

# *Toward a Healthy Future*

Second Report  
on the Health  
of Canadians

Prepared by the Federal, Provincial and Territorial Advisory Committee on Population Health  
for the Meeting of Ministers of Health, Charlottetown, P.E.I., September 1999

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## Preface

*Toward a Healthy Future: Second Report on the Health of Canadians* is the result of a collaborative effort by the Federal, Provincial and Territorial Advisory Committee on Population Health (ACPH), Health Canada, Statistics Canada, the Canadian Institute for Health Information and a project team from the Centre for Health Promotion, University of Toronto.

The role of the Advisory Committee is to advise the Conference of Deputy Ministers of Health on national and interprovincial strategies to improve the health status of the Canadian population and to provide a more integrated approach to health.

As the title suggests, this is the second report to summarize and comment on the state of the nation's health. The first report was released in September 1996. The current report differs from the first one in several ways. It puts more emphasis on the influence of gender and socioeconomic status on health. Chapters on healthy child development and biology and genetics have been added in order to paint a picture that includes all of the major determinants of health. The section on the physical environment has been expanded to provide a better understanding of how it impacts on the health of all Canadians.

This report summarizes the most current information we have on the health of Canadians, and invites the reader to consider the implications of these findings for current and future policies, practices and research. It is a tool to alert policy makers, practitioners and the public to current and future challenges in health, and to help identify actions that can be taken to improve the health of Canadians.

More detailed statistics and information are provided in the *Statistical Report on the Health of Canadians (1999)*, published under separate cover by the ACPH.

Print copies of this report and the *Statistical Report on the Health of Canadians* are available from Provincial and Territorial Ministries of Health or from:

Publications  
Health Canada  
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The full text of both reports can be found on the Internet at the following Web site: <http://www.hc-sc.gc.ca>. The Statistical Report is also available at <http://www.statcan.ca> and at <http://www.cihi.ca>.

Members of the Federal, Provincial and Territorial Advisory Committee on Population Health welcome your comments on this report. A questionnaire is included at the end of the report for this purpose.



The Federal, Provincial and Territorial Advisory Committee on Population Health (ACPH) wishes to acknowledge the many individuals who contributed to the development and production of *Toward a Healthy Future: Second Report on the Health of Canadians*.

Members of the project team from the University of Toronto, Centre for Health Promotion, were: Irving Rootman (Director of the Centre), Peggy Edwards (writer), Reg Warren (analyst), Rick Wilson (coordinator) and Katherine Joly (production of earlier drafts).

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Project management was provided by Carol Silcoff (Health Canada), assisted by Stephanie Wilson (until September 1998) and Lynda Bottoms (until January 1999). The following Health Canada staff also contributed to project planning and implementation: Nancy Hamilton, Suzanne Desilets, Dyanne Wilson, Johanna Laporte, Jacqueline Goudal, Jerry Dybka, Roslyn Nudell, Jeffrey Pender, Elisabeth Gebhardt, Marie-Josée Thérien and Rolande Ostiguy (and others too numerous to mention).

Members of the ACPH, the ACPH Working Group and the Health Canada Working Group are listed in Appendix A. The ACPH wishes to thank John Millar for chairing the Working Group until December 1998, and Shaun Peck and Kim Elmslie for co-chairing since that date.





## *Executive Summary*

This report summarizes the most current information we have on the health of Canadians. As such, it is a tool to alert policy makers, practitioners and the public to current and future challenges in population health and to identify actions that will improve the health of all Canadians.

### **What Makes Canadians Healthy or Unhealthy?**

This deceptively simple story speaks to the complex set of factors or conditions that determine the level of health of every Canadian.

“Why is Jason in the hospital?

Because he has a bad infection in his leg.

But why does he have an infection?

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

But why does he have a cut on his leg?

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

But why was he playing in a junk yard?

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

But why does he live in that neighbourhood?

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

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

Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?

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

But why ...?”

As this story suggests, health, illness and early death depend on a variety of factors or “determinants” that surround individuals, families and nations. Getting to the root cause of Jason’s illness and the other major health problems we face in Canada today requires action on the broader determinants of health. It also requires that we continue to provide high-quality health services that will help Jason heal.

This report shows that factors in the socioeconomic and physical environment, as well as early childhood experiences, personal health practices and biology, have a major impact on health. These factors operate independently of the amount of money we spend on health care. The highlights of these findings are summarized in the next section.

## Highlights

### *How Healthy Are Canadians?*

- ◆ Canada ranks in the top three developed countries in the world in measures of life expectancy, self-rated health and mortality rates. Life expectancy in Canada has reached a new high: 75.7 years for men and 81.4 years for women (Chapter 1).
- ◆ Most recent immigrants to Canada are in good health and the great majority of our older citizens enjoy independence and good health as they age (Chapters 1, 3, 5, 7).
- ◆ In 1996, Canada’s infant mortality rate dropped below the level of six infant deaths per 1,000 live births for the first time ever (Chapters 1, 3).
- ◆ The United Nations (UN) ranks Canada first in the world on its human development index. That standing drops to 10th place, however, when the UN Human Poverty Index for industrialized countries is applied (Chapter 1).

### *Gender and Age Influence Health*

- ◆ Men are more likely to die prematurely than women, largely as a result of heart disease, fatal unintentional injuries, cancer and suicide. Rates of potential years of life lost before age 70 are almost twice as high for men than women and approximately three times as high among men aged 20 to 34 (Chapter 1).
- ◆ While women live longer than men, they are more likely to suffer depression, stress overload (often due to efforts to balance work and family life), chronic conditions such as arthritis and allergies, and injuries and death resulting from family violence (Chapters 1, 2).
- ◆ While overall cancer death rates for men have declined, they have remained persistently stubborn among women, mainly due to increases in lung cancer mortality. Teenage girls are now more likely than adolescent boys to smoke. If increased rates of smoking among young women are not reversed, lung cancer rates among women will continue to climb (Chapters 1, 3, 5).
- ◆ Older Canadians are far more likely than younger Canadians to have physical illnesses; however, youth (aged 12 to 19) report the lowest levels of psychological well-being (Chapters 1, 3, 7).



- ◆ Unintentional injuries are still the leading cause of death among children and youth, as well as a tragic and costly cause of disabling conditions among young Canadians. Boys and young men experience more unintentional injuries and more severe injuries than girls and young women (Chapters 1, 3).
- ◆ Rates of physical activity drop quickly as age increases, and males are more active than females in every age group. Regular, moderate activity is associated with better health, reduced risk for chronic illnesses and longer life (Chapter 5).

### ***Income and Income Distribution Affect Health***

- ◆ Only 47% of Canadians in the lowest income bracket rate their health as very good or excellent, compared with 73% of Canadians in the highest income group (Chapter 1).
- ◆ Low-income Canadians are more likely to die earlier and to suffer more illnesses than Canadians with higher incomes, regardless of age, sex, race and place of residence (Chapters 1, 2).
- ◆ At each rung up the income ladder, Canadians have less sickness, longer life expectancies and improved health (Chapters 2, 3).
- ◆ In 1995, children, youth and unattached seniors (mostly women) were most likely to be living in low-income situations (below Statistics Canada low-income cut-off) (Chapters 2, 3).
- ◆ In 1995, almost 50% of single-parent, mother-led families were in low-income situations. However, poverty was not restricted to single-parent families. From 1990 to 1995, the percentage of married couples with children in low-income situations rose from 9.5% to 13% (a total of almost 460,000 families) (Chapter 2).
- ◆ A greater proportion of Aboriginal families are experiencing problems with housing and food affordability than Canadian families as a whole (Chapter 4). In 1995, a disturbing 44% of the Aboriginal population lived in low-income situations (Chapter 2).
- ◆ Studies suggest that the distribution of income in a given society may be a more important determinant of health than the total amount of income earned by society members. Large gaps in income distribution lead to increases in social problems and poorer health among the population as a whole (Chapters 1, 2, 8).
- ◆ Overall, inequities in income distribution remained relatively constant in Canada between 1985 and 1995. This was largely due to the effect of redistributive taxes and transfer payments, which helped to offset a growing income gap between the 10% of Canadians with the lowest incomes and the 10% of Canadians with the highest incomes (Chapter 2). Trends in income inequality beyond 1995 are worth monitoring in future analyses.
- ◆ Changes in income distribution are closely related to changes in employment and wages. In recent years, some workers have been gaining, most notably older workers and those who are highly skilled. Others, especially young workers and lower-paid, lower-skilled men have experienced declines.



- ◆ While women are making progress in the workplace, they still earn less than men, mainly because they hold the majority of the lowest paying jobs .

### ***The Social Environment Affects Health***

- ◆ By and large, Canadians are a caring people. They report high levels of social support, caring for others, voluntarism and civic participation. These are important buffers in times of stress (Chapter 2).
- ◆ Family violence has a devastating effect on the health of women and children in both the short and long term. In 1996, family members were accused in 24% of all assaults against children; among very young children, the proportion was much higher. In 1997, about 40% of female homicide victims were killed by a man with whom they had experienced an intimate relationship (Chapter 2).
- ◆ In a 1996 study of 15-year-olds, half of boys and one-quarter of girls said that bullying was a problem (Chapter 3). While the incidence of violent youth crime has decreased in recent years, it remains much higher than it was a decade ago (Chapter 2).

### ***Education and Literacy Affect Health***

- ◆ Canadians with low literacy skills are more likely to be unemployed and poor, to suffer poorer health and to die earlier than Canadians with high levels of literacy (Chapters 1, 2).
- ◆ In 1994–1995, about 17% of Canadians scored in the lowest prose literacy category. Another 26% achieved the second level, which means that they can read, but not well (Chapter 2).
- ◆ In 1995, Canada had twice the proportion of citizens who lacked adequate literacy skills as Sweden, the number-one ranked country on this index (Chapter 1).
- ◆ People with higher levels of education have better access to healthy physical environments (Chapter 4) and are better able to prepare their children for school than people with low levels of education (Chapter 3). They also tend to smoke less, to be more physically active and to have access to healthier foods (Chapter 5).
- ◆ In 1996, more young Canadians (especially women) were gaining advanced degrees than ever before. However, there are a core of young people who leave high school early. Most often, they are young men who are having difficulty in school and have limited emotional and financial support for staying in school. Young women who leave school early tend to do so because of pregnancy or other family problems (Chapters 2, 3).

### ***The Physical Environment Affects Health***

- ◆ The prevalence of childhood asthma has increased sharply over the last two decades, especially from birth to age 6. Children (especially poor children) are more vulnerable to airborne contaminants and other environmental toxins than adults. In 1995, at least 1.4 million children were exposed to environmental tobacco smoke in their homes (Chapter 4).

- ◆ In 1996, many Canadians faced a housing affordability crisis. Some 58% of lone-parent families and 59% of older Canadians living in one-person households were spending more than 30% of their income on housing. As many as 200,000 Canadians were estimated to be homeless, including increasing numbers of women and children, Aboriginal people, adolescents and persons with mental illnesses (Chapter 4).
- ◆ Climate change and environmental hazards in the food supply may have a particularly negative effect on Aboriginal people (Chapter 4).

### ***Personal Health Practices Affect Health***

- ◆ Tobacco use accounts for at least one-quarter of all deaths of adults between the ages of 35 and 84 (Chapter 1). Smoking rates have increased substantially among young people, particularly among young women in the last 10 years. Smoking rates among Aboriginal people are double the overall rate for Canada as a whole and the age of onset for tobacco use is substantially younger among Aboriginal children in some communities (Chapters 1, 5).
- ◆ Multiple risk-taking and unsafe sex practices remain high among young people, particularly among young men (Chapter 5). Multiple drug use (e.g. combination of alcohol, tobacco and cannabis) has increased among high school students in regions where this has been surveyed.
- ◆ The proportion of new AIDS cases attributed to men who have sex with men declined steadily from nearly 80% in the 1980s to just over 50% in 1997. By contrast, 20% of adult AIDS cases in 1997 were attributed to injection drug use, compared to 2% prior to 1990, and 5% in 1993.

### ***Health Services Affect Health***

- ◆ Disease and injury prevention activities in areas such as immunization (Chapter 3) and the use of mammography (Chapter 6) are showing positive results. These activities must continue if progress is to be maintained.
- ◆ Advances in the treatment of HIV/AIDS and other diseases have helped to increase the length of life and quality of life of people living with life-threatening illnesses (Chapter 1).
- ◆ The annual growth rate of Canada's insured health-care expenditures fell from 11.1% (between 1975 and 1991) to 2.5% between 1991 and 1996 (Chapter 6). Despite this slowdown, Canadians did not report a significant increase in unmet health-care needs (Chapter 6), and most measures of population health continued to improve (Chapter 1).
- ◆ There has been a substantial decline in the average length of stay in hospital. Shifting care into the community and the home raises concerns about the increased financial, physical and emotional burdens placed on families, especially women (Chapters 2 and 6). The demand for home care has increased in several jurisdictions, and there is a concern about equitable access to these services (Chapter 6).

- ◆ Little information on the quality of care or the impact of restructuring was available. However, the public's assessment of the overall quality of the health-care system, although still largely favourable, has deteriorated since the beginning of this decade. In February 1998, 29% of Canadians rated Canada's health-care system as "excellent" or "very good," down from 61% in 1991 (Chapter 6).
- ◆ Access to universally insured care remains largely unrelated to income; however, many low- and moderate-income Canadians have limited or no access to health services such as eye care, dentistry, mental health counselling and prescription drugs (Chapter 6).
- ◆ Expenditures for medications and the use of prescription drugs have increased dramatically since 1975. In 1996–97, 30% of Canadians aged 12 and over and 46% of Canadians aged 75 and older used three or more medications (Chapter 6).

### ***Biology and Genetics Affect Health***

- ◆ Studies in neurobiology have confirmed that when optimal conditions for a child's development are provided in the investment phase (between conception and age 5), the brain develops in a way that has positive outcomes for a lifetime (Chapters 3, 7).
- ◆ Aging is not synonymous with poor health. Active living and the provision of opportunities for lifelong learning may be particularly important for maintaining health and cognitive capacity in old age (Chapter 7).

## **Key Population Groups**

This report describes decreased opportunities for optimal well-being among three key population groups: children, youth and Aboriginal people.

### ***Early Childhood***

With nurturing and consistent support in later years, many children can overcome early disadvantages. However, the preferred strategy is to prevent problems by providing all children with the kinds of social, economic and physical environments they need in order to thrive.

Efforts to maximize healthy child development in the early years will require direct action by the health sector as well as collaboration with the other sectors (e.g. education, social services, housing and taxation) and the many people and institutions that affect child development (e.g. families, schools, communities, workplaces, governments and the media).

- ◆ A loving, secure attachment between parents/caregivers and babies in the first 18 months of life helps children to develop trust, self-esteem, emotional control and the ability to have positive relationships with others in later life (Chapters 3, 7). Support to families and parents through a broad range of strategies is the best way to help children get this important head start in healthy development.
- ◆ Experiences from conception to age six have the most important influence of any time in the life cycle on the connecting and sculpting of the brain's neurons. Positive stimulation early in life improves learning, behaviour and health right into adulthood.

- ◆ Infants and children who are neglected or abused are at higher risk for injuries, a number of behavioural, social and cognitive problems later in life, and death (Chapters 2, 3, 7). In 1996, almost 70% of children under age 3 who were victims of assault were assaulted by family members (Chapter 2).
- ◆ Readiness for school is an important indicator of developmental maturity and future success in school. In 1996–97, approximately 15% of preschoolers arrived at school with low cognitive scores; 14% had high scores in behavioural problems. Safe, cohesive neighbourhoods, high-quality childcare and growing up with a mother who has a higher level of education are all factors that positively affect school readiness (Chapters 3, 7).
- ◆ A healthy childhood begins before conception and continues through the prenatal period. Good prenatal nutrition and support to pregnant women can help reduce low birthweight and other problems associated with birth. In 1996, 5.8% of all live births in Canada resulted in low birthweight babies (a total of 21,025 babies) (Chapters 1, 2, 3, 7).
- ◆ Despite a parliamentary resolution to eliminate child poverty by the year 2000, the proportion of young children who lived in low-income families increased from one in five in 1990 to one in four in 1995. These proportions are higher in Aboriginal and recently arrived immigrant communities, and in families headed by very young parents and female lone parents (Chapter 2).
- ◆ Children in low-income families and neighbourhoods are at higher risk for infant death and low birthweight. They are more likely to experience developmental delays, to be exposed to environmental contaminants that have a negative effect on health, and to experience higher rates of both unintentional and intentional injuries than children who grow up in families with higher incomes (Chapters 2, 3).
- ◆ At the same time, there is no economic cut-off point above which all children do well. The greatest proportion of children who experience difficulties are found in the bottom 20% of the socioeconomic scale. However, due to the large size of the middle class in Canada, the greatest number of children not doing as well as they might is in the middle socioeconomic group.

## ***Young People***

Just as it is important to invest in early childhood, this report points to the immediate need to invest in Canada's youth. Young people deserve love and respect for who they are. They are also central to Canada's investment in its future as a caring and productive nation. Young people themselves must be involved in identifying both problems and solutions, and in providing input to policy and program decisions related to their well-being.

- ◆ A number of things are going well with young people. For example, youth voluntarism has increased dramatically and the number of young women completing post-secondary levels of education is at its highest point ever (Chapter 2).

- ◆ At the same time, distressing trends in the psychosocial well-being of Canada's youth are reported in virtually every chapter of this report.
- ◆ Negative health predictors among young women include high levels of reported stress and depression and low levels of psychological well-being (Chapter 1). Many young women report that they smoke to manage stress (Chapters 1, 5).
- ◆ Among young men, high rates of suicide (especially in Aboriginal communities) and unintentional injuries contribute to early deaths (Chapter 1). Early school leaving and multiple risk-taking behaviours (including drinking and driving and drinking and unsafe sex) are symptoms of despair that do not bode well for the current or future health of Canada's young men (Chapters 2, 5).
- ◆ Despite some recent improvements, unemployment and underemployment remain pervasive problems for young people. This is related to increases in the number of young people who live in low-income situations and the number of young low-income families in Canada (Chapter 2).

### ***Canada's Aboriginal People***

Aboriginal communities have the main role in enabling their people to take control of and improve their health. However, meeting this goal will require the support of all Canadians. Policy makers and practitioners who are non-Aboriginal need to work with Canada's Aboriginal people to find culturally appropriate ways to improve their health and well-being.

- ◆ Despite reductions in infant mortality rates, improvements in education levels, and reductions in substance use in many Aboriginal communities, First Nations and Inuit people remain at higher risk than the Canadian population as a whole for illness and early death (Chapters 1, 3).
- ◆ Aboriginal people suffer from chronic diseases such as diabetes and heart disease more so than the general population and there is evidence that these conditions are increasing among Aboriginal groups (Chapter 1).
- ◆ Despite major improvements since the 1970s, infant mortality rates are still twice as high in First Nations communities than in Canada as a whole (Chapters 1, 3).
- ◆ It has been estimated that the suicide rate among the Aboriginal population averages two to seven times that of the population of Canada as a whole. Young Aboriginal men (especially Inuit males) are most likely to commit suicide (Chapters 1, 3).
- ◆ Aboriginal young people are at higher risk for unintentional injuries and early deaths from drowning and other causes (Chapters 1, 5).
- ◆ A greater proportion of Aboriginal families face problems with housing and food affordability than Canadians as a whole.

## Addressing Current and Future Challenges to Health in Canada

This report suggests the need for a comprehensive and collaborative approach to improving the health of Canadians that addresses the root causes of illness and early death. This kind of strategy has been named a “population health approach” by the federal, provincial and territorial health departments in Canada.

### ***A Population Health Approach***

A population health approach focuses on the interrelated conditions that underlie health and then uses what is learned to suggest actions that will improve the well-being of all Canadians. A population health approach uses both short- and long-term strategies to:

- improve the underlying and interrelated conditions in the environment that enable all Canadians to be healthy, and
- reduce inequities in the underlying conditions that put some Canadians at a disadvantage for attaining and maintaining optimal health.

### ***Priorities for Action***

While there are many challenges to improving health, the ACPH recognized the importance of highlighting three broad priority areas for action. The selection of these priorities was based on the evidence contained in this report, as well as the collective experience and expertise of the committee members and their partners. See Chapter 8 for an expanded discussion of key strategies for action.

1. *Renewing and reorienting the health sector* requires collaborative efforts to:
  - take action to meet emerging challenges in health promotion, disease and injury prevention and health protection, as well as in treatment services,
  - increase the accountability of health services through improved reporting on the quality of health services and increasing access to needed services,
  - increase our understanding of how the basic determinants of health influence collective and personal well-being,
  - evaluate and identify policy and program strategies that work, and
  - influence sectors outside of health which can significantly affect health status.
2. *Investing in the health and well-being of key population groups* addresses recent trends that indicate decreased opportunities for optimal well-being among three groups: children, youth and Aboriginal people.
3. *Improving health by reducing inequities in literacy, education and the distribution of incomes in Canada* speaks to the findings in this report showing direct links between poor health and early death, and low levels of income, education and literacy.

## ***The Need for Dialogue and Collaboration***

Obviously, the health sector has a key direct role in improving health. But, since many of the determinants of health are outside the traditional health system, building alliances with other sectors is a primary strategy for improving the health of the population. Other health-determining sectors that need to be involved include finance, justice, housing, education, the physical environment, employment, recreation, transportation and social services.

The ideal outcome of these collaborations will be healthy public policies in a variety of health-determining sectors, as well as in the health sector itself. The health sector cannot do it all, nor can it impose its agenda on other sectors. It can, however, initiate dialogue and partnerships with other sectors, and act as a collaborator for change.

All sectors stand to benefit from improvements in health and the conditions that affect health. Healthy, well-educated, productive citizens who nurture their young people and live in a civic, egalitarian, sustainable society feel in control of their destiny. They are better prepared to address the local, provincial or territorial, national and global challenges of the new millennium.

Collaboration in the pursuit of the public's health needs to occur at all levels — families, neighbourhoods, communities, provinces and territories, regions and national. Partners need to include voluntary, professional, business, consumer and labour organizations, private industry, governments and representatives of communities of faith, various cultures, population groups and disadvantaged groups.

## **Moving Ahead**

This report points to some important trends and challenges that need to be addressed. Trends, however, are not destiny. It is possible to achieve positive health outcomes through the implementation of a broad population health strategy that has a role for all: public, private and not-for-profit.

As we enter a new century, there is an expectation that our past achievements and collective commitment to improving the well-being of all Canadians will provide us with some exciting opportunities to address the challenges presented in this report. We can give no greater gift to the next generation than a healthy future.





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## *Introduction*

### **Toward a Healthy Future**

**A**s Canadians stand poised to enter a new millennium, we have much to celebrate. By almost any measure, Canada is a highly desirable, healthy place in which to live. For the past two years, the United Nations has ranked Canada in the top spot on its Human Development Index, which takes life expectancy, educational attainment and income into account. Canadians are living longer with fewer disabilities in old age. Fewer babies are dying in the first year of life and early deaths from heart disease continue to decline. Many Canadians are taking positive steps to improve their health: overall, we smoke less and exercise more. The safety of our food and the quality of our air and drinking water are among the best in the world. And, despite recent stresses in the health-care system, Canadians continue to enjoy and value universal access to medically insured health services.

This overall high standard of health, however, is not shared equally by all sectors of society. There are clear disparities in health status by gender, age, socioeconomic status and place of residence. Indeed, the 1998 United Nations Report on Human Development took Canada to task for failing to ensure that everyone has a chance to take advantage of its enviable living standards. In its annual report, the UN said that “Canada and France have significant problems with poverty and their progress in human development has been poorly distributed.”<sup>1</sup>

In addition to problems relating to inequities, the current report shows that the majority of early deaths and illnesses that Canadians suffer are preventable. For example, almost all disease, disability and early death caused by tobacco use, intentional injuries and unintentional injuries can be prevented.

Interprovincial/territorial differences are presented in Appendix B. No province or territory emerges as the healthiest overall, and there are, in some cases, large differences between the provinces and territories on specific indicators of health. These data should be interpreted with caution, however, due to differences in sampling and information collection methods. Unfortunately, data from the Yukon Territory and Northwest Territories (NWT) are limited because the results of the National Population Health Survey in those jurisdictions were still in the process of analysis. Nunavut data were included in the NWT database and had not yet been separated out.

In the chapters that follow, we will see how a variety of factors affect health, including gender, age, genetics, personal health practices, coping skills, social support, working conditions, the physical environment and early childhood experience. Perhaps the most powerful influence on health, however, is socioeconomic status, which is

measured in this report by income and education levels. Whether we look at how people rate their own health, premature mortality, psychological well-being or the incidence of chronic disease, socioeconomic status remains strongly related to health status. The evidence presented in this report also shows that an active socioeconomic gradient is at work. In other words, people's health improves on virtually all measures and in all of the factors that influence health as levels of income and education increase.

This report also concludes that there is a persistent gap in health status between Canadians with high incomes and those with low incomes. Chapter 2 explains why the distribution of income within a given society is just as important to population health as the overall income level of that society. Indeed, it is estimated that if the same death rates as for the highest income earners applied to all Canadians, over one-fifth of all potential years of life lost before age 65 could be prevented.

Despite the persistence of troubling inequities in health, most Canadians are living longer and their overall health continues to improve. In an aging society, this is good news. As we enter a new century, our progress and potential for technological advances are cause for optimism. As we look forward to a healthy future, it is especially important to invest in our most precious human resources. While Canadian children and young people may be at the peak of their physical health, this report suggests some disturbing findings on their economic and social well-being.

We can give no greater gift to the next generation than a healthy future. This report helps us take stock of where we stand in terms of health and will help us measure our progress by looking at changes over time. This is an essential first step in addressing the challenges to health in the next millennium.

**A** *variety of factors affect health, including gender, age, genetics, personal health practices, coping skills, social support, working conditions, the physical environment and early childhood experience.*

## About This Report

This report summarizes the most current national information we have on the health of Canadians and invites the reader to consider the implications of these findings for current and future policies, practices and research. It is not a report card on the health-care system. Rather, it is a tool to alert policy makers, practitioners and the public to current and future challenges in health and to identify broad strategies that can address the major factors that influence health. Since it is the second in a series of reports on the health of Canadians, it also serves as an important monitoring tool by offering benchmarks for gauging progress in the future.

In this report, health is viewed as far more than the absence of disease. It uses the World Health Organization's definition in which health is seen as a complete state of physical, mental, social and emotional well-being. Health is a resource for living that enables people of all ages to realize their hopes and needs, and to change or cope with the environments around them.<sup>2</sup>

In keeping with this broad understanding of health, this report has been structured around the major factors that influence health. These factors — which include but extend beyond traditional health-care services — were identified as “prerequisites for health” in the 1986 *Ottawa Charter for Health Promotion*.<sup>3</sup> In 1994, the Federal, Provincial and Territorial Advisory Committee on Population Health (ACPH) released a document entitled *Strategies for Population Health: Investing in the Health of Canadians*<sup>4</sup> that expanded on this concept. This paper identified the following key influences or “determinants” of health: living and working conditions (the socioeconomic environment), the physical environment, health services, early childhood development, social support, personal health practices and coping skills, and biology and genetic endowment. While each of these influences is dealt with in a separate section of this report, it is the interplay of all of these factors that ultimately determines the health of individuals, families and communities. This way of examining health is termed the population health approach.

In addition to the factors mentioned above, gender, culture and membership in specific population groups have significant effects on health status. Within the limits of data availability, every attempt was made in this report to comment on the influence of these factors on health status and the determinants of health.

*Toward a Healthy Future: Second Report on the Health of Canadians* was prepared by the ACPH in collaboration with Statistics Canada, Health Canada, the Canadian Institute for Health Information and a project team from the Centre for Health Promotion, University of Toronto. As the title suggests, it is the second report to summarize and comment on the state of the nation's health. The first, *Report on the Health of Canadians*, was released in September 1996.<sup>5</sup>

The current report differs from the first one in several ways. It assumes a greater focus on inequities and the influence of gender on health. Chapters on healthy child development and biology and genetics have been added in order to paint an overall picture that includes all of the major determinants of health. The section on the physical environment has been expanded to provide a better understanding of how this determinant impacts on the health of Canadians.

Each chapter begins with a highlights section that provides a snapshot of the key information, which is followed by a more detailed discussion of selected aspects of the population's health and a brief discussion of the major findings and challenges arising from the information in the chapter. The final chapter suggests a vision of health for the new millennium and points to recurring themes, challenges and strategies brought out in the preceding chapters. As such, it provides a menu of key challenges for both short- and long-term action.

## Data Sources and Limitations of This Report

Each year in Canada, massive amounts of information are collected on the health of Canadians. This includes vital statistics such as births and deaths, information on people's contacts with the health-care system, and information from outside the traditional health sector on such important matters as traffic injuries, housing and employment. These data are collected through surveillance systems that monitor new and emerging health problems, as well as national, provincial and local health surveys.

There is no one easy, comprehensive way to summarize all of this information in a single, manageable report. It was necessary, therefore, to select and focus on a limited range of issues and emerging trends that describe key aspects of the health of Canadians, and the factors that affect health. This report draws primarily on data contained in the *Statistical Report on the Health of Canadians*,<sup>6</sup> which were drawn from a variety of sources that are topical, recent and national in scope. The 1994–95 and 1996–97 cycles of the National Population Health Survey (NPHS), the 1996 Census and the National Longitudinal Survey on Children and Youth (1994–95 and 1996–97) are major information sources for this report. The reader is encouraged to turn to the *Statistical Report on the Health of Canadians* and the publications from the National Longitudinal Survey on Children and Youth for information on topics not covered in this report.

Whenever possible, other reliable data sources and reports were consulted and credited in discussions of health issues; however, it was impossible to fully address the diversity of Canada's population in one national report. Information on Aboriginal people, newcomers to Canada and provincial/territorial differences have been included when reliable national data were available, but reporting is inconsistent throughout the text. In this regard, there may be a need to produce a number of supplementary reports that take a more specific and detailed look at provincial comparisons and influences on health such as gender, income, culture and membership in a specific population group.

In other cases, such as the exploration of early child development and health, a number of other excellent reports already exist (see Appendix C). This report is not intended to duplicate these efforts but to summarize what we know from a broad, national perspective about healthy child development as a key factor in the current and future health status of Canadians. The chapter on biology and genetics provides an introductory look at this important determinant of health. A specific, more detailed report on this topic would be extremely useful.

The use of a number of different sources means that there are discrepancies in the age categories that are reported. The 1996–97 NPHS has a distinct advantage over other national surveys in that age classifications are more detailed than those used in past surveys. This allows the reader to see differences among youth, for example, who look



and act very differently at ages 12 and 19. It also allows the reader to consider the “cohort effect.” For example, the generation of Canadians who are now over the age of 75 may have had a very different life experience than Canadians in younger generations. The cohort effect is especially relevant when we think about predictions for the future. At the same time, the factors that influence health are likely to have an intergenerational effect unless they are reversed. For example, children who grow up in low-income, disadvantaged neighbourhoods are more likely to raise their own children in the same kind of neighbourhood, unless they are given opportunities to break out of this cycle.

This report also looks at time trends, with a concentration on changes in the various indicators contained in the previous report. In some cases, longer periods of time are used to provide a more balanced look at changes over time. However, time trends between the two NPHS surveys offer the most reliable comparisons, since the methodology and sample size were similar.

While the use of large, national data sources ensures an accurate overall perspective on the health of Canadians, there are often insufficient numbers to make reliable observations about subcategories within specific demographic groups or populations, such as Aboriginal people. Provincial comparisons of health indicators in Appendix B should be interpreted with caution because of small sample sizes in some provinces. Even statistics within provinces tend to mask the heterogeneous nature of groups within a particular jurisdiction. For example, while overall measures of health may be high in a particular province, there may be large differences among cultural or socioeconomic subpopulations within that jurisdiction that are not captured by large databases. Unless otherwise noted, provincial and territorial estimates in this report are not age-standardized.

At the time of writing, data from the 1996–97 National Population Health Survey in the Northwest Territories and the Yukon Territory were still in the process of analysis by Statistics Canada. As well, the new territory of Nunavut officially came into being — an historic and important event for Canada. Data from Nunavut, however, were not yet separated from the NWT database. While every attempt was made to glean information from other surveys and documents, this report falls short of providing a clear picture of the health of Canada’s Northern residents.

Information on Aboriginal people should be treated with caution, since undercoverage in the 1996 Census was considerably higher among Aboriginal people than other segments of the population. Some 77 Indian and Inuit reserves and settlements (containing an estimated 44,000 people) were incompletely enumerated. In addition, there was very little information available distinguishing findings among the diverse subgroups within the Aboriginal population (e.g. Inuit, Métis, Registered Indians [on and off reserve], and Unregistered Indians). Fortunately, initial results from the First Nations and Inuit Regional Health Survey — which included questions similar to those in the National Population Health Survey and was carried out with First Nations peoples living on reserve and with Inuit communities in Labrador — became available toward the end of the writing process. Further analysis of this survey will add important information to what is contained here.

While a number of specific gaps in data are identified throughout the report, two areas deserve special mention. The first relates to the lack of data on the quality of health services (not the quantity) and the fact that most health service data are hospital-based. As the health system increasingly moves into the community, more information on

community-based care is required. The second gap relates to the paucity of population-based measures of health. As discussed in Chapter 1, virtually all the information in this report is based on individual health measures. Future reports of this type would benefit from additional measures of collective well-being based on sound methodologies and a combination of indices.

## The Canadian Population

The age and sex composition of a population can have a dramatic effect on aspects of health such as fertility rates and the use of health services. The following paragraphs contain some key statistics based on the 1996 Census.

In 1996, there were just over 30 million people living in Canada. About 27% of the population was aged 19 or younger and some 12% were 65 years of age or older. This reflects a significant decline in the proportion of the population made up of children and young people in Canada, as well as the aging of the population as a whole. The number of Canadians aged 20 to 64 rose from 53% in 1971 to 61% in 1996; over the same time period, the population aged 65 and over increased from 8% to 12%. Because of the longer life expectancy of women, there were more women than men past age 65; in all of the younger age groups, the numbers of males and females were virtually equal. The proportion of Canadians aged 65-plus is expected to more than double by 2041 to approximately 10 million people (representing between 22% and 25% of the population).

About 3% of the Canadian population is Aboriginal in origin. In 1996, there were approximately 1,192,600 Aboriginal persons living in Canada, of whom 507,200 were Registered Indians, 57,000 Inuit, 205,800 Métis and 422,600 non-status/other.

Canada's Aboriginal population is much younger than the general population. The average age of the Aboriginal population included in the 1996 Census was 25.5 years, some 10 years younger than the average of the general population. Children under age 15 accounted for 35% of all Aboriginal people, as compared with only 20% of the general population.

The majority of Canadians live in Ontario (38%) and Quebec (24%). There are vast differences in provincial population size and the territorial populations are smaller than that of the smallest province (Prince Edward Island). While the majority of Canadians live in large urban centres, a substantial number of people live and work in rural areas.

In 1996, 17% of the Canadian population — some 5 million people — were immigrants. Immigrants (people born outside Canada whose parents are not Canadian) have been a vital part of Canadian society for more than 400 years. Canada's population is becoming increasingly diverse. Earlier waves of immigrants from Europe have largely been replaced by newcomers from Asia, the Middle East and Africa. In 1996, there were some 226,000 newly-landed immigrants in Canada; about one in six immigrants were classified as refugees. Forty-seven percent of 1996 immigrants were between 25 and 44 years of age. Three-quarters of recent immigrants settled in Ontario or British Columbia, with Quebec and Alberta attracting the next largest proportions of Canada's newest arrivals. Recent immigrants have been especially attracted to Canada's three largest urban areas: Toronto, Vancouver and Montréal.

Recent immigrants, regardless of their country of birth, tend to be in better health than Canadian-born residents. This is probably a function of the immigration process — people in good health are more inclined to emigrate than those in poor health, and potential immigrants must first undergo medical screening for serious conditions. The longer immigrants remain in Canada, however, the more their health is likely to resemble that of Canadian-born citizens.<sup>7</sup>

## A Population Health Approach

In January 1997, the ACPH defined population health as follows:

*Population health refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services.*

*As an approach, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations.*

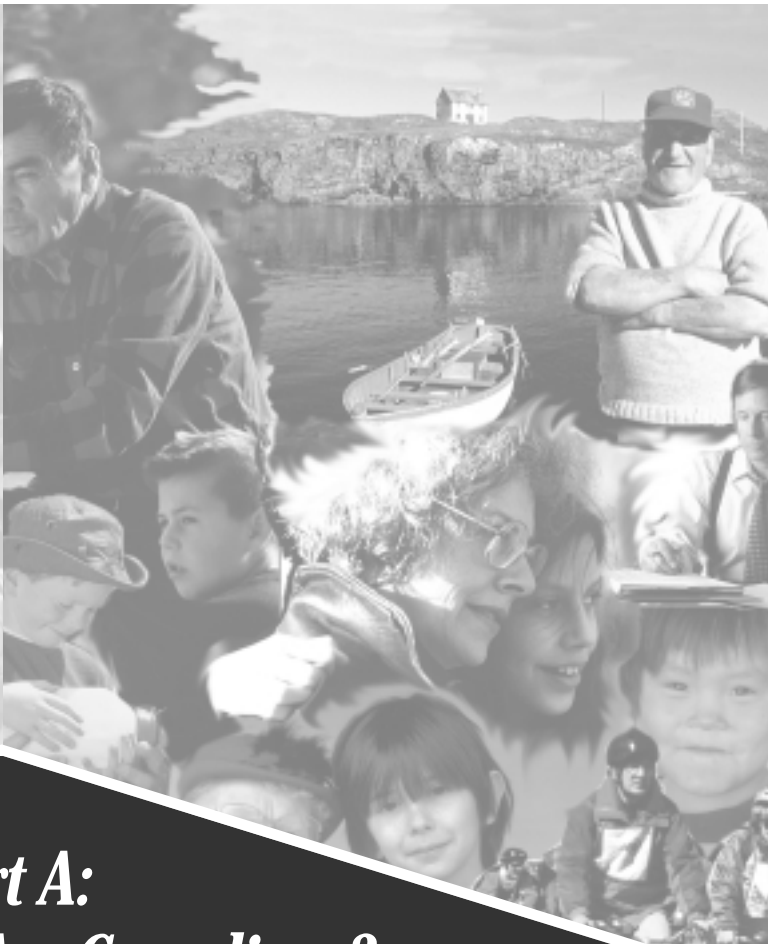
### Definitions

- ◆ **First Nations** population refers to those persons who are registered as Indians under the terms of the *Indian Act* and whose names appear in the Indian Register maintained by the Department of Indian Affairs and Northern Development.
- ◆ **Aboriginal** refers to all indigenous persons of Canada of North American, Indian, Inuit or Métis ancestry, including those in the Indian Register.
- ◆ Statistics Canada defines **immigrants** as “people who are, or have been at one time, landed immigrants in Canada.” A **landed immigrant** is a person who has been granted the right to live in Canada permanently by immigration authorities. Some are recent arrivals, while others have resided in Canada for a number of years. **Recent immigrants** are people who came to Canada within the last five years.

The goal of a population health approach is to maintain and improve the health status of the entire population and to reduce inequities in health status between groups. This requires a thorough, ongoing examination of both health status and the factors that determine or influence health. Current data and evidence from the literature are then used to make decisions about future efforts in research, policy and programs. This report and its predecessor are important tools for understanding and implementing a population health approach in Canada.

## Endnotes for Introduction

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2. World Health Organization, Health and Welfare Canada, Canadian Public Health Association. *Ottawa Charter for Health Promotion*. Ottawa: CPHA, 1986.
3. Ibid.
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6. Federal, Provincial and Territorial Advisory Committee on Population Health. *Report on the Health of Canadians: Technical Appendix*. Prepared for the Meeting of Ministers of Health, Toronto, September 1996. Ottawa: Health Canada, 1996.
7. Chen, J., Ng, E., Wilkins, R. (Statistics Canada). "The Health of Canada's Immigrants in 1994-95." *Health Reports* 7, 4 (Spring 1996): 33-45 (Statistics Canada Cat. No. 82-003-XPB).



*Part A:  
How Healthy Are Canadians?*







## *The Health Status of Canadians*

*Good health enables individuals to lead productive and fulfilling lives. For Canada as a whole, a high level of health contributes to increased prosperity and overall social stability.*

— *Report on the Health of Canadians, 1996.*

**T**his chapter focuses on three related questions: “How healthy are Canadians?,” “Is the health of Canadians improving?” and “Who is healthy and who is not?” The answers to these questions will help focus our efforts to improve the well-being of all Canadians.

For the most part, Canadians enjoy a high level of health on virtually all measures of health. Positive health status and improvements in health, however, are not shared equally by all Canadians. This chapter shows that age and gender influence health status in a number of ways. It also shows that income and health status are closely related on nearly all measures of health.

This chapter uses a broad range of health indices or measures to describe the health of Canadians. All of these — with the exception of the United Nations Human Development Index — are measures of individual health status. Future reporting on the status of health among the Canadian population as a whole would benefit from additional collective indices based on sound methodologies and a combination of a number of measures.

## Definitions and Measures

- ◆ **Self-rated health** describes how individual Canadians experience and assess their own physical and mental health.
- ◆ **Psychological well-being** includes three measures: Sense of coherence is a perception that life is meaningful, challenges are manageable and life events are comprehensible. Self-esteem refers to an individual's sense of self-worth and mastery describes the extent to which people believe that their life chances are under their control.
- ◆ **Selected diseases and conditions** looks at the incidence and prevalence of selected diseases and health conditions over time.
- ◆ **Disability days** measures how often health problems forced an individual to cut down on regular activities (at work, school or home) for the better part of a day in the preceding two weeks.
- ◆ **Activity limitation** measures the degree to which an individual is limited in performing their normal activities at work, home or school due to a long-term (more than six months) disability or health problem.
- ◆ **Major causes of death** reports on the principal causes of death.
- ◆ **Infant mortality** refers to the death of a live born infant within the first year of life. **Perinatal deaths** are the combination of stillbirths and early neonatal deaths (deaths within the first seven days of life).
- ◆ **Life expectancy at birth** measures the number of years a Canadian baby born today can expect to live, based on current mortality data.
- ◆ **Potential years of life lost** describes the number of potential years lost when a death occurs prior to the age of 70.
- ◆ **Human Development Index** is a composite measure used by the United Nations to compare the progress of various countries on human development. It measures life expectancy, educational attainment and adjusted income. Three additional measures — the Human Poverty Index, the Gender-Related Development Index and the Gender Empowerment Measure — were added in the 1998 United Nations report. These are explained later in this chapter.



## Highlights

*Many Canadians enjoy a high level of health that continues to improve.*

**Self-rated health:** Sixty-three percent of adult Canadians say that their health is excellent or very good and only 9% rate their health as fair or poor. These rates, which have been stable since 1985, represent one of the highest levels of self-rated health among citizens of developed countries.

**Infant mortality:** In 1996, Canada's infant mortality rate (5.6 per 1,000 live births) dropped below the level of six infant deaths per 1,000 live births for the first time. While this is an important achievement, it is still quite far above the infant mortality rate of Japan, which is the lowest in the world (3.8 deaths per 1,000 live births).

**Life expectancy:** Based on current mortality patterns, a Canadian child born in 1996 can expect to live to the age of 78.6 (males 75.7, females 81.4). This life expectancy represents a new high in Canada, and is one of the highest in the industrialized world, behind only Switzerland and Japan (of the 12 OECD countries reporting this information).

*Gender and age have varying effects on health status.*

- ◆ Men are far more likely than women to die before age 70, mainly because of gender differences in deaths due to heart disease, cancer, suicide and unintentional injuries. Rates of potential years of life lost are almost twice as high for men than women and approximately three times higher among men aged 20 to 34.
- ◆ While women live longer than men, they are more likely to suffer from long-term activity limitations and chronic conditions such as osteoporosis, arthritis and migraine headaches.
- ◆ While older Canadians are far more likely than young Canadians to have physical illnesses and conditions, youth (aged 12 to 19) report the lowest levels of psychological well-being. Young women are particularly likely to report feeling depressed.
- ◆ Suicide rates among young men are high in Canada, compared to other countries. Suicides among Aboriginal groups (especially Inuit) have been reported to be two to seven times more frequent than in the population at large.
- ◆ While unintentional injuries among children have decreased over time, they are still the leading cause of death among children and youth. They are also a significant cause of disability in children and young people. Boys and young men tend to experience more unintentional injuries and more severe injuries than girls and young women.

***Canadians with low incomes are more likely to suffer illnesses and to die early than Canadians with high incomes.***

- ◆ Only 47% of Canadians at the lowest income level rate their health as excellent or very good, compared with 73% of Canadians in the highest income group.
- ◆ Low-income Canadians are more likely to die earlier and to suffer more illnesses than Canadians with high incomes. It is estimated that if the death rates of the highest income earners applied to all Canadians, more than one-fifth of all years of life lost before age 65 could be prevented.

***Inequities in income distribution and literacy downgrade Canada's rank from first in the world to tenth on the United Nations Human Development Index.***

- ◆ The 1998 United Nations Human Development Report ranked Canada best in the world (among 174 countries) in terms of human development as measured by life expectancy, educational attainment and adjusted income.
- ◆ This standing dropped to tenth place when the Human Poverty Index for industrialized countries (which takes into account literacy, unemployment, percentage of people living below the poverty line and the percentage of people not expected to live past age 60) was applied. The UN Report suggests that this drop is because "Canada has significant problems of poverty and their progress in human development has not been evenly distributed."

***Canada's Aboriginal people are at higher risk for poor health and early death than the Canadian population as a whole.***

- ◆ Despite major improvements since 1979, infant mortality rates among First Nations people are still twice as high as that of the Canadian population as a whole.
- ◆ Life expectancy is significantly lower among Aboriginal people than for the overall Canadian population. High rates of suicide and fatal unintentional injuries among First Nations and Inuit young people partly account for this difference.
- ◆ The prevalence of all major chronic diseases, including diabetes, heart problems, cancer, hypertension and arthritis/rheumatism is significantly higher in Aboriginal communities than in the general population and appears to be increasing.

## **Self-Rated Health**

Self-rated health status has been shown to be a reliable predictor of health problems, health-care utilization and longevity.<sup>1</sup> In the 1996–97 NPHS, one-quarter of Canadians aged 12 and over described their health as excellent, and more than one-third rated it as very good. Less than one in ten Canadians described their health as fair or poor. Women were slightly less likely to rate their health as excellent or very good (62%) than men (65%). Fair or poor self-rated health status increased with each successive age group, from 2% of 12- to 14-year-olds to 27% of Canadians over age 75.<sup>2</sup>

Exhibit 1.1 shows a definite gradient in self-rated health that is strongly linked to income. Among adult Canadians in the lowest income brackets, 47% rated their health as excellent or very good and 21% described their health as fair or poor.

Among Canadians with the highest income levels, 73% described their health as excellent or very good, while only 5% rated their health as fair or poor. Canadians who lived in the lowest income households were four times more likely to report fair or poor health than those who lived in the highest income households.

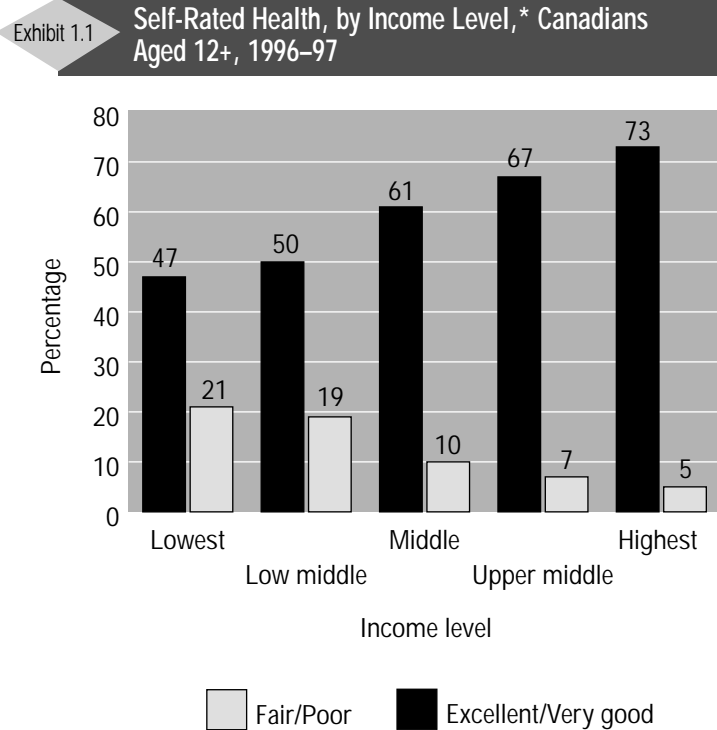
There were substantial provincial differences in self-rated health. Only 17% of Saskatchewan residents viewed their health as excellent, compared with 27% of people living in Quebec. Nova Scotians were most likely to see their health as fair or poor (10%), while residents of Newfoundland (7%) and Quebec (8%) were least likely to rate their health as fair or poor.

## Psychological Well-Being<sup>3</sup>

In the 1994–95 National Population Health Survey (NPHS), sense of coherence, self-esteem and mastery scores were based on a series of standardized interview questions. “High,” “adequate” and “low” scores were based on peaks in the distribution of scores. This allows for inter-group comparisons, but negates the meaningfulness of statements about absolute levels of psychological well-being.

In 1994–95, some 28% of Canadians had a high sense of coherence (a view of the world that life is meaningful, events are comprehensible and challenges are manageable). Forty-nine percent had high self-esteem and 21% had a high sense of mastery (the extent to which individuals feel that their life chances are under their own control). As this was the first time these questions were asked in a national health survey, no time trends or comparisons to other countries can be provided. But, within Canada, there are pronounced variations in these measures among different age groups.

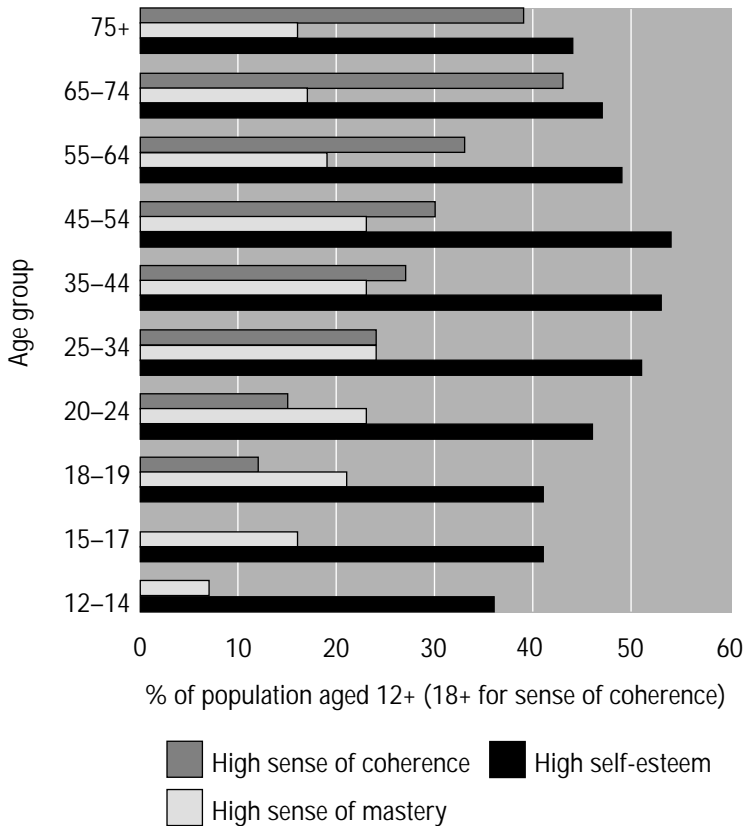
In contrast to the high levels of physical health usually found among youth, psychological well-being is, on average, lowest among the youngest age groups. Sense of coherence increased with age: seniors over age 75 were three times more likely than



\* Income levels in this figure and those to follow that are based on the NPHS represent total household incomes before taxes and are adjusted for family size and age-standardized.

Source: Statistics Canada. *National Population Health Survey, 1996–97.*

Exhibit 1.2 Three Indicators of Psychological Well-Being, by Age Group, Canada, 1994–95



Source: Statistics Canada. *National Population Health Survey, 1994–95*.

18- and 19-year-olds to score high on sense of coherence. As Exhibit 1.2 shows, self-esteem and mastery improve with age to a peak in middle adulthood, followed by a modest decline in later years.

These age-related patterns are consistent with measures of poor psychological health such as depression, which declines with age (discussed later). This positive association between psychological well-being and age is a reversal from that experienced a generation ago, when seniors were more likely than younger Canadians to be depressed.<sup>4</sup>

Males were slightly more likely than females to report a high sense of mastery, but the difference was small for this attribute and almost nonexistent for the other two. The lack of differences in reported self-esteem between young men and women is surprising, since many other studies have concluded that young women have lower levels of self-esteem than young men.<sup>5</sup>

As Exhibit 1.3 shows, all three measures of psychological well-being were positively linked to income level. Self-esteem and mastery were also positively related to level of education.

Exhibit 1.3 Percentage of Canadians Reporting Low Self-Esteem, Low Sense of Mastery and Low Sense of Coherence, by Income Level, 1994–95

Income level	Low self-esteem	Low sense of mastery	Low sense of coherence
Lowest	18%	31%	47%
Middle	13%	22%	33%
Highest	10%	12%	26%

Source: Statistics Canada. *National Population Health Survey, 1994–95*.

## Selected Diseases and Conditions

### *Chronic Diseases*

A comparison of the 1994–95 and 1996–97 National Population Health surveys revealed that the major self-reported chronic diseases with the highest number of new cases were non-arthritic back problems and arthritis/rheumatism. Women reported higher incidence rates than men for most chronic diseases, although in some cases these differences were not statistically significant.

In the 1994–95 NPHS, 81% of all people over age 65 and living in private households reported that they had at least one chronic condition. Arthritis and rheumatism were the most common chronic health problems reported. Three percent of Canadians aged 12 and over reported having diabetes that had been diagnosed by a health professional. For Canadians over age 65, the rate was just above 10%. While there were no substantial differences in the prevalence of diabetes between the sexes or between urban and rural residents, it was significantly higher among Canadians with low incomes.<sup>6</sup>

According to a recent article by Young and colleagues, the prevalence of all self-reported major chronic diseases was significantly higher in Aboriginal communities than in the general population, and appears to be increasing (Exhibit 1.4).<sup>7</sup> For example, the rate of diabetes among First Nations and Inuit men was 3 times the rate for all Canadian men; for First Nations and Inuit women, the diabetes rate was 5 times the rate for all Canadian women.

In 1994–95, chronic conditions were less common among immigrants (50%) than among the Canadian-born population (57%). Recent non-European immigrants had a particularly low prevalence of chronic conditions (37%), but as their duration of stay in Canada increased, so did the prevalence of chronic conditions. Fifty-one percent of long-term non-European immigrants reported at least one chronic condition.<sup>8</sup>

Exhibit 1.4

First Nations/Canada Ratio of Age-Adjusted Prevalence for Selected Chronic Diseases, 1997

Disease	Ratio: Men	Ratio: Women
Diabetes	3:1	5:1
Heart problems	3:1	3:1
Cancer	2:1	2:1
Hypertension	3:1	3:1
Arthritis/rheumatism	2:1	2:1

Source: *First Nations and Inuit Regional Health Survey, 1997.*

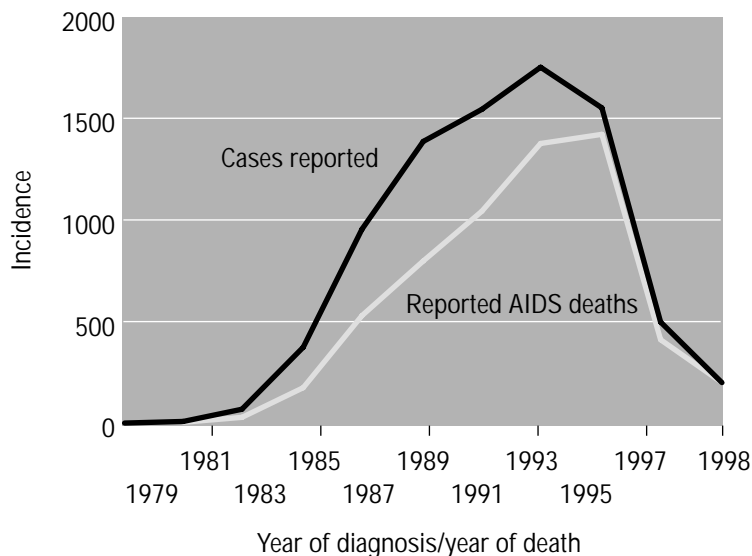
This finding is likely due to a number of factors. First, Canada's immigration policies tend to favour immigrants who are in good health. Second, many immigrants and refugees are young when they arrive. The reasons why the prevalence of chronic conditions increases the longer they stay in Canada is less well understood. The normal aging process is clearly a factor. Also, after arrival, the adoption of unhealthy lifestyle practices such as smoking (which is more common among certain groups in Canada than in other countries) may also be a factor.<sup>9</sup>

### **Depression<sup>10</sup>**

The 1996–97 NPHS showed that some 6% of Canadians aged 12 and over were at possible or probable risk of depression. Although the rates of depression reported by women (8%) were slightly higher than those reported by men (5%), the rates for both men and women were lower than in 1994–95. Young women aged 15 to 19 were the most likely of any age-sex group to exhibit signs of depression (8% to 9%). For both males and females, depression was more likely to occur in the younger years (especially at ages 18 and 19).

For both men and women, the risk of depression was highest among those with the lowest incomes. Thirteen percent of women in the lowest income group were at risk of depression, compared with 5% of women in the highest income group. For men, the rate of depression ranged from 11% among those in the lowest income bracket to 4% among men with high incomes.

Exhibit 1.5 Reported AIDS Cases and Reported AIDS Deaths in Canada, 1979 to 1998



Source: Bureau of HIV/AIDS, STD and TB, LCDC, December 1998.

### **HIV and AIDS**

As of June 30, 1998, a total of 15,935 cumulative AIDS cases had been reported in Canada; however, because of reporting delays the true figure was likely to be about 20,000. Almost three-quarters of reported AIDS cases (more than 11,000 persons) had died by this date. Since 1995, there has been a dramatic decline in the annual number of reported AIDS cases and in the number of reported AIDS deaths (Exhibit 1.5). This may be due, at least in part, to new anti-retroviral treatments that delay the onset of AIDS and help people with AIDS live longer.<sup>11</sup>

Males outnumber females by 14 to 1 in both number of reported cases and death, but this ratio is beginning to change. Prior to 1995, women comprised only of 6% of all adult cases; by 1997, the percentage had risen to 13%.<sup>12</sup>

Exhibit 1.6 shows the estimated number of new HIV infections occurring each year in Canada. The method of back-calculation from AIDS cases was used from 1975 to 1989, but not for subsequent years because of new treatments that delay the development of AIDS and the long interval between HIV infection and AIDS. After 1989, other methods were used to estimate the average number of annual HIV infections for the years 1989 to 1994 as a whole (shown as a block in Exhibit 1.6) and for the year 1996. There were an estimated 4,200 new HIV infections in Canada in 1996. This is lower than the estimated peak in annual HIV infections of 5,000 or more that occurred in the mid-1980s, but is higher than the estimate of 2,500 to 3,000 per year for the period 1989 to 1994. The majority of the recent increase in HIV infections appears to be occurring among injection drug users who now represent half of all new infections. (See Chapter 5 for more information.) Furthermore, available data suggest increasing HIV infection rates among Aboriginal persons and women.<sup>13</sup>

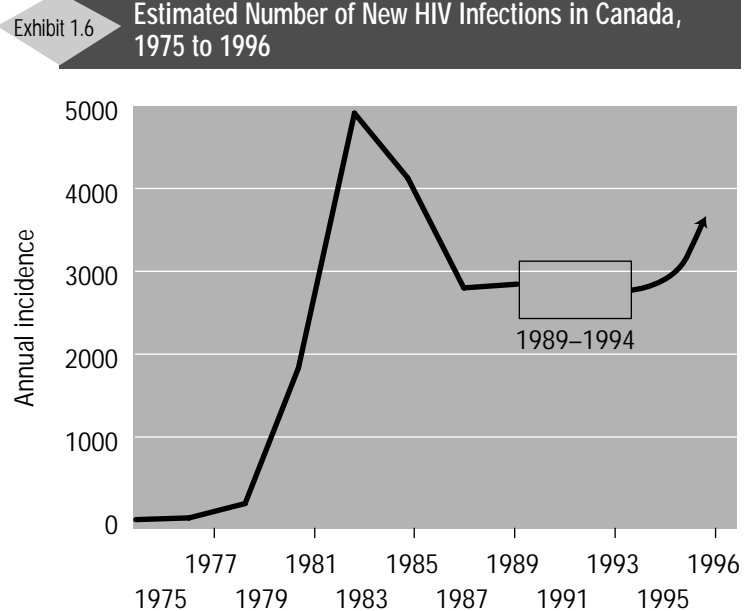
Those who present for HIV testing and test positive represent only a portion of the population with HIV infection. At the end of 1996, Health Canada determined that of the estimated 40,000 Canadians living with HIV, some 11,000 to 17,000 people were still unaware of their infection.<sup>14</sup>

## Injuries

In 1995–96, there were 217,000 hospital admissions due to injury. By far, the highest rates of hospital admissions due to injuries were among senior Canadians over the age of 65 (235 per 10,000 population among senior women and 152 per 10,000 population among senior men). The rate of hospital admission due to injury was much lower among people under the age of 45. In this age group, males accounted for 69% of all injury admissions.<sup>15</sup>

The vast majority of injuries are unintentional — nearly two out of three hospital admissions due to injury are the result of falls and motor vehicle crashes. Injuries intentionally inflicted by another person accounted for 5% of all hospital admissions due to injury, while self-inflicted injuries accounted for approximately 2% of injury admissions.<sup>16</sup>

While the rate of injury due to falls is particularly high among Canadians over the age of 60, falls remained an important cause of injury among children under the age of 11, and youth aged 11 to 20. Among children, the next most important cause of injury-related admission to hospital in 1996 was poisoning. For adolescents and adults under the age of 60, the second most important cause was motor vehicle crashes.<sup>17</sup>



Source: Bureau of HIV/AIDS, STD and TB, LCDC, July 1997.

## Disability and Activity Limitations<sup>18</sup>

As Exhibit 1.7 shows, between the 1994–95 and 1996–97 cycles of the NPHS, there was a decrease in the percentage of Canadian women and men who reported one or more disability days during a two-week period, and who reported a continuing health condition that limited their normal activities at home, school or work. Exhibit 1.7 shows a particularly impressive decrease in activity limitations between the two surveys. Most of the improvements were among Canadians over age 55. Women were more likely than

men to report both disability days and long-term activity limitations.

According to the NPHS, and as shown in Exhibit 1.8, Canadians who have activity limitations were also more likely to have low incomes. Among men in the lowest income group, 32% reported an activity limitation, compared with 12% of men in the highest income bracket. Among women, the rate of reported activity limitations ranged from 28% in the lowest income group to 16% in the highest income group. The relationship between income and disability is not yet clear. Do activity limitations and disabilities lead to low-income status or does low-income status lead to disabilities? While both factors are likely at play, this is an important area for further investigation.

