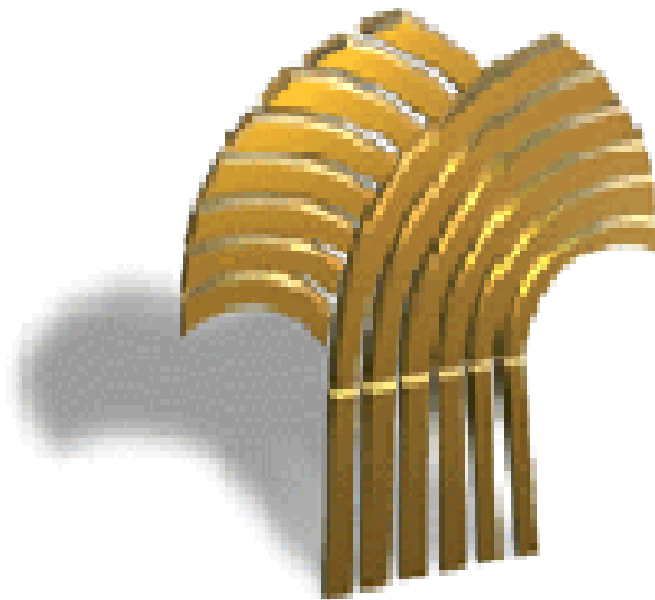


SASKATCHEWAN COMPARABLE HEALTH INDICATORS REPORT 2004



HEALTH

Healthy People. A Healthy Province.

INTRODUCTION

THE SASKATCHEWAN COMPARABLE HEALTH INDICATORS REPORT 2004

Background to indicator reporting in 2004

This is the second report in the comparable health indicators series. The first reports, published in September 2002 by all jurisdictions were in response to a commitment outlined by First Ministers in their September 2000 Communiqué on health to increase the accountability of jurisdictions to their public. These reports focused on health status, health outcomes and quality of service. (A copy of Saskatchewan's 2002 report can be found at http://www.health.gov.sk.ca/info_center_comparable_health_indicators_report.html).

In February 2003 the Federal/Provincial/Territorial First Ministers established the 2003 First Ministers Accord on Health Care Renewal. As well as setting out an action plan for reform, First Ministers agreed that enhanced accountability and improved performance reporting are essential to reassuring Canadians that reforms are occurring. As an outcome of this, it was decided that each jurisdiction would continue to provide comprehensive and regular public reporting on the health programs and services it delivers as well as on health system performance, health outcomes and health status.

(For more details on the 2003 Health Accord, and other background documents please follow the links in the [Further Information](#) section at the end of this chapter).

As was the case with the first report, the Office of the Provincial Auditor in Saskatchewan was the third party verifier of this report. A copy of their audit opinion and the management representation can be found on our website at:

http://www.health.gov.sk.ca/mc_comparable_hlth_indicators_04.html

So what has changed since the last report?

Why are some of the indicators different from the last time?

This report builds on the initiatives and reporting requirements of the first comparable health indicator reporting process but also contains some new indicators developed to supplement the work undertaken for the 2002 reports. Furthermore, a renewed commitment to increased reporting to the general public specifically led to a common core set of indicators being decided upon for the reports.

For these reasons some of the indicators we reported on last time are not in this report, and some new indicators that weren't talked about in 2002 are included for the first time in 2004.

What are Indicators?

Health indicators are summary measures of health status, the health care system or related factors that we know influence health

Health indicators help track changes over time or differences between locations in terms of the health and well-being of a population, and can provide evidence for program and policy development.

INTRODUCTION

Where have some of the indicators gone?

As well as being shorter in content, the process for choosing indicators to appear in these reports was also slightly different from the approach used the last time. A common core set of indicators (18 in total) was chosen by a working group of Federal/ Provincial/ Territorial representatives based on input and feedback obtained from stakeholder consultations, and the general public (Website submissions and focus groups).

Saskatchewan has chosen to supplement this common core set that will be reported on by all jurisdictions with an additional six indicators (highlighted in yellow/ italicised throughout the report) that it feels are of particular interest and importance to people in Saskatchewan, or highlight a particular theme (see text box).

In total 24 indicators are reported on in 2004 in this written report. In 2002, Saskatchewan reported on 61 indicators out of a total 67 measures that were primarily chosen by one group – the Federal/ Provincial/ Territorial Performance Indicators Reporting Committee (PIRC).

Although only 24 indicators appear in this written report, data for a total of 70 indicators (including the 18 common core indicators included here) are available from December 1st 2004 at either of the following locations:

<http://www.cihi.ca/comparable-indicators> or <http://www.statcan.ca/english/freepub/82-401-XIE/2002000/index.htm>

What else is different about this report?

The 2004 Saskatchewan Comparable Health Indicators Report contains several new features compared to the 2002 report. Primarily, this is an electronic report. Although paper copies will be available for our summary 'Highlights' document (see [Further Information](#) for details on obtaining a copy), keeping the main report, which contains more contextual information and technical detail, in an electronic format helps cut-down on the costs associated with performance reporting – and helps save a few trees along the way as well! This year's Saskatchewan Comparable Health Indicator report has also been written with non-technical audiences in mind. Special features include colour graphs and charts, a [Saskatchewan Progress Report](#) that outlines key programs and services in the province that are working towards achieving our indicator goals, frequent [Highlights](#) sections that provide a snapshot of the indicator results for quick reference, and [Further Information](#) sections that provide references and links to other sources of information on the indicator area being discussed. [Summary tables](#) highlight our status on each indicator at the start of each chapter. A key to interpreting these summary tables is included in the [appendix](#).

Heart Attack Indicators – A focus for 2004

This year 'heart attack' indicators are focused on throughout the report, so for example three indicators which measure different aspects of heart attack care in the province are reported: mortality rates for heart attack (chapter 1); wait times for cardiac bypass surgery (chapter 3 – Access to Care); and in-hospital mortality rates for heart attack (chapter 3 – Quality of Care). This is in addition to the non-medical determinants of health outlined in chapter 2 which draw attention to risk factors for this disease such as sedentary lifestyles and overweight/ obesity.

We hope you like it!

INTRODUCTION

Further Information

- For more information on the 2003 First Ministers Accord on Health Care Renewal visit Health Canada's Website at:
<http://www.hc-sc.gc.ca/english/hca2003/accord.html>
- To view data from all jurisdictions on all 70 indicators visit the common Website hosted by Statistics Canada and the Canadian Institute for Health Information:
<http://www.statcan.ca/english/freepub/82-401-XIE/2002000/index.htm>
<http://www.cihi.ca/comparable-indicators>
- To download a copy of the report or the summary Highlights document visit Saskatchewan Health's website at:
http://www.health.gov.sk.ca/mc_comparable_hlth_indicators_04.html

Acknowledgements

Saskatchewan Health would like to acknowledge the contributions of all the individuals and groups who contributed to the content and format of this report:

Saskatchewan Health Program Branches
Population Health
Community Care
Acute & Emergency Services
Primary Health Services
Drug Plan & Extended Benefits
Medical Services
Health Human Resources
Communications
Regional Policy
Corporate Information & Technology

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Images courtesy of Getty Image Bank and
Virtual Saskatchewan.

This report was prepared by members of
the Policy & Planning Branch, Saskatchewan
Health.



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Healthy People

The Health of Saskatchewan's Population

Highlights: Health

- Self-reported health status in Saskatchewan was comparable to the national average at 59.2% in 2003, and 6th highest in Canada in terms of the number of people who reported their health as excellent or very good.
- Health Adjusted Life Expectancy in the province is similar to the national average for both men and women. Women in the province are expected to live 70.2 years in good health, and men 67.3 years. After age 65, a further 14.6 years of good health are expected for women and 12.5 years for men.
- Men living in the highest income group in Saskatchewan can expect to live 6.1 years longer in good health than men in the lowest income group. For women the difference is 3.2 years.

Highlights: Disease & Disability

- The age-standardised prevalence rate of diabetes in Saskatchewan was similar to the national average in 1999/2000. Out of every 100 people (aged 20 and older) in the province 4.5 had been diagnosed with diabetes in this time period, compared to the national average of 4.8 cases per 100 population.
- In 2001, Saskatchewan was ranked as having the 6th lowest mortality rate for heart attack. A mortality rate for heart attack of 48.4 for every 100,000 people was reported in 2001, with the national average being 52.1 per 100,000 population.

	How are we doing?	Increasing or Decreasing ?
Self-reported Health	K	ì
Health Adjusted Life Expectancy	K	N/A
Prevalence of diabetes	K	ì
Mortality rates for heart attack	J	í

* Notes on interpreting these summary charts are included in the [appendix](#).

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(i) Health Status

"My health problems, I believe began when I was eight years old. Now, I'm sixty-seven. In between there I went through a lot of mental, physical, sexual...(pause) I think what happened at residential school when I was taken out of my home and taken to residential school from that first day that's when my illness started. I was confused, hurt and lonely. I don't believe there ever was a doctor that came to our school. I figured my parents didn't want me [so] that's why they put me in that residential school."

Amy, Sioux Grandmother

Source: Deiter, C & Otway, L. (2001) Sharing our Stories and Promoting Health & Community Healing: An Aboriginal Women's Health Project. Prairie Women's Health Centre of Excellence

As the story above relates, our health can be affected by a large number of social, emotional, physical and psychological factors, including events that happened early on in our childhood. As this section of the report will discuss, there are strong links between our social and economic circumstances, and our health.

Health status and health inequality is examined in this section of the report by looking at two indicators of the current health of the population:

Self-reported health status

Health Adjusted Life Expectancy (HALE)

What we know...

- Ratings of self-reported health have been found to predict mortality even when more objective measures such as clinical evaluations are taken into account.
- HALE is a population health indicator that incorporates both morbidity and mortality measures into a single statistic, representing the number of years a person can expect to live in perfect health. Thus HALE is not only a measure of quantity of life but also quality of life.
- Over the last few decades, research has shown that there are strong links between socio-economic factors and health inequalities. These social and economic inequalities tend to translate into variations in health status.
- Certain groups, such as Aboriginal peoples, tend to experience poorer health than others, which is oftentimes related to these inequalities in their social and economic environments.

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- Average incomes are rising but increases have been greater for higher income groups than for lower income groups

What we don't know...

- There is a lack of statistical data on the health status of Aboriginal peoples living on reserve, people living on Canadian Forces bases and those within correctional facilities as these groups tend to be excluded from survey sampling frames.
- To what extent personal coping practices and social supports mitigate the effects of ill health on self-reported measures of health.
- We still need to know more about the relationship between wealth and health, and how income as a marker for social and economic conditions relates to health measures other than mortality and longevity.

Self-reported Health

Measuring the perceived health of the population

Key Messages

- Self-reported health status is a good general indicator of the overall health status of individuals.
- The percentage of people aged 12 years and older who reported their health as very good or excellent in Saskatchewan in 2003 was 59.2%, similar to the national average of 58.4%.
- A similar number of women (59.0%) to men (59.3%) in Saskatchewan rated their health as excellent or very good. The percentage of people who rate their health as excellent or very good appears to decrease with age.
- Saskatchewan was ranked 6th highest across Canada in terms of the number of people reporting excellent or very good health in 2003.

Introduction

Self-reported health status (people's perceptions of their own health), is a good general indicator of the overall health status of individuals, as it may include aspects of what other measures may miss such as disease presence and severity, aspects of good health, physiological/ psychological reserve, social and mental functioning. In other words, this measure allows an individual to assess positive health as more than just the absence of health problems.

Self-reported health is measured using a 5-point reporting scale, ranging from excellent to poor. An individual's ratings of their own health appear to be a somewhat accurate predictor of chronic disease incidence, functional ability and life expectancy. The data used in the current analysis are based on individuals' aged 12 years and older living in private households who reported their health as excellent or very good (see [appendix- technical specifications](#) for details and data limitations).

Limitations associated with this measure include the fact that the definition of health is left up to the individual, which can become even more pronounced when cultural and gender differences are taken into account.

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Saskatchewan Profile

The percentage of people who reported their health as very good or excellent in Saskatchewan in 2003 was 59.2%, comparable to the national average of 58.4%

Rates of self-reported health in Saskatchewan are similar between men and women. In 2003, 59% of women and 59.3% of men rated their health as excellent or very good.

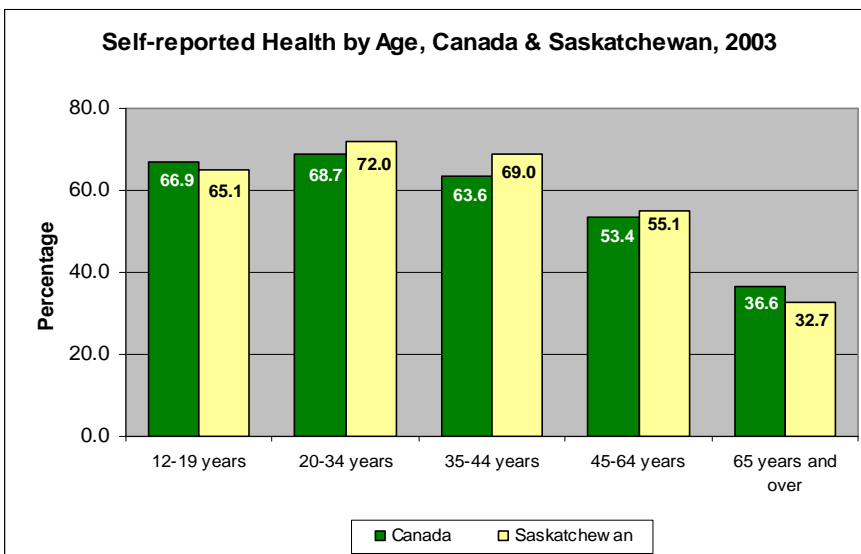
Figure 1 Self-reported health by gender, Canada & Saskatchewan, 2003

	Canada	Saskatchewan
Sex		
Male	59.5	59.3
Female	57.3	59.0

Source: Statistics Canada, Canadian Community Health Survey, 2003

There are somewhat predictable differences in self-reported health by age. As might be expected, individuals in older age groups tended to rate their health less positively than those at younger ages. This speaks to the power of self-reported health to match what are likely real functional declines in health as we age.

Figure 2 Self-reported health by Age, Canada & Saskatchewan, 2003



Source: Statistics Canada, Canadian Community Health Survey, 2003

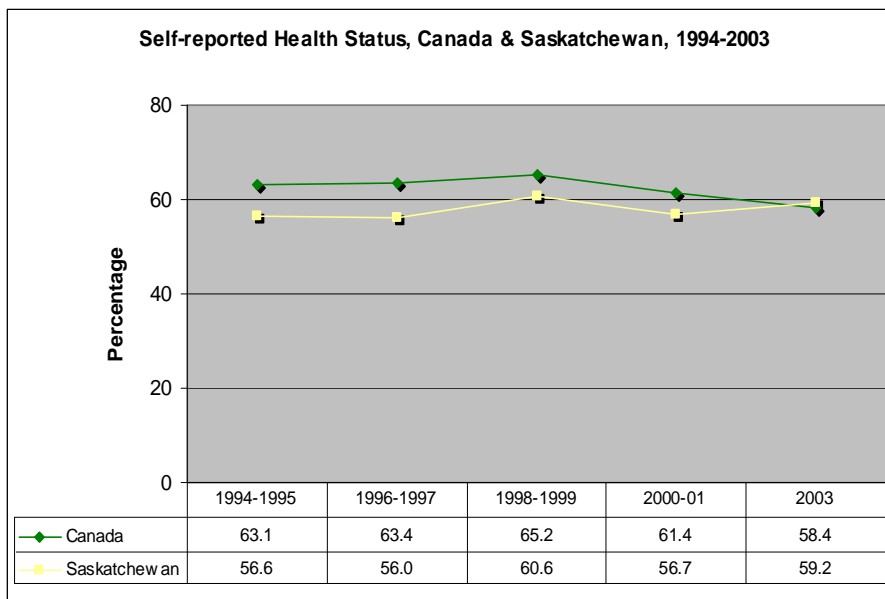
The percentage of people reporting their health as excellent or very good tends to be similar to the national average for most age groups.

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Trends

Using data from the National Population Health Survey for 1994 through to 1999, trends in self-reported health can be examined. Although there are no dramatic changes at either the national or provincial level, the percentage of people who rated their health as excellent or very good appears to have decreased slightly nationally, but to have increased slightly over time in Saskatchewan (figure 3). In 1994-2003, 56.6% of the Saskatchewan population felt their health was very good or excellent. In 2003 the percentage of people who rated their health in this way was 59.2%.

Figure 3 Self-reported health trend 1994/5- 2003



It is difficult to conclude from these relatively minor changes in self-reported health that there has been any shift in the self-reported health status of the population in the last decade.

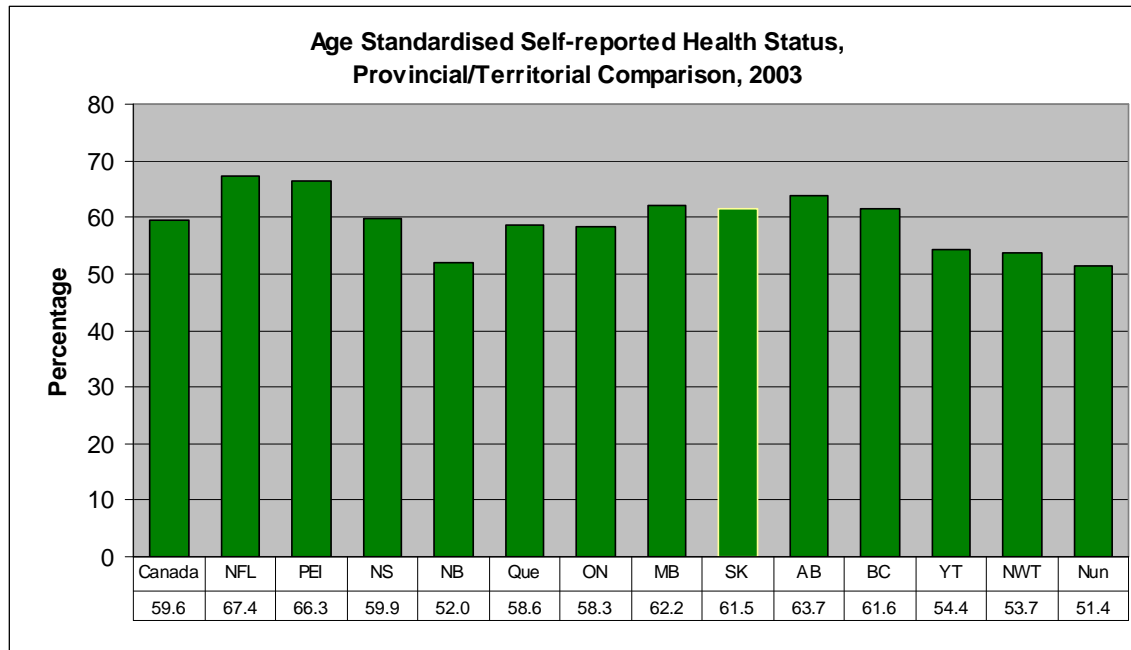
Source: Statistics Canada, CCHS Cycle 1.1 2000-01, Cycle 2.1 2003; Statistics Canada NPHS 1994-95 to 1998-99

Provincial/Territorial Comparison

Small differences in self-reported health can be observed across the country (figure 4). Saskatchewan had the 6th highest percentage of people reporting their health as excellent or very good in 2003. The reasons for these differences are difficult to explain without further research on the factors underlying self-rated health such as income, access to care, culture, etc. These data are age-standardised to allow comparisons across jurisdictions with varying age structures.

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Figure 4 Self-reported health, Provincial/ Territorial Comparison, 2003



Source: Statistics Canada, Canadian Community Health Survey, 2003

Contributing

Factors

Along with the potential effects of gender and age several other factors may contribute to differences in health status.

- **Income:** Research data has consistently shown that individuals living in the highest income groups rate their health as excellent or very good more so than those in lower income groups¹. Income inequality likely explains the difference observed between certain population groups, including those noted above for gender and age, and health status. For example, single mothers tend to report excellent health less so than married mothers. This association between low income and health status appears to be particularly prevalent in other vulnerable groups such as recent immigrants, people with long-term disabilities and off-reserve Aboriginal peoples².

Interpreting the effects of income on health:

International research suggests 2 main reasons for the impact of income on health:

1. People with very low levels of income are deprived. They have inadequate funds to purchase life's necessities such as food and shelter.
2. People with relatively low incomes may have their social participation restricted and opportunities to exercise control over their lives reduced.

Source: Marmot, M. (2002) The influence of income on health: views of an epidemiologist. *Health Affairs* 21(2):31-44

¹ Phipps, S (2003) The Impact of Poverty on Health: A Scan of Research Literature. Poverty & Health CPHI Collected Papers. Canadian Institute of Health Information; ON

² CIHI (2004) Improving the Health of Canadians. Canadian Institute for Health Information; ON

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- **Income-Health Buffers:** The relationship between income inequality and health is not found consistently across all countries, and even within countries. This has led some researchers to suggest that differences in institutional and societal arrangements such as health care, education, social services, employment and income supports may buffer the impact of income inequality on health³.
- **Stress & Coping:** Just as income, or lack of it can be a significant stressor in the lives of many, the ability to cope with financial or other stresses can also have an impact on perceived health. People who use adaptive means to cope with their stress such as physical activity and social support networks tend to evaluate themselves as being more healthy.
- **Culture:** Culture can help shape definitions of health. In Canada, where a wide variety of world cultures exist, different interpretations of 'health' are also likely to occur. For example, health for many people can encompass not only physical well-being but also emotional, mental and spiritual well-being.
- **Aboriginal Status:** Along with other indicators of health status, levels of self-reported health are also lower in Canada's Aboriginal peoples than in the population as a whole. This is likely due to a number of factors noted above.

Policy Choices = Major Effects

Sweden has both the highest rate of single parenthood, yet the lowest rate of low-income for single parent families because of their generous child benefit policies.

	Children in Single-Parent Families (%)	Single-parent families in low income (%)
Canada	12.2	51.6
US	16.6	55.4
UK	20.0	45.6
Sweden	21.3	6.7

Source: UNICEF Innocenti Research Centre (2000). A League Table of Child Poverty in Rich Nations. Innocenti Report Card 1. Florence: UNICEF Innocenti Research Centre.

Self-reported Health Status of Canada's Aboriginal Peoples

	Excellent / Very Good (%)
Non-reserve	56
On-reserve Status Indians	40
Inuit	56
Métis	58
Canada	61

Source: CIHI (2004) Improving the Health of Canadians. Canadian Institute for Health Information; ON

³ Kaplan, GA & Lynch JW (2001) Is economic policy health policy? American Journal of Public Health 91(3): 351-353

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Saskatchewan Progress Report

Self-reported health is a measure of self-perceived health status. As such, there are no specific programs or initiatives in the province that are focused directly on improving ratings of self-reported health. It is likely, however, that the variety of programs in the province that focus on health promotion and disease prevention indirectly impact ratings of self-reported health.

More information on these programs can be found throughout this report in the [Saskatchewan Progress Report](#) boxes.

Further Information

- Self-reported health is used as an indicator of health status in many reports. For international comparisons the Organisation for Economic Co-operation and Development (OECD) contains comparable data from other countries on self-reported general health: OECD (2003) Health at a Glance: OECD Indicators 2003. France: OECD. Although not always free information, their Website contains links to several other data sources.

<http://thesius.sourceoecd.org/vl=1954795/cl=63/nw=1/rpsv/home.htm>

- For data on Aboriginal people's self-reported health, Statistics Canada's Aboriginal Peoples Survey 2001. Cat No 89-589-XIE provides information on the well-being of non-reserve Aboriginal people.

<http://www.statcan.ca/english/freepub/89-589-XIE/free.htm>

Health Adjusted Life Expectancy

Measuring quality of life not just quantity

Key Messages

- Health adjusted life expectancy (HALE) is the number of years in perfect health that an individual can expect to live, and is a measure of quality of life not just quantity.
- The number of years of healthy life that a Saskatchewan resident can expect to live is 67.3 for men and 70.2 for women. After age 65, a further 12.5 years of health are predicted for men in the province and a further 14.6 years for women.
- For HALE at birth, Saskatchewan is ranked 7th for men and 6th for women in terms of the number of healthy years of life expected. The additional years of healthy life after age 65 sees Saskatchewan ranked as 6th for men and 4th highest for women across the provinces.
- A clear gradient in health is seen for both HALE at birth, and HALE at age 65 for men; as income levels decrease from high to low, so too does the number of years a person can expect to live in good health.

Introduction

Health adjusted life expectancy (HALE)⁴ is the number of years in perfect health that an individual can expect to live, given current mortality and morbidity conditions. Increases in life expectancy may be accompanied by an increase in years spent in poor health, therefore, just because the population is living longer doesn't mean people are doing so in good health. HALE incorporates estimates of health utility (i.e., years free of disease and disability) and as such can tell us about quality of life not just quantity. HALE is calculated at birth and at age 65 years – in other words the number of additional years lived in good health after age 65. HALE at birth is based on data for those aged 15 years and over.

The Health Utility Index

The Health Utility Index is constructed from responses to survey questions about current disease conditions or disabilities. To view the questions used to assess health utility use the link below:

<http://www.statcan.ca/english/concepts/health/pdf/hui.pdf>

⁴ An advisory note on interpreting HALE can be found at www.statcan.ca/hale

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HALE is a measure that is closely related to income inequality. As such differences in HALE by income group can also be examined. Income terciles* are used to assign individuals into low, middle or high income brackets. (For details on the calculation of HALE and HALE by socio-economic status and the data limitations associated with these indicators please see [appendix: technical specifications](#).)

Saskatchewan Profile

As the table below shows, the number of years of healthy life (at birth) that a Saskatchewan resident can expect to live is 67.3 if they are male and 70.2 if they are female. For both men and women these rates are slightly below the national average (provinces only). After age 65, women continue to have a significantly greater number of years of healthy life - a further 12.5 years of health are predicted for men in the province and a further 14.6 years for women.

Figure 5 HALE: Years of Healthy Life at Birth & Age 65, Canada & Saskatchewan, 2001

	Canada		Saskatchewan	
	Males	Females	Males	Females
At birth	68.3	70.8	67.3	70.2
Age 65	12.7	14.4	12.5	14.6

Source: NPHS, Institutional Component for HUI 1996-97; 2001 Census counts for persons in long-term care; CCHS Cycle 1.1 for HUI in households and counts of persons in households; 2000-01 abridged life tables.

There appears to be a difference between men and women in terms of the number of years lived in good health. In general women in Saskatchewan can expect to live a further 2.9 more years in good health than men. The gap between men and women in years of healthy life lived beyond age 65 is 2.1 years.

Provincial Comparison

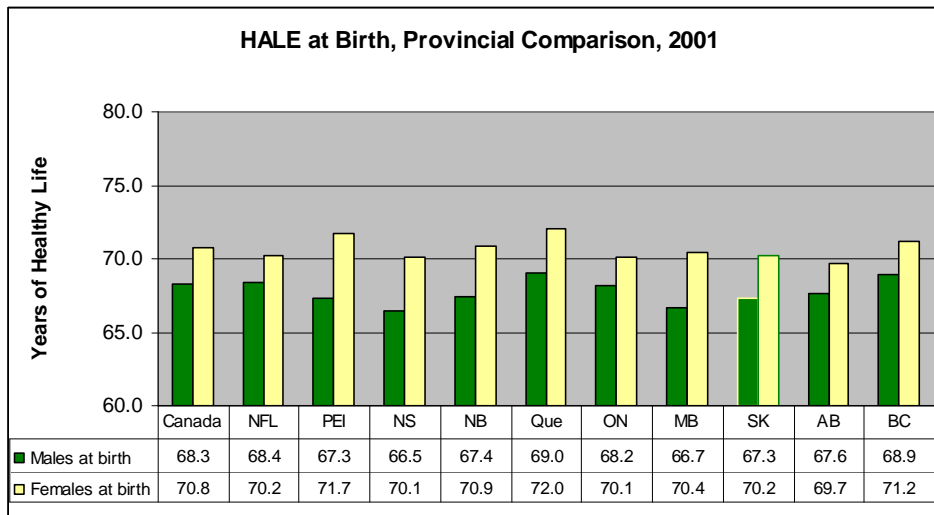
Comparisons across the country in HALE are for provinces only; no data are available for the territories. Data is available for 2001 only.

For HALE at birth, Saskatchewan is slightly below the national average for men and women, and ranked 7th for men and 6th for women in terms of the number of healthy years of life expected across the country. The additional years of healthy life after age 65 sees Saskatchewan ranked as 6th for men and 4th highest for women across the provinces. In this case both Saskatchewan men and women are comparable to the national average.

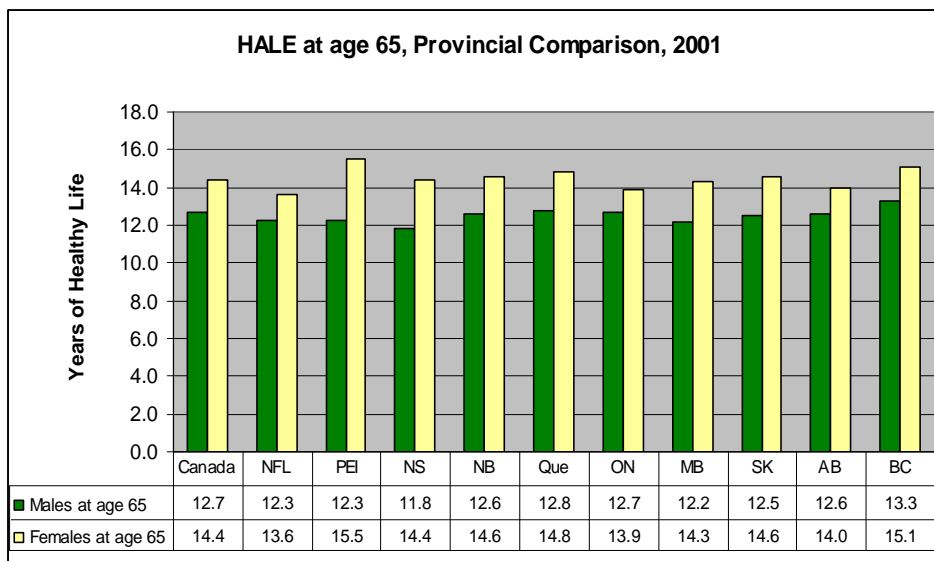
* An income tercile is a term used to describe one-third of a population distribution

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Figure 6 HALE: Provincial Comparisons, 2001



Note – the scale for HALE at birth starts at age 60 to make the differences clearer.



A similar pattern is noticeable across the country with women having more years of healthy life than men.

Source: NPHS, Institutional Component for HUI 1996-97; 2001 Census counts for persons in long-term care; CCHS Cycle1.1 for HUI in households and counts of persons in households; 2000-01 abridged life tables.

HALE is a variable that is sensitive to income levels. Research continues to show that there are strong links between poverty levels and poor health. In this report HALE is broken-down by income status. Respondents are placed into three groups (high, medium and low income) using an ecological approach; that is, average incomes are established using postal codes to mark enumeration areas. In other words, income is assessed based on average income for a community rather than individual income levels.

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Using this method, the expected patterns of decreasing HALE from high to low income are noted, both at the national level and for Saskatchewan. A clear gradient in health is seen for both HALE at birth and HALE at age 65, as income levels decrease so too does the number of years a person can expect to live in good health. At each income level women in Saskatchewan appear to live more years in good health than men, this being true until at the highest levels of income where men appear to catch up and no real difference in healthy years of life lived between men and women is noted anymore.

Figure 7 HALE by income, at Birth and at age 65, Canada & Saskatchewan, 2001

At Birth

Income	Canada		Years of Healthy Life	Saskatchewan	
	Males	Females		Males	Females
Highest	70.5	72.3	↓	70.0	71.5
Middle	68.6	70.8		67.8	70.6
Lowest	65.8	69.1		63.9	68.3

It looks as if the decrease in HALE by income level is not as steep for women as it is for men, especially between the middle and highest income groups.

At Age 65 years

Income	Canada		Years of Healthy Life	Saskatchewan	
	Males	Females		Males	Females
Highest	13.3	14.7	↓	13.5	14.6
Middle	12.9	14.3		11.8	14.5
Lowest	12.0	14.2		11.8	14.4

The number of additional healthy years lived after age 65 by women in the highest income group and lowest income group is similar, being only 0.2 years apart. For men the gap between low and high income groups appears to be slightly larger.

Source: NPHS, Institutional Component for HUI 1996-97; 2001 Census counts for persons in long-term care; CCHS Cycle1.1 for HUI in households and counts of persons in households; 2000-01 abridged life tables.

Contributing Factors

Other than the effects of income on HALE, differences in the years of healthy life lived may also be impacted on by other factors. In many instances, however, income levels also affect these factors and the independent contribution of each is hard to distinguish.

- Gender: men tend to develop serious illnesses earlier in life and die younger from them. It is assumed that many of the factors that account for these earlier deaths are preventable (e.g. lifestyle behaviours where income levels tend to

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play a large role). If the types of diseases and disabilities that women suffer from are different from men; that is more chronic, develop over a longer time frame and due to conditions that are less preventable⁵, and therefore, less likely to be affected by income levels, then the above results reflect a pattern we would expect to see- smaller differences in health status between income levels for women, especially older women. Given the higher prevalence of many conditions that cause significant disability but are currently less preventable (such as arthritis) among women, these results provide additional insight into the nature of the sex gap in health⁶.

- Geography: differences in health status vary across the country; between provinces, but also within, where differences between cities, and rural and urban areas can be observed. Again, to some extent these may be a factor of income levels, which also vary across the country, and within provinces. Access to services may also be a problem for people living in certain areas of the country, especially the North, which may have further impacts on healthy years lived over and above those of income.
- Education: education levels tend to mirror income in terms of differences in health status - higher levels of education translating into better health status. Over and above its close relationship to income (see Catch 22 box), it is likely that people with higher levels of education are more aware of the preventive measures they can take to avoid ill health, as well as having the means to carry them out.
- Culture: As with other measures of health status, Canada's Aboriginal peoples and recent immigrants also tend to have lower life expectancies and lower health expectancies. Social, economic and environmental conditions are all likely contributors to this state. However, there is also some evidence that the loss of culture, language, and tradition may also play a role in the health status for these groups.
- Diet & lifestyle: Recent results from the Healthy Ageing: Longitudinal study in Europe (HALE) population highlight how, regardless of other

The Catch-22 Situation

Income and education are closely related. Just as higher levels of income are required to obtain higher levels of education such as university degrees; so too do higher levels of education translate back into higher levels of income in terms of increased opportunity to get higher paid jobs.

Culture and Health Status

63% of First Nations respondents in a 2002 opinion poll and 57% of Metis respondents identified the loss of land and culture as a significant contributor to poorer health status.

Source: National Aboriginal Health Organisation (2003) Public Opinion Poll on Health Care. First Nations Views on Their Health & Health Care; Ottawa, ON: NAHO

⁵ DesMeules, M, Turner, L., Cho, R. (2003) Morbidity Experiences and Disability Among Canadian Women. Women's Health Surveillance Report. ON; Canadian Population Health Initiative & Health Canada

⁶ DesMeules, M, Manuel, D., Cho, R. (2003) Life and Health Expectancy of Canadian Women. Women's Health Surveillance Report. ON; Canadian Population Health Initiative & Health Canada

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predisposing factors, diet⁷ and lifestyle behaviours such as being physically active, moderate alcohol use and non-smoking, are especially important for elderly people in terms of reducing their risk of death from chronic conditions and maximizing their prospects for healthy aging⁸.

Saskatchewan Progress Report

Several programs that influence diet and lifestyle are likely to contribute to health-adjusted life expectancy. Since many of these programs are listed in the [Saskatchewan Progress Reports](#) in chapter 2 of this report only those that are directed at seniors in particular are listed here:

- Link to Health: is an active living program aimed at seniors (individuals aimed 55 years and over) who want to become or stay functionally independent. As well as increasing physical activity levels this program is also designed to include a mix of balance, flexibility, coordination and other skill related fitness activities that can reduce the incidence of falls in elderly people, (see [Further Information](#) for more details on this program).
- The Positive Steps program in Regina coordinated by the Regina Qu'appelle Health Region and the Dr Paul Schwann Applied Health and Research Centre at the University of Regina offers exercise programs available as audio or video cassettes designed specifically for seniors (see [Further Information](#)).
- The Department of Culture, Youth and Recreation (CYR) works directly with a variety of organisations in the province to ensure that all Saskatchewan citizens have reasonable access to the programs and services provided by this sector. As well as distributing funding for a variety of programs that seniors access, CYR also provides consultative and technical services on programs such as the 55+ Seniors Games (see [Further Information](#)).
- Local health region public health nutritionists/dietitians also provide healthy eating information for seniors. A healthy eating for seniors checklist can also be found on the Department of Health Website (see [Further Information](#)).

⁷ Diet in this study refers to the adoption of a Mediterranean style diet, that is one that is high in monounsaturated fats such as olive oils, high in fruits, vegetables, nuts and grains and low in saturated fat, in particular from meats and dairy.

⁸ Knoops, KTB, de Groot, L, Kromhout, D et al. (2004) Mediterranean diet, lifestyle factors, and 10-year mortality in elderly European men and women. *Journal of the American Medical Association* 292(12): 1433-1439

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Further Information

- Information exists for HALE in other countries. See OECD references in self-reported health section and also the World Resources Institute Earthtrends searchable data index, which contains a variety of indicators for assessing population health and human well-being in different countries.

http://earthtrends.wri.org/searchable_db/index.cfm?action=select_variable&theme=4

- Link to Health is a Canadian Red Cross initiative available in Regina, Saskatoon and Prince Albert. More information on this program and its availability can be found by calling your local Canadian Red Cross office, or from their Website link below.

<http://www.crm.mb.ca/redcross/>

- Information on the Positive Steps program in Regina can be found on the web at http://www.rqhealth.ca/programs/comm_hlth_services/pubhealth/positive_steps.shtml

- Culture, Youth & Recreation is the provincial government department responsible for the development of recreational programs and services in the province.

-General information can be found on their Website at

<http://www.cyr.gov.sk.ca/index.cfm?page=1>

- or specifically on the 55+ Seniors games at

<http://www.cyr.gov.sk.ca/index.cfm?page=37#SG>

- Information on Healthy Eating for Seniors is available on the Saskatchewan Health Website at:

http://www.health.gov.sk.ca/rr_healthy_eating_forsen.html

- The Active Living Coalition for Older Adults Website also contains useful information for maintaining lifestyles that contribute to overall well-being. This site includes, amongst other things, tips on healthy eating and active living for older adults.

<http://www.alcoa.ca/e/index.htm>

- See also Health Canada's Physical Activity Guide for Older Adults.

<http://www.hc-sc.gc.ca/hppb/paguide/older/index.html>

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(ii) Disease & Disability



Mike is 27; three years ago he found out he had a high level of glucose in his urine. A blood test from his local GP confirmed that he had type 2 diabetes. Mike was shocked as he thought he was too young to have diabetes. Mike suddenly realised that his lifestyle behaviours were likely to blame– the lack of physical activity and poor eating habits. Although he had lost weight in the past he had always gained it all back, now the risks he faced seemed much more real.

In this section of the report indicators that measure 'lack of health' i.e., disease and disability will be looked at. More specifically, two health conditions affecting Saskatchewan people are focused on in this report:

Diabetes prevalence

Mortality rates for heart attack*

What we know...

- Diabetes is a significant health problem in Canada, especially in Aboriginal populations where it is reaching epidemic proportions.
- The prevalence of risk factors (such as overweight/obesity, lack of physical activity) for diabetes in the general population is also high, therefore, diabetes is likely to remain a significant health problem for future generations. Diabetes can be largely prevented or delayed by maintaining a healthy weight and regular exercise.
- Acute myocardial infarctions (heart attacks) are a major cause of death and disability in Canada, and heart disease is a leading cause of death in the country, second only to cancer.
- Many of the risk factors for heart attacks are preventable through behaviour and lifestyle changes such as diet and exercise, and appropriately prescribed and used medication.

* Heart attack is sometimes referred to in this report using its technical reference: AMI (acute myocardial infarction). Indicators in italics are supplemental to those reported on by all jurisdictions.

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What we don't know...

- What the true prevalence of diabetes is, i.e., how many people have diabetes but remain undiagnosed.
- The relative contributions of diet and exercise to reducing diabetes, and whether exercise has beneficial effects on diabetes over and above its impact on weight loss.
- The actual costs on the health care system from diabetes in terms of increased use of services in the acute, chronic and homecare sectors
- More research is needed on the gender differences in mortality rates for heart attack.

