases like high blood pressure, cardiac disease, stroke, diabetes and some cancers. This obviously has implications for the health care system and many other areas in Canadian society.

Addressing obesity will require policies and programs in a number of areas given the range of factors that underlie the problem, such as food marketing, food choices, inactive leisure time, less physically demanding work and increased urbanization. School-based physical education and activity programs seem to hold promise in reducing obesity. But much broader policy options could be considered, like community-based activity and nutrition programs, marketing restrictions, improved food labelling and financial incentives and penalties. Individuals and families, business and industry, community organizations and government—across levels and sectors—can contribute to solutions in their areas of responsibility, as well as coordinate and collaborate with others to ensure maximum impact of efforts.

## What Have We Learned from *Improving the Health of Canadians*?

The health of Canadians has improved substantially over the last century. Rising life expectancy and falling rates of death from coronary heart disease over the years are two measures that clearly show improved health among Canadians.<sup>1</sup>

These improvements in health have been supported by the choices and investments that Canadians have made as a society in the past. These choices include investing in public education and health care; providing income supports, such as public pensions for seniors; taxing and regulating the use of tobacco and alcohol products; legislating the use of seat belts and requiring specific seat restraints for infants; and publicly disseminating information on how to live healthier lives. Some Canadians have used this information to change their behaviour and make healthier choices, such as stopping smoking, eating better and getting more exercise.

We have also made societal choices that may have undermined health. These policy choices have resulted in urban sprawl, cuts in surveillance and public health, reductions in physical education time in schools, cuts in income support programs and lack of adequate early childhood education and care programs.

can all contribute to reducing inequalities in health. Health inequalities will not be cured in hospitals or doctors' offices alone.

### 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 be of benefit to our health. These choices are framed by three themes:

- Expanding public knowledge and shifting attitudes to emphasize “upstream” determinants of health
- Concretely focusing on ways to reduce health inequalities
- Dedicating everyone at all levels of society to working together

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

Research done the Canadian Population Health Initiative on public views of the determinants of health shows that Canadians recognize the importance of some of the determinants, specifically

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## Improvements in health have been supported by the choices and investments that Canadians have made as a society.

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Solutions to the inequalities in health identified in this report 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

health-related behaviour and lifestyle and environmental issues, like air and water pollution.<sup>2</sup> Determinants related to social and economic conditions, like income and housing, and related to community characteristics, like supportive community networks, were only mentioned by one in three Canadians. Clearly, there is work to be done to increase the understanding of Canadians about the full range of factors that may lead to health improvements.

**Second, inequalities in health in Canadian society are largely avoidable, not inevitable.**

Factors like early childhood development, work, income and the environment can be influenced and changed. Canadians, both at the individual and 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, sometimes people need additional support and resources to make healthy choices.

*Improving the Health of Canadians* provides evidence and examples that many

In making choices on what programs will best improve health, an unanswered question is how best to balance universal or targeted approaches. The discussion on policies and programs throughout this report suggests that most likely a mix of the two may 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.

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## There are new choices to be made and these choices can be of benefit to our health.

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inequalities in health are preventable if all actors in society (for example, politicians, government officials, employers, unions, community leaders and individuals) take responsibility.

**Third, 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. The complexity of the interrelationships between the factors affecting health means that broad involvement is required across sectors (for example, finance, environment, human resources, sport and recreation, industry) and at all levels of society (e.g. individuals and families, communities, regions, provinces/territories and the nation) to create an integrated approach. This means more than just governments; it means involving the private, public and non-profit sectors. And it means being vigilant about the impact that policies and programs have on health.

We also need to build on what already exists and enhance mutual learning and action. Broad involvement can also help to avoid duplication, thereby assuring the best use of available resources.

### 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 their understanding of health and health care—universality, equity, solidarity, fairness, quality and efficiency, wellness and trust.<sup>3</sup> They were revealed in a process of dialogue with Canadians that was conducted for the Commission.<sup>4</sup>

According to the *Report on the Citizen's Dialogue on the Future of Health Care in Canada*:<sup>4</sup>

- “Canadians are passionate about health care and very concerned about its future”
- Health system renewal should “focus on wellness, prevention and patient education”
- Canadians “pledge to assume greater responsibility for their own health, through diet, exercise and more healthy living”
- Canadians are “aware of the connection between health and other governmental responsibilities such as the environment, social programs, and housing. They want joint interdepartmental strategies to address the determinants of health.”

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## Effective and potential solutions for improving the health of Canadians that have been identified in this report call for sustained efforts over a long period.

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The Citizens' Dialogue suggests that the values and beliefs of Canadians have shifted, and that opportunities for reform have appeared:<sup>4</sup>

“On the issue of wellness, prevention, and promotion, citizens were remarkably consistent from coast to coast. Observers wondered if Canada is on the cusp of a major societal shift from a disease-based to a wellness-based way of thinking. . . . The combination of [Canadians'] vulnerability [to health risks] and their desire to live a healthy life creates a remarkable opening for public policy, across the spectrum of government programming.”