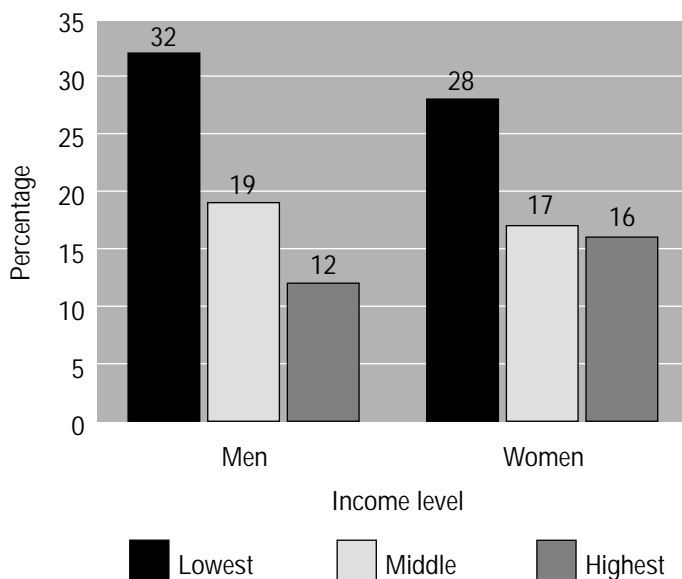
Overall, immigrants to Canada were less likely than the Canadian-born population to have any long-term disability. However, the relationships between gender, socioeconomic status and disability hold true for immigrants as well. Disability was more strongly related to low household incomes and to being a woman than to immigrant status.<sup>19</sup>

Exhibit 1.7  
Percentage of Men and Women Reporting Disability Days and Activity Limitations, Aged 12+, 1994–95 and 1996–97

	1994–95	1996–97
<b>Disability days</b>		
◆ Men	13%	12%
◆ Women	17%	14%
<b>Activity limitations</b>		
◆ Men	20%	15%
◆ Women	21%	17%

Source: Statistics Canada. *National Population Health Survey, 1994–95 and 1996–97.*

Exhibit 1.8  
Percentage of Canadian Men and Women Reporting Activity Limitation or Handicap, by Income Level, Aged 12+, Canada, 1996–97



Source: Statistics Canada, *National Population Health Survey, 1996–97.*



## Major Causes of Death

In Canada, death rates for most of the major causes have declined since 1970, particularly in the case of coronary heart disease. The exception to this is the cancer death rate which continued to increase until the mid 1980s and then declined steadily among men and stabilized in women.

### Cardiovascular Disease

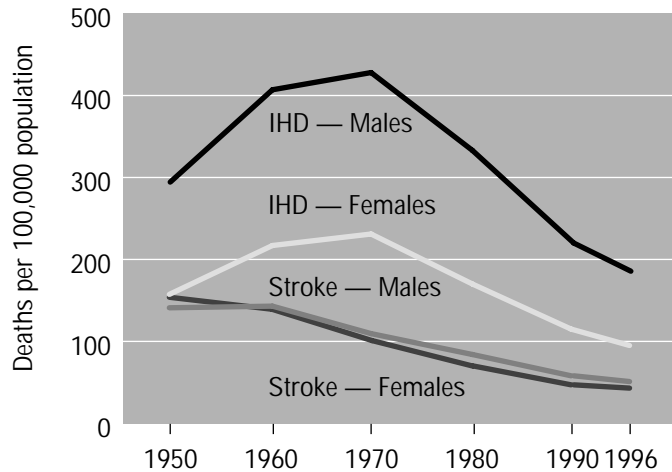
Cardiovascular disease is the major cause of death in Canada. The two major components of cardiovascular disease are ischemic heart disease, including acute myocardial infarction or heart attack, and cerebrovascular disease and stroke. In 1996, cardiovascular disease accounted for 37% of all deaths in Canada. While more men than women died of ischemic heart disease (22% versus 19%), more women died of stroke (9% versus 6%).<sup>20</sup>

As Exhibit 1.9 shows, deaths from cardiovascular disease have been declining in Canada since 1970 among both men and women, although more slowly in women. Canada has one of the lowest rates of cardiovascular disease mortality among all developed countries.<sup>21</sup>

The Atlantic provinces have had consistently higher mortality rates than the western provinces for cardiovascular disease. Provincial prevalence rates of smoking, high blood pressure and obesity run parallel to the rates for cardiovascular disease.<sup>22</sup>

Exhibit 1.9

Death Rates Due to Ischemic Heart Disease and Stroke, Canada, 1950 to 1996\*



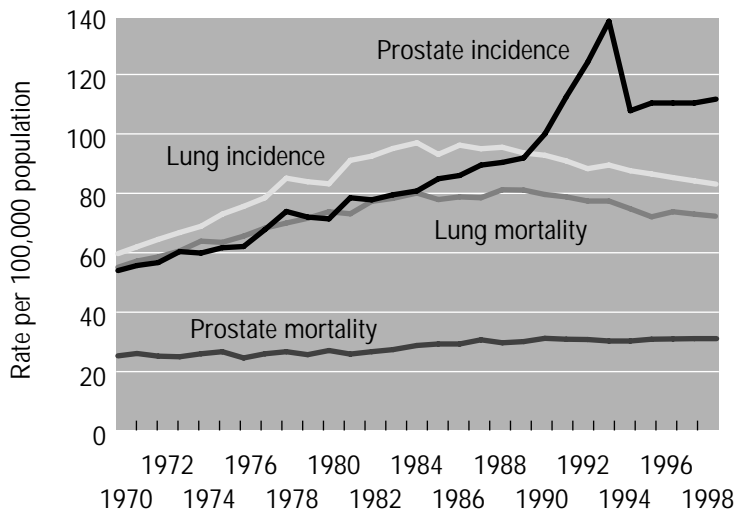
\*Age-standardized to the 1991 Canadian population.

Source: Statistics Canada, Health Statistics Division. *Health Indicators, 1999* (Statistics Canada Cat. No. 82-221-XCB).

### Cancer<sup>23</sup>

Cancer in its many forms is the second leading cause of death and the leading cause of potential years of life lost before age 70. Among men, declining rates for most forms of cancer were offset by dramatic increases in the detection of (but not mortality from) prostate cancer, primarily due to the introduction of PSA testing. The incidence of new cancer diagnoses in women has remained relatively stable since the early 1980s. Cancer death rates have declined slowly for men since 1990, while they have remained relatively stable among women over the same period.

Exhibit 1.10 Incidence and Mortality Rates for Selected Cancer Sites, Age-Standardized, Males, Canada, 1970 to 1998\*



\* Incidence rates from 1994 to 1998 are estimated. Mortality rates from 1996 to 1998 are estimated.

Source: National Cancer Institute of Canada. *Canadian Cancer Statistics 1998*.

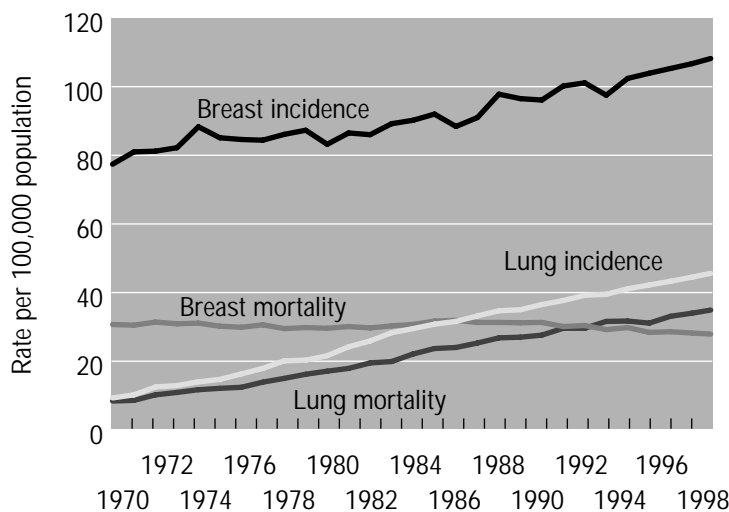
As Exhibit 1.10 shows, the incidence of prostate cancer was the highest among new cancers in men. The 1993 peak of new cases of prostate cancer was due to the introduction of PSA testing. At the same time, death rates from this type of cancer have remained relatively stable. Since prostate cancer is most often detected in old age and is a slow growing cancer, many men who are diagnosed with prostate cancer die of other causes.

The number of new cases of lung cancer has declined among men since the 1980s, likely due to a decline in male smoking rates over the past 30 years. However, lung cancer death rates still far exceed death rates due to prostate cancer.

As Exhibit 1.11 shows, the incidence of both breast and lung cancer have been increasing among women since the 1970s. Breast cancer was estimated to be the most common newly diagnosed cancer in 1998; however, the leading cause of cancer death was still predicted to be lung cancer.

Thus, while cancer remains a serious problem, we are beginning to see signs that prevention and control strategies are working for a number of different cancer sites. These favourable results are obscured, however, by continuing increases in lung cancer incidence and mortality among women (largely as a result of increased smoking) and the recent transient surge in prostate cancer incidence (but not mortality) in males.

Exhibit 1.11 Incidence and Mortality Rates for Selected Cancer Sites, Age-Standardized, Females, Canada, 1970 to 1998\*



\* Incidence rates from 1994 to 1998 are estimated. Mortality rates from 1996 to 1998 are estimated.

Source: National Cancer Institute of Canada. *Canadian Cancer Statistics 1998*.

Time will tell whether the early detection of prostate cancer affects the mortality rate.

Provincial differences in cancer incidence and deaths are rather marked. Nova Scotia has the highest male age-standardized incidence and death rates, due largely to higher lung cancer rates than the Canadian average. Among women, the highest new case incidence rate is also in Nova Scotia; the highest death rates are in Nova Scotia and Prince Edward Island.

## ***Unintentional Injuries***

Unintentional injuries are the third most important cause of death overall, accounting for 8,663 deaths (29 per 100,000 population) in 1996. However, they remain the leading cause of death among Canadians age 1 to 44, and as such are a major contributor to potential years of life lost. Although many sources persist in referring to such events as “accidents,” it is estimated that 90% of deaths due to unintentional injuries are preventable. And, despite a 50% reduction in such deaths among children between 1970 and 1991, unintentional injuries remain the major cause of death among children and youth.<sup>24</sup>

Injuries and poisonings are the number one cause of death in the First Nations population (crude rate 154 per 100,000 population). In 1993, the age-standardized injury rate for First Nations persons was 3.8 times higher than that for Canadians in general. Native children and youth have much higher death rates due to injury than do other Canadians. For Aboriginal infants, the rate of death is almost four times greater; for preschoolers, it is five times higher; and among teenagers, the injury-related death rate is three times higher.<sup>25</sup>

Overall, motor vehicle crashes are the major cause of deaths due to unintentional injury. In 1994, they accounted for 38% of deaths, followed by falls (31%), poisonings (9%), drownings and suffocation (5%) and fires (4%). Motor vehicle crashes are a particularly important cause of injury and death among children and youth. However, due in part to increases in seatbelt usage and reductions in impaired driving, the number of deaths due to motor vehicle traffic crashes has declined impressively in recent years — from 5,253 in 1977 to 3,082 in 1996.<sup>26</sup> Falls remain an especially important cause of death among the elderly, accounting for nearly three out of every four deaths due to unintentional injury among Canadians over the age of 70.<sup>27</sup>

## ***Suicide***

Suicide is a tragic event and an important cause of potential years of life lost. In 1996, there were 3,941 suicides in Canada — almost 11 per day.<sup>28</sup> Trends and rates associated with suicide need to be interpreted with caution, however, since official statistics tend to under-report suicide. In addition, changes over time may reflect differences in the official reporting and certification of suicide deaths.

There are dramatic sex and age differences in suicide rates. In 1996, males were four times more likely than females to commit suicide. The highest rate for male suicides was among men aged 20 to 24 (29 per 100,000 population) and 35 to 44 (30 per 100,000 population). For women, the highest rate of suicide was among those aged 45 to 54 (10 per 100,000 population).<sup>29</sup>

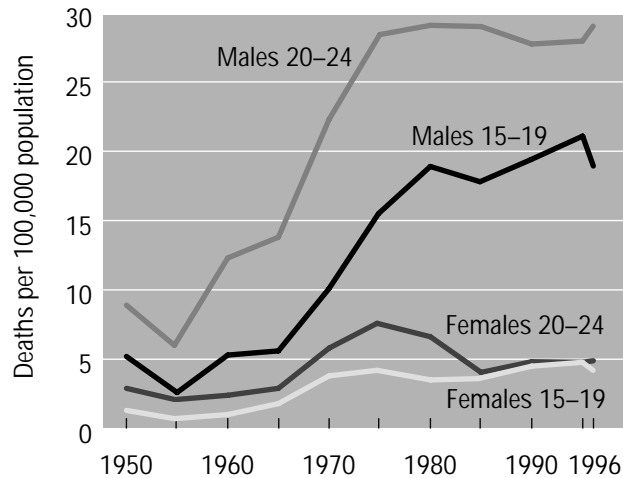
Young men's suicide attempts are far more likely to have a fatal outcome than young women's. The reasons for this are not clear, but presumably relate to male–female differences in reaching out for help, the nature of underlying problems, learned responses to stress and the use of lethal methods (such as firearms and hanging) by young men.

Women attempt suicide more often than men, but the ratio is a subject of debate due to wide variations in how the data are gathered. The population of attempters is large and heterogeneous and may differ in important ways from that of suicide completers. For example, most attempters will not ultimately die from suicide, though they may try repeatedly; and many people who die by suicide have not made a previous attempt.<sup>30</sup> It is

likely that more suicidal acts committed by women are intended as non-fatal, as compared to those by men.<sup>31</sup>

Compared with other countries, Canada's rates of youth suicide are high. In 1973, Canada was the only country among 21 western countries in which the suicide rate for male youth aged 15 to 24 equalled or exceeded the rate for the general population of males. By 1987, only four other countries shared this pattern.<sup>32</sup> Between 1991 and 1993, the suicide rate for Canadian male youth was exceeded only in Australia and the Russian Federation (among 10 industrialized countries); the female rate was higher than that of all other countries except Sweden and the Russian Federation.<sup>33</sup>

Exhibit 1.12 Suicide Rates for Youth Aged 15–19 and 20–24, Canada, 1950 to 1996



Source: Statistics Canada, Health Statistics Division. *Health Indicators, 1996* and unpublished tabulations.

As Exhibit 1.12 shows, there has been a steady and significant increase in suicide rates among young men aged 15 to 24 since 1950. The 1996 rate of 18.5 per 100,000 among 15- to 19-year-old males was almost twice as high as the 1970 rate. Suicide rates among young men aged 20 to 24 were even higher. These rates reached a peak in the early 1980s and have fluctuated around this level ever since. In 1996, the male suicide rate for this age group was 29 per 100,000. During the 1990s, there has been an average of almost 39 suicides per year by children aged 10 to 14 (mostly boys), up from the average of 27 per year during the 1980s.<sup>34</sup>

Suicide among Aboriginal groups in Canada has been reported to be two to seven times more frequent than in the population at large. In the Northwest Territories (NWT) and Nunavut combined, considerable attention has focused on an apparent increase in the occurrence of suicide in a number of communities. In 1992, the annual age-standardized suicide rate for the NWT and Nunavut combined was estimated at 23 per 100,000 population compared with 13 per 100,000 for Canada as a whole.<sup>35</sup>

In Nunavut, Inuit people represent the majority of the population. A comprehensive study conducted in 1997 on suicide in the NWT and Nunavut combined found that in a comparison of ethnic groups, the highest rate of suicide occurred among the Inuit, at 79 per 100,000, compared with 29 per 100,000 for the Dene and 15 per 100,000 for all other ethnic groups, comprised primarily of non-Aboriginal persons. A comparison of three five-year time periods between 1982 and 1996 revealed increasing rates of suicide, particularly for Nunavut. Young Inuit males were the most likely group to commit

suicide. Thirty-six percent of those who committed suicide had experienced a recent family or relationship break-up and 21% were facing criminal proceedings. Understanding these and other reported circumstances on the risk of suicide requires further investigation.<sup>36</sup>

Other groups at high risk of suicide include people who suffer from depression and people with substance abuse problems. Studies show that gay men, lesbians and people who have experienced child sexual abuse may also be at higher risk.<sup>37</sup>

### ***Homicide***

There were 581 homicides reported in Canada in 1997 — a decline of 9% from 1996. This continues a steady decline in the homicide rate in Canada. Following rapid increases in the late 1960s and early 1970s, the rate of homicide in Canada in 1997 reached its lowest point since 1969. Males accounted for nearly two-thirds (64%) of all homicide victims and 84% of accused persons.<sup>38</sup>

Canada's 1997 homicide rate of 1.92 per 100,000 was less than one-third that of the United States (6.70), but higher than that of most European countries, including England and Wales (1.00) and France (1.66).

There were 193 homicides committed with firearms in 1997, 19 fewer than in 1996. Despite this drop, firearms continue to be used in about one out of three homicides.<sup>39</sup>

### ***Infant Mortality***

In 1996, infant mortality rates fell below 6 per 1,000 live births for the first time.<sup>40</sup> While this is an important achievement, it is still quite far above the infant mortality rate of Japan, which is the lowest in the world (3.8 deaths per 1,000 live births).<sup>41</sup>

Perinatal complications were the most important single cause of both infant mortality and perinatal death.<sup>42</sup> There are substantial differences in infant mortality rates among the various income groups in Canada. Although rates among First Nations people have fallen dramatically since 1979, the 1994 infant mortality rate was twice as high among First Nations people than in the Canadian population as a whole.<sup>43</sup> These findings are explored in more detail in Chapter 3 on Healthy Child Development.

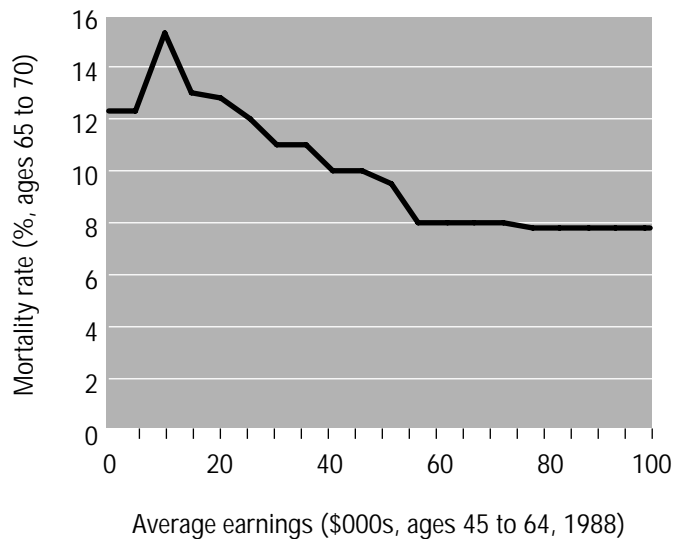
### ***Deaths Attributable to Smoking***

As a cause of early death, smoking far outweighs suicide, motor vehicle crashes, AIDS and murder combined.<sup>44</sup> In Canada, smoking is estimated to be responsible for at least one-quarter of all deaths for adults between the ages of 35 and 84.<sup>45</sup> In 1991, more than 45,000 deaths were attributed to smoking.<sup>46</sup> Overall, men are still more likely than women to smoke and to smoke heavily; hence, death rates due to smoking are substantially higher among males than females. This gender difference, however, can be expected to disappear as smoking rates converge.

## Life Expectancy at Birth

Based on current mortality patterns, a Canadian child born in 1996 could expect to live to the age of 78.6 (males 75.7; females 81.4). This life expectancy represents a new high in Canada, possibly due to declines in the mortality rates for several of the leading causes of death. At all ages, women have a greater life expectancy than men. The gap in life expectancy at birth has continued to narrow, however, from 7.5 years in 1978 to 5.7 in 1996.<sup>47</sup>

Exhibit 1.13 Career Earnings and Death for 500,000 Canadian Men



Source: Wolfson, M.C., et al. "Career Earnings and Death: A Longitudinal Analysis of Older Men." *Journal of Gerontology: Social Sciences*, 47, 4 (1993): S167-S179.

strong inverse relationship between career earnings and age of death for Canadian men; as earnings increased, the rate of premature mortality decreased (Exhibit 1.13). Wolfson's findings also suggest that this pattern is not primarily due to people being unable to work because of illness and thus unable to earn higher incomes, but rather because low economic status leads to exposure to unhealthy life conditions, and thus to poorer health and earlier death.<sup>50</sup>

Consistent with these findings are the results of a study on the life expectancy of status Indians, many of whom live in low-income situations. As Exhibit 1.14 shows, the life expectancy of the status Indian population in 1990 was seven years less than that for the overall Canadian population in 1991.<sup>51</sup>

## Potential Years of Life Lost<sup>52</sup>

Potential years of life lost (PYLL) concerns the loss of life before age 70. Therefore, addressing the causes of PYLL would be expected to make a major difference to life expectancy and health status in general.

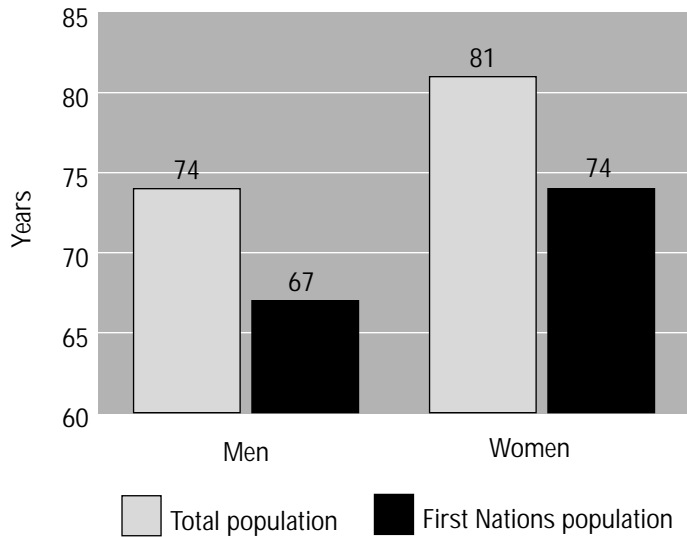
Immigration contributes to high life expectancy rates in Canada. Immigrants, particularly those from non-European countries, have lower mortality rates and higher life expectancies than residents who are Canadian-born. In 1991, 41% of male and 57% of female non-European immigrants could expect to live to age 85, compared with 23% of male and 45% of female Canadian-born residents.<sup>48</sup>

According to a 1991 study by Robine and Ritchie, Canadian men in the highest quarter of income distribution can expect to live 6.3 years longer and 14.3 more years free of disability than those in the lowest quartile. For women, the differences are 3 and 7.6 years respectively.<sup>49</sup>

Another study, conducted by Michael Wolfson in 1993, shows the

Exhibit 1.14

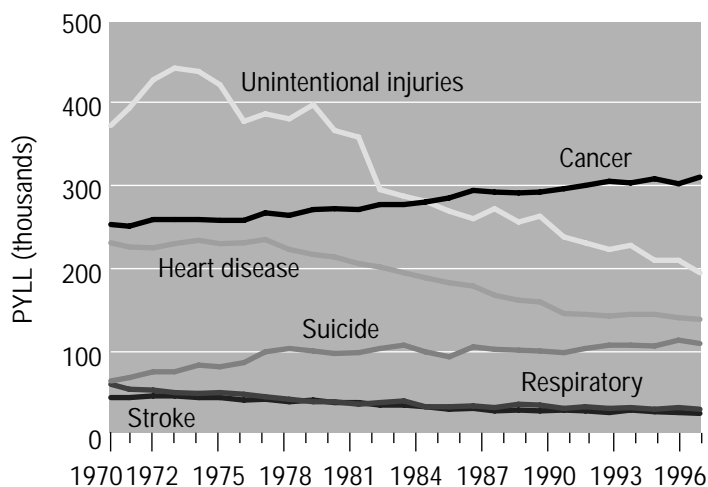
### Life Expectancy, First Nations Population (1990) and Total Population, Canada (1991)



Sources: Department of Indian Affairs and Northern Development (Status Indians); Statistics Canada, *Births and Deaths, 1993*.

Exhibit 1.15

### Potential Years of Life Lost (PYLL), by Cause of Death, Canada, 1970 to 1996



Source: Statistics Canada, Health Statistics Division. *Health Indicators, 1999* (Statistics Canada Cat. No. 82-221-XCB).

In 1996, there were more than 1 million PYLL due to all causes. As Exhibit 1.15 shows, the most important cause of PYLL was cancer (30% of total). Unintentional injuries (19%) and heart disease (13%) were the second and third most important causes. Cancer has been the leading cause of PYLL since 1984 and, along with suicide, is the only major cause of PYLL to have increased since 1970.

Between 1970 and 1996, there was a marked improvement in premature mortality due to unintentional injuries among young Canadians, especially for ages 10 to 19.

Potential years of life lost *per 100,000 population* allows us to compare the burden of premature mortality among various groups. Overall, these rates are almost twice as high among men as among women, and approximately three times higher among men aged 20 to 34. The higher rates of premature mortality among men in general are attributed largely to the higher rates of cancer, heart disease, suicide and unintentional injuries.

PYLL per 100,000 population varies substantially by province and territory, from a low of 3,453 in Ontario to highs of 4,742 in the Yukon Territory and 7,695 in the Northwest Territories and Nunavut combined (Exhibit 1.16). The rates of PYLL in the Northwest Territories and Nunavut are more than double that for the rest of Canada. Premature deaths from unintentional injuries and suicides in the three territories account for much of the difference.

Exhibit 1.16 Potential Years of Life Lost per 100,000 Population, by Cause and by Province and Territory, 1996

	Total	Neoplasms	Accidents	Suicide	Respiratory	Heart disease	Stroke	All others
Newfoundland	3,721	1,152	759	224	77	663	110	737
Prince Edward Island	3,687	1,189	829	188	144	642	138	557
Nova Scotia	3,983	1,264	860	367	147	592	64	689
New Brunswick	3,736	1,126	758	394	77	589	82	711
Quebec	4,032	1,192	735	660	108	521	98	717
Ontario	3,453	1,079	601	284	110	475	93	810
Manitoba	4,066	1,147	936	351	140	546	121	824
Saskatchewan	4,203	1,086	964	508	161	523	82	879
Alberta	3,943	1,009	963	529	129	492	86	735
British Columbia	3,986	960	828	279	102	385	75	1,357
Yukon Territory	4,742	775	1,788	457	86	559	0	1,078
Northwest Territories and Nunavut	7,695	1,479	2,309	1,480	370	481	269	1,308

Note: Small differences occur between the total and the sum of the cause columns because of rounding.

Source: Health Canada, Laboratory Centre for Disease Control, Calculated from Statistics Canada, Health Statistics Division. *Health Indicators, 1999* (Statistics Canada Cat. No. 82-221-XCB).

There are marked differences between socioeconomic groups in terms of PYLL. A 1995 study by Wilkins found that residents of the poorest neighbourhoods had death rates from circulatory disease, lung cancer, injuries and suicide that were significantly higher than rates for residents of the richest neighbourhoods. In other words, people who are economically disadvantaged do not suffer more from a particular disease, but show an increased vulnerability to early death due to a variety of causes. Wilkins concluded that if the death rates of the highest income group for all causes of death applied to all Canadians, more than one-fifth of all years of life lost before age 65 could be prevented.<sup>53</sup>

## How Does Canada Compare to Other Countries?

Many health measures indicate that Canadians enjoy a standard of health that is among the best in the world. Compared to other developed countries that are members of the Organisation for Economic Co-operation and Development (OECD), Canada ranks third in life expectancy, behind only Switzerland and Japan. Canadian mortality rates are among the lowest in the industrialized world, behind only those of South Korea, Japan, Iceland and Switzerland. And among countries reporting self-rated health status, Canada ranks behind only Norway, and well ahead of such countries as Sweden, Spain, Finland, Germany and South Korea (Exhibit 1.17).<sup>54</sup>

Yet, there is clearly room for improvement.

Although Canada's infant mortality rate has decreased steadily, the rate of improvement may have been lower than that in most industrialized countries. In 1990, Canada ranked fifth among 17 OECD countries; by 1996, it ranked 12th. That year, Canada's rate of 5.6 deaths per 1,000 live births was lower than those of only the United States, New Zealand, Greece, Australia and the United Kingdom.<sup>55</sup> However, this more recent ranking may be largely due to changes in the way infant mortality is reported in various countries.

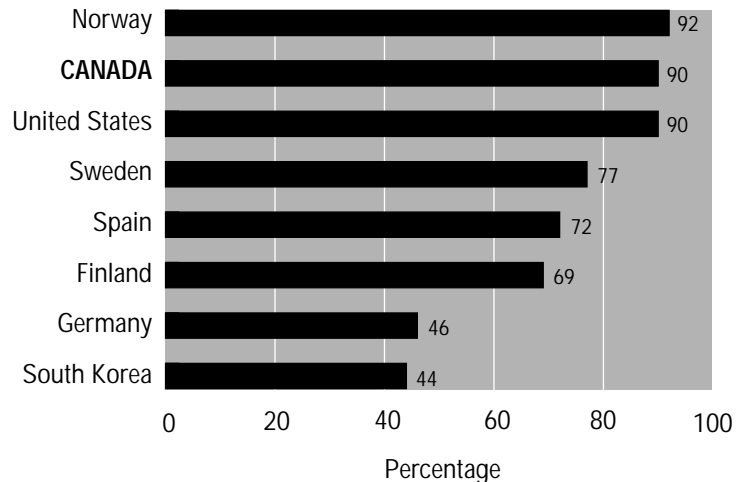


The concept of “human development” was introduced by the United Nations (UN) in 1990 as an alternative view of development that is not equated solely with economic growth. The indices used by the Human Development Index to measure progress (life expectancy, education and standard of living) provide an important international measure of population health. Canadians have been extremely proud of their first place ranking among more than 170 countries in the last two reports of the United Nations. The country’s performance on human development falls considerably, however, when additional measures are used to account for inequities.<sup>56</sup>

In 1998, the UN introduced two new measures of human development. The first is the Human Poverty Index-2 (HPI-2), which measures the way poverty is manifested in industrialized countries, including deprivation in survival, knowledge and disposable personal income, and social exclusion (measured by long-term unemployment). The second indicator is the gender empowerment measure, which measures women’s opportunities to participate in decision making in economic, professional and political domains. Exhibit 1.18 summarizes the four measures of human development used by the United Nations in its 1998 report.

Exhibit 1.17

### Percentage Reporting Good or Better Self-Rated Health, Aged 15+, Selected OECD Countries, 1995



Note: Data for Canada are from 1996–97 and include “excellent” health.

Source: OECD. *OECD Health Data '98* (software); Statistics Canada. *National Population Health Survey, 1996–97*, special tabulations.

### Exhibit 1.18 United Nations Measures of Human Development

	Longevity	Knowledge	Standard of living	Participation
Human Development Index	Life expectancy	Literacy rate and school enrolment	Adjusted per capita income	
Gender-Related Development Index	Male and female differences	Male and female differences	Male and female differences	
Human Poverty Index-2 (for developed countries)	Percentage of people not expected to live past age 60	Functional illiteracy rate	Percentage of people living below income poverty line: less than 50% of mean disposable income	Unemployment (12 months or more)
Gender Empowerment Measure			Women’s earned income share as a percentage of men’s	Women’s participation in politics and decision-making positions

Source: United Nations Development Program. *Human Development Report 1998*.

As Exhibits 1.19 and 1.20 show, Canada ranked number one in the world on the Human Development Index as a whole and when gender was factored into the three measures of human development. When the HPI-2 is applied, however, Canada drops to tenth place out of the 17 countries to which this measure was applied (Exhibit 1.21). The UN Report suggests that the reason for the drop is that “Canada has significant problems of poverty and [its] progress in human development has not been evenly distributed.” Supporting documentation in the Report shows that, in 1995, Canada had more than twice the number of citizens who lacked adequate literacy skills than Sweden, Sweden being the number one ranked country on this index. In addition, 11.7% of the Canadian population (1990) lived below the income poverty line, compared with 6.7% in Sweden and 5.9% in Germany.

Interestingly, the extent of human poverty as measured by the HPI-2 had little to do with the average level of income. The United States, with the highest per capita income among the 17 countries, also had the highest index of human poverty. Sweden, which ranked first in the HPI-2, was 13th in average income. This suggests two things:

Exhibit 1.19 Human Development Index, 1995\*  
World Rank (1=best)

1	<b>CANADA</b>
2	France
3	Norway
4	U.S.A.
5	Iceland
6	Finland
7	Netherlands
8	Japan
9	New Zealand
10	Sweden

\* 174 countries total

Exhibit 1.20 Gender-Related Development Index, 1995\*  
World Rank (1=best)

1	<b>CANADA</b>
2	Norway
3	Sweden
4	Iceland
5	Finland
6	U.S.A.
7	France
8	New Zealand
9	Australia
10	Denmark

\* 102 countries total

Exhibit 1.21 Human Poverty Index-2, 1995\*  
World Rank (1=best)

1	Sweden
2	Netherlands
3	Germany
4	Norway
5	Italy
6	Finland
7	France
8	Japan
9	Denmark
10	<b>CANADA</b>

\* 17 industrialized countries

Exhibit 1.22 Gender Empowerment Measure, 1995\*  
World Rank (1=best)

1	Sweden
2	Norway
3	Denmark
4	New Zealand
5	Finland
6	Iceland
7	<b>CANADA</b>
8	Germany
9	Netherlands
10	Austria

\* 174 countries total

Source: United Nations Development Program. *Human Development Report 1998*.

first, that “poverty” is not just about income — it is also about reduced opportunities in employment, education and political life. Second, development progress is closely tied to the degree of inequity in income distribution in any given country.

Exhibit 1.22 suggests that Canada needs to provide more opportunities for women to participate in decision-making positions in the political, business and professional communities and to decrease the wage gap between men and women. Again, per capita income had little to do with the degree to which a country empowers women. In some cases, developing countries did better than industrialized countries; for example, Trinidad and Barbados were ahead of the United Kingdom and Ireland on this measure.

## Discussion

### *Reducing Inequities*

As Canada stands poised to enter a new millennium, reducing persistent inequities in health status remains one of our greatest challenges to achieving population health. Canadians with low incomes and low levels of education (which are often related) are more likely to have poor health status, no matter which measure of health is used. They are also more likely to die earlier than other Canadians, no matter which cause of death is considered.

This chapter also shows that poor health is not just the result of economic deprivation — indeed, an active gradient is at work. In other words, health status improves for all Canadians with each step up the economic ladder. Current thinking suggests that this may be related to increased susceptibility to disease processes related to the stresses of disadvantage and the coping skills people possess, in addition to increased exposure to threats in the physical environment.<sup>57</sup>

This report recognizes the inherent challenges in achieving the goal of reduced inequities. Virtually all societies struggle with this problem. Achieving complete equality in health status among all Canadians is an unrealistic goal. But achieving “equitable” or fair access to the opportunities and supportive environments all people need to be healthy is both a laudable and achievable goal in a caring, civilized society. The United Nations report on human development suggests that efforts to reduce relative poverty, and to increase opportunities in education, employment, wages and participation in political and economic spheres are the key strategies for reducing inequities and, therefore, improving the health and well-being of Canadians.

### *Addressing Differences in Population Groups*

This report and others point to the urgent need to find effective ways to improve the health of Canada’s Aboriginal people. Failure to address inequities in the health and socioeconomic status of Aboriginal people will inevitably lead to continuing disparities and to an increase in illness, suffering and early deaths for this population.

Aboriginal communities have the lead role in finding ways to enable their people to take control of and improve their health. However, to do so will require all policy-makers and practitioners (both Aboriginal and non-Aboriginal) to work with Canada’s Native peoples to find culturally appropriate ways to improve their health and well-being.

## ***Gender Has an Important Influence on Health***

In the last half of this century, women have lived longer than men; however, the gap in life expectancy at birth between women and men has continued to narrow — from 7.5 years in 1978 to 5.7 years in 1996.<sup>58</sup> This may be due to a number of factors including increases in stress on women and decreases in the major causes of premature death among men, especially ischemic heart disease and lung cancer.

While this reduction in two of the major causes of death among men is welcome, premature mortality rates continue to be substantially higher among men than women. If male mortality rates are to be further reduced, increasing attention needs to be paid to other major causes of death among men, including fatal injuries and suicide.

While a decrease in lung cancer deaths is good news for men, cancer death rates have remained stubbornly persistent for women, mainly due to continuing increases in lung cancer mortality. At the same time, smoking rates among young women have continued to escalate (see Chapter 5). Indeed, adolescent women are now more likely to smoke than adolescent men. Unless the trend toward increased smoking among young women is quickly reversed, lung cancer will increasingly become a major killer of women.

Quality of life is as important as quantity. While women live longer than men, they also suffer more from chronic diseases and disabilities. Efforts to prevent these problems in the senior years are essential to maintaining and improving the health of both women and men, but may be particularly important to women.

This chapter (and others to follow) also suggests a need to address the psychosocial well-being of young people. Low scores for psychological well-being, high scores for probable depression and high rates of suicide are warning signs that many of Canada's young people are greatly troubled. Increases in substance use and multiple risk behaviours, which will be discussed in subsequent chapters, are further signs of youth distress. The next chapter suggests that enhanced employment opportunities, incentives for higher education and nurturing communities are all prerequisites for improving the well-being of Canada's young people.

## ***Increasing Health Promotion and Disease and Injury Prevention Activities in Key Areas***

Most of the causes of disease, disability and early death explored in this chapter are preventable. In the cases of heart disease and cancer, we are beginning to see some positive results from ongoing efforts to prevent and reduce these diseases. These initiatives (and others) need to continue, with an increased focus on Canadians with low incomes and low levels of education.

Deaths and disabilities due to smoking and unintentional injuries are almost all preventable. As such, they must remain a high priority for policy-makers and practitioners. In terms of injuries, we need to pay attention to and better understand gender and age differences in risk-taking behaviour, the causes of both intentional and non-intentional injuries, and how they are best prevented. Reducing the very high rates of injury and injury-related deaths among Aboriginal young people must also be a priority for action.

## Endnotes for Chapter 1

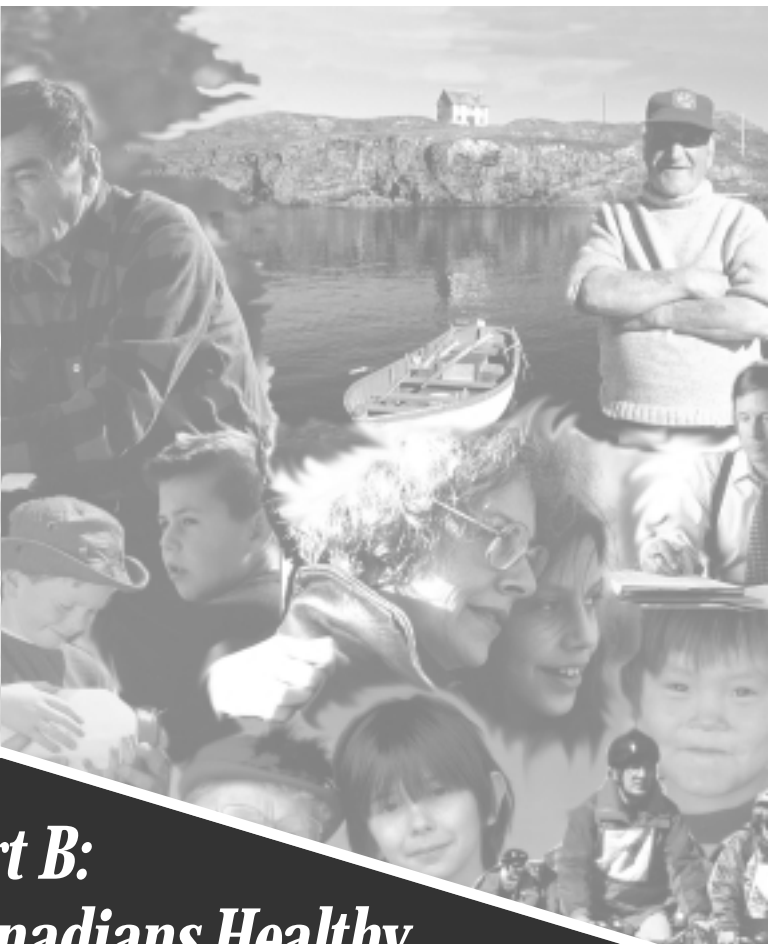
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***Part B:  
What Makes Canadians Healthy  
or Unhealthy?***







## *The Socioeconomic Environment*

*What matters in determining mortality and health in a society is less the overall wealth of the society and more how evenly wealth is distributed. The more equally wealth is distributed, the better the health of that society.*

— Editor, *The British Medical Journal*, 1996.<sup>1</sup>

**T**he important influence of the environment on health has been recognized for some time. Over 25 years ago, *A New Perspective on the Health of Canadians* suggested that health was influenced by four key factors or fields: lifestyle, biology and genetics, health care and the environment.<sup>2</sup> Within the latter, social and economic conditions (described here as the socioeconomic environment) have a significant effect on individual and collective well-being. The influence of another component of this field, the physical environment, is explored in Chapter 4.

The previous chapter confirmed that health status is directly related to economic status. Although there is clear agreement that income is related to health, why this is so requires further study. As well, there is no consensus as to which is the best measure of socioeconomic status (SES). Some researchers prefer to use education level or occupation, while others use income. This report uses income as a proxy for SES in most cases, although education is discussed when it is particularly relevant to the topic. A full exploration of the links between income and health is beyond the scope of this report. A separate report exploring this issue would be a welcome addition to the field.

While there are many factors in the social and economic environments that affect health, this chapter focuses on five key influences: income (and income distribution), education and literacy, employment and unemployment, working conditions, and factors in the social environment.

## Definitions and Measures

- ◆ The **socioeconomic environment** refers to living and working conditions in both the economic and social realms. Key influences on health in the economic dimension of the environment include income and income distribution. Major determinants on the social side of the environment include education and literacy, employment and working conditions, levels of social support, violence in the community and in the home, civic participation, and voluntarism.
- ◆ **Low income** refers to economic families and unattached individuals who have incomes below Statistics Canada's low income cut-offs (LICOs) 1992 base. These cut-offs were selected on the basis that families and unattached individuals with incomes below these limits usually spend more than 54.7% of their incomes on food, shelter and clothing, and hence are considered to live in strained circumstances.
- ◆ Statistics Canada has repeatedly emphasized that the LICOs are quite different from measures of poverty and the department does not endorse their use as such. However, LICOs reflect a consistent and well-defined methodology that identifies those who are significantly worse off than the average person or family. In the absence of an accepted definition of poverty, these statistics have been used by many analysts to study the characteristics of relatively deprived groups in Canada.
- ◆ **Poverty** is used in this chapter as one way of describing low-income status.
- ◆ **The economic family** concept is used to establish LICOs rather than to describe a census family. An economic family consists of all persons in a household who are related to each other by blood, marriage, common-law or adoption. An unattached individual is a person 15 years old or over who is living alone or living in a household where he/she is not related to anyone else.
- ◆ **Total income** represents the income an individual receives from all sources, including wages and salaries, farm and non-farm self-employment, government transfer payments, investment income, retirement pensions and other money income.
- ◆ **Income data** are presented in constant dollars. Incomes from previous censuses are adjusted for changes in the price of goods and services using the Consumer Price Index. For example, the actual average income of a census family in 1995 was \$54,000 compared with \$51,300 in 1990. This is an increase of 6.4% before adjustment. When changes in prices are taken into account, real (constant dollar) family income for 1995 declined by 4.8% compared with 1990.
- ◆ **The Gini Index or coefficient** is a well-established measure of income inequality. If incomes were distributed in a fully equitable manner, each person would receive the same share of income. The Gini Index measures how far real distribution is from this theoretical reference point. In theory, the Gini coefficient can vary between 0 (perfect distribution) and 1 (complete concentration in a single person). In practice, Gini coefficients of per capita income vary between 0.25 and 0.60. The larger the Gini coefficient, the greater the inequality in income distribution.
- ◆ **Prose literacy** refers to the ability to read and comprehend a passage of text; **document literacy** describes the ability to complete standard forms such as job applications; **quantitative literacy** (sometimes called numeracy) requires basic computation skills. Literacy skills are allotted to one of five levels, five being the highest.
- ◆ **Aboriginal people** include those who reported themselves as North American Indian, Métis or Inuit in the 1996 Census. **Visible minority** refers to people other than Aboriginal Canadians who are members of a race other than Caucasian.

## Highlights

### ***Income level and health***

- ◆ People with higher incomes generally live longer, healthier lives than people with lower incomes.
- ◆ Between 1990 and 1995, the proportion of Canadians with low-income status increased from 16% to 20%.
- ◆ In 1995, young children (under the age of 6) and youth (aged 18 to 24) were most likely to live in low-income situations. An estimated 1.3 million children under the age of 15 lived in low-income households in 1995 — an increase of 300,000 children in just five years.
- ◆ Between 1980 and 1996, there was a substantial and welcome drop in the number of older Canadians who fell below Statistics Canada's low income cut-off (LICO). However, one in five seniors (mostly unattached women) is still likely to be living in a low-income situation.
- ◆ Aboriginal people and visible minorities continue to be over-represented in the population with low-income status. In 1995, about 36% of the visible minority population and 44% of the Aboriginal population lived in low-income situations.
- ◆ In 1995, almost 50% of single-parent mother-led families were in low-income situations. However, poverty was not restricted to single-parent families. From 1990 to 1995, the percentage of married couples with children in low-income situations rose from 9.5% to 13% (a total of almost 460,000 families). In 1995, the average low-income two-parent family with children lived some \$11,641 below the LICO.

### ***Earnings, income distribution and health***

- ◆ The distribution of income in a given society may be a more important determinant of population health than the total amount of income earned by society members.
- ◆ Overall, income distribution inequalities remained relatively constant in Canada between 1985 and 1995. This was largely due to the effect of redistributive taxes and transfer payments, which offset a growing income gap between the 10% of Canadians with the lowest incomes and the 10% of Canadians with the highest incomes. Trends in income inequality beyond 1995 were not available for this report; however, they are worth monitoring in future analyses.
- ◆ Some groups have been gaining in wage rates and earnings, notably older workers and the more highly skilled and paid; others have experienced dramatic declines, notably low-skilled young males, youth in general, and lower-paid, lower-skilled men.
- ◆ While women are making gains in average earnings, they continue to face a significantly higher risk for earning a low income than do men. In 1996, 19% of adult women fell under the low-income category compared with 13% of adult men.

***Education, literacy and health***

- ◆ Educational status and literacy levels are important determinants of health and well-being.
- ◆ In the 1996–97 National Population Health Survey (NPHS), only 19% of respondents with less than a high school education rated their health as “excellent” compared with 30% of university graduates.
- ◆ In the last 15 years, levels of schooling have continued to rise for all population groups in Canada. In 1996, there were more than four times as many female university graduates as in 1971.
- ◆ In 1994–95, about 17% of Canadians fell into the lowest prose literacy category (level 1); another 26% achieved level 2 in prose literacy, which means they can read but not well.

***Employment and health***

- ◆ Continuing high rates of unemployment and underemployment among youth, Aboriginal people, adults with low levels of education and people living in certain regions in the eastern provinces are linked to health disadvantages for Canadians in these groups.

***The social environment and health***

- ◆ Working conditions (paid and unpaid), social support and levels of personal security at home and in the community are important influences on health.
- ◆ Working conditions and role overload (balancing work and family life) are major stresses for women, especially young women.
- ◆ Canadians reported high levels of social support, caring for others, volunteerism and civic participation. These are important buffers in times of stress.
- ◆ Partner and child abuse, the most common forms of family violence, have a devastating effect on the health and well-being of women and children in both the short and long term. In 1996, family members were accused in 24% of all assaults against children. In 1997, about 40% of female homicide victims were killed by a man with whom they had experienced an intimate relationship.

## Income and Health

The previous chapter demonstrated the close relationship between income status, health status and other determinants of health. For example, Canadians in the lowest income group were four times more likely than Canadians in the highest income group to report their health as only fair or poor, two times more likely to have a long-term activity limitation and only one-third as likely to have dental insurance (the latter is discussed in Chapter 6). Certainly, differences in health status are evident in a comparison of the highest and lowest income groups. But an active gradient in health status from low to middle and upper levels of income can also be observed in virtually all measures of both mortality and morbidity. In other words, high-income Canadians are more likely to be healthy than middle-income Canadians, who are in turn healthier than low-income Canadians.

Since income and health status are closely linked, it is important to understand current trends in income status. This section provides a brief overview of both long-term and recent (1990–1995) trends related to low-income populations in Canada, as determined by Statistics Canada low income cut-offs (LICOs). (See Definitions and Measures at the beginning of this chapter.) Unless otherwise stated, total income figures are taken from the 1991 Census (reflecting 1990 data) and the 1996 Census (reflecting 1995 data). Unfortunately, reliable national data after 1995 were not available at the time of writing.

### Income Versus Wealth

The distribution of income in society is intimately linked to the distribution and concentration of wealth — but the two are by no means the same. Wealth is a much broader concept than income, and includes ownership of both financial (income, savings, investments, stocks and bonds, etc.) and other assets (real estate, home ownership, buildings, land, art, etc.). The relationship between wealth and health has received far less attention than that between income and health. Both subjects warrant further research.

### ***Fifteen-Year Trends in Low Income***<sup>3</sup>

According to the 1996 Census, about 16% (or 1.3 million) of all economic families in Canada fell below the low income cut-off in 1995. Likewise, about 20% of individual Canadians (just over 5.5 million people) lived below the LICO rate.

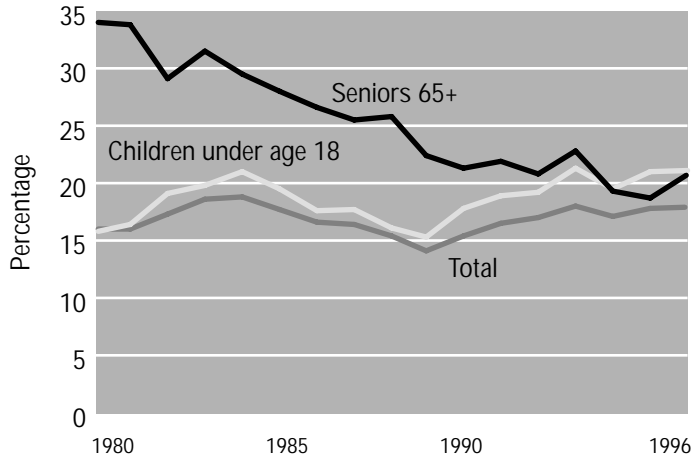
As Exhibit 2.1 shows, the prevalence of low-income persons across all age groups fluctuated between 1980 and 1996, from 16% in 1980 to a high of 19% in 1983 and 1984, then back to a low of 14% in 1989. Low-income prevalence again crept back up to over 18% in 1996, almost to the same level as in the mid-1980s.

During this time period, however, the face of low income changed dramatically. There was a substantial and welcome drop in the number of older Canadians who fell below the LICO. It should be noted, however, that in 1995 one senior out of five (mostly unattached women) still lived below the LICO.

At the same time, there was a fairly dramatic increase in the proportion of low-income children (under age 18) and families, particularly in the early 1990s. In 1995, 21% of children lived in low-income households.

Exhibit 2.1

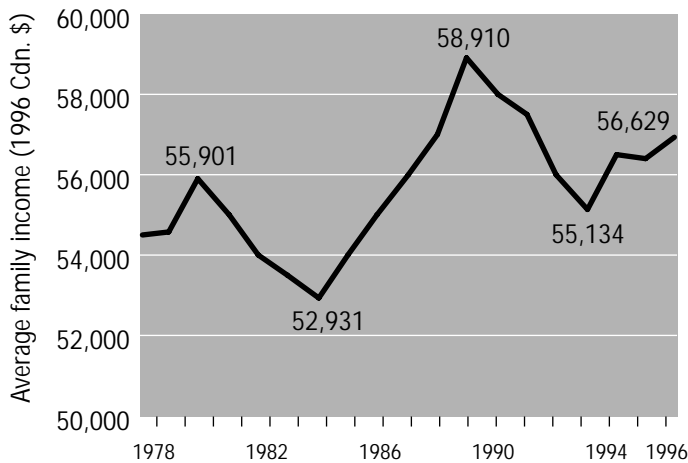
## Percentage of Canadians with Low Incomes, by Age, Canada, 1980 to 1996



Source: Statistics Canada. *Income Distribution by Size in Canada, 1996* (Statistics Canada Cat. No. 13-207).

Exhibit 2.2

## Average Family Income (1996 Dollars), Canada, 1978 to 1996



Source: Statistics Canada. *Income Distribution by Size in Canada, 1996* (Statistics Canada Cat. No. 13-207).

This suggests that public policies designed to maintain and improve seniors' economic standing, combined with the entry of a new cohort (with higher incomes) into this age group significantly reduced poverty among older Canadians. At the same time, economic downturns and changes in family structure and employment pushed child and family poverty rates to their highest levels in over 15 years.

In 1995, the nearly 21 million individuals who were income recipients (from all sources, including wages, self-employment, government transfers, investment income, pensions and other income) had an average total income of \$25,196, down 6% from 1990 after adjustment for inflation. This decrease wiped out gains made during the second half of the 1980s. As a result, average total income in 1995 was almost identical to that in 1985, and slightly below the level of 1980.

As Exhibit 2.2 shows, average family incomes (in constant dollars) fluctuated widely between 1978 and 1996. Between 1980 and 1984, there was a steady decrease in average family income, reaching a low of \$52,931 in 1984. Average family incomes then rose to a high of \$58,910 in 1989. After that, family incomes largely decreased, settling at \$56,629 in 1996. In other words, in 1996, average family incomes equalled those of 1988, despite an economic recovery following the downturn of the early 1990s.

In 1996, the majority of family expenditures were concentrated in taxes (22%) and necessities such as shelter (17%), food (12%) and transportation (12%). These four costs combined accounted for almost two-thirds of the average Canadian family's expenditures.<sup>4</sup> Chapter 4 on the physical environment suggests that shelter costs have become particularly problematic for many low-income Canadians in recent years.



While LICO rates provide us with the percentage of the population who live below predetermined income levels, they do not differentiate between the people who are living in abject poverty and those who earn just a few dollars less than the LICO. For that, we need measures of the depth of poverty. Exhibit 2.3 shows the depth of poverty (or income deficiency between family income and the LICO) by family type in 1990 and 1995. In terms of the proportion of families in low-income situations, female lone-parents remain the worst off — almost 50% were in low-income situations, living \$10,165 below the LICO in 1995. However, poverty is not restricted to single-parent families. From 1990 to 1995, the percentage of married couples with children who lived in low-income circumstances rose dramatically from 9.5% to 13%. In 1995, the average low-income, two-parent family with children lived some \$11,641 below the LICO.<sup>5</sup>

Exhibit 2.3 Income Deficiency,\* by Family Structure, Canada, 1990 and 1995

	Low income (%)	Number of low-income families	Average total income (\$)	Family income deficiency* (\$)
<b>1990</b>				
All economic families	13	961,835	13,615	10,111
Married couples only	9	210,145	11,345	8,233
Married couples with children	9.5	332,200	15,951	10,963
Male lone-parent families	18	24,290	11,665	9,929
Female lone-parent families	44	300,240	12,092	10,337
<b>1995</b>				
All economic families	16	1,267,205	13,778	10,223
Married couples only	10	252,765	11,223	7,398
Married couples with children	13	456,930	16,199	11,641
Male lone-parent families	24	39,325	11,612	9,412
Female lone-parent families	48	396,245	12,032	10,165

\* Income deficiency is the difference between family income and the applicable low income cut-off.

Source: Statistics Canada. "Census 1996: Sources of Income, Earnings and Total Income and Family Income." *The Daily*, May 12, 1998 (Statistics Canada Cat. No. 11-001-XIE).

### ***Trends in Low-Income Status, 1990 to 1995***

Overall, between 1990 and 1995, the proportion of Canadians with low-income status increased from 16% to 20%, but certain groups in the population were harder hit than others. In 1995, children, youth and unattached seniors (mostly women) were the most likely to be classified as low income.

Exhibit 2.4

### Number and Percentage of Children, Youth and Seniors Living in Low-Income Situations, Canada, 1990 and 1995

	1990		1995	
	Low-income number	% of low income	Low-income number	% of low income
Children under age 6	447,230	20	582,905	26
Children, aged 6 to 14	576,100	17	761,620	22
Youth, aged 15 to 17	180,455	16.5	229,210	20
Youth, aged 18 to 24	548,805	21	675,365	26
Adults, aged 65 to 69	169,410	16	182,730	17
Adults, aged 70 and over	415,135	23	441,265	20.5

Source: Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income and Family Income." *The Daily*, May 12, 1998 (Statistics Canada Cat. No. 11-001-XIE).

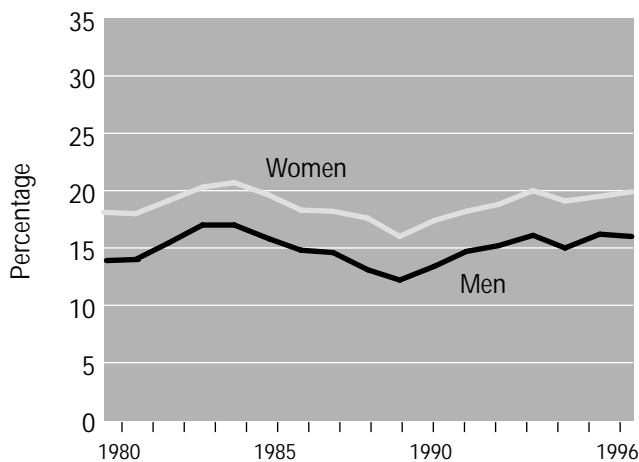
Exhibit 2.4 shows the increase in the number of children and youth (ages 0 to 24) who lived in low-income circumstances. In 1995, very young children (under the age of 6) and youth (aged 18 to 24) were most likely to be poor.<sup>6</sup>

As Exhibit 2.5 shows, there has been virtually no change in the gap between the percentage of men and women who fall into the low-income category. This inequity has persisted despite the fact that men's average income dropped 7.8% between 1990 (\$33,733) and 1995 (\$31,117), while women's incomes dropped only 2% (from \$19,630

to 19,208). One of the reasons for this disparity is that women still hold the majority of the lowest paying jobs. According to the 1996 Census, women dominate in all but five of the 25 occupations at the bottom of the earning scale. Women aged 18 to 24 and age 70 and over were most likely to be living in low-income circumstances in both 1990 and 1995. Almost half of female lone parents (some 400,000 families) lived below the LICO.<sup>7</sup>

Exhibit 2.5

### Percentage of Women and Men with Low Incomes, Canada, 1980 to 1996



Source: Statistics Canada. *Low Income Persons, 1980 to 1996* (Statistics Canada Cat. No. 13-569-XPB).

Exhibit 2.6 demonstrates how Aboriginal people and visible minority populations are more likely to live in low-income situations. In 1995, about 36% of the visible minority population in Canada and 45% of children under the age of 6 in visible minority families were in a low-income situation. At least 44% of the Aboriginal population and a full 60% of Aboriginal children under the age of six lived below the LICO. These figures likely underestimate the problem, since some 44,000 people living on reserves and settlements were incompletely enumerated in the 1996 Census.

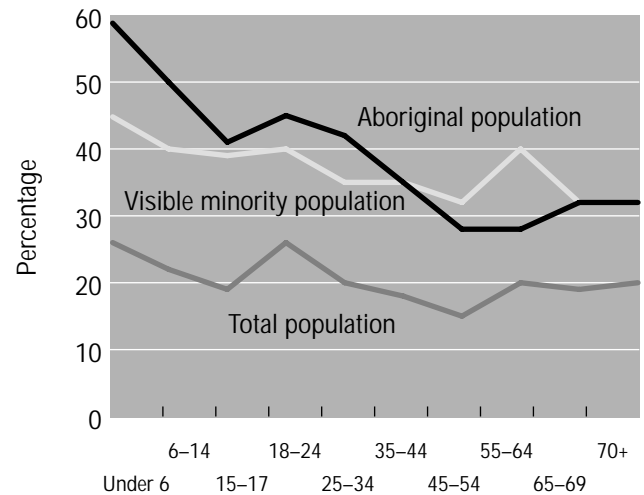
**Provincial Differences:** From 1990 to 1995, the proportion of the population with low incomes increased in every province except Saskatchewan. The largest increases in the number and proportions of low-income Canadians occurred in Ontario. In 1995, the highest rates of low income continued to be reported by residents of Quebec (23%), Newfoundland (21%) and Manitoba (21%).

As Exhibit 2.7 shows, the largest increases in low-income persons both numerically and proportionately were registered in Canada's most populous provinces. In 1990, Ontario had the lowest low-income rate in the country (13%); by 1995, 18% of Ontario residents faced low-income circumstances — an increase of nearly one half million people in that province. Substantial increases in low-income rates also were registered in Quebec (19% in 1990 and 23% in 1995) and British Columbia (16% in 1990 and 20% in 1995) (Exhibit 2.7).

**Families:** As Exhibit 2.8 shows, the proportion of all types of low-income families increased between 1990 and 1995. Families headed by young parents aged 15 to 24 were particularly hard hit. Female-led single-parent families were still the most likely to live in low-income situations.

Exhibit 2.6

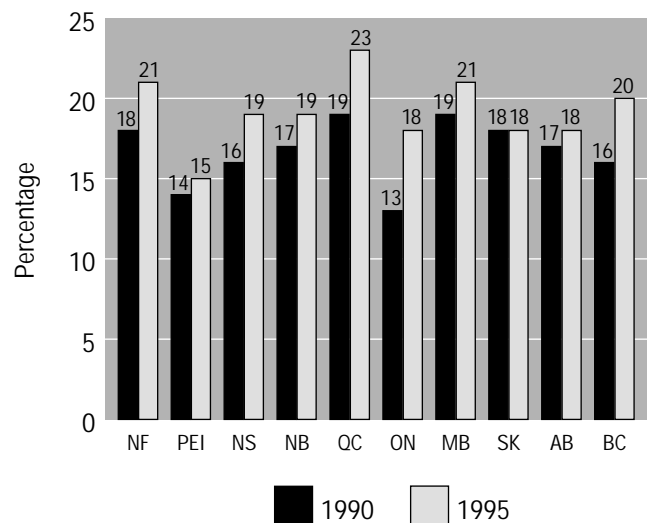
### Percentage of the Aboriginal Population, Visible Minority and Total Population with Low Incomes, by Age Group, Canada, 1995



Source: Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income and Family Income." *The Daily*, May 12, 1998 (Statistics Canada Cat. No. 11-001-XIE).

Exhibit 2.7

### Percentage of Population with Low Incomes, by Province, 1990 and 1995



Source: Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income and Family Income." *The Daily*, May 12, 1998 (Statistics Canada Cat. No. 11-001-XIE).

Exhibit 2.8 also shows the dramatic increase in child and youth situations of low income. Despite a parliamentary resolution to eliminate child poverty by the year 2000, the proportion of children (under age 15) and youth (ages 15 to 24) living below the LICO rose from one in five in 1990 to one in four in 1995.

Living in poverty is not just a risk for single-parent families. While there is a greater proportion of single-parent families living below the poverty line, in absolute numbers, low-income families are more likely to be headed by two parents (Exhibit 2.8).

Exhibit 2.8 Average Family Incomes, Percentage of Families with Low Income, by Family Type and Number of Low-Income Families, 1990 and 1995

Average family income	1990	1995
◆ Two-parent families (all ages)	\$61,053	\$58,763
◆ Lone-parent families with young parents (ages 15 to 24)	\$29,313	\$23,115
◆ Male-led, lone-parent families (all ages)	\$45,557	\$40,974
◆ Female-led, lone-parent families (all ages)	\$29,652	\$27,721
<b>Percentage of families with low income, by family type</b>		
◆ Two-parent families	9%	12%
◆ Male-led, lone-parent families	18%	24%
◆ Female-led, lone-parent families	44%	48%
<b>Percentage of children and youth in low-income families</b>		
◆ Children under age 15	20%	25%
◆ Youth ages 15 to 24	21%	26%
<b>Total number of low-income families</b>		
◆ Two-parent families	577,075	759,630
◆ Lone-parent, male led	24,290	39,325
◆ Lone-parent, female led	300,240	396,245

Source: Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income and Family Income." *The Daily*, May 12, 1998 (Statistics Canada Cat. No. 11-001-XIE).