Prevalence of Diabetes

Measuring prevalence rates of diagnosed diabetes

Key Messages

- Diabetes is a chronic condition that if not treated or improperly managed can result in serious health consequences such as damage to the heart, kidneys, eyes, and can result in the amputation of limbs.
- Type 2 diabetes is preventable. With proper nutrition and regular physical activity you can significantly reduce your risk of getting type 2 diabetes.
- The age and sex standardised rate of diagnosed diabetes in the Saskatchewan population aged 20 years and over was 4.5 cases per 100 population in 1999/2000. This is comparable to the national average of 4.8 cases per 100 population.
- In Saskatchewan, 5 men in every 100 who use the health care system had a diagnosis of diabetes compared to just over 4 women in every 100 in 1999/2000. This is possibly due to the higher rates of obesity and overweight in men.

Introduction

Diabetes is a chronic condition that is caused by the body's inability to sufficiently produce or properly use insulin, a hormone that is responsible for making sure the glucose released from the foods we eat is turned into energy. If your body doesn't make enough insulin or if the insulin doesn't work the way it should, glucose can't get into your cells and will stay in your blood instead. Consistently high levels of blood glucose can result in long term damage and lead to the dysfunction and failure of several organs including the kidneys, eyes and heart.

There are several types of diabetes including the diabetes women sometimes get when they are pregnant (gestational diabetes). The two main types accounting for 10% and 90% of cases, respectively, are type 1 diabetes (previously known as insulin-dependent diabetes mellitus) and type 2 diabetes (previously known as non-insulin dependent diabetes mellitus). Type 1 diabetes typically occurs in childhood and adolescence and is not caused by modifiable risk factors such as obesity and sedentary behaviour but by a combination of genetic factors and environmental

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stressors. Type 2 diabetes has typically occurred in people over 40 years of age (but is now being seen in younger and younger age groups), and is found in a high proportion of individuals who are considered to be overweight or obese.

Anybody can be diagnosed with diabetes, but age, weight, heredity and ethnic background can all play a role in personal risk for developing the disease. It has been estimated that approximately 5% of all Canadians are affected by diabetes. Indicators that measure the prevalence of diabetes in the population, therefore, give us an idea of the importance or burden of this disease at a given time. Diabetes prevalence is a widely used indicator in public health monitoring and planning.

Diabetes Symptoms

- Unusual thirst
- Frequent urination
- Weight change (gain or loss)
- Extreme fatigue or lack of energy
- Blurred vision
- Frequent or recurring infections
- Cuts and bruises that are slow to heal
- Tingling or numbness in the hands or feet

However, many people who have type 2 diabetes display no symptoms

Saskatchewan Profile

The data presented in this report are from administrative sources (as opposed to survey data) for persons aged 20 years and older. These data may also differ from other reported sources such as federal and provincial/territorial publications because of different cut-off dates and population estimates, which are constantly being updated. Furthermore, these data reflect prevalence rates – which refer to the number of people who currently have the condition and not the number of new cases reported in that year (i.e., incidence rates).

Data from New Brunswick and Newfoundland & Labrador are not available.

Note to Readers: Readers should be cautious when interpreting these data. (For the full list of considerations for indicator quality and comparability see [appendix-technical specifications](#))

Diabetes – A Growing Problem

The number of cases of type 2 diabetes is increasing dramatically and is forecast to keep on doing so due to a number of factors:

- The population is aging.
- Obesity rates are rising.
- Canadians lifestyles are increasingly sedentary.
- Aboriginal people are three to five times more likely than the general population to develop type 2 diabetes, and the Aboriginal population is also growing
- 77% of new Canadians come from populations that are at higher risk for type 2 diabetes. This includes people of Hispanic, Asian, South Asian or African descent.
- There is a growing incidence of type 2 diabetes in children from high-risk populations.

Source: Canadian Diabetes Association,
http://www.diabetes.ca/Section_About/prevalence.asp

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In 1999/2000 (the latest year for which comparable information is available) the age-standardised⁹ diabetes prevalence rate in Saskatchewan was similar to the national average. Out of every 100 people in the province 4.5 had been diagnosed with diabetes in this time period, compared to the national average¹⁰ of 4.8 cases per 100 population.

The diabetes prevalence rate is slightly lower in women than men, this is likely related to the lower rates of obesity and overweight in women compared to men.

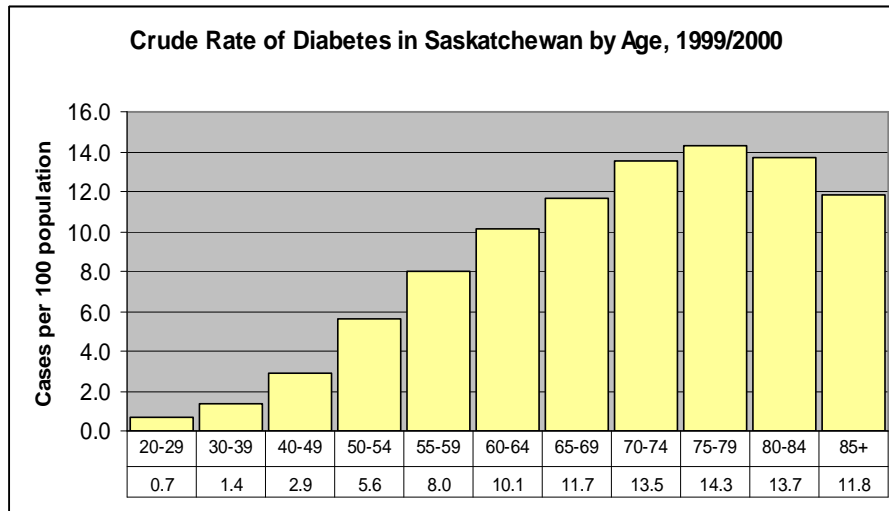
Figure 8 Diabetes Prevalence Rates (Age-standardised)

Year	Canada		↑ Rate per 100	Saskatchewan	
	Males	Females		Males	Females
1999/2000	5.2	4.4		5.0	4.1
1998/1999	4.9	4.1		4.8	4.0
1997/1998	4.5	3.8		4.4	3.7

It also appears from current data that prevalence rates of diabetes have risen slightly from 1997/98.¹¹

Source: Adapted from National Diabetes Surveillance System, 2003

Figure 9 Diabetes Prevalence Rates by Age



As the data shows, diabetes crude prevalence rates¹² in the province increase quite dramatically with age. The highest rate being found in the 75-79 year age group where over 14 people in every 100 in the province who use health services had a diagnosis of diabetes in 1999/2000.

Source: National Diabetes Surveillance System, 2003

⁹ Age-standardised rates enable comparisons to be made between populations that have different age structures.

¹⁰ References to the national average for this indicator excludes New Brunswick and Newfoundland & Labrador.

¹¹ Data prior to this time may not be comparable due to the fact that the criterion for diagnosis was lowered in 1998 from 7.8 mmol/L to 7.0 mmol/L in the fasting glucose test; this likely resulted in an increase in the number of individuals with a diagnosis of the disease.

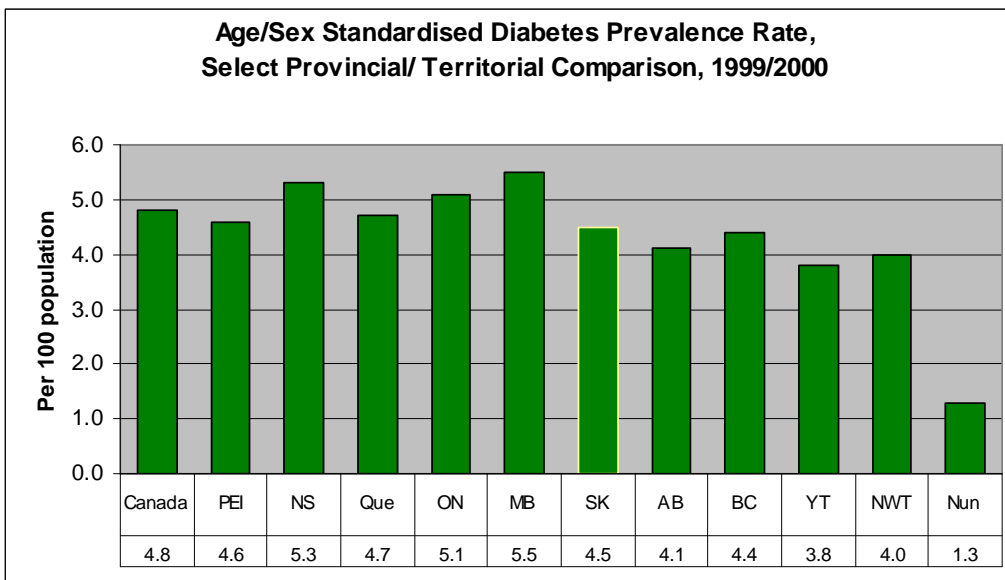
¹² Crude rates refer to actual observed rates that have not been age-standardised. Comparisons to other jurisdictions crude rates should, therefore, not be made.

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Provincial/Territorial Comparison

In 1999/2000, the prevalence of diabetes¹³ in Saskatchewan was the 6th lowest (see figure 10) in Canada (excludes NB and NFL). It is difficult to tell whether these rates reflect actual prevalence of diabetes, or to what extent there is a larger amount of underreporting of symptoms and non-diagnosis of diabetes across the country, since these rates only capture people who are users of health services.

Figure 10 Diabetes Prevalence Rates, Provincial/ Territorial Comparison



Source: National Diabetes Surveillance System, 2003

Contributing Factors

The causes of type 1 diabetes are largely unknown, although risk factors like exposure to cow's milk in infancy and infections of various kinds are currently under study. The information below, therefore, refers to the factors contributing to type 2 diabetes. Although anyone can get type 2 diabetes there are certain risk factors that can increase your chances of getting the disease:

Diabetes Complications:

If diabetes is not treated or is improperly managed it can lead to a number of health problems:

- Heart disease
- Kidney disease
- Eye disease
- Problems with erection (impotence)
- Nerve damage
- Peripheral vascular disease (i.e. damage to small blood vessels that may lead to amputation of limbs)

¹³ The age and sex standardised prevalence rates are used to compare across jurisdictions that have different age and sex structures.

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- Age: In general, people over the age of 40 are at an increased risk of developing type 2 diabetes and should be tested at least once every 3 years. Increasing age is associated with increased wear and tear on the pancreas – the organ that produces insulin. However, due to lifestyle behaviours we are now seeing people at younger ages, even children, with type 2 diabetes.
- Family history: people who have other family members who are diabetic are advised to get tested earlier than age 40 since diabetes can run in families
- Ethnicity: For some reason, certain population groups appear to be at an increased risk of developing diabetes. If you are of Aboriginal, Hispanic, Asian, South Asian, or African descent you are likely to be at an increased risk of developing diabetes.
- Lifestyle: By far the biggest contributor to type 2 diabetes is lifestyle behaviours. Being overweight, especially if that weight is carried around the middle of the body (the apple-shaped figure), is a key risk factor in the development of diabetes. A poor diet, that not only leads to obesity/ overweight can also contribute to other health conditions such as high blood pressure and high blood cholesterol levels, both of which are also risk factors for the development of diabetes. Leading a sedentary lifestyle (i.e., not being physically active enough – see chapter 2) is also a risk factor for diabetes since it can contribute to the chances of being overweight or obese, but also regular physical activity can help blood glucose management.

For tips on how to manage your diabetes including making lifestyle changes see [Further Information](#) for links to Canadian Diabetes Association fact sheets.

Questions to Ask Your Doctor

If you suspect you have diabetes then you will need advice and support from a number of health care professionals. Start with your family doctor.

1. What type of diabetes do I have?
2. Do I have to take insulin?
3. Will I need to take prescription drugs?
4. Are there any supplements or over-the-counter drugs I should or shouldn't take?
5. How can I manage my diet to keep my blood sugar levels under control?
6. What lifestyle modifications should I make to best maintain my health?
7. What important warning signs and symptoms should I look out for?
8. What role does insulin resistance play in my diabetes?

Source: WebMD Diabetes.com
<http://my.webmd.com/content/article/56/65923.htm>

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Saskatchewan Progress Report

- In February 2004, Saskatchewan Health finalised the Provincial Diabetes Plan (see [Further Information](#)), which provided a framework for a comprehensive and coordinated approach for effective management and control of diabetes. The foundation of the Plan was built on the findings and recommendations of the Saskatchewan Advisory Committee on Diabetes as presented in "Diabetes 2000, Recommendations for a Strategy on Diabetes Prevention and Control in Saskatchewan".
- Collaborations between the Provincial Diabetes Coordinator, Aboriginal Diabetes Consultant and the Provincial Diabetes Advisory Body working groups led to the establishment of an Aboriginal working group, which provided advice for the successful implementation of the Provincial Diabetes Plan in First Nations, Aboriginal, Métis and Inuit communities
- To enhance the knowledge and skills of health care providers, two diabetes education programs were developed and are available by distance education. In addition, a provincial approach for screening of risks associated with diabetic foot problems has been implemented. A draft set of clinical practice guidelines for a provincial approach to intensive management of complications in diabetic foot problems has been developed.
- Regional Health Authorities can access information on the prevalence of diabetes over a five-year period from 1996/97 to 2000/01. This profile provides data to support program planning and to track progress in reducing the incidence of diabetes over the long term.
- Saskatchewan Health circulated copies of the "Canadian Diabetes Association 2003 Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada" encouraging care providers to follow the guidelines for effective management and control of diabetes.

Further Information

- The Canadian Diabetes Association publishes a number of fact sheets on diabetes. The following links go directly to their home page...

http://www.diabetes.ca/Section_About/FactsIndex.asp

...and also their fact sheet on how to make lifestyle changes to help manage type 2 diabetes

http://www.diabetes.ca/Files/Type2_Diabetes_mar04.pdf

...and living with diabetes (driving, travel tips, dental care, exercise).

http://www.diabetes.ca/Section_About/LivingIndex.asp

- For more information on type 1 diabetes try the Juvenile Diabetes Research Foundation website.

<http://www.jdrf.ca/>

- Health Canada also has a Website dedicated to diabetes- fact about the disease, how to manage it, personal stories, published reports etc.

<http://www.hc-sc.gc.ca/pphb-dgspsp/ccdpc-cpcmc/diabetes-diabete/english/>

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- The First nations and Inuit Health Branch of Health Canada also hosts the Aboriginal Diabetes Initiative Website which addresses the problem of diabetes in Aboriginal populations specifically.

<http://www.hc-sc.gc.ca/fnihb/cp/adi/introduction.htm>

- The Saskatchewan Health Website also contains several links to diabetes initiatives in the province, includes access to the Provincial Diabetes Plan.

http://www.health.gov.sk.ca/mc_dp_diabetes_provplan.pdf

Heart Attack Mortality rates

(A supplemental indicator)

Key Messages

- Heart attack is one of the leading causes of death in Canada. Lower death rates from heart attack may point to the operation of successful disease prevention, detection and treatment programs in the province.
- In Saskatchewan, the age-standardised mortality rate from heart attacks was 48.4 for every 100,000 people in 2001 and the 6th lowest in Canada. The national average in this year was 52.1 deaths per 100,000 population.
- Rates of heart attack mortality in women were approximately half that of men at 31.5 deaths per 100,000 population, compared to 69.0 deaths per 100,000 in men. This is likely due to lower overall incidence of heart attacks in women, especially at younger ages.

Introduction

Heart attack or acute myocardial infarction (AMI) as it is known medically, is one of the leading causes of death in Canada. A heart attack occurs when blood flow to part of the heart muscle is cut off, most commonly from a blood clot blocking blood passing through one of the arteries to the heart. If this blood supply to the heart is cut off for several minutes the heart muscle suffers irreversible damage. This damage to the heart is permanent and can cause disability and death. It is estimated that there are over 70,000 heart attacks in Canada each year, and that 19,000 Canadians die from heart attacks¹⁴.

What causes a heart attack?

The formation of blood clots is often associated with atherosclerosis, the build up of plaque (a combination of cholesterol, and waste materials) on artery walls. When this plaque ruptures, it can form a blood clot capable of blocking one of the arteries to the heart.

Risk factors for atherosclerosis include high blood pressure, smoking, a high fat diet, lack of regular physical exercise and stress.

Since lifestyle remains the most important modifiable risk factor for heart disease, measuring trends in heart attack death rates may indicate long-term success in

¹⁴ Heart and Stroke Foundation of Canada

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reducing deaths from this disease. Lower death rates may point to the operation of successful disease prevention, detection and treatment programs in the province.

Saskatchewan Profile

In Saskatchewan, the rate of deaths¹⁵ that occurred due to heart attacks was 48.4 for every 100,000 people in 2001 (the latest year for which comparable data is available). The national average in this year was 52.1 deaths per 100,000 population. The death rate from AMI in the province actually dropped by around 13% from 2000 when it was reported to be 55.5 deaths per 100,000 population. It appears that this is part of a long-term trend. Although data is available from 1979 to 1999, due to differences in coding for the underlying cause of death (International Classification of Diseases ICD 9 was used from 1979-99; ICD 10 for 2000 onwards), a continuous time trend cannot be presented (see [appendix-technical specifications](#) for details and data limitations).

What we do know, however, is that from 1979 to 1999 a steady decline in deaths from heart attack was noted in the province, from 130.5 deaths per 100,000 population in 1979 to 56.4 deaths per 100,000 population in 1999.

Early intervention and management of early warning symptoms of heart attack are likely factors in the prevention of death from an AMI. Research^{16,17} also suggests that changes in treatment strategies, such as the increased use of surgical procedures and medications shown to increase survival, may have had an impact on the trends observed in mortality rates for heart attack in the population.

Symptoms of Heart Attack

The classic symptoms of a heart attack are:

- A crushing, squeezing pain in the chest.
- Chest pain is often accompanied by pains in the left arm and jaw and/or...
- Breathlessness
- Nausea
- Sweating
- Anxiety

Heart attack symptoms are different for different people. Women in particular may experience vague chest discomfort or think they are having severe heart burn. Symptoms can come and go.

Post-AMI Care

The Health Quality Council has recently undertaken a study to examine the extent to which evidence-based, leading practices are being used in the drug treatment of heart attack patients.

The preliminary results of this study show that the dispensing rates of three drugs shown to decrease the risks of having a second heart attack (beta-blockers, ACE inhibitors, and statins) are on the increase in every health region.

Although dispensing rates varied across health regions, it appears that several health regions are on their way to reaching evidence-based benchmarks.

Source: Health Quality Council: Drug Dispensing Rates in Saskatchewan: A Preliminary Look

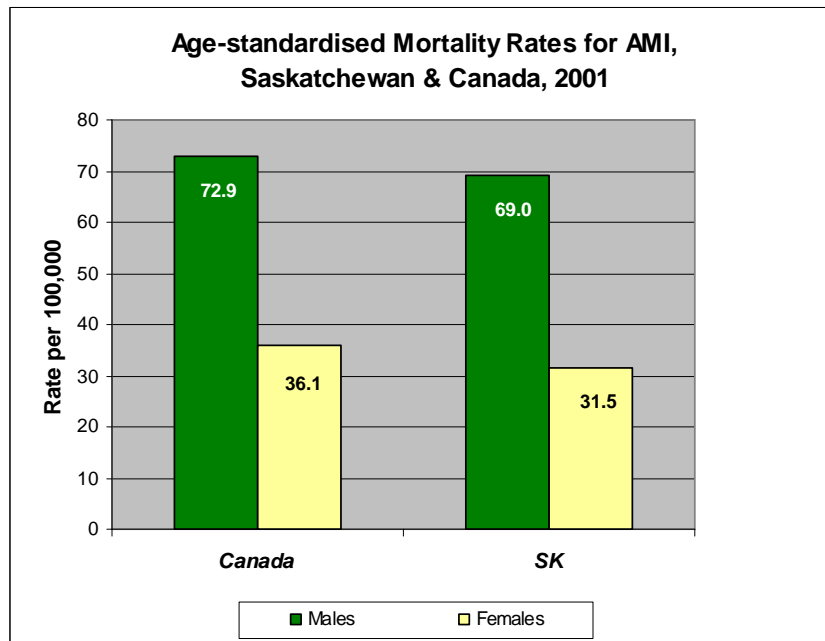
¹⁵ Refers to age-standardised rates which are estimates created to allow comparisons between populations with different age structures

¹⁶ Pilote, L., Lavoie, F., Ho, V & Eisenberg, MJ (2000) Changes in the treatment and outcomes of acute myocardial infarction in Quebec, 1988-1995 Canadian Medical Association Journal 163(1):31-6

¹⁷ Dodek, A (2000) Acute myocardial infarction in Canada: improvement with time CMAJ 2000;163(1):41-2

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Figure 11 AMI Mortality Rates, Saskatchewan & Canada, 2001



Source: Statistics Canada, Vital Statistics & Demography Division; ISQ

When deaths from heart attack are looked at by gender, at both the national and provincial level, death rates from heart attack in women are at least half that of men (fig 11).

This finding has, in the past, contributed to the myth that women are not at risk for heart disease. Canadian statistics indicate that over 39,000 women die of cardiovascular diseases annually. That makes cardiovascular diseases

the leading cause of death in women in Canada. Heart disease and stroke claim more deaths than cancer, accidents, and diabetes combined. Recent research in fact suggests that women are less likely to survive a heart attack than men^{18,19}. What we do know though is that the incidence rates of heart disease in women are lower than men, women being protected somewhat by hormonal factors until a later age (post menopause).

(For more information on women and heart disease see the link in [Further Information](#)).

Provincial/Territorial Comparison

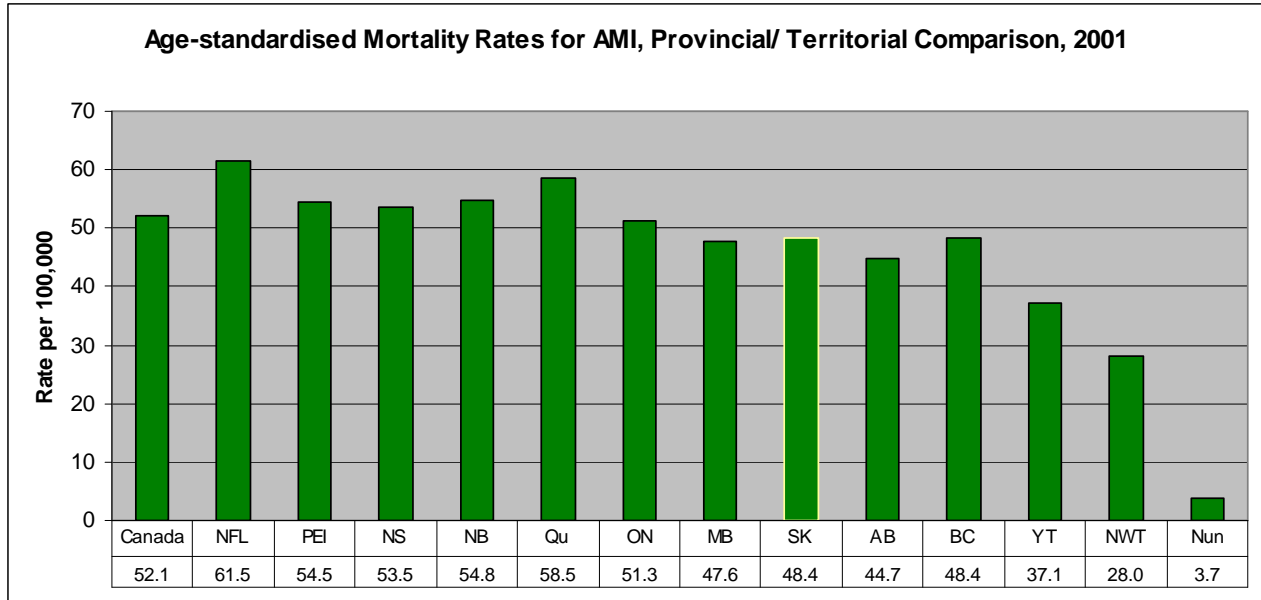
Differences exist in mortality rates across the country. It is difficult to tell without further research, however, whether these differences are due to better early diagnosis and prevention programs, better medical care and more aggressive treatment/drug utilisation, or differences in lifestyle behaviours in the population that reduce their risk for developing heart disease.

¹⁸ V Vaccorino et al, "Sex-based differences in early mortality after myocardial infarction," The New England Journal of Medicine 341 (July 22, 1999) 217-225.

¹⁹ Chang, W. et al (2003) Impact of Sex on Long-term Mortality From Acute Myocardial Infarction vs Unstable Angina. Arch Intern Med.163:2476-2484

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Figure 12 AMI Mortality Rates, Provincial/Territorial Comparison, 2001



Source: Statistics Canada, Vital Statistics & Demography Division; ISQ

* Rates for the Yukon, NWT and Nunavut should be interpreted with caution due to a small underlying count

In general, there is an east-west trend, with the western provinces tending to have lower mortality rates than those in the east. Saskatchewan is ranked as having the 6th lowest mortality rate for heart attack along with BC.

Contributing Factors

Risk factors for heart disease can be grouped into those that can be changed, i.e., lifestyle behaviours, and those that cannot be changed.

Risk factors that cannot be controlled include:

- Gender: Men are at an increased risk of developing heart disease than women, that is, until women reach menopause when any protective effects are eliminated. In fact, as previously pointed out, women who have a heart attack are actually at an increased risk of dying from it compared to men.
- Age: Increasing age is also a risk factor for heart attack, and the likelihood of dying from that heart attack.
- Family History: Heart disease tends to run in families. If a member of your family had a heart attack or stroke at an early age it is worth getting your doctor to assess your personal risk.
- Ethnicity: Certain population groups (such as South Asians, Aboriginal ancestry) appear to be at an increased risk of developing heart disease that could contribute to a fatal heart attack than others.

The following are risk factors for heart disease that can be changed. The more of these risk factors you have the more likely it is you will die from your heart attack.

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- **Smoking:** Smoking dramatically increases your risk of heart disease and stroke. Chemicals in cigarettes such as nicotine, carbon monoxide and tar can reduce the amount of oxygen to the heart, narrow blood vessels and increase the build up of plaque deposits.
- **Physical Inactivity:** Being physically active decreases other risk factors like overweight/ obesity and diabetes.
- **Diabetes:** Diabetes damages blood vessels and causes circulation problems that lead to cardiovascular complications related to heart disease.
- **Obesity:** Being overweight or obese increases your risks of developing high blood pressure, high blood lipids and diabetes - all of which increases the chances of a heart attack.
- **High Blood Pressure:** High blood pressure increases the stress put on the heart, causing it to work harder and faster, and as a consequence wear out faster.
- **High Blood Cholesterol:**
Cholesterol is an essential substance made by the liver and critical for the proper functioning of cells in the body, however, cholesterol comes in different forms. Low-density (LDL) or 'bad' cholesterol lead to the build up of fatty plaques in the blood vessels, which over time can block the proper flow of blood. High-density (HDL or 'good') cholesterol acts like a janitor helping to clean up some of the harmful effects of the LDL cholesterol. Therefore, when LDL levels are too high, or HDL levels too low the chances of a heart attack or stroke are increased. Diets high in saturated fats or 'trans-fats' are the primary cause of cholesterol problems.
- **Stress:** Increased stress levels cause the release of chemicals that stimulate the heart to beat faster. When this happens on a regular basis extra wear and tear is put on the heart muscle.

"A smoking, overweight diabetic over the age of 50 is a walking time bomb"

Source: American Heart Association's Heart & Stroke Facts

Diet and Heart Disease

Diet and exercise are two risk factors for heart disease that can be controlled.

- Diets rich in fruits and vegetables have been shown to reduce the risk for a number of diseases including heart disease.
- Lowering the amount of fat, especially saturated fat in your diet is also recommended.
- Avoiding products that contain trans-fats (trans fatty acids) such as processed foods can be achieved by reading labels and looking for 'partially hydrogenated' or 'shortening' in the list of ingredients.
- Increasing good oils such as monounsaturates like olive oil and the polyunsaturated omega 3 family of fats found in fish such as salmon, herring and mackerel help.

For more see '[Further Information](#)' section

CHAPTER 1: HEALTHY PEOPLE

Saskatchewan Progress Report

The Health Quality Council (HQC) of Saskatchewan has been actively involved in researching quality improvements in the treatment of patients after their heart attack. The quality of heart attack care is one area in which improvements can result in decreases in mortality from this condition. The HQC work addresses the quality of heart attack care in the province on three fronts:

- Reviewing administrative data to determine the extent to which patients here are getting three of the important drugs for heart attack care (beta-blockers, ACE inhibitors, and statins), and the extent to which patients are dying or being readmitted to hospital for a second heart attack
- Identifying leading practices in improving drug use, in Saskatchewan health regions and abroad.
- Working with health system partners to develop and implement strategies for improving quality of care for Saskatchewan heart attack patients.

Other programs in operation in the province that reduce the risk factors for heart attack, such as those aimed at increasing physical activity and reducing the level of obesity are also likely to have beneficial effects on mortality rates for heart attack by reducing the incidence of heart disease in the population. For more information on these programs see the [Saskatchewan Progress Reports](#) in the section on physical activity and overweight/obesity in Chapter 2.

Further Information

- The Heart & Stroke Foundation of Canada has a very informative website on cardiovascular disease.
<http://ww1.heartandstroke.ca/Page.asp?PageID=1613&ContentID=15873&ContentTypeId=1>
- Women and heart disease:
<http://ww1.heartandstroke.ca/Page.asp?PageID=1613&ContentID=15873&ContentTypeId=1>
- Diet and heart disease:
<http://ww1.heartandstroke.ca/images/English/TRANSFAT-finalMay04-ENGLISH.pdf>
- Lots of links with information on heart disease prevention and patient care
http://www.healthyeating.net/HE_8-01.HTM
- Health Canada's Website also covers information on heart disease, with links to other sites for further information on specific risk factors.
<http://www.hc-sc.gc.ca/english/diseases/heart.html>

HEALTHY PRACTICES, HEALTHY PLACES:

Personal health behaviours & public health protection

Highlights: Personal Health Practices

- Physical activity levels in Saskatchewan are gradually increasing. In 2003-04, 49.6% of the population aged 12 and over were moderate or physically active.
- Rates of teen (12-19 years) current smokers in Saskatchewan (14.8%) were comparable to the national average of 15.2 % in 2003.
- The levels of obesity (19.7%) / overweight (35.3%) in Saskatchewan are above the national average. Although the percentage of the population aged 18 and older who are overweight has decreased slightly, obesity rates have increased over time.

Highlights: Public Health Protection

- Age-standardised immunisation rates for flu in seniors aged 65+ years in Saskatchewan (58.0%) were below the national average of 62.1% in 2003, but 5th highest across the country.
- Chlamydia incidence rates in Saskatchewan continue to be higher than other provinces and the national average. A provisional estimate for 2002 of 355.3 per 100,000 population in Saskatchewan being nearly double the national average rate of 178.9 per 100,000 population.

	How are we doing?	Increasing or Decreasing ?
Physical Activity	K	ì
Teen Smoking	K	î
Body Weight	L	ì
Immunisation rates 65+	L	ì
Chlamydia incidence rates	L	ì

* Notes on interpreting the summary table are included in the [appendix](#).

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

(i) Personal Health Practices



Jeni was 11 years old when she first started smoking. All of her friends had tried it, so why shouldn't she? Her parents both smoked after all so what was the big deal. The first time it tasted awful, but everyone said that it got better, better than being the class 'loser' anyway.

The type of personal health practices that we pursue influences how healthy we are as individuals and subsequently as a society. There is growing recognition that these personal life "choices" are greatly influenced by the socio-economic environment in which people live, learn, and work. Nevertheless, measuring and reporting on indicators associated with healthy lifestyles helps us to understand the overall health of a population and to design, change and implement health promotion programs. In this report three behavioural determinants of health are focused on:

Physical Activity

Teen Smoking

Body Weight

What we know:

- Personal health practices refer to those behaviours that we know have an impact on personal health. So, for example, we know that people who are overweight or who spend little time in physical activity tend to be at an increased risk of developing several chronic conditions such as diabetes, cardiovascular diseases, and joint problems.
- We also know that there has been an increase in Canadian adults and children who are overweight or obese and/ or physically inactive.
- There is also strong evidence that smoking is linked with an increased chance of developing lung cancer, and that because of its addictive nature, preventing people from starting smoking is a key step in reducing disease risk factors.

What we don't know:

- How well self-reported data on body weight and physical activity patterns corresponds to actual weight and activity.

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

- What the extent of the impact of underlying social, environmental and economic factors on obesity and physical inactivity trends are.
- Data is also lacking on bodyweight and physical activity trends in Aboriginal populations.
- What are the actual impacts on health of preventive policies and programs that improve diets, increase physical activity and discourage smoking.

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

Physical Activity

Measuring rates of activity and inactivity in the population.

Key Messages

- Physical inactivity is associated with numerous health risks, whereas being active for 30-60 minutes a day can result in significant positive health benefits.
- Nearly half of all people (47.8%) in Saskatchewan aged 12 years and over are still considered as not being active enough to attain these health benefits.
- Saskatchewan is comparable to the national average age standardised rate (51.0%) in terms of the number of people who are moderately or physically active and ranked 6th highest across the country in terms of the percentage of people who are physically active.
- As might be expected, younger people tend to be more physically active than those in older age groups. A steady decrease in physical activity is noted with age.
- Creating social and physical environments that encourage and support people to be more physically active can result in significant changes in individual behaviour.

Introduction:

Although the effects of diet and physical activity on health often interact, particularly in relation to obesity, there are additional health benefits to be gained from physical activity that are independent of nutrition and diet (World Health Organisation, 2004).

Throughout the 1990's a growing body of research has demonstrated that most Canadians are not active enough to benefit from the health-related outcomes of regular physical activity. Therefore, although survey data indicates that more people are recognising the need for lifestyle change, with most indicating that more exercise is the personal health practice most needed, a substantial number of Canadians are still insufficiently active.

Benefits of Physical Activity include:

- Better overall health
- Maintenance of healthy weight
- More energy
- Stronger muscles and bones
- Reduced stress
- Continued independent living in old age

Health Risks of Inactivity

- Premature death
- Cardiovascular conditions: heart disease, high blood pressure, stroke
- Diabetes
- Colon cancer
- Osteoporosis
- Depression

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

Health benefits occur at lower levels of intensity of physical activity than many people believe. Indeed, people who are usually inactive, such as those in the older age groups, can improve their health and well-being by becoming even moderately active²⁰ on a regular basis. Becoming more physical activity does not necessarily mean joining a health club or gym, or taking up running. Instead 'Active Living' approaches that focus on types of physical activity that can be incorporated into daily life advocates activities such as taking the stairs instead of the elevator, walking/cycling to work, or parking further away from work, and active playing with your children. These small simple steps make it easy to build up to the recommended 60 minutes of activity in one day in a number of shorter time intervals spread throughout the day. (For more information on getting active every day see Health Canada's Physical Activity Guide available on the web at <http://www.hc-sc.gc.ca/hppb/paguide/index.html>)

Saskatchewan Profile

Based on the latest survey data of estimated time spent in physical activities, Saskatchewan's population is still slightly below the national average (50.4%) in terms of the number of people who are regarded as 'active'²¹ enough to experience health-related benefits. In 2003, 49.6% of the population aged 12 years and older were regarded as moderate or physically active. This still means that nearly half the population of the province (47.8%) are not physically active enough to incur the health benefits associated with an active lifestyle²². This may even be an under-representation of the problem, as when asked about their own activity levels many people have a poor concept of time spent in sedentary versus active behaviours, so rates of inactivity may actually be higher than those recorded by self-reported data (for details and data limitations see [appendix-technical specifications](#)).

Figure 13 below suggests that more women than men appear to be physically inactive, however, this may be due to the fact that men tend to engage in more vigorous forms of activity than women, and therefore, the types of activity women are involved in may not be vigorous enough to classify them as moderately active.

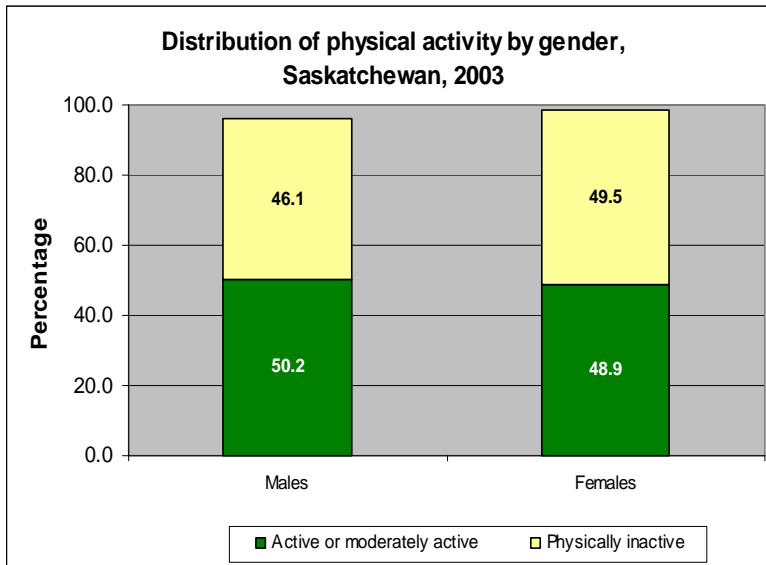
²⁰ Moderate activity is defined as activities that raise your heart rate, and make you slightly out of breathe such as brisk walking, biking, swimming, or raking leaves. Recommendation is made that moderate activity is pursued for 30-60 minutes, 4 to 5 times a week.

²¹ Full technical definition can be found in Appendix-Technical Considerations

²² These percentages may not add to 100% due to a small number of people who did not state their activity levels.

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

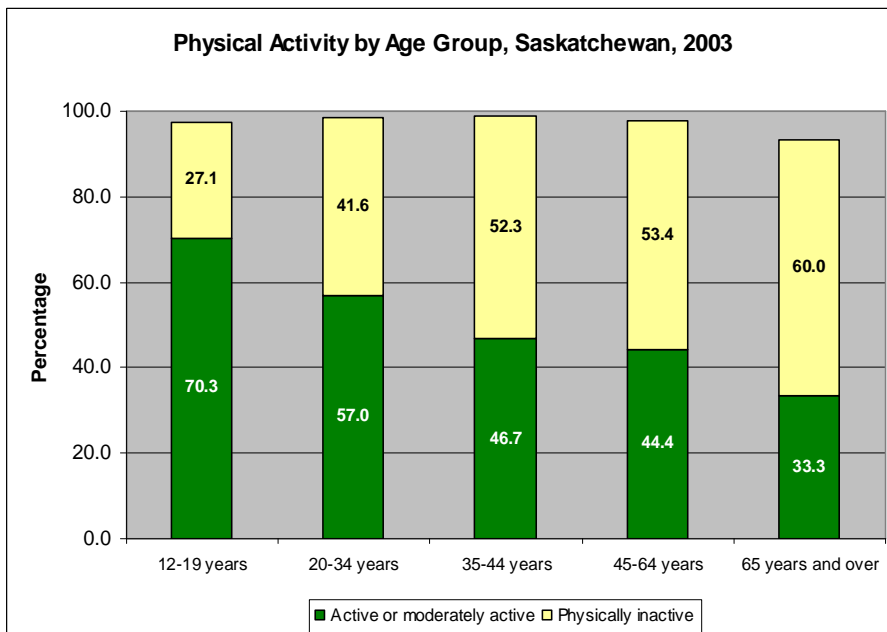
Figure 13 Physical Activity by Gender, 2003



Source: Statistics Canada, Canadian Community Health Survey, 2003

Age differences are apparent in the data. As might be expected, younger people are recorded as being physically active more so than those in all other older age groups.