It is likely that some policies and programs can improve health in the short term, while others will take longer for sustained change and improved health to occur.

### Future Priorities

*Improving the Health of Canadians* reveals our lack of knowledge about some basic issues. This is most apparent when examining the health of Aboriginal Peoples in Canada. Although more is known each year about Aboriginal Peoples' health and its determinants, it is critical that efforts be made in Canada to continue to give priority to the development of an information infrastructure so better understanding of

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## *Improving the Health of Canadians* reveals our lack of knowledge about some basic issues.

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A population health perspective is concerned with the broad set of societal and individual factors that have an impact on health. It also argues for promoting and achieving equitable health outcomes.<sup>5, 6, 7, 8, 9, 10, 11</sup> Canada can learn from other countries, such as Sweden and the UK that have crosscutting governance structures to address health issues from a broader perspective to understand the health consequences of decisions made in areas such as finance, environment and land-use planning. These structural changes are necessary to address the interwoven nature of population health problems and issues.

Effective and potential solutions for improving the health of Canadians that have been identified in this report call for sustained efforts over a long period.

Aboriginal Peoples' health can be achieved. The information gaps for this population group are considerable.

Better data and surveillance for monitoring the health of Canadians in general are also needed. This was pointed out as critical in the October 2003 report of the National Advisory Committee on SARS and Public Health.<sup>12</sup> While there are many existing data in Canada relevant to understanding the broad factors that affect health, they are not always easily available or accessible. This is a challenge that needs to be addressed. Further, integrating available administrative data, survey data, census data and geographic information systems in a privacy-sensitive manner, will make that data much more useful to all the sectors concerned with the health of Canadians.

This is a particular challenge that CPHI, as part of the Canadian Institute for Health Information, along with our partners at Statistics Canada and Health Canada, and in academia, and working with provincial/territorial and regional partners, is well placed to address.

*Improving the Health of Canadians* has also shed light on the evidence on the effectiveness of some of the policies and programs that influence the health of Canadians. It identifies gaps that need to be addressed. First, there is a need for ongoing syntheses and systematic reviews of studies that evaluate the effectiveness of policies and programs in terms of health outcomes. We need to know what works, what doesn't work and why. Second, investments in information management, and evaluations of policies and programs introduced to improve health, need to be ongoing.

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.

## Future Topics

The Canadian Population Health Initiative will produce the next report on *Improving the Health of Canadians* in 2006. CPHI is supporting ongoing research in areas such as obesity, place and health, health inequalities and the health of children and youth. As well, CPHI continues to monitor progress on policies and programs aimed at improving health and public views of health and health issues. Data on these and other topics and population groups will contribute to the 2006 report.

## For More Information

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## It's Your Turn

We welcome comments and suggestions on *Improving the Health of Canadians*, and on how to make future reports more useful and informative. Please complete this questionnaire or email ideas to [cphi@cihi.ca](mailto:cphi@cihi.ca).

Please complete and return this questionnaire to:

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**Canadian Institute for Health Information**  
**377 Dalhousie Street, Suite 200**  
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For each question, please put an "X" beside the most appropriate response. There are no right or wrong answers, we are only interested in your opinions. Our goal is to improve future reports. Individual responses will be kept confidential.

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- It was mailed to me                       From a colleague                       Through the Internet  
 I ordered my own copy                       Other, please specify \_\_\_\_\_

2. To what extent have you read through the report?

- I have read through the entire report                       I have read certain chapters and browsed through the entire report  
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3. How satisfied are you with the following aspects of the report?

- |                           |                                    |                               |                               |                               |
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| Organization/Format       | <input type="checkbox"/> Excellent | <input type="checkbox"/> Good | <input type="checkbox"/> Fair | <input type="checkbox"/> Poor |
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- |  |                                      |  |                                     |                                       |
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| Chapter 1: Introduction                | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Chapter 2: Income                      | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Chapter 3: Early Childhood Development | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Chapter 4: Aboriginal Peoples' Health  | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Chapter 5: Obesity                     | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Chapter 6: Summary and Conclusions     | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
| Summary Report                         | <input type="checkbox"/> Very useful | <input type="checkbox"/> Somewhat useful | <input type="checkbox"/> Not useful | <input type="checkbox"/> Did not read |
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5. How do you plan on using the information presented in this report?

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7. How would you improve this report? Do you have any suggestions for future reports?

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8. Where do you live?

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- Prince Edward Island
- Quebec
- Ontario
- Manitoba
- Saskatchewan
- Alberta
- British Columbia
- Northwest Territories
- Yukon Territory
- Nunavut
- Outside Canada, please specify country \_\_\_\_\_

9. What is your main position or role?

- Health services manager or administrator
- Researcher
- Policy analyst
- Board member
- Elected official
- Health care provider
- Student
- Educator
- Other, please specify \_\_\_\_\_

*Thank you for completing and returning this questionnaire*