## Income Distribution

There is strong evidence that the health of a given population depends on the equality of income distribution rather than on average income. The greater the disparities between rich and poor, the greater the health consequences. Or, as Sir Frances Bacon observed: “Money is like muck — not good unless it be well spread.”<sup>8</sup>

There is a well-established literature on the measurement of income inequality. Typical indicators are the income shares of various income quintile groups and summary measures such as the Gini Index. The Gini coefficient measures inequalities in the distribution of income. Essentially, the larger the Gini coefficient, the greater the inequality in distribution of income.

A recent article by Michael Wolfson and Brian Murphy concludes that income inequality in Canada remained relatively stable between 1985 and 1995. The authors examined family disposable income, defined as total income less federal and provincial income taxes and payroll taxes (CPP, QPP, UIC), adjusted for family structure. They found that the Gini coefficient (which measures income inequality) was actually slightly lower in 1995 than in 1985.

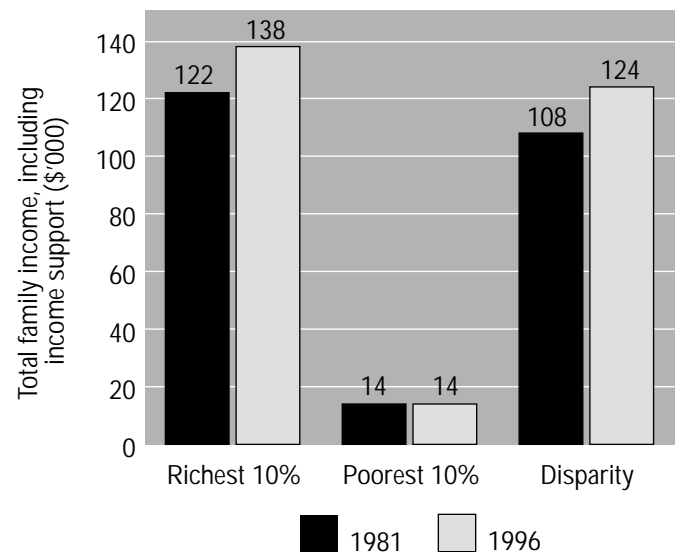
In comparing Canada and the United States, Wolfson and Murphy further suggest that if the value of publicly funded health services had been included in the analysis, Canadian family incomes would have risen relative to those in the United States, and inequality among Canadian incomes would have diminished.<sup>9</sup>

Some economists prefer to measure inequalities by simply comparing groups in the wealthiest and poorest 10th percentiles. This measurement is easy to understand and relates quite closely to the Gini coefficient. It does not, however, show the distribution in middle-income groups — a factor that can alter the overall picture of inequality. Using this measure, the Toronto Centre for Social Justice has shown growing income disparities between the wealthiest and poorest families in Canada. According to that study, the average incomes of the top 10% of families with children in 1973 were 8.5 times those of the bottom 10%; by 1996, this ratio had increased to 10.2. Exhibit 2.9 shows how the earned incomes of the wealthiest 10% of families rose from \$122,000 in 1981 to \$138,000 in 1996. In contrast, the earned incomes of the poorest families with children remained largely unchanged between 1981 and 1996 (approximately \$14,000).<sup>10</sup>

Since earnings are the main source of income for most Canadians, changes in income inequalities are closely related to changes in wage rates, earnings and working time among Canadian workers. In recent years, some groups have been

Exhibit 2.9

Income Disparity among Families with Children Under Age 18, in 1996 Dollars, Canada, 1981 and 1996



Source: Yalnizyan, A. *The Growing Gap*. Toronto: Centre for Social Justice, 1998.

gaining, most notably older workers and those who are highly paid and skilled, while others — particularly young workers and lower-paid, lower-skilled men — have experienced declines.<sup>11</sup>

Government transfer payments and personal income taxes play an important role in reducing income inequality in Canada. The effect of government transfer payments and personal income taxes in reducing income inequalities is evident in the Gini coefficient results shown in Exhibit 2.10. In 1995, the difference in the Gini coefficient before transfers (.458) and after taxes (.300) was nearly 16 percentage points.<sup>12</sup>

Exhibit 2.10 also shows that income inequality before transfers and taxes rose substantially between 1970 and 1995. However, income inequalities after taxes and transfers actually decreased from .316 to .300.

Exhibit 2.10 Gini Coefficients for the Income Distribution of Families, 1970 to 1995

	1970	1980	1985	1990	1995
◆ Total income	0.352	0.351	0.359	0.357	0.373
◆ Income before transfers	0.388	0.401	0.425	0.425	0.458
◆ Income after taxes	0.316	0.293	0.304	0.295	0.300

Note: The larger the Gini coefficient, the greater the inequality in income distribution.

Source: Rashid, Abdul. "Family Income Inequality, 1970–1995." *Perspectives* (Winter, 1998). Statistics Canada Cat. No. 75-001-XPE: 12–17.

Trends in income equality beyond 1995 were not available for this report, but recent reductions in transfer payments in several jurisdictions are worrisome. Government transfer payments are crucial for low-income families. They account for 55% of average total income for low-income families, increasing to 66% among low-income, female lone-parent families. Trends beyond 1995 are worth monitoring in future analyses.

In addition to understanding inequities in income distribution in Canada, it is important to consider where poor people are most likely to live. Studies have shown a growing concentration of poverty in certain core areas of Canada's larger urban centres. In 1990, Winnipeg, Montréal and Quebec City combined had about one-seventh of Canada's population. They accounted for nearly half of Canada's distressed urban neighbourhoods. In Winnipeg, Aboriginal people were vastly over-represented in such areas.<sup>13</sup> Children and youth growing up in these neighbourhoods are particularly vulnerable to the social disadvantages and marginalization associated with distressed neighbourhoods, which may in turn feed a self-perpetuating cycle of poverty and poor health.

## Education and Literacy

In this section, data on educational attainment were taken from the 1996 Census. Information on literacy skills was drawn from the 1997 International Adult Literacy Survey which explored the prose, document and quantitative literacy of Canadians as well as citizens in other countries.

## Educational Attainment

Educational attainment is widely acknowledged as one of the key components of socioeconomic status and is positively associated with health status and health behaviours.<sup>14</sup> For example, in the 1996–97 National Population Health Survey, only 19% of respondents with less than high school education rated their health as “excellent,” compared with almost 30% of university graduates.<sup>15</sup>

As Exhibit 2.11 shows, from 1971 to 1996, there was a significant decline in the proportion of Canadians aged 15 and over with less than a Grade 9 education (from 32% to 12%) and a corresponding increase in the proportion of Canadians who had completed some post-secondary schooling (from 17% to 34%). Interestingly, 1996 was the first census year to record more university graduates than people reporting less than Grade 9 education.<sup>16</sup>

Overall, women were slightly more likely than men to have ended their formal education after high school. Women in their 20s, however, were more likely to be college and university graduates than men of the same age. One of the most significant changes between 1971 and 1996 was the increase in the number of women attaining university degrees. There were over four times as many women university graduates over age 25 in 1996 as there were in 1971.<sup>17</sup>

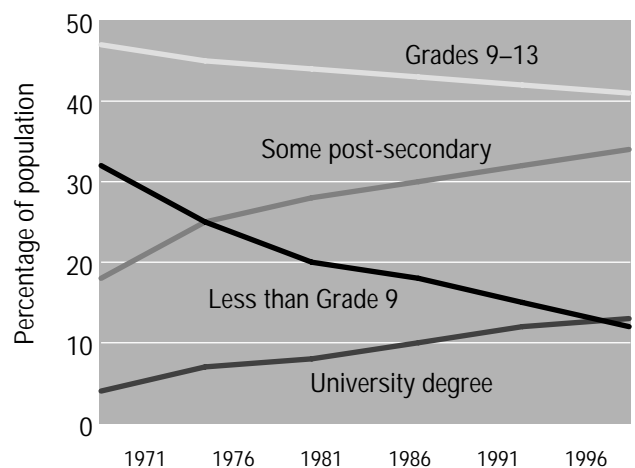
The data show a strong inverse relationship between age and education: with each older cohort, there was a greater proportion who had not finished high school. There was also considerable variation among provinces and territories in the proportion of Canadians who had not completed high school, ranging from 45% in Newfoundland to 31% in British Columbia and 28% in the Yukon Territory. University degrees were most likely in Ontario (17%) and the Yukon Territory (17%) and least in proportion in Newfoundland (10%).<sup>18</sup>

Aboriginal people were less likely to have high levels of formal education than Canadians 15 years and over in the total population. However, comparisons of 1981 and 1996 data show that Aboriginal people are making marked educational progress. During that time, the proportion of Aboriginal Canadians with less than a high school education dropped from 59% to 45%. Among Aboriginal people aged 20 to 29, the proportion with a college degree or diploma rose from 19% to 23% and the proportion of university graduates rose from 3% to 4%.<sup>19</sup>

Employment earnings increased with the number of years of education. This was particularly true for Canadians with a university degree, and reflects the continued demand for highly educated labour in Canada. Canadians who didn’t complete high school reported earnings of \$18,639 in 1995. This was significantly below the Canadian

Exhibit 2.11

### Highest Level of Schooling, Age 15+, Canada, 1971 to 1996

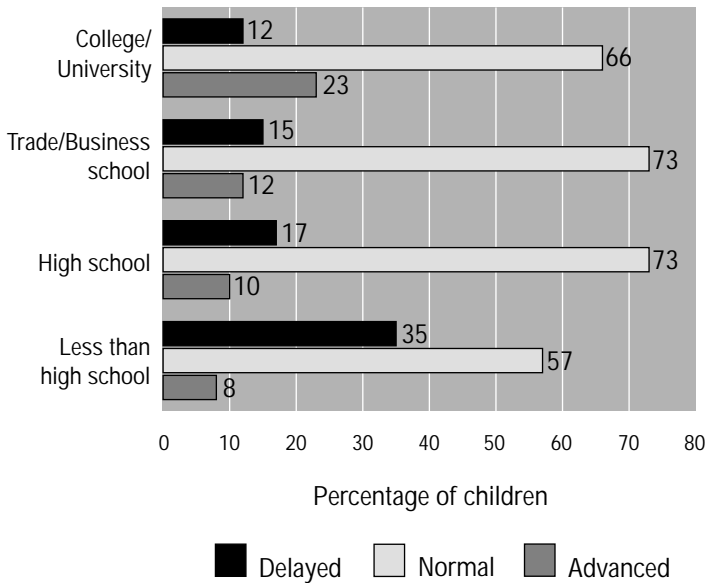


Source: Statistics Canada. “1996 Census: Education” *The Nation Series* (Statistics Canada Cat. No. 93F0028XDB95002).

average of \$26,474, and less than half the average earnings of Canadians with a university degree (\$44,658). Although average earnings declined in all education categories from 1990 to 1995, the largest downturns were felt by Canadians with less than a Grade 9 education.<sup>20</sup>

Parents' education levels are clearly strongly linked to the school readiness of children.<sup>21</sup> As Exhibit 2.12 shows, children with a parent who had attended college or university were far more likely to score in the "advanced" category of school readiness than children whose parent(s) had attained lower levels of education. See Chapter 3 for more information on the concept of school readiness.

Exhibit 2.12 School Readiness of Children, Aged 4 and 5, by Parents' Education,\* Canada, 1994-95



\* Education of most-schooled parent.

Source: Human Resources Development Canada and Statistics Canada. *Growing Up in Canada: National Longitudinal Survey of Children and Youth*. November 1996 (Statistics Canada Cat. No. 89-550-MPE, No. 1).

## Literacy

Literacy and numeracy skills are essential for full participation in today's world. Society rewards individuals who are proficient and penalizes those who are not, in employment opportunities, job success, citizenship and active participation in the community. People with low literacy skills often feel alienated and have difficulty finding and accessing health information and services. As a result, they suffer poorer health than those who have higher literacy skills. Literacy is also important to nations, as these skills enable the creation of a labour force that is capable of competing in a changing world and contributing to economic growth.<sup>22</sup>

The 1997 International Adult Literacy Survey explored three aspects of literacy: prose, document and quantitative literacy (numeracy). Skill levels on each of these measures are allotted to one of five levels (five being the highest).

In 1994-95, only 57% to 58% of Canadians aged 16 to 65 attained Level 3 or

greater (out of five levels) in prose, document and quantitative literacy. Literacy distribution in Canada was similar to that in the United States, although there was a slightly larger proportion at Level 1 in the United States. Both countries had relatively large numbers at Level 1 (most notably for the document scale) and Level 4-5. The Netherlands showed great consistency across the board, while Sweden ranked at the highest levels in all three measures of literacy. When comparing the Level 4-5 of each measure, out of the 11 countries/regions listed, Canada ranked second highest in both prose and document literacy and fifth highest in quantitative literacy.<sup>23</sup>

In 1994-95, about 17% of Canadians aged 16 to 65 were determined as fitting in the lowest level of prose literacy. Another 26% achieved the second lowest level. These Canadians can read only simple material that does not contain complex instructions. While there is a clear connection between educational attainment and literacy levels,

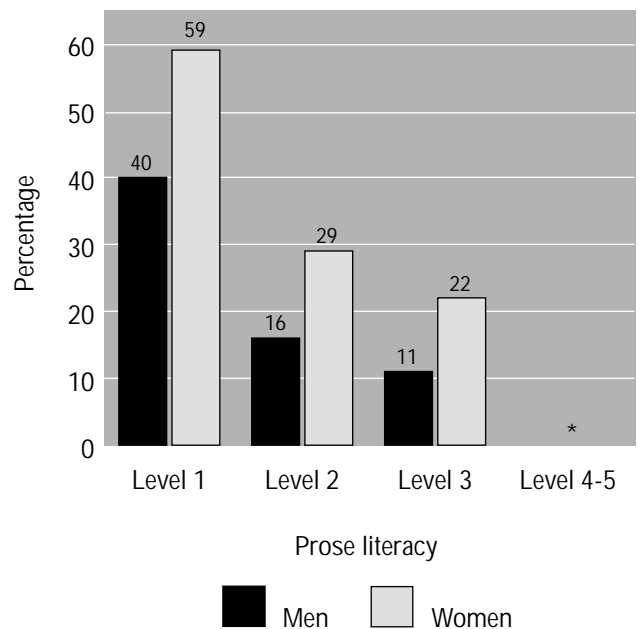


about 20% of Canadians had lower literacy levels than would be predicted by their level of schooling and about 16% had higher levels. Clearly, education does not “fix” a person’s literacy skills for a lifetime.<sup>24</sup>

The International Adult Literacy Survey showed considerable variation in Canadians’ literacy skills:<sup>25</sup>

- Generally, there were higher proportions of adults with high skill levels in the western provinces and larger proportions with low skill levels in the east.
- The unadjusted results for youth were clustered into three groups: Manitoba and Saskatchewan scored more than one year of schooling above the national average; British Columbia, Alberta, Nova Scotia and Quebec scored near the national average; and Ontario, New Brunswick, Newfoundland and Prince Edward Island scored about one year of schooling below the national average. Almost one-half of the variation was attributable to differences in youths’ socioeconomic background.<sup>26</sup>
- A significant majority of young Quebecers (both anglophones and francophones) performed at Level 3 and above on the prose and quantitative scales. The skill levels of francophones outside Quebec were largely equivalent on the document and quantitative scales; however, their scores on prose literacy tended to be lower than those of francophones living in Quebec. This may point to the benefits of increased access to education in one’s mother tongue.
- Women’s scores in prose literacy were higher than men’s across all ages. There were no significant differences in document literacy scores. Men scored higher than women in quantitative literacy, but only in the age groups 16 to 25 and over 65.
- While a significantly larger proportion of immigrants had Level 1 literacy skills in their new country’s language, the proportion of immigrants with Level 4 and 5 skills in English or French was higher than the proportion of non-immigrant Canadians. This finding, which sets Canada apart from the other countries who participated in the International Adult Literacy Survey, likely reflects Canadian immigration policies that welcome both business-class immigrants (who are likely to have excellent literacy skills) as well as refugees and family-class immigrants (who are less likely to be skilled in English or French).

Exhibit 2.13  
Percentage of Working-Age Adults Residing in Low-Income Households, by Level of Prose Literacy, Men/Women, 1994



\* Number too small to report.

Source: *International Adult Literacy Survey* (Schalla and Schellenberg, 1998).

- More than 1.6 million Canadians over the age of 65 performed at Level 1 in literacy. Poor literacy skills lower seniors' quality of life and increase their health and safety risks.
- An unemployed person was about three times as likely to score in the Level 1 category than someone who was employed. Workers with higher literacy skills were also employed more weeks per year than those with low literacy skills.

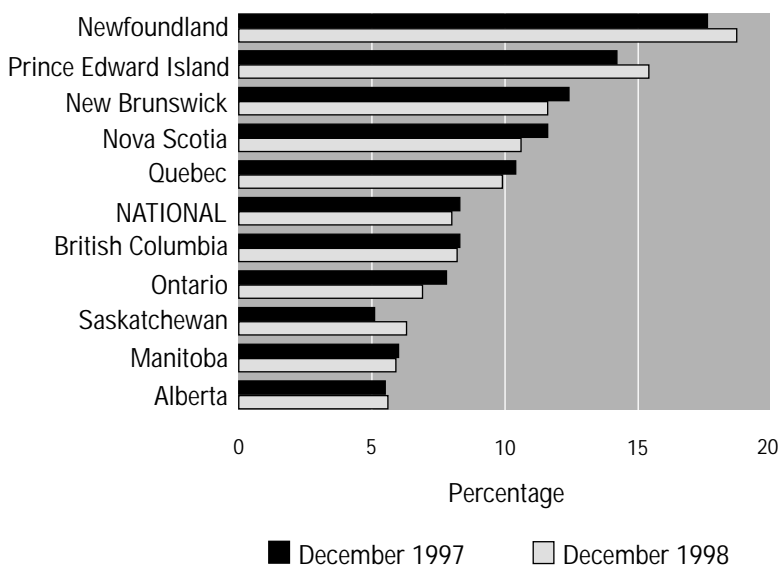
There is a large income penalty for Canadians with low literacy scores. Among Canadians with the lowest levels of prose literacy, 47% lived in low-income households, compared with 8% of Canadians with the highest levels of prose literacy. Women with low literacy skills were particularly vulnerable. Among women with Level 1 prose literacy, the low-income rate was 59%; this decreased to 22% among women with Level 3 skills. Among men with Level 1 prose literacy, 40% lived in low-income households, compared with 11% of those with Level 3 prose literacy skills (Exhibit 2.13).<sup>27</sup> Recipients of social assistance had markedly lower literacy skills than either the general population or Canadians who received employment insurance benefits.<sup>28</sup>

## Employment and Unemployment

Employment has a significant effect on a person's physical, mental and social health. Paid work provides not only money, but also a sense of identity and purpose, social contacts and opportunities for personal growth. When a person loses these benefits, the results can be devastating to both the health of the individual and his or her family.<sup>29</sup> Unemployed people have a reduced life expectancy and suffer significantly more health problems than people who have a job.<sup>30</sup>

Exhibit 2.14

### Unemployment Rates, \* by Province, December 1997 and 1998



\* Seasonally adjusted.

Source: Statistics Canada. *Labour Force Survey, December 1998. The Daily*, January 8, 1999.

In December 1998, just over 11.8 million people were working full-time in Canada, up 8% from the start of the decade. In contrast, the proportion of part-time workers increased 24.4% over the decade to just over 2.7 million. In December 1998, some 1.3 million Canadian workers were unemployed and the seasonally adjusted unemployment rate was 8%.<sup>31</sup>

Since the recession of the early 1990s, rates of unemployment have slowly eased from 11.2% in 1992 to 8% in December 1998. However, there are large differences in unemployment rates in different parts of the country and among different groups. In December of 1998, the seasonally adjusted unemployment rate was 18.7% in Newfoundland, 15.4% in Prince Edward Island, 11.6% in New Brunswick and 10.6% in Nova Scotia.

Western provinces reported the lowest rates of unemployment: Alberta (5.7%), Manitoba (5.9%) and Saskatchewan (6.3%) (Exhibit 2.14).<sup>32</sup>

As Exhibit 2.15 shows, the overall size of the Canadian labour force has grown significantly in the last 30 years, largely as a result of increased participation rates by women. The massive influx of women into the paid labour force is of particular note not only for its economic and health implications, but also because women have traditionally had a high rate of participation in unpaid work (Exhibit 2.16). This will be discussed later in this section.<sup>33</sup>

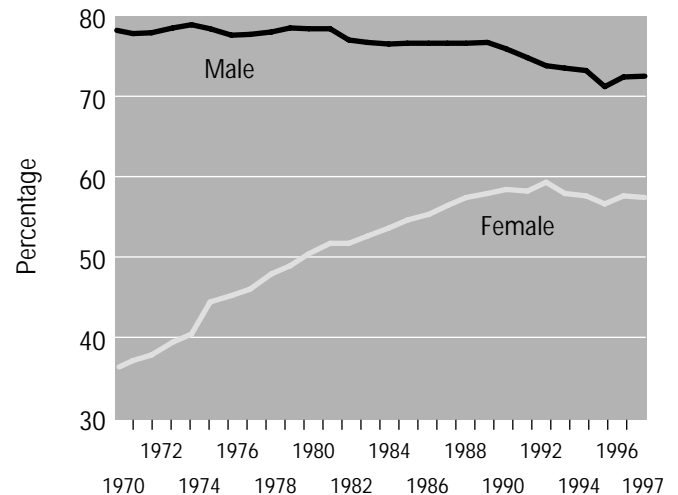
Much of the growth in the labour force has been in part-time jobs and self-employment, both of which do not provide benefits and pensions. In 1998, about 30% of adult women working part-time were doing so involuntarily, and an additional 20% worked part-time so they could care for their children.<sup>34</sup>

As in other developed countries, the nature of work is also changing in Canada. Globalization, changing market structures and the advent of new technologies have had a profound effect upon the Canadian wage economy. Employment growth in Canada and the structure of employment in all sectors are shifting toward knowledge- and technology-intensive industries. This widespread “upskilling” reinforces the continued shift in demand from low-skilled to high-skilled workers.<sup>35</sup>

As a result, many Canadian workers are anxious about their ability to keep up with the changing requirements of the labour market. According to recent research, one-third of Canadian workers believe that their skills are already obsolete, and almost 40% believe that their job skills will become obsolete within 10 years. There are as many people in Canada who believe they could lose their jobs in the next couple of years as there are those who feel secure.<sup>36</sup>

Exhibit 2.15

### Labour Force Participation, by Sex, Age 15+, Canada, 1970 to 1997



Source: Statistics Canada, Health Statistics Division. *Health Indicators, 1999* (Statistics Canada Cat. No. 82-221-XCB).

## Exhibit 2.16 Men, Women and Work, 1995 (Unless Shown Otherwise)

There are several important differences between the participation of men and women in the wage economy and in unpaid work.

	Men	Women
◆ Full-time paid employment (including self-employment) <sup>a</sup>	56%	43%
◆ Increase in self-employment between 1991 and 1996 <sup>a</sup>	11%	21%
◆ Average employment income <sup>b</sup>		
◆ Work full-time	\$43,000	\$30,000
◆ Work part-time	\$18,000	\$13,000
◆ Unemployment rate <sup>c</sup>		
◆ Under age 25	20%	18%
◆ Age 25 to 44	8%	8%
◆ Age 45 to 64	7%	8%
◆ Time devoted to paid employment (hours per week) <sup>b</sup>	45.7	40.8
◆ Employed and devoting 15 hours a week to unpaid housework <sup>b</sup>	25%	50%
◆ Employed and devoting 30 hours a week to unpaid housework <sup>b</sup>	6%	20%
◆ Employed, in a two-parent family and devoting 30+ hours a week to child care <sup>b</sup>	23%	55%
◆ Employed, in a two-parent family and devoting 60+ hours a week to child care <sup>b</sup>	8%	25%

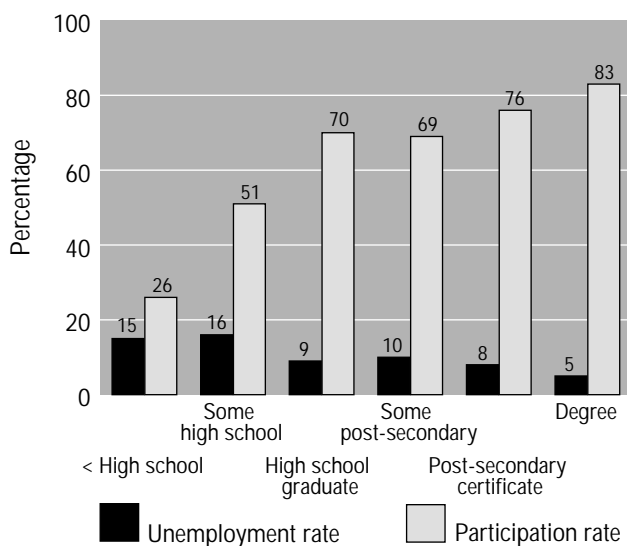
Sources:

a Statistics Canada. "1996 Census: Labour Force Activity, Occupation and Industry, Place of Work, Mode of Transportation to Work, Unpaid Work." *The Daily*, March 17, 1998.

b Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income, and Family Income." *The Daily*, May 12, 1998.

c Statistics Canada. *Historical Labour Force Statistics, 1997* (Statistics Canada Cat. No. 71-201-XPB).

## Exhibit 2.17 Labour Force Participation and Unemployment, by Education Level, Canada, 1995



Canadians with limited educational attainment have the highest unemployment rates and the lowest participation rates in the wage economy. As Exhibit 2.17 shows, only 26% of Canadians with less than a high school education were active participants in the labour force, and 15% were unemployed. Among those with some high school, 51% participated in the labour force, and 16% were unemployed. By contrast, 83% of Canadians with a university degree were active participants in the labour force, and only 5% were unemployed.

Source: Statistics Canada. "1996 Census: Sources of Income, Earnings and Total Income, and Family Income." *The Daily*, May 12, 1998.

First Nations people experienced high rates of unemployment (as defined by Statistics Canada), as shown in Exhibit 2.18. Other groups who tend to have higher rates of unemployment than average include the visible minority population and people with mental and physical disabilities.<sup>37</sup>

After years of decline, the availability of jobs for youths aged 15 to 24 revived somewhat in 1998, jumping 7% compared to 1997. Continuing high unemployment rates among young people, however, remain a major concern. In 1997, 25.5% of young people aged 15 to 17 were looking for work; unemployment rates were 18.4% among young people aged 18 to 19 and 13.6% among those aged 20 to 24. Youth unemployment rates have remained consistently higher than adult rates in the latter part of this century, although changes from 1997 to 1998 have reduced that gap slightly.<sup>38</sup>

At the same time, young people who do find work are increasingly employed in part-time work. Between 1980 and 1995, the part-time share of all employment for young men doubled (from 20% to 40%); for young women, it increased 81% (from 28% to 51%).<sup>39</sup> In 1998, about 23% of young people working part-time would have preferred to work full-time; 68% were working part-time because they were also going to school.<sup>40</sup>

Exhibit 2.18

### Employment and Unemployment among the First Nations Population, 1996

	On reserve	Off reserve
◆ Labour force participation rate	52%	57%
◆ Unemployment rate	29%	26%

Source: Statistics Canada. *1996 Census*. Department of Indian Affairs and Northern Development Custom Tabulation, August 1998.

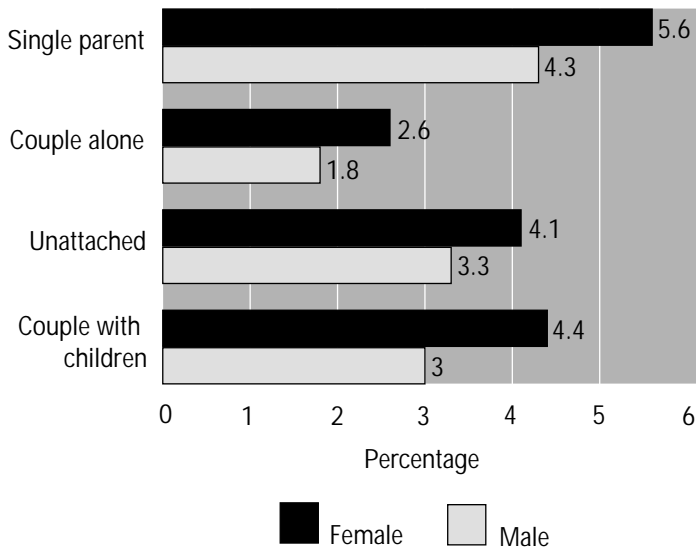
## Working Conditions

Well over half of adult Canadians spend a substantial amount of time at work each day. Conditions at work (both physical and psychosocial) can have a profound effect on people's health and emotional well-being.<sup>41</sup> Participation in the wage economy, however, is only part of the picture. Many Canadians (especially women) spend almost as many hours engaged in unpaid work, such as doing housework and caring for children or older relatives. When these two workloads are combined on an ongoing basis and little or no support is offered, an individual's level of stress and job satisfaction is bound to suffer.

### ***Job Satisfaction and Work Stress***<sup>42</sup>

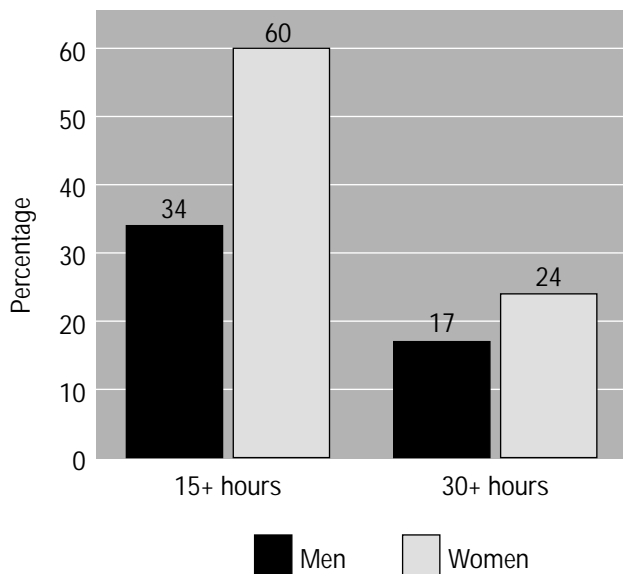
Overall, men are more likely than women to be satisfied with their jobs, and job satisfaction for both sexes significantly increases with age. Between 1991 and 1995, the proportion of Canadian workers who were "very satisfied" with their work declined, and was more pronounced among female workers, dropping from 58% to 49%. Reported levels of work stress followed the same pattern. In the 1996–97 NPHS, more women reported high work stress levels than men in every age category. Women aged 20 to 24 were almost three times as likely to report high work stress than the average Canadian worker.

Exhibit 2.19  
 Percentage of Employed Persons Reporting High Work Stress, by Household Type, Age-Standardized, Canada, Aged 15+, 1994–95



Source: Statistics Canada. *National Population Health Survey, 1994–95*.

Exhibit 2.20  
 Hours Per Week Devoted to Unpaid Housework, Employed Men and Women Living Together, with Children under Age 15, 1996



Source: Statistics Canada. "1996 Census: Labour Force Activity, Occupation and Industry, Place of Work, Mode of Transportation to Work, Unpaid Work." *The Daily*, March 17, 1998.

As Exhibit 2.19 shows, while reports of "high" work stress were generally low, there were notable differences among different types of households. Almost 6% of female single parents reported high work stress, nearly double the percentage reported by individuals in couples with no children.

### Unpaid Work<sup>43</sup>

Whether they are employed outside the home or not, Canadian women bear a disproportionate burden of unpaid housework. One out of two fully employed women reported doing at least 15 hours per week of unpaid housework in the 1996 Census, compared with one out of four working men. Nearly one out of five working women performed 30 hours or more of housework each week, compared with fewer than one out of every 15 working men.

As Exhibit 2.20 shows, the burden of housework increased substantially for both men and women when there were children in the household: 60% of working women and 34% of working men with children under the age of 15 reported doing at least 15 hours per week of unpaid housework. For both men and women, the amount of time spent on paid employment competes with time available for child care. As Exhibit 2.21 shows, responsibility for child care falls disproportionately on women. Among employed women in two-parent families with a child under the age of 6, more than one out of two women reported spending at least 30 hours per week on unpaid child care, while one out of four women reported 60 hours or more. Among men in similar circumstances, fewer than one out of four reported spending 30 hours or more per week on unpaid child care, while fewer than one in 10 spent more than 60 hours on child-care responsibilities.

Overall, 19% of women and 14% of men reported providing care to seniors. Women provided more hours of care for seniors on average than did men, but 7% of women and 4% of men provided at least five hours per week of unpaid care to seniors. Responsibility for caring for older parents or relatives generally increases with age: 25% of women aged 45 to 64 provided care to seniors in the week prior to the 1996 Census, compared with 17% of men in the same age group.

### ***Injuries at Work***

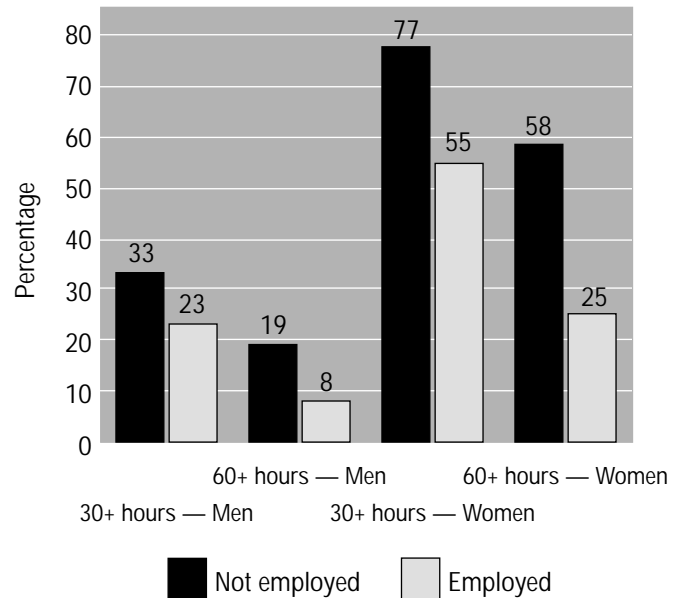
Employees who become ill or injured as a result of workplace conditions suffer pain, a lowered quality of life and reduced earning potential. Employee illness and injury are also a significant expense for employers in the form of workers' compensation and health benefit claims, absenteeism, increases in turnover, and lowered performance on the job. In 1994, there was one compensation claim resulting from injury for every 13 workers, amounting to direct medical costs of more than \$250 per person and perhaps twice as much again in indirect costs.<sup>44</sup>

Overall, there has been a steady decrease in the rate of reported time-loss work injuries, from 49 injuries for every 1,000 workers in 1987 to 28 per 1,000 in 1996. Young men aged 15 to 29 were most at risk: their injury rate was 43 per 100,000 workers — 57% above the average for all ages and both sexes. The rates of compensated injuries were highest in forestry and logging, although rates in transportation, wholesale trade, manufacturing and construction were well above average. Among white-collar industries, government and the health-care sector had the two highest rates of time-loss injuries in 1996.<sup>45</sup>

According to the 1996–97 NPHS, an estimated 2 million Canadians aged 12 and over suffered a repetitive strain injury (RSI) in the past 12 months. Injuries to the back or spine accounted for the greatest share of RSIs among men (20%), while injuries to the wrist, hand or fingers were the most common among women (25%). For both sexes, the greatest proportion of RSIs occurred at work or school.

Exhibit 2.21

### Hours Per Week Devoted to Child Care, Men and Women Living Together, with Children under Age 6, by Employment Status, 1995



Source: Statistics Canada. "1996 Census: Labour Force Activity, Occupation and Industry, Place of Work, Mode of Transportation to Work, Unpaid Work." *The Daily*, March 17, 1998.

## The Social Environment

Families and friends provide needed emotional support in times of stress, and help provide the basic prerequisites of health such as food, housing and clothing. The caring and respect that occur in social networks, as well as the resulting sense of well-being, seem to act as a buffer against health problems. Indeed, some experts in the field believe that the health effect of social relationships may be as important as established risk factors such as smoking and high blood pressure.<sup>46</sup>

The importance of social support also extends to the broader community. Civic vitality refers to the strength of social networks within a community, region, province or country. It is reflected in the institutions, organizations and informal giving practices that people create to share resources and build attachments with others.<sup>47</sup>

This section looks at five indicators of a supportive social environment: access to social support, personal security (violence in the home and in the community), volunteering, participation in community organizations, and charitable donations.

### ***Social Support***

In the 1996–97 National Population Health Survey (NPHS), more than four out of five Canadians reported that they had someone to confide in, someone they could count on in a crisis, someone they could count on for advice and someone who makes them feel loved and cared for. Similarly, in the 1994–95 National Longitudinal Survey of Children and Youth, children aged 10 and 11 reported a strong tendency toward positive social behaviour and caring for others.<sup>48</sup>

In the 1996–97 NPHS, women were more likely than men to report high levels of support. High levels of support declined with age: adolescents and young adults were most likely to report that they had high levels of support while seniors were least likely to do so. Nonetheless, almost three-quarters of seniors reported having access to high levels of social support.

When household types were taken into account, unattached individuals enjoyed the highest levels of social support (89% for women and 82% for men) and single parents had the lowest (81% for women and 72% for men). Income was also related to the level of social support. People with the lowest income levels had the lowest percentage of high support (74%) compared with those with the highest incomes (89%).

### ***Violence at Home***

Women and children are most often the victims of family violence, which can have a devastating effect on health and well-being in both the short and long term.

In 1996, children under age 18 were the victims of 22% of assaults reported to police agencies, accounting for a total of almost 23,000 reported assaults. Children represented a much larger proportion of sexual assault victims (60%) than physical assault victims (18%). Family members were accused in 24% of all assaults against children. Almost 70% of victims under the age of 3 were physically assaulted by family members, and parents accounted for 85% of such assaults.<sup>49</sup>



In 1993, approximately one-third of Canadian women over the age of 16 reported violence at the hands of an intimate partner at some point during their lives.<sup>50</sup> In 1996, almost 22,000 incidents of spousal assault were reported to police; 89% of these assaults were against women.<sup>51</sup> Four out of five women and children living in shelters or transition centres in 1995 were there to escape an abusive situation, the majority from abuse by a partner (or father).<sup>52</sup>

Women who are assaulted often suffer severe physical and psychological health problems; some are even killed. In 1997, 80% of victims of spousal homicide were women, and another 19 women were killed by a boyfriend or ex-boyfriend. In all, about 40% of female homicide victims were killed by a man with whom they had an intimate relationship at some point in their lives.<sup>53</sup>

In 1996, older adults (age 65 and older) were victims in 2% of violent crimes reported to police. Family members were involved in 20% of reported cases: 44% involved children and 34% involved spouses.<sup>54</sup>

### ***Violence in the Community***<sup>55</sup>

Since peaking in 1991, the national crime rate (including homicide, attempted murder, robbery, break-ins, motor vehicle theft and impaired driving) declined 19% by 1997. However, this national rate is still more than double what it was three decades ago. From 1996 to 1997, the national crime rate dropped 5%. Decreases in provincial rates ranged from 2% in Nova Scotia to 10% in Prince Edward Island. Only Saskatchewan (+4%) and Alberta (+2%) reported increases in their crime rates.

From 1996 to 1997, rates of violent crime decreased in 16 of 25 metropolitan areas. Rates were lowest in Sherbrooke and Trois Rivières, and highest in Thunder Bay and Regina. Regina reported the highest increase in violent crime during this period (29%).

There were 193 homicides committed with firearms in 1997, 19 fewer than in 1996. Despite this drop, firearms continue to be used in about one-third of all homicides. The rate of firearm robberies has been falling since 1991, including a 20% drop in 1997.

A total of 111,736 young people aged 12 to 17 were charged with *Criminal Code* offences in 1997 — a drop of 7% from the previous year. More than half were charged with property crimes, while 20% were charged with violent crimes. Despite this decline, the rate is still more than double that of a decade ago.

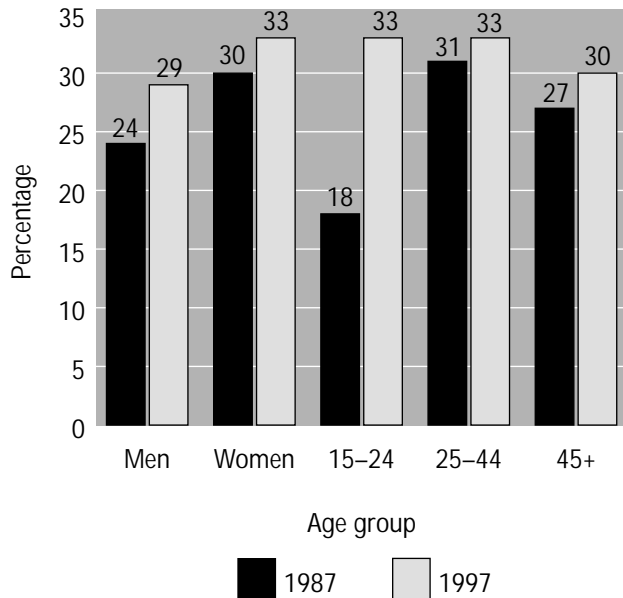
In recent years, concern has been growing about increasing violence by young women. Over the last 10 years, the rate of female youths charged with violent crimes has increased twice as fast as that of male youths. In 1997, however, the rate for female youths was still only one-third the rate for their male cohorts.

### ***Volunteering***<sup>56</sup>

Canadians are actively involved in supporting their communities and there has been a substantial increase in volunteer activities in Canada over the last 10 years. Thirty-one percent of adult Canadians reported volunteering with not-for-profit organizations in 1996–97 — a 40% increase in the number of volunteers since 1987. These 7.5 million volunteers contributed more than 1 billion hours of time — the equivalent of 578,000 full-time jobs.

Exhibit 2.22

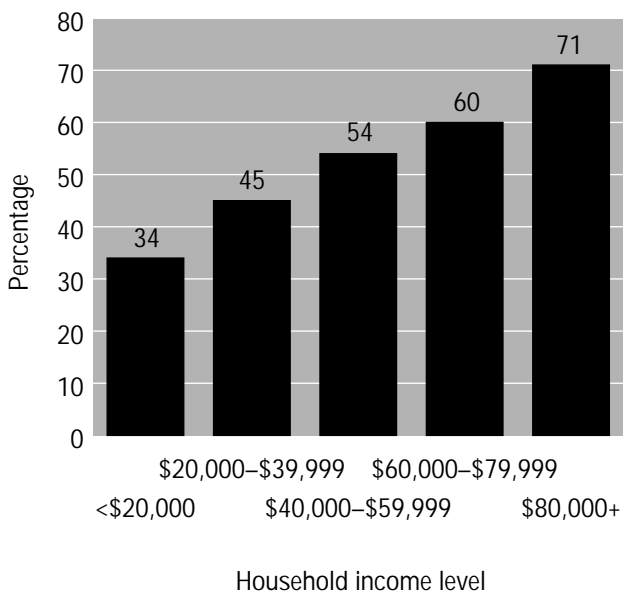
### Volunteering Rate, by Age Group and Sex, Canada, 1987 and 1997



Source: Hall, M., et al. *Caring Canadians, Involved Canadians: Highlights from the 1997 National Survey of Giving, Volunteering and Participating*. Ottawa: Minister of Industry, 1998.

Exhibit 2.23

### Participation in Community Organizations in Canada, by Household Income Level, 1996-97



Source: Hall, M., et al. *Caring Canadians, Involved Canadians: Highlights from the 1997 National Survey of Giving, Volunteering and Participating*. Ottawa: Minister of Industry, 1998.

Women (33%) were slightly more likely to report participating in volunteer activities than men (29%). However, men reported devoting more hours to volunteer activities, averaging 160 hours per year as compared with 140 hours for women.

In general, rates of volunteering increased with income level. The rate of volunteer participation among Canadians with incomes less than \$20,000 (22%) was half that of wealthy Canadians (44%). This may reflect the inability to pay for the direct costs of volunteering such as transportation to a program or clothing costs, as well as poorer health status of low-income Canadians.

Exhibit 2.22 shows that the biggest increase in volunteering occurred among youth aged 15 to 24. In this age group, the 1997 volunteer rate rose to 33% from 18% in 1987. Youth volunteers tended to have different motivations for volunteering than other participants. They were particularly likely to volunteer to improve job opportunities (54%), to explore their own abilities (68%) and to use their skills and abilities (82%).

### Civic Participation

One in two Canadians reported being involved in a community organization (e.g. work-related, sports and recreation, religious, school-related, cultural, educational and political groups).

Men (53%) reported a slightly higher rate of civic participation than women (49%), and Canadians aged 35 to 64 reported the highest rates of participation of any age group. The strongest predictor of civic participation was socioeconomic status. As income increased, so too did the likelihood of participating in community organizations (Exhibit 2.23).

## Charitable Donations

Eighty-eight percent of Canadians made donations, either financial or in-kind, to charitable and not-for-profit organizations in 1996–97. Women (81%) were somewhat more likely than men (75%) to have made financial donations during 1995–96.

Direct financial contributions totalled an estimated \$4.5 billion. Health organizations received the largest number of individual donations; however, religious organizations received the largest amount of all money donated.

The third of donors who made the largest financial donations (\$150 or more) accounted for 86% of the total value of financial donations (Exhibit 2.24).

## Discussion

In looking at the socioeconomic environment as a determinant of health, it is useful to first consider the two related parts separately — trends in economic status (including income distribution) and factors in the social environment.

### *Income, Income Distribution and Health*

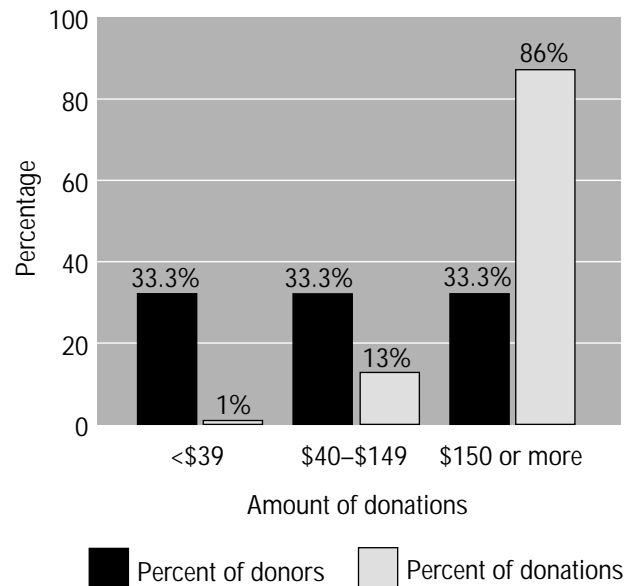
In terms of economic status, the first concern is for individuals and families living in low income situations. As shown in Chapter 1, people with higher incomes live longer, healthier lives than people with low incomes. This relationship persists, regardless of gender, culture or race, even though the causes of illness and death may vary.<sup>57</sup>

Low income in Canada is often related to gender. Women, especially single mothers and unattached seniors, remain particularly vulnerable. As we have seen in this chapter, low-income status is also linked to age. In 1995, very young children (under the age of 6) and youth (aged 18 to 24) were most likely to live below the LICO. Despite the recent resolution of governments and non-governmental organizations to end child poverty by the year 2000, we have seen the proportion of young children living in low-income situations increase from one in five to one in four in 1995. To many Canadians, this is unacceptable in a country as prosperous as Canada.

Children are poor because their families are poor. Increases in poverty among all family types are directly related to a number of trends: cyclical recessions in the economy; the growth of earning inequities (especially between young and older workers); changes in family structure; reduced access to affordable housing (see Chapter 4); and reductions in social assistance in some jurisdictions. A renewed effort to address child and family poverty is required, as is a solid plan for doing so.

Exhibit 2.24

Distribution of All Financial Donations by Size of Annual Donation, Canadian Donors Aged 15+, 1997



Source: Hall, M., et al. *Caring Canadians, Involved Canadians: Highlights from the 1997 National Survey of Giving, Volunteering and Participating*. Ottawa: Minister of Industry, 1998.

A second concern relates to the distribution of income in Canada. A growing body of literature on health suggests that as the gap widens between the rich and poor, so too does the gap in health status in any given population.<sup>58</sup> This chapter has shown that tax redistribution policies and transfers are critical to reducing income inequities. Increasing opportunities for education, lifelong learning and employment in meaningful work are also important.

Efforts to reduce economic inequities in Canada stand to benefit middle- and upper-income Canadians, as well as those with low-income status. In the long run, investing money and effort in reducing disparities now will save both money and suffering in terms of increasingly poor health status in the future.

Reducing inequities is also important for sustaining the overall quality of life in communities across Canada. Richard Wilkinson has shown that societies with greater economic inequalities begin to “disintegrate” — that is, they show evidence of decreased social cohesion or citizen commitment to society.<sup>59</sup>

### ***Employment and Health***

Despite a slight recovery in 1998, persistent high levels of unemployment combined with dramatic increases in the amount of part-time or temporary work have led to large relative declines in average wages among young Canadians. These trends have reduced young people’s opportunities for upward economic mobility. In other words, the current generation of youth are less likely to achieve or surpass their parents’ standard of living. These trends have also contributed to the increase in poverty among young families.

If Canada is to remain a vibrant and productive society in the new millennium, young people in Canada must be provided with increased opportunities for meaningful employment.

Women earn significantly less than men, even when their education and literacy skills are equal. Job insecurity is higher for women than men because more women work part-time or lose job seniority if they take time off to be with young children. Women are disadvantaged relative to men in terms of job satisfaction because they are more likely to work in situations affording them little control over the pace and content of their tasks.<sup>60</sup> The relationship between lack of control at work and poor health has been well documented.<sup>61</sup>

When it comes to unpaid work, the situations of women and men diverge even more. The role overload documented in this chapter is extremely stressful. In one recent study, 85% of working women said that there were not enough hours in the day to accomplish everything they needed to do and more than one-quarter had thought about quitting their job because the effort of balancing work and family life was too stressful.<sup>62</sup>

At the same time, young women in their 20s are now more likely than their male counterparts to graduate from college and university. As well, low-skilled male workers were particularly hard hit by recent recessions. As employment opportunities continue to shift from low-skilled to high-skilled, knowledge-dependent jobs, young men need to be encouraged to stay in school.

## ***Education, Literacy and Health***

In most cases, employment, education and income are inextricably linked. The world of work is increasingly demanding: it is estimated that two-thirds of new jobs in the year 2000 will require more than 17 years of education.<sup>63</sup> For young people, educational attainment is the single most important factor in determining whether or not they obtain a job that will enable them to support themselves and a family. In 1994, for example, the unemployment rate for Canadians aged 25 to 29 with no more than a primary school education was almost four times the rate for young people with a university education.<sup>64</sup>

There are many factors that help or hinder a young person's desire and ability to pursue an education. The 1995 School Leavers Follow-Up Survey<sup>65</sup> suggests that young people who leave high school before graduation (22% of young men and 14% of young women) are more likely to:

- dislike school, skip classes and have friends not attending school
- come from families who did not think high school completion was very important
- come from lower socioeconomic backgrounds
- be married and have dependent children
- have failed an elementary grade and have lower grade averages
- cite work-related reason (mostly males) for leaving (e.g. having to work for financial reasons, preferring work to school)
- cite family motivations for leaving (mostly female) (e.g. pregnancy/marriage, problems at home).

These findings suggest that efforts to help young people stay in school should include support for early childhood development (see Chapter 3), the provision of nurturing school environments, community support for troubled young people, renewed focus on preventing adolescent pregnancy, and the provision of support for students who cannot afford to stay in school.

While the increase in the number of university graduates (particularly young women) is welcome, several recent reports have pointed to a growing concern about the increasing costs of attending college and university. While many young men and women from high-income families take advantage of post-secondary education opportunities that lead to professional careers, increasingly, students from low- and middle-income families cannot afford to pursue a higher education without incurring a large debt.<sup>66</sup>

Literacy levels, which are usually, but not always, related to levels of education, are important predictors of employment, active participation in the community and health status. They are also important predictors of the success of a nation. As discussed in Chapter 2, Canada's first-place ranking on the UN Human Development Index drops to 10th when factors such as income distribution and literacy are factored in. In 1995, Canada had more than twice the proportion of citizens who lacked adequate literacy skills as Sweden, the number one ranked country on the Human Poverty Index for industrialized countries.<sup>67</sup>

## ***The Social Environment and Health***

A growing body of evidence suggests that decreased social capital is a precursor of increased illness and death.<sup>68</sup> Kawachi and Kennedy, who found that high levels of trust and group membership in U.S. states were associated with reduced mortality rates, make the case that economic inequities contribute to increases in crime and violence, deteriorating health and education systems and other social problems.<sup>69</sup>

While this report suggests that crime is decreasing in most jurisdictions, crime levels remain higher than a decade ago. Family violence and abuse remain pervasive social problems. And many Canadians are concerned about recent, highly publicized incidents of youth alienation and violence at school.

Family violence and abuse have a devastating effect on health in both the long and short term. Everyone — family members, neighbours, health and social service professionals, teachers, police, community leaders, employers, voluntary organizations, the justice system and governments — has a role to play in preventing family violence by intervening to protect victims, who are most often women and children. This violence will not be eliminated until society as a whole makes it unacceptable.

The strongest predictors of wife assault are the young age of a couple (18 to 24 years), chronic unemployment of male partners, living in a common-law relationship, witnessing abuse as a child, and the presence of emotional abuse in the relationship. Research also shows that children who are abused or witness abuse are at increased risk of becoming perpetrators of violence themselves.<sup>70</sup> Thus, family violence is both an intergenerational and systemic issue. Efforts to prevent family violence must include strategies to employ young people in meaningful jobs, and to help prepare them for intimate, egalitarian relationships and the role of parenting.

The information in this chapter on social support, giving and civic participation suggests that Canadians are, by and large, a caring society. Richard Wilkinson and others who have studied this area in detail suggest that the pursuit of a positive social fabric and narrower income differentials is complementary to both economic growth and improved population health.<sup>71, 72</sup>

## ***The Role of the Health Sector***

Some people may question this in-depth discussion on the socioeconomic environment in a health report. The reason is simply this: the evidence in this report and others suggests that many of the root causes of poor health lie in the socioeconomic conditions in which people live. Many of these conditions fall under the mandate of sectors outside of health, including education, justice, housing, employment and others. The health sector cannot impose its agenda on other sectors, but it can initiate dialogue and act as a collaborator in collective efforts to improve the well-being of all Canadians. This is a somewhat new and sometimes difficult role, but one that will become increasingly important as we learn more about the underlying determinants of health.

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*Every day one thousand children are born in Canada. Making sure that they grow up healthy, happy, successful and safe is a key responsibility for parents, communities and society as a whole.*

— Federal, Provincial and Territorial Council of Ministers on Social Policy Renewal in *A National Children's Agenda: Developing a Shared Vision.*

**I**n the last decade of the 20th century, new evidence on the effects of early experiences on brain development, school readiness and health in later life has sparked a growing consensus about early child development as a powerful determinant of health in its own right. At the same time, we have been learning more about how all of the other determinants of health affect the physical, social, mental, emotional and spiritual development of children and youth. For example, a young person's development is greatly affected by his or her housing and neighbourhood (Chapters 1 and 4), family income and level of parents' education (Chapter 2), access to nutritious foods and physical recreation (Chapter 5), genetic makeup (Chapter 7) and access to dental and medical care (Chapter 6).

A variety of recent publications have done an excellent job of profiling the health and well-being of Canada's children and youth. The reader is directed to Appendix C for other key reports on this topic. This chapter cannot duplicate the depth of information and analysis found in these documents. Rather, it provides a brief overview of some of the key indicators of healthy child development, with a particular focus on the effects of socioeconomic status and gender on these indicators. Where data were available, information on differences among population groups has also been provided.

Most Canadian children are physically healthy. However, important indicators of well-being and healthy development among children and youth follow the same trends as were observed for adults in Chapters 1 and 2 of this report. In some cases, children and young people in Aboriginal communities appear to be particularly at risk.

## Definitions and Measures

- ◆ **National Longitudinal Survey of Children and Youth (NLSCY)**, developed jointly by Human Resources Development Canada and Statistics Canada, is a comprehensive survey that follows the development of children in Canada and paints a picture of their lives. The survey monitors children's development and measures the incidence of various factors that influence their development, both positively and negatively. The first cycle of the NLSCY, conducted in 1994–95, interviewed some children and the parents of approximately 23,000 children up to the age of 11. The second cycle, carried out in 1996–97, interviewed the same children and their parents and thus provides unique insights into the evolution of children and their family environments over time. Unless stated otherwise, the information in this chapter is drawn from Cycle 1 of the NLSCY.
- ◆ **Secure attachment:** As parents and caregivers respond affectionately to their babies, a responsive, trusting relationship develops in which they gain confidence that their parents will protect them and meet their needs. This relationship is referred to as a secure attachment.
- ◆ **School readiness:** The NLSCY assessed school readiness in two ways. The Peabody Picture Vocabulary Test was used to assess **cognitive competency**. Children within 15 points of a score of 100 were termed "normal"; those below this cut-off — "delayed," and those above — "advanced." To measure **behavioural competence**, mothers completed a 43-item questionnaire including questions about aggression, anxiety, conduct and social problems.
- ◆ **Child and family poverty:** While Statistics Canada is careful not to refer to the low income cut-offs (LICO) as poverty lines, the LICO is the most widely used measure to define child poverty rates. As stated in Chapter 2, the LICO was selected on the basis that families below these cut-offs spend more than 54.7% of their total incomes on basic shelter, food and clothing, and hence are considered to be in constrained circumstances.
- ◆ **Infant mortality** refers to the death of a live born infant within the first year of life.
- ◆ **Perinatal deaths** are the combination of stillbirths and early neonatal deaths (within the first seven days of life).

## Highlights

***The foundation for healthy growth and development in later years is established to a large degree in the first six years of life.***

- ◆ Experiences from conception to age six have the most important influence of any time in the life cycle on the connecting and sculpting of the brain's neurons. Positive stimulation early in life improves learning, behaviour and health into adulthood.
- ◆ Low birthweight (less than 2,500 grams or about 5.5 pounds) can result in mental and physical disabilities, and sometimes death. In 1996, 5.8% of all live births in Canada resulted in low birthweight babies (a total of 21,025 babies).
- ◆ Tobacco and alcohol use during pregnancy can lead to poor birth outcomes. In the 1996–97 National Population Health Survey, about 36% of new mothers who were former or current smokers smoked during their last pregnancy (about 146,000 women). The vast majority of women reported that they did not drink alcohol during their pregnancy.
- ◆ A secure attachment with a nurturing adult influences a child's capacity for cognitive, social and emotional development. Children whose parent(s) are depressed or otherwise troubled are most at risk for losing the opportunity to establish a secure attachment in the first 18 months of life. Children living with depressed parents were almost four times as likely to be living in low-income households than high-income households.
- ◆ Readiness for school is an important indicator of developmental maturity and future success in school. The 1996–97 NLSCY found that approximately 15% of all preschoolers arrived at school with low cognitive scores; 14% of all children had high scores on measures indicating behavioural problems.

***Efforts are needed to maximize all children's opportunities for healthy development.***

- ◆ Poverty compounds the stresses that all families face and can have a negative effect on children's development. In the early 1990s, child and family low-income rates remained high and continued to increase in some circumstances. In 1995, 24% of children in Canada aged 0 to 14 years and 23% of young people aged 15 to 24 lived in low-income families. Children under the age of 6 were most likely to be poor (26%). Almost 50% of families headed by a single mother were poor.
- ◆ Poor children are not always disadvantaged and disadvantaged children are not always poor. According to the NLSCY, positive parenting, nurturing neighbourhoods and high-quality child care may decrease the chances of developmental problems in children.
- ◆ While the majority of children in lone-parent families are doing well, data from the NLSCY show that children in lone-parent families run a greater risk of poor developmental outcomes, especially if the parent's approach to child rearing is hostile or ineffective, if they live in extremely poor families, or if they live in troubled neighbourhoods.

- ◆ At the same time, there is no economic cut-off point above which all children do well. The greatest proportion of children who experience difficulties are found in the bottom 20% of the socioeconomic scale. However, due to the large size of the middle class in Canada, the greatest number of children not doing as well as they might is in the middle socioeconomic group.
- ◆ Family violence, which occurs in families of all income levels, can have a devastating effect on children's health and development in both the short and long term. In 1996, family members were responsible for one-fifth of physical assaults and one-third of sexual assaults on children. Girls were the victims in 80% of sexual assaults and in over half of all physical assaults by family members.

***While Canada's youth are doing well in many ways, a number of indicators combine to show a disturbing picture of the well-being of this group.***

- ◆ In the 1996–97 National Population Health Survey, Canadian adolescents (especially young women), reported the lowest levels of psychological well-being among all age groups. Depression was most common among 18- and 19-year-olds of both sexes, and young women aged 15 to 19 were the most likely of any sex-age group to exhibit signs of depression (9%).
- ◆ Canada's continuing high rate of suicide among young people (mainly young men) is a particularly troubling indicator of young people's distress. It has been estimated that suicide rates are two to seven times higher in the Aboriginal population than in the general population. Young Aboriginal men (especially young Inuit males) are the most likely to commit suicide.

## Growing Up Healthy

Unintentional injuries are the leading cause of death among children and youth and are particularly high among young people aged 15 to 19. Death rates due to injuries are much higher among Aboriginal young people. For example, when Indian children are compared with the total Canadian population of children, the rate of death from injuries is almost four times greater for infants; for preschoolers, the rate is five times greater. Indian teenagers are three times more likely to die due to injuries than the total population of adolescents in Canada.<sup>1</sup>

Childhood cancer is the second leading cause of death among children aged 1 to 19<sup>2</sup> and asthma (see Chapter 4) is the leading cause of hospitalization for children under the age of 12.<sup>3</sup>

Health is also about the quality of life that children and youth enjoy. This chapter points to the fact that young people's quality of life depends to a large degree on both risk factors and protective factors in the environment in which they grow up.

This section looks at four stages of child development: the prenatal and infancy period (from conception to 18 months), the preschool years from 18 months to age 5 (approximate age when children enter the formal school system), the school years from ages 6 to 12, and adolescence from ages 13 to 18. In each of these stages, there are key windows of opportunity for investing in healthy development.