Figure 14 Physical Activity by Age, 2003



Source: Statistics Canada, Canadian Community Health Survey, 2003

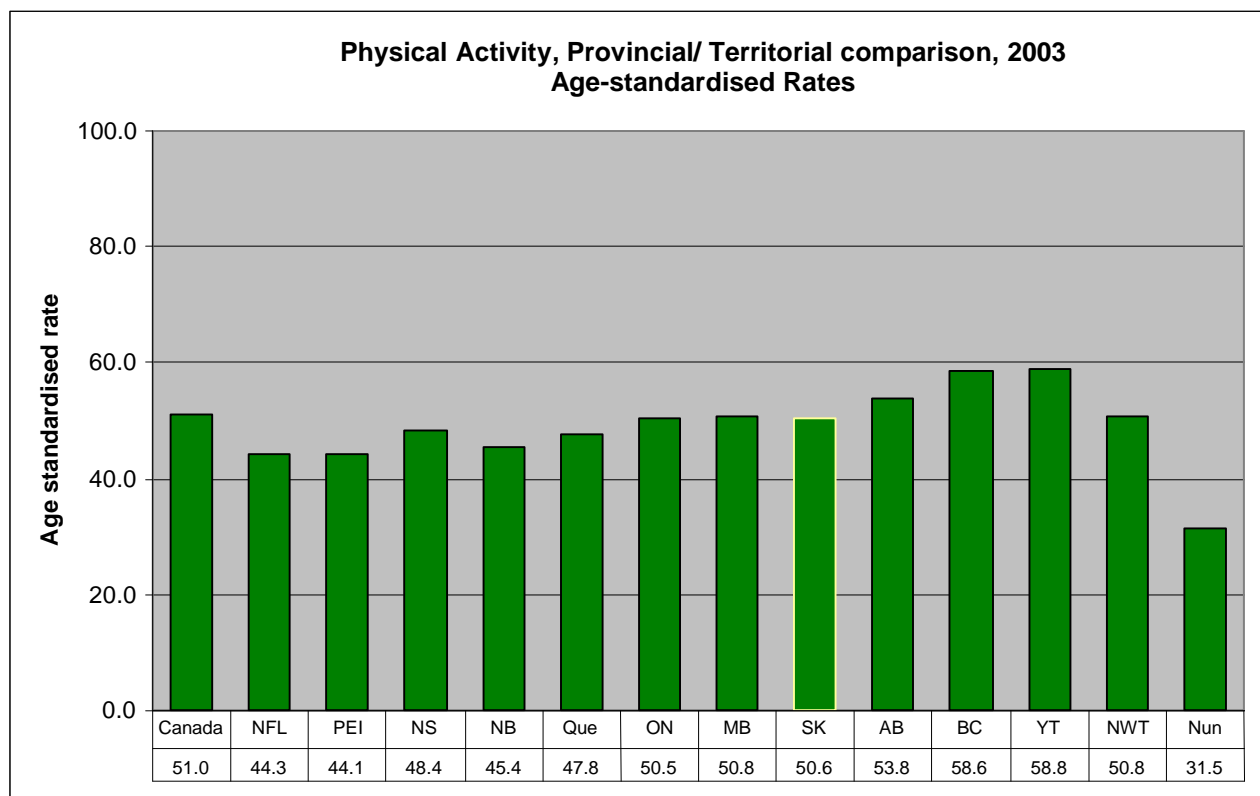
As can be seen by the increasing size of the yellow bars, physical inactivity increases with age. Less than a third of 12-19 year olds are classified as being physically inactive, but close to two thirds of seniors aged 65 years and over are not active enough for health. Decreased levels of functional mobility and a lack of social contacts often contribute to lower levels of physical activity in the elderly.

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

Provincial/Territorial Comparison

In general, rates of physical activity tend to be higher in Western Canada than on the East coast. Figure 15 below highlights these trends. Since age is a contributing factor to physical activity levels, age-standardised rates are used in these comparisons to control for the effects of different population age structures across the country. Other factors like physical access to and availability of time, resources (economic and social) and facilities for physical activity are likely to differ across the country as they do within the province.

Figure 15 Physical Activity, Provincial/ Territorial Comparison, 2003



Source: Statistics Canada, Canadian Community Health Survey, 2003

Rates of physical activity in Saskatchewan are comparable to the national average, and 6th highest across the country.

Trends

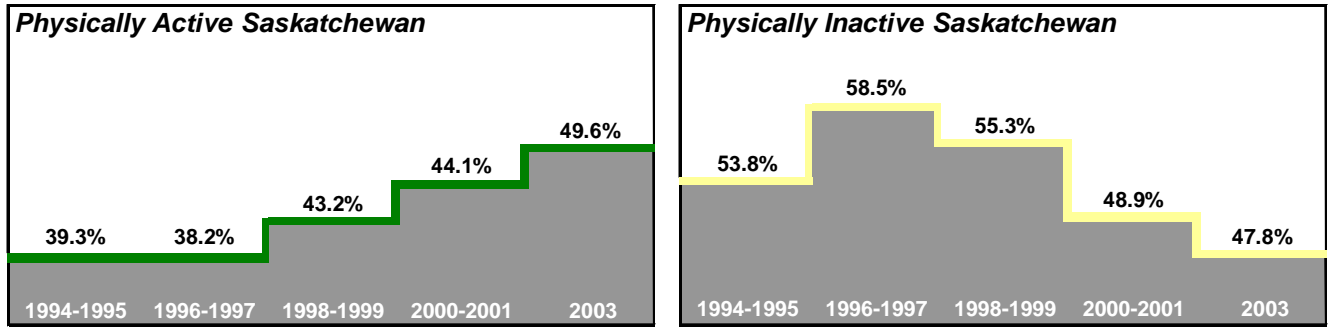
There has been a gradual increase in the numbers of people becoming physically active in Saskatchewan²³. Although the changes from one year to another are small, as the graphs below show, Saskatchewan people are making significant steps between

²³ Changes in survey collection methods suggest that caution should be used when looking at changes over time on this indicator.

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

1994/95 and 2003 towards increasing their levels of physical activity. However, the fact that nearly half the population of the province over 12 years of age are still not active enough in their daily lives to incur health benefits indicates that further work needs to be done (see [Saskatchewan Progress Report](#)).

Figure 16 Small steps: Trends in Physical Activity in Saskatchewan



Source: Statistics Canada, Canadian Community Health Survey, 2003; 2000-01 & National Population Health Survey 1994-95 to 1998-1999

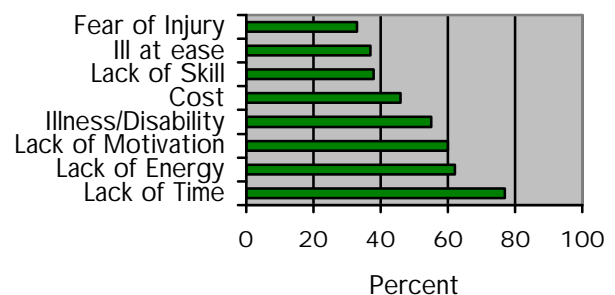
Contributing Factors

Several factors contribute to current trends in physical activity patterns:

- Age: Levels of physical activity tend to decrease with age due to real or anticipated functional limitations.
- Urbanisation: Increases in sedentary lifestyles are largely a part of increased levels of modernisation including motor vehicle use, labour-saving devices, and inactive leisure pursuits (TV watching, computer use).
- Environmental infrastructure: A lack of recreational public places (e.g. parks, walking/ cycling paths); feelings of neighbourhood safety; increased traffic flow and lack of pedestrian walkways.
- Income: Low-income populations tend to be more inactive, possibly related to economic ability to access and participate in physical activities, many of which can have added costs such as equipment, clothing or facility fees for participation.
- Gender: From adolescence onwards levels of female participation in physical activity tend

Most Important Barriers to Physical Activity

A survey by the Canadian Fitness and Lifestyle Research Institute found that the most important barriers to physical activity for people aged 15+ in Saskatchewan were:



2002 Physical Activity Monitor

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

to be lower than those of males. Increasing levels of family responsibility faced by women is one reason commonly cited as contributing to this trend. The fact that women participate in less intense forms of physical activity may also be partly responsible for the observed gender difference.

Next Steps

Increasing the proportion of people who are physically active has the potential to increase quality of life and reduce healthcare costs. However, programs that have traditionally focused on changing the behaviours of individuals have generally met with limited success. Overcoming these barriers of accessibility, time and safety requires the creation of social and physical environments that encourage and support people to be physically active. This requires a focus on physical activity at home, at work, at school, and for recreation and transport.

Governments have a role to play in the creation of an environment that enables individuals, families and communities, to make active living part of their daily life and enhance their quality of life. The development of strategies requires collaboration between the health sector, education, urban planning, and transportation to name but a few.

Although policies are needed to guide the development of practices that promote active living in communities, workplaces, and schools there are steps that as individuals we can all make to ensure that physical activity is part of our daily lives. Experts recommend that individuals incorporate 60 minutes of physical activity a day into their schedules (30 minutes of moderate intensity activity, which cause you to be slightly out of breath), and reduce the amount of time spent in sedentary activities such as television watching and computer use. Three types of exercise are also recommended: endurance activities (that work the heart and circulatory system); flexibility activities (that enhance joint mobility and muscle relaxation); and strength activities (that develop muscle strength).

See Health Canada's Physical Activity Guide for more details.

http://www.hc-sc.gc.ca/hppb/paguide/activity_endurance.html#3

Removing the traditional focus from just physical fitness and prescribed exercise programs, active living approaches encourage all forms of physical activity being part of daily living, whether this is gardening, dog walking or playing with your kids. In this way active living is something that everyone can do. (See **Things You Can Do** and **Further Information** for ways to put these recommendations into action).

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Saskatchewan Progress Report

- “A Physically Active Saskatchewan! A Strategy To Get Saskatchewan People In Motion”, is a major provincial initiative aimed at reducing physical inactivity in Saskatchewan, with a goal of increasing physical activity in the province by 10% by 2005 and is a collaboration of leaders in the sport, recreation, culture, education and health sectors.
- in motion™ Saskatchewan has a plan to make Saskatchewan the healthiest, most physically active province in Canada by Saskatchewan’s Centennial in 2005 through the province’s commitment of \$5 million from the Community Initiatives Fund (CIF). The commitment will build on the huge success of the Saskatoon Health Region’s in motion™ program that has increased the level of physical activity among Saskatoon residents by 13 per cent since its inception in 1999. The province-wide in motion™ program is unique to Canada and focuses on health promotion and active living.
- Saskatchewan Health’s Population Health Promotion Strategy (2004) Healthier Places to Live, Work & Play (available at www.health.gov.sk.ca) highlights ‘Active Communities’ as one of four priority areas for action. It encourages communities to increase opportunities for physical activity, reduce barriers that limit participation and create safe environments that support physical activity. Regional Health Authorities and their intersectoral partners are developing Regional Population Health Promotion Strategies that will include initiatives to increase physical activity.
- The Aboriginal Participation Initiative builds capacity and leadership for Aboriginal people through participation in sport, culture and recreation activities. It focuses on building opportunities for Aboriginal people living in urban communities and in the North through key partnerships, new grant opportunities and leadership programs. The initiative has already had significant involvement and support from key partners including the Federation of Saskatchewan Indian Nations, the Métis Nation of Saskatchewan, the Northern Recreation Coordinating Committee, Sask Sport Inc., and the Saskatchewan Parks and Recreation Association.

Further Information

- Health Canada’s VITALITY Program: lots of information on how to make physical activity part of your daily life - http://www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/vitality_approach_e.html

Always got an excuse for not exercising? - http://www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/active_living_e.html

Things You Can Do...

Start taking the stairs instead of the elevator

Walk to work, get off the bus a few stops early, or park further away from work

Take stretch breaks at work – go for a quick walk or stretch in your chair

Encourage your whole family to get involved.

Even gardening and light housework can count towards your daily 60-minute goal

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

- Health Canada also produces a physical activity guide to help you make physical activity choices regardless of your age or current fitness level.
<http://www.hc-sc.gc.ca/hppb/paguide/index.html>
- The Canadian Fitness and Lifestyle Research Institute has more information and practical tips for those interested in reading more about the benefits of physical activity.
<http://www.cflri.ca/cflri/tips/index.html>
- The Saskatchewan Health Website also has links to the recently released population health promotion strategy 'Healthier Places to Live, Work and Play...A Population Health Promotion Strategy for Saskatchewan' which focuses on active communities amongst other things.
http://www.health.gov.sk.ca/ic_phb_hlthbook.pdf
- Saskatchewan in motion™ provides information for all ages on how to keep physically active; includes fact sheets, personalised walking programs, newsletters and fitness tips <http://www.saskatchewaninmotion.ca>

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

Teen Smoking Rates

Measuring rates of youth smoking in the population.

Key Messages

- Tobacco use is the leading cause of preventable illness and death in Canada, and due to the addictive nature of nicotine, youth smoking is of particular concern.
- Rates of teen (12-19 years) current smokers in Saskatchewan (15.2%) were comparable to the national average of 14.8 % in 2003.
- As in previous years, rates of smoking in teenage girls exceed that of teenage boys. In 2003, 16.9% of girls aged 12-19 years currently smoked daily or occasionally compared to 13.6% of boys of the same age.

Introduction

Tobacco smoke kills over 47,500 people in Canada each year²⁴. That's more than the total of all murders, alcohol-related deaths, car accidents and suicides. Putting it another way, that is the equivalent of a small city (or lets say the combined population of Moose Jaw and Weyburn) that dies every year from tobacco use. In Saskatchewan over 1,600 residents die each year from tobacco-related causes²⁵, again this is equivalent to the rural municipality of Wynyard dying every year from tobacco smoke.

The Effects of Teen Smoking

Smoking can:

- Reduce your physical fitness due to it's effects on lung function.
- Effect your endurance performance due to its effects on heart function - resting heart rates of young adult smokers are 2-3 beats per minute faster than those of non-smokers.
- Increase frequency of cough and respiratory illness including asthma.
- Increase your chances of developing lung cancer, heart disease and stroke as an adult.
- NOT control your weight. Research* shows that young adults who smoked, or started smoking, did not lose weight – contrary to the popular belief that smoking keeps you slim. Also...
- Make you gain weight, not lose it. People who quit smoking were 34% more likely to gain weight than those who had never smoked.

²⁴ Makomaski Illing EM, Kaiserman MJ (2004) The Mortality Attributable to Tobacco Use in Canada and its Regions 1998 Canadian Journal of Public Health 95 (1) : 38-44

(* Klesges, RC, Ward, KD. & JW Ray 1998. The Prospective Relationships Between Smoking and Weight in a Young, Biracial Cohort: The Coronary Artery Risk Development in Young Adults Study Journal of Consulting and Clinical Psychology, Vol. 66, No. 6)

²⁵ Makomaski Illing EM, Kaiserman MJ (2004) The Mortality Attributable to Tobacco Use in Canada and its Regions 1998 Canadian Journal of Public Health 95 (1) : 38-44 (cited in Saskatchewan Public Health Association presentation <http://www.cpha.ca/english/inside/branches/sask/tobacco/page1.htm>)

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

It is estimated that approximately eight out of every 10 people who try smoking become habitual smokers. Both physical and psychological addiction to smoking can make it a hard habit to break, and one that highlights the importance of preventing youth from starting to smoke in the first place.

Causes for concern include the short-term health effects such as damage to the respiratory system, addiction to nicotine and the associated risk of other drug use, but also the long-term health consequences associated with the fact that most young people who smoke regularly in their adolescence continue to do so into adulthood.

Smoking rates are also associated with lower self-ratings of health, suggesting that at some level adolescents may be aware of the health impact of smoking. Despite this, 14.8% of 12 to 19 year olds in Canada are current smokers, 9.1% indicating that they smoked daily. These relatively high rates of smoking seem to confirm the widespread perception that adolescents have a reduced sense of personal vulnerability to the consequences of their behaviour or are willing to disregard them²⁶.

Smoking costs....

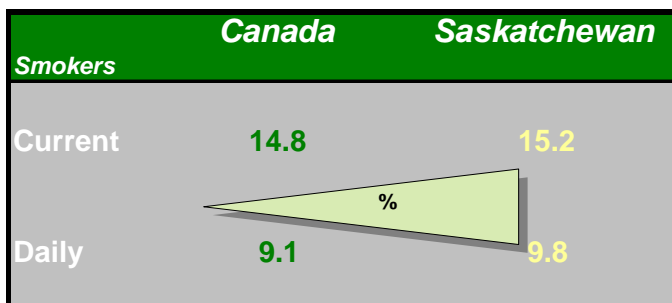
- Based on average prices, someone who smokes 15 cigarettes a day for a year will spend over \$1000
- the cost of a new stereo
- 15 cigarettes a day for 2 years, that's over \$2000
- the cost of a new top-end computer
- 20 cigarettes a day for 5 years, over \$14,000
- the cost of a new car

...what would you rather spend your money on??

Saskatchewan Profile

Recently reported survey data²⁷ suggests that 15.2% of youth in Saskatchewan, that is teens aged between 12 and 19 years, currently smoke either daily or occasionally. Of these current smokers, nearly 10% do so daily. (Survey details and data limitations can be found in [appendix-technical specifications](#))

Figure 17 Current and Daily Teen Smokers, Canada & Saskatchewan, 2003



Source: Statistics Canada, CCHS 2.1, 2003

Female teenagers report that they currently smoked at a rate that appears to be slightly higher than that of males (fig 18).

Current smokers also tend to be older (15-19 years), but the numbers of 12-14 years reporting current daily or occasional smoking is also cause for

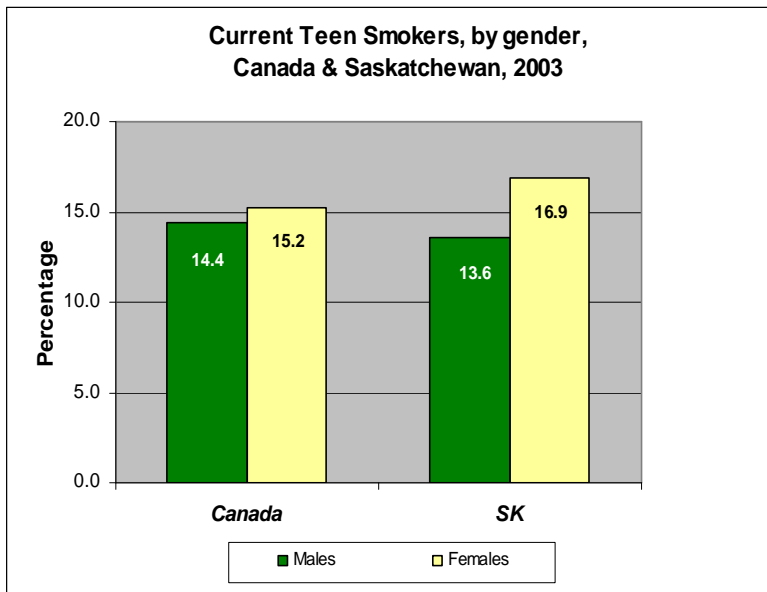
²⁶ Romer D & Jamieson P. (2001) Do adolescents appreciate the risks of smoking? Evidence from a national survey. *Journal of Adolescent Health* 29:12-21.

²⁷ Statistics Canada Canadian Community Health Survey 2.1, 2003

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concern, considering the likelihood that these young smokers will continue to do so into their late teen, and indeed adult years (fig 19).

Figure 18 Current Teen Smokers by Gender

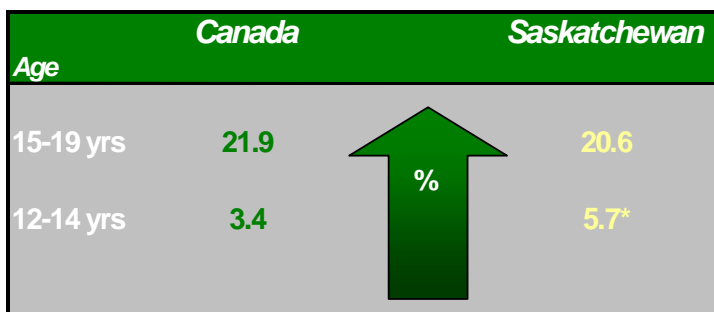


Source: Statistics Canada, Canadian Community Health Survey, 2003

In Saskatchewan a further 3.3% of females smoke compared to males. This trend for teenage girls requires further monitoring, especially since in all other age groups, and for the total population aged 12 years and older this trend is reversed; i.e., more males of all ages currently smoke (Saskatchewan - 24.7%, Canada - 25.0%) than females (Saskatchewan - 22.9%, Canada - 20.9%). Furthermore, this pattern of higher smoking rates in teenage girls is supported by results from other large-scale surveys of tobacco use such as the Canadian

Tobacco Use Monitoring Survey (CTUMS, 2003)²⁸. The factors that lead to the adoption and maintenance of smoking behaviours in teenage girls are likely, therefore, to require further research.

Figure 19 Current Teenage Smokers by Age, 2003



Source: Statistics Canada, CCHS 2.1, 2003;

* Use with caution, high sampling variability

The majority of teenage smokers tend to be in the 15-19 years age group. However, the fact that 5.7% of 12-15 year olds in Saskatchewan currently smoke suggest that despite being below the legal age to purchase cigarettes many find avenues to support their use. According to data from CTUMS (2003), 56% of current smokers who are under the

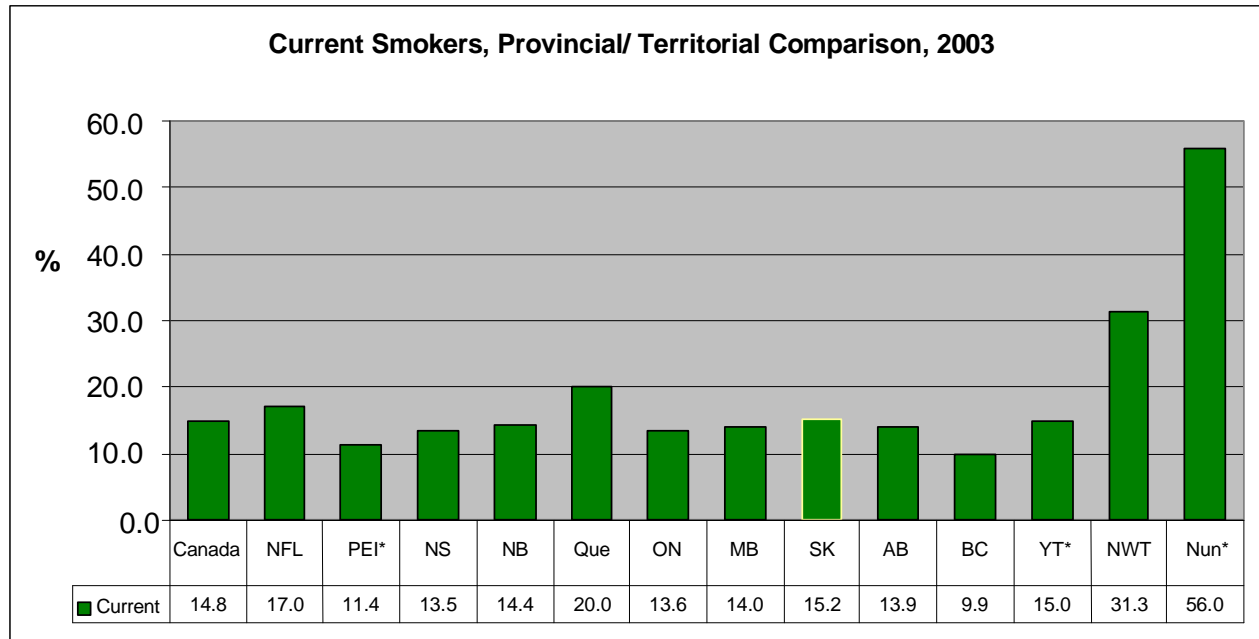
legal age to purchase cigarettes report obtaining them from someone else.

²⁸ http://www.hc-sc.gc.ca/hecs-sesc/tobacco/research/ctums/2003/summary_first_2003.html

CHAPTER 2: HEALTHY PRACTICES, HEALTHY PLACES

Teen smoking rates vary across the country. Saskatchewan has the 5th highest rate of teen smoking in Canada. Generally, low socio-economic status, as measured by education and income, is one of the strongest predictors of smoking in adults²⁹. We also know that many teenagers model their behaviour on that of their parents or other significant adults in their lives. Furthermore, children who live in households with at least one smoker are twice as likely to become regular smokers compared to children who do not live with a smoker³⁰. Ethnic and cultural factors also influence smoking prevalence and can interact with socio-economic status. Cultural differences in tobacco use are evident when rates of smoking in Aboriginal and non-Aboriginal populations are compared. At least twice as many Aboriginal Peoples smoke compared to non-Aboriginals³¹, and rates are even higher in Inuit populations³².

Figure 20 Current Teenage Smokers, Provincial/ Territorial Comparison



Source: Statistics Canada, Canadian Community Health Survey, 2003;

* Use with caution, high sampling variability

²⁹ Health Canada (1999) Towards a Healthy Future. Second Report on the Health of Canadians. Ottawa: Health Canada

³⁰ Health Canada Tobacco Control Programme - Resources for Professionals

http://www.hc-sc.gc.ca/hecs-sesc/tobacco/prof/youth/odds/odds091_c13_p4.html

³¹ Tjepkema M. (2002). The health of the off-reserve Aboriginal population. Health Reports Supplement 13, 1.16. Catalogue no. 82-003-XIE

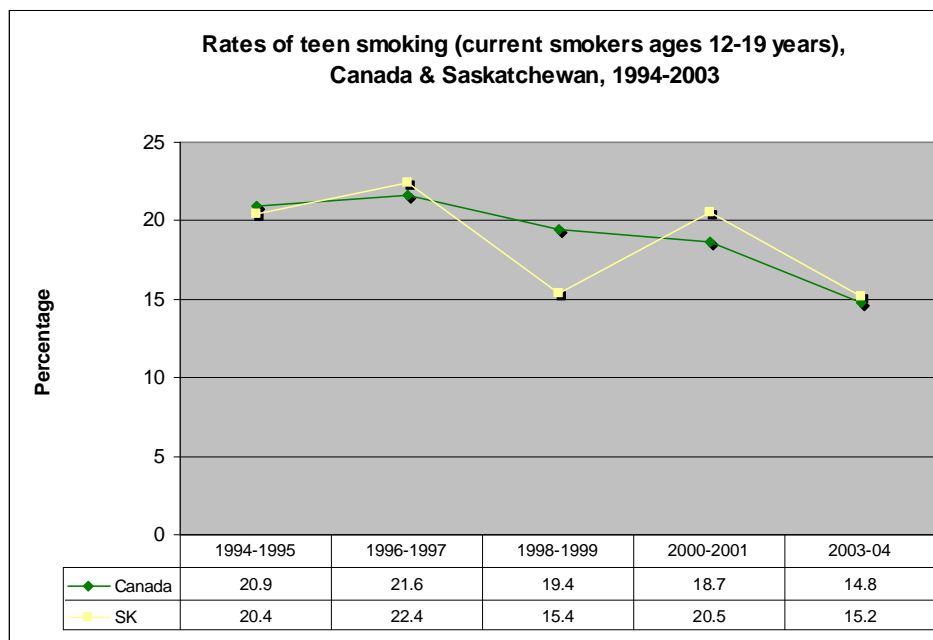
³² Statistics Canada. (2003). Aboriginal Peoples Survey 2001: Initial Release Supporting Tables. Ottawa: Minister of Industry. Catalogue no. 89-593-XIE

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These variations in smoking rates across the country are matched by a high degree of variability in smoking rates within each jurisdiction. In Saskatchewan the use of smokeless (chewing) tobacco by Aboriginal youth in northern Saskatchewan also poses a significant health problem ³³.

Trends

Figure 21 Current Teenage Smokers, Trend 1994-2003



Although rates of teen smoking have been gradually decreasing at the national level, rates of teen smoking in Saskatchewan have not followed the same pattern. Rates in Saskatchewan have fluctuated between 1994/95* and 2003, however, an encouraging decrease from 20.4% to 15.2% is noted over this time period.

Source: Statistics Canada, Canadian Community Health Survey, 2003; National Population Health Survey 1994-1999

* Data for SK 1994/95 through to 1998/99 should be used with caution due to high sampling variability

Contributing Factors

There are many factors that influence teenagers to start, and to continue smoking, in fact it is almost impossible to identify a cause-effect relationship for any single factor and youth smoking.

- Predisposing factors that are difficult to change include the cultural factors mentioned above, and the impact of other family members, family structure and income on the likelihood of smoking initiation.

³³ Hoover J, McDermott R, Hartsfield T (1990) The prevalence of smokeless tobacco use in native children in northern Saskatchewan, Canada. Canadian Journal of Public Health 81:350-2.

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- A major influencing factor in youth smoking is the role of their friends. Peer pressure and the perception that smoking is 'cool' appear to be important reasons for smoking initiation.
- In addition to seeing people they know smoke, youth are exposed to a variety of media images and advertising showing celebrities using tobacco products. Because hundreds of thousands of people quit smoking every year, children have become the tobacco industry's new targets. These media images reinforce the opinion that smoking is 'normal' and that everyone does it.
- Reasons for continuing smoking are different from those for starting smoking. Youth identify boredom, stress relief and addiction as the underlying factors causing them to continue smoking.
- Many of the reasons youth give for starting and continuing smoking are related to their self-esteem. Interventions aimed at preventing/ reducing youth smoking should encompass building self-esteem as a program goal ³⁴.

Youth Access-to-Tobacco-Restrictions

- Being able to easily access tobacco further increases the chances that youth will start smoking.
- A recent evaluation of retailers behaviour and youth Access-to-Tobacco-Restrictions (Nielsen, 2004), found that nationally, the percentage of retailers refusing to sell cigarettes to underage Canadians has fallen back to 67.7% from the 2002 high of 71.2%.
- Within Saskatchewan, the rate of retailers refusing to sell to minors was 81.7%, with Saskatoon being noted as having one of the highest compliance rates across Canada at 89.0%.

Source: AC Neilson (2004) Evaluation of Retailer's Behaviour to Certain Youth Access-to-Tobacco Restrictions Report prepared for Health Canada Tobacco Control Programme.

Survey of Attitudes Toward Second Hand Smoke in Public Places in Regina, 1999

- 82% support a ban in any indoor public place used by children.
- 61% support a ban in restaurants.
- 60% support a ban in all public places.

Source: Canadian Public Health Association

³⁴ Health Canada (1999) Lessons Learned from the Tobacco Demand Reduction Strategy. Ottawa; Health Canada

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Saskatchewan Progress Report

- Saskatchewan Health's 'Healthier Places to Live, Work & Play...A Population Health Promotion Strategy for Saskatchewan' (see [further information](#)) identifies decreased substance use and abuse as one of four priority areas for action. A key goal being specifically to reduce tobacco use and the harm it causes in the population, especially in children and youth. Regional Health Authorities and their intersectoral partners are developing Regional Population Health Promotion Strategies that will include initiatives to decrease substance use and abuse, including tobacco.
- The Tobacco Control Amendment Act, passed by the Saskatchewan Legislature in June 2004, includes provisions for a 100% ban on smoking in public places, such as bars, billiard halls, bingo halls, bowling centres, casinos, restaurants and private clubs, effective January 1, 2005. Some places in Saskatchewan, such as Moose Jaw, already have this ban in effect.

Further Information

- A Health Canada Website that is directed at youth smokers.
<http://www.hc-sc.gc.ca/hecs-sesc/tobacco/youth/index.html>
- More information on Health Canada's Tobacco Control Programme.
<http://www.hc-sc.gc.ca/hecs-sesc/tobacco/about.html>
- Link to Saskatchewan Health's 'Healthier Places to Live, Work & Play...A Population Health Promotion Strategy for Saskatchewan' report.
http://www.health.gov.sk.ca/ic_phb_hlthbook.pdf
- Saskatchewan is going smoke-free news release.
<http://www.gov.sk.ca/newsrel/releases/2004/05/12-259.html>
- The Lung Association of Saskatchewan hosts the latest news releases on topics associated with tobacco use.
<http://www.sk.lung.ca/>

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Body Weight

Measuring rates of obesity and overweight in the population.

Key Messages

- There is an increased risk to health of being overweight or obese.
- Over half the population (55%) of Saskatchewan (18 years and older) are overweight or obese. Rates of obesity/ overweight are higher in Saskatchewan than the Canadian average (48.2%).
- More women than men appear to be at risk of developing health problems due to being underweight.

Introduction

Overweight and obesity are major contributors to many preventable causes of death and disability. There is growing concern that the prevalence of overweight and obesity is reaching epidemic proportions in Canada, as it is in other developed and developing countries. According to the World Health Organisation³⁵, rates of obesity are replacing under nutrition and infectious disease as the major causes of ill health at the global level.

People who are obese or overweight are at an increased risk of developing heart disease, stroke, type 2 diabetes, cancer, kidney failure, osteoarthritis and other joint problems, and mental health problems such as depression and anxiety. Indeed, the quality of life effects of obesity are similar to those caused by other behavioural determinants of health such as smoking, and problem drinking³⁶.

Of further concern is the extent to which overweight and obesity are affecting those at younger ages. In Canada, there is strong evidence that the prevalence of childhood overweight and obesity is increasing rapidly. Between 1981 and 2001, the prevalence of obesity among Canadian children aged 7–13 years rose by 1.5 to 5 times³⁷.

³⁵ The world health report (2002) Reducing risks, promoting healthy life. Geneva, World Health Organization, 2002.

³⁶ Canadian Population Health Initiative (2003) Obesity in Canada: Identifying Policy Priorities. Canadian Institute for Health Information, Ottawa.

³⁷ Canadian Institute for Health Information (2003) Improving the Health of Canadians. Chpt 4 – Obesity. CIHI, Ottawa

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Measuring Obesity

One of the most common methods used to determine whether an individual's body weight is putting them at an increased risk for health problems is to use the Body Mass Index (BMI). BMI takes into account a person's weight and height (weight in kilograms divided by height in meters squared) but does not distinguish between lean muscle mass weight, or other causes of excess weight (such as carrying a child) from fat mass (see [appendix-technical specifications](#) for full list of data limitations).

Although it is an imperfect measure and not suitable for use with pregnant women, athletes or growing children, it is the most simple and standardised way to collect estimates of the prevalence of overweight and obesity in the population.

Given emerging evidence of the negative health consequences of a BMI of 25 or greater, current Canadian guidelines have been brought in line with international standards for the measurement of weight status. (See text box above for new Canadian classification).

BODY MASS INDEX – New Canadian Classification.	
Under weight	less than 18.5
Normal	18.5-24.9
Overweight	25.0-29.9
Obese	30-40+

Saskatchewan Profile

Using the current classification system for BMI, over half of the population of Saskatchewan (aged 18 years and older) are at an increased health risk due to their current weight.

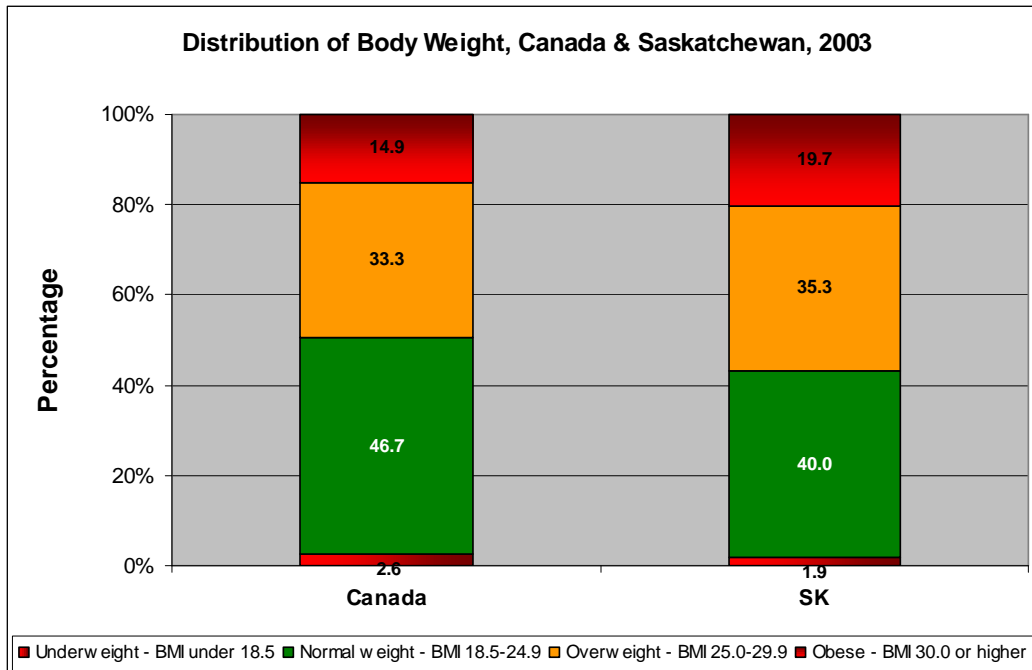


Figure 22 BMI, 2003

The areas represented in red in the figure opposite indicate the percentage of the population at most risk of incurring health benefits due to their weight, i.e. those who are severely overweight or underweight.

Source: Statistics Canada, Canadian Community Health Survey, 2003

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In 2003, 35.3% of Saskatchewan's population aged 18 years and older were estimated to be overweight, and around a further 19.7% obese.

This may even be an under-representation of the problem, as when asked about their own height and weight there is evidence that people tend to underestimate their weight and overestimate their height, so rates of obesity and overweight may actually be higher than those recorded by self-reported data³⁸.

Regardless of this potential bias, which is likely to hold true for all survey data collected throughout the country, rates of obesity in Saskatchewan are significantly higher than the Canadian average. The proportions of the total Canadian population that are overweight or obese are estimated to be around 33% and 15%, respectively (Fig 22).

Figure 23 Overweight and Obesity, Canada & Saskatchewan, 2003

%	Canada		Saskatchewan	
	Males	Females	Males	Females
Overweight	41.0	25.7	41.2	29.5
Obese	15.9	13.9	21.6	17.8

Figure 23 indicates that more men than women are overweight or obese in Saskatchewan.

More women, however, appear to be at risk of health problems related to being underweight (4.1% of Canadian women being classified as being underweight compared to 1.2% of men; and 3.3% of women in Saskatchewan specifically compared to 0.5% of men³⁹. This may reflect

Source: Statistics Canada, CCHS 2.1, 2003

the fact that women still feel some societal pressure to be thin, and are more likely to be victims of eating disorders such as anorexia nervosa and bulimia nervosa than men, both of which are related to an increased risk of morbidity and mortality.

Age-related changes in bodyweight are also evident. As figure 24 below indicates, the percentage of people who are overweight, increases slightly with every sequential age-group until the senior years (ages 65+) when it decrease slightly to below that of the 45-64 year age group. Obesity rates also increase comparatively from early to later adulthood, with the exception of the 35-44 years age group who have similar rates of obesity to the 25-34 year olds. This trend is in part due to increasing levels of sedentary behaviour, increasing levels of functional limitations (real or perceived) and reductions in 'free' time which are commonly associated with increasing age, up until the senior years when physiological and psychological changes in appetite, accompanied by reduced opportunities for social eating can lead to a reduced energy intake for many

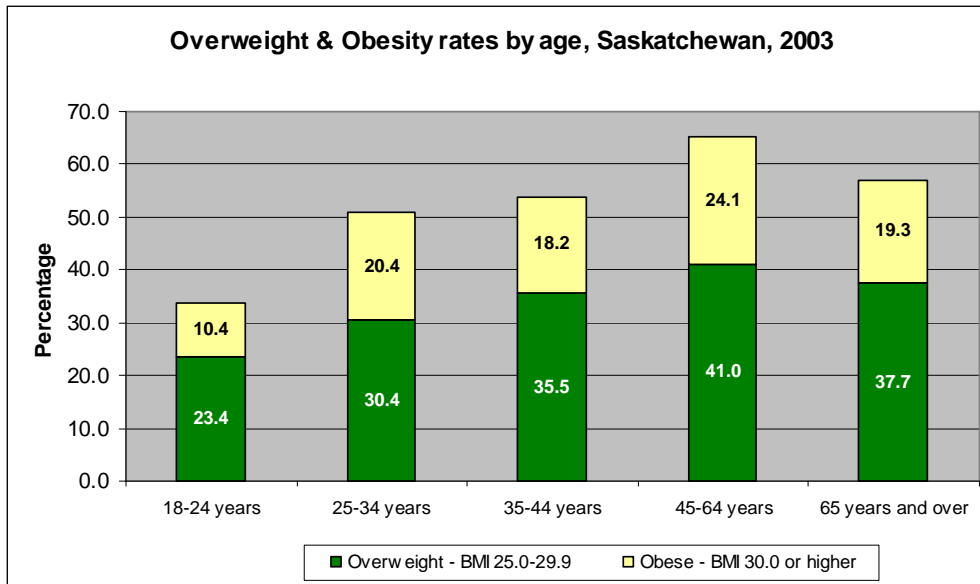
³⁸ Lara, J. J., Scott, J. A. & Lean, M. E. J. (2004) Intentional mis-reporting of food consumption and its relationship with body mass index and psychological scores in women. *Journal of Human Nutrition & Dietetics* 17 (3), 209-218.

³⁹ Rates of 'underweight' men in Saskatchewan should be interpreted with caution due to a high degree of sampling variability

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elderly people. Indeed, for many seniors the prevailing concern is ill health due to dehydration and malnutrition as opposed to overeating and obesity.

Figure 24 Overweight & Obesity by Age, 2003



Source: Statistics Canada, CCHS 2.1, 2003

Trends

Rates of obesity have been increasing steadily since the 1970s. In fact, according to the Heart & Stroke Foundation, the increasing numbers of Canadians who are overweight or obese now pose as great a threat to public health as tobacco use did 30 years ago⁴⁰.

Survey data from 1994/95 to 2003 reflects a portion of this trend (Figure 25). Although it appears that the proportion of the population aged 18 years and older in Saskatchewan who are classified as overweight has remained fairly stable over time, an increase in the numbers who are obese can be seen over this time period. In Saskatchewan, rates of obesity have increased from 16.4% in 1994-95 to 19.7% in 2003⁴¹. This is around a 20% increase in the number of people whose health is likely to be adversely affected by their weight, and a potential burden on the health system.

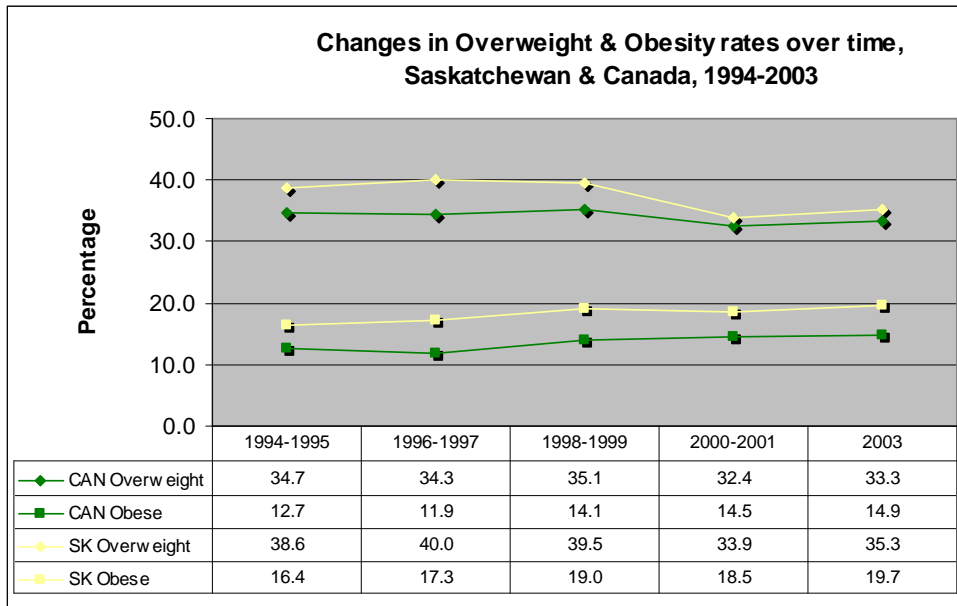
Furthermore, at all time points, rates of obesity and overweight in Saskatchewan are slightly above that of the Canadian average.

⁴⁰ Heart & Stroke Foundation of Canada (2004) Heart And Stroke Foundation Warns Fat Is The New Tobacco <http://www2.heartandstroke.ca/Page.asp?PageID=33&ArticleID=2913&Src=news>

⁴¹ Due to differences in survey data collection methods comparisons over time should be interpreted with caution

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Figure 25 Overweight & Obesity Trends, 1994-2003

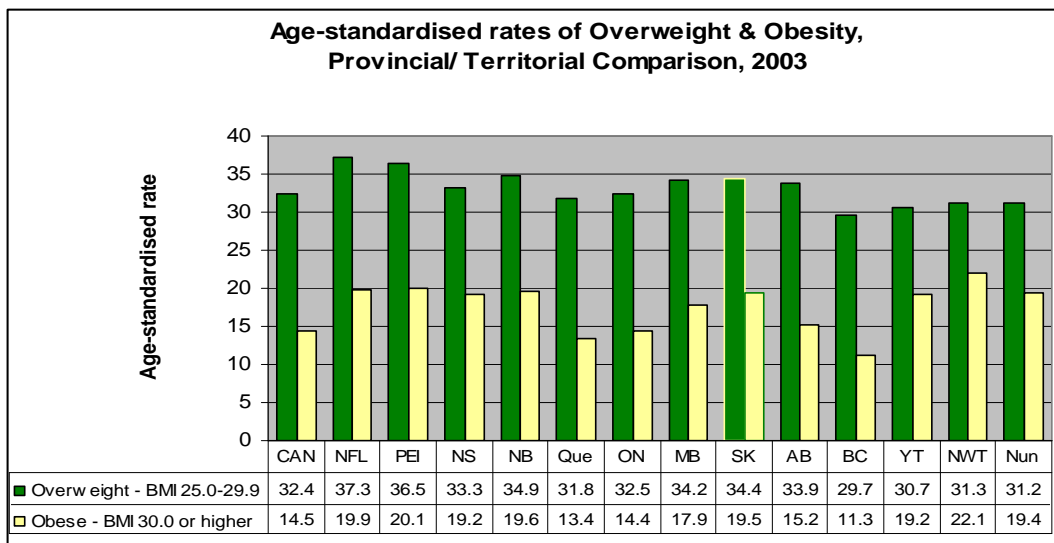


Source: Statistics Canada, CCHS 2.1, 2003; CCHS 1.1 2000-01; NPHS 1994/95-1998/99

Provincial/Territorial Comparisons

A similar picture is presented across Canada, as in Saskatchewan, where age-standardised rates⁴² of overweight and obesity in individuals aged 18 years and older suggest that in nearly all provinces and territories approximately 1 in every 2 people is at an increased risk of developing health problems related to their current weight.

Figure 26 Overweight & Obesity, Provincial/ Territorial Comparison, 2003



Source:
Statistics Canada,
CCHS 2.1, 2003

⁴² Age-standardised rates are used for provincial/ territorial comparisons to control for differences in population age structures across the country

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Rates of obesity in Saskatchewan are currently significantly higher than the national average. Across the country, Saskatchewan had the 5th highest age-standardised rate of obesity in 2003. The lowest rates being found in British Columbia (11.3%). The percentage of the population who are overweight in Saskatchewan is the 4th highest in the country.

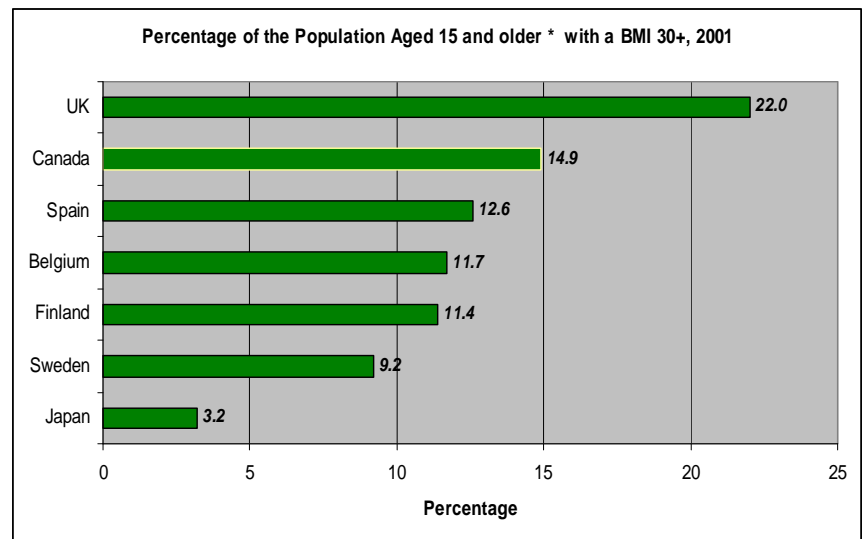
International Snapshot

Unhealthy diets and physical inactivity are the leading causes of several major chronic diseases and contribute significantly to the global burden of disease, death and disability.

International comparisons suggest that the problem of obesity is higher in Canada than in many other developed countries, with the exception of the United Kingdom, and the United States (health examination data from 1999 indicate that the percentage of the population aged 15+ years with a BMI greater than 30 was 30.9% in the US).

Age-standardised Rates of Obesity

Age distribution patterns across the country may also have some impact on obesity rates. Although obesity rates are rising too in younger populations, the risk of obesity is higher in older age groups. For this reason age-standardised rates of obesity are reported in provincial/territorial comparisons.



Source: Organisation for Economic Co-operation and Development (2003) Health at a Glance.

* Data from Canada for 20-64 year olds;

^a Data from the UK based on health examinations rather than self-rep

Contributing Factors

Obesity is a result of a complex variety of social, behavioural, cultural, environmental, physiological, and genetic factors. The rapid rise in the rate of obesity in a relatively short space of time suggests that environmental factors not genetic causes explain the increase in the rate of adult and childhood obesity. Among the suspected causes of this obesity epidemic are:

- easy access to and availability of energy dense but nutrient poor foods, and high intakes of sugar sweetened drinks and juices (e.g. soft drinks, candy and many snack foods);
- low levels of physical activity in leisure time and increased popularity of sedentary activities such as TV watching, computer use and electronic gaming. Increased levels

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of mechanisation at home/work (such as elevators, remote controls) also impact upon the likelihood of obesity rates rising;

- urban designs/ neighbourhood safety issues that act as a barrier to physical activity;
- the role of home and school environments in informing the food choices made by children, and the heavy marketing of fast foods (high in energy and low in micronutrients) to which children and adults are exposed;
- sociocultural influences along with parental modelling and environmental exposure can also contribute towards expectations around portion size. There is some evidence that increasing portion sizes is correlated with the rising rates of obesity observed in Western cultures;
- poverty - access to exercise facilities can be restricted due to cost issues, housing and transportation costs take precedence over food and exercise, 'fast food' and 'junk foods' are often cheaper than healthier alternatives.

Next steps

Canadians appear to believe that the government holds some responsibility to transform the current environment into one that will reduce the risk of obesity.

Work is increasing to identify more effective strategies to address the rising levels of obesity in Canada. This includes identifying policy priorities, focusing on key priority areas such as school health, urban design and transportation, research and intervention tools, and the social inequality determinants of obesity⁴³.

Who do Canadians believe is responsible?	Percentage of Canadians
Individual responsibility	54%
Government leadership needed	18%
Food industry leadership needed	2%

Source: Heart and Stroke Foundation of Canada

Evidence suggests that strategies to prevent obesity must start early – with the promotion of breast-feeding and good prenatal care, but also cover comprehensive school programs, and assessment of the barriers to good nutrition and physical activity at the community level, and in the workplace.⁴⁴

Work is also ongoing with the food industry to encourage good practice, increase consumer access to information through food labelling, and encouraging healthy food choices. This work is occurring not only at the level of government but also through organisations such as the Heart and Stroke Foundation's HealthCheck Program,

⁴³ Canadian Population Health Initiative (2003) Obesity in Canada: Identifying Policy Priorities. Canadian Institute for Health Information, Ottawa.

⁴⁴ WHO/FAO Expert Consultation, Diet, Nutrition and the Prevention of Chronic Diseases, WHO Technical Report Series 916, 2003; Geneva, Switzerland.

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designed to help consumers identify healthy food choices. (See [Further information](#) for more details.)

Although social and environmental changes are needed, Canadians also feel that there is some level of individual responsibility to maintaining a healthy weight. Recommendations from expert bodies suggest that to prevent obesity and indeed for general health, individuals should attempt to:

- limit energy intake from fat, especially saturated fat;
- increase consumption of fruits and vegetables as well as legumes (beans, lentils, pulses), whole grains and nuts;
- limit the intake of added sugars and sugary foods;
- limit salt (sodium) consumption from all sources and ensure that salt is iodised;
- achieve energy balance for weight control and obesity prevention by getting 60 minutes of physical activity every day.⁴⁵

See [Things you can do](#) and [Further Information](#) for ways to put these recommendations into practice.

Saskatchewan Progress Report

A number of provincial and national initiatives in health and other sectors address factors that affect body weights. The following are examples.

- Saskatchewan Health's 'Healthier Places to Live, Work & Play...A Population Health Promotion Strategy for Saskatchewan' identifies 'Accessible Nutritious Food' as one of the four priority areas for action. Three goals are identified including increasing opportunities for people to enjoy nutritious food, reducing the barriers that limit healthy food habits, and advocating for food policies that promote and protect health. Regional Health Authorities and their intersectoral partners are developing Regional Population Health Promotion Strategies that will include initiatives that work towards increasing access to nutritious food.
- The Saskatchewan Community School Program, through Saskatchewan Learning, provides additional resources and supports to school divisions to support high needs students and their families which are impacted by complex socio-economic factors. The range of initiatives is wide and includes food/snacks and increased use of school facilities for physical activity.
- The Heart and Stroke Foundation of Saskatchewan recently commissioned a study to look at nutrition in Saskatchewan's schools due to a growing concern over the sharp increase in the percentage of the Saskatchewan population, especially children and youth, who are overweight or obese. The report "Nutrition in Saskatchewan Schools: Policy, Practice and Needs" outlines the results of these questionnaire based studies on the existence of nutrition and food policies in Saskatchewan schools as well as offering some recommendations for health professionals, schools/school boards and food service staff, teachers, students, and parents on healthy eating and the development of school food policies (for link to full report see [Further Information](#)).

⁴⁵ World Health Organisation (2003) Integrated Prevention of Noncommunicable diseases. Draft global strategy on diet, physical activity and health. Geneva: WHO.

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Further Information

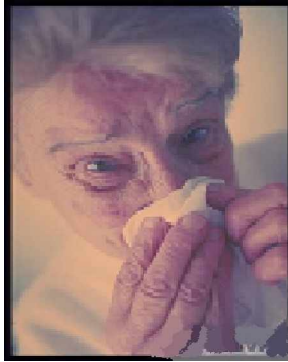
- The Heart and Stroke Foundation of Canada's HealthCheck Program, a food information program, to help make wise food choices when buying groceries.
<http://www.healthcheck.org/>
- The Heart and Stroke Foundation of Saskatchewan also provides similar information as well as updates on Saskatchewan specific initiatives. A copy of the Nutrition in Saskatchewan Schools reports can be also be found there.
<http://ww2.heartandstroke.sk.ca/Images/English/SK-Nutrition-Report-April-2004.pdf>
- The Registered Dietitians of Canada also host an informative Website that can help check out your food choices, activity patterns, and healthy weight. It provides personalised feedback to help achieve healthy eating and active living goals and answers nutrition questions.
<http://www.dietitians.ca/english/fra mes.html>
- Canada's food guide: Provides information on major food groups for health, serving sizes and number of servings per day.
http://www.hc-sc.gc.ca/hpfb-dgpsa/onpp-bppn/food_guide_rainbow_e.html
- The Saskatchewan Health Website also has links to the recently released population health promotion strategy 'Healthier Places to Live, Work and Play...A Population Health Promotion Strategy for Saskatchewan'.
http://www.health.gov.sk.ca/ic_phb_hlthbook.pdf

Things you can do:

- Follow Canada's Food Guide to Healthy Eating.
- Try to eat 5 portions of fruit and vegetables a day, and encourage children to eat 5-a-day also.
- Drink 6-8 glasses of water a day.
- Follow Canada's Physical Activity Guide to Healthy Active Living by increasing physical activity to 60 mins a day: walk to work, get off the bus a few stops early, park your car further away, take the stairs not the elevator.
- Restrict TV watching, electronic gaming, computer use.

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(ii) Public Health Protection



Betty thought she had caught the cold, her granddaughter had been coughing a lot the last time she visited. But then the fever started, her body ached all over. Not liking to be a burden, Betty didn't want to go to the doctor for what she thought was just a cold. Betty's neighbour suggested she call the Healthline. The nurse on the phone told her to go to her doctor right away, and that being over the age of 65 she would have qualified for getting a free 'flu shot'. Betty had heard about the flu shot and was worried it actually caused the flu. The nurse reassured Betty that despite what she might have heard, the story that the vaccine actually caused you to get the flu was a myth.

Introduction

Although major public health problems such as smallpox, polio, cholera and the plague are largely diseases of the past in Canada, many new challenges remain.

Communicable diseases (i.e., conditions that are readily passed from one person to another by either direct or indirect contact) continue to affect thousands of Canadians each year. One example of a communicable disease, and the potential harm it can cause in Canada today is SARS (severe acute respiratory syndrome), which in 2003 had a huge impact on the health of Canadian society, and on the economy of the country. Not including the healthcare costs of containing and treating the outbreak, it is estimated that SARS also resulted in an estimated \$1.5 billion loss in national economic activity due to its effect on travel and tourism, primarily in the Toronto area ⁴⁶. Like the Walkerton E.Coli outbreak before it, SARS received substantial media coverage and resulted in a close look being taken at disease control and prevention responses at the local, and national level. Health protection and disease prevention programs are designed to anticipate, avoid, and address these and other immediate threats to health. Although there are a whole host of communicable diseases currently affecting pockets of the Canadian population such as tuberculosis, HIV/AIDS, and meningitis, two communicable diseases will be addressed in this report to highlight the current state of public surveillance and protection responses in the country, and in Saskatchewan specifically:

Immunisation rates for Influenza in the 65+ years age group

Chlamydia rates*

⁴⁶ Conference Board of Canada (2003) The Economic Impact of SARS – Special Briefing May 2003. Ottawa, Canada.

* Supplemental indicator

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Both are examples of communicable diseases, which with effective public education and prevention programs can have substantial impacts on health, as well as economic benefits in terms of potential reduced health care costs associated with the treatment of outbreaks of these diseases. As such, they serve as indicators of the preventive measures in place to reduce the burden placed on society by communicable diseases.

What we know....

- How effective preventive measures like the influenza vaccine is in controlling outbreaks of influenza, especially reducing morbidity and mortality from the disease in the elderly.
- There is some information available on the reasons people choose not to use preventive health services such as getting immunised; i.e., they feel they are not at risk, believe the vaccine is ineffective, that the vaccine side-effects are harmful, or can cause flu.
- What the likely effects of not using preventive health services are on the future health of the individual.

What we don't know...

- How accurate self-report measures are for the population, and especially the senior population where problems of memory and recall are likely to be a factor.
- How many cases of sexually transmitted infections go unreported or undiagnosed.
- There is a lack of information from groups outside the survey framework such as Aboriginal peoples.
- More information is needed on the potential effects of age and gender on seeking preventive public health services.
- How best to ensure that all at-risk groups receive appropriate education about their need for preventive health services.
- What the potential cost to the health system is of ineffective or not efficiently used public health prevention services.

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Immunisation for influenza in the 65+ years population

Key Messages

- The influenza vaccine is one of the best ways to protect yourself from getting 'flu', a respiratory illness that can be fatal for the elderly (65+ years).
- In Saskatchewan, nearly 60% of adults aged 65+ years reported receiving a flu-shot in the last year (2002-03).
- More women in Saskatchewan than men reported receiving a flu shot in the last year.
- Immunisation rates for flu have increased from 1996-97, perhaps as a result of better education around the vaccine and improved access to immunisation.
- In 2003, Saskatchewan had the 6th highest rate of immunisation for influenza in the 65+ population.

Influenza, or the flu virus is spread by droplets sent airborne by an infected person's coughs and sneezes. Although there are a variety of different strains of flu the symptoms range in severity, and can mimic those of the common cold and other respiratory infections. Most flu sufferers complain of a cough, stuffy nose, fever (higher in children), a sore throat, headaches, and often muscle aches and fatigue. A cold may go away in several days to a week, but the flu can linger on for up to two weeks.

Individuals who are aged 65 years and older are classed as being a 'high-risk' group. Although the flu may pose little threat to an otherwise healthy child or adult, respiratory complications for older adults, especially those with chronic illnesses such as asthma, diabetes, and heart disease, can be potentially life

Is it the Cold or Flu??

Symptoms	Common Cold	Influenza
Fever	Rare	Usual, sudden onset
Headache	Rare	Usual, can be severe
Aches & Pains	Sometimes mild	Usual, often severe
Fatigue	Sometimes mild	Usual, may last 2+ wks
Runny nose	Common	Sometimes
Sneezing	Common	Sometimes
Sore throat	Common	Sometimes
Chest pain	Sometimes	Usual, can be severe
Coughing	Mild to moderate	Usual, can be severe
Vomiting	Sometimes	Not a symptom of flu

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threatening. Elderly people tend to have weaker immune systems, tend to stay indoors more where there is less ventilation, and for many who live in assisted living facilities or nursing homes, are more likely to be exposed to environments where the virus can be easily transmitted rapidly. Even something as innocent as a loving hug or kiss from a grandchild can cause the spread of a disease which maybe potential fatal for many seniors. The biggest danger to the elderly from influenza is that it lowers the body's ability to fight other infections that they may get or be exposed to while they have the flu.

Getting immunised against influenza ('the flu-shot') is one of the best ways, for at-risk groups such as the elderly, to protect themselves from this disease. Flu season usually lasts from November to April and immunisation is the best prevention. Saskatchewan's harsh winters mean that many people spend a lot of time indoors where the virus can spread quickly from one person to another. The immune system may also be less effective during the colder months when people exercise less and tend to eat fewer fresh fruits and vegetables. The vaccination works by triggering the body to make antibodies against the virus. Since this can take one to two weeks for this reaction to occur, the best time to get your flu-shot is during October, before flu season hits.

People over the age of 65 years in Saskatchewan (along with other high risk groups such as children and adults with chronic conditions) can receive their vaccination free of charge. For more information on how to get a flu-shot contact your doctor or local public health office (See [Further Information](#) for links to Saskatchewan Health fact sheet on influenza immunisation)

Saskatchewan Profile

Data from the Canadian Community Health Survey, 2003 (see [appendix-technical specifications](#) for details and data limitations) suggests that over half (59.4%) the population of Saskatchewan seniors (aged 65+) had reported receiving an influenza immunisation in the last year. This was below the Canadian average of 62.4% in

Flu Shot 'Myths'

An Ipsos-Reid survey in Ontario showed that 27% of those surveyed believed that the flu vaccine actually caused the flu*.

Fact: The vaccine does not contain any live virus and cannot cause infection

The flu-shot symptoms are worse than the flu

Fact: the vaccine is actually very safe reactions are rare

The vaccine doesn't work because you still got the flu

Fact: The vaccine prevents flu symptoms in about 7 out of 10 healthy adults, if they are exposed to a strain of the virus that is close to the strain contained in the vaccine. Many diseases mimic flu symptoms, plus getting the vaccination too late, i.e., when you have already been exposed to infection may make it appear less effective.

Certain groups like the elderly may still get the flu, but experience less severe complications if they have been immunised.

Source: BC Healthfiles; BC Healthguide.org

* "Flu Myths Persist" HealthyOntario.com; Ontario Ministry of Health.

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2003. When the data is looked at by gender, it appears that more women than men report receiving a flu-shot. Similarly, more of the 75+ years age group, when compared to the younger subset of the 65+ years age group, report receiving a flu-shot in 2003 (figure 27).

Figure 27 Influenza Immunisation 65+ years, 2003

%	Canada		Saskatchewan	
	Males	Females	Males	Females
65-74 years	58.2	62.4	49.3	60.2
75+ years	66.1	64.2	63.7	64.2

Source: Statistics Canada, CCHS 2.1, 2003

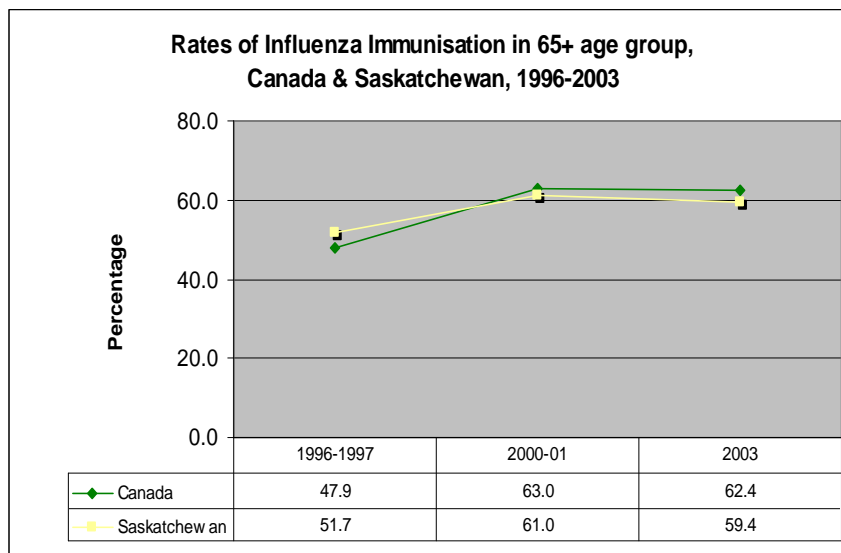
We know from other research that women tend to seek preventive care more often than men⁴⁷, and this may in part contribute to the higher rates of immunisation for influenza observed here.

Furthermore, with respect to age, it is possible, that the older a person gets, and the more chronic conditions that accompany aging, that there will be increased contact with the health system and the greater likelihood that a medical professional will recommend getting a flu shot.

Furthermore, with respect to age, it is possible, that the

Trends

Figure 28 Influenza immunisation trends



Source: Statistics Canada, CCHS 2.1 2003; & NPHS 1996-97
Note- time trend is not continuous

As figure 28 shows, the number of people in the province (and nationally) who reported receiving a flu shot has increased since 1996-97, reaching a high of 61.0% in Saskatchewan in 2000-01, before tapering off slightly to 59.4% in 2003.

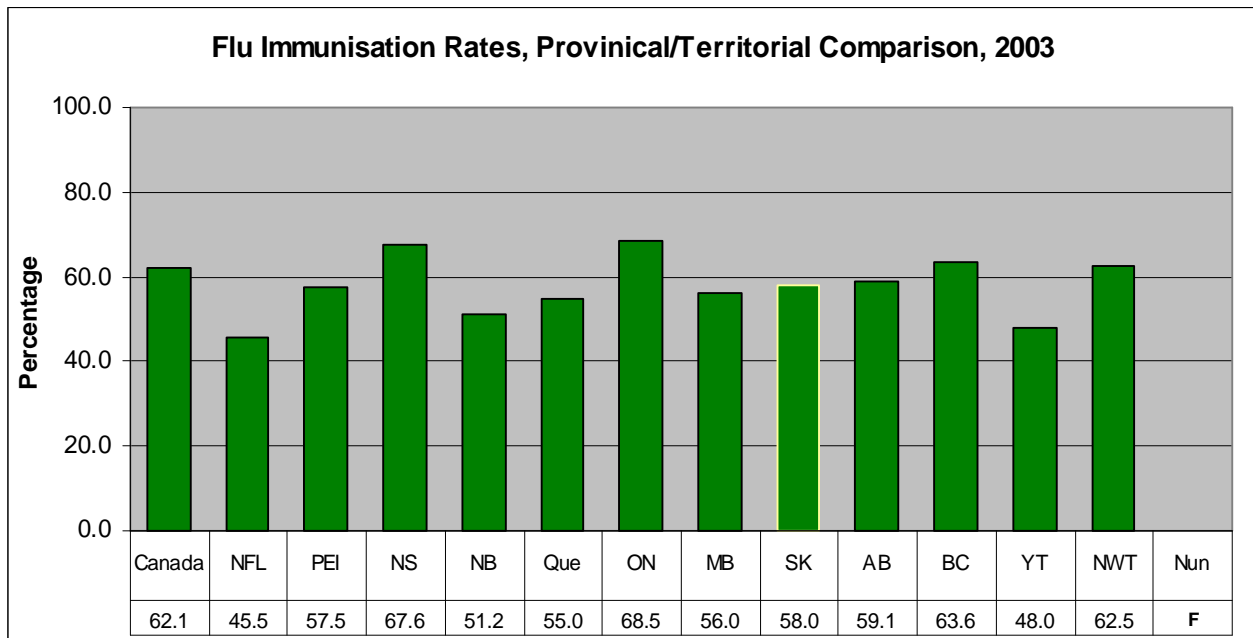
⁴⁷ Bertakis, KD Gender differences in the utilisation of health care services. Journal of Family Practice (Feb 2000)

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It is hard to tell what factors are responsible for changes that may occur over time. It is possible that increased access to free vaccination and better public education surrounding the myths associated with getting immunised for influenza may be contributing factors.

Provincial/Territorial Comparison

Figure 29 Age-standardised rates for flu immunisation



Source: Statistics Canada, CCHS 2.1, 2003
F - rates for Nunavut are too unreliable to be published

Although below the national average in terms of its age-standardised⁴⁸ immunisation rates for influenza in the 65+ years age group, Saskatchewan had the 6th highest rate across the country in 2003. In other words, it would appear there has been some success in public education with respect to reducing immunisation refusal in those who fear adverse reactions or mistakenly believe that the vaccine is either ineffective or unnecessary, and from increasing access to the vaccine.

Contributing Factors

Several factors influence access to immunisation services. Although age and gender are mentioned above, their effects on immunisation rates are hard to determine without further research. The following factors are also potential contributors to the varying rates of uptake for influenza immunisation.

⁴⁸ Age-standardised rates are presented to control for the effects of different age structures in the population across the country

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- geographical location can have a large impact on the ability to access immunisation services, especially for the elderly living in rural or remote areas.
- education: knowledge of immunisation services available to you as well as having information on the facts surrounding the vaccine can also impact upon utilisation of the service. Beliefs that the vaccine is ineffective, or indeed causes the flu, are likely to impact upon its uptake.
- presence of chronic conditions: individuals with existing chronic conditions such as asthma, heart disease and diabetes are at an increased risk of morbidity and mortality associated with influenza. Individuals who are currently being monitored by health professionals for these conditions may be more likely to receive immunisation for influenza.

Saskatchewan Progress Report

Saskatchewan Health, in cooperation with the Regional Health Authorities, will be promoting the benefits of the flu shot in a public education campaign, which will coincide with the beginning of the flu season and delivery of immunization in the province.

- Saskatchewan Health provides influenza vaccine free of charge to those who meet eligibility criteria. This is a shared program between Saskatchewan Health, Health Regions and physicians.
- This year, Saskatchewan Health Regions will begin immunization programs in the 1st week of October. Public health experts agree that vaccinations received in October or November provide good protection during a typical flu season
- Health care workers are encouraged to be immunized, especially in the wake of SARS; as both diseases present with similar symptoms, increasing immunizing of health care workers may reduce potential confusion or concern that someone that has influenza has SARS.
- Regional Public Health departments across Saskatchewan will be offering flu shots in various locations such as malls, seniors complexes, and public health clinics, throughout the province. For clinic times and dates in your area, call your local public health office or watch your local newspaper.

Further Information

- Saskatchewan Health's influenza immunisation fact sheet.
http://www.health.gov.sk.ca/rr_influenza_immun.pdf
- Health Canada's Division of Immunisation and Respiratory Diseases also publishes information online about influenza immunisation.
http://www.hc-sc.gc.ca/pphb-dgspsp/dird-dimr/vpd-mev/influenza_e.html

Chlamydia incidence rates (Supplemental indicator)

Key Messages

- Incidence rates of the sexually transmitted infection, chlamydia, appear to be increasing across the country, at a rate higher than would be expected purely by increases in reporting and better testing procedures alone.
- Provisional data for 2002 suggests there were 3,613 cases of chlamydia reported in Saskatchewan, a rate of 355.3 per 100,000 population. This rate is approximately double that found in the Canadian population as a whole (178.9 cases per 100,000 population).
- Saskatchewan had the highest rates of chlamydia infection of all provinces in Canada (excluding the territories) in 2002.
- Rates of chlamydia continue to be higher in women (especially young women and teens) than men. In 2002 the incidence of chlamydia in Saskatchewan women was 455.1 per 100,000 population, compared to 253.8 per 100,000 population for Saskatchewan men.

Introduction

Chlamydia rates are an important indicator of prevention efforts to control a major public health issue that is of particular concern in youth. Sexually transmitted infections remain an important public health problem in Canada, with chlamydia accounting for 39% of all notifiable diseases reported to Health Canada in 1999⁴⁹.

Young women bear the burden of chlamydia, especially teenage girls and young adults, who are often unaware of their infection. Yet the consequences of infection can be severe and long reaching including pelvic inflammatory disease, increased chance of ectopic pregnancy and infertility.

Definitions:

The term STI (sexually transmitted infection) is now used instead of STD (sexually transmitted disease). STI is more encompassing and includes infections which may be asymptomatic.

⁴⁹ Division of Disease Surveillance, Health Canada, 2000

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Incidence rates of genital chlamydia remain an important health indicator because of the complications that can result from untreated infections.

Since chlamydia became nationally notifiable (1992), females have traditionally accounted for approximately 75% of all reported cases, which is attributed at least in part to better screening and case-finding among females rather than reflecting a true female: male distribution⁵⁰. (For more details on interpreting results and data limitations see text box below and [appendix-technical specifications](#))

Saskatchewan Profile

These changes in screening and testing are reflected in the time trends below, which show increasing incidence rates of chlamydia in Canada and in Saskatchewan.

Women continue to account for the majority of cases of chlamydia, both nationally and at the provincial level. In 2002* there were 3,613 cases of chlamydia identified in Saskatchewan, of which 2,333 were in women, and 1,280 in men. These cases are represented as rates per 100,000 population in figure 30 below. As can be seen incidence rates for this STI are somewhat higher in Saskatchewan than the national average.

Figure 30 Chlamydia incidence rates, 2002

Sex	Canada	Saskatchewan
Male	112.1	253.8
Female	244.1	455.1

Rate per 100,000 population

Source: Sexual Health & Sexually Transmitted Infections Section, Community Acquired Infections Division Centre for Infectious Disease Prevention and Control, Health Canada

* All data for 2002 are provisional

Interpreting results:

Current incidence rates must be interpreted in the context of increased reporting and improved sensitivity of testing procedures (nucleic acid amplification techniques -NAAT), which can detect low-level infections that could not have previously been diagnosed. Furthermore, this data captures only reported cases, with approximately three quarters of female infections being symptom-free, and about half of male infections, many cases remain undiagnosed.

⁵⁰ Health Canada (2000) Canadian Sexually Transmitted Disease Surveillance Report 1998/99. Canada Communicable Diseases Report vol26S6

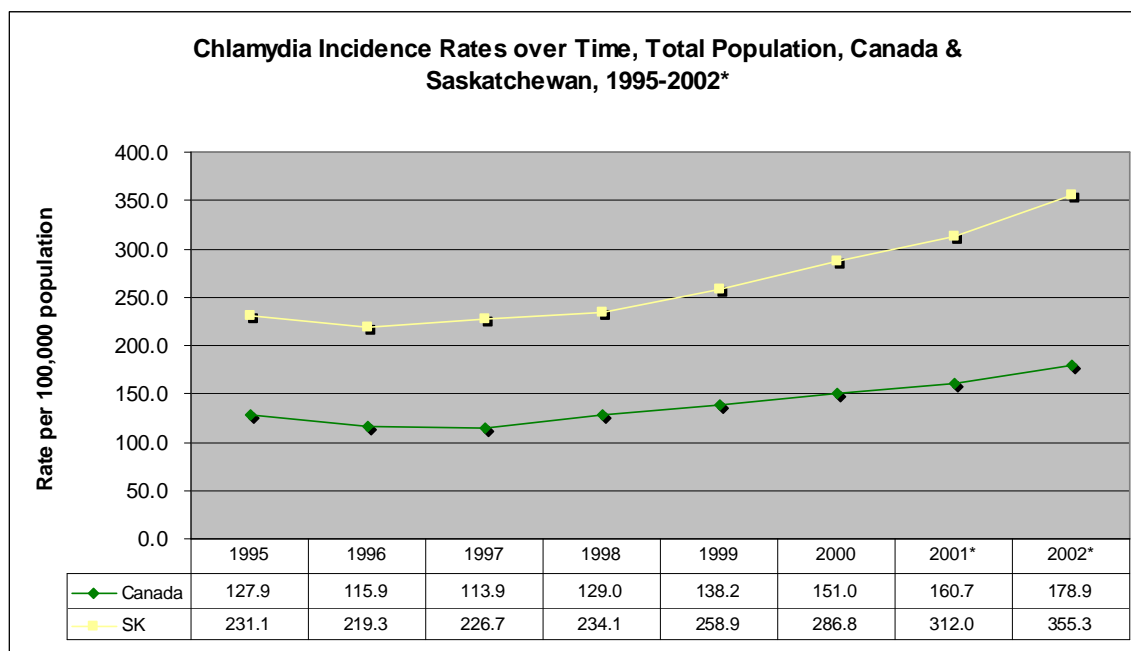
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It is hard to determine whether these rates are a result of improved screening and rigorous diagnostic testing in the province for chlamydia, or a breakdown in the communication of sexual health education to young people about high-risk behaviours that increases their chances of contracting chlamydia

Trends

As can be seen (figure 31), although incidence rates of this STI have been climbing across the country over the last decade, rates in Saskatchewan have increased by over 50% from 1995 to a high of 355.3 cases per 100,000 population in 2002. This is a rate that is approximately double the Canadian average.

Figure 31 Chlamydia Incidence Trends, 1995-2002



Source: Sexual Health & Sexually Transmitted Infections Section, Community Acquired Infections Division
Centre for Infectious Disease Prevention and Control, Health Canada

* Data are provisional and liable to change

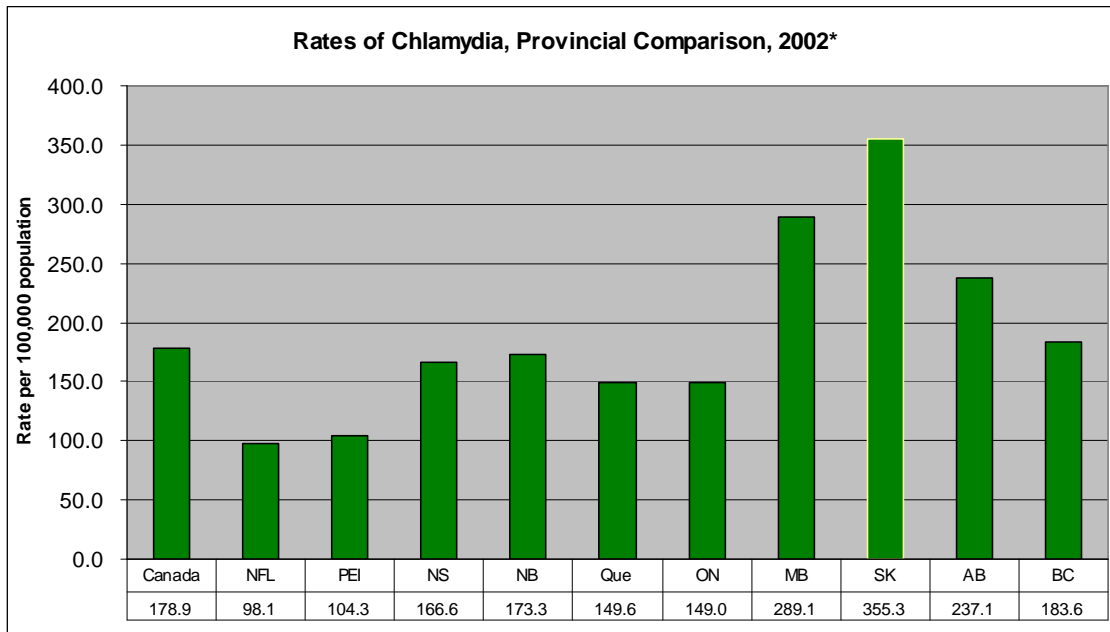
These trends are in part likely due to the adoption of more sensitive diagnostic tests introduced around 1997. The continued increase to 2002, however, suggests there has been a trend towards an increase in the reported number of cases as well. It is unclear, why rates in Saskatchewan continue to be double the national average.

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Provincial/Territorial Comparison

Incidence rates of chlamydia are also higher in Saskatchewan than they are in several other jurisdictions in Canada. Data from 2002 indicates that the lowest rates tend to be in the east, and the highest in the territories. Comparing amongst the provinces only, Saskatchewan had the highest incidence rate across the country for this STI in 2002 (figure 32).

Figure 32 Chlamydia Incidence, Provincial Comparison, 2002



Source: Sexual Health & Sexually Transmitted Infections Section, Community Acquired Infections Division
Centre for Infectious Disease Prevention and Control, Health Canada

* Data for 2002 are provisional and liable to change.

Contributing Factors

- Age: rates of chlamydia appear to be higher in younger adults and teenagers than in older age groups. This may be in part due to a limited capacity to understand the connection between present actions and later outcomes, or placing less value on these longer-range outcomes⁵¹.
- Risky sexual behaviour: risky sexual behaviours that increase the chances of contracting a STI include having unprotected sex, or having sex with multiple partners.

Age break-downs, Saskatchewan 2002

Age	Cases	Rate
10-14	72	92.1
15-19	1230	1515.6
20-24	1345	1787.3
25-29	546	831.1
30-39	327	240.1
40-59	89	33.2
60+	6	3.2

Source: Saskatchewan Health,
Communicable Diseases Centre.

⁵¹ Hall PA, Holmqvist, M & Sherry, SB (2004) Risky adolescent sexual behaviour – A psychological perspective for primary care physicians. Topics in Advanced Practical Nursing e-Journal 4 (1).