## ***Prenatal and Infancy Period (Conception to 18 Months)***

In this first stage, the basic “sculpting” of a child’s brain takes place and children are most dependent on their parents and caregivers. Pre-birth factors such as maternal nutrition and the use of alcohol and tobacco during pregnancy can permanently influence a child’s development. After birth, an infant’s relationship with caregivers has an important influence on how connections are made among the brain cells. These connections may affect a child’s immediate and future cognitive, emotional and behavioural development.<sup>4</sup>

### ***Infant mortality***

Infant mortality is recognized internationally as one of the most important measures of the health of a nation and its children. It is also an important indicator of the health of pregnant women. Canada’s infant mortality rate has declined dramatically in the last 35 years. In 1996, it dropped below the level of six infant deaths per 1,000 live births for the first time.<sup>5</sup> While this is an important achievement, it is still quite far above the infant mortality rate of Japan, which is the lowest in the world (3.8 deaths per 1,000 live births).<sup>6</sup>

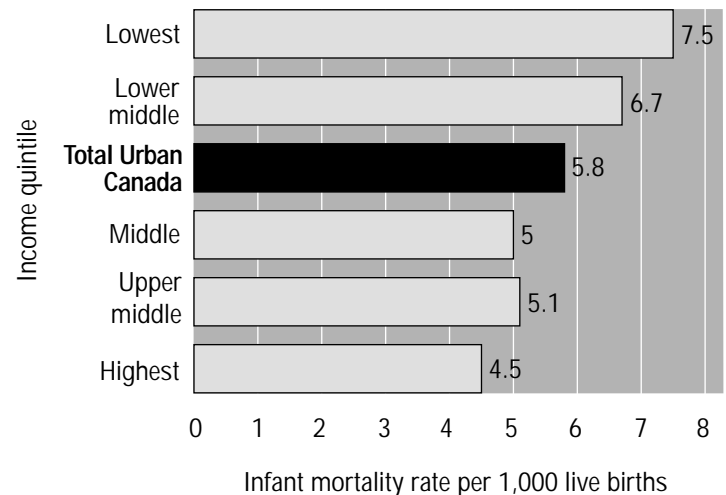
In 1995, 2,321 infants in Canada died before their first birthday. Of these deaths, 68% occurred in the neonatal period (the first twenty eight days of life) and 32% occurred in the postneonatal period. The two leading causes of death in the neonatal period were conditions originating in the perinatal period such as respiratory distress, prematurity and low birthweight (60%), and congenital anomalies (33%). The two leading causes of postneonatal deaths were sudden infant death syndrome (SIDS) and congenital anomalies, accounting for 31% and 23% of postneonatal deaths, respectively.<sup>7</sup>

Experience has shown that death rates from SIDS can be lowered substantially by keeping infants on their backs while sleeping, breastfeeding infants, keeping infants in a smoke-free and drug-free environment, and ensuring that they are warm but not hot.<sup>8</sup>

Differences in infant mortality rates are pronounced among the various income groups in Canada. In 1991, the overall infant mortality rate in urban Canada was 5.8 per 1,000. As Exhibit 3.1 shows, the infant mortality rates of the high, upper-middle and middle income groups fell below the Canadian average, while the lower-middle and low income groups experienced higher than average infant mortality rates.<sup>9</sup>

Exhibit 3.1

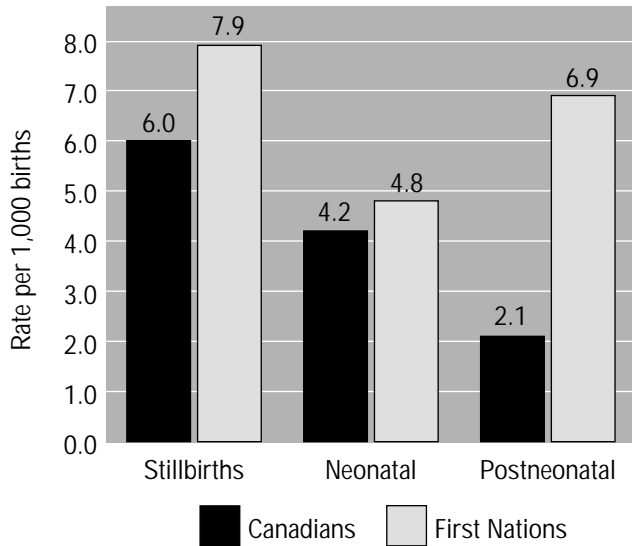
**Infant Mortality Rate, by Income Quintile, Urban Canada, 1991**



Source: Wilkins, R. *Mortality by Neighbourhood Income in Urban Canada, 1986 to 1991*.

Exhibit 3.2

### Stillbirth, Neonatal and Postneonatal Death Rates Among First Nations and Canadian Populations, 1994



Source: Health Canada, Medical Services Branch. *Health Programs Analysis — First Nations and Inuit Health Programs, 1996.*

The infant mortality rate among First Nations people fell from 28 per 1,000 live births in 1979 to 12 per 1,000 in 1994. Most of this decline, however, occurred before 1987. Since then, rates have been comparatively stable. Infant mortality is still twice as high among First Nations people than in the Canadian population as a whole. As Exhibit 3.2 shows, the 1994 neonatal mortality rate among First Nations people was close to the national average. In contrast, rates during the postneonatal period were at least three times higher among First Nations infants than infants in the general population, and stillbirth rates were also higher. For First Nations infants, the main causes of death in the postneonatal period were sudden infant death syndrome (SIDS), congenital anomalies and respiratory conditions such as bronchitis and pneumonia.<sup>10</sup>

### Birthweight

The weight of infants at birth is a principal determinant of both their survival and their health in childhood. Low birthweight (less than 2,500 grams or about 5.5 pounds) can result in mental and physical disabilities, and sometimes death. In 1996, 5.8% of all live births in Canada resulted in low birthweight babies (a total of 21,025 babies).<sup>11</sup> More than half of low birthweights are due to premature births (before the 37th week of gestation); the rest are due to a lack of nourishment in utero, pregnancy-induced hypertension and/or heavy smoking by the mother during pregnancy.

Studies have shown that greater maternal education is associated with a decreased likelihood of low birthweight, regardless of race.<sup>12</sup> Low birthweight outcomes in Canada are concentrated among very young and older mothers (Exhibit 3.3). While mothers over age 45 are more likely to experience medical complications that could affect birthweight, a recent study using NLSCY data concluded that neither young mothers nor mothers who are single parents are particularly at risk for having a child with adverse birth outcomes, once income and maternal education levels are taken into account.<sup>13</sup>

According to the First Nations and Inuit Regional Health Survey, the rate of low birthweight among Aboriginal people in 1996–97 did not differ significantly from national norms in 1994–95. However, the rate of high birthweight (above 4,000 grams) was significantly higher (18% versus 12%). High birthweight is associated with higher neonatal mortality.<sup>14</sup>



## Exhibit 3.3 Low Birthweights in Canada, by Mother's Age, 1996

Age of mother	No. of births <2,500 g*	% of all live births
10–14	21	9.3
15–19	1,516	7.0
20–24	3,934	5.9
25–29	6,107	5.3
30–34	6,195	5.6
35–39	2,730	6.4
40–44	487	8.1
45+	23	10.0
<b>Total</b>	<b>21,025</b>	<b>5.8</b>

\* Note: Excludes births in age groupings where age of mother is unknown.

Source: Statistics Canada. "Births 1996." *The Daily*, July 8, 1998 (Statistics Canada Cat. No. 11-001-XIE).

### ***Tobacco and alcohol use during pregnancy***

The use of tobacco and alcohol during pregnancy can contribute to poor birth outcomes. Research has shown that the infants of women who smoke during pregnancy are one-and-one-half times more likely to be of low birthweight than infants of non-smokers.<sup>15</sup>

In 1996–97, about 36% of new mothers (following the birth of a first or subsequent child) who were former or current smokers smoked during their previous pregnancy (about 146,000 women). The prevalence of smoking while pregnant is highly related to education. Among those who had ever smoked, some 61% of pregnant women with less than a high school education smoked during their pregnancy, compared to only 14% of women with a university education.<sup>16</sup> Over 40% of teen mothers smoked during their pregnancies; they were twice as likely to smoke as were women aged 25 and older. Teen mothers who smoke and have low levels of education are more likely to have a low birthweight baby, but no more so than older mothers who smoke and have comparable levels of education. Thus, it appears that income and education — not age — are the major predictors of smoking during pregnancy.<sup>17</sup>

Women who drink during pregnancy tend to be older and of higher socioeconomic status than non-drinkers. In the 1996–97 National Population Health Survey, the vast majority of women reported that they did not drink alcohol during their pregnancy. Very few women (only 2.5% of those who drank) reported that they had consumed at least five drinks at one time and only 7% reported drinking throughout their entire pregnancy.<sup>18</sup> While these overall numbers are relatively low, there is no question that alcohol use during pregnancy can have harmful effects on children, and excessive use can cause fetal alcohol syndrome and fetal alcohol effects (see Chapter 6). Both of these conditions are preventable. Since a safe limit for alcohol use during pregnancy has not yet been established, the prudent choice for women who are or may become pregnant is to abstain from alcohol use.

### ***Teen pregnancy***

Adolescent pregnancy is another important indicator for early childhood development. Teen childbearing often leads to poor economic and social outcomes for adolescent parents and their children. Adolescent mothers are less likely to attain a high level of education and more likely than other women to live in poverty. They also tend to be less emotionally mature than older mothers, since they themselves are still dealing with developmental issues. Therefore, without support, teen moms may find it difficult to provide the consistent nurturing the infant and child require to make a secure attachment in the first 18 months.

In 1995, there were a total of 38,502 teenage pregnancies (including live births, abortions and stillbirths). The number of teenage pregnancies decreased among 15- to 19-year-olds from the mid-1970s to 1988, and then increased slightly. The number of pregnancies among 13- and 14-year-olds decreased slowly from the mid-1970s to a low of 573 in 1988; since then it has remained at about 600.<sup>19</sup> While the number of teen pregnancies in 1995 was still well below their historic highs, increasing rates of teen pregnancies (from 41 per 1,000 women aged 15 to 19 in 1987 to 47 per 1,000 in 1995) is a worrisome trend.<sup>20</sup> Research suggests that effective strategies to reduce teen pregnancies include high-quality sex education, accessible clinical services, open discussion of human sexuality in the mass media and actively involving parents and teenagers in such programs.<sup>21</sup>

### ***Breastfeeding practices***

There are numerous benefits from breastfeeding, including protection against infectious diseases, healthy development of the brain and nervous system, and improved bonding between mother and child.<sup>22, 23</sup> Breastfeeding has increased since the 1980s when about two-thirds of women breastfed their babies. In 1996–97, 79% of all recently pregnant women breastfed their last child. There is a strong relationship between a mother's level of education and the choice to breastfeed. In 1996–97, recent mothers with less than a high school education were least likely (60%) to have breastfed their last child, while university-educated mothers were the most likely (95%) to have done so. Similarly, mothers with less than a high school education were almost twice as likely as mothers who had completed high school and almost four times more likely than mothers who were university graduates to smoke while breastfeeding.<sup>24</sup>

### ***Secure attachment***

Recent research has also confirmed the necessity of infants and young children to form a *secure attachment* to a parent or loving caregiver if they are to experience optimal emotional and social development. A secure attachment provides the basis for a child's capacity to develop trust, self-esteem, self-regulation, self-soothing and relationships with others. It influences language and cognitive development and gives infants the confidence they need to explore their world. Secure attachment has also been shown to establish connections in the brain that can reduce anxiety and allow the brain to take in new stimuli. The critical period for secure attachment occurs in the first 18 months of life.<sup>25</sup>

Children whose parent(s) are depressed or troubled are most at risk for losing the opportunity to establish a secure attachment in the first 18 months of life. A number of risk factors for depression among parents have been identified. According to the 1996–97 National Population Health Survey, single parents were far more likely to be depressed

(9%) than couples with children (3%).<sup>26</sup> The 1994–95 NLSCY found a striking association between parental depression and household income. Children living with depressed parents were almost four times as likely to be living in low-income households than in high-income households.<sup>27</sup>

### ***Preschoolers (18 Months to Age 5)***

The preschool years are a time of rapid cognitive, behavioural, emotional and social development. Stimulation, consistent nurturing from loving adults, active play and early learning opportunities during this period can stimulate children's readiness to learn and help to overcome disadvantages related to poverty and other problems.

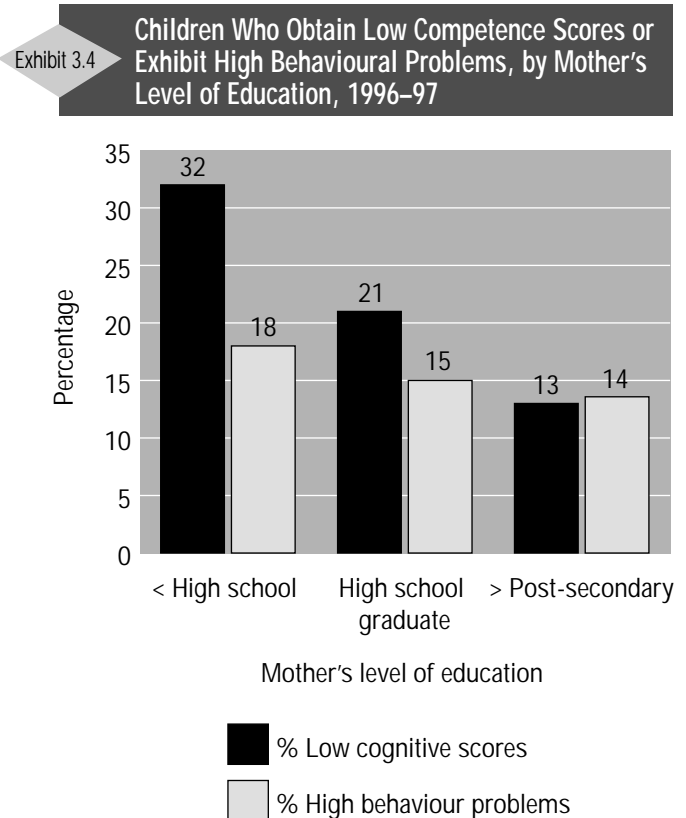
### ***School readiness***

Readiness for school is an important indicator of developmental maturity and future success in school.<sup>28</sup> The 1996–97 NLSCY found that approximately 15% of children arrived at school with low cognitive scores; 14% of children had high scores on measures indicating behavioural problems. (See the Definitions and Measures box earlier in this chapter.)

Children whose mothers had low levels of education tended to have lower cognitive and behavioural competency scores. As Exhibit 3.4 shows, 32% of children whose mothers had not completed high school obtained low cognitive competency scores and 18% received scores indicating behavioural problems, compared to 13% and 14% of children whose mothers had more than a high school level of education. The 1996–97 NLSCY also found a clear association between household income and school readiness for both cognitive and behavioural competence. In addition, children living in neighbourhoods that were identified by mothers as unsafe and low in cohesiveness were less likely to be ready for school than children in better neighbourhoods.<sup>29</sup>

### ***Immunization***

Since vaccines were first introduced, Canada has seen a 95% reduction in vaccine-preventable diseases among children and the total elimination of polio. Mass catch-up campaigns and the implementation of a two-dose measles immunization program in 1996 led to a seven-fold decrease in the incidence of reported measles from 1995. This puts Canada in a very good position to achieve its goal of eliminating measles by 2005. In contrast, the reported incidence of pertussis (whooping cough) in 1994–95 (approximately 34 per 100,000 population) was the highest in a decade. The rate of pertussis was highest in the Yukon Territory and Northwest Territories.<sup>30</sup>



Source: Kohen, D., Hertzman, C., Brook-Gunn, J. *Affluent Neighbourhoods and School Readiness*. Human Resources Development Canada, 1998. (Data from 1996–97 NLSCY).

The very success of immunization programs may well be one of their greatest challenges. As generations of children grow up in the absence of diseases that used to wreak havoc on the population, they are less inclined to seek continued protection. As well, parental confidence in some vaccines has been eroded by exaggerated and often erroneous reports of serious adverse reactions. At the same time, due to the patchwork implementation of vaccine programs across Canada, there is a risk that relatively benign childhood diseases such as chicken pox may become lethal for adults because of alterations in the disease due to partial vaccination. Thus, vigilance in attaining and maintaining a national commitment to necessary immunization programs remains a public health priority.<sup>31</sup>

### ***School-Age Children (Ages 6 to 12)***

The period between the ages of 6 and 12 builds on the experiences of the earlier years. Children become more independent at this stage and environments beyond the home and family play more important roles in their lives. As in the preschool years, opportunities for stimulation help to keep school-age children “on track” and they help disadvantaged children achieve developmental levels comparable with those achieved by their more advantaged peers.<sup>32</sup>

### ***Unintentional injuries***

As noted earlier in the chapter, unintentional injuries (mostly resulting from motor vehicle crashes) are the major cause of death among children aged 6 to 12.<sup>33</sup>

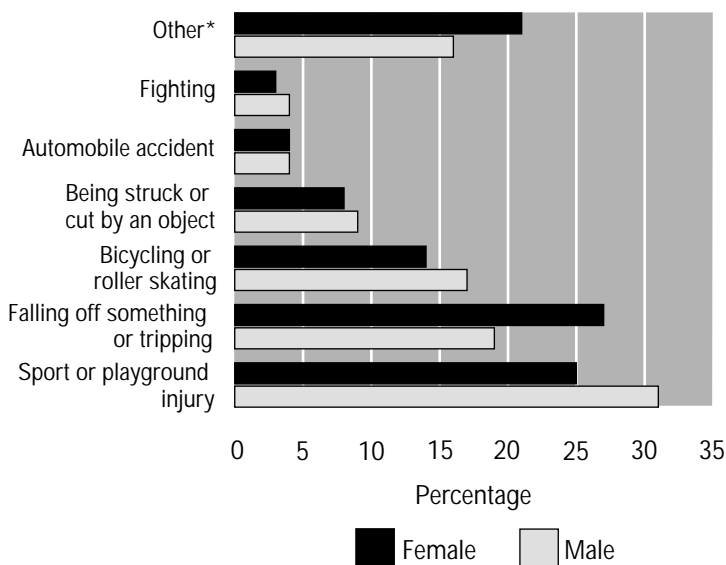
Injuries are also a major source of suffering. In the World Health Organization 1993–94 cross-national survey of school-aged children, 21% of 11-year-old Canadian

girls and 25% of boys of the same age reported an injury that caused them to miss school or required medical attention in the past 12 months. Canada's injury rates were high compared to those of other countries. Among 22 reporting countries, only Scotland, Wales, Israel, Belgium and France had higher injury rates. As shown in Exhibit 3.5, the largest group of injuries were those that occurred during sporting activities and play. The second largest group were those that involved the child falling off or tripping over something.<sup>34</sup>

In addition to having a greater incidence of injuries at all ages and stages, boys also suffer more severe injuries than girls do. The reasons for these differences — which may include greater risk taking by boys, the different nature of childhood activities and inborn differences in impulsivity and activity level — are still a matter of debate.<sup>35</sup>

Exhibit 3.5

**Cause of Most Serious Injury Reported by 11-Year-Old Boys and Girls, Canada, 1993–94**



\* "Other" was a response choice.

Source: King, A., et al. *The Health of Youth: A Cross-National Survey, 1993–1994*. World Health Organization, 1997: 124.

The incidence and consequences of injuries also vary with income status. Some studies have shown that poor children have a two-fold greater risk of death due to injury than children who are not poor.<sup>36</sup>

### ***Relationships with peers and siblings***

A child's ability to get along with others becomes particularly important when he or she enters school and begins to engage in neighbourhood activities with other children. Overall, the NLSCY showed that the overwhelming majority of children aged 4 to 11 years had very positive relationships with their peers and siblings.<sup>37</sup> However, emotional and behavioural problems in childhood pose a heavy burden of suffering on some children and families.

### ***Emotional and behavioural competence***

The emotional and behavioural competence of children aged 4 to 11 was measured in the NLSCY on a number of scales, based on detailed questionnaires filled out by the parent who best knew the child (usually the mother) and separate questionnaires that were filled out by the children (aged 10 and 11 only). The study found marked differences between girls and boys and among income groups on a variety of measures of emotional and behavioural problems. Boys were more likely than girls to have one or more of these types of problems (Exhibit 3.6) and to have higher scores on all of the individual measures. The most marked difference was in hyperactivity among the youngest age group, where the rate in boys was more than twice that in girls (14% compared to 6.1%).<sup>38</sup>

Exhibit 3.6

#### Percentage of Boys and Girls Experiencing One or More Emotional and Behavioural Problems, Canada, 1994–95

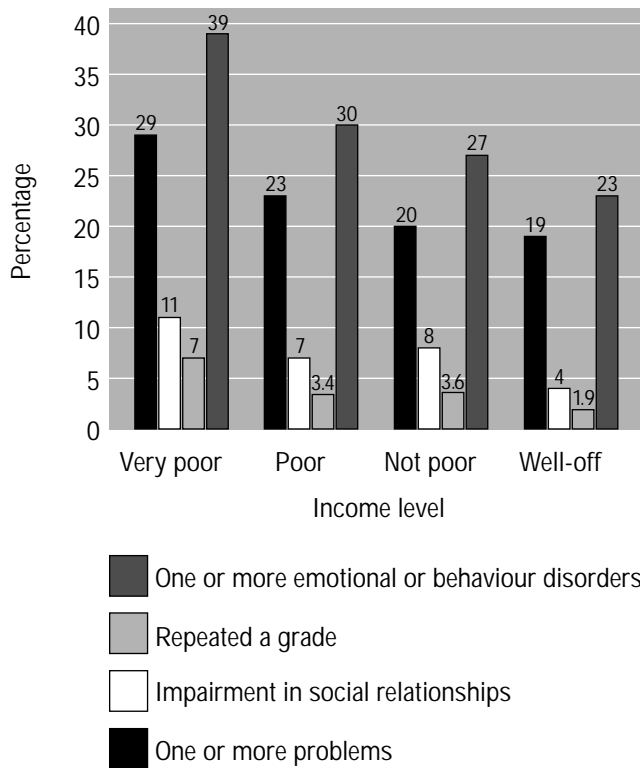
Boys		Girls	
◆ Aged 4 to 7	27.4%	◆ Aged 4 to 7	19.1%
◆ Aged 8 to 11	31.0%	◆ Aged 8 to 11	24.0%
◆ Aged 4 to 11	29.9%	◆ Aged 4 to 11	22.4%

Source: Offord, D., Lipman, E. "Emotional and Behavioural Problems." *Growing Up in Canada: National Longitudinal Survey of Children and Youth*. Ottawa: Human Resources Development Canada and Statistics Canada (1996): 123.

In view of the gender differences in hyperactivity reported in the NLSCY, it is not surprising that boys were diagnosed with attention-deficit hyperactivity disorder (ADHD) far more often than girls. While many experts believe that ADHD is an inherited condition, others argue that the socialization of male children plays an important role. A better understanding of the biomedical and social nature of sex and gender differences related to behaviour in children is needed.

Exhibit 3.7

### Frequency of Psychological Problems in Children, by Adjusted Household Income Level (as per LICO), 1994–95



Source: Offord, D., Lipman, E. "Emotional and Behavioural Problems." *Growing Up in Canada: National Longitudinal Survey of Children and Youth*. Ottawa: Human Resources Development Canada and Statistics Canada (1996): 124.

Exhibit 3.7 shows the marked differences revealed among income groups on measures of emotional and behavioural disorders, repeating a grade, impairment in social relationships and having one or more psychosocial problems. For all variables, very poor children were the most disadvantaged and well-off children, the least.<sup>39</sup>

The NLSCY has found that safe, nurturing neighbourhoods, residence and school stability, and parenting styles may have a marked effect on a child's emotional and social development (discussed later). Involvement in activities such as sports, recreation and arts can also protect children from emotional and social problems.<sup>40</sup>

### Adolescence (Ages 13 to 18)

In adolescence, young people begin to establish an independent life course and to make decisions that can have lifelong consequences. As they search for a unique and stable identity, they experience the dramatic physical and emotional changes associated with puberty. Peers become increasingly influential; however, strong support from families, schools and communities remains essential to healthy development in this stage.

### NLSCY Definitions

In the NLSCY (1994–95) the following definitions were used:

- ◆ **Very poor** = Adjusted family income below 75% of the LICO
- ◆ **Poor** = Adjusted family income between 75% and 100% of the LICO
- ◆ **Not poor** = Adjusted family income up to 25% above the LICO
- ◆ **Well-off** = Adjusted family income more than 25% above the LICO

Adolescents in Canada are doing well on several fronts. On the whole, young people today have higher levels of education than the previous generation. The International Adult Literacy Survey found nearly one-third of Canadian youth to have among the highest level of literacy skills among reporting countries, second only to Swedish youth.<sup>41</sup> In 1998, the Canadian Council on Social Development found that an increasing number of cities and towns in Canada were involving young people in civic life initiatives, such as round tables and civic committees.<sup>42</sup> As shown in Chapter 1, youth rates of volunteering with charitable organizations have risen substantially and the number of criminal charges against youth has continued to drop since 1991.

### ***Psychological well-being***

At the same time, a number of indicators combine to show a disturbing picture of the psychosocial well-being of Canada's youth. In the 1996–97 National Population Health Survey, Canadian adolescents reported low levels of self-esteem, sense of mastery and sense of coherence when compared to other age groups. Depression was most common among 18- and 19-year-olds of both sexes, and young women aged 15 to 19 were the most likely of any sex-age group to exhibit signs of depression (9%). Young Canadians aged 18 and 19 were the most likely to report high life stress levels (37%), compared to the national rate of 26% (see Chapter 1).

In the World Health Organization cross-national survey, students in Canada, France, Finland, Israel and Northern Ireland were consistently more likely than students in 16 other countries to report feeling depressed once a week. Measures of psychological well-being for 13- and 15-year-olds were consistently lower for females than for males.<sup>43</sup>

Canada's continuing high rate of suicide among young people (mainly young men) is a particularly troubling indicator of young people's distress. It is estimated that the suicide risk for Aboriginal youth is much higher than that of their peers in the general population.

Substance use and abuse is another important indicator of adolescent well-being. As shown in Chapter 5, there appears to have been a resurgence in adolescent drug use in the 1990s, as well as an increase in multiple risk-taking behaviours.

As noted in Chapters 1 and 5, teenage girls are now more likely than teenage boys to smoke. Many young women report that they smoke to manage stress and to keep their weight down.<sup>44</sup>

A commitment to learning and staying in school are other signs of healthy development in the adolescent stage (discussed in Chapter 2). The decision to drop out of school early is influenced by family support, structure and income. For example, students from single-parent and large families are much more likely to leave school early. Drop-out rates are higher in rural areas and small communities, especially Aboriginal communities.<sup>45</sup>

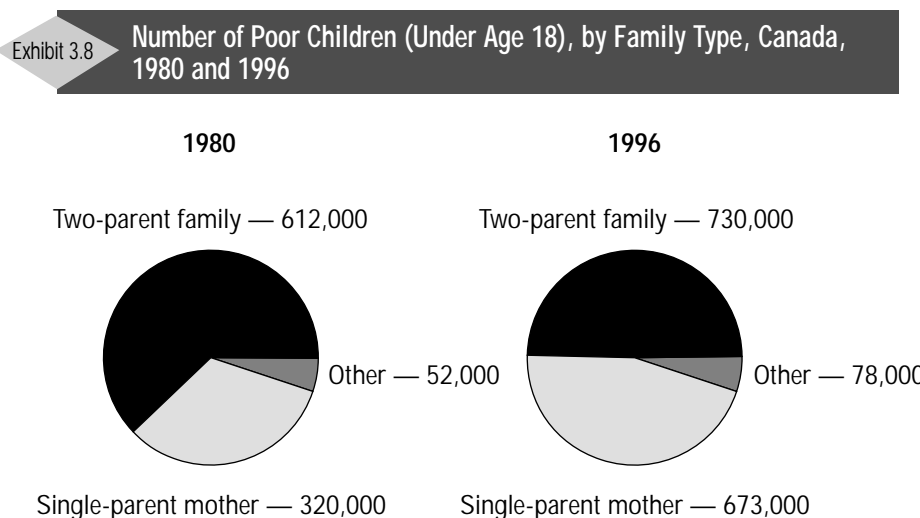
Other factors that help young people stay in school include parental expectations and involvement by parents in a young person's school life. Teachers and the overall school environment are also important to school success. Children and youth who see their teachers as fair and caring are more likely to have positive attitudes toward school and increased motivation to achieve.<sup>46</sup>

As discussed in Chapter 2, the economic, employment and psychosocial consequences of early school leaving are greater today than they were 10 or 20 years ago, and are likely to be even more acute in the next millennium. High school dropouts will increasingly find themselves unemployed, marginalized and looking for work at the lowest levels of the job market.

## Some Key Issues Affecting Healthy Child Development

### *Child and Family Poverty*

Children are poor because their families are poor and most children's development is closely tied to the socioeconomic status of their families and the communities they live in. As Exhibit 3.8 shows, child poverty is not restricted to single-parent families. In 1996, 730,000 poor children under the age of 18 lived in two-parent families, compared with 673,000 poor children in female-led single-parent families. Nonetheless, it is also true that a far higher proportion of children of single parents lived in low-income circumstances, particularly those who lived with lone-parent mothers.<sup>47</sup>



Source: National Council of Welfare. *Poverty Profile 1996*. Spring 1998: 79 (Using LICOs).

Young parents — who are most likely to have preschool children — tend to have the fewest financial resources at their disposal. Children living in a family in which a parent was under age 30 in 1996 were three times more likely to be living in a low-income household than children in a family in which a parent was 40 years of age or older.<sup>48</sup>

Cycle 2 of the NLSCY showed that 7 out of 10 children living in low-income families in 1994 were also living in low-income environments in 1996. Lower income, then, while escapable, is persistent at least in the short term for most children in poor families.

Few people would dispute the direct and devastating consequences of living without the means to afford safe housing and adequate food. Chapter 4 points out that a great many young families in Canada have trouble paying their rent. A recent study of NLSCY



data showed that among the 16,639 families studied, 206 had experienced hunger in the last year, 72 of them frequently. Children who went hungry were more likely to live in large cities, to live in lone-parent families and to live in families that depend on social assistance. However, more than half of the families with hungry children also reported having wages or salaries as a source of income. Thus, it appears that some working poor families — as well as those on social assistance — are experiencing food security problems. The study also found that parents were seven times more likely to go hungry themselves when there was little food available.<sup>49</sup>

In addition to the obvious effects of restricted access to adequate food and shelter on children's health, economist David Ross has concluded that some 31 different indicators measured in the NLSCY and the NPHS all show that as family income falls, the likelihood that children will experience problems increases. Rates of poor health, hyperactivity and delayed vocabulary development have been shown to be higher among children in low-income families than among children in middle- and high-income families. Children's likelihood of participating in organized sports activities was dramatically lower if they lived in low- and modest-income families. Almost 16% of older teens in low-income families were at loose ends — they did not attend school, nor did they have a job — compared to less than 4% of teens in high-income families.<sup>50</sup>

Although the proportion of children not doing well is higher nearer the bottom of the income scale, there are children in all socioeconomic groups who do not do well. There are several implications of this finding:

- There is no economic cut-off point above which all children do well.
- Because of the large middle class in Canada, the number of children not doing as well as they might is greatest in the middle-income group.
- Programs and policies for positive early child development and parenting must apply to all sectors of society if we wish to decrease the steepness of the socioeconomic gradient.
- Income is not the only factor in healthy child development. Other factors such as positive parenting and access to early developmental programs also affect development.<sup>51</sup>

Interestingly, the 1996–97 NLSCY found that many immigrant and refugee children were doing better emotionally and academically than their Canadian-born peers, even though far more of the former lived in low-income households. Dr. Morton Beiser, one of the authors of the study, suggested that “poverty among the Canadian-born population may have a different meaning than it has for newly arrived immigrants. The immigrant context of hope for a brighter future lessens poverty's blows; the hopelessness of majority-culture poverty accentuates its potency.” The author also suggests that poor immigrant families seem particularly able to provide emotional stability to their children, and therefore the effects of poverty may be limited to material deprivation and not emotional or social deprivation.<sup>52</sup>

### ***Security and Safety of Children and Youth***

Reported instances of child abuse (including children injured as a result of assault, abuse, battery or neglect) increased from 1970 to 1995.<sup>53</sup> In 1996, children under age 18 were victims in 22% of the violent crimes reported to police. Family members were responsible for one-fifth of physical assaults and one-third of sexual assaults on children. Parents were

the most likely perpetrators in cases of family-related physical (64%) and sexual (43%) assaults against children. Fathers were responsible for 73% of physical assaults and 98% of sexual assaults committed by parents.<sup>54</sup>

Girls were the victims of reported assaults by family members more often than boys: victims were female in 80% of sexual assaults and in over 50% of all physical assaults. Girls and boys were vulnerable to abuse by family members at different stages of their development. Girls were more likely to be sexually assaulted at 12 to 15 years of age, compared with 4 to 8 years of age for boys. The likelihood of being physically assaulted by a family member increased with age for girls, reaching a peak at age 17. For boys, the peak age for physical assault was 13.<sup>55</sup> Young women aged 18 to 24 were the most likely of all age groups to report being assaulted by a partner.<sup>56</sup>

Other forms of violence and maltreatment that negatively affect children's development include neglect (which has not been well documented or studied), physical and verbal abuse among siblings, and witnessing spousal violence. The latter appears to have a strong influence on young people's subsequent risk behaviours, including substance abuse and criminal behaviour.<sup>57</sup> Children who witness their mother being abused by their father or by another male partner display higher rates of withdrawal, low self-esteem, depression and emotional problems. They also tend to have lower school achievement.<sup>58</sup>

While the main responsibility for protecting children and youth rests with parents, child welfare agencies are responsible for investigating allegations of mistreatment and intervening if necessary. As a last resort, these agencies can take children who are at risk of abuse into public care until they reach adulthood. During the early and mid-1990s, the number of children in care increased while resources and funding for child protection initiatives and support services for families were reduced in several jurisdictions.<sup>59</sup> Children and youth in care are particularly vulnerable to stress and instability — often living in a variety of foster homes. The best approach to prevent children from experiencing this scenario is for all of society to support parents and families. But at the same time, we must be vigilant in our efforts to ensure that all children enjoy their right to a safe and secure environment in which to grow up.<sup>60</sup>

One study conducted in Toronto found that about two-thirds of street youth had been physically abused and one-fifth had been sexually abused by someone living with them. More than half of them (58%) reported that this abuse directly contributed to their decision to live on the street. Once on the street, young people are exposed to all kinds of physical violence and sexual exploitation.<sup>61</sup>

Recently, bullying by older, aggressive children and youth has been recognized as a serious form of childhood victimization. A 1996 study of 15-year-olds found that half of boys and one-quarter of girls felt that bullying was a problem.<sup>62</sup>

### ***Changing Family Structures***

Between 1991 and 1996, the number of common-law families increased by 28%, the number of lone-parent families increased by 19% and the number of married-couple families increased by 2%. The number of children living in families increased by 6% overall; however, virtually all of this growth was in common-law and single-parent families.<sup>63</sup> Many children whose parents divorce or separate will live with a single parent for a while and then in a blended family with a stepparent and (often) new siblings.

The dramatic increase in the number of lone-parent families in Canada, which is mainly due to parental breakups, can have significant effects on child development. While the majority of children in lone-parent families are doing well, data from the NLSCY show that they run a greater risk of poor developmental outcomes, especially if their parents' approach to child rearing is hostile or ineffective, if they live in extremely poor families, or if they live in troubled neighbourhoods. The first of these factors — negative parenting — seems to have the greatest influence.

The emotional process of separation and divorce has significant social, psychological and economic consequences for children and parents, especially for women who most often assume the role of home parent. According to the NLSCY, the movement of children's families into and out of lower-income situations was attributable primarily to family breakdown and reformation.

### ***The Importance of Parenting and High-Quality Child Care***<sup>64</sup>

According to the NLSCY, positive parenting may decrease the chances of developmental problems in children. "Positive" parenting was defined as parents who carefully monitored children's performance, provided a caring environment and encouraged independence. These three traits are characterized as an "authoritative" style of parenting, in contrast to an "authoritarian" style (being overly demanding and lacking warmth) and a "permissive" style (being overly indulgent and setting few limits).

The 1996–97 NLSCY found that about one-third of parents might be characterized as "authoritative" and that both positive and negative parenting practices are found in rich and poor families alike. This suggests that good parenting matters to everyone and that all parents would benefit from brief training programs to improve their parenting skills. While more research is needed (due to concerns about methodology), it also suggests that positive parenting may, to some extent, counteract the negative effects of poverty and other disadvantages.

The National Forum on Health and other groups have repeatedly pointed out that parenting capacity is highly affected by wages and working environments. The Vanier Institute of the Family has calculated that the average Canadian family requires 77 weeks of paid work to cover basic annual expenses.<sup>65</sup> As discussed in Chapter 2, many young parents have unstable, low-paying jobs. And, since there are only 52 weeks in a year, most families are thus required to have two wage earners. Meeting the demands of both work and family is a formidable challenge for working parents, especially women (see Chapter 2). Evidence from the NLSCY suggests that, in addition to positive parenting, several other factors have a positive effect on children's behaviour and relationships. These include supportive neighbourhoods, residential and school stability and access to high-quality child care while parents are working or studying. Unfortunately, although the number of families requiring child care while parents work or study has grown in every jurisdiction over the last decade, operating grants to child-care centres were frozen or decreased in all but two provinces and one territory between 1990 and 1995.<sup>66</sup>

### ***The Need for Integrated Service Delivery***<sup>67</sup>

Both health and social service delivery systems have an important influence on healthy child development. These sectors have experienced restructuring and cost reductions in most jurisdictions over the last 10 years.

Social services, which address both the basic needs of children and youth (including the need for protection) and aspects of their social and psychological development, may be particularly vulnerable to budget cuts. While universally insured health services are available to all children under the *Canada Health Act*, social services are not.

As revealed in Chapters 2 and 4, many young families are encountering difficult life circumstances, such as unemployment and changes in family structure, which require social services like mediation counselling, child welfare services and child care, as well as related supports such as employment training programs and subsidized housing. Social services — particularly those that support effective parenting and early development — also contribute to helping children make a successful transition into the formal education system.

Recently, there has been a renewed emphasis on finding ways to connect the contributions of various sectors (e.g. health, social services, education, justice, recreation and housing) in the common pursuit of healthy child and youth development. There are numerous benefits to an integrated approach including better coordination of services and more comprehensive services that respond to both the individual and collective needs of children and families.

## Discussion

This chapter points to the usefulness of a child development framework when examining the indicators of both health and positive development for Canada's children and youth.

In the first stage (prenatal to age 18 months), broad, intersectoral strategies are required to promote positive birth outcomes and to support new parents so that all babies can make a loving and secure attachment with a parent(s) or other adult caregivers. Positive parenting and opportunities for early learning are critical to successful development in the second stage. During the school years, efforts to help children achieve positive social and behavioural skills and to advance their cognitive development are essential. In the adolescent period, there is an emerging, clear need to address the social and emotional well-being of young people.

There are also a number of cross-cutting concerns that affect children in all stages of development, including socioeconomic status, family transitions (see Chapter 2), environmental contaminants (see Chapter 4) and family violence.

Overall, this report points to the need to emphasize broad strategies to strengthen families and healthy child development, which are summarized below.

### ***Invest in the Early Years***

As we have seen in this section, healthy child development has its roots in our earliest life experiences. Investing in prenatal health and the first five years of life is good for children, and for the economy. Indeed, one study showed that every dollar spent in early intervention can save seven dollars in future expenditures on health and social spending.<sup>68</sup> Despite this knowledge, governments and communities tend to commit greater financial investments later in the life cycle, thus missing the most critical time to promote human competence and potential. Investing in the early stages of life must become a priority.

## ***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. In fact, improving conditions for those living in low socioeconomic conditions has been shown to help improve conditions for those living in high socioeconomic conditions. All children require access to nurturing, stimulating, supportive, caring and safe environments. Children's rights to these basic determinants of health are protected under the United Nations Convention on the Rights of the Child, which was ratified by Canada in 1991. At present, access to these factors differs by socioeconomic status.

## ***Support Parents and Families***

Parents are the most important people in children's lives and families are the focus of child rearing. Therefore, it is ironic that so little time is spent preparing young people to parent. Efforts to give young people and young parents the information and support they need to parent well are investments in the healthy development of children. Families involved in the processes of separation and divorce are exposed to high levels of psychological and economic stress and may require extra help with parenting at this time.

The information in this chapter has demonstrated a consistent link between a mother's education and several indicators of a healthy start in life. Investing in the early years of childhood includes investing in young people, especially young women, before they become parents. School and community programs are also needed to help young men learn to be good partners and nurturing parents, and to help them build skills related to fathering.

## ***Enhance the Psychological and Emotional Well-Being of Young People***

This chapter, combined with Chapters 1, 2 and 5, shows an emerging and disturbing picture of the psychological and social well-being of youth in Canada. High rates of depression and stress and low rates of self-esteem are invariably linked to the broader picture presented in Chapter 2 of socioeconomic conditions and unemployment among young people. As they enter a new century, young people in the transition to adulthood face a very different environment than their parents did. In fact, the natural pattern of development is changing rapidly. Young people are staying at home and in school longer because they no longer have a straightforward transition from school to employment. Easy access to permanent, full-time jobs is a thing of the past. They are coping with more stresses and at a younger age than the generation before them. Early school leaving and substance abuse among certain groups are signs of adolescent stress.

Young people are Canada's leaders in the next century. A comprehensive intersectoral strategy involving health, education, social services, the private sector and young people themselves is urgently needed to find effective ways to support the healthy development of youth in changing times.

### ***Pay Attention to Gender Differences***

When broad strategies for healthy child development are discussed, there often is no distinction made between the health status, capacities and needs of boys and girls. Certainly, all children require similar supports to grow up healthy. However, the data presented in this chapter suggest that a strategy for children must always take into account the differences in how girls and boys experience the process of development. For example, reducing injuries and behaviour problems appears to be a priority for boys; reducing family violence and the early onset of smoking is a priority for girls and young women.

### ***Uphold the Right of Children and Youth to a Safe and Secure Environment***

“Failure to protect the physical, mental and emotional development of children (and young people) is the principal means by which humanity’s difficulties are compounded and its problems perpetuated.” This statement from UNICEF’s *State of the World’s Children 1990 Report* is the fundamental principle underlying the need to protect all of Canada’s children and youth from abuse, neglect and exploitation and to ensure that they have a safe and stable home.

### ***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. It does, indeed, take a whole village to raise a healthy child. Community action is an important complement to government action. Neighbourhoods must be safe and supportive of healthy child development. The private sector must also be involved, since the time/income dynamic has important implications for parenting capacity. 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.

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*We do not inherit the land from our fathers,  
we borrow it from our children.*

— Aboriginal saying.

**F**rom a global perspective, Canadians enjoy a relatively healthy physical environment. We have one of the safest food supplies in the world, the overall quality of our air and drinking water is good, and the built (or human-made) environment is generally clean and healthy. The quality of the Canadian environment, however, cannot be taken for granted. In recent years, there has been a growing concern that some of the pollutants we release into our environment will persist and pose a risk to human health. Indeed, in a 1996 survey, almost two out of three Canadians said that their health had been affected by pollution, and more than one out of two people said they were very concerned about air quality.<sup>1</sup>

At the same time, there is a growing realization that Canada also has a global responsibility to protect and strengthen the world's environmental resource base. Air pollution and other environmental problems aren't restricted by national boundaries. Sustaining the health of the planet for future generations is our ultimate challenge.

The physical environment is an important determinant of health in its own right. At certain levels of exposure, contaminants in our air, water, food and soil can cause a variety of adverse health effects, including cancer, birth defects, respiratory illness and gastrointestinal ailments. In the built environment, factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our physical and psychological well-being.

The physical environment is also linked to other determinants of health. Active living requires green spaces, clean water and protection from exposure to excessive ultraviolet rays. Healthy eating depends on the availability of safe, nutritious foods. Healthy working conditions require safe workplaces that maximize comfort, productivity and well-being. Healthy child development can be dramatically affected by the physical environment because children are particularly vulnerable to environmental contaminants.

In a recent review in the *Canadian Journal of Public Health*, Chaudhuri discussed the potent mix of poverty, childhood and environmental hazards. “Not only do poor children generally live in the most polluted parts of cities, they also tend to be less well-nourished, to live in the poorest quality and most unhealthy housing, and to have parents who work in the most dangerous and stressful jobs.”<sup>2</sup>

This chapter begins with a brief discussion of the concept of sustainable development. It then looks at a selected number of factors in the natural and built environments that have a significant effect on health. The reader is referred to a number of other sources in Appendix C for more detailed and comprehensive information than can be covered in this chapter.

## Highlights

***From a global perspective, the quality of the physical environment in Canada is relatively good. However, certain groups of Canadians are affected more than others by hazards and problems in the physical environment.***

- ◆ Children are more vulnerable to environmental contaminants. Poor children are particularly likely to be exposed to multiple contaminants as a result of living in substandard housing and in neighbourhoods adjacent to high transportation corridors and polluting industries.
- ◆ The prevalence of childhood asthma, a respiratory disease that is highly sensitive to airborne contaminants, has increased sharply over the last two decades, especially among the age group 0 to 5. It was estimated that some 13% of boys and 11% of girls aged 0 to 19 (more than 890,000 children and young people) suffered from asthma in 1996–97.
- ◆ Children and outdoor workers may be especially vulnerable to the health effects of a reduced ozone layer. Excessive exposure to UV-B radiation can cause sunburn, skin cancer, depression of the immune system and an increased risk of developing cataracts.

***Environmental tobacco smoke (ETS) is a major health hazard in the built environment.***

- ◆ Some 300 Canadian non-smokers die each year from ETS-related lung cancer. Deaths due to ETS-related heart disease are estimated to be much higher.
- ◆ Infants and young children are particularly vulnerable to the negative health effects of environmental tobacco smoke. In 1995, at least 1.4 million children were exposed to ETS in their homes.
- ◆ In 1995, municipal bylaws on smoke-free spaces covered 63% of the population of Canada. The nature of smoking restrictions varied considerably from setting to setting, and in most commercial settings the lowest levels of restrictions were in place.

***Access to affordable, safe housing has become a major concern for many low-income Canadians.***

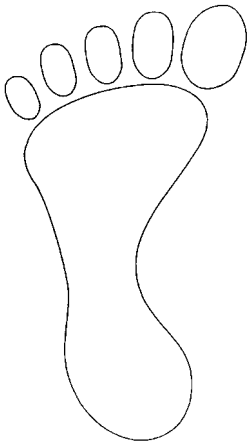
- ◆ In 1996, a growing number of Canadians, including 58% of lone-parent families and 59% of older Canadians living in one-person households were spending more than 30% of their income on housing.
- ◆ As many as 200,000 Canadians were estimated to be homeless or living in substandard housing. Homeless Canadians included increasing numbers of women and children and other groups in special circumstances, including adolescents, persons with mental illness and Aboriginal people.

## Sustainable Development and Health

The Report of the World Commission on the Environment defines sustainable development as “a process in which the exploitation of sustainable resources, the direction of investment, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.”<sup>3</sup>

Thus, sustainable development combines economic, social and environmental goals and takes into account their effects on health. If our natural and built environments, our economy and our social structure are not sustainable, then the health of Canadians will inevitably suffer.

On a global scale, the World Health Organization identifies two broad classes of environmental threats to health: “traditional hazards” associated with lack of development, and “modern hazards” associated with unsustainable development. Traditional hazards related to poverty and insufficient development include inaccessible safe drinking water, inadequate sanitation in the household and community, indoor air pollution from cooking and heating, and inadequate solid waste disposal. Modern hazards are related to development that lacks health and environmental safeguards, and unsustainable consumption of natural resources. These include climate change, stratospheric ozone depletion, urban air pollution, water pollution and transboundary pollution.<sup>4</sup>



### ***Ecological Footprints***

Mathis Wackernagel and colleagues have developed a crude but useful concept called “the ecological footprint,” which measures dependence on natural resources to sustain oneself. A nation’s ecological footprint corresponds to the land and water it uses to produce the resources it consumes and absorb the waste it generates. Wackernagel estimates that, globally, approximately 1.7 hectares per capita are available for human use and that this will decline to approximately 1.0 hectare per capita over the next 30 years. In 1993, the size of Canada’s footprint was estimated to be 7.0 hectares per capita. In other words, Canadians consume far more than their share of the world’s precious resources.<sup>5</sup>

## **The Natural Environment**

This section focuses on six aspects of the natural environment: ozone depletion, climate, air, environmental toxins, water and food.

### ***Ozone Depletion***

Stratospheric ozone acts as a natural filter by shielding the earth’s surface from the sun’s ultraviolet (UV) rays. Excessive exposure to UV-B radiation may cause sunburn, skin cancer, depression of the immune system and an increased risk of developing cataracts in humans.<sup>6</sup> Children and outdoor workers may be especially vulnerable to the health effects of a reduced ozone layer.

Melanoma, an often fatal type of skin cancer, is caused by periods of intense and intermittent exposure to ultraviolet radiation. The incidence and death rates from melanoma steadily increased from 1969 to 1985 among women and from 1969 to 1989 among men, when overall rates started to decline due to reductions among the younger age groups. In 1999, there were an estimated 3,500 new cases of melanoma and 770 deaths from melanoma. New cases and deaths among men were about double the rates for women.<sup>7</sup> Cataracts were reported by 659,000 Canadians aged 18 and older in the 1996–97 National Population Health Survey (NPHS).

The manufacture and release of ozone-depleting substances (chlorofluorocarbons or CFCs) used in air conditioning, refrigeration equipment, some fire extinguishers, solvents and pesticides contribute to the thinning of the ozone layer. In Canada, there have been substantial fluctuations in measured stratospheric ozone levels over the last 15 years. According to Environment Canada, the levels have ranged from a high of 15% below pre-1980 levels in 1993, to 6% in 1996 and 2% in 1998.

Canada, along with 150 other countries that signed the 1987 Montreal Protocol, is making a serious effort to phase out the use of ozone-depleting substances. From 1987 to 1996, new supplies of ozone-depleting substances have fallen from 27.8 kilotonnes to 0.8 kilotonnes.<sup>8</sup> However, given the long half-lives of existing CFCs, this problem will persist into the new millennium.

## Sun Exposure and Protection

**Sun Exposure:**<sup>9</sup> Most serious sun exposure in Canada occurs during the summer months, during outdoor work and leisure-time activity. In 1996, a national survey on sun exposure and protective behaviours found that three out of four summer outdoor workers were male, and 72% were under 45 years of age. Two out of three outdoor workers (both sexes) were exposed to the sun for two or more hours per day.

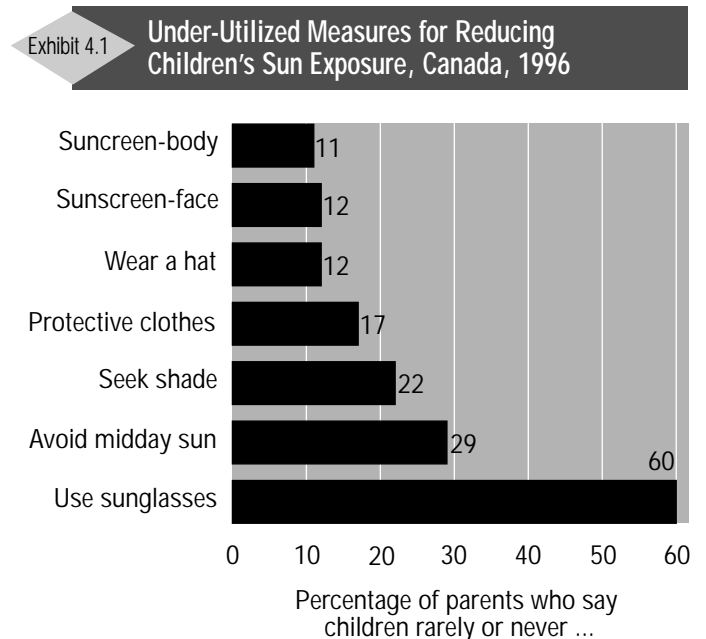
In the general population, 35% of men and 21% of women reported more than two hours of leisure-time sun exposure per day during the summer months. One out of two adults were sunburned at least once during the summer months; nearly half were sunburned while participating in outdoor recreation activities, while one-third were sunburned while working outdoors.

The highest rates of sun exposure were among children under the age of 12. About 96% of parents said that, on average, their children were exposed to the sun for 30 minutes or more each day during the summer months. More than one out of two reported sun exposure of two hours per day or more. Forty-five percent of parents reported that one or more of their children had a sunburn during the summer months.

**Protective Behaviours:** Because melanoma and cataracts are long-term outcomes of excessive sun exposure, dermatologists and other public health authorities advise people to limit their midday sun exposure. This is especially important for children, whose skin and eyes may be more susceptible, and who have more years of potential exposure.

When asked about protective behaviours, 72% of adult Canadians said that they seek shade, avoid the midday sun (66%), use sunscreen on their face (53%), use sunscreen on their body (42%), wear sunglasses (70%), wear a hat (59%), or wear protective clothing (67%).

There is substantial room for improvement in efforts to protect children from excessive sun exposure (Exhibit 4.1). In the 1996 National Survey on Sun Exposure and Protective Behaviours, 22% of parents said that their children rarely or never sought shade or avoided the midday sun (29%). Parents also reported that their children rarely or never wore a hat (12%), did not wear sun protective clothes (17%), rarely or never used sunscreen (11%, 12%), and did not use sunglasses (60%).



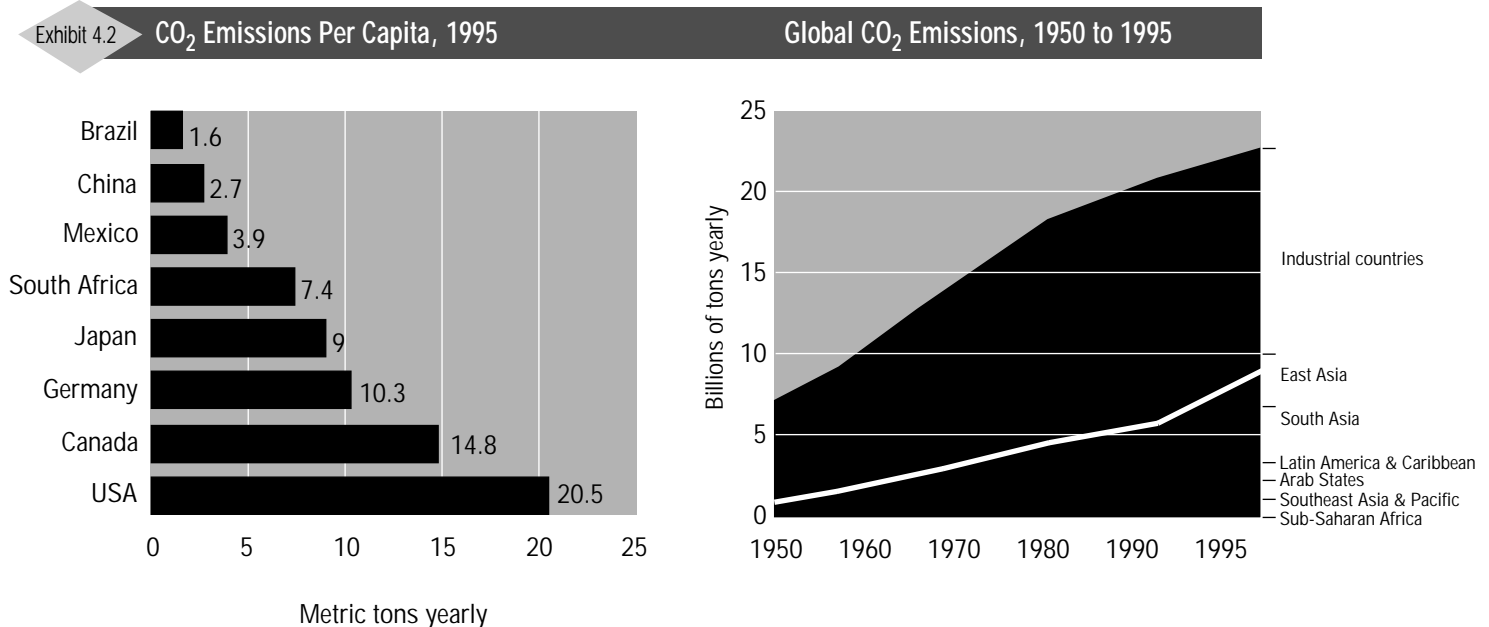
Source: Statistics Canada. *Sun Exposure Survey, 1996*. (Statistics Canada Cat. No. 62M0019XDBGPE).

## Climate

Average global air temperature has risen by about 0.5° C over the past century. As a northern country, Canada is likely to experience greater temperature changes than most regions of the world. The impacts of continued global warming are expected to be both positive and negative. Already, Canada has experienced longer growing seasons, increased forest yields and record agricultural harvests, as well as an increase in severe weather and in the frequency and severity of smog episodes. On the global front, possible consequences of warming also include threats to food security, decreased cold-related illnesses but increased heat-related illnesses, and the possible emergence of tropical diseases in temperate climates such as Canada.<sup>10</sup>

The balance of evidence suggests that greenhouse gases such as carbon dioxide, methane and nitrous oxide are contributing to the current global warming trend. Much of the growth in global atmospheric carbon dioxide concentrations is the result of human activity — in particular, the burning of fossil fuels and deforestation.

As Exhibit 4.2 suggests, global carbon dioxide emissions from fossil fuels have continued to rise with increasing global energy consumption. Canada ranks second highest in the world in per capita carbon dioxide emissions and the majority of these emissions come from the burning of fossil fuels.



Source: *United Nations Human Development Report 1998* (CDIAC 1996; UN 1996 and 1997; UNESCO 1997; World Bank 1997).  
New York: Oxford University Press, 1998.

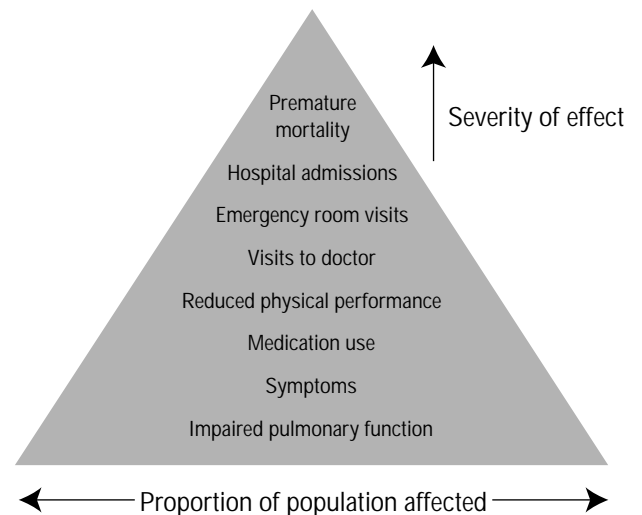


## Air

Even though we have reduced the levels of many air pollutants, evidence suggests that many Canadians are still adversely affected. As Exhibit 4.3 shows, the impact of air pollution on health may vary from subtle, subclinical effects to hospital admissions and early deaths. A recent study published in the *Canadian Journal of Public Health* found a substantial increase in the death rates in 11 Canadian cities when smog was at its worst. Although rates varied from city to city, exposure to ambient air pollution was associated with an increased risk of premature mortality in each of the cities studied. The study concluded that the combined effects of various pollutants accounted for as much as one out of every 11 non-accidental deaths.<sup>11</sup>

Exhibit 4.3

### The Health Effects of Air Pollution



Source: Health Canada. *Outdoor Air and Youth Health: A Summary of Research Related to the Health Effects of Outdoor Air Pollution in the Great Lakes Basin*. 1996: 3. Adopted from the *Canadian Respiratory Journal* 2, 3 (1995): 155–160.

## What Is Smog?

The word “smog” was coined to describe the combination of smoke and fog in the atmosphere, which is often visible as a brownish yellow haze over urban areas. Smog is a complex product of vehicle exhaust and industrial pollution that tends to form during hot, sunny days. Ground-level ozone is the principal ingredient of smog. Acidic air pollutants are also present.

One of the most common health problems related to airborne contaminants is asthma — a respiratory disease that affects more than 2 million Canadians.<sup>12</sup> Asthma results in about 49,000 hospital separations and 198,000 in-hospital days each year.<sup>13</sup> In addition to the serious impact asthma has on the quality of life of many Canadians, it poses a heavy burden on the nation’s health-care expenditures.

It is estimated that more than 89,000 Canadian children 0 to 19 years of age suffer from asthma (approximately 13% of boys and 11% of girls).<sup>14</sup> Over half of all hospitalizations for asthma occur among this age group; the majority are aged 0 to 4. This young age group has also experienced the greatest increase in hospitalization rates due to asthma. From 1971 to 1995, the rate increased more than three-fold.<sup>15</sup>

## ***Environmental Toxins***

Canadians are concerned about the effect of exposure to toxic substances on their health, their children's health and that of future generations, as well as the impact these substances have on the ecosystem.

All Canadians are exposed to a variety of natural and human-made toxic substances. The nature and degree of exposure vary significantly from region to region and with varying eating habits.<sup>16</sup> Children are more vulnerable to environmental contaminants because of their rapid growth and metabolic immaturity. Their greater food, air and fluid intake relative to body weight makes them especially vulnerable to excessive exposure levels of contaminants that might have less profound health consequences among adults. As well, they are just beginning a lifetime of exposure to cumulative environmental hazards, the likes of which no other generation has experienced.

Another area of emerging concern is the possible effect of certain chemicals known as endocrine disrupters, which resemble human hormones. Some scientists suggest that there is a link between specific chemicals or chemical mixtures and disruptions in female and male reproductive functions and/or the occurrence of certain cancers.<sup>17</sup> Further research is needed before such links can be demonstrated or ruled out.

## ***Water***

In Canada, the overall quality of our drinking water remains high. About 87% of Canadians receive treated municipal drinking water, and Canada has one of the lowest incidences of waterborne diseases in the world.<sup>18</sup>

The incidence of waterborne diseases is several times higher in First Nations communities than in the general population, in part because of inadequate or non-existent water treatment systems. The Assembly of First Nations, in partnership with Health Canada, is taking steps to improve this situation.<sup>19</sup>

Keeping Canada's natural water resources clean for both human consumption and recreational use remains a basic priority for population health. While there has been a concerted effort to correct past abuses in areas such as the Great Lakes and St. Lawrence basins, other water sources continue to come under pressure from industrial and municipal pollution, landfill leachates, agricultural run-off and inadequately treated sewage.<sup>20</sup>

## ***Food***

Food security is one of the essential prerequisites for health identified in the Ottawa Charter for Health Promotion.<sup>21</sup> In 1996–97, 6% of Canadians (approximately 1.5 million) reported that, at some point during the previous year, their household had run out of money and couldn't buy food. Of these, more than one out of four (27% or approximately 400,000 Canadians aged 12 and over) said that they had received food from a food bank, soup kitchen or other charitable agency, and 62% (910,000) said that they did not always have enough food to eat.

Low-income households were the most likely to report running out of food (28%), receiving food from a food bank or other organization (10%) and not always having enough food to eat (21%). Among single parents, 18% of women and 8% of men reported

that they had run out of food during the previous year; 7% of lone-parent women and 3% of lone-parent men reported not always having enough food to eat; and 4% of women, as well as 3% of men, reported using a soup kitchen or other organization.<sup>22</sup>

A 1998 report from the Canadian Association of Food Banks showed that the number of Canadians using food banks more than doubled between 1989 and 1998, and the number of communities with food banks more than tripled during that time. The report also stated that in 1998, more than 250,000 children and young people under age 18 were recipients of food banks. Although children and youth made up only one-quarter of Canada's population that year, they represented 42% of the people who depended on food banks.<sup>23</sup> This finding is in keeping with the increase in the number of low-income families (see Chapter 2) and with the 1996–97 NLSCY results on child hunger (see Chapter 3).