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- **Tendencies to underestimate personal risk:** A larger majority of adolescents and adults alike are aware that certain sexual behaviours are dangerous, indeed it could be speculated that knowledge levels of STIs are higher now than in the past, in part due to the individual- and population-level sexual health educational campaigns launched by healthcare and public health professionals at the national and provincial level. High rates of risky sexual behaviour, and as a result, high levels of STIs such as chlamydia, may instead be indicative of a failure in the perception of personal vulnerability. In summary, adolescents like adults may consider unprotected sexual intercourse as dangerous in general, but due to this pervasive bias in thinking may underestimate their personal risk for adverse consequences.
- **Mental illness:** A review of relevant literature concluded that mentally ill adolescents engage in more risky sexual behaviours than their non-mentally ill counterparts⁵². Even low to moderate feelings of depression have been linked to low condom use and increased risk of STIs in youth⁵³.
- **Alcohol & Drug Use:** Alcohol and drug use can increase the number of compromising situations youth may find themselves in, where it is more likely they will engage in risky sexual behaviours, that can ultimately lead to increased risk of contracting an STI.
- **Vulnerable populations:** A recent study indicated that vulnerable youth groups such as street youth, aboriginal youth, and those who had been living in foster care or had a social worker tended to have a higher association with chlamydia infection⁵⁴.

Risky Behaviours

Contrary to popular belief, there is significant research evidence that adults and adolescents do not differ in the degree to which they consider themselves at risk for negative events such as unintended pregnancy or contracting STIs. Like adults, adolescents perceive themselves as less vulnerable to STIs and unintended pregnancy than others around them.

Source: Hall, Holmqvist, Sherry, (2004). Risky Adolescent Sexual Behavior: A Psychological Perspective for Primary Care Clinicians. Topics in Advanced Practice Nursing E-journal.
http://www.medscape.com/viewarticle/467059_1

⁵² Brown LK, Danovsky MB, Lourie KJ, DiClemente RJ, Ponton LE. (1997) Adolescents with psychiatric disorders and the risk of HIV. *J Am Acad Child Adolesc Psychiatry* 36:1609-1617

⁵³ Millstein SG, Moscicki AB, Broering JM. (1994) Female adolescents at high, moderate, and low risk of exposure to HIV: differences in knowledge, beliefs, and behavior. *Journal of Adolescent Health* 15:133-141.

⁵⁴ Shields SA, Wong T, Mann J, Jolly AM, Haase D, Mahaffey S, Moses S, Morin M, Patrick DM, Predy G, Rossi M, Sutherland D (2004) Prevalence and correlates of Chlamydia infection in Canadian street youth. *J Adolesc Health* 34(5):384-90

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Saskatchewan Progress Report

- Youth Educating About Health (YEAH), is a youth-run initiative in the province directed by Planned Parenthood Regina. This youth-driven project examines alcohol and other drug-use as it relates to sexual behaviour.
- Saskatchewan Health has identified chlamydia rates as a proxy measure to assist Health Regions to assess need and evaluate the effectiveness of programs and services targeted toward reducing high-risk behaviour associated with all STIs.
- There are four Sexually Transmitted Infections (STI) clinics in the province (Regina, Saskatoon, Prince Albert and North Battleford). These clinics provide treatment and prevention services. Sexually transmitted disease treatments are also provided through physicians' offices throughout the province.

Further Information

- Planned Parenthood is a youth-focused sexual-health centre providing services such as walk-in clinics, public education and community programs. Within the province both Regina and Saskatoon have Planned Parenthood Centres.
<http://www.regina.pafc.info/agency.html>
<http://www.saskatoon.pafc.info/>
- The Planned Parenthood Federation of America also has an informative and interactive site aimed directly at youth.
<http://www.teenwire.com/index.asp>
- Health Canada's Sexual Health and Sexually Transmitted Infections unit contains links to recent research on STIs, as well as current trends in STI rates, and public education messages.
<http://www.hc-sc.gc.ca/pphb-dgspsp/std-mts/>

HEALTHY PROGRAMS, HEALTHY SERVICES

Access to and Quality of Health Care in Saskatchewan

Highlights: Access to Care

- According to the latest estimates from the Health Service Access Survey (2003), the majority of people in Saskatchewan (62.4%) reported waiting less than one month to receive diagnostic services. The national average (provinces only) for people reporting a wait of less than one month was 57.5%.
- The percentage of the population aged 15 years and older who reported difficulty obtaining routine/ongoing care, health information or advice, or immediate care was significantly lower in Saskatchewan than the national average in 2003. The rates of reported difficulties for these services being 11.7%, 12.5%, and 17.3% for routine care, health information, and immediate care, respectively.
- Prescription drug spending as a percentage of income varies across the country. In Saskatchewan, 69.1% of households spend less than 1% of their after-tax income out-of-pocket on prescription drugs.
- In Saskatchewan the median wait time for cardiac bypass surgery was 20 days. The majority of patients (47.4%) receiving their surgery in less than 14 days. There is some concern that this data may be atypical, however, given the health service workers strike in the province in 2002. Work continues in the province on reducing waiting times for surgery.
- The number of individuals who received publicly funded home care services in the province in 2002/03 was 27, 712. This represents a rate of 2,749.9 per 100,000 population.

Highlights: Quality of Care

- Hospitalisation rates for ambulatory care sensitive conditions (ACSC conditions) have decreased in Saskatchewan and nationally since 1995. Rates in Saskatchewan in 2001/02 were above the national average at 513 hospitalisations per 100,000 population compared to 346 hospitalisations per 100,000 population at the national level.
- In general there has been a trend towards lower 30-day mortality rates for AMI in Saskatchewan hospitals. In 2000/01 the risk adjusted in-hospital mortality rate for AMI was 11.7%.

	How are we doing?	Increasing or Decreasing?
Wait times for diagnostic services	J	N/A
Difficulty obtaining routing/ ongoing care	J	N/A
Difficulty obtaining health information/advice	J	N/A
Difficulty obtaining immediate care	J	N/A
Prescription drug spending	L	N/A
Wait time cardiac surgery**	J	N/A
Overview of waiting times for surgery**	J	N/A
Home care clients**	J	N/A
Hospitalisation for ACSC	L	í
30-day in-hospital mortality rate for AMI	K	í

**Note: No national comparable data is available for these three indicators. How are we doing ratings are based on subjective impressions of how our programs compare to others across the country.

* Notes on interpreting the summary table are included in the [appendix](#).

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(i) Access to Care



"I always thought I was in good health, not perfect, but other than a few minor allergies and those couple of extra pounds I couldn't seem to lose, nothing to complain about. Then I started to notice little signs like I was tired all the time, even when I didn't seem to be doing much, so much so that I couldn't complete a full days work. It wasn't until my vision started to get blurry in one eye that I went to the doctor. He scheduled me for some tests like an MRI and a spinal tap to rule out Multiple Sclerosis. MS! That was 3 months ago and I'm still waiting for my MRI. Every day that passes I become more convinced that I really have MS. I think the waiting is going to kill me."

Access to health care services continues to be a growing issue for patients and policy makers alike. High profile incidents that make news highlights such as people dying because they have waited 'too long' to be diagnosed or treated underscore waiting times as one of the longstanding challenges for the Canadian health care system.

Access to care can refer to several things; in other words it can mean the ability to access certain services in your area in a timely fashion, or it can mean the availability of services, or lack thereof, in a community. The barriers that present themselves when talking about accessing care can also vary; the financial costs of obtaining care, geographical distance from care, time to wait till care is received, and a lack of human resources to provide care, but all can reduce satisfaction with health care services, and ultimately the health status of the population.

This section of the report will look at the challenge of accessing care in Saskatchewan at several levels, using survey-based data of individual self-reports, and information from administrative data sets on actual wait times recorded in Saskatchewan hospitals. The areas covered will be:

Self-reported wait times for diagnostic services

Difficulty obtaining routine/ ongoing health care

Difficulty obtaining health information or advice

Difficulty obtaining immediate care

Household spending on prescription drugs

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Wait times for cardiac bypass surgery

Wait times for surgery

Home care clients per 100,000 population

(Indicators in italics are supplemental indicators reported by Saskatchewan Health but not other jurisdictions)

What we know...

- That people in rural and remote areas have more barriers to accessing care
- Most people in the province have few barriers to accessing routine health care, health information and advice, and immediate care they receive, but there is still work to be done, especially on the issue of wait times.
- We have some information on wait times for various imaging services and the problems patients report experiencing while waiting for care.
- That spending on prescription drugs is increasing steadily due in part to an increase in volume of drug use, and the fact that better, more effective pharmaceutical treatments also tend to be more costly.
- That although survey data of self-reported waiting times can be influenced by many factors and is not always an accurate representation of actual waits, it is the best source of comparable information currently available.

What we don't know...

- How well medical imaging services affect patient care, outcomes, and costs in comparison to assessing and managing patients' conditions without using imaging technology.
- What the relative balance in terms of costs and benefits of using various types of diagnostic imaging services on the health care system is.
- More work needs to be done on setting benchmarks for wait times; what is an acceptable waiting period can vary by disease state, and patient status.
- Comparable data about who is waiting for what, and for how long, is limited. One of the challenges is agreeing on how best to define wait times, i.e., when waiting actually begins and ends.
- More work is needed on developing comparable quality indicators of waiting times.
- More research is needed on the factors that contribute to increased drug spending.

Access to Care: Diagnostic Services

Self-reported wait times for diagnostic services

Key Messages

- According to the latest estimates from the Health Service Access Survey, the majority of people in Saskatchewan (62.4%) reported waiting less than one month to receive diagnostic services. The national average (provinces only) for people reporting a wait of less than one month was 57.5%.
- Although estimates are less reliable, 25.9% reported waiting 1- 3 months, with a further 11.7% waiting more than 3 months.
- Due to small sample sizes no data is available for Saskatchewan on median waits for diagnostic services.
- Small sample sizes and a lack of reliable estimates also prevent provincial comparisons being made.

Introduction

Increased attention in the media has been given recently to the waiting time experienced for diagnostic services⁵⁵ such as MRI and CT scans. Since many conditions can be successfully treated if they are caught in the early stages of the disease progression, reductions in death and disability can follow from reduced waiting times for diagnostic services.

One of the problems associated with measuring wait times, however, is that the definition of 'wait times' (i.e., when the waiting period is deemed to start and finish) can vary across the country. In order to obtain comparable data, the results of the Health Service Access Survey (HSAS) are presented here. The HSAS was designed to provide timely data on patient's experiences accessing health care services and any difficulties they might have experienced doing so. As such the HSAS was designed to collect information on access to first-contact⁵⁶ and specialised services⁵⁷ from a sub-sample of the Canadian Community Health Survey (CCHS) 2.1

⁵⁵ MRI, CT scan or angiography requested by a physician to determine or confirm a diagnosis but does not include tests such as X-rays, blood test, etc

⁵⁶ Include routine care, health information or advice, and immediate care for a minor health problem provided by a family or general physician, nurse or other health care provider

⁵⁷ Services including specialist visits for a new illness or condition, non-emergency surgery other than dental surgery, and selected diagnostic tests (non-emergency MRIs, CT scans, and angiographies).

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respondents aged 15 and over, from each of the 10 provinces. Excluded from this survey are residents of the three territories, those living on Indian reserves or Crown lands, residents in institutions, full-time members of the Canadian Forces, and residents of certain remote regions.

Although the HSAS provides timely and comparable data, there are a number of limitations associated with self-report measures, especially for information as sensitive as waiting times (see text box). As well as problems of understanding when a wait time starts and finishes, respondents' ability to remember how long their waiting time was can vary dramatically (full list of data limitations can be found in [appendix-technical specifications](#)).

Wait times for this indicator refer to the length of time, in weeks, between the patient being referred for a diagnostic services and receiving the service, during the 12 months prior to the survey.

Limitations of the HSAS

- HSAS data are based on self-reported information and as such suffer from recall bias, and has not been clinically validated.
- Reliable estimates at the national and provincial levels could not be produced for all the variables, given that, in some cases, very few individuals may actually need services or experience difficulties at various times. In some cases, sample sizes were too small for meaningful data to be published.
- The data do not reflect the waiting times of those still waiting at the time of the survey, only those who completed their waiting and received care. Respondents could report waiting times in days, weeks or months and it is likely that many may have rounded their waiting times. For these reasons, direct comparisons of waiting time estimates presented in this report with estimates based from other sources, such as waiting time registries, health administrative data and physician reports, should be made with extreme caution.
- In general, direct comparisons between the results from the 2001 HSAS and the 2003 HSAS cannot be made because of changes in the manner in which the data were collected.

Source: Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group; Statistics Canada. Ottawa: ON.

Data is recorded in two ways; as a median wait time, and as a distribution of wait times. The median wait being the time at which 50% of respondents reported having received their diagnostic service, and 50% of respondents were still waiting. The distribution of wait times is presented as the percentage of people who waited less than 1 month, 1-3 months, or more than 3 months.

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Saskatchewan Profile

(a) Median wait times

Due to small sampling sizes, median wait time data for Saskatchewan is too unreliable to be published for diagnostic services in 2003.

(b) Distribution of wait times

Although caution is warranted with respect to interpreting some of the wait time data for diagnostic services in the province, the data that is available indicates that the majority of people (62.4%) reported that they received their diagnostic services in less than one month from being referred for those services (fig 33). According to this survey data, the percentage of the population in Saskatchewan (aged 15 years and older) who waited less than one month for diagnostic services was slightly higher than the Canadian average (57.5% - based on data for provinces only).

Due to small sample sizes, the data presented for Saskatchewan at 1-3 months and greater than 3 months is not reliable enough to make true comparisons with the national average. Therefore, although an estimated 25.9% of people in the province are reported as receiving their diagnostic test in 1-3 months, there was considerable variation around this estimate, with the percentage of people reported to be waiting this length of time ranging from a low of 17.4%, to a high of 34.4%. The same is true for the percentage of those who reported waiting longer than 3 months, although an estimate of 11.7% is reported, all we can say is that between 5.5% and 17.8% of people waiting for diagnostic services had to wait longer than 3 months. Ideally of course we would like to be able to state more accurately how many people waited this length of time, but the small numbers of people waiting for these services in the province are not high enough for conclusions to be drawn from survey-based estimates of wait times.

Figure 33 Distribution of wait times for diagnostic services, 2003

	Canada %	Saskatchewan %
< 1 month	57.5	62.4
1- 3 months	31.1	25.9^E
> 3 months	11.5	11.7^E

Source: HSAS, supplement to CCHS 2.1, 2003.
E - use with caution, high degree of sampling variability

Caution is also warranted when comparing these data to the earlier estimates produced from the first HSAS in 2001.

Differences in the order of questioning used in each survey has the potential to alter responses, as fatigue effects can interfere with participants ability to answer questions that

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appear later in a survey, especially when those questions require memory recall.

Provincial/Territorial Comparisons

No comparisons are presented for this indicator. Data is either not available (i.e., was not collected or too unreliable to be published) or is, in several instances, presented only with caution surrounding the high degree of variability in the estimates caused by small sample sizes.

Contributing Factors

Equipment and facilities: For many people, waiting for diagnostic services is seen as being simply due to a shortage of available diagnostic machines or facilities offering these services. The hours of operation can vary by type of imaging, by location, by time of year, and other factors. Although this is a factor that can create a bottle-neck in waiting times it is only one of several contributing factors to the problem of wait times for diagnostic services.

Health human resources: The number of medical radiation technologists (MRTs) who are responsible for operating diagnostic imaging and radiation therapy equipment tends to vary across the country. Although the number of MRTs has increased across the country, and in Saskatchewan, over the last 10 years, these numbers have not increased enough to meet the growing consumer need for these treatments. Therefore, although the number of active registered MRTs in Saskatchewan was 451 in 2002, this translates into a rate of 44.7 per 100,000 population, the second lowest rate in Canada⁵⁸.

Appropriate use: More equipment and more operators do not necessarily translate into more efficiency and better health. The appropriate use of these services is a long-standing issue that often contributes to differences in observed practices across the country. Wait lists are typically managed at the regional, hospital, or clinic level, which means large variations can exist within provinces and health regions let alone between them. Patients referred for imaging in one setting may be managed completely different in another.

The burden of waiting

The most common consequences of waiting for diagnostic services reported by patients who felt the wait had affected their lives were worry, anxiety and stress.

Source: Statistics Canada
HSAS, 2001/ 2003

⁵⁸ Canadian Institute for Health Information (2004) Health Personnel Trend in Canada 1993-2002. CIHI. Ottawa: ON

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Type of care: wait lists also tend to differ depending on the type of care you need (e.g., MRI or CT) and how urgently you need care. Global indicators of diagnostic services do not take into account these differences between types of service or prioritisation criteria.

Patient preferences:

The measurement of wait times can also be affected or skewed by patient preferences. That is, the decision by individuals to delay their procedure to fit in or around their work or family schedule, can inadvertently affect the measurement of wait times.

The Western Canada Wait List Initiative

This federally funded project was launched to develop practical tools for prioritising patients waiting for services ranging from surgery to diagnostic services such as MRIs. The project developed scoring tools based on extensive clinical input and research. Partners on the WCWL from Saskatchewan include Saskatchewan Health, Saskatchewan Medical Association, The Health Quality Council, and reps from Regina Qu'appelle and Saskatoon Regional Health Authorities.

Saskatchewan Progress Report

Steps are being taken throughout the province to reduce wait times for diagnostic services, The Action Plan for Saskatchewan Health Care speaks directly to this by calling for the expansion or establishment of CT scanners in regional hospitals as resources would allow.

In 2003-04 approval and funding was provided to purchase 3 new CT scanners for Sunrise (Yorkton), Cypress (Swift Current) and Five Hills (Moose Jaw) health regions. As of September 2004, the Five Hills (Moose Jaw) CT scanner has begun operation, with Sunrise (Yorkton) and Cypress (Swift Current) soon to follow in the coming months.

\$1.3 Million in incremental operating funding was made available to Regina and Saskatoon in 2004-05 to support an increase in operating time for the existing MRI scanners. This increase will support an additional 4,000 MRI exams in 2004-05. These expansions will occur on a staged basis over the course of 2004-05 and are linked to the successful recruitment of staff. These expansions are expected to stabilise and begin to reduce waiting lists/times, at least in the short term.

The addition of another MRI to be located in Regina was approved in the 2004-05 budget. This new MRI is anticipated to be operational in 2005-06.

Saskatchewan Health is currently working at developing a provincial strategy to manage medical imaging capacity and access issues. This strategy will address the growing demand for medical imaging services and will include examination of a range of options including management structures, demand management strategies and a provincial medical imaging network possibly using the Saskatchewan Surgical Care Network as a model.

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Further Information

- For more information in medical imaging visit CIHI's Website and view their report on Medical Imaging in Canada.

<http://www.cihi.ca>

- The Western Canada Waiting List Initiative Website contains more information on the wait list project as well as published research on waiting times in Canada, prioritisation tools and ongoing projects.

<http://www.wcwl.org/>

- Saskatchewan Health's Website has more information on waiting times, including access to the Action Plan for Saskatchewan Health Care and an update of progress made under the plan.

http://www.health.gov.sk.ca/hplan_health_care_plan.pdf

http://www.health.gov.sk.ca/hplan_action_plan_update.pdf

Access to Care: First Contact Services

Difficulty obtaining routine/ongoing care

Key Messages

- The ability to obtain routine care when it is needed is believed to be a key factor in maintaining health, reducing the need for emergency care, and preventing the inappropriate use of hospital services.
- Compared to national averages, significantly fewer people in Saskatchewan experience difficulties in accessing routine or on-going care at any time of day (11.7%) in 2003.
- The top 4 barriers identified nationally to obtaining routine care were Difficulty getting an appointment, Long waits for an appointment, Long in-office waits, Difficulty contacting a physician.
- Work continues in the province to decrease barriers to obtaining routine care via initiatives such as the Physician Recruitment & Retention program.

Introduction

The ability to obtain routine care when it is needed is believed to be a key factor in maintaining health, reducing the need for emergency care, and preventing the inappropriate use of hospital services. By routine care, what is meant is health care provided by a family or general practitioner, including an annual check-up, blood tests or routine care for an ongoing illness (e.g., prescription refills)⁵⁹. In other words, this indicator will discuss the ability of individuals to, for example, see their regular doctor, 24 hours a day, 7 days a week. This is just one of what are considered to be first contact services, those services where the first line of care is provided by a family doctor or general practitioner, nurse or some other health care provider for minor health problems.

Comparable data is available from the Health Service Access Survey (HSAS) 2003 on the number of people who felt they experienced some difficulty on accessing

First-contact services

First contact services include routine care, health information or advice, and immediate care for a minor health problem provided by a family or general physician, nurse or other health care provider, not including medical specialists.

Source: Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group; Statistics Canada. Ottawa: ON.

⁵⁹ Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group; Statistics Canada. Ottawa: ON.

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24/7 first contact services, and also what the barriers to getting that care were. The limitations surrounding the Health Services Access Survey data have been outlined in the previous indicator (page 76), and also apply here (see [appendix-technical specifications](#) for more details). When reading these results, therefore, it should be remembered that this information is based on respondent's self-reports of problems accessing care. Although there are numerous limitations associated with using survey data for collecting this type of information, it is the best available source we currently have for making comparisons across the country. Work continues on the development of more reliable, quality comparable indicators of access to care.

Saskatchewan Profile

The percentage of the population (aged 15 years and over) who stated that they had problems accessing routine or on-going care in the province in 2003 was **11.7%**. This is significantly below the national average of **15.8%**⁶⁰. This data refers to people who experienced difficulties at anytime of day.

No direct comparisons can be made with the previous round of the HSAS (2001) due to differences between the surveys in the set of questions used and their sequence in the questionnaire.

Provincial Comparison

The age-standardised rates are used to compare between provinces with very different age structures. In 2003, the average rate of difficulties experienced obtaining routine care at anytime of day was 16.4%. In Saskatchewan, the percentage of people reporting difficulties accessing routine care was somewhat lower, at 12.5% (fig 34).

Measuring self-reported difficulty in accessing routine care.

As part of the HSAS respondents were asked:

"In the past 12 months, did you ever experience any difficulties getting routine or on-going health care services you or a family member needed?"

If, yes...

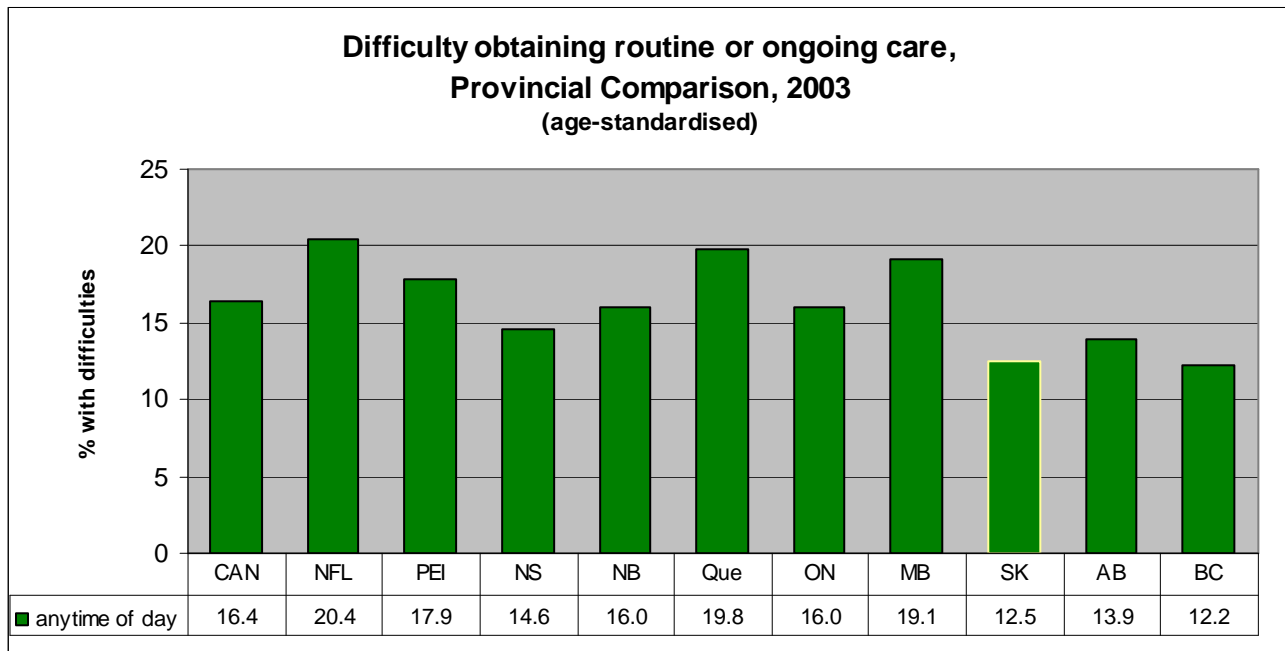
"Did you experience difficulties getting such care during "regular" office hours (i.e. 9:00 am to 5:00 pm Mon-Fri)?"

"Did you experience difficulties getting such care during evenings and weekends (i.e. 5:00 to 9:00 pm Mon-Fri or 9:00 am to 5:00 pm Sat-Sun)?"

⁶⁰ Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group, Statistics Canada; Ottawa: ON

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Figure 34 Difficulty obtaining routine care, Provincial comparison, 2003



Source: HSAS, 2003, supplement to the CCHS 2.1

E – interpret with caution

Contributing Factors

Information is also available from the HSAS on the barriers to obtaining routine or on-going care. Respondent's who reported difficulties were asked to identify the specific problems they faced obtaining this type of care. Although not an exhaustive list, the top four barriers to accessing routine care across Canada were:

- Difficulty getting an appointment
- Long waits for an appointment
- Long in-office waits
- Difficulty contacting a physician

These barriers suggest that for the small percentage of people in the province who reported difficulties in obtaining routine care that the availability of care-providers is an important issue. Health human resources, that is having sufficient numbers of doctors, nurses, and others operating in the province, remains an area of concern that Saskatchewan Health is working hard to remedy through, for example, its physician recruitment and retention programs, bursary programs, quality work place initiatives, and a range of other programs (see [Saskatchewan Progress Report & Further Information](#) for more details).

Despite these barriers, it appears that, compared to the national average, significantly fewer people in Saskatchewan experience difficulties in accessing routine or on-going care.

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Saskatchewan Progress Report

- The province's plan to deal with the challenges of attracting and keeping skilled health professionals is multi-faceted. A combination of actions such as the formation of primary health care teams, training more health care providers, supporting health professionals to make full use of their skills and training, offering competitive wages and incentives, and continuing education and professional development are all part of the Saskatchewan Health action plan to ensure people in the province have access to quality health care services.
- Key actions for 2004-05 include: implement province-wide health human resource planning; increase training opportunities for select health professions; enhance the Provincial Bursary Program; continue to expand the registered nurse/registered psychiatric nursing education program and the practical nursing program; and support the management and implementation of existing/new programs to enhance physician recruitment and retention in the Province.

Further Information

- Saskatchewan Health's Website provides information on the provinces Physician Recruitment and Retention Programs:
http://www.health.gov.sk.ca/ph_hr_phys_recr_rete.html
- To read Statistics Canada's report on the Health Service Access Survey:
<http://www.statcan.ca/english/freepub/82-575-XIE/2003001/report.htm>

Access to Care: First Contact Services

Difficulty obtaining health information or advice

Key Messages

- The ability to obtain useful health information or advice is believed to be important to maintaining health and ensuring appropriate access to health services.
- The percentage of the population who reported difficulty obtaining the health information and advice they needed at anytime of the day or night was significantly lower in Saskatchewan (12.5%) than the Canadian (provinces only) average (16.2%).
- Work continues in the province on expanding telehealth networks, and on improving the provincial telephone health line, both of which increase access to health information and advice for Saskatchewan people.

Introduction

Another important factor in what is loosely termed 'access to care' is the ability to obtain health information and advice. The ability to contact a doctor's office to find out about the symptoms your elderly mother has, or to pick up information from a community clinic on quitting smoking, or to call a telephone health line when your baby develops a fever, relates directly to the availability of these services in the population, and the ease with which they can be accessed. The ability to obtain useful health information or advice is believed to be important to maintaining health and ensuring appropriate access to health services.

The limitations of the HSAS for collecting this type of information are noted earlier in this chapter (page 76). No comparisons to 2001 data are

Measuring self-reported difficulty in accessing health information or advice.

As part of the HSAS respondents were asked:

"In the past 12 months, did you ever experience any difficulties getting the health information or advice you needed for you or a family member needed?"

If, yes...

"Did you experience difficulties during "regular" office hours (i.e. 9:00 am to 5:00 pm Mon-Fri)?"

"Did you experience difficulties during evenings and weekends (i.e. 5:00 to 9:00 pm Mon-Fri or 9:00 am to 5:00 pm Sat-Sun)?"

"Did you experience difficulties getting health information or advice during the middle of the night?"

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available due to differences in the survey design. (See [appendix-technical specifications](#) for full details on data considerations).

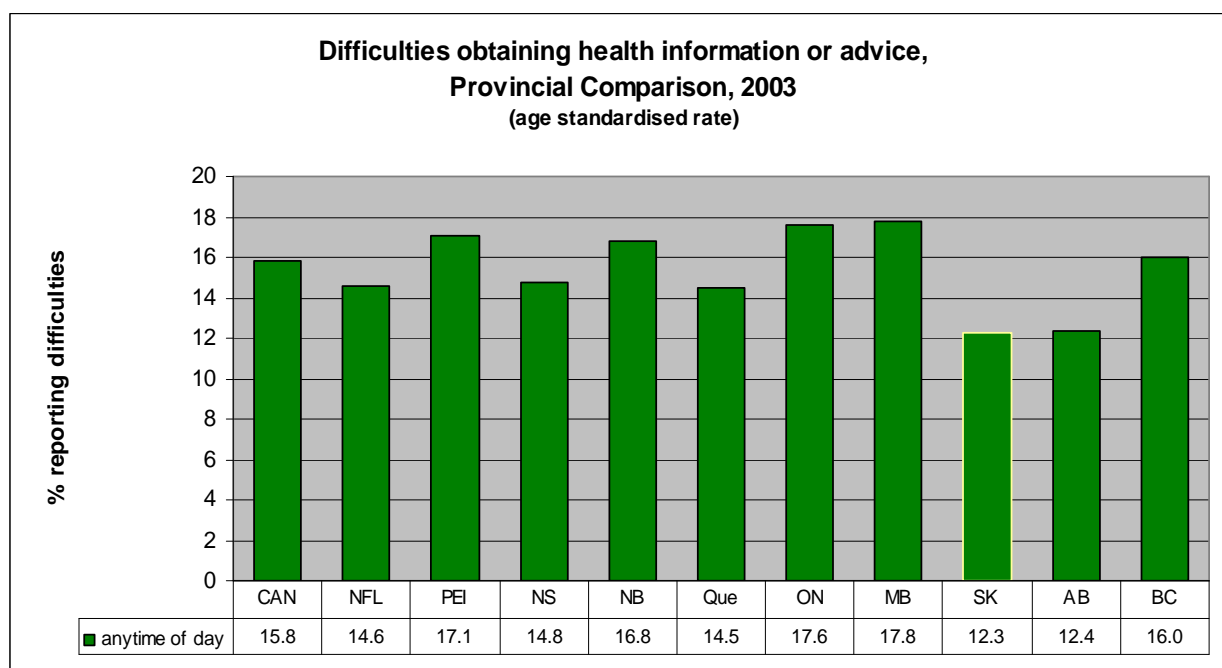
Saskatchewan Profile

Overall, 16.2% of Canadians who indicated that they required health information and advice reported that they had difficulties obtaining it at any time of the day. The percentage of people who reported difficulties accessing health information or advice in Saskatchewan was significantly lower than this all-province average at 12.5%⁶¹.

Provincial Comparison

Age-standardised rates are presented below to allow for differences in age structures between jurisdictions to be accounted for. The provincial comparison below (fig 35) is based on data for individuals reporting difficulties obtaining health information or advice at any time of the day or night.

Figure 35 Difficulties obtaining health information, Provincial comparison, 2003



Source: HSAS (2003), supplement to CCHS 2.1
E – interpret with caution

⁶¹ Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group, Statistics Canada; Ottawa: ON

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Saskatchewan had the lowest age-standardised rate of people (aged 15 years and over) experiencing barriers to obtaining health information and advice at anytime of day in 2003 (12.3%). Rates in Alberta were similarly low at 12.4%.

Contributing Factors

Data from Statistic Canada's report on the HSAS 2003 (see [further information](#) for link to full report) again provides some information as to what the barriers to obtaining health information or advice are for Canadians. The types of barriers identified by those who reported difficulty obtaining health information included:

- Difficulties contacting a physician or nurse
- Waiting too long to speak to someone
- Receiving inadequate information or advice.

Obviously, for those living in rural and remote areas, barriers to obtaining health information and advice are oftentimes hampered by geographical distance from care providers. The introduction of services such as telephone healthlines (Healthline) and telehealth networks (see indicator "Patient Satisfaction with telehealth" in chapter 4, pg 152 for more details) are designed with the intention of reducing these barriers by providing telephone access or video link-up to health care professionals for people who would otherwise have difficulty contacting someone to talk to about their health concerns.

An update on programs and services in the province that are designed to increase access to health information and advice is outlined in the Saskatchewan Progress report box.

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Saskatchewan Progress Report

- Saskatchewan Health's HealthLine was launched in August 2003 to provide free and confidential 24-hour health advice. Staffed by registered nurses, callers are provided with professional health information or advice, and can be directed to the most appropriate source of care. Since the start of its operation HealthLine has managed more than 65, 000 calls. Calls have been received from every Health Region in the province with the majority coming from Saskatoon and Regina.
- HealthLine is having a positive impact in terms of appropriate utilisation of health services. For example callers to HealthLine are asked at the end of the call where they would have gone if HealthLine was not available. From Jan. 1, 2004 to April 30, 2004, 1,863 callers indicated they would have gone to the Emergency Room. Of these 1,863 callers 546 were sent to Emergency Rooms. The remainder were directed to seek medical attention through a physician or health care provider or provided with information to manage at home.
- Telehealth began in 1999 as a pilot project in Northern Saskatchewan. The expansion of telehealth services in the province will hopefully provide access to health information and advice for people living in rural and remote areas of Saskatchewan. To date (2003-04) 351 educational sessions have been conducted, with 5,381 people attending, and a further 137 clinical sessions with a total of 309 patients seen. As of May, 2004, the telehealth network in the province expanded to include Yorkton, Kindersley, Weyburn, Moose Jaw, Swift Current and La Loche, bringing the total number of telehealth sites to eighteen.
- Work continues on increasing training opportunities for health care professionals and on creating representative workforces so that the health system in the province meets the needs of its diverse population.

Further Information

- To read Statistics Canada's report on the Health Service Access Survey 2003: <http://www.statcan.ca/english/freepub/82-575-XIE/2003001/report.htm>
- Visit the Saskatchewan Health Website for more information on its programs and services including Healthline: <http://www.health.gov.sk.ca/>

Access to Care: First Contact Services

Difficulty obtaining immediate care for a minor health problem

Key Messages

- The ability to access needed care for a minor health problem is believed to be important in restoring health and preventing the inappropriate use of services.
- An estimated 17.3% of people in Saskatchewan (aged 15 years and over) who required immediate care for a minor health problem reported having difficulties obtaining this care. This was significantly lower than the Canadian average for 2003 of 24.2%.
- Work continues in the province to ensure that people receive timely health care services when needed.

Introduction

For many people, visiting a doctor is not something that occurs on a regular basis, nor is it planned or part of routine check-up procedure. For the majority of people an immediate need to obtain health care occurs as a result of experiencing problems with our own health or that of other family members. Coming down with a fever, getting an unexplained rash, spraining your ankle playing sports, getting a blinding headache at work that won't go away, or dealing with a vomiting child are all minor health problems which can be dealt with by first contact health service providers such as family physicians and nurses, and that if treated promptly can avoid the need for further care and prevent health emergencies.

The ability to access needed care for minor health problems, therefore, is believed to be important in restoring and maintaining individual health, but also in preventing the inappropriate use of services, such as hospital emergency rooms for non-emergency situations.

Measuring self-reported difficulty in obtaining immediate care

As part of the HSAS respondents were asked:

"In the past 12 months, did you ever experience any difficulties getting immediate care needed for a minor health problem for you or a family member?"

If, yes...

"Did you experience difficulties getting such care during "regular" office hours (i.e. 9:00 am to 5:00 pm Mon-Fri)?"

"Did you experience difficulties getting such care during evenings and weekends (i.e. 5:00 to 9:00 pm Mon-Fri or 9:00 am to 5:00 pm Sat-Sun)?"

"Did you experience difficulties getting such care during the middle of the night?"

CHAPTER 3: HEALTHY PROGRAMS, HEALTHY SERVICES

Information is available from the HSAS to help assess the barriers to accessing immediate care. The limitations of the HSAS for collecting this type of information are noted earlier in this chapter on page 76 (also see full details in [appendix-technical specifications](#) for this indicator). Again, data is not comparable to 2001 figures from the HSAS.

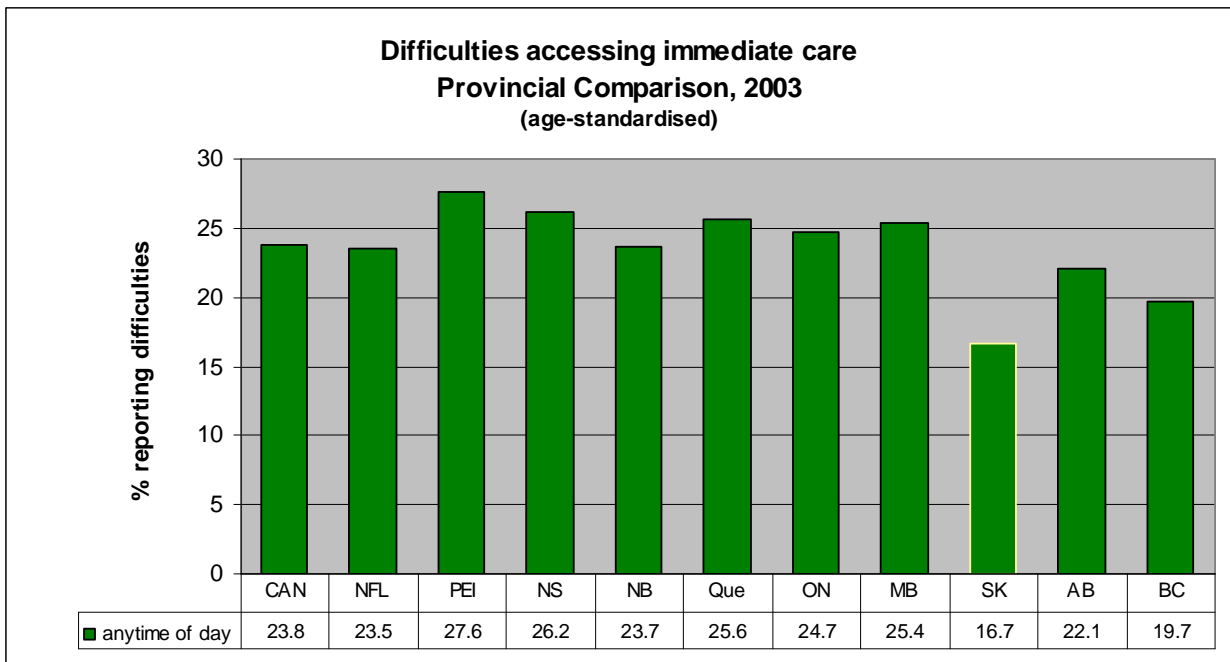
Saskatchewan Profile

An estimated 17.3% of people in Saskatchewan (aged 15 years and over) who required immediate care for a minor health problem reported having difficulties obtaining this care at anytime of day. This rate was significantly below⁶² the Canadian (provinces only) average of 24.2% in 2003.

Provincial Comparison

Age-standardised rates are used to compare between jurisdictions with very different age structures. Data are presented below for difficulties obtaining immediate care at anytime of the day or night. Saskatchewan has the lowest rate of reported difficulties obtaining immediate care across the country (provinces only).

Figure 36 Difficulty obtaining immediate care, Provincial comparison, 2003



Source: HSAS (2003), supplement to CCHS 2.1
E – interpret with caution

⁶² Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group, Statistics Canada; Ottawa: ON

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Contributing Factors

The top four barriers to obtaining immediate care have been identified at the national level as being:

- Long in-office waits
- Difficulty getting an appointment
- Waiting too long for an appointment
- Difficulty contacting a physician.

The in-office waiting time being too long was the main barrier noted by most people who reported they had a problem accessing immediate care⁶³. Low ratios of doctors to patients can create situations where individuals have to wait longer than they feel is satisfactory to obtain medical attention. This can be a problem especially in rural and remote areas where one doctor may be responsible for several communities. Some of the programs and services in the province that aim to address these problems are outlined earlier in this chapter under 'Access to routine or on-going care'.

Saskatchewan Progress Report

- See [Saskatchewan Progress Report](#) for 'Access to Routine or Ongoing Care'

Further Information

- To read Statistics Canada's report on the Health Service Access Survey 2003: <http://www.statcan.ca/english/freepub/82-575-XIE/2003001/report.htm>
- Visit the Saskatchewan Health Website for more information on its programs and services: <http://www.health.gov.sk.ca/>

⁶³ Statistics Canada (2004) Access to Health Care Services in Canada, 2003. Health Analysis & Measurement Group, Statistics Canada; Ottawa: ON

Prescription Drug Spending

The percentage of the population with out-of-pocket drug costs

Key Messages

- Prescription drug spending as a percentage of income can provide valuable information on the extent to which households are burdened by prescription drug costs.
- It appears, however, that the survey-based data presented here for Saskatchewan may not be an accurate reflection of out-of-pocket drug costs in the province.
- This survey-based data suggests that, in Saskatchewan, 69.1% of households spend less than 1% of their after tax income out-of-pocket on prescription drugs.
- However, the percentage of households spending more than 5% of their after-tax income on prescription drugs (8.1%) was above the national average (3.0%) in 2002.
- There is concern that this figure is somewhat inaccurate for Saskatchewan, given that our current drug plan is designed to cover the cost of drugs for households spending more than 3.4% of their income.
- Saskatchewan Health continues to work towards providing additional support to those who can least afford rising prescription drug costs.

Introduction

Broad definitions of access to care acknowledge the ability of the individual to access those services that help them maintain their health. For many people, taking daily medication is a primary means of maintaining their health and preventing or slowing down disease progression. Prescription drug spending as a percentage of income can provide valuable information on the extent to which households are burdened by prescription drug costs.

Prescription drug spending in Canada continues to rise, due not only to increasing drug prices but also to higher use per person and the changing mix toward more costly medications. In Saskatchewan, the total cost of prescriptions in 2003-04 had risen to \$328 million, more than double what it was ten years earlier. Of this total cost, the government paid \$149 million or 45.5%, with an increasing shift to support those who can least afford the drugs⁶⁴.

Prescription Drug Spending

Definition: Prescription drug spending only includes prescription drugs purchased by the household, and not over-the-counter medications or drugs paid for by the government or insurance companies.

Source: Statistics Canada, Survey of Household Spending

⁶⁴ Data from Saskatchewan Health Drug Plan & Extended Benefits Branch, 2004

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Saskatchewan Profile

Data is available from the annual Survey of Household Spending collected by Statistics Canada (for more information on the survey and data limitations for this indicator see [appendix - technical specifications](#)). What this data indicates is the number of households who spend more on prescription medication than the maximum payable under a provincial prescription drug plan.

The high percentage of people in Saskatchewan who appear to be spending more than 5% of their after tax income on out-of-pocket drug costs is somewhat inconsistent with current catastrophic drug management programs in the province, which provide coverage for individuals who spend more than 3.4% of their income on prescription medications. The data presented here should, therefore, be interpreted with caution, and may in part be a reflection of the survey nature of the data (see [data limitations](#) box).

As these data limitations highlight, there may be a gap between perceived spending on prescription drugs and the actual out-of-pocket drugs costs incurred by families. In fact studies that use methods other than perceived spending survey data highlight that Saskatchewan has one of the best pharmacare models for providing the greatest protection against catastrophic prescription drug costs⁶⁵.

Data Limitations

There are a number of reasons why households may spend more than the maximum payable under a provincial prescription drug plan. Some of these include:

- The Survey of Household Spending refers to the income of 'households', which can include multiple families, or a number of non-related persons (roommates) living together.
- There may be some instances in which insurance premiums for a provincial prescription drug plan may have been reported as prescription drug spending.
- Households who have recently moved, or have lived in more than one province during the year will be coded as living in the province they were in at the time of the survey. The reported spending on prescription medications of these households may, therefore, reflect differences between jurisdictions in drug plan coverage.
- Furthermore, reported costs may be a result of drug spending while persons are temporarily outside of their home province which may not be covered under the provincial plan.
- Although the list of drugs covered under provincial drug plans is quite comprehensive, in some instances, reported drug costs could be due to spending on prescription drugs that are not covered under the provincial formulary.
- If prescription drugs are covered by a plan but the household pays a certain percentage of the cost of the drugs, the cost to the household is included in the amount spent on prescription drugs.
- There is a chance that individuals may have confused spending on prescription medications, with what they spend on all drugs (i.e., including over-the-counter medications).

The reasons why Saskatchewan in particular appears to have a higher than average percentage of people paying more than 5% of their income on prescription medications is not immediately apparent. It may be that this indicator is related more

⁶⁵ Coombes, ME, Morgan, SG, Barer, ML & Pagliccia, N. (2004). Who's the fairest of them all? Which provincial pharmacare model would best protect Canadians against catastrophic drug costs. Longwoods Review 3(2): 13-26 (see [Further Information](#) for weblink)

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to a lack of awareness in the Saskatchewan public of the availability of this program, personal eligibility to receive it, or a lack of willingness to apply for this coverage.

Figure 37 Prescription drug spending, 2002

<i>Spending as % of income*</i>	<i>Canada % households</i>	<i>Saskatchewan % households</i>
Greater than 0%	65.2	69.1
Greater than 1%	19.1	30.5
Greater than 2%	10.5	21.3
Greater than 3%	6.5	15.9
Greater than 4%	4.5	11.6
Greater than 5%	3.0	8.1

Source: Statistics Canada; Survey of Household Spending, 2002;

* total after tax income

The number of households in Saskatchewan spending more than between 0-5% out-of-pocket on prescription medications was above the national (provinces only) average in all cases.

When these rates are looked at over time (1997-2002), the percentage of households spending between 1 and 5% of total after tax income out-of-pocket on prescription medications has remained fairly stable. Only the percentage of households in Saskatchewan spending more than 0% out-of-pocket on prescription drugs has decreased substantially between 1997 and 2002 (fig 38).

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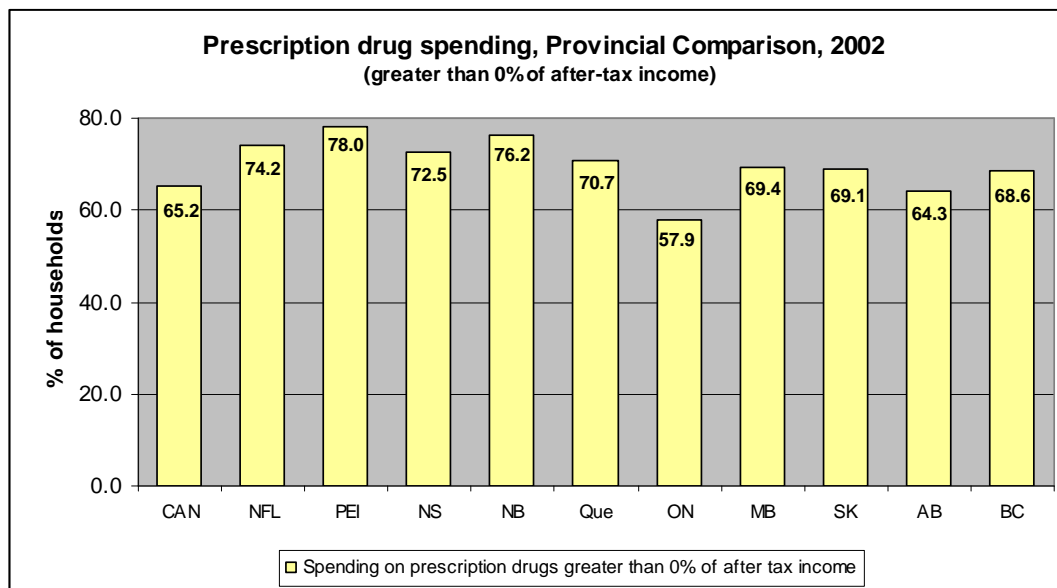
Figure 38 Prescription drug spending, 1997-2002

		1997	1998	1999	2000	2001	2002
Saskatchewan	greater than 0% of after tax income	74.3	70.4	70.3	69.6	68.9	69.1
	greater than 1% of after tax income	31.8	31.1	30.0	30.5	30.0	30.5
	greater than 2% of after tax income	21.3	20.8	20.4	20.9	21.8	21.3
	greater than 3% of after tax income	15.9	15.6	14.9	15.8	16.4	15.9
	greater than 4% of after tax income	10.9	11.4	12.0	11.4	11.5	11.6
	greater than 5% of after tax income	8.3	8.0	8.7	9.4	9.0	8.1

Source: Statistics Canada; Survey of Household Spending, 1997, 1998, 1999, 2000, 2001, 2002

The following two graphs indicate some of the variation in the potential burden incurred by individuals across the country in terms of out-of-pocket drug costs. As can be seen, there is some variation across the country in terms of the number of households spending more than 0% on out-of-pocket drug costs. Saskatchewan has the 7th highest rate across the country, indicating that for the majority of households in the province out-of-pockets drug costs are kept to a minimum (less than 1% of their total income).

Figure 39 Prescription drug spending, provincial comparison, (> 0%)

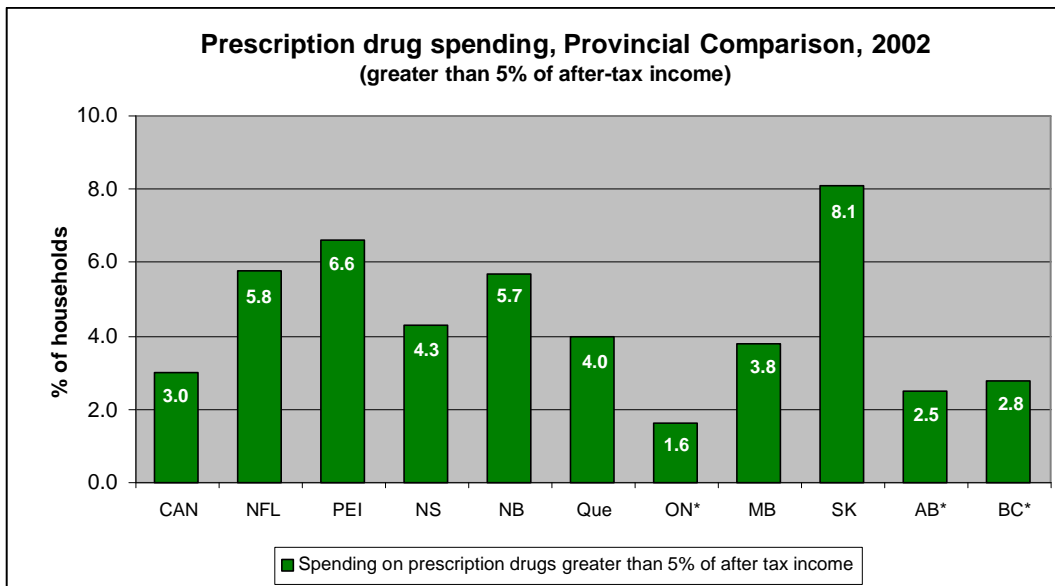


Source: Statistics Canada; Survey of Household Spending, 2002

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However, when households who appear to spend a larger amount of their income on drug costs, are compared across the country, Saskatchewan has the highest rate of households (8.1%) who spend greater than 5% of their total after tax income on prescription drugs. As noted earlier, caution is warranted in the interpretation of these results (see [Further Information](#) for more details).

Figure 40 Prescription drug spending, provincial comparison (> 5%)



Source: Statistics Canada; Survey of Household Spending, 2002

* Interpret with caution

Contributing Factors

There are several factors that can contribute to increased amounts of spending on out-of-pocket drug costs, and that may in part explain some of the regional variation observed in prescription drug spending.

- Age: Multiple-drug use increases with advancing age. Around a quarter of senior men and women use 3 or more drugs; in contrast, less than 20% of people under the age of 65 use 3 or more drugs. According to Statistics Canada⁶⁶, prescription-drug use is much more common among seniors

The Consequences of Out-of-pocket Drug Costs

A recent study found that nearly half of patients who have a prescription for any of the cholesterol-lowering drugs called statins fail to fill their prescription often enough, or stop filling it altogether, even though statins give the most benefit if used long-term. Patients' out-of-pocket costs for these drugs were found to be a contributing factor to the stopping of their drug treatment, despite the fact that these drugs reduce the risk of heart attacks and other cardiovascular problems.

Source: Ellis, JJ, Erickson, SR, Stevenson JG et al. (2004) Suboptimal Statin Adherence and Discontinuation in Primary and Secondary Prevention Populations. *Journal of General Internal Medicine* 19(6): 638

⁶⁶ <http://www.statcan.ca/english/ads/11-008-XIE/drugs.html>

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than among younger people. While seniors represent about 12% of the Canadian population, they consume 20% to 30% of all prescribed drugs. Higher prescription drug use occurs due to the medical problems associated with advancing age. Although all Canadian provincial and territorial governments have some type of prescription drug cost reimbursement program for residents aged 65 and over, increased drug consumption carries with it increased costs for both the health care system and the individual.

The fact that different jurisdictions have different age structures, Saskatchewan being characterised by its large proportion of elderly residents, may contribute to the variations in out-of-pocket drug costs seen here.

- Rising prescription drug costs and use: Since drug prices, have been relatively stable

over the past decade, factors affecting increased drug spending in Canada essentially relate to the volume of drug use and the entry of new drugs (typically introduced in to the market at higher prices). New advances in pharmaceutical technologies have led to a new generation of prescription drugs. While these drugs are often quite effective, they can also be very costly. New drugs for old conditions are typically priced at 100% to 150% higher than the “old” drug prices. We now have effective medications for a large number of conditions that once couldn't be treated with drugs, or at least not well. When new drugs are more effective than older ones or have fewer side effects, more people consider taking them. Most of these new drugs are more expensive than the ones they replaced.

- Health status and health treatments: Changes in the health status of the population, especially the emergence of new diseases are often followed by the need for and production of new classes of drugs. Sometimes drug treatment replaces other forms of therapy. For example, drug treatment is replacing surgery for a number of conditions including cancer and heart disease. As well as demographic differences, therefore, between populations, differences in the health status of different groups (e.g., ethnicity or geography) are also likely to contribute to drug utilisation rates, and potentially an increased need for out-of-pocket spending when drug costs exceed provincial drug plan coverage.

Limitations of the survey:

-The Survey of Household Spending does not take account of individual spending on drugs, but that of a household. Therefore, multiple families, or a number of unrelated persons (such as room-mates) could be included in the surveying of one household.

- The survey is dependent on individual recall and understanding. There is always the possibility that insurance premiums for a provincial prescription drug plan may have been reported as personal prescription drug spending.

(For further information on survey considerations see [appendix – technical specifications](#))

Saskatchewan Progress Report

- Effective July 1, 2002, the \$850 semi-annual deductible under the Prescription Drug Plan is now an income-based program. Families who previously relied on the deductible must apply to the Drug Plan for Special Support coverage to be assessed for assistance; assistance is available when an individual or family's prescription drug costs exceed 3.4% of total family income. Generally, the elimination of the deductible means that families with incomes of less than \$50,000 will not have to pay more for their prescriptions.

Further Information

- For more information on drug expenditures in Canada see CIHI's Drug Expenditures in Canada 1985-2003 report. Available on their Website at: http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=AR_80_E&cw_topic=80
- To find out more about Saskatchewan Health's Drug Plan visit the Drug Plan and Extended Benefits Branch on the Saskatchewan Health Website: http://www.health.gov.sk.ca/ps_drug_plan_broc_pub.html
- For an alternative picture on out-of-pocket drug costs that uses methods other than public perception of their spending on prescription medications see the article by Coombes et al. (2004) which can be downloaded from: <http://www.longwoods.com/LReview/LR23/LR23Coombes.pdf>

Wait times for cardiac bypass surgery

(A supplemental indicator)

Key Messages

- Heart attack is one of the leading causes of death in Canada. Lower death rates from heart attack may point to the operation of successful disease prevention, detection and treatment programs in the province.
- Wait times for cardiac bypass surgery remains a high priority in Saskatchewan. In 2002/03 the median waiting time for this procedure was 20 days.
- The majority of procedures are performed in less than 43 days. In 2002/03, 47.4% of patients waited less than 14 days, and a further 8.9% waited between 15 and 42 days. However, 13.4% still waited more than 180 days for their cardiac bypass surgery.
- This data may be atypical, however, due to the health service workers strike in Saskatchewan in 2002.
- Saskatchewan Health continues to work with Health Regions and other surgical care system partners to manage wait lists.

Introduction

The size of surgical waiting lists, and the length of time some people are waiting for certain surgeries is a concern in Saskatchewan, as it is across the country. It is a key role of the health system to achieve reasonable waiting times for services by ensuring that there is effective management of wait lists and operating room schedules, efficient bed utilisation strategies, and appropriate budgets allocated to programs and services for prevention, treatment and follow-up care.

Wait times are commonly used as measures of the efficiency of this system. However, since a wide variety of factors can impact upon waiting times, such as the demographics of the population, treatment patterns of physicians, and the availability of human resources, comparing wait times across the country can be problematic. Furthermore, the collection and reporting of wait time data is relatively new, and differences exist between jurisdictions in the definition of what constitutes a 'wait'. For example, wait times can be calculated from when a person first visits a doctor, when the patient is assessed by the specialist, when test results confirm the need for treatment, or from some other point in the path of care. The lack of standardised definitions creates difficulties when trying to produce comparable indicators, which

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allow patients and consumers of health care services to compare differences and similarities in access to care across the country.

Although not comparable to other provinces/ territories across the country indicators on wait times are being included as supplemental indicators as it is felt that they are of high public relevance.

Calculating wait times

Median⁶⁷ wait times for cardiac bypass surgery are calculated as the time between the most recent cardiac catheterisation⁶⁸ and the date that actual surgery occurred. All levels of urgency are included in the analysis, but refer only to isolated⁶⁹ surgeries – i.e., those uncomplicated by any other procedure such as heart valve repair or replacement. All data presented refer to adults aged 20 years and older for the fiscal year 2002/03.

What is Cardiac Bypass Surgery?

Cardiac bypass surgery or Coronary Artery Bypass Graft Surgery (CABG) as it is sometimes called, is a surgical procedure used in severe cases of coronary artery blockage. Since these vessels are responsible for allowing oxygen rich blood to enter the heart, blockages can create health conditions such as angina and increase the risk of a heart attack. The surgery involves grafting a portion of a small blood vessel from the leg or chest to use as the new 'bypass artery', avoiding the blocked artery and allowing blood to flow to the heart muscle. CABG is typically a high-risk surgery that has an extended recovery period and is a costly procedure. It is likely an optimal therapy for patients who have been in the health system for some time and have an elevated requirement for surgery.

Source: Medline Plus

<http://www.nlm.nih.gov/medlineplus/ency/article/002946.htm>

Saskatchewan Profile

(For full details on the definitions, measurement, and data limitations of this indicator see [Appendix-Technical Specifications](#)).

(a) Median Wait

The median wait time for the 666 isolated cardiac bypass surgery procedures carried out in Saskatchewan in 2002/03 was 20 days. In other words, 50% of patients who had their cardiac catheterisation on the 1st of any given month would have received their surgery by the 20th day of that month.

What figure 41 indicates is that this median wait for the year is based on varying waits per quarter. The reason why the waits in the second half of the year are substantially higher than in the first half are suggested as being due to delays for some elective surgery related to the job action taken by Saskatchewan health care

⁶⁷ Median refers to the 'middle number' in a list. It is the point at which 50% of patients will have received their surgery and 50% will still be waiting.

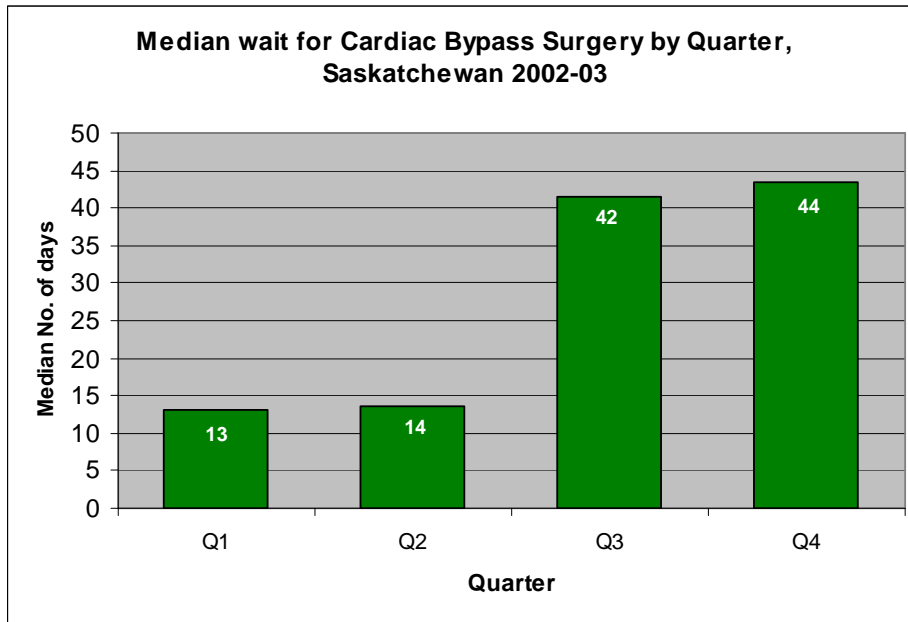
⁶⁸ A cardiac catheterisation is a procedure in which a very long thin plastic tube is inserted into the chambers of the heart to find out how the heart and coronary arteries are working.

⁶⁹ Exclusions used to identify 'isolated' cases is based on a report published by the Cardiac Care Network of Ontario, available at <http://www.ccn.on.ca/publications/hospitalreportfinalchf4.pdf>

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workers in September-October of 2002 when health service workers in the Health Sciences Associations of Saskatchewan went on strike.

Figure 41 Median wait for cardiac bypass surgery, 2002-03



Note: due to differences in the way data is reported (days instead of weeks), direct comparisons to data reported elsewhere or in earlier reports should be made with caution.

Source: Discharge Abstract Database, analysis by Saskatchewan Health, Acute & Emergency Services Branch

(b) Distribution of waits

The distribution of wait times for cardiac surgery indicates that the majority of people (56.3%) received their surgery less than 43 days after their catheterisation, with most people being seen in less than 15 days (see figure 14). Around 30% of patients waited 43 to 180 days, with a further 13.4% waiting more than 180 days. This is likely to reflect those people whose need for surgery was not emergency or urgent surgery.

Figure 42 Distribution of wait times for cardiac bypass surgery, 2002/03

Saskatchewan	
% waiting	
less than 15 days	47.4%
15 to 42 days	8.9%
43 to 180 days	30.3%
more than 180 days	13.4%

In 2002/03, 47.4% of surgeries were performed in the first two weeks following catheterisation. This is down slightly from 2000/01. The distribution of wait times for 2000/01 indicates that 56% of cases were treated in less than 15 days, and that only 2.4% of people waited more than 180 days.

Source: Discharge Abstract Database, analysis by Saskatchewan Health, Acute & Emergency Services Branch

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Cardiac procedures continue to receive high priority in Saskatchewan, and wait times for cardiac surgeries remain relatively short in comparison to other types of surgery. It is difficult, however, to provide comment on the comparability of these waits without data from other parts of Canada. Although several jurisdictions release data on waiting times for various procedures, the lack of similarity in the way data is collected and reported across the country, and the lack of agreed upon national standards for wait times, hampers the ability to make provincial/territorial comparisons.

Contributing Factors

Other than an increased demand for surgery, which in itself can be an outcome of the health status of different population groups, there are several factors that contribute to waiting times in the province.

- health human resources: the number of specialists required to keep up with increasing demands for surgery is an issue for wait list management. Of course, as the data indicates, it is not only cardiac specialists and surgeons that are required for surgical procedures to be carried out, but a variety of other health care service workers who are involved in the process. The impact of unforeseen actions like the health care strike in Saskatchewan have demonstrable effects on waiting times for surgeries.
- Other health resources: studies indicate that a low availability of acute care beds is also associated with increased waiting times⁷⁰.
- Increasing demand: as the number of people requiring surgery increases so too does the pressure on available resources. Variations in wait times, may therefore, in part be explained by the underlying health status of the local population. Non-medical determinants of health that contribute to the need for cardiac surgery such as diet & lifestyle behaviours, increasing age, income and education, may all play a role in creating waiting time variations from place to place and over time.

Work continues in the province on achieving target time frames for surgical procedures. Much of this is outlined in the following indicator on the target time frames initiative (pg 104). The active role of health promotion in the reduction of modifiable risk factors for heart disease such as diet and lifestyle should also not be overlooked as a means to help reduce waiting lists for cardiac bypass surgery.

⁷⁰ OECD (2003) Explaining waiting times variations for elective surgery across OECD countries. <http://www.oecd.org/dataoecd/31/10/17256025.pdf>

Saskatchewan Progress Report

For an update on progress in the province on waiting times for surgical procedures see the [Saskatchewan Progress Report](#) for the 'Target Time Frames' initiative on page 108.

Further Information

- For more information on the Saskatchewan Surgical Care Network and wait list initiatives in the province visit the SSCN Surgical Website:

<http://www.sasksurgery.ca/>

- The Action Plan for Saskatchewan Health Care, which outlines, amongst other things plans for improving access to surgery and decreasing wait times in the province, can be found on the Saskatchewan Health Website, along with an updated progress report on the Action Plan-

The Action Plan:

http://www.health.gov.sk.ca/hplan_health_care_plan.pdf

Progress Report on the Action Plan:

http://www.health.gov.sk.ca/hplan_action_plan_update.pdf

An Overview of Waiting Times for Surgery Saskatchewan's Target Time Frames Initiative*

(A supplemental indicator)

Key Messages

- In March 2004 the new Target Time Frames for Surgery were announced. These targets are “performance goals” for the surgical care system that signal the direction of our Government in reducing surgical wait times.
- We know that 80% of all patients are receiving their surgical care within 6 months, and 90% of patients within 1 year. However, a small percentage of patients are waiting too long.
- A long-term plan to ensure more reasonable, fair and predictable waits for Saskatchewan residents is underway. With advice from the Saskatchewan Surgical Care Network, progress is being made on the three new priority surgical care system initiatives: the Surgical Patient Registry, the new Patients Assessment Process and Target Time Frames for surgery.
- Our long-term goal is to ensure that all Saskatchewan residents receive timely and appropriate surgical care.

Introduction

Provincial/territorial health authorities have an important role to play in ensuring timely access to surgical services. The importance of identifying and addressing access issues relating to surgery is widely recognised across the country.

The collection and presentation of data on waiting times is crucial to achieving accountability on surgical access issues. Yet, historically the collection of wait time data has not been standardised in Canada or elsewhere, and there is very little comparable data available across the country on waiting times for surgery. Saskatchewan is the first province to implement a province-wide surgical registry with consistent definitions and collection of wait time data for all types of surgery. Data from the new Registry provides comprehensive, provincial waiting time information on all types of surgery available in the province.

* The third party verifier (Office of the Provincial Auditor) of the report did not audit this indicator.

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It is important that information from the Registry is made available to increase transparency of the surgical care system and encourage a better understanding of wait time issues in the province. This supplementary indicator provides a broad overview of waiting times in Saskatchewan. More detailed information on waiting times for different specialties and for common procedures is available on the Saskatchewan Surgical Care Network website, which is updated regularly.

A number of factors can impact upon waiting times such as population demographics and the demand for specific procedures, treatment patterns of physicians and prioritisation of urgency, and health human resources. Comparable data on wait times is scarce, and is hindered by the lack of clear and consistent definitions of 'waiting'; i.e., when a wait starts and ends.

The data presented below, therefore, speaks to current initiatives in Saskatchewan with respect to waiting times for surgical procedures in the province, and is not directly comparable to information presented elsewhere, nationally or internationally (see [appendix-technical specifications](#) for full notes).

The Saskatchewan Surgical Care Network

The Saskatchewan Surgical Care Network (SSCN) is an advisory group of physicians, health care providers, health training organisation representatives, and health system administrators who oversee improvements to Saskatchewan's surgical care system as described in the Saskatchewan Action Plan for Saskatchewan Health Care.

For more information on both the SSCN and the Action Plan see [Further Information](#) at the end of this indicator.

Saskatchewan's Surgical Services Strategy

The Government of Saskatchewan recognises the importance of surgical access issues and, with assistance and advice from the Saskatchewan Surgical Care Network (SSCN), is working with Regional Health Authorities to ensure timely access to quality surgical care for all Saskatchewan residents. The main components of Saskatchewan's long-term strategy are outlined in the [Saskatchewan Progress Report](#) on page 108.

Saskatchewan Profile

Saskatchewan's Target Time Frames Initiative

When Target Time Frames were announced in March 2004 a commitment was made to focus initially on ensuring that patients needing surgery for cancer or suspected cancer are performed within target time frames (all cancer or suspected cancer falls within Priority II (95% within 3 weeks) and on reducing and eventually eliminating the backlog of patients who wait

Saskatchewan Target Time Frames

Priority Level	Target Time Frame
Priority I	95% within 24 hours
Priority II	95% within 3 weeks
Priority III	90% within 6 weeks
Priority IV	80% within 3 months
Priority V	80% within 6 months
Priority VI	80% within 12 months
All Cases	Within 18 months

Source: Saskatchewan Health, Annual Report.

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over 18 months for non-urgent surgery. The SSCN has formed a Research and Evaluation Working Group with members of the Western Canada Waiting List Project (WCWL) to evaluate the Patient Assessment Process, by which each patient's priority level is determined. The Group will:

- Review the reliability and validity of the new assessment process and recommend any changes.
- Produce guidelines for the interpretation of scores and make recommendations for appropriate use of the priority questionnaires.

Evaluation (and revision if necessary) of the Patient Assessment Process, tools and priority levels will ensure that patients are appropriately prioritised in accordance with the urgency of their need for surgery. Management to meet target time frames based on standardised assessments of patient needs will ensure that access to surgical services is fair.

The Western Canada Waiting List Project (WCWL) is a collaborative undertaking by medical associations, ministries of health, regional health authorities, and health research centres. The WCWL's mission is "to improve the fairness of the health care system so that Canadians' access to appropriate and effective medical services is prioritized on the basis of need and potential to benefit." Information on the WCWL and its work can be found at its Website: www.wcwl.org

Current Waits for Surgery in Saskatchewan

Although in its early stages, baseline data from the first six months of Registry information is being used to show how long people are waiting for surgery now.

Figure 43 below shows the distribution of wait times for surgery performed in the seven reporting health regions during the first 6 months of 2004. These seven regions, which include Saskatoon, Regina-Qu'Appelle, Prince Albert- Parkland, Five Hills, Sunrise, Prairie North, and Cypress Regional Health Authorities, perform about 95% of the surgery done in the province each year. All surgery is included, regardless of urgency. The timelines used in the graph correspond to the Priority Levels used in the Patient Assessment Process. More detailed information on waiting times, using similar timelines is available for different specialties and for common procedures on the Saskatchewan Surgical Care Network website.

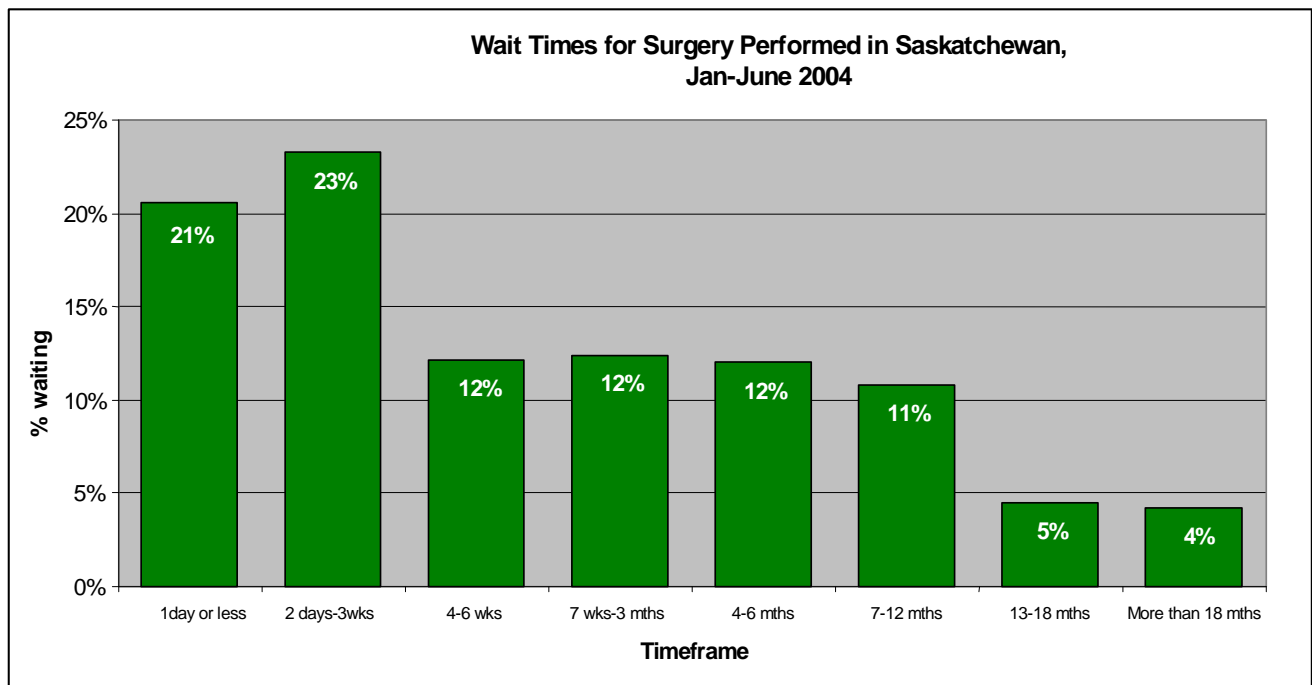
The data presented below (figure 43) indicates that 44% of surgery performed was completed within 3 weeks, that 80% was completed with 6 months, and that 91% was completed within 12 months of the booking date. Although priority levels are not indicated on this graph, the distribution does reflect the relative

Waiting time is defined as: the time between the date that the booking form is received from the surgeon by the Regional Health Authority and the date that the surgery is performed. Booking forms are to be submitted when the surgeon and patient agree to proceed with the surgery. Patients sign a form consenting to surgery. Waits to see the surgeon (prior to the decision to have surgery) are currently not included.

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urgency of cases as prioritisation is always going on within the system. For example, most of the cases that were completed in a day will be emergency cases, and most cases done within 6 weeks will have relatively high levels of urgency, while cases waiting over six months will be the least urgent cases. It is important to note, however, that the graph does not measure the achievement of each priority level. That analysis is being done as the number of patients who have undergone the New Patient Assessment Process increases and as the evaluation of the process continues.

Figure 43 Distribution of wait times for surgery



Source: Saskatchewan Health, Acute & Emergency Services Branch

Note: A small number of cases (less than 1%) for which waits could not be calculated are excluded.

More information about the data source:

- Data is from the SSCN's Surgery Registry.
- The seven Regional Health Authorities who submit data to the Registry include all of the tertiary hospitals (Saskatoon and Regina Qu'Appelle) and regional hospitals (Prince Albert Parkland, Five Hills, Cypress, Sunrise and Prairie North) where about 95% of the surgery done in the Province is performed. Initiatives are underway to add other regions to the Registry.
- The data reflects surgery performed in operating rooms. Some procedures may be done in operating rooms and/or in other locations such as procedure rooms.

More information about wait times:

- Wait times include time periods during which patients have specified that they are unavailable for surgery (e.g. vacation, harvest time, work commitments, etc.).
- Cases where surgery has been deferred for patient or clinical reasons are also included.
- A small number of cases (0.9% of all cases) for which waits could not be calculated are excluded from calculations of waiting times.

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There were a relatively small percentage of total cases (9%) that waited more than a year, including 4% that waited more than 18 months. Some common procedures for which some patients wait a long time for surgery include hip and knee replacements, some forms of dental surgery, treatments for a weak bladder, and surgical procedures such as the removal of tonsils, bunions etc.

The Government of Saskatchewan recognises that many of these patients waited too long (although some may have deferred their surgery for clinical or personal reasons) and is using the registry to identify the backlog of long-waiting patients still on the waitlist. As part of the target time frame initiative, additional funds are being allocated to reduce and eliminate waits over 18 months.

Saskatchewan Progress Report

Based on the findings of the review of the Provincial Wait List Strategy team several initiatives were developed and implemented. Many of these are outlined in the Action Plan for Saskatchewan Health Care (see [Further Information](#)). Several of the key initiatives are listed here:

- The Surgical Patient Registry - Saskatchewan now has the most comprehensive surgical database in the country. It currently tracks all patients having surgery in the province's seven largest Regions. Other Regions will be on-line in the near future. Information from this comprehensive database will allow the surgical care system to better predict who will require what type of surgery in what time frames. Ultimately this will help to improve wait list management, assist in determining system capacity and resource requirements, and reduce wait times for patients.
- The new Patient Assessment Process - As part of the new process, surgeons are currently answering a standardised set of questions when assessing patients. This new assessment process will help to increase consistency and fairness for both surgeons and patients. It will also help us to ensure those with the greatest need for surgery receive it first.
- Target Time Frames for Surgery will allow us to better manage surgical wait lists and match surgical care system resources to patient need. The Target Time Frames are "performance goals" for the surgical care system that signal the direction of our Government in reducing surgical wait times. The Targets will allow the Regional Health Authorities to better monitor and track patients and help to ensure they receive care according to their level of need.
- A public Website and 1-800 Surgical Care Co-ordinator phone lines in Regina and Saskatoon. The SSCN Website was recently redesigned to reflect Surgical Patient Registry data and to add improved information about surgery and wait times in Saskatchewan.

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Further Information

- For more information on the Saskatchewan Surgical Care Network and wait list initiatives in the province visit the SSCN Surgical Website:

<http://www.sasksurgery.ca/>

- A paper outlining the development of the surgical wait list management strategy in Saskatchewan, and an update on the creation of the SSCN is available in the journal Hospital Quarterly

Hospital Quarterly 2002: <http://www.longwoods.com/opinions/HQ53PGlynn.pdf>

Hospital Quarterly 2003: <http://www.longwoods.com/opinions/HQ71PGlynn.pdf>

- The Action Plan for Saskatchewan Health Care, which outlines, amongst other things, plans for improving access to surgery and decreasing wait times in the province, can be found on the Saskatchewan Health Website, along with an updated progress report on the Action Plan

The Action Plan:

http://www.health.gov.sk.ca/hplan_health_care_plan.pdf

Progress Report on the Action Plan:

http://www.health.gov.sk.ca/hplan_action_plan_update.pdf

Home care
Home care clients per 100,000 population

(A supplemental indicator)

Key Messages

- Comparing home care services across the country is hampered by a lack of consistency in exactly what services are covered under the broad banner of 'home care'.
- The following data is based on provincial data and is not comparable to other jurisdictions across the country.
- In 2002/03 the number of individuals in Saskatchewan who received publicly funded home care services was around 28, 000. This represents a rate of approximately 2,785 clients per 100,000 population.

Introduction

Home care refers to the variety of health related services that enable individuals who would otherwise have to be cared for in hospitals or long-term care facilities, to remain in their homes. These services can include nursing care such as the giving of injections, to rehabilitation therapy, to the provision of personal assistance with daily activities such as bathing and dressing. Saskatchewan's home care program, therefore, as well as helping people remain at home for as long as possible, also prevents unnecessary hospital admissions and can increase the likelihood that hospital stays can be shortened for a number of individuals.

Home care is available for a range of people, including those with minor health problems and disabilities to those who are acutely ill. Although the use of the health care system tends to increase with age, there are no upper or lower limits as to the age at which home care services can be accessed.

Home care services have several benefits – including greater opportunity for individual lifestyle choices to be exercised, the maintenance of independence (often important for psychological recovery from an illness or health condition); as well as the fact that hospital facility spaces can be reserved for those with the greatest health care needs.

Unfortunately volume measures of how many people use home care does not tell us how well those needs are being met, or the quality of the home care services

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provided. Although we have some survey-based evidence of patient's satisfaction with community-based care services (see [Chapter 4: Healthy Perceptions](#)), work is needed to develop indicators that allow us to measure the impact of home care programs on the quality of life of people with chronic health conditions.

Saskatchewan Profile

Data for 2002/03 suggests that around 28,000 people received home care services in the province in this time period. Expressed as a rate, approximately **2,785 clients per 100,000 population** made use of the province's home care services.

Of the 28,000 home care clients in 2002/03, the majority, or approximately 17,000 clients were aged 75 years or older. Home care services, are therefore, an important part of a health care service that is responsive to the needs of its elderly population. Although many people may require home care services temporarily as a result of an acute illness or injury, for the elderly, home care services are an essential part in the maintenance of their quality of life.