Food shortages appear to be a serious problem in certain Aboriginal communities. According to the Aboriginal People's Survey conducted in 1993, 8% of all respondents over 15 years of age reported food availability as a problem during the previous year. The percentage was highest among Inuit people (13%). In total, 8% of all Indians living on reserve and 9% of Indians living off reserve reported food availability as a problem.<sup>24</sup>

In terms of quality, Canadians are blessed with one of the safest food supplies in the world. According to Health Canada's Market Basket Surveys, the levels of contaminants to which Canadians are exposed in their food are far below national and international guidelines.<sup>25</sup>

An interesting example of the complex interactions between food, culture and the environment was reported in a recent study related to mercury contamination in First Nations communities. This study suggested that the presence of environmental contaminants can have profound effects on the way of life of Aboriginal communities beyond the physical health risks posed by the contaminants themselves. Many Aboriginal communities view human health within a model that embodies physical, emotional, intellectual and spiritual well-being. Thus, a food advisory in an Aboriginal community can mean far more than removing a certain food from one's diet. A quote from the report makes the point most eloquently: "Inuit foods give us health, well-being and identity. Inuit foods are our way of life. For us to be fully healthy, we must have our foods, recognizing the benefits they bring. Contaminants do not affect our souls. Avoiding our food from fear does."<sup>26</sup>

Any discussion of food resources in Canada is bound to bring to mind the tragic loss of the cod stocks in Atlantic Canada, and more recently the reduction of salmon stocks in British Columbia. The failure to ensure sustainability of these precious food stocks has had a devastating effect on the economic status and way of life of Canadian families and communities whose livelihoods depend on fishing. The sustainable management of natural food sources will continue to be a challenge in the next millennium.

## The Built Environment

Most Canadians spend more time indoors than outdoors. We are as much a part of our built environment as we are part of our natural environment. The built environment includes our homes, schools, workplaces, parks, business areas and roads. It extends overhead in the form of electric transmission lines, underground in the form of waste disposal sites and subway trains, and across the country in the form of highways. This section looks at three aspects of the built environment: tobacco smoke as a key contaminant in indoor air quality, transportation and affordable housing.

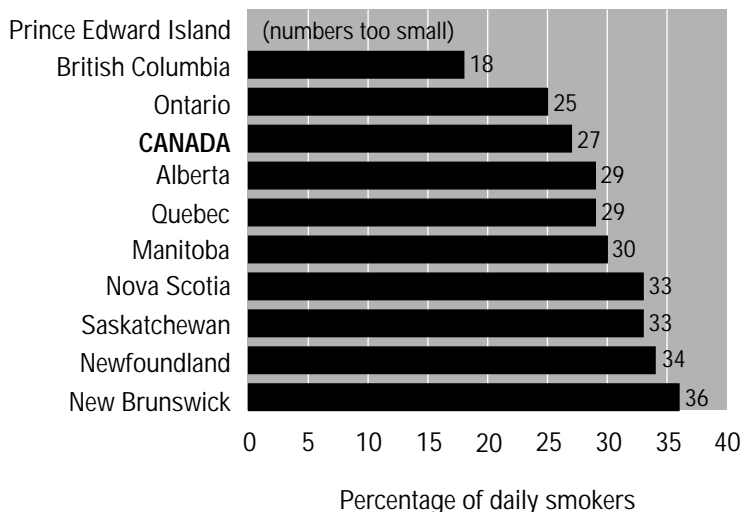
### *Environmental Tobacco Smoke*

Health Canada has estimated that more than 300 Canadian non-smokers die each year from lung cancer caused by exposure to environmental tobacco smoke (ETS).<sup>27</sup> The number who die from heart disease as a result of ETS is likely much higher, since researchers have estimated that at least 10 times the number of non-smokers die from ETS-related heart disease than from ETS-related lung cancer.<sup>28</sup>

Many municipalities now have restrictions on smoking in public settings in an effort to protect the health of both smokers and non-smokers. In 1995, municipal bylaws on smoke-free spaces covered 63% of the population of Canada. The nature of smoking restrictions imposed by municipalities varied from the lowest level of restriction (designated, unventilated smoking areas) to the highest level of restriction (total ban with an explicit provision for enforcement). In commercial settings (such as restaurants and shopping malls), the most common requirements were designated, unventilated smoking areas.<sup>29</sup>

Exhibit 4.4

Percentage of Daily Smokers\* with at Least One Child (Under Age 15) Who Permit Smoking in the Home, by Province, Canada, 1995



\* Smokers aged 15+ who live in a home in which smoking is permitted.

Source: Statistics Canada. *General Social Survey 1995 (Cycle 10)*, special tabulations from the Housing, Family and Social Statistics Division.

There were significant interprovincial variations in municipal smoking restrictions. The population covered by bylaws ranged from 3% in Newfoundland to 81% in Ontario. For most provinces, municipal bylaw coverage was greater in 1995 than in 1991, with the exception of Manitoba, where coverage actually decreased during that time.<sup>30</sup>

Pregnant women, fetuses and young children are particularly susceptible to the effects of ETS, which include complications of pregnancy and low birthweight, increased risk of sudden infant death syndrome and ear infections, reduced lung development, and increased severity of asthma and other respiratory illnesses.<sup>31</sup>

In 1995, at least 1.4 million Canadian children were exposed to ETS in their homes. The majority of these children lived with parents aged 25 to 44 — the age group that smokes the greatest number of cigarettes

daily. Level of education was directly linked with the chance that daily smokers would observe some form of smoking restriction in the home — the more educated the smoker, the greater the chance of restrictive smoking behaviour.<sup>32</sup>

On a provincial basis (Exhibit 4.4), about one-third of daily smokers in New Brunswick, Newfoundland, Saskatchewan and Nova Scotia potentially exposed at least one child to ETS. Daily smokers in Quebec who did not live in a home where smoking was restricted potentially exposed a minimum of 491,000 children to ETS in the home, representing the largest group out of all of the provinces.

A study of smoke-free workplaces in 1994 showed that 26% of male employees and 11% of female employees worked in environments in which there were no restrictions on smoking. Workers in Quebec were most likely to be in workplaces that allowed smoking “anywhere” (30%) or “in most places” (13%).<sup>33</sup>

### ***Transportation***

Most Canadians enjoy a high degree of mobility and personal freedom, thanks primarily to the automobile. In 1993, there were more than 12 million cars in Canada, almost one for every two people. This love affair with the automobile, however, comes with a price. The widespread and frequent use of cars reduces air quality. Traffic congestion creates stress and car crashes can wound and kill. Motor vehicle crashes account for nearly half of all accidental deaths in Canada each year. They are the third leading cause of death overall and the most common cause of death for children and young people under age 35.<sup>34</sup>

Walking and cycling are two of the most popular forms of alternative transportation. Many Canadian drivers say that they would walk and cycle more if street and community designs were more favourable to these practices.<sup>35</sup> Since the majority of Canadians are insufficiently active to achieve health benefits, increased support for active forms of transportation would benefit individual health as well as collective air quality.

According to the 1996 Census, 73% of working Canadians drove their own automobile to work; 7% travelled as a passenger in a private vehicle; 10% used some form of public transportation; 7% walked to work; and 1% bicycled.

Men were more likely to drive to work (79%) than were women (67%); women were more likely than men to travel to work as a passenger, by public transportation, or on foot. Men (1.6%) were slightly more likely than women (0.6%) to report riding a bicycle to work.

### ***Affordable, Adequate Housing***

The Ottawa Charter for Health Promotion recognizes adequate shelter as a basic prerequisite of health. A number of physical factors in the home environment can have a negative influence on health, including a lack of access to piped water and sanitary facilities, high levels of noise, poor indoor air quality, inadequate refuse storage and collection facilities, overcrowding, poor lighting, building defects and pests.<sup>36</sup> In 1991, the Canada Mortgage and Housing Corporation reported that one in five Canadians who paid rent lived in inadequate or unsuitable housing.<sup>37</sup> In 1993, Aboriginal people often reported poor housing as a major problem. Inadequate housing and crowded living conditions may be factors in increased rates of respiratory infections and other infectious diseases in Aboriginal children, compared with non-Native children.

From 1991 to 1996, the number of Canadians who owned a house increased by 10%. But at the same time, shelter became less affordable for many other Canadians. From 1991 to 1996, average shelter costs for owners decreased by approximately 1%, while their average household incomes declined by 5%. Among renters, average shelter costs declined by 3%, while average household incomes declined by 12%. Young Canadians were particularly hard hit. Among young people under the age of 30, average household incomes declined by more than 17%, while rent declined by less than 5%. As a consequence, during that period, a full 43% of renters had a housing affordability problem — that is, more than 30% of their income was spent on shelter, as compared with 17% of owners.<sup>38</sup>

In 1996, 27% of couples without children who rent had an affordability problem. This increased to 30% among couples with children, to 51% among one-person households, to 58% among lone-parent families, and to an incredible 76% among lone-parents under the age of 30. Very high rates of affordability problems (59%) also were experienced by Canadians aged 65 and over living in one-person households.<sup>39</sup>

These findings reflect the growth in number of young low-income families in Canada in the early 1990s (see Chapter 2). At the same time, decreases in government spending on social housing forced a growing number of families with children to seek accommodation in the private marketplace where housing may be more expensive or of poorer quality than subsidized non-profit housing.<sup>40</sup>

### ***Homelessness***

No condition demonstrates the importance of adequate housing for health better than the problem of homelessness. Homeless people have a range of chronic health problems due to their extreme poverty, lack of stable housing and exposure to the elements on the street. They are less likely to receive adequate medical care and more likely to draw heavily upon emergency medical services.<sup>41</sup>

The causes of homelessness are complex. They include poverty, changes in the housing market, reductions in social assistance, family violence, substance abuse and changing mental health services. As a result, the face of the typical homeless Canadian has changed; the composition of this group now includes increasing numbers of women and children and other groups in special circumstances, such as adolescents, persons with mental illness and Aboriginal people.<sup>42</sup> A review by Beavis cites these factors as well as socioeconomic marginalization, poor housing and severely depressed conditions on reserve and in remote communities as major risk factors in Aboriginal homelessness. The author also notes that “the majority of runaways and street youth in Pacific cities are Aboriginal people, with more females than males.”<sup>43</sup>

Although estimating the total number of homeless people is difficult, as early as 1986, 130,000 to 200,000 Canadians were estimated to be homeless or living in substandard housing,<sup>44</sup> and there is compelling evidence that this number has been increasing. For example, several groups have estimated that in Toronto alone, 25,000 people were homeless in 1996 — double the number in 1994. The Good Shepherd Hostel reported a 30% increase in people using its shelter between 1995 and 1996; and the Metro Children’s Aid Society reported a 33% increase in households sharing accommodation and a 52% increase in families in shelters over the same period.<sup>45</sup>

A 1998 Environics' survey showed strong public support for action on homelessness. More than 80% of respondents disagreed with the statement "homelessness really only harms the people who are homeless themselves; there is no real cost to the rest of society." More than 80% agreed that "the homeless population is changing and now includes more young people, women and families than used to be the case." And, more than one out of two Canadians endorsed the notion that "governments should spend more on preventing homelessness, even if the money must come out of other areas or possibly from increased taxes."<sup>46</sup>

A 1996 review of the literature by Novac concluded that homelessness and violence are inextricably linked for women. Novac noted that "homeless women with histories of family disruption and abuse distinguish being housed from being safe, so that homelessness is a problem for women, but it also is a strategy for escaping violence. The relationship between violence and homelessness among women is complex, since there is also a great risk of violence when women are homeless."<sup>47</sup>

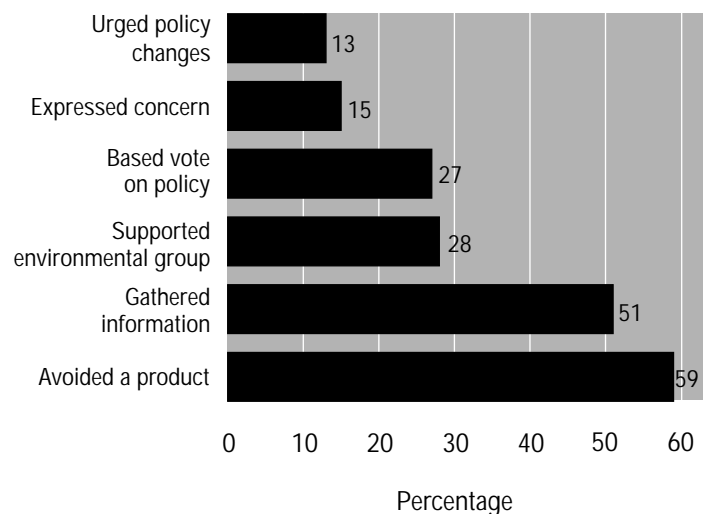
A recent study by Caputo and colleagues concluded that street youth are a heterogeneous group, and that the magnitude of the problem continues to be subject to debate. They note that "involvement in the street lifestyle can include participation in illegal activities such as stealing, shoplifting or breaking and entering ... A major reason for involvement in such activities is to acquire the resources needed to meet basic needs while living on the street. In addition, participation in the street lifestyle involves alcohol and other drug use, participating in high risk sexual activities and facing the hazards of living in marginal circumstances. These hazards include violence and other threats to a person's physical and emotional well-being."<sup>48</sup>

## What Canadians Are Doing

In addition to taking up active forms of alternative transportation, in 1997–98, large numbers of adult Canadians reported taking a range of other actions to preserve their physical environment or to protect their health against perceived environmental hazards. Among ongoing actions to preserve the environment, recycling and/or composting — reported by 88% of Canadians — were the most common, while 64% of Canadians bought environmentally sensitive products and 69% reported that they used energy-saving devices. In each of these areas, action was reported more frequently by women than by men, and by highly educated Canadians, particularly those with university degrees.<sup>49</sup>

Exhibit 4.5

### Percentage Reporting Environmentally-Inspired Actions in the Past Year, Aged 18+, Canada, 1997–98



Source: Environics Research Group Ltd. *The Environmental Monitor*, 1998, Cycle 1.

Exhibit 4.5 shows how Canadians are increasingly inclined to make a political or public statement about their environmental concerns. Over half of all adults (59%) claimed to have avoided certain consumer products for environmental reasons in the previous year, while many others gathered information about environmental issues (51%) and/or voted for or against political candidates or parties because of their stand on environmental issues (27%).

Individual action is reinforced and complemented by the many collective efforts of Canadians to improve and protect the environment in their communities, and to support group efforts to preserve certain aspects of the physical environment. In 1997–98, 28% of Canadians said that they supported an organized environmental group.

## Discussion

### ***Sustainable Development***

In terms of creating and sustaining physical environments that promote health, the greatest challenge we face is to create a more sustainable society. Sustainable development calls for a balanced approach in which economic vitality, environmental integrity, human development and social well-being are all considered and equally weighed when decisions are made. This balance must be achieved not only in a Canadian context, but also globally. Encouraging Canadians and Canadian institutions to “think globally and act locally” is still a good strategy.

### ***The Natural Environment***

In the natural environment, reducing fossil fuel emissions is an immediate and long-term priority. Fossil fuel combustion is believed to be a major cause of both climate change and air pollution. The two problems are also related from a health perspective. As the global climate warms, air pollution and smog production will worsen, resulting in further increases in respiratory illnesses and deaths.

The Kyoto Protocol of December 1997 established emission reduction targets for the year 2012. Canada agreed to reduce its greenhouse emissions by 6% below 1990 levels between the years 2008 and 2012. The health and quality of life of Canadians and others will benefit greatly from the immediate and long-term implementation of intersectoral strategies to increase energy efficiency and reduce fossil fuel emissions. Reducing air pollution will also reduce the billions of dollars lost in early deaths and spent on health services to treat asthma and other respiratory diseases.

### ***The Built Environment***

Within the built environment, air quality is seriously compromised by environmental tobacco smoke which takes a large toll on health, especially the health of children. Concerted action on this issue needs to continue.

The data reported in this chapter suggest that Canada is experiencing a housing affordability crisis. As family incomes and support for social housing have dropped in many jurisdictions, housing costs have remained high, especially for renters. One of the quickest and most direct ways to decrease the inequities discussed throughout this report is to increase access to affordable housing for all Canadians. Working with Aboriginal



people both on and off reserve to ensure that housing is adequate in both quantity and quality must be a top priority.

There is also a growing number of Canadians who believe that homelessness in one of the world's richest countries is a national and community disgrace that should be rectified. A recent study that looked at predictors of entry into shelters and subsequent housing stability for a cohort of families in New York City showed that subsidized housing was the best predictor of residential stability after shelter living. The odds of stability were 21 times greater for families who received housing subsidies than for those who did not. Compared to the availability of affordable housing, mental or physical health problems did not appreciably cause family homelessness or impede later stability.<sup>50</sup>

This study suggests that a reinvestment in social housing by all levels of government is an important strategy for ameliorating the current crisis in both housing affordability and homelessness. It may also be one of the best ways to prevent homelessness in the first place.

As this chapter shows, Canadians have demonstrated a growing interest in and concern about issues related to the physical environment and its link to health. Policy-makers and leaders who are managing health risks in the environment need to be sure that the public is both informed and involved in the decision-making process. At the same time, groups working on different but related issues need to be encouraged to collaborate and build stronger alliances in the pursuit of common goals. As we have seen in this report so far, child health, environmental protection, consumer information and income distribution are inextricably linked.

While there are many unanswered questions concerning the physical environment, two areas stand out as particularly important for further research efforts. The first is a need to answer some broad questions related to the effects of environmental contaminants and changes on human health, especially as they relate to the health of children.

At the 1997 G-8 Denver Summit, the Declaration on Children's Environmental Health (of which Canada is an official signatory) identified seven areas of concern that require further study and information sharing in terms of policy and program solutions:

- increasing our understanding of the particular exposures and sensitivities of infants and children to environmental contaminants and exchanging information on relevant regulatory decisions and standards
- further reducing maternal and child exposure to lead
- ensuring microbiologically safe drinking water for all Canadian families
- reducing air quality threats
- reducing the exposure of pregnant women, children and youth to environmental tobacco smoke
- reducing threats to children's health from endocrine-disrupting chemicals
- reducing the impact of global climate change on children's health.<sup>51</sup>

The second related area for investigation concerns the potential impacts of environmental endocrine-disrupting chemicals on human reproduction functions. The recently announced Toxic Substance Research Initiative will help address this issue.<sup>52</sup>

## Endnotes for Chapter 4

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*“There is today, greater recognition that the socioeconomic environment plays an important role in influencing individual lifestyles.”*

— Canadian Public Health Association, *Health Impacts of Social and Economic Conditions: Implications for Public Policy, 1997.*

**A** broad range of personal health practices influences the health of Canadians. However, there is a growing recognition that personal life “choices” are greatly influenced by the socioeconomic environments in which people live, learn, work and recreate. This chapter examines eight personal health practices: alcohol and tobacco use, illicit drug use, selected safety practices, sexual behaviours that increase risk for sexually transmitted diseases, HIV testing, physical activity, healthy eating and gambling. Trends in body weight — to a large extent the result of physical activity and eating practices — are also reported here. Efforts Canadians make to protect themselves and their children from excessive sun exposure are discussed in Chapter 4. Information on the effects of income, education and other broad determinants on personal health practices is provided when it was available.

## Highlights

***Many Canadians are making impressive efforts to improve their health.***

- ◆ Almost half of the Canadian population aged 12 and older reported changing some behaviour to improve their health in the year before the 1996–97 National Population Health Survey.
- ◆ Overall, smoking rates have dropped impressively among Canadians aged 15 and over — from 47% in 1970 to 30% in 1990. Since then, there has been some fluctuation, but no clear trend in overall smoking rates.
- ◆ There has been an impressive decline over the past 20 years in fatal motor vehicle crashes, attributable at least in part to increases in seatbelt use and reductions in impaired driving.

***Nevertheless, there remains considerable room for improvement in personal health practices. Considering the stresses on young people observed in other chapters, it is not surprising that adolescents and young adults are particularly vulnerable to negative health practices.***

- ◆ Rates of smoking have increased substantially among adolescents and youth, particularly among young women, over the past five years. Rates of smoking among young women aged 12 to 19 remain substantially higher than among young men.
- ◆ Smoking rates among Aboriginal people are double the overall rate for Canada as a whole. The age of onset for the use of tobacco, alcohol and other drugs is substantially younger for Aboriginal children than for children in the population as a whole.
- ◆ Multiple drug use — particularly the combination of alcohol, tobacco and cannabis — among high school students has increased substantially, at least in all regions that have been surveyed.
- ◆ Multiple risk-taking behaviours, including such hazardous combinations as alcohol, drug use and driving, and alcohol, drug use and unsafe sex, remain particularly high among young people, especially young men.
- ◆ The proportion of overweight men and women in Canada increased steadily between 1985 and 1996–97 — from 22% to 34% among men and from 14% to 23% among women.
- ◆ Rates of physical activity drop quickly as age increases and there are large differences between males and females. In the 12 to 14 age group, 54% of boys and 33% of girls were active in their leisure time. By age 20 to 24, the percentage who were active dropped to 39% among males and 22% among females.
- ◆ In 1994–95, 51% of sexually active 15- to 19-year-old women who had more than one sex partner and 29% of sexually active young men in the same age group reported that they had had sex without a condom in the past year. Among 20- to 24-year-olds, 53% of sexually active women and 44% of men reported having had sex without a condom during the previous year.

***Injection drug use (IDU) and its relationship to HIV infection and hepatitis C is a major concern.***

- ◆ In 1997, 20% of adult AIDS cases were attributed to injection drug use, compared with less than 2% prior to 1990 and 5% in 1993.
- ◆ Injection drug use is believed to be associated with perhaps 70% of hepatitis C virus infections.

## Trends in Health Practices

Almost half the Canadian population aged 12 and older reported changing some behaviour to improve their health in the year before the 1996–97 National Population Health Survey. A slightly larger proportion reported that some future change was needed. Women were more likely than men to report changes in the past year, to recognize the need for changes and to intend to make those changes in the coming year. Women and men who recognized the need for change were most likely to say that more exercise was the personal health practice that was most needed. A lack of time and will were cited as the main barriers to making lifestyle changes.

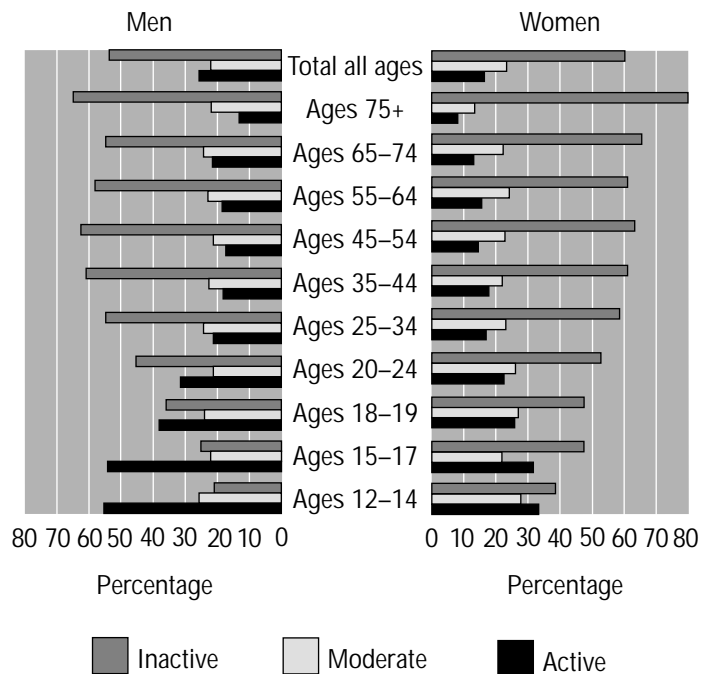
Behaviour changes were reported most often in Ontario (50%) and least often in Saskatchewan (39%).<sup>1</sup>

### ***Physical Activity***

Lack of physical activity is recognized as a significant risk factor for coronary heart disease and other serious health problems. Conversely, active living provides many health benefits including a reduced risk of cancer, diabetes, heart disease and osteoporosis, and an enhanced feeling of well-being.<sup>2</sup>

Surveys have shown a substantial increase in Canadians' levels of leisure-time physical activity between 1981 and 1995.<sup>3</sup> During 1996–97, 21% of Canadians aged 12 and over were classified as physically active during their leisure time; another 23% were moderately active, while more than half (57%) were inactive. These rates are similar to those of 1994–95, when 58% of Canadians were classified as physically inactive. As Exhibit 5.1 shows, men continued to report higher rates of physical activity and lower rates of sedentary behaviour than women at all ages. The data reveal that, after

Exhibit 5.1 Leisure-Time Physical Activity Levels, by Age Group and Sex, Canada, 1996–97



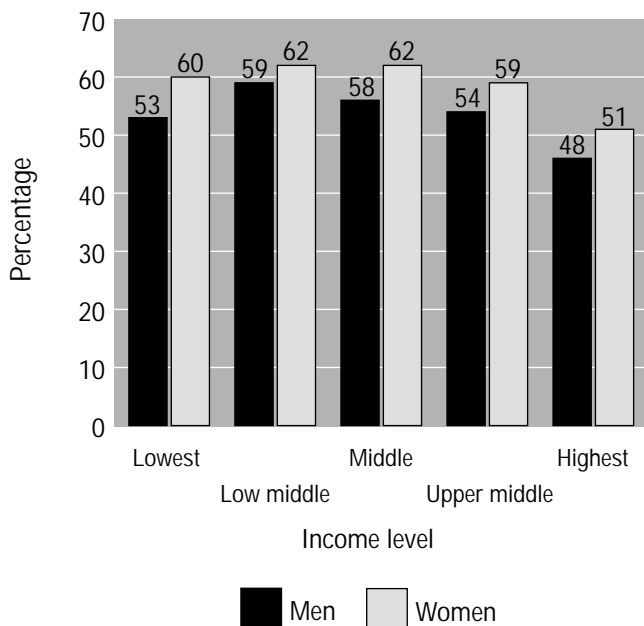
Source: Statistics Canada. *National Population Health Survey, 1996–97.*

## NPHS Definition

- ◆ In the National Population Health Survey (NPHS), **level of activity** is classified by assigning estimated kilocalories used per kilogram of body weight per day: active = 3.0 or more, moderate = 1.5 to 2.9, inactive = less than 1.5.

Exhibit 5.2

### Percentage of Canadians Who Are Not Physically Active During Leisure Time, by Sex and Income Level, Aged 12+, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

age 18, there was a significant drop in activity levels for young men. The number of girls and women who were active declined progressively from adolescence on.

An analysis of the 1994–95 NPHS showed that non-European immigrants were particularly likely to have been inactive in their leisure time (67%), regardless of their length of time in Canada. By contrast, the proportion of immigrants from European countries who reported inactive leisure varied from 59% of recent to 51% of long-term immigrants (less than among Canadian-born citizens.)<sup>4</sup>

In the 1996–97 NPHS, the highest rates of leisure-time physical activity were reported by men and women with the highest incomes. As shown in Exhibit 5.2, only 48% of men in the highest income bracket were physically inactive, compared with 53% of Canadian men in the lowest income bracket. Among women with high incomes, 51% were physically inactive, compared with 60% of women with the

lowest income level. Lower-income Canadians may be more likely to have jobs that involve physical labour, and this may affect their need or desire to engage in leisure time physical activity. But there are other barriers to participation relating to income, including the costs of equipment and user fees for participation in recreational activities. Further research is needed on the links between income and participation in physical activity.

According to the Canadian Fitness and Lifestyle Research Institute, only one-third of Canadian children and youth are physically active enough to meet the optimal standards for healthy development. One of the reasons for this may be the cost of participating in sports and recreation. In 1995, nearly half of families with incomes below \$20,000 per year cited high costs as a reason for not participating in physical activities compared with one-third of families earning \$60,000 per year or more.<sup>5</sup>



## Healthy Eating

Diet in general and the consumption of fat in particular are linked to some of the major causes of death, including cancer and coronary heart disease. However, little data exist on the actual dietary intake of Canadians.

In the 1994–95 NPHS, 45% of men and 47% of women rated their eating habits as excellent or very good; 16% of both men and women described their eating habits as fair or poor. Canadians with low incomes were more likely to describe their eating habits as fair or poor than those in upper income brackets.

Dietary fat was a source of concern for many Canadians: 59% of persons aged 12 and over said they were concerned about fat in their diet and claimed to be taking action to reduce their consumption of fat. Two-thirds of women (67%) reported taking action to reduce dietary fat, compared with 50% of men. Similarly, one-third of women (32%) reported making efforts to increase carbohydrates and fibre in their diets, compared with about one in five men (20%).

Low-income Canadians were more likely to express concerns about the cost of low-fat foods than were high-income Canadians. As Exhibit 5.3 shows, 40% of Canadians in the lowest income bracket believed that low-fat products were expensive, compared with 32% of Canadians with the highest incomes. Similarly, 27% of low-income Canadians believed that grain products were expensive, compared with only 8% of Canadians with high incomes.<sup>6</sup>

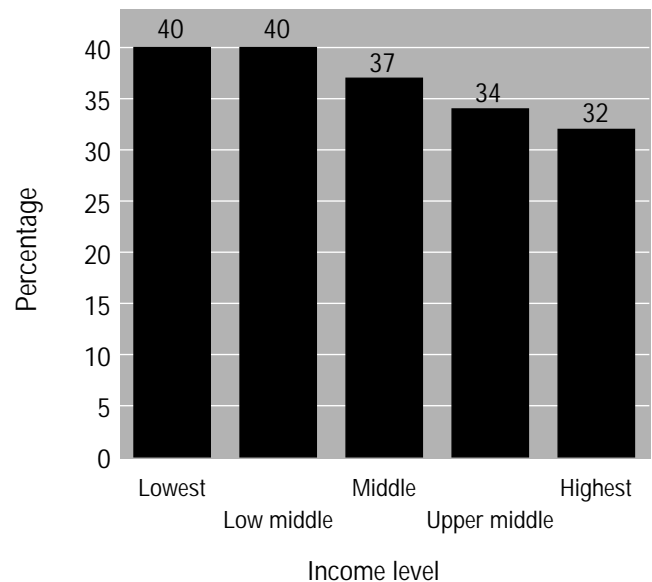
## Healthy Weights

While body weight is not a personal health practice, it is, to a large extent, determined by eating and physical activity practices.

Body weights above the healthy weight range (i.e. a Body Mass Index over 27) are linked to a variety of health problems, including cardiovascular disease, diabetes and some forms of cancer. Body weights below the healthy weight range (i.e. a Body Mass Index under 20) may also be a sign of current or impending health problems, including the eating disorders anorexia and bulimia.<sup>7</sup>

Exhibit 5.3

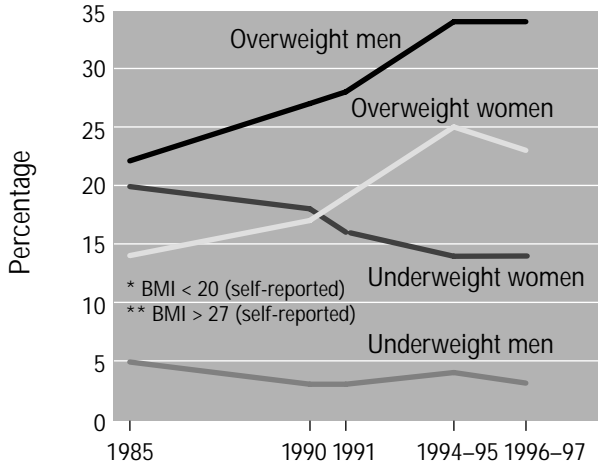
Percentage of Canadians Who Believe That Low Fat Foods Are Expensive, Aged 12+, by Income Level, 1994–95



Source: Statistics Canada. *National Population Health Survey, 1994–95*.

Exhibit 5.4

### Percentage of Underweight\* and Overweight Canadians (Ages 20–64),\*\* by Sex, 1985 to 1996–97

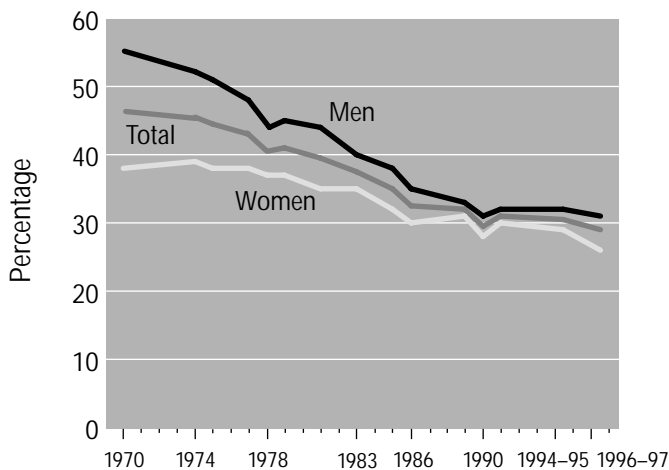


Note: BMI refers to Body Mass Index.

Source: *General Social Survey Cycles 1 (1985) and 6 (1991)*; *Health Promotion Survey (1990)*; and *National Population Health Surveys, 1994–95 and 1996–97*, special tabulations.

Exhibit 5.5

### Percentage of Men and Women Who Smoke Cigarettes, Aged 15+, Canada, 1970 to 1996–97



Source: Pederson, L. Smoking. In *Health Promotion Survey 1990: Technical Report*; and Statistics Canada. *National Population Health Surveys, 1994–95 and 1996–97*, special tabulations.

A number of surveys (Exhibit 5.4) have shown that the proportion of overweight men and women in Canada increased steadily between 1985 and 1996–97 — from 22% to 34% among men and from 14% to 23% among women. In 1996, the problem of excess weight was particularly pronounced among men and women aged 45 to 64. Men in this age group (58%) were much more likely than women (37%) to be overweight. The chances of being overweight decreased with each successive level of education. Income was also a factor; being overweight was most common among adults in low-income groups.<sup>8</sup>

The increasing prevalence of excess body weight is a trend that has been observed in many developed countries.<sup>9</sup> Dietary changes and decreases in daily physical activity levels as well as the aging of the baby boomers have been cited as the most likely reasons for this trend, but further study is required.

As shown in Exhibit 5.4, in the 1996–97 NPHS, women (14%) were nearly five times more likely than men to be underweight (3%). The problem of low body weight remained most pronounced among women age 20 to 24, among whom one out of four were below the healthy weight range. Despite the substantially higher proportion of overweight men in Canada, women (40%) were still more likely than men (23%) to report recent attempts at weight loss. This desire to lose weight extended to many women who were already within the healthy weight range.

Little information is available on attempts to gain weight. However, concerns have been raised about young males trying to gain weight and muscle bulk through the use of steroids and other substances.<sup>10</sup>

## Tobacco Use

Studies over time (Exhibit 5.5) have shown that overall, smoking rates have dropped impressively among Canadians aged 15 and over — from 47% in 1970 to 30% in 1990. Since 1990, there has been some fluctuation, but no clear trend in smoking rates. The success of public health campaigns to reduce smoking rates, however, have not been equally successful with all population groups. Three groups — young women and women and men with low-income status — lag behind.

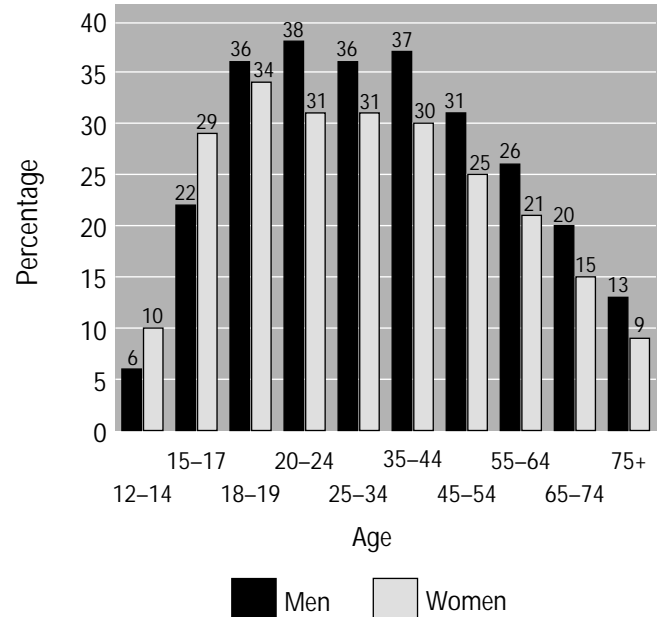
In the 1996–97 NPHS, 30% of Canadian men and 25% of women aged 12 and over reported being daily or occasional smokers. This represents a slight decline from 1994–95 when 31% of men and 28% of women reported smoking cigarettes. The rate of smoking among men exceeded the rate for women in every age group — with the exception of youth aged 12 to 17 (Exhibit 5.6). Continuing a trend observed in 1994–95, the rate of smoking among girls aged 12 to 14 (10%) and 15 to 17 (29%) remained substantially higher than among young men of the same age (6% and 22% respectively).<sup>11</sup>

Rates of smoking varied substantially by income level, with the highest rates of smoking reported by men (40%) and women (36%) in the lowest income bracket. As Exhibit 5.7 shows, smoking decreased to a low of 16% and 13% among men and women in the highest income bracket.<sup>12</sup>

The highest rates of smoking in Canada are reported by Aboriginal people, about double the overall rate in the Canadian population as a whole. In 1997, adult smoking rates within the Aboriginal population were highest among young people aged 20 to 24 (72%) and 25 to 29 (71%) (Exhibit 5.8). The use of smokeless tobacco by Aboriginal youth in the Northwest Territories and northern Saskatchewan also poses a significant health problem.<sup>13</sup>

Exhibit 5.6

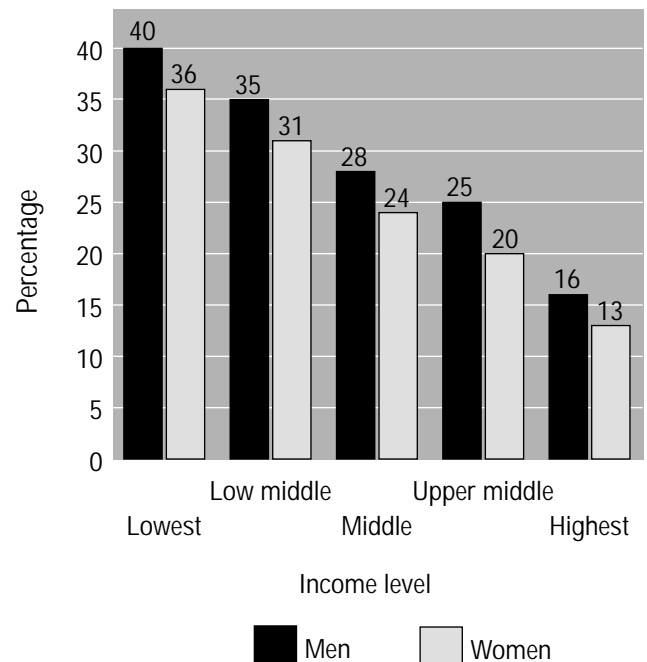
Percentage of Men and Women Who Smoke Cigarettes, by Age Group, Canada, 1996–97



Source: National Population Health Survey, 1996–97.

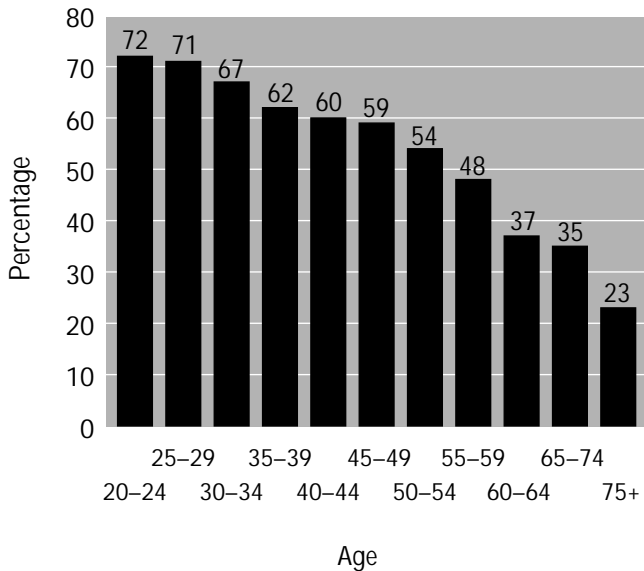
Exhibit 5.7

Percentage of Men and Women Who Smoke Cigarettes, by Income Level, 1996–97



Source: Statistics Canada. National Population Health Survey, 1996–97.

**Exhibit 5.8** Percentage of Aboriginal Adults Who Smoke Cigarettes, by Age Group, 1997



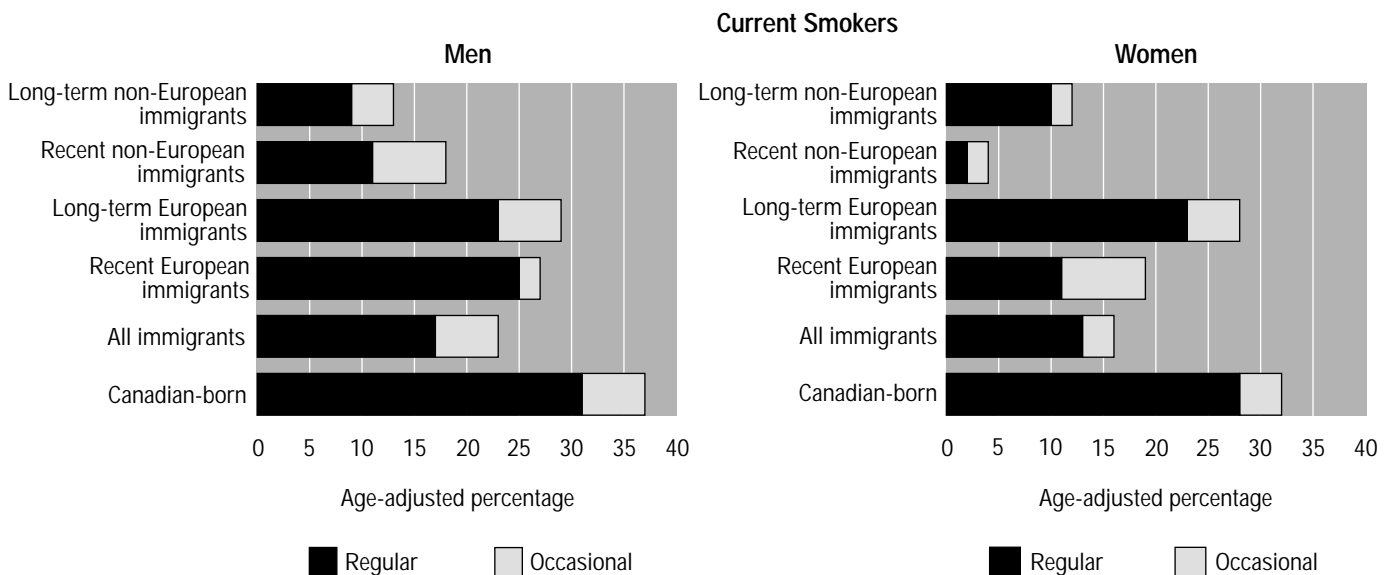
Source: Reading, J. "The Tobacco Report." *First Nations and Inuit Regional Health Survey, 1997*.

to 1997. In 1991, 22% of both male and female students reported smoking at least one cigarette during the previous year. By 1997, this had increased to 28% among boys and 29% among girls.<sup>15</sup>

In 1994-95, recent non-European immigrants were significantly less likely than the Canadian-born population to smoke (Exhibit 5.9). For all immigrants, the number who smoke generally increased with the length of time in Canada. Unlike for the Canadian-born population, there was no clear association between smoking and income status.<sup>14</sup>

There was little increase in the rate of smoking among adolescents and youth from 1994-95 to 1996-97. However, data from provincial surveys of students suggest that the major increases in youth smoking occurred somewhat earlier, attributable at least in part to the availability of low-cost smuggled cigarettes, and the subsequent roll-back in tobacco taxes and prices. Data from Ontario, for example, suggest that rates of smoking among students in grades 7, 9, 11, and 13 increased sharply from 1991

**Exhibit 5.9** Prevalence of Smoking by Immigrant Status, Duration of Residence and Sex, Canada, 1994-95



Source: *National Population Health Survey, 1994-95*. Published in Chen, J., Ng, E., Wilkins, R. (Statistics Canada). "The Health of Canada's Immigrants in 1994-95." *Health Reports* 7, 4 (Spring 1996): 42.

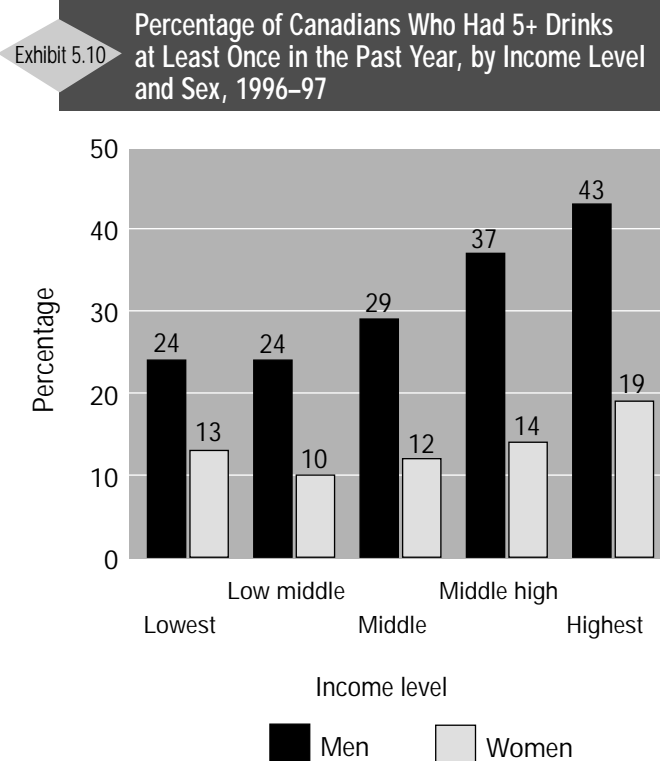
In Nova Scotia, rates of smoking among students in grades 7, 9 and 11 increased significantly from 26% in 1991 to 36% in 1998 (34% among boys and 38% among girls). Rates reported in surveys in the other Atlantic provinces during 1998 were similar, ranging from 27% in Prince Edward Island to 33% in New Brunswick, and 38% in Newfoundland.<sup>16</sup>

### ***Use of Alcohol***

While the moderate use of alcohol is not harmful for some people, excessive use can lead to a range of health and social problems, including motor vehicle crashes involving impaired drivers. According to Transport Canada, there were 3,082 motor vehicle traffic deaths in 1996 — an impressive decline from the 5,253 traffic deaths in Canada two decades earlier. There has also been a significant decline in the number of fatally injured impaired drivers over the past 20 years. Nevertheless, the rate of alcohol involvement in fatal traffic crashes remains unacceptably high. Among fatally injured drivers, 35% were legally impaired; the number of innocent victims who were injured or killed was not available for this report.<sup>17</sup>

According to the NPHS, in 1996–97, 53% of Canadians (63% of men and 43% of women) drank alcohol at least once per month — a slight decrease from 1994–95. Women were more likely to be non-drinkers than men. Men (42%) were more likely than women (21%) to report consuming five or more drinks on at least one occasion during the past year — a commonly used indicator of “heavy” or “binge” drinking. There are differences in how alcohol affects men and women, however, so the consumption of less than five drinks by women could be interpreted as heavy (problematic) drinking among women.

In the 1996–97 NPHS, the proportion of men and women who drank at least once per month rose steadily with increases in income. Men and women with higher incomes also tended to be heavier drinkers. Among men in the two lowest income levels and who were drinkers, 24% reported at least one episode of heavy or “binge” drinking, compared with 43% of men in the highest income bracket. The rate of heavy drinking among women drinkers in the lowest income level was 13%. This dropped to 10% at the next income level, then slowly climbed to 19% at the highest income level (Exhibit 5.10). This is due in part to the fact that lower income Canadians are less likely than upper income Canadians to consume any alcohol at all. However, among lower income Canadians who did drink alcohol during the previous year, their rate of heavy drinking tended to slightly exceed that of higher income earners.

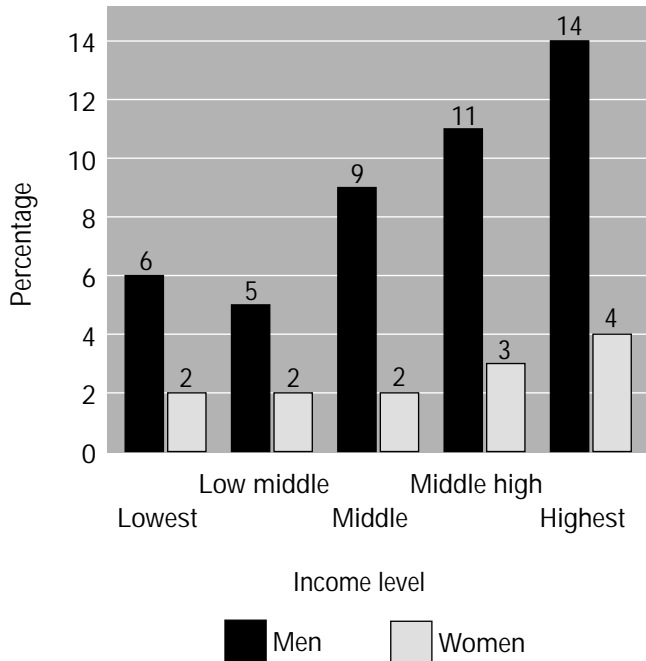


Source: Statistics Canada. *National Population Health Survey, 1996–97*.

According to the 1996–97 NPHS, among Canadians who have a driver's licence and consume alcohol, 10% admitted to driving after consuming “too much” alcohol. Men (13%) were much more likely than women (5%) to report driving after drinking. The highest rate of driving after drinking (18%) was reported by young drivers aged 18 and 19.

Exhibit 5.11

### Percentage of Canadians Who Drove After Drinking, by Income Level and Sex, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

majority of whom are below the legal drinking age) reported drinking alcohol in the previous year.<sup>19</sup> Similarly, in Newfoundland and Labrador, 20% of Grade 7 students and 59% of Grade 9 students reported drinking alcohol. In Ontario, 32% of Grade 7 students and 56% of those in Grade 9 reported drinking during the previous year.<sup>20</sup>

Motor vehicle traffic crashes are a leading cause of death among young people in Canada. In Nova Scotia, 8% of students admitted to driving a motor vehicle within an hour of consuming two or more alcoholic drinks. More than one out of four students (27%) had been passengers in a motor vehicle with a driver who had had “too much to drink,” and 10% of students had driven a motor vehicle within one hour of using a drug (other than alcohol or tobacco).<sup>21</sup>

### **Illicit Drug Use**

Generally, the reported use of illicit drugs in Canada is low: in the 1994–95 NPHS, less than 1% of Canadians used crack cocaine, LSD or speed. Seven percent of Canadians (1.7 million) reported the use of marijuana. Use of illicit drugs was highest among young people and especially among those with some post-secondary education — presumably current students in many cases.

Canadians with low incomes were less likely than Canadians with high incomes to drink and drive. As Exhibit 5.11 shows, only 6% of men and 2% of women in the lowest income level reported driving after drinking, compared with 14% of men and 4% of women with the highest incomes. This is in keeping with the fact that low-income Canadians drink less overall and are also less likely to own cars.

Alcohol use, underage drinking, heavy drinking and alcohol-related problems among young people remain a persistent concern. And there are disturbing indications from provincial surveys that rates linked to these behaviours and problems may be increasing. For example, the Nova Scotia Student Drug Use Survey reported that 57% of students drank alcohol in 1998 — an increase of 12% from 1991. Similar rates of drinking were reported by students in the other Atlantic provinces (Prince Edward Island, 53%; New Brunswick, 56%; Newfoundland, 58%) and in Ontario (60%).<sup>18</sup>

In Nova Scotia, 21% of Grade 7 students and 58% of Grade 9 students (the vast

Recent surveys of students in Ontario and the Atlantic provinces show that the use of cannabis has been increasing. In 1997, one out of four Ontario students (25%) reported using cannabis in the previous year — an increase from 12% in 1991.<sup>22</sup> Rates reported in surveys in the Atlantic provinces were similar and often higher, including rates of 22% in Prince Edward Island, 30% in Newfoundland and 31% in New Brunswick. The use of cannabis by students in Nova Scotia has dramatically increased — from 17% in 1991 to 38% in 1998.<sup>23</sup>

### ***Disturbing Trends in Substance Use and Abuse***

In addition to a major concern about increased tobacco use among adolescent women, three other trends deserve special attention: increasing rates of HIV infections among injection drug users, a resurgence in multiple drug use among adolescents, and the high rates of substance use by young children in Aboriginal communities.

#### ***Injection drug use and increases in HIV infection***

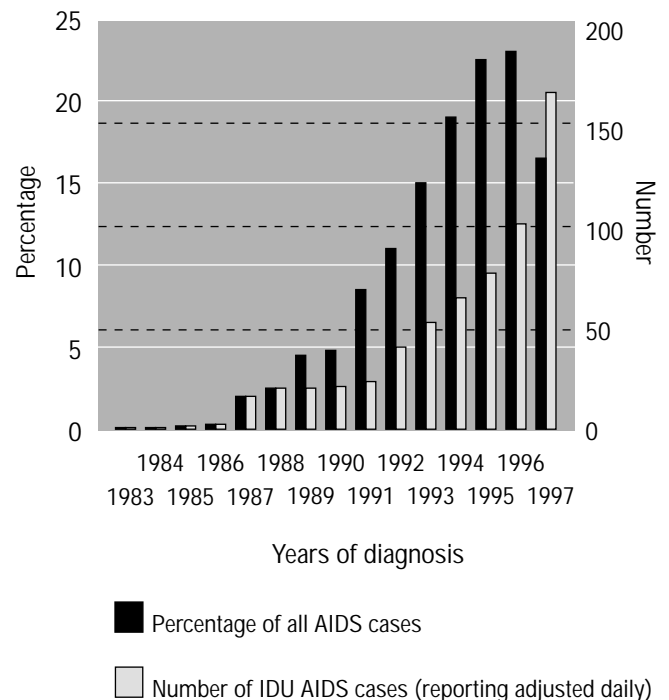
Since the early 1980s when HIV infection was concentrated in the population of men who have sex with men, the Canadian picture has continued to evolve. In 1996, approximately half of the estimated 3,000 to 5,000 HIV infections that occurred in Canada were among injection drug users.<sup>24</sup>

The proportion of AIDS cases attributed to injection drug use (IDU) increased until 1996 and then decreased slightly in 1997, likely due to the availability of new, more effective treatments and perhaps due to decreased reporting completeness (Exhibit 5.12). For men, the percentage of IDU-related cases of AIDS increased from 0.7% before 1988, to 2.4% between 1988 and 1992, and to 6.5% between 1993 and 1997. For women, the percentage increased from 4.1% to 14.7% and finally to 24.9% for the same time periods.<sup>25</sup>

The HIV epidemic among injection drug users is well documented in Canada's largest cities. For example, the prevalence of HIV infection among injection drug users in Vancouver increased from about 4% in 1992–93 to 23% in 1996–97; in Montreal, it increased from about 5% prior to 1988 to 19.5% in 1997. The problem, however, is now being seen outside major urban areas as well. Given the geographic mobility of injection drug

Exhibit 5.12

**Number of Annual IDU AIDS Cases Diagnosed and Percentage of All Known AIDS Cases, 1983 to 1997**



Note: IDU means "injection drug use."

Source: Health Canada. *HIV/AIDS, Epi Updates*, May 1998.

users and their social and sexual contact with non-users, there is an urgent need to deal with this problem in Canada's large cities as well as in areas outside the major urban centres, including Aboriginal communities.<sup>26</sup>

In addition to contributing to the onset of AIDS, IDU is also the major mode of transmission of hepatitis C in Canada. Injection drug use is now the major risk factor for the hepatitis C virus (HCV) accounting for perhaps 70% of all HCV infections.<sup>27</sup>

### ***Increasing use of multiple drugs among adolescents***

After a period of decline during the 1980s, the 1990s have seen a resurgence in adolescent drug use (based on data gathered from regions that have been surveyed). Between 1993 and 1995, the use of eight of 20 drugs increased significantly in Ontario.<sup>28</sup> Nova Scotia also reported significant increases in the use of 12 different drugs by students between 1991 and 1998: alcohol, cigarettes, cannabis, LSD, non-prescription stimulants, prescription stimulants, psilocybin or mescaline, non-prescription tranquilizers, cocaine or crack, PCP, heroin and inhalants.<sup>29</sup>

Student use of a combination of alcohol, tobacco and cannabis has increased substantially in all regions that have been surveyed. In Nova Scotia, for example, the percentage of students reporting use of all three of these drugs increased from 12% in 1991 to 25% in 1998;<sup>30</sup> in Newfoundland, the percentage increased from 18% to 23% during the same time period.<sup>31</sup>

### ***Substance use by young children in some Aboriginal communities***

While much attention has been focused on adolescent substance use in both Aboriginal and non-Aboriginal communities, one of the most disquieting facts about addiction in some Aboriginal communities is the alarming rate of substance use by young children. Studies continue to show that the age of onset for the use of tobacco products, alcohol, solvents and cannabis is substantially younger for Aboriginal children than for children in the population as a whole, and that Aboriginal children are entering Canadian treatment facilities at younger ages.<sup>32</sup> In the 1993 report of *Aboriginal Peoples in Urban Centres*, 67% of participating Friendship Centres reported that children were consuming alcohol and sniffing solvents during school hours, after school, on the streets and in their homes.<sup>33</sup>

### ***Use of Safety Equipment for Injury Prevention***

Safety equipment has proven successful in preventing several types of unintentional injuries. Common examples include:

- safety belts for automobiles
- helmets for motorcycles, bicycles, all-terrain vehicles, and snowmobiles
- flotation devices (PFDs, lifejackets) for watercrafts
- smoke detectors for protection against house fires and smoke inhalation
- child-proof container lids on medication and other potentially hazardous products to prevent poisoning.



As documented in annual drowning reports of the Canadian Red Cross Society from 1993 to 1998, among victims of boating drownings, wearing rates for flotation devices were only about 10%. For Aboriginal victims, wearing rates were lower — about 5%. Even among drowning victims who were non-swimmers or weak swimmers, wearing rates were equally low.<sup>34</sup>

Unlike the situation for safety belts in cars where wearing of the belt is mandatory, the law does not require boaters to wear a flotation device. Since most boating drowning incidents involve either sudden unanticipated falls into water or capsizes and swampings under adverse conditions, many boaters who are not wearing a flotation device at the moment of the incident are unable to find one, put it on, and rescue themselves.<sup>35</sup>

At present, all Canadian provinces have mandatory seatbelt legislation. In 1998, a roadside survey by Transport Canada found that 89% of vehicle occupants were wearing seatbelts. The highest rates of seatbelt usage were in Quebec (92%), Saskatchewan (90%) and British Columbia (90%); all 10 provinces achieved wearing rates of more than 82%. In the Yukon Territory, 82% of vehicle occupants were found to be wearing seatbelts, but the rate dipped to 53% in the Northwest Territories.

Among drivers of passenger cars, the rate of seatbelt use was 92%, an increase from 82% a decade earlier. Prior to seatbelt legislation in Canada, only an estimated 15% to 30% of Canadians wore seatbelts. These results, together with the impressive reduction in motor vehicle fatalities in Canada, reflect the profound influence that legislative action outside of the health sector can have on the health of Canadians.<sup>36</sup>

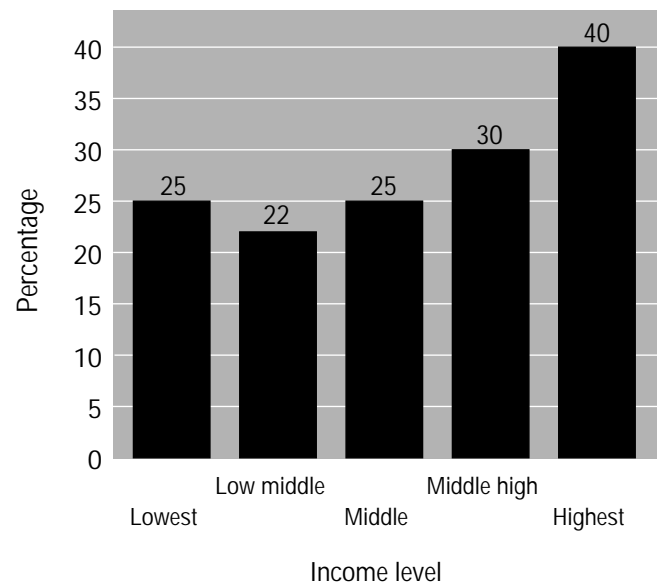
In the 1996–97 NPHS, 29% of Canadians aged 12 and over reported always wearing a helmet when riding a bicycle. Women (31%) were slightly more likely than men (28%) to report use of a helmet. The rate of helmet use was highest among those aged 12 to 14 (40%), but plummeted to its lowest level (15%) among youth aged 15 to 19.

Two of the most powerful determinants of bicycle helmet use are income and provincial legislation. Among Canadians in the lowest income group, 25% reported always using a helmet when riding a bicycle, compared with 40% of Canadians in the highest income group (Exhibit 5.13).

Recently, three provinces (British Columbia, Nova Scotia and Ontario) enacted legislation involving the use of bicycle helmets. As shown in Exhibit 5.14, rates of helmet use were substantially higher in these three provinces. Fifty-three percent of British Columbians, 37% of Nova Scotians and 33% of Ontarians reported always wearing a helmet when they ride their bicycle. By contrast, in provinces without comparable legislation (where sufficient data were available), helmet wearing rates varied from a high of 26% in Alberta to a low of 12% in Manitoba.

Exhibit 5.13

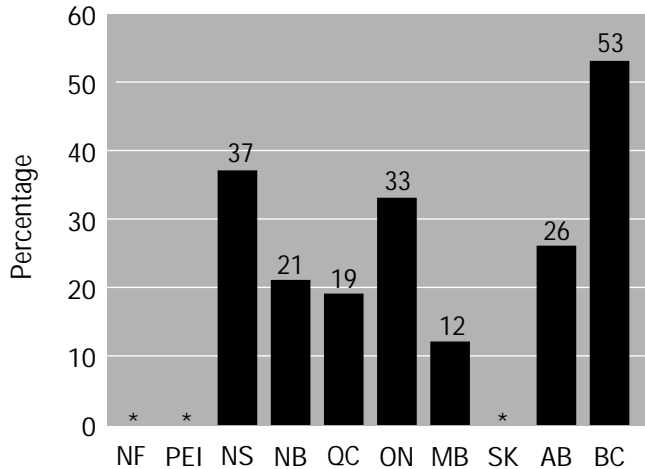
Percentage of Canadians Aged 12+ Who Always Wear a Helmet When Riding a Bicycle, by Income Level, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

Exhibit 5.14

Percentage of Canadians Aged 12+ Who Always Wear a Helmet When Riding a Bicycle, by Province, 1996–97



\*Small sample size.

Source: *National Population Health Survey, 1996–97*.

## Gambling

Government-regulated casinos and video lottery terminals (VLTs), introduced in the 1990s, have turned gambling into a multi-billion dollar industry in Canada. In 1997, Canadians wagered \$6.8 billion on some form of government-run gambling activity — 2.5 times the amount wagered in 1992. Gambling profits increased in every province and in both territories over the past five years, and now account for between 1% (British Columbia) and 4% (Manitoba) of total government revenues in each province.<sup>37</sup>

In 1996, the majority of households in Canada (82%) gambled some money, spending an average of \$423 during the year. Among households that gambled, those with incomes of less than \$20,000

spent an average of \$296, or about 2.2% of their total household income. Those with \$80,000 or more spent \$536, only 0.5% of their total income.<sup>38</sup>

While gambling may be a harmless pastime for some people, problem gambling has deleterious effects on the well-being of individuals and families. The nature and extent of problem gambling is only beginning to be documented in Canada. However, a 1997–98 Nova Scotia study of video lottery terminal (VLT) players showed cause for concern. This study concluded that 16% of those who play VLTs on a regular basis could be considered “problem VLT gamblers.” This group of gamblers contributes just over one-half of the net revenue for video lottery gambling. For the most part, these adults report significant guilt and anxiety, as well as difficulties in coping and feeling at a loss as to how to control their VLT gambling.<sup>39</sup>

A study of students in Nova Scotia showed that three out of four students (75%) participated in gambling activities during the previous year. About 2% of students reported that betting money caused them problems and 2% stated that they would like to stop betting but do not think they can.<sup>40</sup>

## Sexual Practices

In addition to unplanned pregnancies, unsafe sexual behaviours can lead to serious conditions such as sexually transmitted diseases (STDs), infertility and HIV infection. HIV infection can be prevented by practising safe sex, which entails the use of a condom during any form of insertive intercourse or the adoption of non-insertive forms of sexual interaction that avoids person-to-person transfer of body fluids which may harbour HIV (for example, semen, vaginal fluid and blood).