In previous years home care admissions have been counted not distinct clients. The most recent year's data (2002/03), therefore, reflects a baseline from which we can monitor future trends in the utilisation of home care services in the province. Due to differences in the definition of home care (that is what services are provided under the home care banner), no comparisons to other jurisdictions across the country can be made (see [appendix-technical specifications](#) for full details).

Contributing Factors

- **Age:** Unfortunately, for most people, increasing age is associated with a decrease in physical faculties or capabilities. As hearing, sight and mobility all decrease, and the risk of chronic conditions increases, the ability to be completely independent and self-reliant declines. Areas of the province in which seniors are the most prevalent population group may, therefore, have higher rates of home care utilisation and need.
- **Social support:** The availability of family or community supports can also be a factor in the need and utilisation of home care services. A lack of family members or other social supports may increase reliance on formal avenues of care, such as home care programs. Although indicators on the burden on informal caregivers are under development, at present, we have limited data to tell us more about the use of family members, or the use of other social supports and their impact on home care utilisation.
- **Income:** Research indicates that a higher percentage of lower-income individuals enter the home care system than those with higher incomes. This may in part be due to the inequities we see in health status associated with income, in that people at the lower end of the income scale tend to experience poorer health (see Chapter 1 on health-adjusted life expectancy for more information on health

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inequalities associated with income) which in turn creates a greater need for care. Furthermore, individuals at the higher end of the income scale may be better placed to pay for private services rather than rely on government subsidised public care ⁷¹.

- Geographical location: Where you live can also influence the likelihood of being able to access home care services. Remote and rural areas pose problems for service delivery in terms of the difficulty and costs associated with arranging services at home for single individuals or families.

Saskatchewan Progress Report

Current Home Care program initiatives include:

- Saskatchewan Assisted Living Services provides a community based option for low-income tenants in selected Social Housing projects for seniors.
- Individualised Funding is an option of the home care program that provides funding (based on assessed need) to people so as they can arrange and manage their own support services.
- The development of the Minimum Data Set for Home Care (MDS-HC), an automated assessment and classification system for persons requiring home care and related community based services, is being developed and implemented.

Further Information

- Saskatchewan Health's website provides links and contact details for our Community Care Branch.
http://www.health.gov.sk.ca/ps_home_care.html
- Health Canada's website also contains information on home care programs across the country and research reports on home care services.
http://www.hc-sc.gc.ca/english/care/home_care.html

⁷¹ Wilkins, K & Park, E. (1998) Homecare in Canada. Health Reports 10(1): 29-37. Statistics Canada.

(ii) Quality of Care



Stacey was worried about her mum. She lived over 500km away, and had diabetes. Compared to Stacey's life in the city, her mum's life was very different. Stacey fretted about the lack of 24 hr pharmacies, the shortage of doctors, the lack of community resources, and the ever-decreasing circle of social support available for her mum. Stacey worried that her mum's diabetes would go unchecked and get worse and worse until she ended up in the hospital. Knowing how much her mum hated hospitals this was about the worst thing she could imagine happening to her.

A health care system that is focused on providing quality care is one that is taking active steps to ensure the optimal health and well-being of the population. Obviously there is no one measure that indicates how well the health system is currently performing in this regard, since definitions of 'quality care' cover many broad aspects of health care delivery (see [Definitions of Quality Health Care](#)). Furthermore, the development of indicators of quality care are still in their infancy, therefore, measuring health system performance in this area is to some extent constrained by what data is readily available, and currently comparable across Canada.

Definitions of Quality Health Care

In Saskatchewan, much of the work on improving the quality of health care in the province is overseen by the Health Quality Council. In their strategic plan they outline the following aspects that define a quality health care system:

- Accessible
- Safe
- Effective
- Patient-centred
- Timely
- Efficient
- Equitable

Source: Health Quality Council Strategic Plan 2004/05

Two indicators of quality health system performance will be highlighted in this section of the report:

Hospitalisation rate for Ambulatory Care Sensitive Conditions

30-Day In-hospital mortality rates for heart attack (AMI)*

The first indicator, hospitalisation rates for ambulatory care sensitive conditions, speaks to the ability of the health care system to appropriately manage long term health conditions (such as diabetes, asthma, alcohol and drug dependence, high blood pressure and emotional disorders such as neuroses and depression) with timely and effective treatment in the community in a way that prevents hospitalisation.

* Supplemental indicator

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Hospitalisation rates for conditions which may oftentimes be cared for in the community is an indicator of access to community-based care, and of an effective quality-driven health care system. This indicator is supplemented by a measure of quality of hospital care. Thirty-day AMI (heart attack) inpatient mortality rates provide some evidence of the use of effective strategies for treating and preventing AMI. Lower risk-adjusted⁷² death rates following a heart attack are believed to be related to the quality of care received in hospital.

What we know...

- That hospitalisation for many long-term conditions can be prevented with effective and early intervention in the community.
- Hospitalisation rates for preventable conditions tend to be higher in rural areas than urban due to differences in the extent to which preventive care and management are available and accessible in the community.
- AMI is one of the leading causes of death in Canada, and that there are effective evidence-based strategies for treating and preventing AMI.
- 30 -day in hospital mortality is strongly related to longer-term mortality rates.
- That age, gender and pre-existing health conditions are all factors that contribute to differences in the risk of death following a heart attack and need to be controlled for when making comparisons across different populations.

What we don't know...

- Hospitalisation rates for ACS conditions tend to vary over time and between regions. Further examination of these differences is needed to determine the extent to which these variations are attributable to the accessibility and quality of community-based care, hospital admitting practices or the prevalence and acuity of these chronic health conditions.
- What the relative contribution of demographic factors like age, gender, income, education, etc. are on hospitalisation rates for ACS conditions.
- More research is needed on the factors that enhance patient adherence to drug regimes that can increase survival from heart attacks.
- More work is needed on the gender differences in heart disease and why survival rates after heart attack tend to be lower in women.

NEWSFLASH - Another example of Quality Care Improvements in Saskatchewan

Saskatchewan is the first province in Canada to introduce formal reporting of critical incidents. This is a key element in providing quality improvements and increased accountability, as outlined in The Action Plan for Saskatchewan Health Care. The regulations on critical incident reporting came into effect September 15th 2004 and refer to all adverse events from unintended complications in a health setting that could result in loss of life, limb or function (See [Further Information](#) box pg126).

⁷² Risk-adjusted mortality rates refer to rates which have been adjusted to take account of co-existing conditions that could contribute to the likelihood of death over and above that caused by the heart attack

Ambulatory Care Sensitive Conditions

Hospitalisation rates for ACS Conditions in Saskatchewan

Key Messages

- Diabetes, drug and alcohol dependency, neurotic depressive disorders, hypertension and asthma are all long-term health conditions, which, if managed with timely and effective care can be treated without the need for future hospitalisation. Hospitalisation rates for these largely preventable conditions can act as an indicator of the existence and effectiveness (or lack) of primary care community-based services.
- Hospitalisation rates for ACS conditions have been declining in Saskatchewan over the last decade. In 2001/02 there were 513 hospitalisations (per 100,000 population) due to ACS conditions in Saskatchewan.
- The rate of hospitalisations in Saskatchewan was above the national average of 346 hospitalisations (per 100,000 pop.) in 2001/02 and the 5th highest rate in Canada.
- Although there are several limitations associated with this measure, it still provides some indication of the existence of the access to quality health care services in the province.
- The development of Primary Health Care Teams in Saskatchewan will result in diminished reliance on specialized and institutional services including hospitalisations for ambulatory care sensitive conditions.

Introduction

Asthma, diabetes, depression, alcohol and drug dependence, and a variety of other problems are all long-term health conditions, which, if managed with timely and effective care can be treated without the need for future hospitalisation. Such conditions are referred to as “ambulatory care sensitive conditions” (ACS conditions)⁷³. Although preventive care, primary care and community-based management of these conditions cannot eliminate all hospitalisations, receiving adequate quality care in the community can prevent many of them. Managing these conditions before a patient requires hospitalisation is believed to not only be better for the patient’s health but also contributes to better overall community health status, and can be a more cost efficient model of care, since community-based care usually costs less than hospitalisations.

⁷³ ‘Ambulatory care’ is used to refer to all types of health services that are provided on an outpatient basis – i.e., where no hospital stay is usually required. In other words, ‘ambulatory care’ usually implies that the patient must travel to a location to receive services that do not require an overnight stay.

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The extent to which preventive care and management are available and accessible in the community tends to vary from one place to another. For example, large differences tend to exist between rural and urban centres. Therefore, hospitalisation rates for these largely preventable events can act as an indicator of the existence and effectiveness of community-based services. Differences over time or between regions require further examination to determine the extent to which these differences are attributable to the accessibility and quality of community-based care, hospital admitting practices or the prevalence and acuity of these chronic health conditions.

Saskatchewan Profile

The number of inpatient discharges and deaths from acute care hospitals for diabetes, drug and alcohol dependency, neurotic depressive disorders, hypertension and asthma are age-standardised⁷⁴ to provide a rate for the total population (see [appendix –technical specifications](#) for further details on the calculation of these rates and data considerations). The age-standardised rate of hospitalisations for ACS in Saskatchewan was 513 hospitalisations per 100,000 population in 2001/02. The hospitalisation rate for Saskatchewan residents was above that of the general Canadian population in this year (346 per 100,000 population).

It appears, however, that there has been a decrease in hospitalisation rates for ACS conditions in Saskatchewan, and at the national level over time. In part this decrease may be due to differences in coding practices over the years, however, the presence of similar trends both in Saskatchewan and nationally suggest there has been a relative increase in either the access to or effectiveness of community-based care that has ultimately reduced hospitalisation rates for ACS conditions.

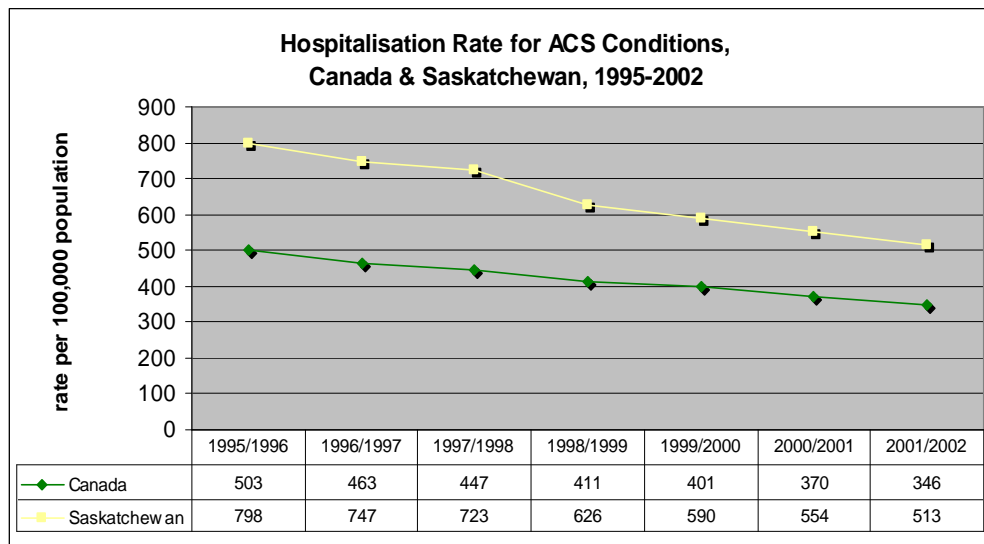


Figure 44
Hospitalisation
rate for ACS
conditions, 1995-
2002

Source: Hospital
Morbidity Database, CIHI.
Census, Statistics
Canada; ISQ

⁷⁴ Age standardisation refers to the method by which the crude or actual rate for a population is adjusted to what it would have been if that population had the same age distribution as a standard population (i.e., the Canadian population). This method allows comparisons between jurisdictions with very different age structures to be compared.

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The historically higher hospitalisation rate for ACS conditions in Saskatchewan may be in part due to the province's large rural based population, which contributes significantly to its demographic profile. The increased burden of avoidable complications and disease progression in rural areas is well documented in the literature⁷⁵ and may be due to a number of differences between rural and urban populations such as limitations in the ambulatory care system, the distribution of doctors and other health care professionals, and also the likelihood that individuals will seek care in the early stages of these conditions. Variation in disease prevalence or hospital use patterns for these conditions may also be responsible in part for the observed variation in ACS condition admission rates⁷⁶.

Hospitalisation rates for ACS conditions appear to be declining for both men and women, although the differences between them remain slight, women traditionally having marginally lower rates for hospitalisation for these conditions than men in both Saskatchewan and Canada. This may be in part to the greater propensity of women to seek care earlier, or their better compliance with primary prevention or care⁷⁷.

Figure 45 Hospitalisations for ACS conditions per 100,000 population by gender

Year	Canada		Hosp. Rate	Saskatchewan	
	Males	Females		Males	Females
99/2000	418	383	↓	596	582
2000/01	389	352		559	547
2001/02	367	325		521	503

Even over this relatively short time period, rates of hospitalisation for ACS conditions have dropped comparably for men and women.

Source: Hospital Morbidity Database, CIHI. Census, Statistics Canada; ISQ

Provincial/Territorial Comparison

Saskatchewan had the 5th highest rate of hospitalisations for ACS conditions across Canada in 20001/02 (fig 46).

High rates of hospital admissions for ACS conditions may provide indirect evidence of problems with patient access to primary preventive health care, or poor quality of care for acute illness, or the management of chronic conditions, or indeed changes in the incidences of these conditions and their treatment in the area. For these reasons it is hard to draw conclusions as to what the causes of regional variation in

⁷⁵ Mitura, V & Bollman, RD (2003) The health of rural Canadians. The Rural and Small Town Analysis Bulletin Vol 4 No. 6 Statistics Canada Catalogue no. 21-006-XIE

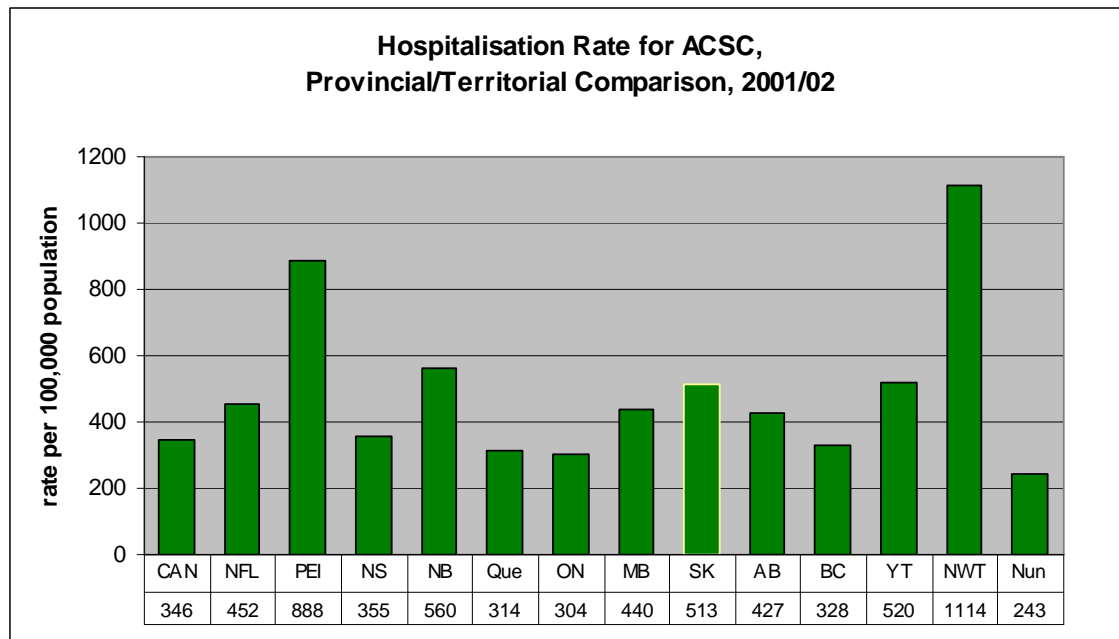
⁷⁶ Silver, MP, Babitz, ME, & Magill, MK (1997) Ambulatory Care Sensitive Hospitalization Rates in the Aged Medicare Population in Utah, 1990 to 1994: A Rural-Urban Comparison. Journal of Rural Health 13 (4): 285-294

⁷⁷ Bertakis, KD, Azari, R, Helms, RJ, Callahan, EJ, & Robbins, JA (2000) Gender differences in the utilisation of health care services. Journal of Family Practice (Feb).

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ACS conditions are. The extent to which variations can be attributed to differences in access to quality care for ACS conditions is limited by a number of factors (see [limitations](#) text box for more information).

Figure 46 Hospitalisations for ACS conditions, Provincial/Territorial comparison



Source: Hospital Morbidity Database, CIHI. Census, Statistics Canada; ISQ

Contributing Factors

There are several factors that likely contribute to the variations and changes in hospitalisations for ACS conditions that are observed over time and between regions.

Some of these are mentioned under limitations as they are factors that limit our ability to draw conclusions that improvements (i.e. reductions in the rate of hospitalisations) are a sign of increased access to quality care. Other factors that may also contribute to variations in hospitalisation rates for ACS conditions are demographic, that is related to differences in the types of people living in certain areas, or at certain times.

Limitations

There are several limitations of the use of hospitalisation rates for ACSC as an indicator of appropriate access to quality care. Hospitalisation rates can be affected by several factors, which makes it difficult to distinguish whether differences are a reflection of better or worse ambulatory care:

- severity of the conditions
- changes in the incidence of the disease
- propensity of individuals to seek care
- improved treatments for conditions that reduce overall disease incidence
- increased rates of death before admission to hospital
- availability of hospital beds
- physician/ hospital practices in admitting

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- Age: The hospitalisation rates for ACS conditions reported here have been age-standardised to take account of differences in the age structures of populations throughout Canada. If this was not the case, very different rates may be produced. With increasing age the chances that care can be managed effectively in the community become slimmer, therefore, populations characterised by large proportions of elderly people may have higher hospitalisation rates for a number of conditions including ACS conditions.
- Income: Several studies in the United States have indicated that low-income is a factor associated with increased hospitalisation rates⁷⁸. Although this may in part be a result of an inability to pay for primary care, other factors associated with low-income may also play a role in this trend that are comparable to situations in countries like Canada. For example, there is a well-known association between income and education, and a number of lifestyle behaviours that are associated with health status. We know that rates of obesity, physical inactivity and smoking are all higher in low-income populations⁷⁹, all of which contribute to several of the ACS conditions (e.g., diabetes, asthma, hypertension, depression) in real and direct ways. The higher incidence of ACS conditions in certain populations limits the extent to which the primary health network at the community level can effectively deal with and prevent hospitalisations when there are increased volumes of patients with these conditions to deal with.
- Geographical location: Since where you live can affect access to and availability of care, differences in hospitalisation rates for ACS conditions tend to vary along rural-urban lines. The extent to which preventive care and management within the community is available is likely to be limited in rural and remote areas more so than in urban centres.

Despite these limitations, hospitalisation rates for ACS conditions remains an important indicator for access to quality health care. Consistent downward trends in hospitalisation rates in recent years, (despite relatively stable population demographics), provide some support for the role of improved access to quality care as a factor in reducing rates of hospitalisations for ACS conditions.

⁷⁸ Shi, L, Samuels, ME, Pease, M. et al. (1999) Patient characteristics associated with hospitalisations for Ambulatory Care Sensitive Conditions in South Carolina. *Southern Medical Journal* 92(10): 989-998

⁷⁹ Canadian Institute of Health Information (2003) *Improving the Health of Canadians*. CIHI: Ontario

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Saskatchewan Progress Report

- Twelve percent of Saskatchewan families currently have access to primary health care⁸⁰ teams. Saskatchewan's goal is to have 25% of the population with access to primary health care teams by 2005-06 and 100% by 2010.
- All Saskatchewan Regional Health Authorities are in the process of finalising Primary Health Care Plans to achieve this goal.

Further Information

- Saskatchewan's Health Quality Council's Website contains a host of information on the quality of care in Saskatchewan.
<http://www.hqc.sk.ca>
- For more information on the effects of income on health see CIHI's latest report on Improving the Health of Canadians, available on their Website at
<http://www.cihi.ca>
- Information on primary health care, health promotion and prevention as well as community care in Saskatchewan can be found under Programs & Services on the Saskatchewan Health Website:
<http://www.health.gov.sk.ca>

⁸⁰ Primary health care is defined as a proactive approach to preventing health problems before they occur and ensuring better management and follow-up once the problem has been identified (Primary Health Services Branch, Saskatchewan Health).

In-hospital 30 day Mortality Rates for Heart Attack

(A supplemental indicator)

Key Messages

- Every year, around 2,200 Saskatchewan residents are admitted to hospital for a heart attack.
- Lower risk-adjusted 30-day mortality rates following AMI may be related to the quality of care that is received in hospital after the event.
- In general there has been a trend towards lower 30-day mortality rates for AMI in Saskatchewan hospitals. In 2000/01 the risk adjusted in-hospital mortality rate for AMI was 11.7%.
- Saskatchewan's 30-day in-hospital mortality rate for AMI (pooled average 1999/2000 to 2001/02) was 11.9%. This was comparable to the Canadian average of 11.8% and the 4th lowest rate across the country based on jurisdictions for which data was available.
- Work continues in the province to enhance the quality of post-heart attack care.

Introduction

Heart disease remains one of the leading causes of death in Canada. Every year, around 2,200 Saskatchewan residents are admitted to hospital for a heart attack. Although mortality rates from heart attack (AMI) can be reduced by effective prevention strategies, early recognition of the warning signs of the onset of a heart attack, ease of access to the health care system, proficient and accurate diagnosis and treatment is also an important factor in reducing mortality rates for AMI. A lower risk-adjusted⁸¹ mortality rate following AMI may, therefore, be related to the quality of care that is received in hospital after the event. The use of 30-day in hospital mortality rates may speak more clearly to quality of care than longer follow-up periods. Research has suggested that much of the mortality occurring after 30 days has little to do with hospital-specific effects. Longer-term mortality may depend on a range of factors that cannot be measured

AMI?

AMI is short for Acute Myocardial Infarction – i.e., heart attack. These terms are used interchangeably throughout this report.

⁸¹ The risk-adjusted rate attempts to control for factors that could affect mortality rates over and above differences in the quality of care received. To enable comparisons across regions, statistical models are used to create rates, which are adjusted for differences in age, sex & co-morbidity.

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adequately using hospital-based administrative data; such as initial treatment decisions made by the patient and physician, patients' subsequent hospitalisations, the quality of outpatient care, or patients' living conditions or ability to adhere to medical or medication regimens⁸². Recent research from Saskatchewan's Health Quality Council has also shown that the use of evidence-based practices in the drug treatment of heart attack patients can be effective in preventing second heart attacks and reducing mortality, and that a number of health regions in the province are well on their way to reaching the evidence-based benchmarks for the dispensing rates of these specific drugs⁸³.

Saskatchewan Profile

The risk-adjusted rate of all cause in-hospital deaths occurring within 30 days of being admitted to an acute care hospital with a diagnosis of heart attack in the province has decreased slightly over time. Although the rates for 2001/02 are slightly higher than those reported for 2000/01 (see fig 47), in general there has been a trend towards lower 30-day mortality rates for AMI in Saskatchewan hospitals.

Figure 47 Changes in Risk-Adjusted Mortality Rate (RAMR) for AMI

Year	Saskatchewan %
1999/2000	12.6
2000/2001	11.4
2001/2002	11.7

Source: Hospital Morbidity Database, CIHI

In other words, of all the admissions for AMI in 2001/02, 11.7% of cases died within 30-days of being admitted as a result of their heart attack. These changes could be the result of a number of factors, including better treatment and in-hospital care.

Provincial/Territorial Comparisons

Comparisons of 30-day AMI mortality rates across the country are based on data available from 1999/2000 to 2001/02. The pooled average rates for this time period are presented below for jurisdictions for which data was available (for full technical specifications including data exclusions and considerations see [appendix-technical specifications](#)).

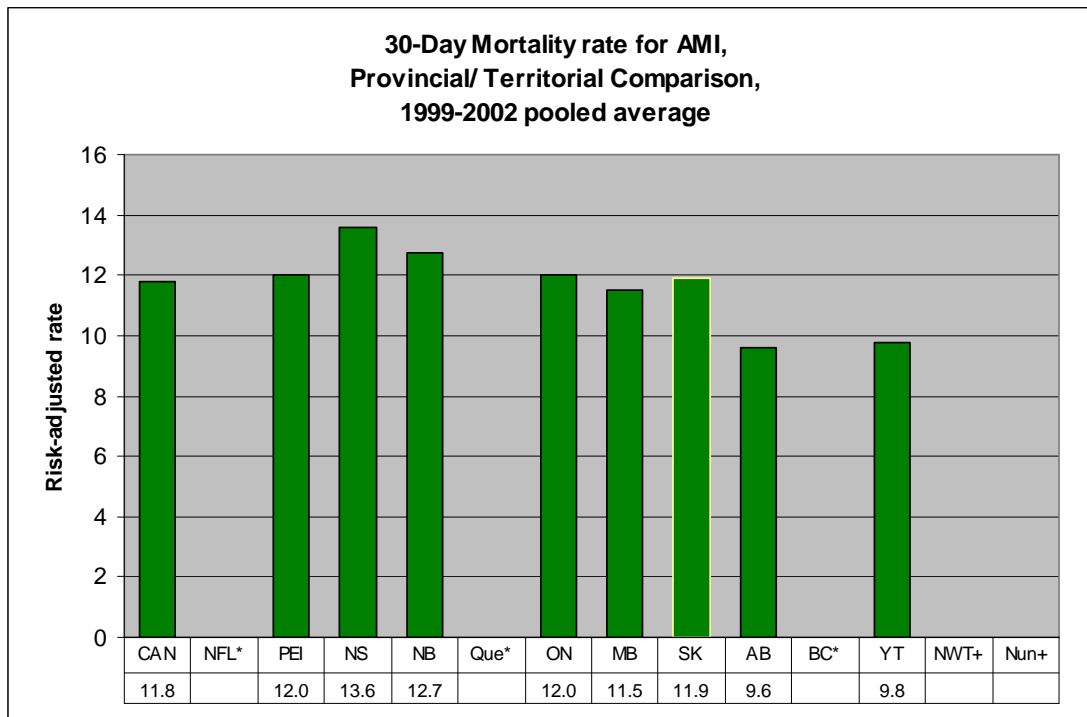
⁸² Garnick, DW, DeLong, ER & Luft, HS (1995). Measuring hospital mortality rates: are 30-day data enough? *Health Services Research* 29(6): 679-695

⁸³ Health Quality Council (July 2004). *Drug Dispensing rates in Saskatchewan: A preliminary look. Quality of Heart Attack Care in Saskatchewan*. HQC Saskatoon: SK.

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Saskatchewan's 30-day in-hospital mortality rate for AMI (pooled average of 11.9%) was similar to the Canadian⁸⁴ average of 11.8% (fig 48). Rates of 30-day in-hospital mortality varied across the country. Saskatchewan had the 4th lowest risk adjusted mortality rate for AMI within 30 days of hospital admission across the country in the period between 1999 and 2002.

Figure 48 30-day Mortality rate for AMI, Provincial/ Territorial Comparison



Source: Hospital Morbidity Database, CIHI

* Data not available

† Data suppressed due to small sample sizes

Contributing Factors

The rates presented here represent hypothetical rates in the province once age, gender, and the existence of other co-morbid conditions have been controlled for. Obviously, therefore, age, gender and pre-existing health conditions are all factors that contribute to differences in the risk of death following a heart attack.

- Age: The ability of elderly patients to overcome the effects of a heart attack are reduced compared to younger patients who are less likely to be as weakened by the effects of the heart attack, or have as many underlying health problems that may hinder their recovery.
- Pre-existing health conditions: The presence of underlying conditions such as high blood pressure, cholesterol problems, diabetes, pre-existing heart disease, and the severity of the initial heart attack (i.e., how much damage is caused to the

⁸⁴ Average is based only on provinces/ territories from which comparable data was available

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heart muscle) are all examples of health conditions that can reduce the chances of experiencing a full recovery from a heart attack.

- Gender: Women have a higher mortality rate after heart attack than men. This is likely a result of a combination of factors including a lack of research on the difference between men and women in the risk factors for cardiovascular disease, differences in the symptoms and therefore early detection of a heart attack, and the fact that current treatments for heart attack are ones that have been shown to be effective in male samples, but about which little is known in women⁸⁵.

Since the above factors are all controlled for by using risk-adjusted mortality rates, the reasons for differences in 30-day in-hospital mortality rates must be due in part to differences in the quality of care received, and patient adherence with treatment regimes.

Facts About Women and Heart Disease

- It is still not well known that heart disease is the number one killer of women.
- Many women may be ignoring the symptoms of heart disease and waiting too long to seek medical help.
- The symptoms of heart attack in women may be different from those of men - women are more likely to have subtle symptoms of heart attack, such as indigestion, abdominal or mid-back pain, nausea and vomiting.
- Some research suggests that women are not diagnosed and treated as aggressively for heart disease as men.

Source: Health Canada (2003) Exploring Concepts of Gender and Health. Women's Health Bureau.

- Quality of care: factors that are also likely to contribute to differences in mortality rates for heart attack is the access to and availability of quality care. As mentioned earlier, mortality rates can be reduced by timely access to effective treatments. The use of life-saving medications like aspirin, ACE inhibitors, statins and beta-blockers can significantly enhance survival by reducing the risks of a second heart attack in patients. Access to quality care such as effective drug therapy and other treatments for heart attacks is likely to vary along geographical lines, and show differences between populations. A number of factors other than medication and treatment practices may also influence patients' recovery in-hospital. Patient's perceptions of care, bed-side manner of staff, nutritional services, and hospital environment are all more subjective and harder to measure in relation to outcome indicators such as in-hospital AMI-mortality rates, but remain important factors determining the overall quality of care received.
- Patient compliance: Lack of adherence to treatment regimes (behavioural and medication) can also influence mortality rates. The reasons for non-compliance are complex and can result from patient lack of understanding, or indeed from careful

⁸⁵ Health Canada (2003) Exploring Concepts of Gender and Health (chpt 7). Womens Health Bureau, Health Canada, Ottawa: ON

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consideration on the part of the patient to not adhere to the treatment offered⁸⁶.

Saskatchewan Progress Report

- Work continues by the Health Quality Council on the quality of post heart attack care in Saskatchewan. As part of this quality improvement project in the province, the Health Quality Council released a report to the public on heart attack care in the province in the Fall of 2004, as well as a 'quality' report card on treatment and health outcomes, highlighting Saskatchewan leaders and promoting projects currently underway in the province that are improving the quality of care. (For more information see [Saskatchewan Progress Report](#) in Chapter 1 on 'Mortality Rates for Heart Attack')

Further Information

- Details on the on-going project by the Health Quality Council (HQC) on post-AMI care in Saskatchewan can be found on their Website.
<http://www.hqc.sk.ca>
- The HQC also publishes educational materials such as information on life-saving medications for heart attack patients.
<http://www.hqc.sk.ca/download.jsp?iKbVWqqbldI+BE0kfo7p6TBizBf0QfLQkUwK4QBZaJu76AT3OgW/QzJHHoqsiPSQ>
- For more information on the effects of gender on heart disease visit Health Canada's Women's Health Bureau where their report Exploring Concepts of Gender & Health has useful information on the effects of gender on several health conditions including heart disease.
<http://www.hc-sc.gc.ca/english/women/exploringconcepts.htm>

More detailed information on Saskatchewan's new critical incidence reporting regulations, highlighted at the start of this chapter, can be found at... news release:

<http://www.gov.sk.ca/newsrel/releases/2004/09/23-561.html>

background:

<http://www.gov.sk.ca/newsrel/releases/2004/09/23-561-attachment.pdf>

⁸⁶ Jaret, P. (2001) Ten ways to improve patient compliance. Hippocrates 15(2)
http://www.hippocrates.com/FebruaryMarch2001/02features/02feat_compliance.html

HEALTHY PERCEPTIONS

Public Perceptions of Saskatchewan's Health Care System

Highlights: Patient Satisfaction

- Satisfaction with overall health services in Saskatchewan was higher than the national average in 2003, with 87.9% of Saskatchewan residents aged 15 and older reporting they were very or somewhat satisfied with overall health services.
- Patient satisfaction with hospital services in 2003 suggests that 87.8% of Saskatchewan's population (aged 15 and above) who had received hospital care in the last year were very or somewhat satisfied with the care provided.
- The majority of people in Saskatchewan (aged 15 years and older) were generally very or somewhat satisfied with physician services they received. In 2003 94.0% of people were very or somewhat satisfied, above the national average of 91.8%.
- Patient satisfaction with community-based care in Saskatchewan indicated that 83.2% of patients were very or somewhat satisfied with the services they received. This was comparable to the national average (82.9%) for 2003.
- The first year of data collected on patient satisfaction with telephone health/ telehealth services shows that the majority of people (86.0%) who reported using these services in Saskatchewan were very or somewhat satisfied with the care provided to them. This was comparable to the national average (83.9%) for 2003.

	How are we doing?	Increasing or Decreasing?
Patient satisfaction: overall health services	J	ì
Patient satisfaction: hospital services	J	ì
Patient satisfaction: physician care	J	ì
Patient satisfaction: community health	K	í
Patient satisfaction: telehealth services	K	N/A

* Notes on interpreting these summary charts are included in the [appendix](#).

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(i) Patient Satisfaction

“my father received a lot of health care and we were very satisfied with the service and care”

“ the waiting periods for health care services are too long, and my husband has been waiting two years for an MRI”

“ I have to go to Saskatoon to see a specialist – this includes, time, money, winter-driving, and having to rebook when roads are bad”

“ My husband has had excellent care. He has been helped a lot in the emergency. When we have had a family crisis, both the doctors and the nurses have been very good”

Source: Saskatchewan Population Health and Dynamics Survey 1999/2000, J6 Complaints & Compliments

As the comments above highlight, public perceptions of the healthcare system can be quite polarised. Personal experiences flavour opinions of the services they received, and can speak to issues such as access and quality of care at a broader level. The measurement of patient satisfaction as a yardstick of quality care is taking an increasingly important role in the growing push toward accountability in the health care system. Measures of patient satisfaction compliment more clinical indicators of process and outcome, as they underlie the shift towards more patient-centred models of care where the patient is seen as a person, and the best judge as to whether their needs are being met.⁸⁷

This section of the report focuses on public perceptions of the health care system in Saskatchewan. The percentage of the adult population (aged 15 years and over) who rated themselves as very or somewhat satisfied with the quality of care they received in five areas are outlined in this chapter of the report:

Overall health services

Services received in hospital

Services received from a family physician

Community-based services

Telephone health line or Tele-health services*

⁸⁷ Guadagnino, C (2003) Role of patient satisfaction. Physicians News Digest
<http://www.physiciansnews.com/cover/1203.html>

* Telehealth services was used in the CCHS questionnaire to refer to telephone health lines, that is phone-based services which offer health information from a nurse or other health specialist, such as Healthline in...

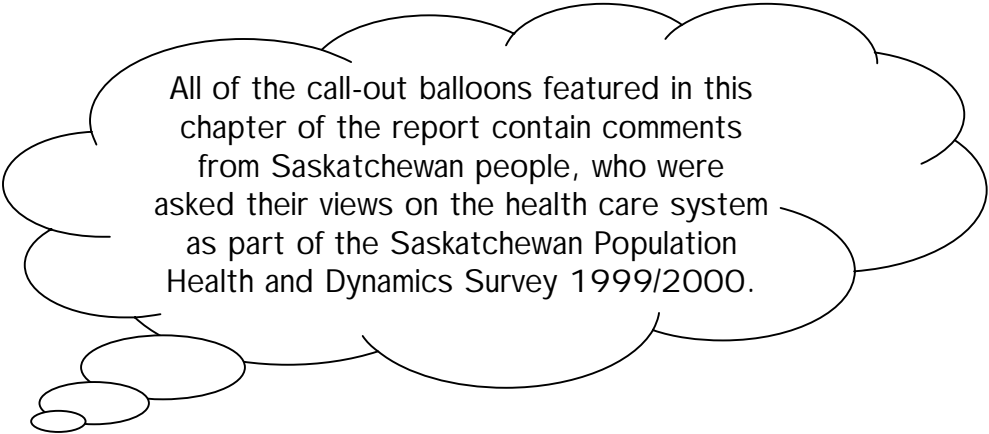
CHAPTER 4: HEALTHY PERCEPTIONS

What we know....

- That patient satisfaction measures are being increasingly used for a number of reasons, including accountability to the general public, to complement more clinical outcome measures.
- Comparable data is available on patient satisfaction for a variety of health care services across Canada from large-scale survey data.
- That personal experiences with the health care system shape perceptions of the healthcare system, as do other factors such as current health status.

What we don't know....

- To what extent measures of patient satisfaction are comparable. Measurement of patient satisfaction by different researchers, for different purposes, using different instruments hampers its expanded use due to a lack of comparability.
- Whether respondents understand the questions on satisfaction to the same degree.
- To what extent isolated negative occurrences flavour overall perceptions of the health care system.
- What the relative contributions of demographic factors like gender and age are on ratings of patient satisfaction.
- Little information is still available on satisfaction with telephone health line and telehealth services as distinct services from each other.



All of the call-out balloons featured in this chapter of the report contain comments from Saskatchewan people, who were asked their views on the health care system as part of the Saskatchewan Population Health and Dynamics Survey 1999/2000.

cont...Saskatchewan. This definition did not account for the existence of other forms of telehealth in operation such as the video-link up system used in Saskatchewan to connect people living in rural and remote areas with specialists. Due to this failure to distinguish between telephone health lines and 'telehealth' there is a possibility that respondents ratings of telephone health lines in Saskatchewan are confused with those for telehealth services in the province.

Patient Satisfaction

Satisfaction with overall health care services received

Key Messages

- Measures of patient satisfaction are becoming increasingly accepted as indicators of quality of care in the health system.
- The percentage of people aged 15 years and older in Saskatchewan who reported they were very or somewhat satisfied with overall health services was 87.9%. This was above the national average (85.3%) and the second highest rate throughout Canada in 2003.
- Although there are limitations in interpreting survey data on patient satisfaction, it appears that the majority of the people in the province who had used health care services in the last 12 months were, in general, satisfied with the care provided to them.
- More work is needed to fully understand the factors that contribute to feelings of satisfaction with the health care system.

Introduction

This indicator applies to individuals who have received any health care services in the last 12 months. The individual's assessment of their satisfaction with those services is measured on a five-point scale from very satisfied to very dissatisfied.

The percentage of the adult population (aged 15 years and older) who reported they were very satisfied or somewhat satisfied with the way the health care services they received were provided are outlined below.

Measuring Satisfaction

Respondents were asked:

" Overall, how satisfied were you with the way health care services were provided? Were you...very satisfied?...somewhat satisfied?...neither satisfied or dissatisfied?...somewhat dissatisfied?...very dissatisfied?"

Source: CCHS 2000-01 & 2003

There are challenges in using patient satisfaction measures as evidence of quality of care (see [appendix-technical specifications](#) for details). Survey methodology excludes certain groups from participating. For example, persons living on First Nations Reserves and on Crown lands, residents of institutions, and full-time members of the Canadian Armed forces, as well as residents of certain remote regions are excluded from the Canadian Community Health Survey sampling frame –

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the data source for patient satisfaction ratings in this report. These are groups who may have real access and quality issues, and who, therefore, may have very different views of the healthcare system than individuals included in the sample. Furthermore, definitions of 'satisfaction' are by no means standard...what to one person may be unacceptable levels of care may be satisfactory to another. Personal expectations of what that level of care should involve, as well as relationships with health care providers can vary greatly from one person to another, and shape satisfaction ratings in different and unexpected ways.

Bearing in mind these limitations, it is becoming increasingly acknowledged, however, that patients' reports of their health and quality of life (such as self-reported health measures) and their satisfaction with the quality of care and services (patient satisfaction ratings), are becoming as important as many of the other more clinical measures of health outcomes used as indicators of an accountable health care system in Canada.

Saskatchewan Profile

In 2003, 87.9% of Saskatchewan people over the age of 15 who had used health care services in the last 12 months rated their satisfaction with the way the service was provided as very or somewhat satisfied. In fact, Saskatchewan was above the national average of 85.3% in 2003. The number of people satisfied with overall health services in the province in 2000/01 was 85.3% Due to the nature of the survey data, it is difficult to tell whether this represents a trend towards increasing levels of satisfaction with health care services in Saskatchewan, or indeed is due to the fact that different people completed the survey in 2003 than in 2000/01.

If we were to add up all the people satisfied with health care services in the province it would be roughly equivalent to the entire population in the regional health authorities of Regina-Qu'Appelle, Saskatoon, Five Hills, and Sunrise.