In the 1994–95 NPHS, among sexually active 15- to 19-year-olds (excluding those with a single sex partner and who were married, in a common-law relationship, divorced or widowed), 51% of females and 29% of males reported having had sex without a condom in the past year. Among youth aged 20 to 24, 53% of sexually active females and 44% of sexually active males reported having had sex without a condom during the previous year (Exhibit 5.15).<sup>41</sup>

Twenty-one percent of sexually active males aged 20 to 24 reported that they had multiple sexual partners and did not use condoms in the past year, as did 17% of females aged 20 to 24, 21% of females aged 15 to 19 and 15% of males aged 15 to 19 (Exhibit 5.16).<sup>42</sup>

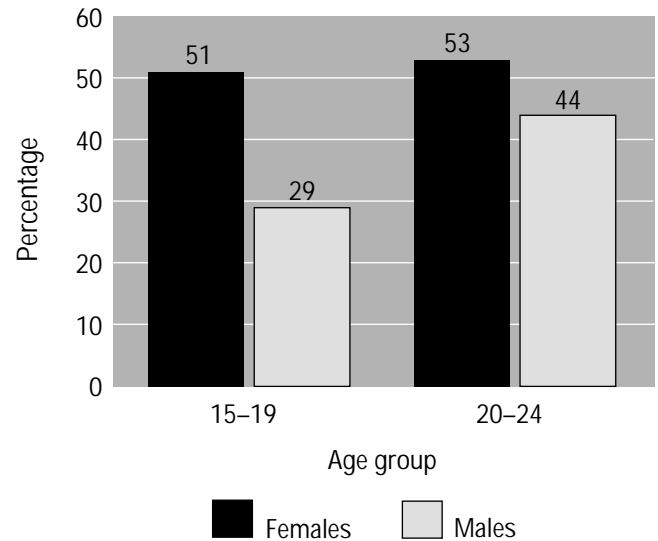
Findings from the four-province Atlantic Student Drug Use Survey (1998) were consistent with these results. The Atlantic study found that 26% of Grade 9 students, 37% of Grade 10 students and 58% of Grade 12 students had sexual intercourse during the previous year. Among sexually active students, 40% had more than one sexual partner. Fifty percent of sexually active students had unplanned intercourse on at least one occasion when under the influence of alcohol or another drug. Condoms were not consistently used, particularly among older students.<sup>43</sup>

### ***HIV Testing***

In 1996–97, 15% of men and 15% of women aged 18 and over reported in the NPHS having had an HIV test at some point in their lives. Adults aged 25 to 34 were most likely to have had an HIV test.

Exhibit 5.15

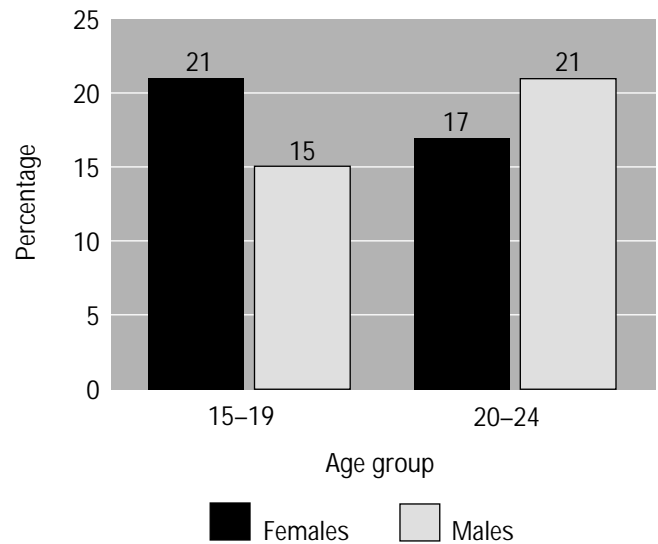
Percentage of Sexually Active 15- to 24-Year-Olds Who Never or Sometimes Used a Condom in the Past Year, by Age Group and Sex, Canada (Excluding Territories), 1994–95



Source: Galambos, N., and Tilton-Weaver, L. "Multiple-Risk Behaviour in Adolescents and Young Adults." *Health Reports* 10, 2 (Autumn, 1998). (Data based on 1994–95 NPHS).

Exhibit 5.16

Percentage of Sexually Active 15- to 24-Year-Olds with at Least Two Sex Partners, Who Did Not Use Condoms in the Past Year, by Age Group and Sex, Canada (Excluding Territories), 1994–95



Source: Galambos, N., and Tilton-Weaver, L. "Multiple-Risk Behaviour in Adolescents and Young Adults." *Health Reports* 10, 2, (Autumn, 1998). (Data based on 1994–95 NPHS).

An in-depth analysis of sexual health practices in 1997 revealed that among Canadians who reported having two or more sexual partners in the past year and not using condoms consistently, 53% of men and 38% of women had never been tested. This finding suggests that substantial numbers of Canadians may be HIV-positive, but unaware of their infection.<sup>44</sup>

### ***Multiple Risk Behaviours***

Risk behaviours generally emerge during adolescence and have important implications for both the immediate and future health of Canada's young people. While most youth experiment with at least one potentially risky behaviour, a minority engage in several. As noted in references to the recent Atlantic student surveys, certain combinations can be particularly hazardous, such as alcohol, illicit drug use and impaired driving; or alcohol, other drug use and unsafe sexual practices.

A recent analysis based on the 1994–95 NPHS that examined multiple risk behaviours by youth aged 15 to 24 focused on smoking, binge drinking, sex with multiple partners and sex without a condom. Males were somewhat more likely than females to engage in multiple risk behaviours. Among males, 32% reported no risk behaviours; 26% engaged in one risk behaviour; two risk behaviours were reported by 24% of males and 19% reported engaging in three or four risk behaviours. Among females (also aged 15 to 24), 39% reported engaging in none of the four risk behaviours; 28% reported one risk behaviour; 19% reported two risk behaviours and 14% engaged in three or four of these behaviours.<sup>45</sup>

The patterns of risk behaviour differed as well. Among females who engaged in a single risk behaviour, nearly half reported binge drinking and about one-third reported smoking. Among single-risk males, binge drinking was by far the most typical risk behaviour — reported by 80%. The most common two-risk combination for both sexes was smoking and binge drinking. However, among males, almost as many reported the combination of binge drinking and unsafe sex.<sup>46</sup>

## **Young Canadians: A Summary of Personal Health Practices**

(Unless otherwise noted, the source of the information presented in this section is the 1996–97 NPHS.)

Adolescence and early adulthood are times when young people make important decisions related to sexuality, physical activity, nutrition and the use of alcohol, tobacco and other drugs. As we take a closer look at these years, we find significant differences in behaviours among young and older teens and those in their early 20s, and between males and females.

**Physical activity:** Rates of leisure-time physical activity dropped quickly as age increased, and there were large differences between males and females:

### **Percentage who are classified as "active" in their leisure time**

<b>Age</b>	<b>Males</b>	<b>Females</b>
12 to 14	54%	33%
15 to 17	53%	31%
18 and 19	39%	26%
20 to 24	32%	22%

## A Summary of Personal Health Practices ... continued

**Smoking:** Rates of smoking are higher among young women aged 12 to 17 than young men in the same age group. In the age group 18 to 24, men are more likely to smoke than women.

**Healthy weights:** Young women were more likely than young men to be concerned about their weight. In 1994, 28% of girls aged 12 to 14, 38% of those aged 15 to 19, and 43% of those aged 20 to 24 were trying to lose weight. Over half of the women in the age group 20 to 24 who were trying to lose weight were already within the healthy weight range.<sup>47</sup>

**Healthy eating:** Among 15-year-olds, only 39% of girls and 40% of boys ate whole wheat bread once a day or more; 25% of girls and 32% of boys ate candy or chocolate bars once a day or more.<sup>48</sup> Forty-eight percent of young women but only 19% of young men aged 15 to 19 reported that they were taking action to reduce dietary fat.

**Drinking:** The amount of alcohol consumed at one time increased with age for both genders. After age 18, young men drank significantly more than young women. At ages 18 and 19, young women were slightly more likely than young men to drive after drinking; after age 20 this pattern was dramatically reversed.

Age	Percentage of drinkers who drank five or more drinks on at least one occasion		Percentage who drove after drinking	
	Male	Female	Male	Female
12 to 14	16%	15%	—	—
15 to 17	53%	46%	—	—
18 and 19	71%	59%	17%	19%
20 to 24	71%	60%	23%	9%

**Bicycle helmet use:** While 12- to 14-year-olds were the most likely of all age groups to wear a bicycle helmet (40%), young people aged 15 to 19 were the least likely to wear one (15%).

**Sexual practices:** Among sexually active young people (aged 20 to 24), 48% reported that they never or sometimes used condoms in the past year. In the age group 15 to 19, 40% reported inconsistent or non-use of condoms.<sup>49</sup>

**Multiple risk behaviours:** Young men were more likely than young women to report multiple risk-taking behaviours. While smoking and binge drinking was the most common combination for both sexes, almost as many young men reported binge drinking combined with unsafe sex.<sup>50</sup>

## Discussion

### ***Influences on Personal Health Practices***

This chapter has demonstrated that income, education and culture, in some circumstances, have a powerful influence on personal lifestyle “choices.” This suggests that information, health education and efforts to teach personal behaviour change skills are not enough. It also suggests that Canadians with low incomes need access to the resources and supports available to higher-income Canadians when it comes to active living, healthy eating and other personal health practices.

This chapter also illustrates the efficacy of broad policy and legislative approaches that change the environment around individuals. For example, increases in smoking behaviour among young people after taxes on cigarettes were reduced substantiate the well-known fact that youth tobacco use is extremely price sensitive.<sup>51</sup> The success of seatbelt (and, to some extent, bicycle helmet) legislation suggests that legislative strategies may be as effective as (and possibly even more effective than) health education in supporting behavioural change. Probably a combination of strategies would be most effective.

### ***Priorities for Action***

As shown in Chapter 1, lung cancer cases and deaths due to lung cancer among women continue to increase. The trend toward increased smoking among girls in Canada foreshadows an epidemic of lung cancer in women 30 years from now, as well as substantially increased rates of heart disease if present rates continue. Why have strategies to reduce and prevent smoking among young people been less effective with girls than with boys? What are the factors in the surrounding environment that cause young women to smoke? What is the relationship between smoking, physical activity and young women's desire to be thin? It is time to ask these questions to young women themselves and to work with them to devise comprehensive strategies to reduce smoking behaviour.

While preventing smoking initiation altogether is most desirable, delaying the onset of smoking (for both sexes) has also been shown to be an important strategy. Starting to smoke at an early age (e.g. 15 or younger) is associated with heavy smoking and a lower probability of quitting in later life.<sup>52</sup> Thus, efforts to prevent or delay the initiation of smoking in preadolescence and early adolescence may be particularly important, especially among girls and in Aboriginal communities in which young people tend to begin smoking and tobacco use at very young ages.

The recent U.S. Surgeon General's Report on Physical Activity<sup>53</sup> has confirmed that increased levels of physical activity by all age groups can result in both health gains and reduced costs in the health-care system. Effecting a change in the level of activity among the inactive population stands to accomplish the most in terms of population health gains. Accordingly, the federal, provincial and territorial ministers responsible for fitness, recreation and sport set a goal of reducing the number of inactive Canadians by 10% by the year 2003. To achieve this goal, there will need to be a concerted effort to remove the barriers to active living among low-income, multicultural and indigenous groups. The factors most often cited as deterring low-income adults, children and youth from

participating in sport, recreation and fitness activities include lack of time, cultural concerns, lack of motivation, and user fees. In view of the low activity levels of Canadian children, renewed efforts to bring quality daily physical activity into school programs also need to be supported.

The launching of *Canada's Guide to Healthy Physical Activity* provides an important opportunity to raise awareness and knowledge about the whys and hows of active living — much in the same way that *Canada's Food Guide to Healthy Eating* has helped to educate Canadians about healthy eating.

Encouraging Canadians to become more active is especially important in light of the increase in the number of Canadians who carry excess weight, and are therefore at increased risk for diabetes and heart disease. Efforts to promote healthy weights will need to combine three messages — active living, healthy eating and positive body image. These three behaviours are most likely to lead to healthy weights without increasing weight preoccupation among vulnerable groups.<sup>54</sup>

Efforts to increase active living will need to be sensitive to the fact that sun exposure is often greatest while engaging in activities associated with an active lifestyle. Reducing sun exposure for children can be accomplished by providing more shaded areas in public places and parks, scheduling outdoor events at hours outside midday, making hats and sunscreen available, educating parents and children about the need to wear sunglasses and training child and youth workers about sun safety (see Chapter 4).

The dramatic increase in the relationship between HIV/AIDS and injection drug use is a major concern. Injection drug use also accounts for the great majority of cases of hepatitis C infection, and is associated with a wide range of related health and social problems.

In the new millennium, the mobility of injection drug users and global access to injection drugs are likely to increase. Reducing HIV infection and other harms associated with injection drug use (IDU) is a complex issue that brings into play legal and ethical issues, as well as having major implications for the health and social service systems in each province and territory. A comprehensive plan to address this problem is required now. Strategies should take a harm-reduction approach, with the objective being to normalize the life of the individual, reduce criminal activity associated with injection drug use, reduce the incidence of IDU and unprotected sexual activity, and facilitate a return to employment. Further research is urgently required on this issue since the problem is complex and its magnitude and characteristics are not well documented.

Risk-taking behaviours among youth remain stubbornly high, and in many areas like tobacco use, binge drinking and cannabis use, they appear to be increasing. Of particular concern is the trend of a significant proportion of adolescents and youth engaging in hazardous combinations of multiple risk behaviours. Recent surveys show alarming rates of multiple risk behaviours among high school students. These rates pale in comparison, however, to those for out-of-the-mainstream youth and street youth.

In a recent review of research and consultation documents that captured young people's views, youth were critical of the nature of the information and the timing of their courses in sex education. Many wanted a broader approach that would include more exploration of topics like love, the positive aspects of sexuality and sexual preference. Youth in small communities expressed concerns about access to condoms and the lack of privacy and confidentiality in their environment.<sup>55</sup>

As noted in previous chapters, there are many reasons to be concerned about the health of Canada's young people, including high rates of abuse, poverty and unemployment; low rates of self-esteem and psychological well-being; and high rates of death due to fatal unintentional injuries and suicides. In an environment characterized by such powerful, negative determinants of health, the tendency of some youths to engage in risk behaviours is not surprising.

Since *A New Perspective on the Health of Canadians* first identified lifestyle behaviours as a primary determinant of health, many governmental and non-governmental programs have worked to change individual behaviours. This approach has worked for some — but less so for those lacking the requisite environmental, social and personal supports and resources. Efforts to educate individuals and build personal skills for change must now work hand-in-hand with efforts to structure an environment around the individual that supports healthy lifestyle decisions. Nowhere is this likely to be more important than with youth.

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## Health Services

*The vast majority of Canadians who participated in our research were immensely proud of the type of health care system that has been built in Canada. They had an abiding sense of the values of fairness and equality, and do not want to see a system in which the rich are treated differently from the poor.*

— National Forum on Health, Values Working Group Report, 1997.

**H**ealth services, particularly those designed to maintain and promote health and prevent disease and injury, contribute to population health. Preventive and primary health-care services such as prenatal care, well baby clinics and immunization are important for maternal and child health (Chapter 3). Services that educate children and adults about health risks and healthy choices, and those that encourage them to adopt healthy living practices, make an important contribution (Chapter 5). Services to help seniors maintain their health and independence are important as well (Chapter 7). And community environmental health services help ensure the safety of our food, water and living environments (Chapter 4).

When people are sick, they look to the curative side of health services to help them regain their health. This chapter focuses on some of the key aspects of treatment and secondary prevention that are part of the health services continuum of care. It also takes a brief look at the use of complementary or alternative care in Canada.

The principles of the *Canada Health Act* apply to the provision of medically insured services in all Canadian jurisdictions. These include universality, portability, accessibility, comprehensiveness and public administration. This chapter examines several aspects of health services in Canada, with a particular emphasis on accessibility.

A single chapter on health services cannot do justice to the complexity of this determinant of health. As stated at the outset, this report is not intended to be a “report card” on the health-care system. It does, however, shed light on some of the major challenges to a system that has been undergoing restructuring. It draws primarily on information in the *Statistical Report on the Health of Canadians* related to four dimensions of health services: health expenditures and the provision of services, access to and utilization of health services, unmet health-care needs and alternative care. Information on the quality of services was not readily available; when it does become available, it should be the focus of a complementary, more detailed report on health services as a determinant of health.

In the 1990s, all of the provinces and territories underwent health-care reform to varying degrees. Certain trends emerged over time, including a shift from centralized governing bodies to regional health authorities, a growing shift in emphasis from institutionally focused care to community-based care, decision making based on need and the best available evidence, and funding of health services at sustainable levels.

Over the past several years, governments have been successful in slowing health-care expenditures. However, the effects of these restrictions, including the increased burden on women, families and communities, and longer waiting times for institutional and community services, have yet to be documented at a national level.

## Definitions and Measures

- ◆ **Unmet health-care needs:** In the NPHS, “unmet health-care needs” were based on self-report; that is, a person required some health care on at least one occasion but did not receive it. Respondents who had at least one unmet health-care need in the past year were asked to identify the category: physical, emotional/mental, regular check-up or care of an injury.
- ◆ **Home care:** In the NPHS, home care was defined as health-care or homemaker services received at home with all or part of the cost borne by the government.

As noted in a recent report, “the efforts of all levels of government to improve their fiscal health have taken their toll on the health-care system, as well as the public’s confidence in it.” The public’s assessment of the overall quality of the health-care system, although still largely favourable, has deteriorated significantly since the beginning of this decade. In February 1998, 29% of Canadians rated Canada’s health-care system as “excellent” or “very good,” down from 61% in May 1991.<sup>1</sup>

This points to the need for increased accountability for the effectiveness and quality of services by both governments and managers within the system. Canadians need to know how well the system performs in relieving pain and suffering, restoring, promoting and protecting health, and providing compassionate care to vulnerable groups.

This form of accountability is an emerging priority for regional health authorities and governments across Canada. Indeed, the lack of data systems to collect this information is a major gap.

At the same time, an examination of current and emerging trends shows that despite financial slowdowns, the core principle of universality has not been noticeably compromised. Access to insured medical services in Canada remains largely unrelated to income. On the other hand, access to needed health services outside of the insured system, including dental services and prescription medications, is seriously restricted for many low-income Canadians. Those who have neither private nor publicly assisted supplementary health benefit plans are most likely to “fall between the cracks.”

## Highlights

***In the early to mid-1990s, governments were successful in slowing public health-care expenditures. However, for the most part, universality of access has not been jeopardized, and detrimental effects to health appear to have been largely avoided.***

- ◆ In spite of population growth, the annual growth rate of Canada’s insured health-care expenditures fell from 11.1% (between 1975 and 1991) to 2.5% between 1991 and 1996. This was largely as a result of reductions in Canadian Health and Social Transfer payments, which increased pressures to control spending and reform the system. However, the 1999 federal budget provided a significant increase in health transfer payments over the next few years.
- ◆ Consistent with a decline in hospital expenditures, there has been a decline in the total days spent in hospitals and in the average length of stay. The shift in the place of care away from the hospital to the community and the home raises concerns about the increased financial, physical and emotional burdens placed on families, particularly on women.
- ◆ Despite slowdowns in health-care spending, most major measures of population health in Canada have continued to improve. By most internationally recognized indicators of health status, Canada continues to rank among the healthiest countries in the world (Chapter 1).

***Concerns remain about access to non-insured services and the quality of care.***

- ◆ At the time of writing, there were few data available on quality of care or the impacts of restructuring upon quality of care. A 1998 survey reflected Canadians’ growing dissatisfaction with the quality of care. Only 24% of Canadians described the overall quality of care they received during the previous year as “excellent” and only 28% described their overall hospital experience as “excellent.” Further research on quality of care is required.

- ◆ Access to dental services, vision correction and required prescription drugs was strongly linked to income and insurance coverage. Canadians with low incomes who did not have publicly assisted insurance or employee health benefits were the most likely to have little or no access to these necessary services.
- ◆ In spite of shorter hospital stays, reduced utilization of emergency services and an increase in the proportion of older Canadians (who are most likely to use home-care services), data from the NPHS showed that publicly sponsored home-care service use did not increase significantly between 1994–95 and 1996–97. However, some provincial utilization data suggest that public expenditures and the use of home care did increase during that time. Further research is required to clarify this discrepancy.
- ◆ It is reasonable to assume that while there were likely some unmet needs in home care, most of the increased need for help at home was picked up by informal caregivers, who are most often women. While most women who cared for others did not claim that this was a burden, some 27% said that their caregiving affected their own health and two-thirds of working women aged 25 to 44 reported job repercussions as a result of their caregiving activities. Further research on these issues is required.
- ◆ Expenditures for medication and the use of prescription drugs have increased dramatically since 1975. Thirty percent of Canadians over age 12 and 46% of Canadians aged 75 and older reported using three or more medications over a two-day period in 1996–97. While 74% of high-income Canadians had prescription drug plans, this benefit was available to only 53% of middle-income Canadians and 38% of low-income Canadians.

***Better measures and information gathering systems are needed to increase accountability.***

- ◆ This chapter identifies a number of information gaps related to the effectiveness of health services and to the reasons for utilization changes in areas such as home care and emergency services. In addition, more information is needed on long-term care, mental health services and palliative care.

## Health Service Expenditures

Countries with the highest health expenditures do not necessarily have the best health outcomes. Recent data from the Organisation for Economic Co-operation and Development (OECD) illustrate this point. Exhibit 6.1 shows Canada's health expenditures per capita, expenditures as a percentage of gross domestic product (GDP), life expectancy at birth and potential years of life lost (PYLL) per 100,000 population, as compared with seven other OECD nations: the United States, Germany, France, Australia, Japan, New Zealand and the United Kingdom.

Although the United States ranked first among the eight OECD nations in expenditures per capita and expenditures as a percentage of GDP, it ranked last in terms of life expectancy and potential years of life lost. Part of the explanation for this may be that much of the U.S. spending on health services is private spending, whose benefits are

not distributed equally across the population. Thus, while those who can pay for health insurance (or pay directly for services) may be healthier, the uninsured or under-insured derive limited benefits from the overall level of health-care spending. In contrast, Japan ranked only sixth in terms of health-care expenditures per capita, and seventh in terms of percent of GDP devoted to health care, but first overall on both life expectancy and potential years of life lost. Canada ranked third overall in health expenditures per capita, and fourth in terms of percentage of GDP devoted to health care, but second in terms

Exhibit 6.1 Health Expenditures, Life Expectancy and Potential Years of Life Lost (PYLL): Selected OECD Countries

Country	Health-care expenditures per capita <sup>a</sup>	Rank	Total health expenditures % of GDP	Rank	Life expectancy (1996) <sup>b</sup>	Rank	PYLL per 100,000 population <sup>c</sup>	Rank
United States	\$4,909	1	14%	1	76.1	8	6496	8
Germany	\$2,339	2	10.4%	2	76.8	7	4921	5
Canada	\$2,095	3	9.3%	4	78.5	2	4368	3
France	\$2,051	4	9.9%	3	78.1	4	4977	6
Australia	\$1,805	5	8.3%	5	78.2	3	4148	2
OECD median	\$1,747	—	7.6%	—	77.2	—	4763	—
Japan	\$1,741	6	7.3%	7	80.3	1	3421	1
New Zealand	\$1,352	7	7.6%	6	77.1	5	6059	7
United Kingdom	\$1,347	8	6.7%	8	76.9	6	4653	4

Notes:

a 1997, US \$, adjusted for cost-of-living differences

b Life expectancy at birth

c 1995

Source: Organisation for Economic Co-operation and Development. *OECD Health Data 1998*. (CD ROM)

of life expectancy, and third in potential years of life lost.

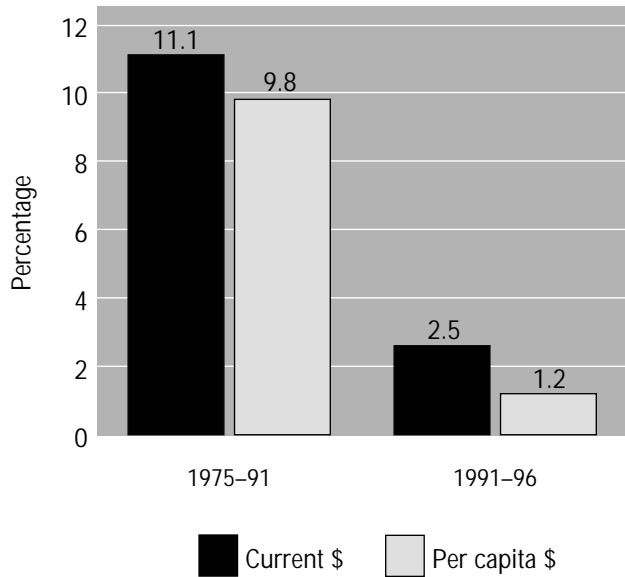
The OECD comparison suggests that enhancing health goes far beyond how much money is spent on health services. It also confirms that despite recent slowdowns in health-care spending, the overall health of Canadians has continued to improve, as documented in Chapter 1.

In recent years, governments have made a concerted effort to control public expenditures on health services. While this has not resulted in a reduction in the absolute amount of money being spent, it has slowed the relentless double-digit, yearly increases of past decades.

In 1996, Canada's total health expenditures (public plus private) were \$75.3 billion, representing 9.2% of the Gross Domestic Product. Between 1975 and 1991, Canada's total health expenditures increased at an average annual rate of 11.1%. Between 1991 and 1996, the average annual rate of growth fell to 2.5% (Exhibit 6.2). The slowdown was most noticeable in expenditures related to hospitals and physicians.

Exhibit 6.2

Average Annual Change in Total Health Expenditures, Current Dollars and Dollars Per Capita, Canada, Selected Periods



Source: Canadian Institute for Health Information. *National Health Expenditure Trends, 1975-1998*.

Historically, increases in total health expenditures tend to be related more to increases in the prices of health-related goods and services than to either population growth or increased utilization.<sup>2</sup> As such, it is important to consider health expenditure data with the effects of inflation removed (i.e. in constant dollars).

As Exhibit 6.2 shows, health-care expenditures on a per capita basis increased by 9.8% between 1975 and 1991. Between 1991 and 1996 the per capita rate of growth in spending fell dramatically to 1.2%.

Much of this slowdown in expenditures appears to have been attributable to a \$6 billion reduction in Canada Health and Social Transfer payments between 1991 and 1996. However, the federal budget of February 1999 provided significantly increased levels of health-care funding.

In 1996, there was considerable variation in health-care spending across the country (Exhibit 6.3). High per capita costs

in the Northwest Territories (including Nunavut) and the Yukon Territory reflect the cost of providing services in a large geographic area with a small population base.

All provinces and territories experienced a pronounced drop in rates of expenditure growth after 1991. These rates were based on the total health-care spending by both public and private sectors. Some regions — Saskatchewan, Alberta, Nova Scotia, Quebec and the Yukon Territory — had decreases in expenditure growth in the mid-1990s, while the others grew after 1991 at rates that were low compared to those of the previous 20 years.

In 1996, hospitals accounted for the largest share (\$25.9 billion, or 34.3%) of all health expenditures, followed by expenditures for physicians (\$10.7 billion; 14.3%) and drugs (\$10.2 billion; 13.6%). From 1991 to 1996, hospital expenditures declined by 0.1% annually, spending on physicians increased at a rate of 1.0% annually, while expenditures on drugs increased at an annual rate of 5.9%.<sup>3</sup> This constitutes an important reorientation of spending priorities in Canada — with relatively more money being spent on the provision of drugs and relatively less on hospitals and physicians.



Exhibit 6.3

### Health Expenditures (Total, per Capita, and Proportion of Gross Domestic Product), by Province and Territory, Canada, 1996

	\$ (millions)	\$ per capita	% of GDP
◆ <b>Canada</b>	<b>75,304.1</b>	<b>2,513</b>	<b>9.2</b>
◆ Newfoundland	1,295.9	2,267	12.1
◆ Prince Edward Island	337.2	2,467	11.8
◆ Nova Scotia	2,144.6	2,274	10.9
◆ New Brunswick	1,807.1	2,371	10.8
◆ Quebec	17,059.0	2,309	9.5
◆ Ontario	29,545.1	2,624	8.9
◆ Manitoba	2,941.4	2,579	10.4
◆ Saskatchewan	2,525.7	2,477	9.0
◆ Alberta	6,648.9	2,380	7.1
◆ British Columbia	10,524.8	2,728	9.9
◆ Yukon Territory	102.6	3,267	8.7
◆ Northwest Territories	371.9	5,564	12.9

Source: Canadian Institute for Health Information. *National Health Expenditure Trends, 1975–1998*.

## Service Delivery

Reporting on service delivery across Canada is fraught with difficulties due to limitations of the available databases. System-based data collected at the provincial and territorial levels and compiled nationally are primarily hospital-based, whereas the system is increasingly community-based. Self-report data do not always match service delivery data. And sometimes data collected in some regions may not be aggregated or comparable at the national level. All of these issues must be addressed if we are to have accurate information on which to base measures of accountability for health services and their governance.

## Hospitals

In 1995–96, diseases of the circulatory system accounted for the most hospital days, followed by mental disorders (Exhibit 6.4). These estimates exclude hospitalization in psychiatric institutions, which normally result in stays of longer duration. If the latter are included, mental disorders account for the most hospital days — over 15 million in 1993–94.<sup>4</sup>

In contrast, hospitalization for childbirth accounted for 3.9% of hospital days and the average length of stay was quite short (2.9 days). Two areas that changed ranking order between 1990–91 and 1995–96 were nervous system disorders, which accounted for more hospital days than cancer in 1995–96, and musculoskeletal diseases which accounted for more days than childbirth that year.

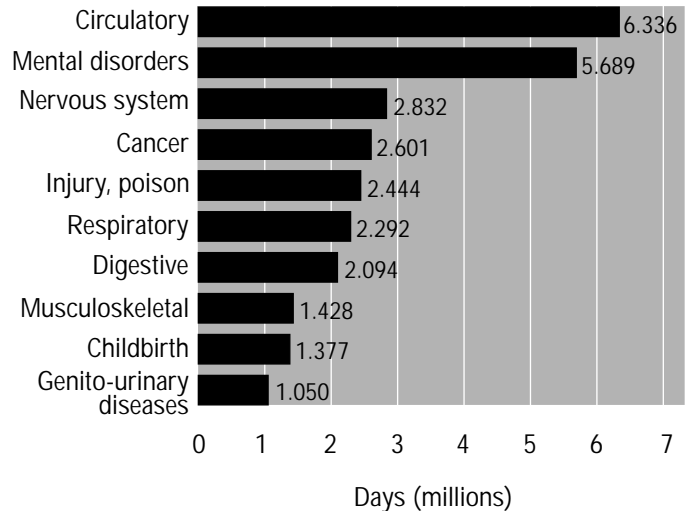
These changed standings were consistent with the increasing prevalence of chronic conditions such as arthritis, rheumatism and back disorders and the major role of nervous system disorders, and back and limb problems as causes of activity limitation during the same period.<sup>5</sup>

Consistent with the decline in hospital expenditures, there has been a substantial reduction in the number of hospitals in Canada as well as fundamental changes to the ways in which they deliver services. From 1986–87 to 1994–95, the number of public hospitals decreased by 14%, and the number of approved beds in public hospitals declined by 11%. As well, a common trend emerged in all categories of public hospitals: the number of outpatient visits increased, while inpatient days decreased.<sup>6</sup>

Changes in hospital stay practices are particularly relevant to women in at least two ways. First, due to childbearing and the tendency for women to live longer than men, women account for more days in hospital and more hospital separations. As such, changes in hospital policies regarding length of stay are relevant to women as clients. Second, early release policies have the potential to increase the burden of caregivers at home — who tend most often to be women.

In 1995–96, Canadians spent 35.5 million patient days in general and allied specialty hospitals (excluding psychiatric institutions) — a decline from 41.4 million days spent in hospital during 1990–91. These declines occurred despite an increase in the population of 1.8 million during that time period. The average length of hospital stays also declined from 11.5 days in 1990–91 to 11.0 in 1995–96 (Exhibit 6.5).

Exhibit 6.4 Total Hospital Days,\* by Major Causes, Canada, 1995–96



\* Excluding psychiatric institutions.

Source: Canadian Institute for Health Information. *Hospital Morbidity Database, 1994–95 and 1995–96.*

The average length of stay in hospital increases significantly with age, and time in hospital remains highly skewed toward older Canadians. Thus, with an aging population, the decline in hospital days is all the more remarkable. This may reflect the continuing improvements in the health of older Canadians observed in Chapter 1 and, as such, should help to allay concerns about the medical costs associated with an aging population. On the other hand, it may be that greater efficiencies were achieved with young and middle-aged patients, possibly due to the increasing use of ambulatory care, technological changes and improvements in drug therapies. It may also be that the burden of early release from hospital was shifted to family members and community services. Further research is needed to evaluate these factors.

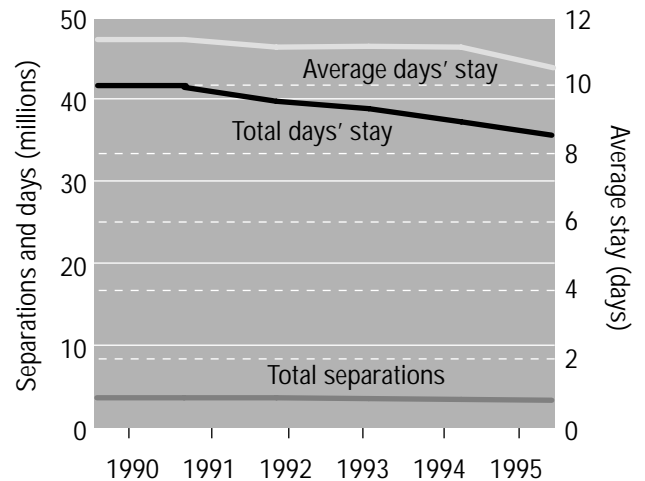
Contrary to the overall trend to reduce the length of hospital stay, there has been an upward trend in the average length of stay for treatment of mental disorders (that is, an increase in the number of patient-days in both acute-care and psychiatric hospitals, combined with a decline in the total number of hospital admissions for mental disorders). This suggests that less serious cases are increasingly being treated without hospitalization, while more severe and persistent cases continue to require inpatient treatment.<sup>7</sup> Whether trends in psychiatric hospitalization reflect changes in the mental health of the population as well as changes in the service system is a matter for research. Since most mental health care is now delivered in the community, the absence of a national database for community mental health services makes it difficult to examine mental health service delivery and its implications for population health.

### ***Emergency Services***

In 1996–97, 25% of Canadians aged 12 and over reported at least one visit to an emergency department. As Exhibit 6.6 shows, there has been a substantial decline in visits to emergency departments in Canada (31% from 1991–92 to 1995–96).

Exhibit 6.5

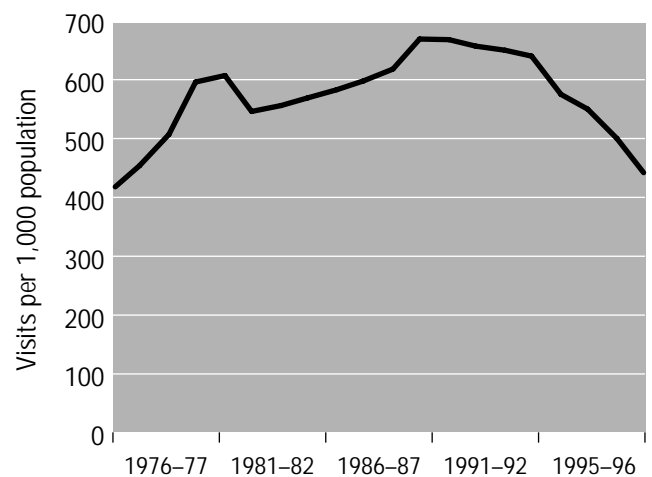
### Hospital Days, Average Stay and Separations, Canada, 1990 to 1995



Source: Canadian Institute for Health Information. *Hospital Morbidity Database, 1994–95 and 1995–96.*

Exhibit 6.6

### Emergency Clinic Visits, Canada, 1976–77 to 1995–96



Source: Statistics Canada. *Health Indicators, 1999.* (Statistics Canada Catalogue No. 82-221-XCB).

This may be partly attributable to the closing of hospital emergency departments, as well as to an increase in the number of walk-in clinics and other types of urgent care treatment services. Further database development and research are required to clarify the factors associated with this change.

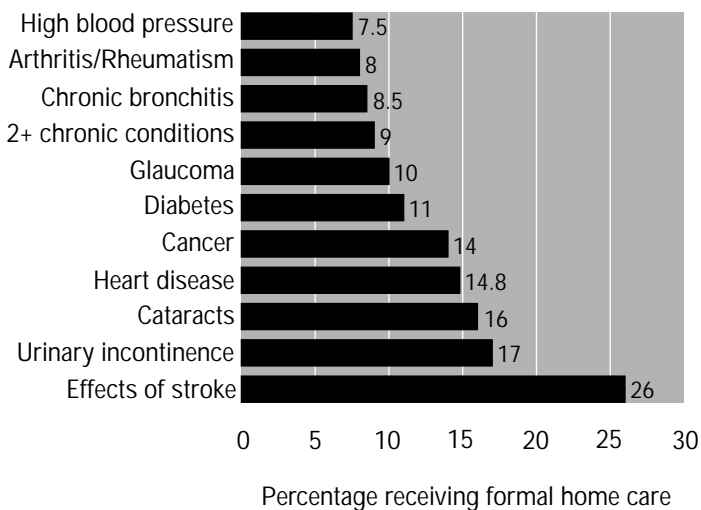
## Home Care

As the population ages and health-care services are reorganized, home-care services become increasingly important as a potential means to maintain health and independence, and to contain costs. There is some uncertainty, however, regarding the use of publicly funded home-care services in Canada. According to the 1996–97 NPHS, 2% of Canadians aged 18 and over (450,000) reported use of publicly funded home-care services — a rate largely unchanged from 1994–95. At the same time, many provinces reported increasing provision of home-care services and related expenditures over the same period. For example, data provided by the Ministry of Health in British Columbia showed an increase in home-care visits from 627,000 (176 per 1,000 population) in 1994–95 to 856,000 (223 per 1,000 population) in 1996–97.<sup>8</sup> This discrepancy may reflect an increase in the number of visits per person, rather than an increase in the number of persons receiving home-care services. Further research is required to help clear up this apparent contradiction.

The rates of reported home-care utilization reported in the 1996–97 NPHS were highest among seniors, particularly older women and people who lived alone. Half of home-care recipients reported their health as “poor” or “fair”; 56% had two or more chronic conditions and 28% had spent eight or more nights in hospital in the previous year. The home-care services most commonly accessed were nursing (46%) and housework (42%).

As shown in Exhibit 6.7, the odds of receiving publicly funded home care for people suffering from the effects of stroke, urinary incontinence, cancer and other conditions were higher than for those with arthritis, even though a home-care worker’s case load would likely include more people with arthritis. This reflects the fact that while arthritis is more common than stroke in the non-institutionalized population, treatment for stroke is more intense.<sup>9</sup>

Exhibit 6.7  
Percentage Who Received Formal Home Care in Past Year, by Presence of Chronic Conditions,\* Household Population Aged 18+, Canada (Excluding Territories), 1994–95



\* As diagnosed by a health professional.

Source: Statistics Canada. *National Population Health Survey, 1994–95*.

There was a clear inverse relationship between household income and receiving publicly funded home care. This may reflect the poorer health status of people with low incomes, the fact that many older people who are prime users of health care have low incomes, and the reality that people with higher incomes are better able to afford private home-care services.

Well over half of those needing help to carry out daily activities including personal care, housework and shopping did not report receiving publicly funded home care. These findings are consistent with a recent study in Saskatchewan of hospital patients discharged to their homes. Sixty percent of those who were assessed in hospital as requiring home care did not go on to receive formal services.<sup>10</sup>

Based on the information reported in Chapter 2 on informal support, it is reasonable to assume that many Canadians who did not access home care received informal assistance from family members and neighbours. As well, it is quite probable that some needs were not met.

### ***Long-Term Care***

As the population ages, discussion increasingly focuses on how to keep people in the community and out of health-care institutions. But when health fails, sometimes the only option is long-term residential care.

According to the NPHS, in 1995–96, just under one-quarter of a million Canadians were living in long-term care institutions. The vast majority (81%) of these institutional residents were aged 65 and over, and among this age group, 73% were women. Over one-half (58%) of older residents did not belong to groups or participate in group activities in the institution. An even larger proportion had no close friends outside the facility. Nevertheless, many older residents received support from a family member: 61% saw a relative once a week or more.<sup>11</sup>

### ***Quality of Care***

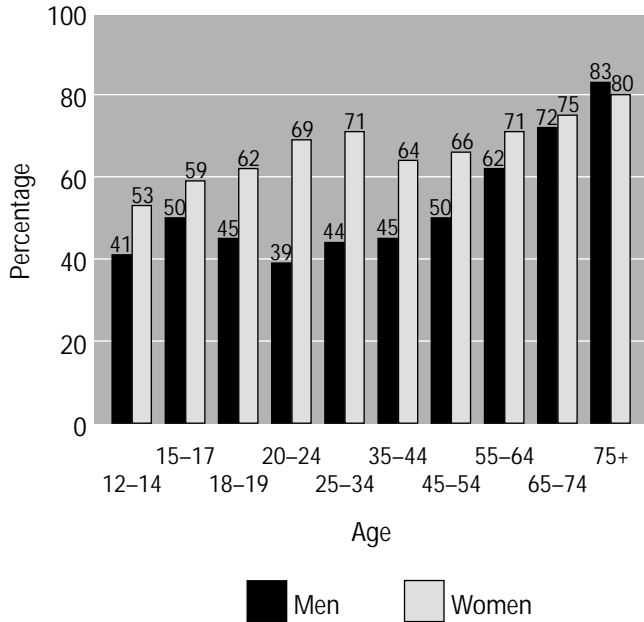
At the time of writing, virtually no data were available to describe the quality of health care in Canada, or to evaluate the impacts of health system restructuring on the quality of care received, including such important dimensions as the impacts of shifting care to communities and homes, the closure of hospital beds, and the waiting time to see a health specialist and/or to access health services. However, a recent poll revealed that only 24% of Canadians felt that the overall quality of care they received in the past 12 months was “excellent” and only 28% described their overall hospital experience as “excellent.” There is a clear need for further research on quality of care issues.<sup>12</sup>

## **Access to and Utilization of Health Services**

The most common focal point for the delivery of health services in Canada continues to be the general practitioner. Consistent with the principles of the *Canada Health Act*, the provision of these services does not seem to be related to the income of the patient. Nevertheless, there appear to be persistent language and cultural barriers to the provision and/or the utilization of services in certain circumstances.

Exhibit 6.8

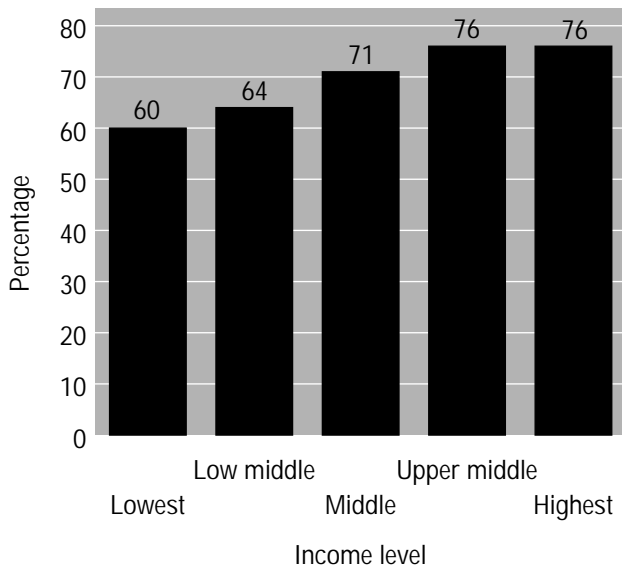
### Percentage of Canadians Reporting Two or More Visits to a Doctor, by Sex and Age Group, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

Exhibit 6.9

### Percentage of Women Aged 18+ Reporting a Pap Smear Test in the Past Three Years, by Income Level, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

## Visits to a General Practitioner or Family Physician

According to the NPHS, during 1996–97, 87% of women and 73% of men reported at least one visit to a physician. Women aged 18 to 54 were two to three times as likely as men in this age group to have seen a physician during the previous year. The highest rates of multiple physician visits were among Canadians aged 65 and over. In this age grouping, the rates of visits reported by men and women were most similar. In fact, among those aged 75 and over, men (83%) were slightly more likely than women (80%) to report two or more visits to a physician (Exhibit 6.8).

Information was not available on the reasons for these visits, although it is well documented that patterns of utilization are markedly different for women than for men. Further investigation into these differences is needed.

Lower-income Canadians reported somewhat more frequent visits to a physician, which is consistent with the higher rates of health problems among economically disadvantaged Canadians.<sup>13</sup> An analysis of the number of contacts with a medical doctor showed almost no variation between both short- and long-term immigrants and the Canadian-born population.<sup>14</sup> However, there may be differences in patterns of utilization of specific services based on country of birth, as illustrated by the finding related to women receiving Pap tests.

## Pap Smear Tests

Cervical cytology screening with a Pap smear can significantly reduce the incidence of and mortality from cervical cancer. Currently, Pap smears are recommended every three years until age 69 for women aged 18 and over. In 1996–97, 72% of Canadian women aged 18+ reported having a Pap smear within the preceding three years; 13% reported never

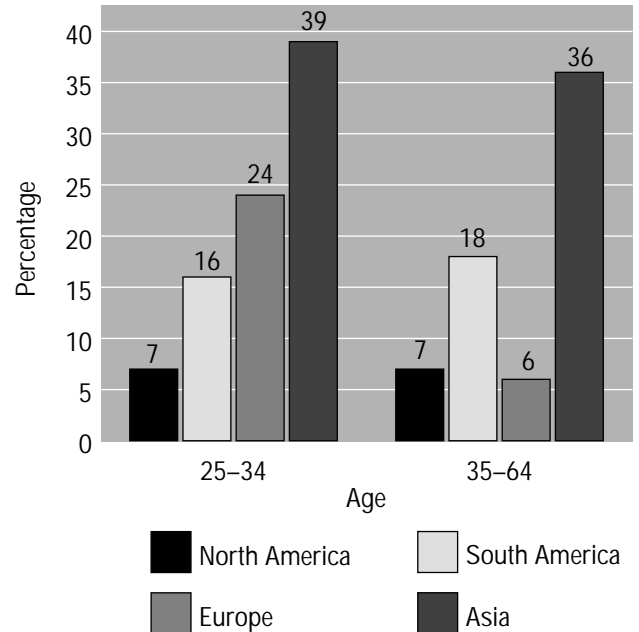
having had a Pap smear. This was a slight but important improvement over 1994–95 when 70% of women aged 18 and over reported having a recent Pap smear, and 15% reported never having had one.

Rates of Pap smear testing were related to education and income: 76% of women in the highest income bracket reported having been tested within the previous three years, compared with only 60% of women in the lowest income group (Exhibit 6.9).

Rates of Pap smear testing were even more strongly related to country of birth, according to a recent analysis based on the 1994–95 National Population Health Survey.<sup>15</sup> Among women aged 25 to 34 who were born in North America, only 7% reported never having had a Pap smear test. This increased to 16% among women of the same age who cited South America as their place of birth; to 24% of women born in Europe; and to 39% of women born in Asia. Similar results held for older women as well. Among women aged 35 to 64, the proportion who had never had a Pap smear increased from 7% among those born in North America to 18% among women born in South America and to 36% among those born in Asia (Exhibit 6.10).

Exhibit 6.10

### Percentage of Women Who Have Never Had a Pap Smear Test, by Age Group and Place of Birth, 1994–95



Source: Statistics Canada. *National Population Health Survey, 1994–95*.

## Mammograms

Early detection of breast cancer by mammograms has been shown to reduce mortality among women aged 50 to 69. Currently, mammography screening is recommended every two years for women in this age group. Most provincial and territorial governments have established organized programs to provide mammographic screening to women in this age group, and some also accept women above and below these ages. As well, considerable mammography screening is conducted in diagnostic clinics. Exhibit 6.11 shows the proportion of women aged 50 to 69 in 1996–97 who reported that they had had a mammogram within the last two years.

Exhibit 6.11

### Proportion of Women Aged 50 to 69 Reporting Having Had a Screening Mammogram within the Last Two Years, 1996–97

Province	%
◆ Newfoundland	29
◆ Prince Edward Island	56
◆ Nova Scotia	40
◆ New Brunswick	60
◆ Quebec	49
◆ Ontario	59
◆ Manitoba	50
◆ Saskatchewan	50
◆ Alberta	56
◆ British Columbia	54

Source: Statistics Canada. *National Population Health Survey, 1996–97*.

## Access to Health Professionals Other Than a Physician

Unlike access to universally insured medical services, access to health-related goods and services that are not universally insured (such as dental procedures, eyeglasses and mental health services by a non-physician) is strongly linked to income. Most income assistance programs offer some degree of vision care and dental coverage (although the terms of the coverage may be more restrictive than the terms for private and employer-sponsored coverage). Thus, inequities in access to these services and to (prescription) drugs are most likely greatest among Canadians who work for low wages and/or in jobs that do not offer supplementary health-care benefits. As we have seen in Chapters 2 and 3, women, young people and young families are most likely to be in this category. This has important implications for access to preventive dentistry for children and to needed eye care for all family members.

### Dental Visits

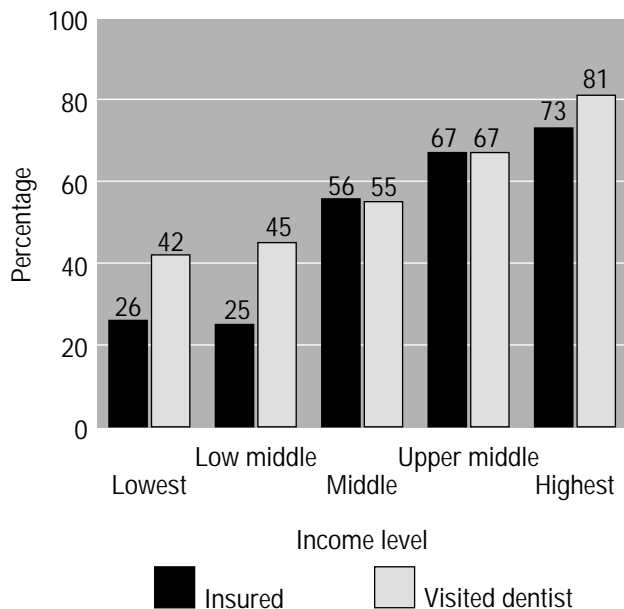
The next most common type of visit to a health professional other than a physician was to a dentist. Sixty-four percent of women and 60% of men aged 12 and older reported a dental visit during 1996–97. The highest rate of dental visits was reported by youth aged 12 to 14 (67%), 15 to 17 (71%), and 18 to 19 (61%), but the frequency dropped sharply to 48% among young people aged 20 to 24.

Income level and dental insurance were powerful determinants of accessibility to dental care: lower-income Canadians were the least likely to have dental insurance or to have visited a dentist during the past year. Among Canadians in the low middle income group, only 25% had dental insurance and only 45% visited a dentist during 1996–97. By contrast, 73% of high-income Canadians had dental insurance, and 81% reported visiting a dentist during the previous year (Exhibit 6.12).

Interprovincial differences in dental insurance coverage were marked, ranging from lows of 40% in Quebec and 43% in Newfoundland to highs of 62% in Alberta and 63% in Ontario.

Exhibit 6.12

Percentage of Canadians with Dental Insurance, and Percentage Who Reported Having Visited a Dentist, within the Past Year, by Income Level (Age-Standardized), 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.



In 1997, Aboriginal people reported lower rates of dental visits than the national rate, despite First Nations and Inuit people having dental care coverage as a non-insured health benefit. According to the First Nations and Inuit Regional Health Survey, 51% of the Aboriginal population on reserve reported visiting a dentist during the previous year.<sup>16</sup>

In 1994–95, relatively few recent non-European immigrants (40%) contacted a dentist, but the figure for those who had arrived more than a decade earlier was 58%.<sup>17</sup>

### ***Eye Examinations and Corrective Lenses***

Regular eye examinations to assess vision, prescribe corrective lenses and check for eye diseases such as glaucoma are important to well-being and one's ability to carry out daily activities. Provincial plans vary in their coverage of eye examinations. Most cover an annual checkup by an ophthalmologist or optometrist, but supplementary insurance generally is needed to pay for any corrective lenses that may be prescribed.

The 1996–97 NPHS shows that, during 1996–97, 42% of Canadians (44% of women and 39% of men) reported having had an eye examination. As with visits to a dentist, visits to an eye specialist were strongly related to income. As income increased, so too did the likelihood of having insurance for corrective lenses and of having a recent eye examination. Only 21% of Canadians in the lowest income bracket reported having eyeglass or contact lens insurance, and only 37% reported a recent eye examination. Sixty-four percent of Canadians in the highest income category reported having insurance and 47% reported a recent eye examination (Exhibit 6.13).

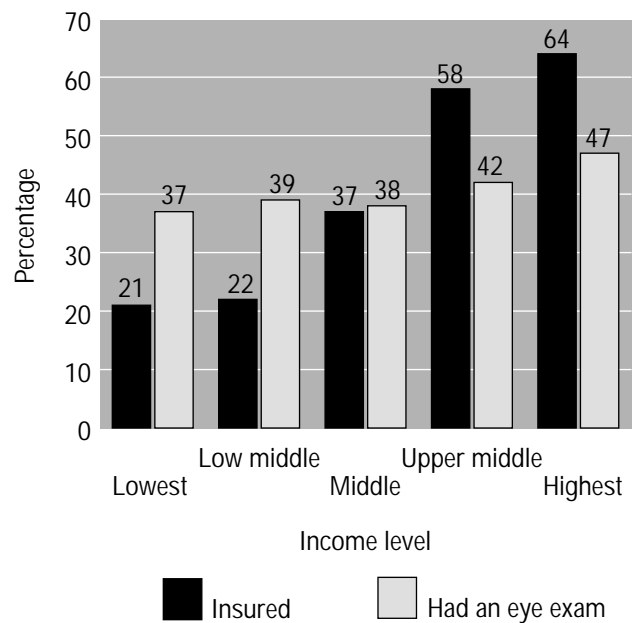
Again, there were wide variations between provinces. The proportion of citizens with insurance for visual correction varied from a low of 26% in Saskatchewan, to 34% in Quebec, 56% in New Brunswick and a high of 57% in Ontario.

### ***Visits to a Chiropractor***

According to the 1996–97 NPHS, in 1996–97, 10% of men and 11% of women reported at least one visit to a chiropractor. Visits to a chiropractor were also strongly related to income. Twelve percent of high-income Canadians reported a recent visit to a chiropractor, compared with only 6% of Canadians with low incomes.

Exhibit 6.13

Percentage of Canadians with Eye Glass/Contact Lens Insurance; Percentage Who Reported Having Had an Eye Examination within the Past Year, by Income Level (Age-Standardized), 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97.*

## Mental Health Services

Services in psychiatric hospitals are excluded from funding under the national health insurance program, but are funded by the provinces and territories. Psychiatric services in general hospitals, by a general practitioner or, upon referral, by a specialist (e.g. a psychiatrist) are also provided for by the provinces and territories under their respective health insurance plans. When delivered as part of a general hospital inpatient or outpatient service, nursing, psychology, occupational therapy, social work and other clinical services are normally covered by public health insurance plans. The provinces and territories may choose to extend this basic coverage by funding certain community-based mental health services delivered by non-physician practitioners.<sup>18</sup> Although social assistance programs and private health insurance plans may provide limited coverage for non-physician mental health services delivered outside of a hospital setting, it is reasonable to assume that low income remains a significant obstacle to accessing such services.

The 1996–97 NPHS results indicate that 3% of Canadians consulted a social worker and 2% consulted a psychologist during the preceding year. In addition, although the NPHS does not shed much light on this issue, many visits to family physicians are for a mental or emotional health problem.

## Medication Expenditures and Use

Between 1975 and 1994, Canadian expenditures on drugs increased from \$1.1 billion to \$9.2 billion. Expenditures per person, adjusted for inflation, more than doubled, rising from \$108 to \$232. Drug expenditures increased faster than any other major category of health care: their share of total health spending between 1975 and 1994 rose from 8.7% to 12.7%. Prescription drugs made up about 70% of this total — \$6.5 billion in 1994. The remainder was spent on over-the-counter drugs and personal health supplies.

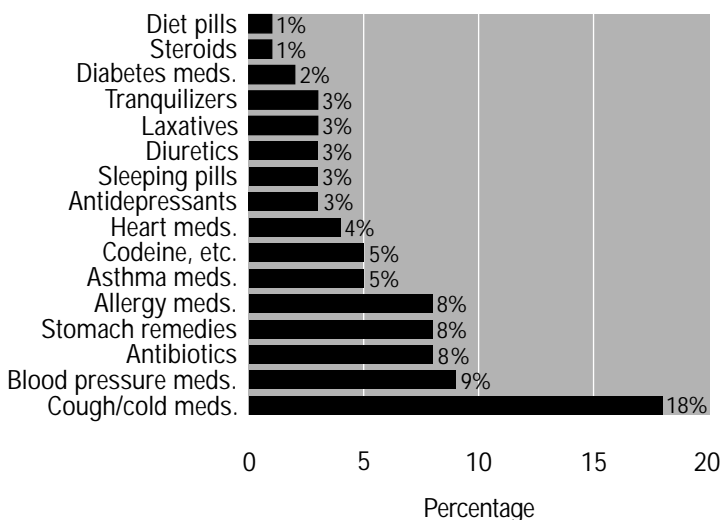
While private funding accounts for much of the total spent on all drugs, the public share of prescription drug expenditures has substantially increased since 1975.<sup>19</sup>

In recent years, increased spending on drugs has slowed down, but not as much as for hospitals and physicians. In 1996, spending on drugs accounted for \$10.2 billion or 13.6% of all health expenditures.<sup>20</sup>

In 1996–97 almost two-thirds of Canadians (60% of men and 67% of women) reported that they took some form of medication (prescription or over-the-counter) in the last two days, and half of these persons (30% overall) reported that they took three or more medications at the same time.

Exhibit 6.14

Percentage of Canadians Aged 12+ Who Used Medication in the Past Month, by Type of Medication, Canada, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

Exhibit 6.14 shows the most common types of medications used. In addition to these, 16% of women aged 12 to 49 reported using birth control pills and approximately 11% of women aged 30 and over were taking hormones.

Generally, medication use increased with age, although the use of allergy medications was highest among youth under the age of 25. Forty-nine percent of Canadians aged 12 to 14 reported the use of at least one medication within the previous two days. This increased steadily across age groups to 89% among seniors aged 75 and over. Twenty-nine percent of young Canadians aged 12 to 14 used three or more medications. This rose to 44% of men and 47% among women aged 75 and older. These proportions are substantially higher than the 20% of seniors who reported using the same number of medications a generation earlier.<sup>21</sup>

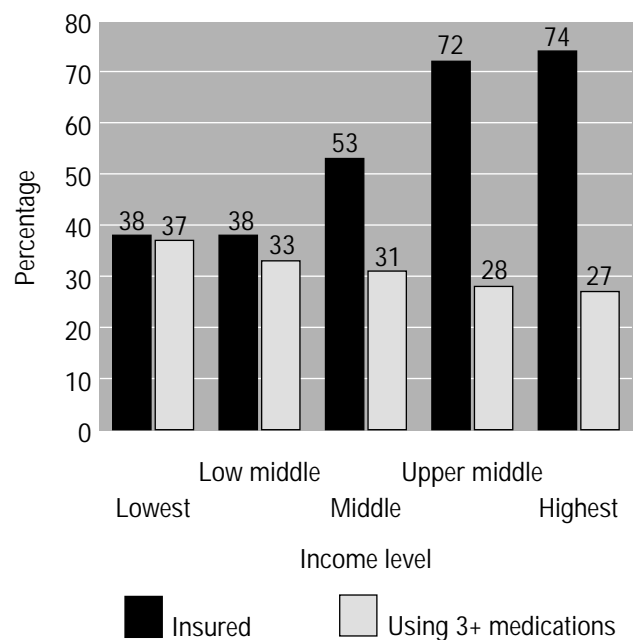
Across all age groups, women were more likely than men to be taking one or two medications, but less likely to be taking three at the same time. Women (5%) were more likely than men (2%) to be using antidepressants.

The prescription drug costs of almost two-thirds of Canadians aged 12 and over are covered to some extent by government plans and employee insurance. Similarly, prescription drugs are considered a non-insured health benefit for First Nations and Inuit peoples. Nevertheless, it appears that lower-income Canadians who are not eligible for social assistance benefits are at greatest disadvantage (Exhibit 6.15). While 74% of high-income Canadians had prescription drug plan subsidies, this benefit was available to only 53% of middle-income Canadians and 38% of low-income Canadians.

Drug insurance coverage from government plans or employee insurance varied among the provinces. Residents of Alberta (67%), Nova Scotia (67%) and Ontario (66%) were most likely to have drug insurance and residents of Saskatchewan (40%) and Manitoba (47%) were least likely to report having drug insurance.<sup>22</sup> However, since the NPHS results exclude children under the age of 12, provincial coverage might not be fully reflected, particularly in cases in which these plans focus on children.

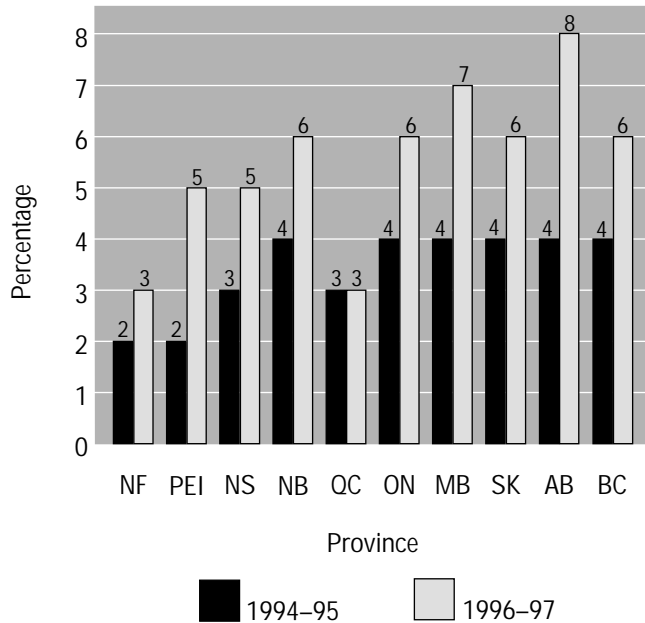
Exhibit 6.15

Percentage of Canadians with Insurance for Prescription Medications; and Percentage Taking Three or More Medications in the Past Two Days, by Income Level (Age Standardized), 1996–97



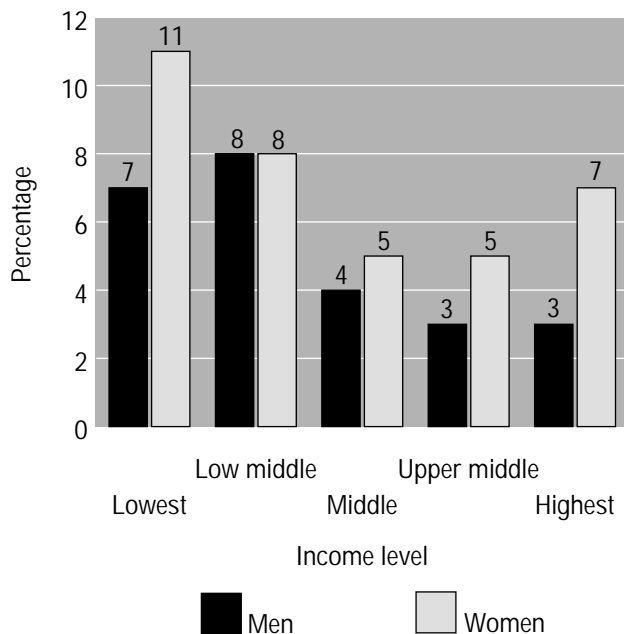
Source: Statistics Canada. *National Population Health Survey, 1996–97*.

Exhibit 6.16 Percentage of Canadians Reporting Unmet Health-Care Needs, by Province, 1994–95 and 1996–97



Source: Statistics Canada. *National Population Health Survey, 1994–95 and 1996–97*.

Exhibit 6.17 Percentage of Men and Women Reporting Unmet Health-Care Needs in the Past Year, by Income Level, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

## Unmet Health-Care Needs

In 1996–97, 5% of Canadians aged 12 and over (1.2 million) said that they had at least one unmet health-care need during the previous year (i.e. they required some health care on at least one occasion but did not receive it). This is a slight increase from 1994–95 when 4% of the population reported unmet health-care needs. Overall, 6% of women and 4% of men reported unmet health-care needs. More than 75% of those who reported an unmet need identified a physical health problem; 9%, an injury; and another 9%, an emotional health problem.

Although the overall level of unmet needs remained low, there were increases in every province except Quebec. In 1996–97, there was almost a threefold interprovincial variation in unmet health-care needs, ranging from a low of 3% in both Newfoundland and Quebec to a high of 8% in Alberta (Exhibit 6.16). These apparent increases in unmet health-care needs should be interpreted with caution, however, due to small sample sizes.

The highest rate of unmet health-care needs was reported by Canadians in the lowest income bracket. This relationship applied to both immigrant and Canadian-born citizens. Eleven percent of women and 7% of men with low incomes reported at least one unmet health-care need (Exhibit 6.17). Among women in the lowest income group who reported unmet health-care needs, 17% identified an emotional health issue as the source of their need. This may reflect the high levels of stress reported by women with low incomes (Chapter 1) and the fact that access to psychological and counselling services (except by a psychiatrist or other physician, or in a hospital setting) is not covered by public insurance schemes.

## Alternative Health Services

The number of Canadians aged 12 and over who reported using the services of an alternative health-care practitioner such as an acupuncturist, homeopath or massage therapist within the previous 12 months increased from 5% in 1994–95 to 7% in 1996–97. Exhibit 6.18 shows the most common types of alternative health-care services used.

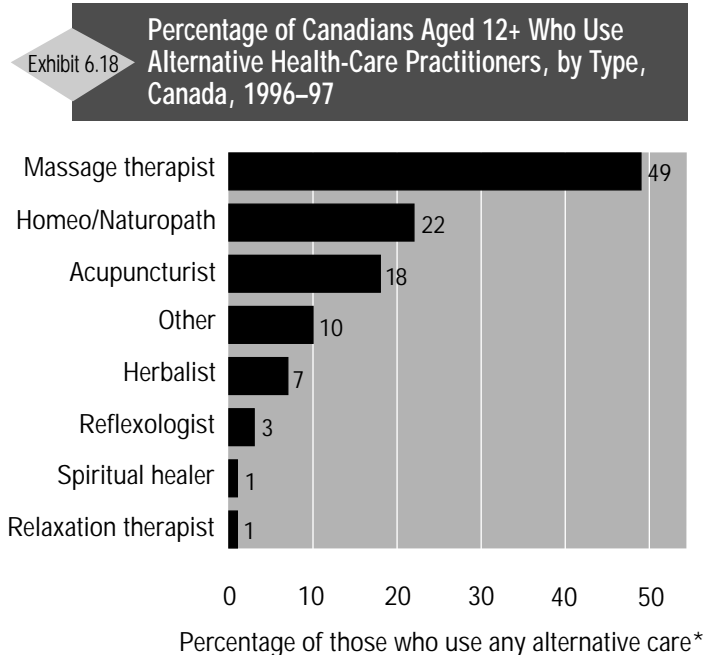
Women were one and one-half times more likely than men to have used alternative care providers in the previous year. The highest rates of use of these services were among women aged 25 to 44 (11%) and women aged 45 to 64 (10%).

Use of alternative health-care providers was higher among Canadians with a university education and among those with higher incomes. Nine percent of Canadians with a university degree reported the use of alternative health-care providers, compared with 3% of Canadians with less than a high school education. This profile suggests that well-educated Canadians may be more aware of different approaches and more likely to be able to afford them. It may also reflect a dissatisfaction with the current medical model of care and a perceived need for a more holistic approach to medical care.

The use of alternative health-care service providers was highest in British Columbia (11%), which may reflect the diverse ethnocultural characteristics of residents of that province. Unfortunately, the NPHS did not include residents of the Yukon Territory and Northwest Territories (including Nunavut) where the use of alternative health-care practices is more widespread. For example, in the 1993 Yukon Health Promotion Survey, 6% of Yukon residents reported the use of a massage therapist; 5% visited a traditional healer; and 2% visited an acupuncturist.<sup>23</sup>

A recent Angus Reid Report shows that when the category of alternative care is expanded to include complementary and alternative treatments such as herbal remedies as well as practitioners, the proportion of adult Canadians who reported having used such products or services increased to 42%.<sup>24</sup>

As more and more Canadians visit complementary therapists and make use of herbal and other alternative medicines, there is a growing concern about the need to evaluate the effectiveness of alternative therapies and the interactions between therapies. At the same time, the public is increasingly asking governments to protect consumers by setting standards and controls on the manufacturing and sale of alternative medicines.



\* Total exceeds 100% due to multiple responses.

Source: Statistics Canada. *National Population Health Survey, 1996–97*.

## Discussion

### ***Quality and Accountability***

As this chapter shows, significant slowdowns in health services costs were achieved with little increase in unmet needs and without compromising overall measures of population health or the right of all Canadians to universally insured medical services. At the same time, public surveys showed an increasing discontent with the quality of services they received. There was growing anxiety about the financial, physical and emotional stress placed on families, especially women, due to gaps in care, waiting times for institutional and community services, and the early release of sicker patients from hospital.

In order to make Canada's health-care system more responsible and accountable to the public, it is necessary to move toward an integrated, high-quality system that provides the care Canadians need in an effective and affordable manner. To do this, the system needs better measures of accountability using a range of indicators to track the outcomes and cost-effectiveness of medical interventions. Combining these measures with a set of indicators that report on the overall health of the population in a certain region, province or territory could be a powerful incentive for agencies inside and outside the formal health-care system to collaborate on common goals that will enhance both individual and population health.

### ***Access to Services***

Canadians can be proud of the fact that income is not generally a barrier to universal medical services. The dramatic increase in mammography use is a positive example of how public education combined with efficient screening services can make a dramatic difference in the use of proven preventive measures. Yet large disparities in access to uninsured health services remain. More information on the age and sex of groups most affected by these inequities is needed.

Most Canadians would agree that dental care, vision care and counselling services are not "frills." For many, access to these services is essential to basic health and to leading a productive life in modern society. Yet many Canadians fall between the cracks: without private or publicly assisted insurance, they have restricted or no access to these services. Reducing this inequity needs to be a priority for policy-makers across the country. Whether this is achieved through the creation of universal access programs or the provision of specific support to Canadians without insurance for these services is a subject for discussion and debate.

### ***Home Care and Community Services***

Advances in drug therapies that have made it possible for people to leave hospital earlier and changes in the nature of ailments for which people are admitted to hospital over the last 20 years suggest that the need for effective community health- and home-care services will continue to escalate in the next 20 years. Chronic conditions such as arthritis, nervous system disorders and the outcomes of stroke are best treated outside of an acute-care hospital, as long as community nursing and home-care support services are available.

The dramatic change in the length of hospital stay for childbirth also requires community backup services. A 24- to 48-hour stay in hospital is appropriate for healthy mothers who have support at home. Without this help, however, new mothers may face problems such as breastfeeding difficulties, exhaustion and depression. In addition to the mother's suffering, these problems affect maternal-child bonding and can have long-term consequences for a child's emotional and mental development.

The National Forum on Health and other groups have recommended that home care and certain other community services be made insured services. This would ensure that all Canadians have access to an integrated continuum of care that includes services in health promotion and prevention, primary care, acute care, post-acute care, chronic care and palliative care. Within this scenario, incentives should be geared to ensuring that people have access to services in the most appropriate, cost-effective settings, and due regard should be given to the burden on caregivers, many of whom are women.

The information presented in this report supports this notion. However, the literature on population health also suggests that services alone are not the answer to improving health. High-quality services must be supported by policies and programs in communities and workplaces that allow people time and opportunity to care for each other, without compromising their own health or financial security.

## ***Medications***

The use of medications has increased dramatically over the last 20 years. The number of Canadians of all ages using more than three medications has risen significantly, including almost half of Canadians over age 75. In some respects, this is not surprising, considering the influx of new drugs that improve quality of life for older people with disabilities and the fact that many more Canadians are living past age 75, when the incidence of health problems requiring medication tends to increase.

There are, however, major concerns associated with multiple drug use, including increased risks for falls and hospitalization due to harmful side effects. In recent years, groups of older adults, pharmacists and organizations of health-care professionals have carried out major campaigns to educate both physicians and older Canadians about the dangers of multiple drug use. These efforts will need to continue. At the same time, more detailed data and analysis of this complex issue are required, including information on the use of more than three drugs and specific outcomes of this use.

Policy-makers need to pay close attention to the costs of prescription drugs. Two areas deserve particular attention. First, policy-makers who regulate payments and physicians who prescribe drugs will need to adopt a rational, evidence-based approach to the complex challenge of containing drug expenditures that is fully informed by and acceptable to consumers. To do this, more information on the links between increased spending on drugs and resulting cost savings in hospitals is needed. Secondly, as drug therapies become increasingly important in the treatment of illness, policy-makers must address the fact that some 25% of Canadians — mostly lower-income Canadians — may have restricted or no access to drug insurance.

## Endnotes for Chapter 6

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## *Biology and Genetic Endowment*

*The basic biology and organic make-up of the human body  
are a fundamental determinant of health.*

— Federal, Provincial and Territorial Advisory Committee on Population Health  
in *Strategies for Population Health: Investing in the Health of Canadians*.

**I**n the last half of the 20th century, Canadians have witnessed remarkable advances in biotechnology and genetic research that could never have been imagined 50 years ago. In 1953, scientists determined that DNA controlled heredity, setting off a race to figure out how DNA functions. In 1996, the U.S. government launched the Human Genome Project — a 15-year, \$3-billion effort to decipher DNA. The first successful heart transplant was performed in South Africa in 1967. In 1978, the first “test-tube baby” was born. Nineteen years later (1997), Scottish researchers cloned a sheep using cells from an adult sheep’s udder.

Some of the genetic and biotechnical advances we have today and can expect in the near future have the capacity to save and enhance lives. Some are repugnant to societal values. Some are too new to have been thoroughly assessed by either the scientific community or the public. However, all have the potential to affect health, family formation and the lives of subsequent generations.

At the same time, research in biology, epidemiology and social science is beginning to expand our knowledge about the links between biological pathways and the determinants of health. For example, exciting new research on brain formation has shed new light on how stimulation in a baby's environment interacts with biology to influence healthy child development in earliest infancy. As the population ages in Canada and around the world, there is growing interest in the links between the biology of aging and how an individual or a population's position on the socioeconomic ladder translates into health or disease in later life.

## Highlights

- ◆ A growing body of evidence suggests that healthy eating in the preconception period increases the chances of a safe and successful pregnancy outcome. After conception, an expectant mother's diet and use of tobacco, alcohol and other drugs can affect both her health and that of the fetus.
- ◆ When an infant is cared for by a nurturing, sensitive, involved adult, a "secure attachment" is formed. This attachment helps establish connections in the brain that can reduce anxiety and allow the brain to take in and incorporate new stimuli.
- ◆ New reproductive and genetic technologies that are designed to overcome infertility or manipulate the conventional conception process have raised many profound social, ethical, legal and health issues. These concerns will become increasingly important as science progresses in the next century.
- ◆ Aging is not synonymous with poor health. A large majority of older Canadians continue to report high levels of well-being on measures such as self-rated health and long-term activity limitations. Older Canadians, however, report significantly lower levels of health and higher rates of certain health problems than younger Canadians. This is particularly true of older Canadians living in low-income situations.
- ◆ Studies on education level and dementia suggest that exposure to education and lifelong learning may create reserve capacity in the brain that compensates for cognitive losses that occur with biological aging.
- ◆ Active living has proven potential to prevent or slow some of the declines associated with biological aging.

## Linking Biology and the Environment

While heredity is an important determinant of health, there is considerable evidence to suggest that its effects are strongly moderated by the social and physical environments. Studies of migrant populations provide some of the best evidence of this relationship. For example, Japanese who moved to California and adopted an American lifestyle had higher rates of coronary artery disease than those who maintained a more traditional Japanese lifestyle.<sup>1</sup> Their genetic makeup did not protect them from the disease patterns of their new host country. Work with rhesus monkeys has shown the powerful influence

of the social environment, particularly the effects of a loving parent. Studies have shown that monkeys born with a genetically inherited negative personality trait fare better when they are reared by a nurturing mother.<sup>2</sup>

New studies have shown that the nervous system, which responds to the outside world and transfers information to the immune system, is the biological pathway that links external stimuli and the body. This link between the nervous system and the immune system (which plays a central role in guarding health) is of major importance in understanding how social and economic conditions can affect health.<sup>3</sup>

For example, we know that long-term, chronic stress in the environment has a negative effect on the immune system and, in turn, on health status. While genetics may play a role, the social environment, and more specifically, the extent of control over a life situation largely determines how successful individuals will be at turning off the stress response and protecting their immune systems from the effects of chronic stressors. People who are lower on the social scale and have less control over their environment are likely to experience more severe physiological consequences to adverse conditions than those who are higher on the social scale and have more control over circumstances in their environment.<sup>4</sup>

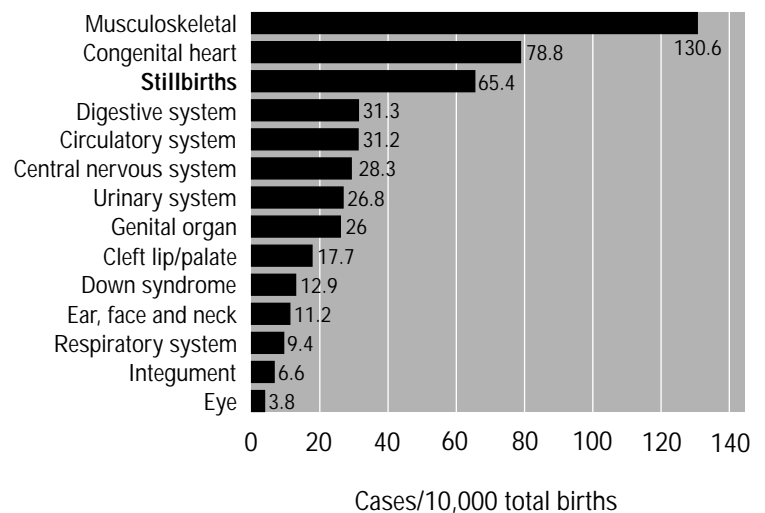
## Biology and Birth Defects

In 1995, there were 13,629 anomalies or birth defects recorded, with a rate of 483.5 for every 10,000 births.<sup>5</sup> This rate is the lowest recorded since monitoring began in 1989.<sup>6</sup> The most common anomalies are musculoskeletal and congenital heart defects (Exhibit 7.1). The most frequent musculoskeletal defects are congenital dislocation of the hip and clubfoot, each of which is more common than anomalies of the digestive system, the central nervous system and genital organs, and Down syndrome.

In this century, science has given us numerous important findings about how to prevent health problems. Nowhere is this research more important than in the birth of healthy babies. For example, research has shown that women who take supplementary folic acid (one of the B vitamins) around the time of conception can greatly reduce the risk of neural tube birth defects, including spina bifida and anencephalus.<sup>7</sup> Health Canada has recently published national guidelines for healthy eating throughout the preconception and prenatal period in light of a growing body of evidence that suggests that preparing for pregnancy increases the chances of a safe and successful birth outcome. Surveys are needed to determine how many women of childbearing age are

Exhibit 7.1

### Birth Defects and Stillbirths, Canada (Excluding NS and QC), 1995



Source: Health Canada, Laboratory Centre for Disease Control, Canadian Congenital Anomaly Surveillance System.

aware of the role of preconception nutrition in preventing birth defects and how many women who are considering a pregnancy are taking steps to meet Health Canada's guidelines.

Other aspects of an expectant mother's lifestyle practices affect the likelihood that a child will be born with mental and physical disabilities. Maternal smoking and/or considerable exposure to environmental tobacco smoke during pregnancy increases the likelihood of a premature delivery and the birth of a low-weight baby who is at high risk for disabilities. In 1996–97, about 36% of new mothers who were current or former smokers acknowledged smoking during their most recent pregnancy and they smoked an average of nine cigarettes each day while pregnant. This amounts to about 146,000 women who smoked during their last pregnancy.<sup>8</sup> As discussed in Chapter 3, women with lower levels of education are much more likely to smoke during pregnancy than women who have pursued a higher level of education.

Alcohol use during pregnancy can affect the health of the mother, the fetus and the ability of the child to lead a healthy life from birth to adulthood. The most disturbing results of alcohol use during pregnancy are fetal alcohol syndrome (FAS) and fetal alcohol effects (FAE).

## Definitions

- ◆ **Fetal alcohol syndrome (FAS)** is a set of alcohol-related disabilities characterized by both physical and behavioural shortcomings, including prenatal and postnatal growth restrictions, neurological abnormalities, developmental delays, behaviour dysfunction and learning disabilities.
- ◆ **Fetal alcohol effects (FAE)** is the term used to describe children with only some of the FAS characteristics in situations where prenatal alcohol use is a possible cause.

Although there is no national surveillance of FAS, conservative estimates suggest that .33 cases of FAS occur in every 1,000 births in western countries.<sup>9</sup> While the incidence of FAE is about three times higher, the relative effects of alcohol use, poor nutrition and impoverished conditions are hard to decipher.

Although some case studies in specific communities suggest that fetal alcohol syndrome (FAS) is more common among Canadian Aboriginal children than non-Aboriginal children, there is yet no good evidence to support this conclusion. For example, researchers have studied FAS in Native communities without including a non-Native comparison group. When a comparison group has been introduced, it is not clear that criteria for FAS have been applied consistently to both groups. To date, a valid comparison of the overall prevalence rates of FAS for Native individuals and non-Natives has not been carried out.<sup>10</sup>

While binge drinking is the pattern associated with FAS, some women may be more susceptible to the effects of alcohol because of differences in the way that their bodies metabolize alcohol.<sup>11</sup> Other risk factors point to the links between personal behaviour, biology and socioeconomic factors. For example, women who drink heavily during pregnancy are often poor, undernourished, depressed and abused, and many are unlikely

to receive prenatal care. Thus, reasons for drinking during pregnancy are based on a mix of socioeconomic factors including the drinking patterns of family members and friends, as well as other adverse situations that lead to heavy drinking.<sup>12</sup>

Virtually all women want to have healthy babies. Most who smoke or drink during pregnancy do so as a consequence of addiction and/or high levels of stress caused by poverty, abuse or other factors. Pregnant women need the support of their partners, families and communities, as well as the recognition that their own health is as important as that of the growing fetus.

More research on the effects of alcohol consumption and smoking by fathers on fetal and infant development is required.

## New Reproductive and Genetic Technologies (NRGTs)

Reproductive technologies are designed to overcome infertility or manipulate the conventional conception process to produce a pregnancy. They include in vitro fertilization, donor insemination, assisted insemination, preconception or “surrogacy” arrangements and postmenopausal pregnancy. Applications of genetics-based technologies include sex selection, embryo research, prenatal diagnosis and human embryo cloning. Recently, the Tri-Council Policy Statement on Ethical Conduct for Research Involving Humans stated unequivocally that some of the practices mentioned in the paragraph above are both unethical and problematic.<sup>13</sup>

The development and application of NRGTs in Canada have raised many profound social, ethical, legal and health issues. While some NRGTs can enhance health and well-being, others threaten human dignity and treat women, children and the reproductive process as commodities. Thus, the title of the 1992 report — *Proceed With Care* — from the Royal Commission on New Reproductive Technologies, was both appropriate and prescriptive.

The Royal Commission recommended a comprehensive, ethics-based approach to regulation, licensing and prohibitions. The federal government responded with a voluntary moratorium on certain procedures in 1995 and the introduction of the *Human Reproductive and Genetic Technologies Act* to regulate NRGTs. This bill died on the order paper when a federal election was called; a new replacement bill is currently being drafted, following a round of strategic consultations. It is anticipated that the new bill will be comprehensive in scope, addressing the issue of prohibitions of certain procedures, as well as proposing regulatory and management structures.

New reproductive and genetic technologies concern the future of our society. They are important to all Canadians, but particularly to women because they are practised almost exclusively on women’s bodies. Women’s relative economic status also makes them more susceptible to adverse consequences of these technologies such as the commercialization of human gametes and embryos. Other vulnerable groups include the children born as a result of these technologies who will be exposed to physical, emotional and legal risks. Canadians with disabilities are concerned that the increasing use of prenatal diagnosis, which is designed to detect genetic or other abnormalities in the embryo or fetus, may heighten negative attitudes toward people with disabilities.<sup>14</sup>

New genetic discoveries related to diseases such as cystic fibrosis and Huntington's disease offer the hope of finding new drugs to treat and cure these conditions. But presymptomatic testing and counselling for adults with a family history of disease raises some profound questions for both individuals and the health-care system. What is a young woman to do when she finds that she carries the gene for ovarian cancer? Should she have her ovaries removed? Should she have children, knowing that there is a risk that she will develop a serious illness and may pass on the gene to a daughter? Will monitoring her health as a result of this knowledge be better for her? Or will the chronic anxiety provoked by the test results make her health worse? An additional concern relates to health and life insurance. Will persons who carry a gene for a particular disease be denied insurance because of a disease they do not have now and may never have in the future? These are all questions that must be addressed by policy-makers, consumers and health-care practitioners on a one-on-one basis, in small focus groups and in public fora.

There is also a concern that a rush to expand high-tech solutions to infertility may take away from low-tech, public health efforts to prevent sexually transmitted diseases (STDs), which are a major cause of infertility. While there has been some decrease in the rates of gonorrhoea and syphilis between 1986 and 1996, the rate of chlamydia (an infection that can cause sterility) remains high, particularly among women aged 15 to 24 (Exhibit 7.2). These high rates may be explained by a number of factors: the early onset of unprotected sexual activity; the high "pool" of STD infection among young people; the tendency of young people to change sex partners frequently; the symptomless nature of some STDs; and the vulnerability of an adolescent woman's immature genital tract to invading micro-organisms.<sup>15</sup> Since the only sensible approach to STDs is prevention, the need to counsel young people on the use of abstinence and safe sex practices is clear.

Exhibit 7.2 Sexually Transmitted Diseases, by Selected Age Groups and Sex, 1996 (Rate per 100,000 Population)

	Chlamydia	Gonorrhoea	Syphilis
◆ Age 15 to 19, total	563.3	59.4	0.6
◆ Male	148.5	33.6	0.3
◆ Female	998.6	86.4	0.9
◆ Age 20 to 24, total	617.4	65.9	0.8
◆ Male	302.7	66.6	0.7
◆ Female	941.2	65.0	0.9
◆ Age 25 to 29, total	238.1	42.0	1.2
◆ Male	155.6	54.8	1.2
◆ Female	322.0	29.0	1.3
◆ Age 30 to 39, total	66.2	19.5	0.7
◆ Male	51.2	30.6	1.0
◆ Female	81.5	8.0	0.4

Source: Health Canada, Laboratory Centre for Disease Control, Bureau of HIV/AIDS, STD and TB, Division of STD Prevention and Control, 1998.

## The Biology of Brain Development

In recent years, new knowledge from the science of neurobiology has expanded our understanding of how the brain develops in the early years and how nature and nurture interact to affect the short- and long-term development of emotions, thinking and behaviour.

A newborn's brain is complete with all of the brain areas and neurons, but only a portion of the brain is "wired" to go. After birth, there is a frenzy of activity in which the neurons connect with each other to form the neural networks that enable movement, talking, feeling and thinking. This process is driven in large part by the flood of sensory stimulation that a child receives from the outside world.

When an infant is cared for by a nurturing, sensitive, involved adult, a "secure attachment" is formed. This attachment helps establish connections in the brain that can reduce anxiety and allow the brain to take in and incorporate new stimuli.<sup>16</sup> On the other hand, neglecting or abusing an infant during this critical period may produce wiring patterns in the brain that can lead to heightened sensitivity to stimuli and to negative and abnormal behaviour in childhood and adulthood. In other words, the environment around an infant has a major influence on the brain's development and subsequently on a person's capacity for control over intense feelings, including anxiety and aggression.<sup>17</sup> This does not mean that a child who is maltreated cannot achieve healthy development. It does mean, however, that it will be much more difficult for that child to achieve success, and he or she will likely require more assistance in doing so.

One good example of the link between biology and the environment is language development. Children are genetically programmed to learn to talk, but their ability to communicate and the language they use depend on what they hear. Language that is part of human caring and interaction activates the brain. As these pathways become well used, a baby develops the ability to understand and use language. Pictures of the brain cortex show that babies who are not exposed to a lot of verbal stimulation have fewer connections and less activity in the brain. This translates into difficulties in communicating as a young child and a reduced readiness for school.

## Aging and Health

The biological effects of aging are fairly well known. As we age, there is a normal and gradual decline in vision, nerve conduction velocity, muscular strength, bone mass and kidney functions. These functions do not all decline at the same rate and there is marked variation from person to person. Many older people develop a chronic disease (which may or may not be related to heredity) that can have dramatic effects on normal body functions. Other factors such as high stress levels associated with poverty or abuse and the social roles assigned to gender in our society can also affect the aging process.

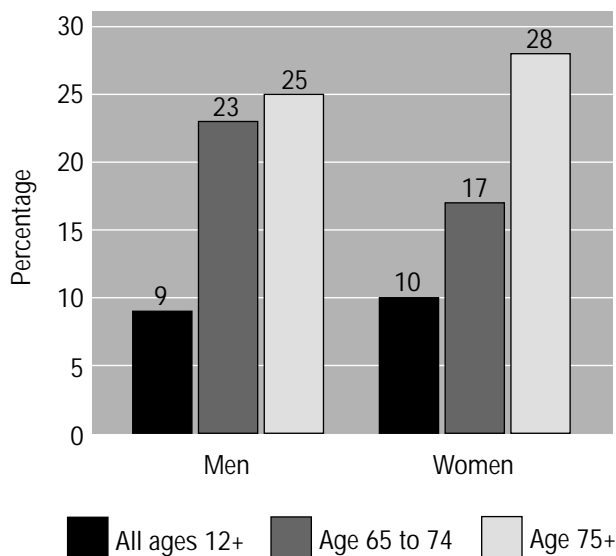
The question remains, however, as to how much of the decline associated with aging is attributable to biological aging and how much of it is the result of other factors, including socioeconomic status, social support, the physical environment and personal health practices. It has been shown, for example, that an older person who is physically active can maintain a level of general physiological functioning and energy that is 20% higher than the majority of people in the same age category.<sup>18</sup>

Information relating to the role of the various determinants of health in the aging process is extremely important today and will be more so in the next century. By the year 2001, it is projected that one-quarter of Canada's population will be over the age of 55. Within that population, an increasing number of seniors will be over the age of 75. In 2011, seniors aged 75 and over will represent nearly 7% of the population of Canada and more than 46% of the population aged 65 and over. The National Advisory Council on Aging has called the growth in this age group one of the most striking socioeconomic developments in recent years.<sup>19</sup>

Our understanding of the factors that influence biological changes associated with aging is greatly complicated by the cohort factor, and the increasing racial and ethnic diversity of Canada's seniors. Those who are old now differ in many ways from those who will be old in the new century. Most of tomorrow's seniors will have enjoyed higher incomes and higher levels of education than today's seniors. They are likely to be more knowledgeable about personal health practices. On the other hand, they may not have learned the coping and resiliency skills of the current generation of older Canadians who survived two world wars and the depression of the 1930s. The diversity we are seeing in seniors who have come to Canada will continue to increase. The waves of new immigrants and refugees from Asia, the Middle East and Africa that have arrived in the 1990s will be an integral part of tomorrow's population of seniors.

Clearly, aging is not synonymous with poor health. A large majority of older Canadians report high levels of well-being on measures such as self-rated health and long-term activity limitations. Older Canadians, however, report significantly lower levels of health and higher rates of certain health problems than younger Canadians. This is particularly true of older Canadians living on inadequate incomes.

Exhibit 7.3  
Percentage of Canadian Men and Women Reporting Fair or Poor Health, by Selected Age Groups, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

**Self-rated health status:** Most older Canadians enjoy good to excellent health status. In the 1996–97 NPHS, 80% of Canadians aged 65 to 74 and 73% of Canadians aged 75 and over described their health as good, very good, or excellent. The percentage of older Canadians who described their health as fair or poor declined from 24% of Canadians aged 65 to 74 and 31% of those aged 75+ in 1994–95 to 20% and 27% respectively in 1996–97. Nevertheless, Canadians aged 75 and over remained nearly three times more likely to describe their health as fair or poor than younger Canadians (Exhibit 7.3).

**Long-term activity limitations:** In 1996–97, 28% of Canadians aged 65 to 74 and 44% of those aged 75 and over reported a long-term activity limitation or disability resulting from a health problem (Exhibit 7.4). This reflects an improvement from 1994–95 when 36% of Canadians aged 65

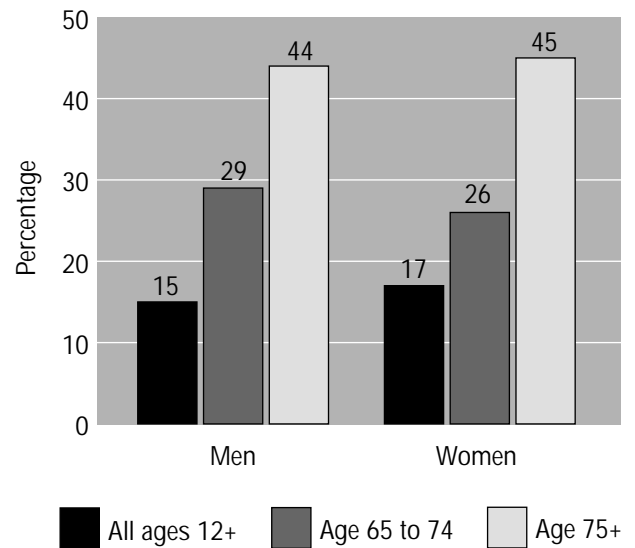


to 74 and 46% of those aged 75 and over reported an activity limitation. In the age group 65 to 74, men were more likely than women to report an activity limitation; after age 75, rates of long-term activity limitations were slightly higher for women (44% for men and 45% for women).

There are significant gender and age category differences when the primary condition responsible for the activity limitation is identified. As Exhibit 7.5 shows, arthritis was the primary cause of activity limitations for women over age 55 in all three age categories. In contrast, the major causes of activity limitations for men varied in each age category: back problems for those aged 55 to 64, heart problems in the age category 65 to 74, and heart problems followed closely by nervous system problems for men aged 75 and over.

Exhibit 7.4

Percentage of Canadian Men and Women with Long-Term Activity Limitation or Disability Resulting from a Health Problem, by Selected Age Groups, 1996–97



Source: Statistics Canada. *National Population Health Survey, 1996–97*.

Exhibit 7.5

Primary Condition Responsible for Activity Limitation, Men and Women, by Age, Canada, 1996–97

	Population estimate ('000)	Nervous system (%)	Back problem (%)	Limb problem (%)	Respiratory problem (%)	Arthritis (%)	Heart problem (%)
◆ Age 55 to 64, total	663	13	18	10	6	17	11
◆ Male	319	11	23	11	7	9	16
◆ Female	344	14	14	9	6	24	7
◆ Age 65 to 74, total	578	10	9	6	8	21	16
◆ Male	272	10	10	6	10	10	20
◆ Female	306	10	9	7	6	32	14
◆ Age 75+, total	585	13	7	13	6	17	13
◆ Male	241	15	#	13	8	11	16
◆ Female	344	11	5	13	5	21	12

# Data suppressed because of high sampling variability.

Source: Statistics Canada. *National Population Health Survey, 1996–97*, special tabulations.

**Health service utilization:** A wealth of research carried out over the last two decades has shown that the vast majority of care given to older adults — at least three-quarters of it — comes from their informal networks, such as family and friends. Most of this informal care is provided by women, especially daughters and wives.<sup>20</sup>

At the same time, Canada's older citizens understandably continue to rank at or near the top of categories of certain health-care services, including visits to a physician, admissions and lengths of stay in hospitals, use of medications and use of home-care services. While there was a substantial reduction in hospital visits by Canadians over the age of 65 from 1991 (35,233 per 100,000 Canadians) to 1995–96 (30,832 per 100,000 Canadians), reductions in length of stay were slight, probably due to the chronic nature of most older people's health problems.<sup>21</sup>

As Exhibit 7.6 shows, the rates of hospital admissions for older Canadians are substantially greater than those for all Canadians in general, in each diagnostic category except pregnancy (data not shown). The largest differentials occur in the categories for circulatory, respiratory and digestive diseases, injuries and neoplasms. Patterns of utilization also vary substantially for men and women: men had substantially greater numbers of hospital admissions due to circulatory, respiratory and genitourinary diseases, and neoplasms, while women had higher admission rates for injuries and musculoskeletal disorders.

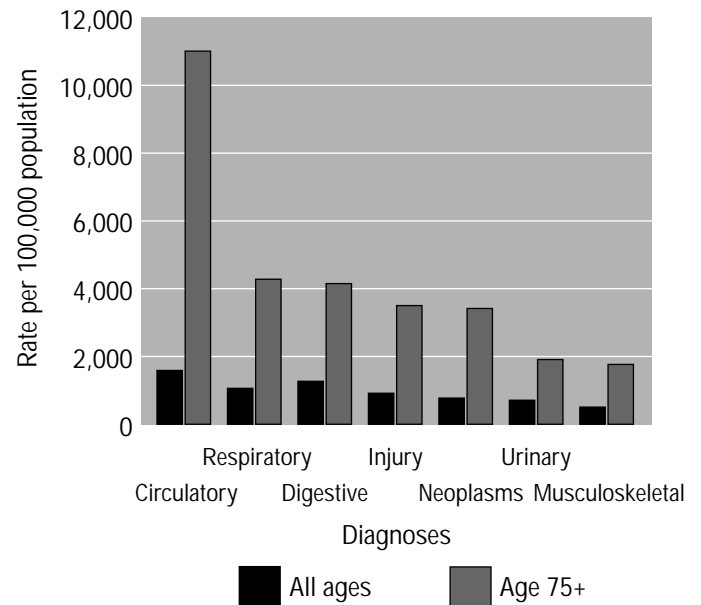
Seniors are the largest consumers of publicly funded home-care services. In 1996–97, 5% of seniors aged 65 to 74 and 17% of those aged 75 and over used home-care services. Women aged 75 and over were the largest consumers of publicly funded home-care services: 20% reported the use of such services. This is not surprising as most women in this age group either provide care to a spouse or live alone, without a partner to care for them. There was a slight reduction in the proportion of seniors receiving publicly funded home-care services from 1994–95 to 1996–97.<sup>22</sup> The extent to which the reduction translated into increased demands on family members has not been determined.

### ***Effects of Other Determinants of Health on Healthy Aging***

**Income:** Data from the 1996–97 NPHS across all age groups show that all three of the previously discussed health status indicators are related to income level: mean scores increase with each successive income level.

Exhibit 7.6

Hospital Separations by Diagnostic Group, Rates per 100,000 Population, All Ages and Age 75+, 1995–96



Source: Canadian Institute for Health Information. *Hospital Morbidity Database, 1995–96.*

**Education:** While education and income are highly correlated, education is also related independently to health status. People with low levels of education tend to have more disabilities and chronic illnesses, regardless of age. Recent research also suggests that a low level of education is a significant predictor of having dementia in old age.<sup>23</sup> While initially this finding was not taken seriously, it is now receiving much attention. As discussed in the previous section, learning and memory depend on connections between nerve cells in various parts of the brain; dementia involves the loss of these connections. Education and ongoing learning enriches these interconnections, creating reserve capacity that may compensate for losses that occur with biological aging.<sup>24</sup>

**Personal health practices:** The potential of active living to prevent the declines associated with biological aging has major implications for maintaining health, mobility and independence in old age. Regular physical activity can reduce risk for back problems and heart disease, which are the two major causes of disability in older men. It also has an important role in the management of arthritis, the number one cause of disability in older women; however, more research on the appropriate use of exercise to manage arthritis is needed. The relationship between physiology and medication use is another area that has received increasing attention in the past several years. Age, size and gender can all affect how the body metabolizes medications. Yet as we saw in Chapter 6, seniors are the most likely of any age group to be prescribed and to use multiple drugs.

**Social support:** There is both theoretical and empirical support for the notion that social support and social ties positively influence health in old age. There is also evidence that social support protects individuals from the negative effects of highly stressful situations such as getting a serious illness. The positive effects of interaction are more apparent for women and vary from one subculture to another.<sup>25</sup> Based on the responses to the 1994–95 NPHS, Statistics Canada recently combined a number of indicators (social participation, contacts with friends, relatives and neighbours, and perceived social support) to determine which groups of Canadians were at increased risk for social isolation. They found that adults over the age of 74 accounted for 74% of those at risk, although they account for only 5% of the population as a whole. Other factors that contributed to a high risk for social isolation included disability, widowhood, having a low level of education, being a newcomer to Canada, and having a cultural background other than French or British.<sup>26</sup> For this reason, some writers consider foreign-born seniors to be victims of double jeopardy. Older ethnic women who are widowed may be triply disadvantaged.<sup>27</sup>

## Discussion

### *Interdisciplinary Research*

This chapter is filled with the hope of what can be achieved by learning more about the relationship between biology and genetics, health status and the other determinants of health. This will require that researchers in social science, epidemiology and biology work together and continue to explore how the findings from the various fields of science are linked. Policy-makers and research-funding bodies need to support and encourage this kind of collaborative work.

## ***New Reproductive and Genetic Technologies***

While a national consensus on how to handle new reproductive and genetic technologies (NRGTs) has not yet emerged, Canadians are clearly looking to the federal, provincial and territorial governments to legislate, regulate, monitor and manage these new technologies in a way that protects and respects those most affected and reflects our collective values and ethics. Thus, governments need to ensure that women of all income levels and races and people with disabilities are fairly represented in consultations, focus groups and public discussions related to the drafting and implementation of regulations, legislation and standards. These groups will be joined by bioethicists and consumer advocates who want to make sure that decisions about the use of NRGTs are grounded in ethics and public health, not commercial interests.

Canada is well placed to play a leadership role in the further development of biotechnology; however, ethical and economic considerations are unavoidable. Would spending more to prevent the known causes of disabilities be a wiser investment than devising more tests to detect fetal conditions and the presence of genes that carry a particular disease? Would increased spending on public health efforts to prevent sexually transmitted diseases and to determine the effects of environmental contaminants on infertility be a wiser investment than rushing toward more high-tech, expensive treatments for infertility? While no one denies the right and need of an infertile couple to seek a solution to their problem, that same couple would have been happier if there had been a way to prevent the problem in the first place.

## ***Brain Development***

Studies in neurobiology have now confirmed that what happens in the first few years of life can have major, long-lasting effects on the capacity of a person to be healthy, to learn and to cope with life's challenges. When optimum conditions for a child's development are provided in the investment phase between conception and age 5, the brain develops in a way that has positive outcomes for a lifetime. This points to the need to provide new parents with adequate social supports during the neonatal and toddler periods, to provide effective prenatal care and treatment for maternal depression, and to support mothers and families who are faced with abandonment, abuse, chronic friction or the psychosocial stresses that are often associated with poverty.<sup>28</sup> It also speaks to the need to educate young people and young parents about the importance of caregiving style and the value of early stimulation, and to help them learn positive parenting skills.

Many children show remarkable resiliency despite exposure to high-risk conditions in the early years. A supportive and stimulating environment combined with loving care from adults in schools and communities can help children achieve positive development outcomes. In the preschool years, opportunities to play with peers and to enjoy stimulating, high-quality preschool or "head start" programs may be particularly important, especially for children from disadvantaged communities (see Chapter 3).

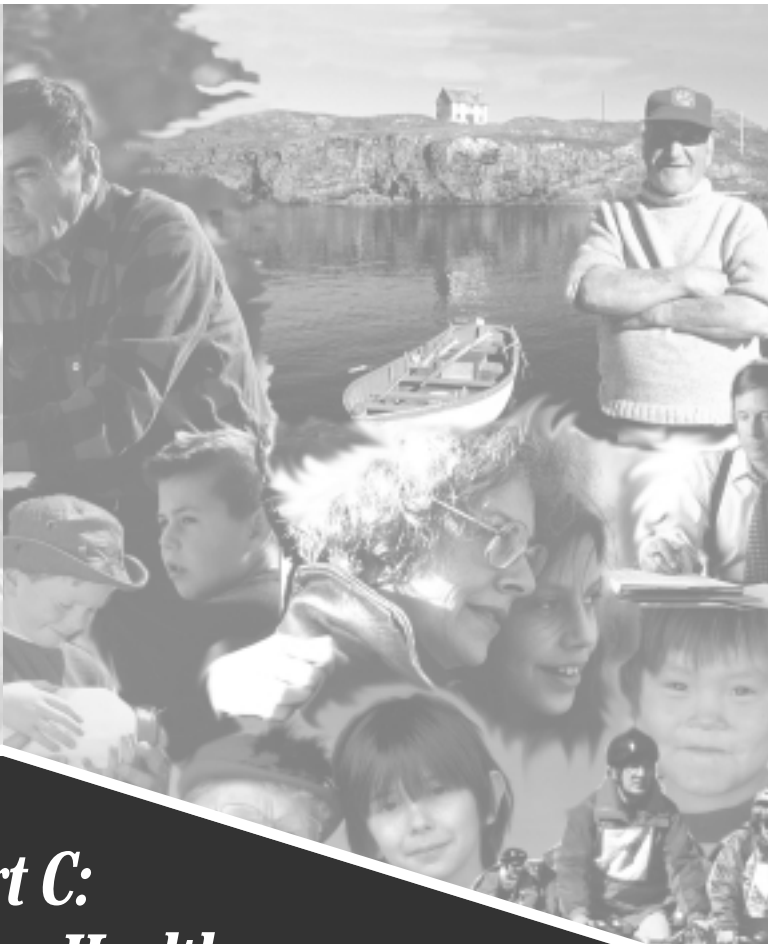
## Promoting Healthy Aging

When it comes to healthy aging, biology is not destiny. Promoting healthy aging means taking action on the broad determinants of health, including socioeconomic status, education and lifelong learning, social support and an active lifestyle. Gender differences need to be taken into account when addressing these determinants and when looking for ways to prevent and reduce activity limitations among seniors. Older women who are poor and live alone, and older adults who are immigrants and refugees are particularly vulnerable to social isolation. Community initiatives to involve and empower these groups are especially important if health inequities are to be reduced.

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*Part C:  
Improving Health*









## Reason to Celebrate

This report has shown that Canada has much to celebrate. Many Canadians enjoy high levels of health and Canada ranks well above other countries in most of the major indicators of population health. Canada's health-care system remains a source of pride for Canadians, despite major restructuring efforts in all jurisdictions. With the exception of certain population groups, health promotion and disease and injury prevention strategies have shown positive results in areas such as immunization, mammography, breastfeeding and car seatbelt usage.

At the same time, there is definitely room for improvement. The high standard of health experienced by many Canadians is not shared by all sectors of society. There are clearly disparities in health status associated with gender, age, socioeconomic status and place of residence. Some Canadians (especially children living in low-income families) are also more vulnerable to threats in the physical environment, including inadequate housing and exposure to damaging toxins.

Achieving complete equality in health status among all Canadians is an unrealistic goal. But achieving equitable or fair access to the opportunities and supportive environments all citizens need to be healthy is both a laudable and achievable goal in a civil, caring society. As this report has also shown, increased access to protective factors in the environment such as social support, safe communities, employment opportunities and advanced education can help to ameliorate some of the inequities in health status associated with living in low socioeconomic circumstances.

## The Use of a Population Health Approach

A population health approach uses both short- and long-term strategies to:

- strengthen the underlying and interrelated conditions in the environment so that all Canadians can enjoy optimum surroundings for healthy living
- reduce inequities in the underlying conditions that put some Canadians at a disadvantage for attaining and maintaining optimal health and well-being.

The deceptively simple story that follows speaks to the complex set of factors or conditions that determine health.

“Why is Jason in the hospital?

Because he has a bad infection in his leg.

But why does he have an infection?

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

But why does he have a cut on his leg?

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

But why was he playing in a junk yard?

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

But why does he live in that neighbourhood?

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

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

Because his Dad is unemployed and his Mom is sick.

But why is his Dad unemployed?

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

But why ...?”<sup>1</sup>

Getting to the root cause of Jason's illness and the other major health problems we face in Canada today requires action on the broader determinants of health. It is also important to continue to provide high-quality health services that will help Jason heal. This is the essence of a population health approach.

In January 1997, the Federal, Provincial and Territorial Advisory Committee on Population Health defined population health as follows:

*Population health refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early child development and health services.*

*As an approach, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in the patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of these populations.<sup>2</sup>*

A population health approach studies these interrelated conditions and then uses what is learned to suggest policies and actions that will improve the health and well-being of all Canadians.

## Priorities for Action

While there are many challenges to improving health, the Advisory Committee on Population Health (ACPH) recognized the importance of highlighting three broad priority areas for action. The selection of these priorities was based on the evidence contained in this report as well as the collective experience and expertise of the committee members and their partners. Additional references and further elaboration of the statements made in this section can be found within the individual chapters noted in the text.

Within each of the following three priority areas, a number of specific challenges are highlighted; both short- and long-term strategies are suggested.

1. *Renewing and reorienting the health sector* requires collaborative efforts to:
  - take action to meet emerging challenges in health promotion, disease and injury prevention and health protection, as well as in treatment services,
  - increase the accountability of health services through improved reporting on the quality of health services and increasing access to needed services,
  - increase our understanding of how the basic determinants of health influence collective and personal well-being,
  - evaluate and identify policy and program strategies that work, and
  - influence sectors outside of health which can significantly affect health status.
2. *Investing in the health and well-being of key population groups* reflects recent trends that have shown decreased opportunities for optimal well-being among three groups: children, youth and Aboriginal people.
3. *Improving health by reducing inequities in income distribution and in literacy and education* speaks to the findings in this report that show direct links between poor health and early death, and low levels of education, literacy and income.

### ***1. Renewing and Reorienting the Health Sector***

Improving the health of all Canadians requires continuing efforts to reorient the health sector. The achievement of sustainable, effective, health services requires renewal and reorientation on five fronts:

#### ***Continue and broaden health promotion, protection and disease and injury prevention strategies in key areas.***

The public will continue to look to health professionals to work with citizens and communities to coordinate health promotion, health protection and disease and injury prevention strategies as outlined in the *Ottawa Charter for Health Promotion*.<sup>3</sup>

This report suggests that there is a need to continue and broaden strategies in the following areas:

- ◆ Reducing costs and suffering through comprehensive strategies on injury prevention.
- ◆ Continuing and improving upon successful initiatives in areas such as immunization, breastfeeding, heart health, safe driving and prenatal health.
- ◆ Providing additional support to young families and parents.
- ◆ Continuing and improving upon successful initiatives in healthy aging, especially in light of the aging of a substantial proportion of the population.
- ◆ Continuing and improving upon successful initiatives in healthy child development.
- ◆ Developing and implementing comprehensive, collaborative strategies to deal with timely issues such as increased smoking among girls and young women, increases in asthma among children, low levels of physical activity among some groups, increases in unsafe sex practices and other risk-taking behaviours among Canada's youth, as well as efforts to reduce family violence and the harm associated with injection drug use.
- ◆ Developing and implementing comprehensive, collaborative strategies to increase the mental and social well-being of young people and to reduce violent behaviour and suicide.

***Renew and modernize the health treatment system by making it more integrated, sustainable, flexible and accountable.***

The health sector is responsible for the delivery of high-quality, timely health services. The evidence shows that, unlike the other determinants, access to insured health services in Canada is not affected by income level; however, this is not the case for uninsured services. Canadians who work part-time or in low-paying jobs without benefits are less likely to have access to these services. This, plus other evidence on the fragmentation of services (e.g. home-care, pharmacare) pose a number of challenges for the health sector. Chapter 6 suggests that key strategies include:

- ◆ Increasing the accountability of health services through improved reporting on the quality of health services in both the acute and community settings.
- ◆ Increasing access to essential, cost-effective health services such as dental care, eye care and required medications which are not currently covered by Canada's universal health insurance plan. Whether this is done through universal access programs or through specific support to Canadians without insurance or the ability to pay for needed services is an important subject for debate and discussion.
- ◆ Ensuring equitable access to community care, home care, mental health services, respite care and palliative care when needed.
- ◆ Continuing and improving upon successful, cost-effective preventive interventions such as mammography, Pap tests and injury control measures.
- ◆ Adopting a rational, evidence-based approach to the complex challenge of containing drug expenditures, while making necessary drug therapies accessible to all Canadians who need them.

***Increase our understanding of how the basic determinants of health influence collective and personal well-being.***

Knowledge and information gaps in population health have been identified throughout this report.

- ◆ Two priorities are the need for additional collective indices of community and population health and the need for more up-to-date, comprehensive and regionally relevant indicators of health in the physical environment. Other gaps include the need for more information on rural and urban differences.
- ◆ Data on the determinants of health (e.g. income, employment) and on health status are often collected in the territories in ways that do not allow for national comparisons. For example, some national household and labour surveys are not carried out in the territories and the information is sometimes collected in different ways. This gap needs to be addressed.
- ◆ Enhanced analysis of the effect of gender, culture, age/stage of development and socioeconomic status on measures of health is needed.

***The health sector can initiate dialogue and act as a catalyst for change.***

***Initiate dialogue with other health-determining sectors about the health impacts of policies in sectors outside health and about collective actions that can be taken.***

Addressing the root causes of poor health will mean working with other sectors to ensure that the general conditions within society support health. This report suggests that there is a need to initiate dialogue with other health-determining sectors, particularly those in the socioeconomic domain, about the health impacts of policies in sectors outside health and collective strategies that can be adopted.

The ideal outcome of these collaborations will be healthy public policies in a variety of health-determining sectors, particularly those in the socioeconomic domain. The health sector cannot do it all, nor can it impose its agenda on other sectors. It can, however, initiate dialogue and act as a catalyst for change.

The 1994 ACPH document *Strategies for Population Health: Investing in the Health of Canadians* stressed the need for collaboration across all sectors in addressing the major determinants of health discussed in this report. Since many of the determinants of health are outside of the traditional health system, building alliances in pursuit of policies in all sectors that affect health is a primary strategy for improving the health of the population. Other sectors that need to be involved include the economic, justice, housing, education, environmental, employment, transportation and social service sectors.

Collaboration can occur at all levels — neighbourhoods, communities, provincial/territorial, regional and national. Partners need to include voluntary, professional, business, consumer and labour organizations, governments and representatives of communities of faith, various cultures, and population groups and disadvantaged groups.

***Generate and share knowledge about the health status of Canadians, the determinants that influence health and the effectiveness of health services.***

Knowledge development refers to a number of related activities including research initiatives that utilize a variety of methodologies, the development of new indices to measure health, program and policy evaluation, and the collection, analysis, synthesis and sharing of information.

Advances in information technology hold great promise for enhancing our capacity to share information with both professionals and the public. Governments and the private sector need to invest in innovative ways of sharing knowledge about population health, and in building the capacity for electronic communication among the voluntary sector, community groups and the public.

This report suggests a number of priority areas for knowledge development:

- ◆ Harmonized standards in information collection are required if health information is to be shared across local, regional, provincial, territorial, national and international levels.
- ◆ Data gaps in health services exist and include a lack of national databases for some chronic diseases (such as diabetes and arthritis), and national data sets for mental health, home-care and community health services. More information on the quality of health services and increased measures of accountability that track the outcomes and cost effectiveness of health service interventions are needed.
- ◆ A better understanding of the quality of existing data (especially self-reports on items with a high level of social desirability) is needed.
- ◆ Lastly, a population health approach requires that investigators in a number of different disciplines increase their collaborative efforts. Interdisciplinary research is particularly important in the exploration of the relationship between biology, genetics and health.

***2. Investing in the Health and Well-Being of Key Population Groups***

The evidence in this report suggests that three population groups are particularly vulnerable at this time to poor health outcomes. These three groups are children, youth (and by extension, families with children and youth) and Aboriginal people. Investing in activities to improve health among these groups and in the conditions that affect their health will lead to important improvements in the health of the Canadian population overall, as well as reducing the future suffering and costs that result from poor health.

This does *not* mean that efforts to support and improve the health of other segments of the population should be abandoned or ignored. Findings in population health increasingly point to the importance of developmental stages and transitions throughout the life cycle. In particular, the aging of the population suggests that efforts to support healthy aging need to continue and expand. At the same time, it is clear in this report that the need to focus on the three groups identified here has increased in recent years.

***Invest in early childhood.***

Studies in neurobiology have now confirmed that when optimal conditions for a child's development are provided in the period between conception and age 5, the brain develops in a way that has positive outcomes for a lifetime. When parents, caregivers and babies have a loving, secure relationship in the first 18 months of the child's life, the infant forms a "secure attachment." This attachment helps to establish positive connections in the brain that allow the child to develop trust, self-esteem, emotional control and the ability to have positive relationships with others later in life. Infants who are neglected or abused or whose parents are unable to form this attachment due to illness or stress are at higher risk for a number of behavioural, social and cognitive problems later in life (Chapters 1, 3 and 7). With nurturing and consistent support in later years, children can overcome these early disadvantages. However, the preferred strategy is to prevent problems by providing all children with the kinds of social and physical environments they need in order to thrive.

Studies have shown that children in low-income families and neighbourhoods are at higher risk for infant death and low birthweight. They are more likely to experience developmental delays, to be exposed to environmental contaminants that have a negative effect on health and to experience higher rates of both unintentional and intentional injuries than children who grow up in families with higher incomes. Some of these disadvantages may be alleviated or overcome by positive parenting, loving caregivers, early opportunities for learning and supportive communities (Chapter 3).

Despite a parliamentary resolution to eliminate child poverty by the year 2000, we have seen the number of young children who live in low-income families increase from one in five in 1990 to one in four in 1995. These proportions are higher in Aboriginal and recently arrived immigrant communities, and in families headed by very young parents and female lone parents (Chapters 2 and 3).

Changes in family structure have contributed to the rise in family poverty in Canada. In 1995, almost 50% of single-parent, mother-led families lived below Statistics Canada's low income cut-off levels (LICOs). However, increases in poverty have not been restricted to single-parent families. Between 1990 and 1995, the percentage of married couples with children in low-income situations rose from 9.5% to 13% — a total of almost 460,000 families (Chapter 2).

Although the highest proportion of children not doing well live in low-income families, there is no income cut-off above which all children do well. Therefore, policies and programs for positive child development must apply to all sectors of society.

All children in Canada deserve nurturing, stimulating, caring and safe environments, nutritious food, safe, stable shelter, and opportunities to participate in community-based recreation and learning activities. Indeed, their rights to these basic prerequisites of health are provided for in the United Nations Convention on the Rights of the Child, which was ratified by Canada in 1991.

***All children in Canada deserve nurturing, stimulating, caring and safe environments, nutritious food, safe, stable shelter, and opportunities to participate in community-based recreation and learning activities.***

Investing in early childhood begins before and after conception. Access to a healthy diet in the preconception stage is important for a healthy birth outcome (Chapter 7). Low birthweight (less than 2,500 grams or about 5.5 pounds) is linked to physical and mental disabilities, and sometimes early death. Women who are most likely to have low birthweight babies are those with lower levels of education, who live in highly stressful environments, who do not have adequate nutrition and support, and who smoke during pregnancy. Women who drink alcohol and/or use drugs during pregnancy are also more likely to have babies with developmental problems. Fetal alcohol syndrome and fetal alcohol effects are the most dramatic outcomes associated with heavy drinking and drug use during pregnancy. Women who drink or use drugs during pregnancy are often victims of addiction, abuse, poverty or neglect (Chapters 3 and 7).

In recent years, both the federal and provincial/territorial governments have begun to invest in early childhood through a series of policies, programs and legislative changes. It will be important to monitor the effects of these initiatives and to report to the public on changes that result.

Efforts to maximize healthy child development in the early years will require direct action by the health sector as well as collaboration with the other sectors (e.g. education, social services, housing, taxation) and the many people and institutions that affect child development (e.g. families, schools, communities, workplaces, governments, the media). Key strategies include:

- ◆ *Alleviating child poverty by increasing income security for all families in Canada.* In addition to strategies designed to increase and protect income security for all families in Canada, there is a need to develop sustained, long-term strategies that support lone parents of all ages (especially female lone parents) and enable them to return to school or upgrade their working capacity, without compromising their own health or the well-being of their children (Chapters 2 and 3).
- ◆ *Continuing efforts to support healthy pregnancies* by providing information and support to young people and expectant parents about health in the prenatal and postnatal periods. Providing outreach services (including social support, information, food and protection) to pregnant women who are isolated, impoverished or distressed in other ways, is an important part of this strategy.<sup>4</sup>
- ◆ *Supporting families and positive parenting* by providing workplace, labour and government policies and programs that enhance parents' (especially young parents) capacities to support their families and still have time to spend with their children, without compromising their own health. These policies may be particularly important for women (Chapter 2). Many women who work outside the home suffer high stress levels trying to balance work and family life. Alternatively, women who work inside the home must deal with the stress of trying to parent well while living on one income. Comprehensive school and community strategies can help provide young people and parents with the information and support they need to build positive parenting skills. Cohesive, safe neighbourhoods and access to high-quality childcare when it is needed have also been shown to support families and parents (Chapter 3). The role of taxation policies in supporting families is important and needs further discussion (Chapter 3).<sup>5</sup>



- ◆ *Upholding the right of all children to a safe and secure environment, free from child abuse, neglect and exploitation.* Family violence is both an intergenerational and a systemic issue. In the short term, infants and young children must be protected from abuse and neglect. Zero tolerance for this behaviour is an important community norm. In the long term, research suggests that broad policy efforts to increase employment, relieve the stress of poverty and prepare young people for intimate, egalitarian relationships are important strategies for reducing and eliminating child abuse and neglect (Chapters 2 and 3).
- ◆ *Providing preschool children with the stimulation and nurturing they need to arrive at school ready to learn and to interact with other children in a positive way.* Community programs that support families and help parents create stimulating environments for their preschoolers can help. Policies that increase access to both high-quality childcare programs for families that need them and to junior kindergartens and preschools need to be considered. Studies have also shown that “Head Start” programs for toddlers who live in disadvantaged neighbourhoods may help some children arrive at school with cognitive and behavioural scores that are similar to children who come from more advantaged families. (Chapter 3).
- ◆ *Reducing and eliminating unintentional injuries among infants and preschool children (e.g. poisoning, falls, motor vehicle crashes) and exposure to environmental contaminants in both the natural and built environments (e.g. environmental tobacco smoke) (Chapters 2, 3, 4).*

**Y**oung people deserve love and respect for who they are. They are also central to Canada's investment in its future as a caring and productive nation.

### ***Work with young people to improve their health.***

Just as it is important to invest in early childhood, this report points to the immediate need to invest in Canada's youth. Young people deserve love and respect for who they are. They are also central to Canada's investment in its future as a caring and productive nation.

This report suggests that a number of things are going well with young people. For example, youth voluntarism has increased dramatically and the number of young women completing post-secondary levels of education is at its highest point ever.

At the same time, we are alerted to distressing trends in the health and psychosocial well-being of Canada's youth in virtually every chapter of this report. Among young men, high rates of suicide (especially in Aboriginal communities) and unintentional injuries contribute to early deaths (Chapter 1). Early school leaving and multiple risk-taking behaviours (including drinking and driving, and drinking and unsafe sex) are symptoms of despair that do not bode well for the current or future health of the young men who engage in these behaviours (Chapters 2 and 5). While the incidence of violent youth crime — a sign of anger and alienation — has decreased in recent years, it remains much higher than it was a decade ago (Chapter 2).

Negative health predictors among young women include high levels of reported stress and depression and low levels of psychological well-being (Chapter 1). Cancer death rates have remained persistently stubborn among women, mainly due to increases in lung cancer mortality. The increase in smoking among young women predicts that this trend will continue and worsen in the new millennium. Many young women report that they smoke to deal with stress (Chapters 1 and 5).

Despite some recent improvements, unemployment and underemployment remain pervasive problems for young people. These conditions are related to increases in the number of young people who live in low-income situations and the number of young low-income families in Canada (Chapter 2). The stresses of poverty tend to exacerbate relationship problems and homelessness (Chapters 3 and 4). Some groups of young people are at particularly high risk for poor health, including young people in care and street youth (Chapter 3).

Most of the negative outcomes described above are preventable. A comprehensive plan to invest in Canada's young people is badly needed. Young people themselves must be involved in identifying both problems and solutions, and in providing input to policy and program decisions related to their well-being. This report also points to the need to pay attention to how gender, culture and membership in various age cohorts and population groups affects the behaviours, beliefs and opportunities available to young people. Key strategies to address this challenge include:

**S***chool and community programs are needed to help both young men and women prepare for parenting.*

- ◆ *Helping young people prepare for intimate relationships and family life.* Positive relationships with peers, family members and other adults prepare young people for intimacy and family life. Young people who are ready for intimate relationships respect each other and share roles between the sexes. They are willing and able to make an intimate commitment to another person. While family life experience is critical in learning how to develop healthy relationships, societal influences in education, media and sport and recreation systems can also have a positive or negative effect on how young people learn to form and maintain relationships. At the same time, school and community programs are needed to help both young men and women prepare for parenting (Chapters 1 and 3).
- ◆ *Helping young people make a successful transition from school to meaningful employment.* Educational achievement is an important factor in obtaining a good job. The following conditions may help young people stay in school: stimulating environments in early childhood, early success in school, nurturing school environments, involved parents who value an education, community support for troubled young people, efforts to prevent teen pregnancy, and increased support for adolescents who cannot afford to stay in school (Chapter 2). Other studies have shown that mentoring, cooperative education, apprenticeship programs and school curriculums that teach work-related skills such as teamwork and problem solving can also help young people make a smoother transition from school to work.<sup>6</sup>
- ◆ *Helping young people prepare to participate in community life.* Partnerships among schools, community agencies, businesses and parents are increasingly seen as an effective way to help young people learn the civic and social skills they need for adulthood. Community service and volunteer work give youth opportunities to develop meaningful roles, to apply academic learning in real life situations, to learn job skills such as cooperation and decision making, to develop self-respect and to earn the respect of the community.<sup>7</sup> Remote, isolated communities and high-density urban housing

areas face special challenges in supporting young adults. Sometimes, the whole community needs to engage in a healing process that involves young people as important contributors to the process.<sup>8</sup>

- ◆ *Making the healthy choices the easy choices.* This report has pointed to several disturbing trends, including unsafe sex practices, which can lead to infection and unwanted pregnancy, increased rates of smoking among young women and multiple drug use by both sexes. Policies and programs to address and reverse these trends are needed. At the same time, we need to recognize that personal lifestyle “choices” are linked to the capacity of the home, school, community, workplaces and governments to make “the healthy choices the easy choices.” Crowded housing, neighbourhoods in which there is a lot of drug dealing, isolated living conditions with little to do, and threatening school environments contribute to increased violence, youth misuse of alcohol, tobacco and other drugs, and increased feelings of alienation and depression. Strategies to support healthy development in adolescence need to focus on providing supportive environments in the places where young people learn, work, recreate and live.

### ***Improve the health of Canada’s Aboriginal people.***

Despite major improvements in infant mortality rates and education levels, and reductions in substance use in many Aboriginal communities, Aboriginal people remain at higher risk for illness, infant mortality and earlier death than the Canadian population as a whole (Chapters 1 and 3). Climate change and environmental hazards in the food supply may have a particularly negative effect on Aboriginal cultures and their way of life (Chapter 4). Young men (particularly those in Inuit communities) are far more likely to commit suicide than their peers in the rest of Canada (Chapter 1) and Aboriginal young people are at higher risk for non-intentional injuries and early deaths from drowning and other causes (Chapters 1 and 5). Aboriginal children in some communities are more likely than children in the general population to engage in adult behaviours such as smoking, drinking and drug use at a young age (Chapters 3 and 5).

A greater proportion of Aboriginal families are experiencing problems with housing and food affordability than Canadian families as a whole (Chapter 4). This is clearly linked to high levels of unemployment and pervasive low incomes. Aboriginal leaders have identified low-income levels as a critical factor in their communities’ health status and have called for a better understanding of the links between income, social factors and the health of their people. Strategies to address this challenge should take into account the following points:

- ◆ *Aboriginal people have the lead role in finding ways to enable their people to take control of and improve their health.* However, meeting this goal will require the support of all Canadians. Policy makers and practitioners who are non-Aboriginal need to work with Aboriginal people to find culturally appropriate ways to improve their health and well-being.
- ◆ *The subpopulations within the Aboriginal population are diverse.* Conditions vary greatly from settlement to settlement and between Aboriginal people who live on and off reserve. It is important to recognize this diversity and to involve specific communities in developing strategies that will address their health challenges.

- ◆ *The creation of the new territory, Nunavut, offers an exciting opportunity to better understand the health of Inuit peoples, who make up the majority of residents there. Existing surveys and databases will need to be analyzed to separate information on Nunavut from the Northwest Territories. Different research methodologies will need to be applied to overcome the challenges of information collection and dissemination in this far-reaching, diverse Northern area.*
- ◆ *The recent Royal Commission Report on Aboriginal Peoples identified numerous strategies to address this challenge, including increased support for self-government, improvements in the basic prerequisites for health such as access to safe, high-quality and affordable housing, and the elimination of racial prejudice in mainstream society. The recommendations from this report should be used to inform a collaborative strategy to improve health in Aboriginal communities.*
- ◆ *Some of the strategies to improve the well-being of Aboriginal people in Canada's North are likely to benefit all people who live in the area. Compromised health among Aboriginal people may sometimes be compounded by isolation and the high costs of living in areas that are remote from food production, schools and health facilities — factors that Aboriginal people share with non-Aboriginal residents of the North.*
- ◆ *Aboriginal and non-Aboriginal researchers, policy-makers and practitioners need to involve local people in all aspects of their studies and to provide ownership of the results to the communities that are involved.*
- ◆ *Future reports on health status and the determinants of health need to take into account cultural differences in definitions when making provincial-territorial comparisons. Definitions of “employment,” for example, may vary dramatically in West coast communities and in Northern Inuit and First Nations communities, where, for example, a major aspect of daily employment is hunting for food.*
- ◆ *Many of the strategies presented in the next section on reducing income inequities will help to improve health status among Aboriginal people, as well as among other groups in Canada.*

### ***3. Improving Health by Reducing Inequities in Income Distribution and in Literacy and Education***

The two priorities described in this section — achieving a more equitable distribution of incomes in Canada, and increasing literacy levels and access to education — have a direct effect on health status even though they are largely managed outside of the health sector. Collaborative, multisectoral, long-term strategies with other sectors involved in these areas are important for improving the health of the Canadian population.

#### ***Achieve a more equitable distribution of incomes in Canada.***

Canadians with low incomes are more likely to have physical, social and mental health problems than Canadians with higher incomes. They are also more likely to die earlier than other Canadians, no matter which cause of death is considered. This is true, regardless of race, age, gender or level of funding in the health care system (Chapters 1 and 2).

Research suggests that in terms of the health of the population, the overall wealth of a given society is less important than how evenly wealth is distributed within that society. The more equally wealth is distributed, the better the health of the population.<sup>9</sup> It is estimated that if all Canadians achieved the same death rates as the highest income earners, over one-fifth of all potential years of life lost before age 65 could be prevented<sup>10</sup> (Chapters 1 and 2).

An income gradient affects health at every rung of the socioeconomic ladder, not just the health of the poor. It also affects the social cohesion that characterizes a neighbourhood or community.<sup>11</sup> Therefore, middle-income and high-income Canadians also stand to benefit from increases in income equality (Chapter 2).

Wages are the major source of income for most Canadians. Despite some recent improvements, high rates of unemployment and underemployment remain problematic among young people, women, Aboriginal people and visible minority groups. The wage gap between men and women persists and women continue to dominate in low-paying jobs. Canada's performance on the United Nations measure of gender empowerment suggests that Canada can do a better job of enabling women to gain decision-making roles in business, industry and government (Chapters 1 and 2).

Canada's tax, transfer and social policies have played a key role in reducing inequities in Canada in the past. Canada's universal health insurance scheme, which provides access to needed medical services, has also been effective in reducing inequities (Chapter 2). However, many low- and moderate-income Canadians do not have equal access to necessary services such as eye care, dentistry, mental health counselling and prescription drugs, which are not covered by current universal health-care plans. This challenge is addressed earlier in this chapter.

Social services and recreation are important complements to health services, especially in support of the healthy development of children and youth.<sup>12</sup> Reductions in access to social services and recreation are particularly hard on families with children that have low- and moderate-incomes and cannot afford to purchase these services (Chapter 3). Providing equitable access to safe, affordable housing is also an important way to reduce inequities (Chapter 4).

At the time of writing, Canada was in the throes of a housing affordability crisis. Reductions in the availability of social housing combined with cyclical recessions and reductions in family incomes have contributed to the increase in the number of families that live in low-income situations, and sometimes are homeless. In 1996, 30% of families with children that rented had housing affordability problems. This increased to 58% among lone-parent families and to 76% among lone-parents under the age of 30 (Chapter 4). Homelessness has increased and homeless Canadians include increasing numbers of women and children and other groups in special circumstances, including Aboriginal people, adolescents and people with mental illness.

A report from the Canadian Association of Food Banks stated that, in 1998, more than 250,000 children and young people under the age of 18 were recipients of food banks. Data from the 1996–97 NLSCY suggested that children who went hungry came from families that depended on social assistance and from families that reported having wages as a source of income. Thus, it appears that poor working families are vulnerable to hunger, as are families on social assistance (Chapter 3).

This report suggests that there are several key strategies for achieving a more equitable distribution of incomes in Canada.

- ◆ *Increase earning capacities and employment opportunities among individuals and groups that have been left behind.* These include women, young people (especially young men with low levels of education and skills and lone female parents), Aboriginal people, members of visible minority communities, and workers in specific industries (e.g. cod and salmon fishing). Policies that promote full-time work for those who want it, fair wages, pay equity, access to employee health benefits, fair unemployment benefits and job diversification are all important strategies to consider.<sup>13</sup> Support for increased opportunities in education, literacy and skills training (discussed later) that enable Canadians to pursue meaningful careers in the higher wage-earning sectors is equally important (Chapter 2).
- ◆ *Continue to use tax and transfer/social policies to reduce inequities among different levels of wage earners.* These have played a key role in reducing inequities in Canada in the past. Any changes in these policies must be looked at carefully because of their potential to ameliorate or increase inequities in income (and therefore in health status) (Chapter 2).
  - ◆ *Review the effectiveness of current programs that provide a safety net for Canadians who require assistance at different times in their lives.* The trends described in this report suggest that this may be especially important for older women who live alone (one in five lives below Statistics Canada's LICO) and for young families that experience economic setbacks due to unemployment, underemployment, elevated housing costs and changes in family structure (Chapters 2 and 3).
  - ◆ *Recognize the importance of recreation and social services to health and find ways to provide equitable access to these services, regardless of an individual's or family's ability to pay* (Chapter 3).
  - ◆ *Find ways to ensure that all Canadian individuals and families have their essential needs for shelter, privacy and security met.* Work with Aboriginal people to ensure adequate, appropriate housing both on and off reserve (Chapter 4).
- ◆ *Develop long-term strategies to prevent hunger in Canada,* including increased access to healthy, affordable foods in Northern and rural communities and in urban settings. While food banks serve an important stop-gap role, they provide only short-term and partial solutions (Chapter 4).

***People with higher levels of education tend to embrace positive health practices more so than people with low levels of education.***

***Increase literacy levels and access to education for all Canadians.***

Canadians with low literacy skills are more likely to be unemployed and poor, to suffer poorer health and to die earlier than Canadians with high levels of literacy (Chapters 1 and 2). The positive links between level of education and other major determinants of health are also well documented. For example, people with higher levels of education

tend to embrace positive health practices more so than people with low levels of education (Chapter 5), to have better access to healthy physical environments (Chapter 4) and to be better able to optimally prepare their children for school (Chapter 3).

In 1995, Canada had more than twice the number of citizens who lacked adequate literacy skills as Sweden, the country ranked number one on the United Nation's Human Poverty Index for industrialized countries (Chapter 2). While higher numbers of newcomers who do not speak English or French may account for part of this difference, the reasons for this need further exploration.

Educational achievement and literacy are usually, but not always, linked. For example, seniors with low levels of formal education who have pursued lifelong learning opportunities score higher on literacy tests than would be expected. Chapter 7 supports the notion that the provision of opportunities for lifelong learning may be particularly important for maintaining mental health and cognitive capacity in old age.

There is a core of young people who drop out of high school early. They tend to be young men who are having difficulty in school and have limited emotional and financial support for staying in school. In 1996, more young Canadians (especially women) were gaining advanced degrees than ever before. However, between 1992 and 1997, tuition fees for post-secondary education rose 70%, compared to a 6% rise in the Consumer Price Index. As a result of increased tuition costs and increases in family poverty, the average debt load for the growing number of students who must seek financial assistance to attend college or university tripled in the 1990s. This is a worrisome trend that may deter future students from seeking a higher education and cause an increasing number of students to default on their loans.<sup>14</sup>

As the demand for workers with knowledge-based skills increases in the new millennium, the marginalization of Canadians with low literacy skills and low levels of education will worsen. Addressing this challenge must be a priority for all sectors: schools, workplaces, communities, governments and families. Key strategies to address this challenge include:

- ◆ *Providing support for literacy upgrading programs in workplaces and communities for people of all ages.* This includes helping newcomers to Canada learn English or French (Chapter 2).
- ◆ *Encouraging young people to stay in school and finding ways to decrease the debt burden for students who pursue a post-secondary education* (Chapter 2).
- ◆ *Preventing adolescent pregnancies.* The evidence in this report has shown a consistent link between a mother's level of education, her own well-being and several indicators related to children's opportunities for a healthy start in life. We need to provide young women with the information and support they need to stay in school and delay pregnancy beyond the teen years (Chapters 1 and 3). At the same time, there is a need to develop a strategy for helping young men stay in school and use safe sex practices that prevent pregnancy and sexually transmitted diseases (Chapters 2 and 5).
- ◆ *Increasing support for lifelong learning.* This report has shown that stimulation and opportunities to learn are important throughout life, beginning in infancy and extending into old age. As discussed in a previous section, preparing preschoolers for a successful entrance to school is especially important for their future health and development (Chapters 3 and 7).

## A Vision for the Future

A vision for health in the new millennium would see all Canadians enjoying improved health and well-being. Maintaining and improving health by enhancing quality of life, increasing the number of years lived in good health and reducing inequities in health status will require collaborative efforts in pursuit of five major outcomes. These represent a synthesis of the major strategic directions articulated by the ACPH.

### ***1. Positive, supportive living and working conditions in all communities, including:***

- a thriving and sustainable economy with meaningful work for all
- an adequate income for all Canadians and a reduction in the number of families living in poverty
- a more equitable distribution of income
- healthy working conditions
- educational, literacy and lifelong learning opportunities for all
- supportive friendships and social support networks in all communities.

### ***2. A safe, high-quality physical environment, including:***

- a healthy and sustainable environment for all with access to good quality air, water and food, and freedom from exposure to harmful toxins
- suitable, adequate and affordable housing for all
- safe, well-designed communities.

### ***3. Opportunities for healthy development and support for individual choices that enhance health and foster independence, including:***

- healthy child development
- healthy life choice decisions
- enhanced independence for those who require assistance with activities of daily living.

### ***4. Appropriate and affordable health services that are accessible to all, including:***

- a continued commitment to a health-service system based on the principles of universality, accessibility, comprehensiveness, portability and public administration
- improved access to services that have been proven cost-effective but are not consistently or uniformly available
- decreased utilization of services, technologies and medications which the evidence indicates are inappropriate, ineffective or over-utilized
- improved service integration and effectiveness, and increased accountability for improving health outcomes.



### **5. Reductions in preventable illness, injuries and premature death, including:**

- reductions in health problems that take a significant toll on the health of Canadians and for which effective prevention or intervention strategies are available
- an initial focus on priorities currently being addressed by several provinces and territories and the federal government.

## **Conclusion**

Canadians are among the healthiest people in the world. However, this good health is not enjoyed equally by everyone. This report points to some important trends and challenges that need to be addressed. Trends, however, are not destiny. It is possible to achieve positive population health outcomes through the implementation of a broad population health strategy that has a role for all sectors: public, private and not-for-profit.

A major challenge facing those who design, implement and manage policies, programs and research is finding the means to effectively tackle the underlying determinants of health and their interactions. As we have seen in this report, these determinants are complex and dynamic. Thus, interventions must include both short- and long-term strategies, within the health sector and in other sectors that influence health status. It is hoped that the evidence presented in this report (and ones to follow) will help initiate dialogue between sectors and guide the development of initiatives designed to improve and promote public health in the new millennium.

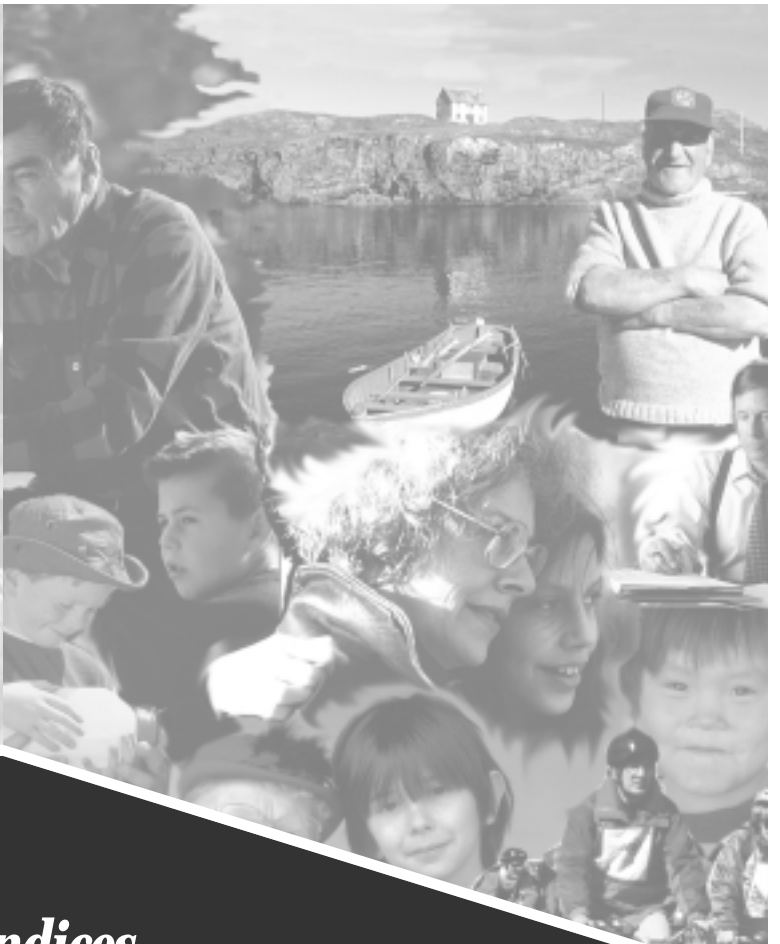
As we enter a new century, our country continues to grow in complexity. Canada is a federation of 10 provinces and three territories that supports bilingualism and multiculturalism. The geography of Canada is vast and varied, and the diversity of our population continues to grow. This breadth, complexity and diversity is both a challenge and a strength.

There is an expectation that our past achievements and collective commitment to improving the well-being of all Canadians will provide us with some exciting opportunities to address the challenges presented in this report.

## **Endnotes for Chapter 8**

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*Appendices*







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## Appendix B

### Selected Health Indicators — Canada, the Provinces and Territories

#### ***Introductory Note***

This appendix contains approximately 100 of the indicators most commonly used to measure health, and the factors that determine the health of Canadians. All of the indicators described in this Appendix are derived from and documented more fully in the *Statistical Report on the Health of Canadians*.

The Statistical Report includes: discussion of each of these measures and their derivation; applicable population boundaries (e.g. age groups); scope of coverage; time frames; and sources. The Statistical Report also addresses the interpretation of inter-jurisdictional comparisons in light of factors such as the limitations of the data-sets and their comparability.

In this section, estimates with high sampling variability have been replaced with a pound sign (#), while those with moderate sampling variability have been identified with an asterisk (\*).

Unfortunately, comparative data from the Northwest Territories and the Yukon Territory are sometimes missing, because analysis of the National Population Health Survey was still under way in the Territories and a number of surveys are not carried out in the Territories. Please note that data pertaining to Nunavut are reported under Northwest Territories.

Caution should be used in drawing comparisons between jurisdictions as a result of differing sample sizes and reporting conventions. Provincial and territorial estimates reported in this appendix are not age-standardized, unless otherwise noted. While a number of notes and some information about sources are included here, readers are referred to the companion *Statistical Report on the Health of Canadians* for more details on reporting methodologies.

## Indicator Data: Canada, Provinces and Territories

Indicator	Canada	NF	PEI	NS	NB	QC	ON
<b>Well-being</b>							
Excellent health (self-rated)	25%	26%	22%	20%	21%	27%	25%
High self-esteem	49%	35%	40%	37%	41%	62%	47%
High mastery	21%	13%	17%	19%	14%	22%	22%
High sense of coherence	28%	36%	33%	28%	27%	25%	30%
<b>Function</b>							
Long-term activity limitation	16%	16%	20%	25%	19%	15%	14%
Disability days (past 2 weeks)	0.85	0.81	0.80	1.05	1.02	0.64	0.80
Very good health (functional status)	88%	91%	89%	85%	87%	90%	88%
<b>Injuries</b>							
Injuries (admissions/10,000 pop.)	72.2	66.0	57.7	61.5	81.0	60.9	63.3
Work injuries (per 1,000 workers)	27.6	27.7	40.6	20.6	12.5	37.2	19.4
Traffic deaths (per 100,000 pop.)	10	8	14	12	12	12	8
Traffic injuries (per 100,000 pop.)	762	463	618	663	627	641	775
<b>Miscellaneous Conditions</b>							
Low birthweight rate	5.8%	6.1%	5.3%	5.4%	5.1%	5.9%	6.0%
Stillbirths (per 10,000 births)	65.4	44.8	70.4		35.3		65.8
Overweight (age 20 to 64)	29%	39%	37%	38%	42%	27%	29%
<b>Mental Health</b>							
Depression (probable)	4%	#	#	5%	5%	4%	4%
High chronic stress	26%	17%	20%	27%	26%	24%	28%
Psychiatric hospitalization rate	709.1	749.9	1,181.9	749.0	857.0	706.7	676.9
High work stress	4%	#	#	#	#	3%	5%
<b>Sexually Transmitted Diseases</b>							
HIV positive tests	41,049	178	PEI+NS* =	531*	217	8,553	18,552
Gonorrhea (per 100,000 pop.)	16.8	0.4	0.7	10.3	5.4	6.5	20.5
Chlamydia (per 100,000 pop.)	114.8	48.8	95.8	113.9	109.3	90.1	94.2
<b>Vaccine-Preventable Diseases</b>							
Measles (per 100,000 pop.)	1.1	0.0	0.0	0.3	0.0	1.1	1.7
Pertussis (per 100,000 pop.)	18.0	10.7	24.9	24.3	16.4	17.9	6.4
<b>Enteric, Foodborne and Waterborne Diseases</b>							
Campylobacter (per 100,000 pop.)	42.7	17.7	31.5	22.5	33.6	38.1	47.8
Salmonella (per 100,000 pop.)	22.0	8.9	11.0	15.6	21.0	21.8	23.7
Giardia (per 100,000 pop.)	20.3	7.3	6.6	15.8	14.6	12.6	22.5
Hepatitis A (per 100,000 pop.)	8.7	0.2	0.7	1.2	1.0	8.0	5.5
E. coli 0157 (per 100,000 pop.)	4.1	0.3	7.3	3.9	0.7	4.1	4.1

## Indicator Data: Canada, Provinces and Territories

MB	SK	AB	BC	YT	NT	Canada	Indicator
<b>Well-being</b>							
21%	17%	25%	25%			25%	Excellent health (self-rated)
34%	34%	44%	46%			49%	High self-esteem
13%	15%	22%	21%			21%	High mastery
31%	34%	28%	28%			28%	High sense of coherence
<b>Function</b>							
18%	22%	18%	21%			16%	Long-term activity limitation
1.02	0.93	1.00	1.05			0.85	Disability days (past 2 weeks)
87%	86%	88%	86%			88%	Very good health (functional status)
<b>Injuries</b>							
89.1	106.3	93.6	91.7	111.3	136.3	72.2	Injuries (admissions/10,000 pop.)
32.8	29.2	22.5	39.7			27.6	Work injuries (per 1,000 workers)
8	13	12	10	22	22	10	Traffic deaths (per 100,000 pop.)
914	664	728	1,022	1,081	388	762	Traffic injuries (per 100,000 pop.)
<b>Miscellaneous Conditions</b>							
5.5%	5.0%	6.1%	5.2%	4.3%	5.5%	5.8%	Low birthweight rate
78.2	60.6	66.9	69.5	0	31.3	65.4	Stillbirths (per 10,000 births)
35%	36%	30%	27%			29%	Overweight (age 20 to 64)
<b>Mental Health</b>							
5%	5%	5%	5%			4%	Depression (probable)
29%	25%	24%	26%			26%	High chronic stress
857.0	797.2	647.3	721.7	653.1	811.7	709.1	Psychiatric hospitalization rate
5%	#	4%	4%			4%	High work stress
<b>Sexually Transmitted Diseases</b>							
621	378	2,976	8,993	21	29	41,049	HIV positive tests
48.4	39.5	16.9	13.7	31.8	187.8	16.8	Gonorrhea (per 100,000 pop.)
224.4	219.3	174.3	106.7	458.6	1,344.9	114.8	Chlamydia (per 100,000 pop.)
<b>Vaccine-Preventable Diseases</b>							
0.0	0.8	0.3	1.1	6.4	0.0	1.1	Measles (per 100,000 pop.)
17.4	52.2	36.9	25.4	421.7	72.0	18.0	Pertussis (per 100,000 pop.)
<b>Enteric, Foodborne and Waterborne Diseases</b>							
17.5	24.4	32.0	67.9	28.7	29.9	42.7	Campylobacter (per 100,000 pop.)
18.9	25.5	21.2	21.7	25.5	41.9	22.0	Salmonella (per 100,000 pop.)
	39.2	19.5	33.7	70.1	32.9	20.3	Giardia (per 100,000 pop.)
21.4	44.1	7.1	12.6	0.0	3.0	8.7	Hepatitis A (per 100,000 pop.)
9.1	3.0	5.1	3.6	0.0	0.0	4.1	E. coli 0157 (per 100,000 pop.)

### Indicator Data: Canada, Provinces and Territories

Indicator	Canada	NF	PEI	NS	NB	QC	ON
<b>Cancer (new cases per 100,000 population)</b>							
Women	346	286	384	354	335	334	350
Men	501	390	563	478	532	511	493
<b>Cancer (deaths per 100,000 population)</b>							
Women	151	149	168	167	158	157	151
Men	232	273	281	264	255	260	223
<b>Chronic Conditions</b>							
Arthritis/Rheumatism	14%	14%	18%	20%	16%	12%	14%
Asthma	7%	5%	6%	6%	6%	7%	7%
Back problems	14%	11%	12%	14%	13%	11%	15%
Food allergies	7%	4%	7%	7%	9%	5%	7%
Non-food allergies	22%	15%	18%	25%	22%	22%	23%
<b>Deaths (per 100,000 population)</b>							
Total	653	710	753	700	680	666	648
Cancer (all)	185	189	207	210	193	203	180
Lung cancer	49	50	57	58	55	61	45
Breast cancer (women only)	29	28	24	30	33	29	29
Cardiovascular disease	226	281	277	233	236	220	229
Coronary heart disease	133	165	165	134	127	135	140
Stroke	47	62	63	42	44	41	48
Respiratory (all)	58	50	76	68	59	56	55
Pneumonia/Influenza	22	18	41	28	18	16	23
Accidents (all)	43	36	45	46	42	49	38
Suicide (all)	13	7	9	12	12	19	9
Infant mortality (per 1,000 live births)	5.6	6.6	4.7	5.6	4.9	4.6	5.7
Perinatal mortality rate (per 1,000 births)	6.7	6.9	7.7	6.2	6.2	5.7	7.2
Early neonatal mortality rate (per 1,000 live births)	3.3	4.5	4.7	3.2	2.4	2.9	3.4
Therapeutic abortions (per 100 live births)	18.7	9.0	0.5	16.8	7.3	20.8	19.9



## Indicator Data: Canada, Provinces and Territories

MB	SK	AB	BC	YT	NT	Canada	Indicator
<b>Cancer (new cases per 100,000 population)</b>							
360	329	338	332			346	Women
549	451	453	447			501	Men
<b>Cancer (deaths per 100,000 population)</b>							
154	139	143	143			151	Women
228	217	211	201			232	Men
<b>Chronic Conditions</b>							
15%	19%	13%	14%			14%	Arthritis/Rheumatism
7%	7%	7%	8%			7%	Asthma
16%	17%	15%	16%			14%	Back problems
7%	9%	7%	8%			7%	Food allergies
18%	23%	21%	25%			22%	Non-food allergies
<b>Deaths (per 100,000 population)</b>							
668	640	639	623	887	1,005	653	Total
185	172	174	166	210	285	185	Cancer (all)
48	43	42	45	83	66	49	Lung cancer
30	25	29	26	12	11	29	Breast cancer (women only)
241	222	233	207	243	216	226	Cardiovascular disease
141	122	127	112	136	58	133	Coronary heart disease
51	45	49	48	11	45	47	Stroke
58	61	58	61	59	179	58	Respiratory (all)
27	28	22	26	20	78	22	Pneumonia/Influenza
45	50	53	41	126	128	43	Accidents (all)
11	14	16	10	35	32	13	Suicide (all)
6.7	8.4	6.2	5.1	#	12.2	5.6	Infant mortality (per 1,000 live births)
7.6	7.1	7.0	6.2	4.5	7.6	6.7	Perinatal mortality rate (per 1,000 births)
3.8	4.5	3.4	2.9	#	2.6	3.3	Early neonatal mortality rate (per 1,000 live births)
17.6	13.6	17.0	18.3	27.2	17.1	18.7	Therapeutic abortions (per 100 live births)

## Indicator Data: Canada, Provinces and Territories

Indicator	Canada	NF	PEI	NS	NB	QC	ON
<b>Potential Years of Life Lost (per 100,000 population), age standardized</b>							
Total	3,804	3,721	3,687	3,983	3,736	4,032	3,453
Cancer	1,098	1,152	1,189	1,264	1,126	1,192	1,079
Accidents	746	759	829	860	758	735	601
Suicide	417	224	188	367	394	660	284
Respiratory	113	77	144	147	77	108	110
Heart disease	491	663	642	592	589	521	475
Stroke	91	110	138	64	82	98	93
Other	848	737	557	689	711	717	810
<b>Life Expectancy at Birth</b>							
Total	78.6	77.7	77.2	77.8	78.2	78.4	78.9
Men	75.7	75.0	73.9	74.9	75.2	75.2	76.1
Women	81.4	80.5	80.7	80.7	81.2	81.5	81.4
<b>Education</b>							
Less than high school	35%	45%	42%	39%	40%	36%	33%
University completed	16%	10%	13%	15%	12%	15%	17%
<b>Income</b>							
Average individual income (\$)	25,196	19,710	20,527	21,552	20,755	23,198	27,309
Low-income persons (%)	20%	21%	15%	19%	19%	23%	18%
Labour force participation rate	64.8%	52.5%	66.3%	60.2%	60.1%	62.1%	65.9%
Unemployment rate	9.2%	18.8%	14.9%	12.2%	12.8%	11.4%	8.5%
<b>Unpaid Household Activities</b>							
Any	89%	85%	87%	87%	87%	88%	89%
60+ hours	5%	10%	5%	6%	6%	4%	5%
Unpaid child care (some)	38%	39%	40%	38%	38%	39%	38%
Unpaid senior care (some)	17%	16%	19%	17%	18%	16%	16%
Effective family functioning	92%	93%	94%	92%	93%	91%	92%
Consistent parenting	58%	54%	58%*	59%	53%	47%	61%
Positive interaction	51%	56%	47%*	50%	52%	52%	51%
<b>Smoking Bylaws/Bans</b>							
Smoking bylaws (population covered)	63%	3%	13%	27%	30%	51%	81%
Smoke-free schools	65%	66%	66%	78%	59%	15%	93%
Smoke-free daycares	51%	55%	50%	48%	47%	35%	53%
Smoke-free health-care settings	29%	44%	18%	18%	31%	7%	30%

## Indicator Data: Canada, Provinces and Territories

MB	SK	AB	BC	YT	NT	Canada	Indicator
<b>Potential Years of Life Lost (per 100,000 population), age standardized</b>							
4,066	4,203	3,943	3,986	4,742	7,695	3,804	Total
1,147	1,086	1,009	960	775	1,479	1,098	Cancer
936	964	963	828	1,788	2,309	746	Accidents
351	508	529	279	457	1,480	417	Suicide
140	161	129	102	86	370	113	Respiratory
546	523	492	385	559	481	491	Heart disease
121	82	86	75	0	269	91	Stroke
824	879	735	1,357	1,078	1,308	848	Other
<b>Life Expectancy at Birth</b>							
78.2	78.4	78.7	79.0	76.1	72.7	78.6	Total
75.5	75.5	76.0	76.1	72.3	69.9	75.7	Men
80.8	81.4	81.3	81.9	84.7	75.8	81.4	Women
<b>Education</b>							
41%	43%	34%	31%	28%	42%	35%	Less than high school
14%	13%	15%	16%	17%	12%	16%	University completed
<b>Income</b>							
22,667	22,541	26,138	26,295	29,079	29,011	25,196	Average individual income (\$)
21%	18%	18%	20%			20%	Low-income persons
66.9%	66.4%	71.8%	64.9%			64.8%	Labour force participation rate
6.6%	6.0%	6.0%	8.7%			9.2%	Unemployment rate
<b>Unpaid Household Activities</b>							
89%	90%	90%	89%	89%	88%	89%	Any
6%	7%	5%	5%	6%	8%	5%	60+ hours
40%	41%	41%	36%	42%	57%	38%	Unpaid child care (some)
20%	21%	16%	15%	12%	21%	17%	Unpaid senior care (some)
92%	91%	91%	92%			92%	Effective family functioning
62%	64%	65%	63%			58%	Consistent parenting
49%	41%	51%	51%			51%	Positive interaction
<b>Smoking Bylaws/Bans</b>							
62%	55%	70%	71%			63%	Smoking bylaws (population covered)
72%	65%	49%	67%	YT+NWT = 57%		65%	Smoke-free schools
55%	49%	53%	54%	YT+NWT = 24%		51%	Smoke-free daycares
47%	44%	28%	37%	YT+NWT = 81%		29%	Smoke-free health-care settings

## Indicator Data: Canada, Provinces and Territories

Indicator	Canada	NF	PEI	NS	NB	QC	ON
<b>Personal Health Practices</b>							
Current smoker	28%	31%	32%	31%	28%	32%	25%
Regular drinker	53%	48%	44%	47%	42%	57%	52%
14+ drinks per week	9%	11%	10%	12%	10%	9%	9%
5+ drinks per occasion	42%	53%	48%	51%	47%	39%	39%
Driving after drinking (1+ times)	10%	8%	9%	7%	7%	10%	7%
Currently use cannabis	7%	4%	#	8%	6%	9%	5%
1+ illicit drugs, lifetime	24%	16%	19%	25%	22%	25%	17%
Physically active	21%	18%	14%	18%	18%	17%	21%
Walk to work	7%	10%	7%	8%	7%	7%	6%
Always use bicycle helmet	29%	#	#	37%	21%	19%	33%
Always insist on seatbelt use	86%	88%	83%	82%	88%	87%	86%
Took actions to improve health	47%	41%	43%	46%	44%	44%	50%
<b>Health-Care Services</b>							
Influenza vaccination, ever	26%	18%	27%	33%	24%	17%	32%
Pap smear test, ever (age 18+)	87%	91%	87%	90%	89%	82%	88%
Screening mammogram, past 2 years (age 50–69)	54%	29%	56%	40%	60%	49%	59%
Blood pressure test, past year	71%	73%	67%	75%	71%	68%	75%
HIV/AIDS test, ever	15%	8%	8%	11%	8%	14%	17%
Visits to health professional (1+)	93%	88%	92%	93%	90%	91%	94%
Visits to a physician (1+)	81%	80%	80%	82%	80%	76%	83%
Visits to a dentist, past year	62%	44%	58%	57%	52%	53%	71%
Dental insurance	55%	43%	48%	50%	53%	40%	63%
Eye examination, past year	42%	31%	39%	39%	34%	39%	48%
Insurance for corrective lenses	47%	47%	51%	52%	56%	34%	57%
1+ medications used, past two days	63%	63%	68%	69%	71%	62%	64%
Insurance for prescription meds.	61%	57%	58%	67%	63%	55%	66%
Unmet health-care needs	5%	3%	5%	5%	6%	3%	6%
Emergency visits (per 1,000 pop.)	433.1	180.3	332.4	380.3	190.9	449.1	465.3
Hospital (average days of stay)	11	8	8	8	8	13	10
Health expenditures (% of GDP)	9.2%	12.1%	11.8%	10.9%	10.8%	9.5%	8.9%
Per capita health expenditures (\$)	2,512.72	2,266.86	2,465.77	2,273.71	2,371.39	2,309.01	2,624.27

## Indicator Data: Canada, Provinces and Territories

MB	SK	AB	BC	YT	NT	Canada	Indicator
<b>Personal Health Practices</b>							
26%	29%	28%	24%			28%	Current smoker
52%	54%	52%	56%			53%	Regular drinker
11%	8%	9%	10%			9%	14+ drinks per week
48%	48%	48%	44%			42%	5+ drinks per occasion
13%	21%	12%	11%			10%	Driving after drinking (1+ times)
9%	7%	8%	12%			7%	Currently use cannabis
26%	22%	30%	37%			24%	1+ illicit drugs, lifetime
20%	20%	26%	27%			21%	Physically active
9%	10%	7%	7%	15%	42%	7%	Walk to work
12%	#	26%	53%			29%	Always use bicycle helmet
77%	82%	78%	89%			86%	Always insist on seatbelt use
46%	39%	48%	49%			47%	Took action to improve health
<b>Health-Care Services</b>							
26%	23%	28%	29%			26%	Influenza vaccination, ever
90%	93%	90%	86%			87%	Pap smear test, ever (age 18+)
50%	50%	56%	54%			54%	Screening mammogram, past 2 years (age 50–69)
72%	68%	69%	66%			71%	Blood pressure test, past year
11%	8%	15%	17%			15%	HIV/AIDS test, ever
93%	92%	91%	93%			93%	Visits to health professional (1+)
81%	81%	80%	83%			81%	Visits to a physician (1+)
60%	48%	59%	64%			62%	Visits to a dentist, past year
58%	50%	62%	59%			55%	Dental insurance
37%	43%	38%	36%			42%	Eye examination, past year
40%	26%	43%	49%			47%	Insurance for corrective lenses
62%	69%	62%	63%			63%	1+ medications used, past two days
47%	40%	67%	62%			61%	Insurance for prescription medications
7%	6%	8%	6%			5%	Unmet health-care needs
502.1	151.7	479.2	433.5	527.8	280.7	433.1	Emergency visits (per 1,000 pop.)
10	8	6	13	4	5	11	Hospital (average days of stay)
10.4%	9.0%	7.1%	9.9%	8.7%	12.9%	9.2%	Health expenditures (% of GDP)
2,579.30	2,477.06	2,380.35	2,728.32	3,267.22	5,563.87	2,512.72	Per capita health expenditures (\$)

## Indicator Data: Notes and Sources

Indicator	Topic Number (Statistical Report)†	Notes and Sources
<b>Well-being</b>		
Excellent health (self-rated)	53	Age 12+, NPHS,** 1996–97. Percentage rating their health as “excellent.”
High self-esteem	54	Age 12+, NPHS, 1994–95. “High” is a score of 20 or more out of a possible 24 on the Self-esteem Scale.
High mastery	54	Age 12+, NPHS, 1994–95. “High” is a score of 23 or more out of 28 on the Mastery Scale.
High sense of coherence	54	Age 18+, NPHS, 1994–95. “High” is a score of 67 or greater (the approximate 70th percentile) on the Sense of Coherence Scale.
<b>Function</b>		
Long-term activity limitation	58	Age 12+, NPHS, 1996–97. Any limitation or disability in normal activities, at home, school or work.
Disability days (in past 2 weeks)	57	All ages, NPHS, 1996–97.
Very good health (functional status)	56	Age 12+, NPHS, 1996–97. Percentage with very good health, a score of 0.80–1.00, based on eight attributes: vision, hearing, speech, mobility, dexterity, cognition, emotion, and pain/discomfort.
<b>Injuries</b>		
Injuries (admissions per 10,000 pop.)	60	All ages, <i>National Trauma Registry</i> , 1995–96. Acute care hospital admissions due to injury.
Work injuries (per 1,000 workers) resulting in time off work	61	Age 15+, 1996, Statistics Canada, Health Statistics Division. Calculated with data from the National Work Injuries Section and the Labour Force Survey Subdivision.
Traffic deaths (per 100,000 pop.)	63	All ages, 1996, Transport Canada, <i>Motor Vehicle Traffic Collision Statistics</i> .
Traffic injuries (per 100,000 pop.)	63	All ages, 1996, Transport Canada, <i>Motor Vehicle Traffic Collision Statistics</i> .
<b>Miscellaneous Conditions</b>		
Low birthweight	64	Percentage of all live births less than 2,500 grams, 1996. Statistics Canada. <i>The Daily</i> , July 8, 1998.
Stillbirths (per 10,000 births)	65	Rate per 10,000 births, 1995. Health Canada, <i>Birth Defect Prevalences in Canada</i> , 1995.
Overweight (age 20–64)	67	Age 20–64, NPHS, 1996–97. Body Mass Index (weight in kilograms/[height in metres, squared]) 27.0 or greater.

<b>Mental Health</b>		
Depression (probable)	75	Age 12+, NPHS, 1996–97. 90% probability of suffering a major depressive episode.
High chronic stress	8	Age 18+, NPHS, 1994–95. Score of 5 or more on 18-item scale.
Psychiatric hospitalization rate	76	All ages, 1995–96. Separations in psychiatric hospitals and general hospitals per 100,000 population, Canadian Institute for Health Information, <i>Mental Health Database</i> .
High work stress	9	Employed Canadians, age 15–74, NPHS, 1994–95. Based on a score of 30 or more on a 12-item (60 point) work stress scale.
<b>Sexually Transmitted Diseases</b>		
HIV positive tests	71	All ages, cumulative total reported HIV positive tests to December 31, 1997. (Note: excludes Quebec results for 1997). Health Canada. <i>HIV and AIDS in Canada, Surveillance Report to December 31, 1997</i> .
Gonorrhea (per 100,000 pop.)	70	All ages, 1996. Health Canada, Special tabulations.
Chlamydia (per 100,000 pop.)	70	All ages, 1996. Health Canada, Special tabulations.
<b>Vaccine-Preventable Diseases</b>		
Measles (per 100,000 pop.)	69	All ages, 1996. Health Canada. <i>Canada Communicable Diseases Report, 1997</i> .
Pertussis (whooping cough, per 100,000 pop.)	69	All ages, 1996. Health Canada. <i>Canada Communicable Diseases Report, 1997</i> .
<b>Enteric, Foodborne and Waterborne Diseases</b>		
Campylobacter (per 100,000 pop.)	72	All ages, 1996. Health Canada. Notifiable diseases annual summary, 1996. <i>Canada Communicable Diseases Report, 1998</i> .
Salmonella (per 100,000 pop.)	72	All ages, 1996. Health Canada. Notifiable diseases annual summary, 1996. <i>Canada Communicable Diseases Report, 1998</i> .
Giardia (per 100,000 pop.)	72	All ages, 1996. Health Canada. Notifiable diseases annual summary, 1996. <i>Canada Communicable Diseases Report, 1998</i> .
Hepatitis A (per 100,000 pop.)	72	All ages, 1996. Health Canada. Notifiable diseases annual summary, 1996. <i>Canada Communicable Diseases Report, 1998</i> .
E-coli 0157 (per 100,000 pop.)	72	All ages, 1996. Health Canada. Notifiable diseases annual summary, 1996. <i>Canada Communicable Diseases Report, 1998</i> .
<b>Cancer (new cases per 100,000 population)</b>		
Women	73	All ages, estimated rates, 1998. National Cancer Institute of Canada. <i>Canadian Cancer Statistics, 1998</i> .
Men	73	All ages, estimated rates, 1998. National Cancer Institute of Canada. <i>Canadian Cancer Statistics, 1998</i> .

<b>Cancer (deaths per 100,000 population)</b>		
Women	73	All ages, estimated rates, 1998. National Cancer Institute of Canada. <i>Canadian Cancer Statistics, 1998</i> .
Men	73	All ages, estimated rates, 1998. National Cancer Institute of Canada. <i>Canadian Cancer Statistics, 1998</i> .
<b>Chronic Conditions</b>		
Arthritis/Rheumatism	68	Age 12+, NPHS, 1996–97. Percentage reporting chronic condition.
Asthma	68	Age 12+, NPHS, 1996–97. Percentage reporting chronic condition.
Back problems	68	Age 12+, NPHS, 1996–97. Percentage reporting chronic condition.
Food allergies	68	Age 12+, NPHS, 1996–97. Percentage reporting chronic condition.
Non-food allergies	68	Age 12+, NPHS, 1996–97. Percentage reporting chronic condition.
<b>Deaths (per 100,000 population)</b>		
Total	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Cancer (all)	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Lung cancer	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Breast cancer (women only)	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Cardiovascular disease	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Coronary heart disease	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Stroke	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Respiratory (all)	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Pneumonia/Influenza	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Accidents (all)	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Suicide (all)	82	1996 (age standardized to the 1991 population). Statistics Canada. <i>Health Indicators, 1997</i> .
Infant mortality (per 1,000 live births)	78	1996. Deaths (per 1,000 live births). Statistics Canada, <i>Compendium of Vital Statistics, 1996</i> .
Perinatal mortality (per 1,000 births)	78	1996. Stillbirths and infant deaths under one week of age (per 1,000 births). Statistics Canada, <i>Compendium of Vital Statistics, 1996</i> .
Early neonatal mortality (per 1,000 live births)	78	1996. Deaths (per 1,000 live births). Statistics Canada, <i>Compendium of Vital Statistics, 1996</i> .
Therapeutic abortions (per 100 live births)	66	All ages, 1995. Statistics Canada. <i>Therapeutic Abortions, 1995</i> . Note: Nova Scotia serves the needs of Prince Edward Island and New Brunswick.



<b>Potential Years of Life Lost (per 100,000 population)</b>		
Total	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Cancer	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Accidents	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Suicide	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Respiratory	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Heart disease	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Stroke	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
Other	83	1996. Years of Life Lost per 100,000 population (age adjusted) based on deaths prior to age 70. Statistics Canada. <i>Health Indicators, 1997</i> . Special tabulations.
<b>Life Expectancy at Birth</b>		
Total	84	Total life expectancy at birth, 1996. Statistics Canada. <i>Compendium of Vital Statistics, 1996</i> .
Men	84	Total life expectancy at birth, 1996. Statistics Canada. <i>Compendium of Vital Statistics, 1996</i> .
Women	84	Total life expectancy at birth, 1996. Statistics Canada. <i>Compendium of Vital Statistics, 1996</i> .
<b>Education</b>		
Less than high school	5	Age 15+, 1996. Statistics Canada, <i>1996 Census: Education</i> .
University completed	5	Age 15+, 1996. Statistics Canada, <i>1996 Census: Education</i> .
<b>Income</b>		
Average individual income	6	Age 15+, 1995. Statistics Canada, <i>1996 Census: Sources of Income</i> .
Low-income persons (%)	6	All ages, 1995. Statistics Canada, <i>1996 Census: Sources of Income</i> . "Low income" refers to economic families and unattached individuals who have income below Statistics Canada's Low Income Cut-Offs, 1992 base. Families and unattached individuals with incomes below these limits usually spend more than 54.7% of their income on food, clothing and shelter.

Labour force participation rate	7	Age 15+, 1997. Statistics Canada, <i>Historical Labour Force Statistics, 1997</i> .
Unemployment rate	7	Age 15+, 1997. Statistics Canada, <i>Historical Labour Force Statistics, 1997</i> .
<b>Unpaid Household Activities</b>		
Any	7	Age 15+, 1996. Statistics Canada, <i>1996 Census: Unpaid Work</i> . Time spent doing unpaid housework, yard work or home maintenance during the previous week, including preparing meals, shopping, laundry and cutting the grass.
60+ hours per week	7	Age 15+, 1996. Statistics Canada, <i>1996 Census: Unpaid Work</i> . Time spent doing unpaid housework, yard work or home maintenance during the previous week, including preparing meals, shopping, laundry and cutting the grass.
Unpaid child care	32	Age 15+, 1996. Statistics Canada. <i>1996 Census: Unpaid Care</i> . Percentage who report spending some time during past week providing unpaid child care.
Unpaid senior care	32	Age 15+, 1996. Statistics Canada. <i>1996 Census: Unpaid Care</i> . Percentage who report spending some time during past week providing unpaid care or assistance to one or more seniors.
Effective family functioning	31	Parents of children aged 0–11, <i>National Longitudinal Survey of Children and Youth, 1994–95</i> . Effective family functioning was defined as a score of 0–14 on a 12-item scale, wherein 35 indicates major dysfunction.
Consistent parenting	31	Parents of children aged 2–11, <i>National Longitudinal Survey of Children and Youth, 1994–95</i> . Consistent parenting measured as a score greater than 14.7 out of a possible 20 for consistency.
Positive interaction	31	Parents of children aged 2–11, <i>National Longitudinal Survey of Children and Youth, 1994–95</i> . Positive/warm interaction measured as a score greater than 13.5 out of 20 for interaction.
<b>Smoking Bylaws/Bans</b>		
Population protected by smoking bylaws	12	Percentage of population living in municipalities with bylaws restricting smoking, 1995. Health Canada. <i>Smoking Bylaws in Canada, 1995</i> .
Smoke-free schools	12	Percentage of schools with complete smoking bans (indoor and out), 1995. Health Canada. <i>Study of Smoking Policies in Various Settings in Canada, 1995</i> .
Smoke-free daycares	12	Percentage of daycare centres with complete smoking bans (indoor and out), 1995. Health Canada. <i>Study of Smoking Policies in Various Settings in Canada, 1995</i> .
Smoke-free health-care settings	12	Percentage of health-care facilities with smoking bans (indoor ban), 1995. Health Canada. <i>Study of Smoking Policies in Various Settings in Canada, 1995</i> .

Personal Health Practices		
Current smoker (%)	40	Age 12+, NPHS, 1996–97. Smokes cigarettes daily or occasionally.
Regular drinker (%)	42	Age 12+, NPHS, 1996–97. Persons who report drinking alcohol at least once per month.
14+ drinks per week	42	Age 12+, NPHS, 1996–97. Percentage of regular drinkers who report consuming 14 or more drinks weekly.
5+ drinks per occasion	43	Age 12+, NPHS, 1996–97. Percentage of “current drinkers” (at least one drink in the past year) who report consuming at least five drinks on one or more occasions during the past year.
Driving after drinking (1+ times)	44	Age 16+, NPHS, 1996–97. Persons who had a driver’s licence and were current drinkers who reported driving a motor vehicle after drinking “too much” alcohol.
Currently use cannabis	45	Age 15+, 1994. Reported using cannabis at least once during the previous year. <i>Canada’s Alcohol and Other Drugs Survey, 1994.</i>
1+ illicit drugs used, lifetime	45	Age 15+, 1994. Reported using cannabis (excluding one-time use only), cocaine/crack, LSD, amphetamines (speed) or heroin at least once during their lifetime. <i>Canada’s Alcohol and Other Drugs Survey, 1994.</i>
Physically active	46	Age 12+, NPHS, 1996–97. Estimated level of activity equal to or greater than three kilocalories per kilogram of body weight per day.
Walk to work	46	Employed Canadians, age 15+, 1996. Statistics Canada, 1996 Census: <i>Mode of Transportation.</i>
Always use bicycle helmet	49	Cyclists age 12+, NPHS, 1996–97. Percentage who say that they always use a helmet when riding a bicycle.
Always insist on seatbelt use	49	Motorists age 16+, NPHS, 1996–97. Percentage who say that they always insist that their passengers wear a seatbelt.
Took actions to improve health	52	Age 12+, NPHS, 1996–97. Percentage who report that they took some action to improve their health during the past year.
Health-Care Services		
Influenza vaccination, ever	15	Age 12+, NPHS, 1996–97. Percentage who report ever having influenza shots.
Pap smear test, ever (age 18+)	16	Women age 18+, NPHS, 1996–97. Percentage who report ever having had a Pap smear test.
Screening mammogram, past 2 years (age 50–69)	17	NPHS, 1996–97. Note: Includes only women who report reason for mammography as follows: a check-up, family history of breast cancer, age or hormone replacement therapy. (Women who reported other reasons were categorized as a non-screening mammography.)

Blood pressure test, past year	18	Age 12+, NPHS, 1996–97. Percentage who report a blood pressure check-up within the previous 12 months.
HIV/AIDS test, ever	20	Age 18+, NPHS, 1996–97. Percentage who report having been tested for HIV/AIDS.
Visits to a health professional (1+)	19	Age 12+, NPHS, 1996–97. Percentage who report at least one visit to a health professional during the past year.
Visits to a physician (1+)	19	Age 12+, NPHS, 1996–97. Percentage who report at least one visit to a physician during the past year.
Visits to a dentist, past year	21	Age 12+, NPHS, 1996–97. Percentage who report at least one dental visit during the past year.
Dental insurance	21	Age 12+, NPHS, 1996–97. Percentage who report having dental insurance.
Eye examination, past year	23	Age 12+, NPHS, 1996–97. Percentage who report at least one eye examination during the past year.
Insurance for corrective lenses	23	Age 12+, NPHS, 1996–97. Percentage who report having insurance for corrective lenses.
1+ medications used, past two days	24	Age 12+, NPHS, 1996–97. Percentage reporting use of one or more medications in the past two days.
Insurance for prescription medications	24	Age 12+, NPHS, 1996–97. Percentage reporting full or partial coverage through government plans or insurance.
Unmet health-care needs	25	Age 12+, NPHS, 1996–97. Percentage who required some health care or advice on at least one occasion and did not receive it.
Emergency visits (per 1,000 pop.)	26	All ages, 1995–96. Canadian Institute for Health Information. <i>Annual Hospital Survey Database, 1995–96.</i>
Hospital (average days of stay)	27	All ages, 1995–96. Canadian Institute for Health Information. <i>Hospital Morbidity Database.</i>
Health expenditure (% of GDP)	29	1996. Canadian Institute for Health Information. <i>National Health Expenditure Trends, 1975–1998.</i> Note: health-care spending only (not social services spending).
Per capita health expenditures (\$)	29	1996. Canadian Institute for Health Information. <i>National Health Expenditure Trends, 1975–1998.</i> Note: health-care spending only.

† The most closely related topic in the *Statistical Report on the Health of Canadians (1999)* is listed. Note that definitions vary in some instances.

\*\* NPHS: National Population Health Survey



## Appendix C

### Selected Resource Documents

The reader is directed to the following key resource documents for more information. More detailed materials are listed in the Endnotes.

#### ***Population Health and Determinants of Health: General***

Evans, R., Barer, M., Marmor, T. (eds.) *Why Are Some People Healthy and Others Not? The Determinants of Health of Populations*. New York: Aldine De Gruyter, 1994.

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

Health and Welfare Canada. *A New Perspective on the Health of Canadians*. Ottawa: Health and Welfare Canada, 1974.

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

National Forum on Health. *Determinants of Health: Adults and Seniors*. Sainte-Foy: Éditions MultiMondes, 1998.

National Forum on Health. *Determinants of Health: Settings and Issues*. Sainte-Foy: Éditions MultiMondes, 1998.

United Nations Development Program. *Human Development Report 1998*. New York: Oxford University Press, 1998.

World Health Organization, Health and Welfare Canada, Canadian Public Health Association. *Ottawa Charter for Health Promotion*. Ottawa: CPHA, 1986.

#### ***Socioeconomic Environment and Health (Chapter 2)***

Canadian Public Health Association. *The Health Impacts of Social and Economic Conditions: Implications for Public Policy*. Board of Directors Discussion Paper. Ottawa: CPHA, 1997.

Statistics Canada. *Family Violence in Canada: A Statistical Profile, 1998*. Ottawa: Statistics Canada, 1998. (Statistics Canada Cat. No. 85-224-XIE).

Wilkinson, R. *Unhealthy Societies: The Afflictions of Inequality*. New York: Routledge, 1996.

### ***Healthy Child and Youth Development (Chapter 3)***

Canadian Council on Social Development. *The Progress of Canada's Children, 1997 and 1998*. Ottawa: CCSD, 1997 and 1998.

Canadian Institute of Child Health. *The Health of Canada's Children: A CICH Profile*. Ottawa: CICH, 1994.

Guy, K. (ed.). *Our Promise to Children*. Arnprior, ON: The HLR Publishing Group, 1997. Distributed by the Canadian Institute of Child Health.

Human Resources Development Canada and Statistics Canada. *Growing Up in Canada. National Longitudinal Survey of Children and Youth*. Ottawa: 1996. (Cat. No. 89-550-MPE, No. 1.)

National Crime Prevention Council. *Preventing Crimes by Investing in Families* (a series of three publications). Ottawa: National Crime Prevention Council, 1996 and 1997.

National Forum on Health. *Determinants of Health: Children and Youth*. Sainte-Foy: Éditions MultiMondes, 1998.

The Honourable McCain, M.N., Mustard, J.F. *Early Years Study: Final Report*. Toronto: Reference Group on the Early Years, 1999.

### ***Physical Environment and Health (Chapter 4)***

Health Canada. *Health and Environment: Partners for Life*. Ottawa: Minister of Public Works and Government Services Canada, 1997. (Cat. No. H49-112/1997E.)

Last, J., Guidotti, T., Hertzman, C., et al. *Implications of Global Change for Human Health*. The Royal Society of Canada, 1995.

Last, J., Trouton, K., Pengally, D. *Taking Our Breath Away*. Vancouver: David Suzuki Foundation, 1998.

World Health Organization. *Health and Environment in Sustainable Development: Five Years After the Earth Summit*. Geneva: World Health Organization, 1997.

Environment Canada. *Canada's National Environmental Indicators Series*.  
[http://www.ec.gc.ca/natural\\_f.html](http://www.ec.gc.ca/natural_f.html)

### ***Health Care and Health (Chapter 6)***

National Forum on Health. *Health Care Systems in Canada and Elsewhere*. Sainte-Foy: Éditions MultiMondes, 1998.

National Forum on Health. *Evidence and Information*. Sainte-Foy: Éditions MultiMondes, 1998.

### ***Biology and Genetics (Chapter 7)***

Health Canada. *New Reproductive and Genetic Technologies: Setting Boundaries, Enhancing Health*. June 1996.

Medical Research Council of Canada, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Council. *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*, August 1998.



# Appendix D

## Key Word Index

This brief index is intended to supplement the detailed Table of Contents. Please note that recommendations from Chapter 8, and highlights and summary sections from all chapters are not covered by the index.

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## Reader Feedback

The Federal, Provincial and Territorial Advisory Committee on Population Health invites you to answer a few questions about *Toward a Healthy Future: Second Report on the Health of Canadians*. Your answers will provide feedback on the content and usefulness of this report.

Please return the completed questionnaire to:

Quantitative Analysis and Research Section  
Policy Development and Coordination Division  
Health Promotion and Programs Branch  
Health Canada  
Jeanne Mance Building  
Tunney's Pasture (AL 1917C1)  
Ottawa, ON K1A 1B4

Alternately, you may return the questionnaire by e-mail to Serge Tanguay at [serge\\_tanguay@hc-sc.gc.ca](mailto:serge_tanguay@hc-sc.gc.ca)

### ***Overall Satisfaction with the Report***

For each of the following questions, please place an X beside the *most appropriate* response.

1. How did you obtain your copy of the *Report*?

- It was mailed to me as part of the initial distribution
- I obtained my copy at work
- I accessed it through the Internet
- I ordered my own copy
- Other (please specify) \_\_\_\_\_

2. To what extent have you read or browsed through the *Report*?

- Have not read or browsed through the document
- Have browsed through the entire document
- Have browsed through the entire document and have read specific chapters
- Have read the entire document

3. How satisfied are you with the following aspects of the *Report*?

a. Length

- Too short
- About right
- Too long

b. Language level (readability)

- Too high
- About right
- Too low

c. Clarity of technical information

- Excellent
- Good
- Fair
- Poor

d. Format and organization

- Excellent       Good       Fair       Poor

e. Use of figures/graphics

- Excellent       Good       Fair       Poor

f. Quality of discussion

- Excellent       Good       Fair       Poor

4. How can the *Report* be improved (e.g. content, format, etc.)?

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***Usefulness of the Report***

5. One of the goals of the *Report* is to increase awareness and understanding about the health status of Canadians and the factors that influence health. Overall, how successful do you think it was in achieving this goal?

- Very successful     Fairly successful     Limited success     Not successful

6. Have you used, or will you likely use, the information in the *Report* for any of the following?

(Place an X beside *all* the appropriate responses.)

- Policy development       Educational activities     For information only  
 Program planning       Research and/or evaluation  
 Briefing notes       To support intersectoral collaboration  
 Public awareness activities     Other (please specify) \_\_\_\_\_

7. How useful did you find each section of the *Report*? (For each, please place an X beside the *most appropriate* response.)

	Very useful	Somewhat useful	Not useful
Executive Summary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Introduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health Status	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Social/Economic Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Healthy Child Development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Physical Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Personal Health Practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reader Feedback

Health Services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biology and Genetics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conclusions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Appendix B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What (degree of) impact do you think the *Report* has had or will have among the following groups? (Please place the appropriate number beside *each item*.)

1 = high impact (widely used)    3 = little impact (little use)    5 = unsure  
2 = some impact (some use)    4 = no impact (not read or used)

- \_\_\_ Health policy makers within government
- \_\_\_ Government policy makers within other sectors
- \_\_\_ Local or regional health authorities
- \_\_\_ Non-governmental (e.g. voluntary) organizations
- \_\_\_ Service providers (e.g. clinicians, other health professionals, social workers)
- \_\_\_ Academic and/or policy researchers
- \_\_\_ Members of the general public
- \_\_\_ Media

9. Do you have a copy of the companion document, *Statistical Report on the Health of Canadians (1999)*?

Yes     No

If yes, which document do you find to be the more useful?

- Toward a Healthy Future*     Both are useful
- Statistical Report*     Unsure (haven't read the *Statistical Report*)

10. Do you have other comments about *Toward a Healthy Future* or suggestions for future reports?

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## **Reader Information**

For each of the following questions, please place an X beside the *most appropriate* response.

11. What is your geographic region (e.g. province, territory)?

- |                                |                               |                                  |                                 |                                |
|--------------------------------|-------------------------------|----------------------------------|---------------------------------|--------------------------------|
| <input type="checkbox"/> Nfld. | <input type="checkbox"/> N.B. | <input type="checkbox"/> N.S.    | <input type="checkbox"/> P.E.I. | <input type="checkbox"/> Yukon |
| <input type="checkbox"/> Que.  | <input type="checkbox"/> Ont. | <input type="checkbox"/> Man.    | <input type="checkbox"/> Sask.  |                                |
| <input type="checkbox"/> Alta. | <input type="checkbox"/> B.C. | <input type="checkbox"/> Nunavut | <input type="checkbox"/> N.W.T. |                                |

12. What sector are you most closely associated with?

- |                                  |   |                                    |                                      |
|----------------------------------|---|------------------------------------|--------------------------------------|
| <input type="checkbox"/> Health  | <input type="checkbox"/> Social services              | <input type="checkbox"/> Education | <input type="checkbox"/> Environment |
| <input type="checkbox"/> Housing | <input type="checkbox"/> Other (please specify) _____ |                                    |                                      |

13. What is your affiliation?

- |   |   |
|---|---|
| <input type="checkbox"/> Federal government           | <input type="checkbox"/> Academic and/or policy research institute    |
| <input type="checkbox"/> Provincial government        | <input type="checkbox"/> Non-government (e.g. voluntary) organization |
| <input type="checkbox"/> Local or regional government | <input type="checkbox"/> Service provider (e.g. clinician)            |
| <input type="checkbox"/> Library                      | <input type="checkbox"/> Media  |
| <input type="checkbox"/> General public               | <input type="checkbox"/> Other (please specify) _____                 |

14. What is your position or role within your organization?

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Policy analyst               | <input type="checkbox"/> Program manager | <input type="checkbox"/> Service deliverer |
| <input type="checkbox"/> Researcher                   | <input type="checkbox"/> Administrator   | <input type="checkbox"/> Board member      |
| <input type="checkbox"/> Other (please specify) _____ |  |  |

**Thank you for taking the time to complete this questionnaire.**