Figure 49 Patients very or somewhat satisfied with overall health services, 2003

	Canada		Saskatchewan	
	Males	Females	Males	Females
Count	9,926,317	10,671,505	299,662	327,280
%	85.4	85.3	87.8	88.0

There is no real difference in ratings of satisfaction between men and women in the province.

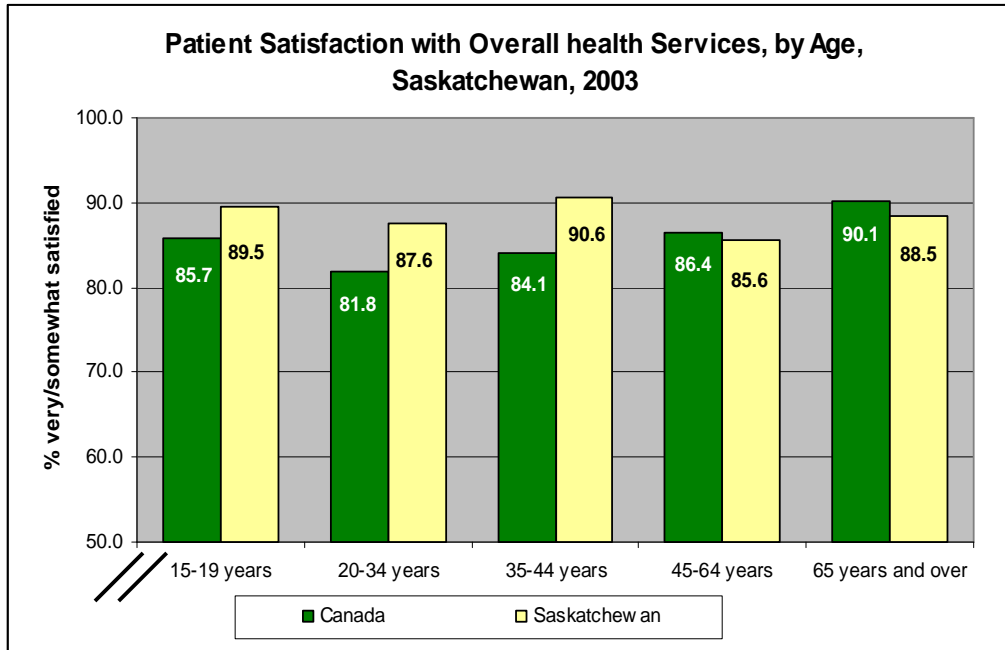
Source: Statistics Canada, CCHS 2.1

Similarly, when the data is split by age groups no consistent trends appear with respect to the degree of satisfaction reported with overall health services in

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Saskatchewan. The largest difference between age groups appears to be between 35-44 year olds who rated their satisfaction higher than that of the 45-64 year olds. Otherwise, it is difficult to draw conclusions about the effect of patient age on satisfaction with overall health services in the province.

Figure 50 Satisfaction with overall health service by age, 2003

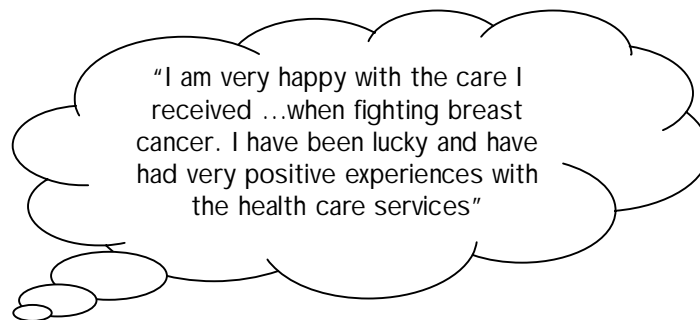


Source: Statistics Canada, CCHS 2.1

* Note scale starts at 50% to highlight differences

Provincial/Territorial Comparison

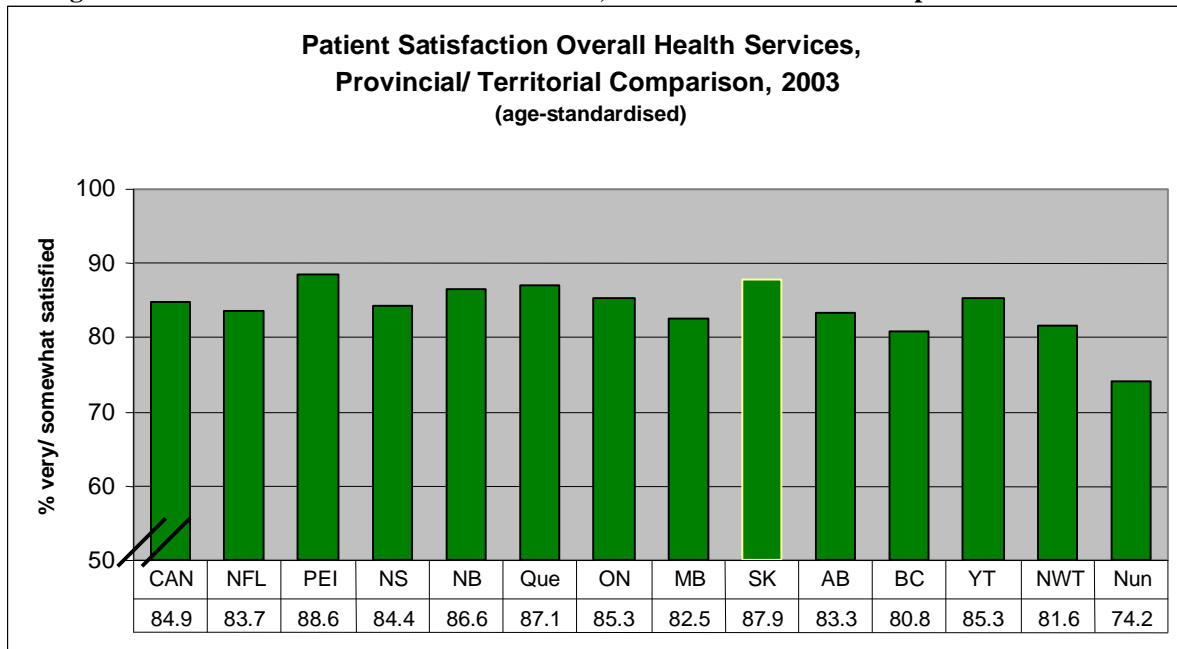
The age-standardised rate⁸⁸ of patient satisfaction with overall health services in Saskatchewan (87.9%) is ranked as second highest across Canada, only Prince Edward Island (88.6%) had a higher percentage of their population who were very or somewhat satisfied with the services provided to them in 2003 (fig 51).



⁸⁸ Age-standardised rates are used when comparison to other provinces/ territories are being made to control for differences between jurisdictions in the age structure of their populations.

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Figure 51 Satisfaction with overall health service, Provincial/Territorial comparison



Source: Statistics Canada, CCHS 2.1

* Note scale starts at 50% to highlight differences

Contributing Factors

Patient dissatisfaction has been linked to patient non-compliance with medical treatment, discontinuation of care, and the frequent changing of health care providers⁸⁹. Understanding the factors that underlie satisfaction with health care services provided can help us understand variations in the rates of patient satisfaction obtained at different times, and from different populations, and ultimately point to the need for quality of care initiatives to address underlying problems contributing to dissatisfaction with current health system delivery.

- Current health status: Several studies have shown that people who are in better health report greater satisfaction with their health care⁹⁰. More recently this data has been further delineated to show that, in particular, it is better self-reported mental health status that is linked with general

"My mum was treated very poorly... The staff said my mum was rude and noncompliant. They didn't understand she was upset due to her lack of independence"

⁸⁹ Da Costa, D., Clarke, A.E., Dobkin, P.L. et al. (1999) The relationship between health status, social support and satisfaction with medical care in patients with SLE. *International Journal for Quality in Health Care* 11(3): 201-207

⁹⁰ Hall, JA, Feldstein, M, Fretwell, MD et al. (1990) Older patients' health status and satisfaction with medical care in an HMO population. *Medical Care* 28: 261-270

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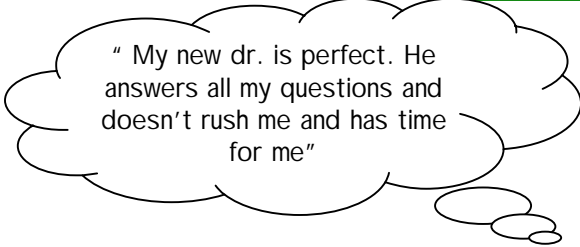
satisfaction with health care. In other words, there is some evidence that patients' emotional states influence their perceptions of the health care they receive ⁹¹.

- Education: Although there appears to be some inconsistency in research findings with respect to demographic variables that are predictors of patient satisfaction, several studies have linked education with patient satisfaction for health care. Higher levels of education being associated with lower ratings of satisfaction. This finding has been explained by an increase in expectations and the application of more stringent criteria when judging the health care services received, which may accompany higher education levels⁹².
- Social support: it has also been suggested that patients with adequate levels of support outside of the health care system tend to be more satisfied with the services they receive than those who feel they have low levels of support from other sources. It may be that patients with low levels of support in their environment may have a variety of unmet needs that the healthcare system is not necessarily equipped to address, and that this related into a higher degree of satisfaction with the medical care they receive ⁹³.
- Communication skills: There is likely a whole range of individual differences that affect the way people interact with their healthcare providers that can influence their feelings of satisfaction with the care provided to them. There is some research, however, that indicates that patient levels of satisfaction are related to the degree of sensitivity to their needs expressed by medical workers. Related to this is the role that language and cultural barriers can play in ratings of satisfaction with care.

Breaking Down Patient Satisfaction

More work is required to help us understand which factors are the most important in influencing patients' perceptions of satisfaction with the health care system.

General satisfaction ratings also tell us little about what informs those ratings. The following sections on patient satisfaction within specific areas of the health care system such as physician care, hospital care, community care and telehealth help to provide a fuller picture of patient satisfaction with the health care system.



" My new dr. is perfect. He answers all my questions and doesn't rush me and has time for me"

⁹¹ Atkinson NJ & Caldwell, L (1997) The differential effects of mood on patients ratings of life quality and satisfaction with their care. *Journal of Affective Care* 44: 169-75

⁹² Hall JA, Dornan, MC (1990) Patient sociodemographic characteristics as predictors of satisfaction with medical care: a meta-analysis. *Social Science & Medicine* 30: 811-818.

⁹³ Da Costa, D., Clarke, A.E., Dobkin, P.L. et al. (1999) The relationship between health status, social support and satisfaction with medical care in patients with SLE. *International Journal for Quality in Health Care* 11(3): 201-207

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Saskatchewan Progress Report

See the other [Saskatchewan Progress Reports](#) in this chapter that speak to some of the factors that contribute to impressions of satisfaction with 'overall health care'.

Further Information

- Visit Saskatchewan Health's Website for the latest information on what we are doing to improve health care in Saskatchewan.

<http://www.health.gov.sk.ca/>

- The Health Quality Council of Saskatchewan also reports regularly on quality improvements and initiatives in the province.

<http://www.hqc.sk.ca>

Patient Satisfaction

Satisfaction with hospital services

Key Messages

- Measures of patient satisfaction are becoming increasingly accepted as indicators of quality of care in the health system.
- The percentage of people aged 15 years and older in Saskatchewan who reported they were very or somewhat satisfied with hospital services was 87.8%. This was above the national average (82.3%) for 2003, and the second highest rate throughout Canada.
- Slightly more men (89.5%) than women (86.5%) tended to be satisfied with current hospital services in the province.
- Although there are limitations in interpreting survey data on patient satisfaction, it appears that the majority of the people in the province who had used hospital services in the last 12 months were, in general, satisfied with the care provided to them.
- More work is needed to fully understand the specific factors that contribute to feelings of satisfaction with hospital services, especially potential gender differences in satisfaction with care.

Introduction

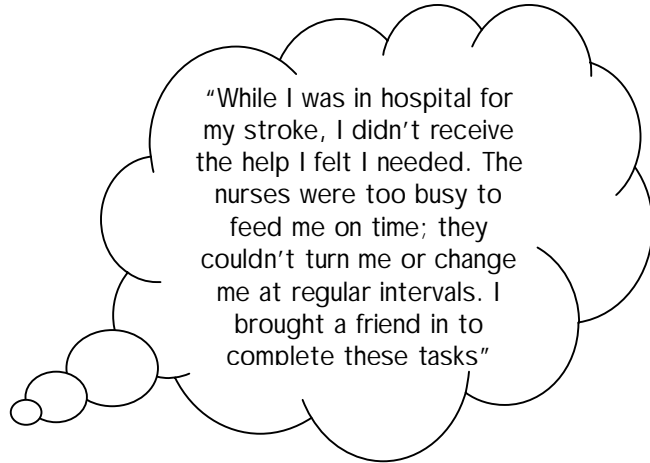
As with general ratings of satisfaction with health care services, the popularity of patient satisfaction for measuring quality of care of specific services such as hospitals has also increased. Users' evaluations are important for continuous quality monitoring and improvement.

Hospitals continue to account for the largest share of total health expenditure at the national and provincial level here in Saskatchewan. An estimated \$36.4 billion was spent on hospitals in Canada in 2003, which is around 30% of total health expenditures. In Saskatchewan, hospital spending per person is estimated to be around \$1,061 for each person in the province⁹⁴. Given the amount of money that hospitals cost, patient satisfaction surveys can tell us about the quality of service patients feel they are getting in return.

⁹⁴ Canadian Institute for Health Information (2003) National Health Expenditure Trends 1975-2003. CIHI, Ottawa; ON

CHAPTER 4: HEALTHY PERCEPTIONS

Research in other countries has suggested that poor satisfaction ratings can be linked to numerous factors within a health care setting ranging from staff attitudes, to cleanliness of the toilet and shower facilities, to the quality of food provided⁹⁵. Although all are important for improving quality of care experiences, more detailed work is required to identify specific strengths and weaknesses within any one health care environment that may contribute to ratings of patient satisfaction with the care provided to them.



(For further limitations see previous indicator and [appendix: technical specifications](#))

Saskatchewan Profile

In Saskatchewan in 2003, 87.8% of patients reported that they were very or somewhat satisfied with the level of hospital care provided, this rate was above the national average for this year (82.3%). In 2000/01 82.9% of people in Saskatchewan reported they were very or somewhat satisfied with hospital services. Again it is difficult to draw conclusions from this data about whether this difference represents a trend towards increasing rates of satisfaction with hospital care or is due to differences in the people surveyed about their current satisfaction with hospital services⁹⁶.

Figure 52 Patients very or somewhat satisfied with hospital services, 2003

	Canada		Saskatchewan	
	Males	Females	Males	Females
Count	2,670,451	3,041,227	91,517	106,820
%	82.2	82.4	89.5	86.5

There was no real difference in ratings of satisfaction with hospital care between men and women in the province, or nationally.

Source: Statistics Canada, CCHS 2.1

⁹⁵ TQA Research (2002) Patient Satisfaction in Queensland Health Acute Care Public Hospitals. State Summary Report; Queensland: Australia.

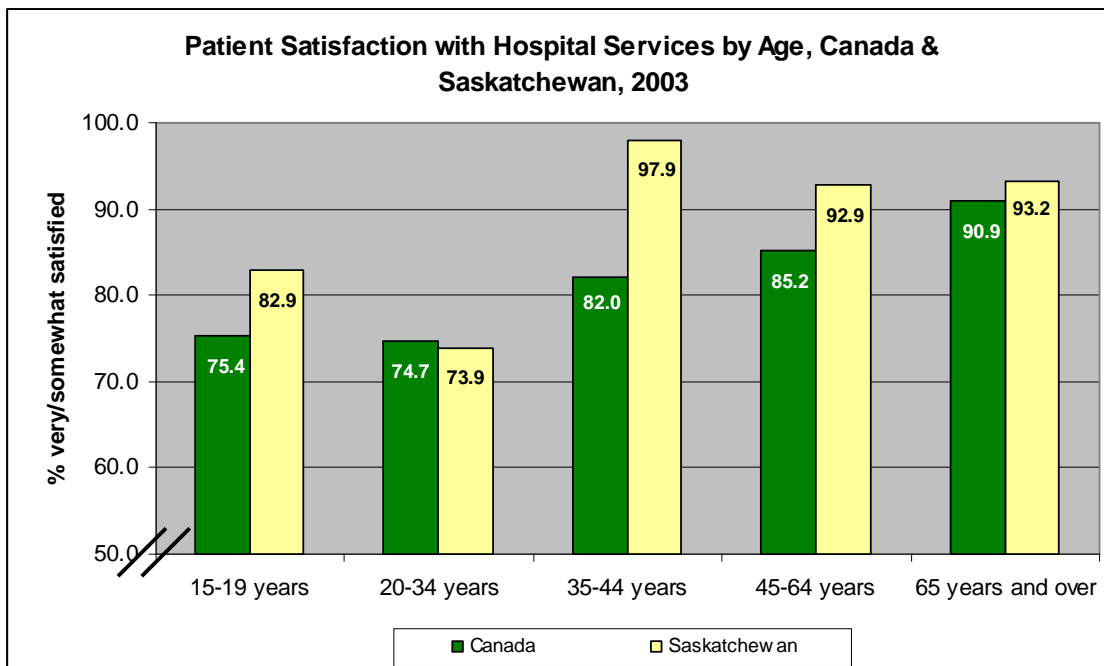
⁹⁶ Caution should be used when comparing data over time due to differences in the methods of collection of survey data

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It is difficult to tell from these figures whether there is a gender difference in ratings of satisfaction with hospital care. Some research suggests that women report lower rates of satisfaction with hospital care even when other factors that could possibly account for differences in satisfaction were controlled for⁹⁷. Possible explanations for this finding include differences in the way women feel they are treated in hospitals, or that women have higher expectations of health care than men that are not met in the current hospital system⁹⁸.

Patient satisfaction ratings by age group suggest that the most satisfied patients with hospital services in Saskatchewan tend to be in the 35-44 years age group, and that the least satisfied users in the 20-34 and the 15-19 years age groups. This is slightly different from the national picture where the most satisfied users tend to be in the 65 years and over age category.

Figure 53 Satisfaction with hospital services by age, 2003



Source: Statistics Canada, CCHS 2.1;
Note, scale starts at 50% to highlight differences

⁹⁷ Woods, SE & Heidari, Z (2003) The influence of gender on patient satisfaction. *Journal of Gender Specific Medicine* 6(4): 30-34

⁹⁸ Foss C. (2002) Gender bias in nursing care? Gender-related differences in patient satisfaction with the quality of nursing care. *Scandinavian Journal of Caring Science* 16:19-26.

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Provincial/Territorial Comparisons

Age-standardised⁹⁹ ratings of patient satisfaction with hospital services again vary across the country. Saskatchewan (86.7%) is above the national average, which was 81.1% in 2003, and has the second highest ratings for patient satisfaction across the country.

Based on current survey data, it appears that the majority of the population in Saskatchewan (aged 15 years and older) were at least reasonably satisfied with the hospital care provided to them in the last 12 months.

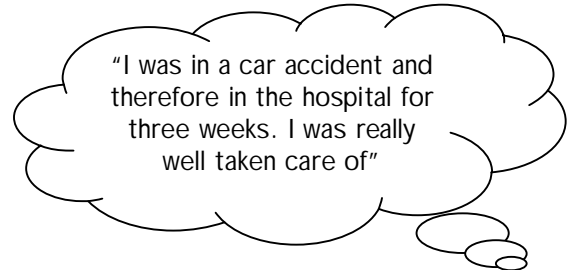


Figure 54 Satisfaction with hospital services, Provincial/Territorial comparison



Source: Statistics Canada, CCHS 2.1;

* Note, scale starts at 50% to highlight differences

Contributing Factors

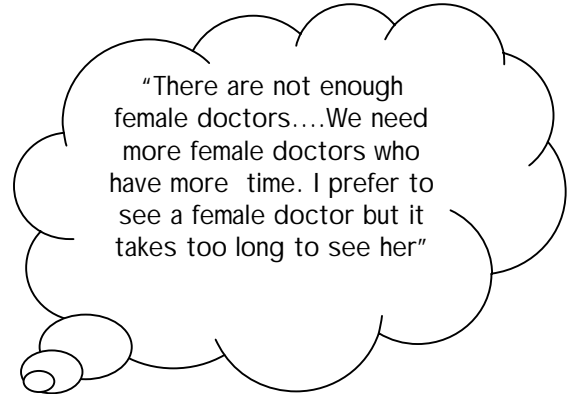
The factors contributing to patient satisfaction are likely similar to those related earlier for general health care services. The research literature suggests that other

⁹⁹ Age-standardised ratings are used to allow comparisons between populations with very different age structures.

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factors may also contribute to potential differences in ratings of patient satisfaction with hospital services.

- Gender: Although the effects of demographic variables such as gender are not conclusive with respect to satisfaction with health care, there is some research that suggests that women's experiences of care are different from that of men. However, it is hard to tell whether this is a result of a real difference in treatment or whether women's expectations of care are different from men's, and it is a perceived lack of care based on these higher expectations that results in lower levels of satisfaction. Research also tells us that women tend to be happier when they can choose the gender of their physician¹⁰⁰, since this is not the case in hospital settings, this may be a factor in women's lower ratings of satisfaction.



Although not everyone is fully satisfied with the hospital care they receive, it appears that the quality of care in Saskatchewan's hospitals is meeting the needs of most of the population, if patient satisfaction levels are used as a measure of service quality.

Saskatchewan Progress Report

- Starting in September 2004, the Health Quality Council will be asking patients recently discharged from Saskatchewan hospitals to share their views on their care experience. This survey asks patients about several aspects of their recent hospital stay, including their admissions process, the hospital staff, waiting times, pain management and their discharge. All health regions in the province are participating in the survey, the first of its kind in Saskatchewan. Results are expected in the spring of 2005.
- For more details see link the to the Health Quality Council website in [Further Information](#).

Further Information

- The Health Quality Council of Saskatchewan is an independent agency that reports on the quality of health care in the province, and actively works to promote its improvement. For more information on quality of care initiatives including the patient satisfaction survey of hospital services visit their Website: <http://www.hqc.sk.ca>

¹⁰⁰ Hsu J, Schmittiel J, Krupat E, et al. (2003) Patient choice. J Gen Intern Med 18:319-325.

Patient Satisfaction

Satisfaction with physician services

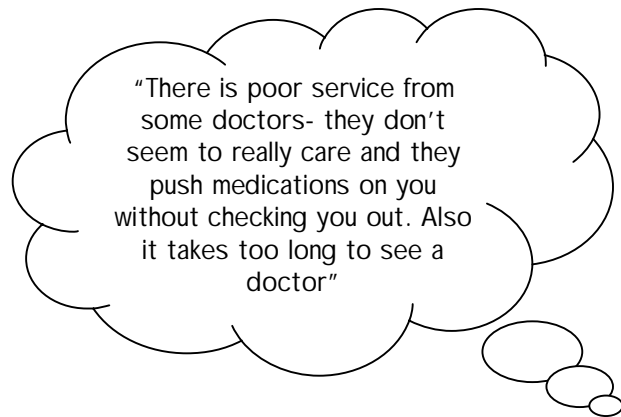
Key Messages

- Measures of patient satisfaction are becoming increasingly accepted as indicators of quality of care in the health system.
- The percentage of people aged 15 years and older in Saskatchewan who reported they were very or somewhat satisfied with physician services was 94.0%. This was above the national average (91.8%) for 2003.
- Saskatchewan had the highest age-standardised rate (along with Prince Edward Island) across the country, with 93.5% of patients reporting they were satisfied with physician care in 2003.
- Although there are limitations in interpreting survey data on patient satisfaction, it appears that the majority of the people in the province who had used physician services in the last 12 months were, in general, satisfied with the care provided to them.
- More work is needed to fully understand the specific factors that contribute to feelings of satisfaction with physician services such as differences between rural and urban populations.

Introduction

Perhaps more than other areas of the health care system, physician services are an area where patient satisfaction measures have an added significance. As in other market-driven systems where consumers have a choice of where to go, there are competitive pressures for physicians to attract patients and retain the ones they already have.

When patients have a choice, unsatisfactory quality of care can result in provider changes that can start with one individual then spread throughout communities. Measuring patient satisfaction can provide important feedback for physicians on how to keep their patients happy.



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Saskatchewan Profile

In 2003, 94% of Saskatchewan's population (aged 15 years and over) reported that they were very or somewhat satisfied with physician care provided to them in the last 12 months (see [appendix- technical specifications](#) for notes on this indicator).

This was above the national average for this year of 91.8%. There appears to be no change over time in satisfaction with physician care. In 2000/01 92.6% of Saskatchewan people indicated they were satisfied with physician care in the province.

If we were to combine all the people who were satisfied with the physician care they received in 2003 it would account for approximately the total populations* of 4 of the provinces regional health authorities (RHAs):

Sunrise RHA, Prince-Albert Parkland RHA, Saskatoon RHA, and Cypress RHA.

*Based on Census 2001 population counts

Figure 55 Patients very or somewhat satisfied with physician care, 2003

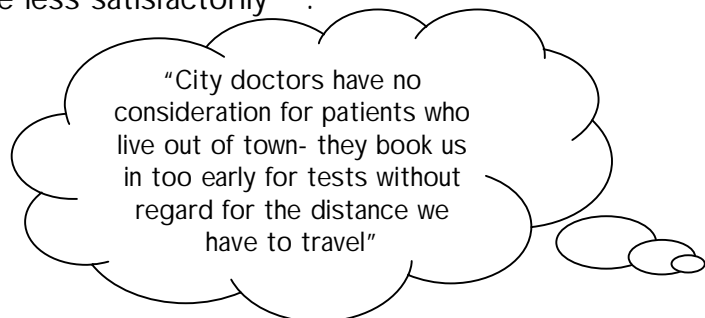
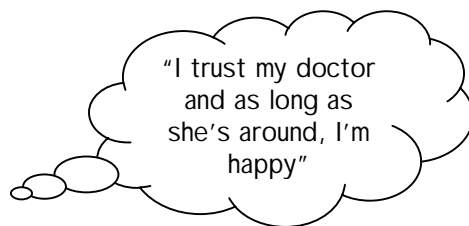
	Canada		Saskatchewan	
	Males	Females	Males	Females
Count	6,479,452	8,113,092	195,640	255,999
%	92.4	91.3	94.5	93.7

Source: Statistics Canada, CCHS 2.1;

It appears from available data that slightly more women visit their doctor or receive physician care in a year than men. In Saskatchewan, over 66,000 more women than men saw their family doctor or another physician in the last year (273,284 women received physician care

compared to 207,044 men). However, in terms of ratings of satisfaction with this care there are no real differences by gender as figure 55 indicates.

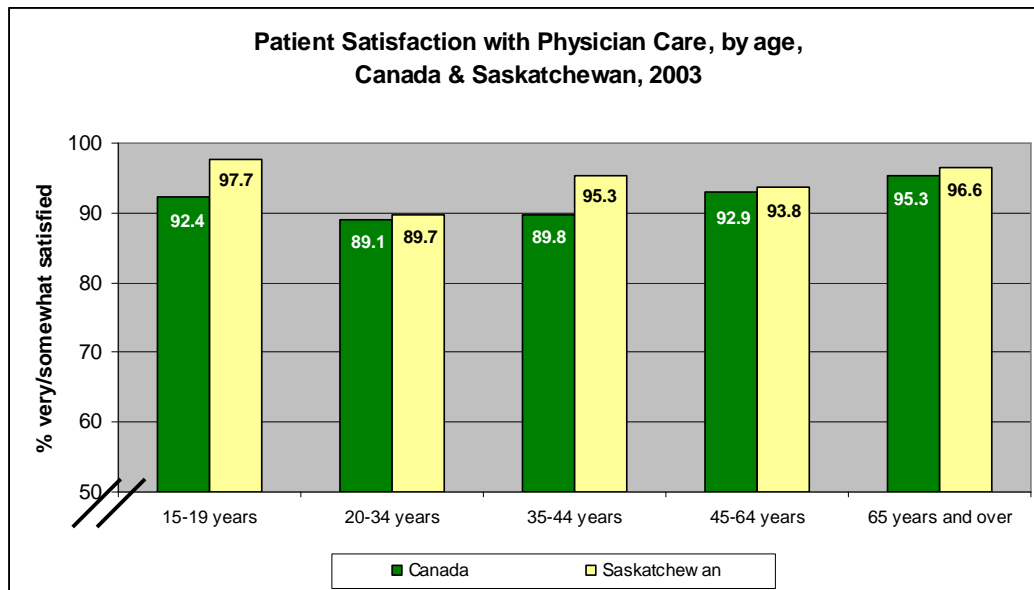
There is some suggestion in the literature that women's satisfaction with their physician is to some extent determined by their physician's gender. Some studies have found that women who have female physicians tend to be less satisfied, perhaps because of their higher expectations that their physician will understand them better, or be more sensitive to their needs if they are female. When these expectations are not fulfilled then women may rate their physician care less satisfactorily¹⁰¹.



¹⁰¹ Schmittiel J, Grumbach K, Selby JV, Quesenberry CP Jr. (2000) Effect of physician and patient gender concordance on patient satisfaction and preventive care practices. J Gen Intern Med 15:761-769.

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Figure 56 Satisfaction with physician care by age, 2003



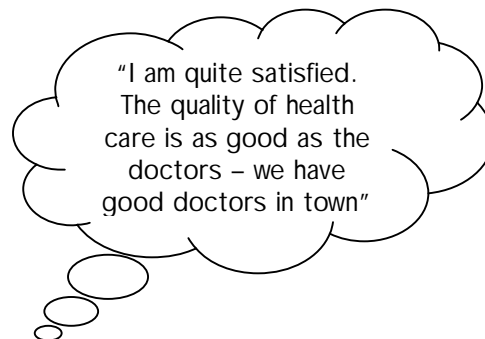
Source: Statistics Canada, CCHS 2.1;

* Note, scale starts at 50% to highlight differences

Very little difference in ratings of satisfaction with physician care between age-groups is observed within the province. In Saskatchewan more 15-19 year olds (97.7%) appear to be very or somewhat satisfied with physician care compared to 20-34 year olds or 45-64 year olds. For other age groups, however, age does not appear to make any real differences to ratings of satisfaction with physician care in the province.

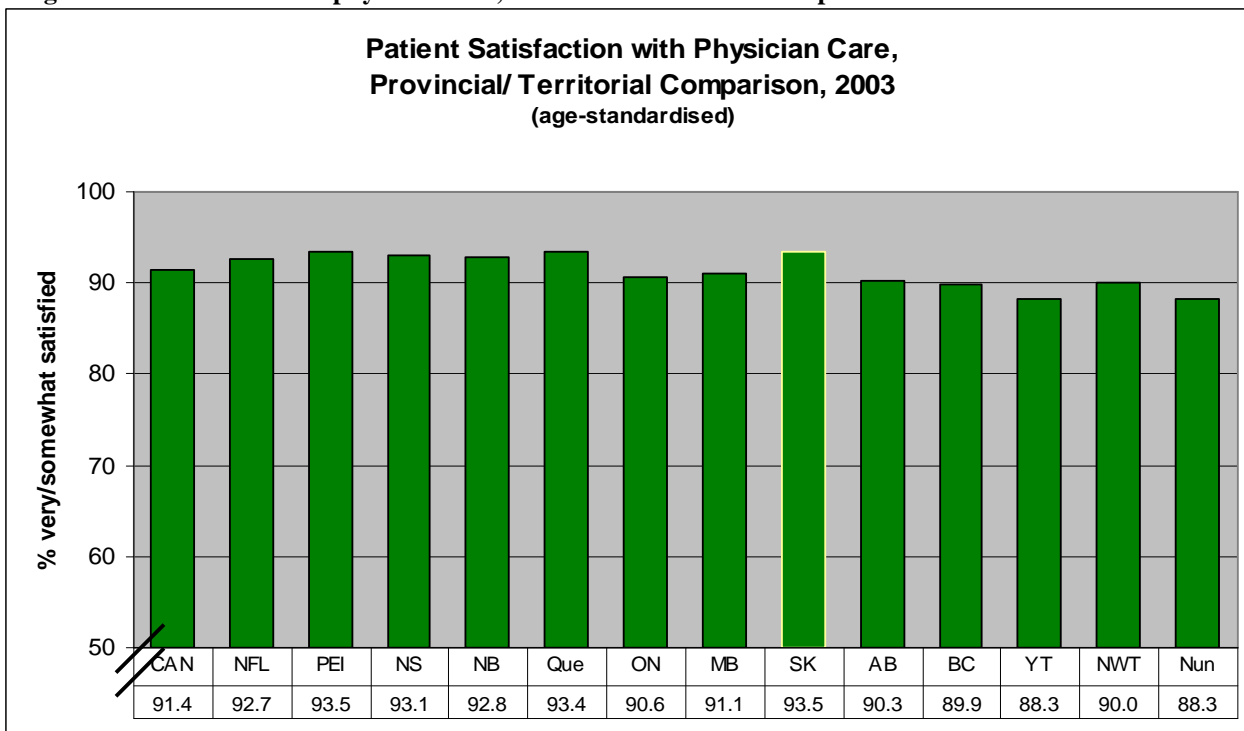
Provincial/Territorial Comparison

Age-standardised rates of patient satisfaction with physician care were above the national average (91.4%) in Saskatchewan at 93.5%. Saskatchewan and Prince Edward Island had the highest ratings for patient satisfaction with physician service across the country in 2003 (see fig 57 for age-standardised rates).



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Figure 57 Satisfaction with physician care, Provincial/ Territorial comparison



Source: Statistics Canada, CCHS 2.1;

* Note. scale starts at 50% not 0% to highlight differences

These rates are age-standardised to take account of varying age structures from one population to another. It is likely, however, that there is as wide a variation within each jurisdiction as there is between. Differences in utilisation rates of physicians, which can be affected by geographical factors such as distance and availability, may have an impact on satisfaction with physician care.

"I would like to have a steady doctor, someone who is always there. I may have to move to get closer to a doctor"

It appears, however, that the majority of people in Saskatchewan are satisfied with the physician care provided to them.

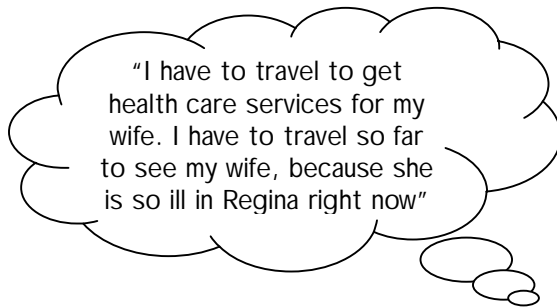
"My doctor saved my life; he's fantastic, a true saviour"

Contributing Factors

The factors that contribute to satisfaction with physician care are, in all likelihood, similar to those for hospital services and overall health services (see earlier indicators). An additional factor not highlighted in previous sections is:

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Access and availability: Easy access to a doctor may also be a factor in satisfaction with the care received. Having to wait a long time to be seen, having to travel long distances to access care, and having very little of a doctor's time are all factors



that can contribute to dissatisfaction with physician services. People living in rural and remote areas, as compared to those in urban centres, may experience greater problems accessing regular physician care. More research is needed on whether these factors influence their satisfaction ratings of the care provided to them.

Saskatchewan Progress Report

Attracting and keeping key health care providers are top priorities. Several new initiatives to assist with the retention and recruitment of health professionals have been developed in the province, a few of which are listed below:

Specialist Recruitment and Retention Fund Bursaries: The first program undertaken in 2001 awarded 35 bursaries of \$18,000 each to residents in specialty training at the University of Saskatchewan, College of Medicine. The second year of the program, 2002, 19 bursaries were awarded and the amount of each bursary was increased to \$25,000. In 2003, 20 bursaries were offered. Residents are eligible for a maximum of three years funding with a commitment to provide one-year return-of-service for each year of funding received.

Specialist Physician Enhancement Training (SPET) Program: The program is designed to provide six grants of up to \$80,000 per year to allow practicing specialists, both Canadian and foreign-certified, the opportunity to obtain additional training to a maximum of two years. Candidates are encouraged to pursue training at the University of Saskatchewan or another accredited North American teaching program. Candidates must have practiced in Saskatchewan for two years to be eligible. Preference will be given to those seeking training in areas of identified need in the community.

Rural Practice Establishment Grant (RPEG) Program: This program makes grants of \$18,000 available to Canadian-trained or landed immigrant physicians that establish new practices in rural Saskatchewan for a minimum of 18 months. It is an ongoing program, which was first offered in 1997. Since its inception, 41 physicians have taken advantage of the program, locating in communities such as Meadow Lake, Kindersley, Humboldt, Nipawin and Assiniboia. (An RPEG program is also established for foreign-trained physicians).

Medical Resident & Undergraduate Student Bursary Programs: These programs are designed to help medical residents or medical students with educational expenses. In return for the assistance, applicants must agree to a rural service commitment. Thirty-one medical residents have received this funding. Seven recipients of this bursary are now practising in rural Saskatchewan. Six have completed their return-of-service commitment and are now practising in Saskatoon or furthering their education. Furthermore, since its inception in 1991, 104 medical students have received assistance.

Northern Medical Services - This is a joint endeavour of Saskatchewan Health, the University of Saskatchewan, and Health Canada, to ensure stable physician services in the North. This program has assisted in stabilising the supply of physicians in northern Saskatchewan.

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Further Information

- For more information on physician recruitment strategies in the province visit the Saskatchewan Health website at the link below:
http://www.health.gov.sk.ca/ph_hr_phys_recr_rete.html
- The Saskatchewan Physician Recruitment Project also has its own website:
<http://www.mdopportunity.org/>
- The College of Physicians & Surgeons of Saskatchewan also maintain a website, where amongst other things patients can express satisfaction or problems with their physician care in the province:
<http://www.quadrant.net/cpss/>

Patient Satisfaction

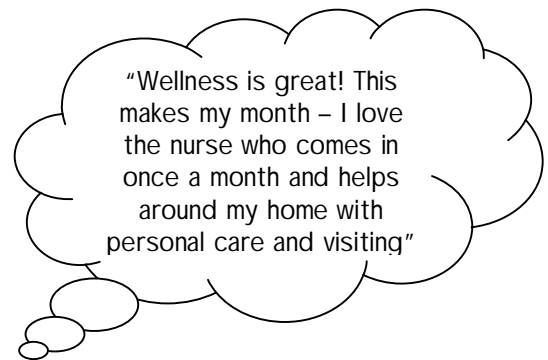
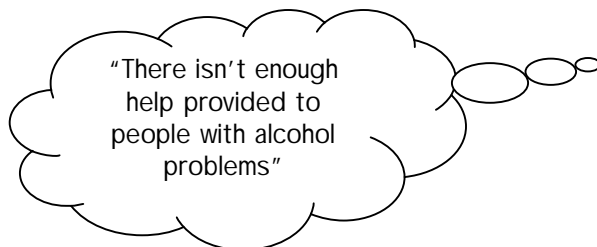
Satisfaction with community-based care

Key Messages

- Measures of patient satisfaction are becoming increasingly accepted as indicators of quality of care in the health system.
- The percentage of people aged 15 years and older in Saskatchewan who reported they were very or somewhat satisfied with community-based care was 83.2%. This was similar to the national average (82.9%).
- Saskatchewan had the 4th lowest age-standardised rate (82.3%) of patients satisfied with community-based care throughout Canada in 2003.
- Although there are limitations in interpreting survey data on patient satisfaction, it appears that the majority of the people in the province who had used community-based care in the last 12 months were, in general, satisfied with the care provided to them.
- More work is needed to fully understand the specific factors that contribute to feelings of satisfaction with community-based care at the level of specific programs.

Introduction

Community-based care refers to the range of health care services that are received outside of a hospital or a doctor's office such as home nursing care, home based counselling or therapy, personal care, or community walk-in clinics. Since community-based care covers a wide range of programs and services, there is likely a wide range of clients. A person's rating



of their satisfaction with a problem gambling program, may be based on completely different criteria than a person assessing their satisfaction with the home nursing care they have received, yet both contribute to

general ratings of satisfaction with community-based services. Nevertheless,

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satisfaction with community-based services provides us with a general indication of the quality of care of programs and services beyond the health care people in the province receive from their family doctor or on a visit to hospital. (More details and data consideration associated with this indicator can be found in [appendix-technical specifications](#)).

Saskatchewan Profile

Data from 2003 suggests that 83.2% of people in Saskatchewan (aged 15 years and over) who received some form of community-based care in the last 12 months were very or somewhat satisfied with the services provided to them. The national average in this year was 82.9%. In 2000/01, 90.3% of Saskatchewan respondents to the same survey indicated they were very or somewhat satisfied with community-based care services in the province. It is difficult to tell whether this change relates to a real decrease in satisfaction with these services in the community, or whether it is due to differences in the people who completed the survey between the two cycles of the survey.

Figure 58 Patients very or somewhat satisfied with community-based care, 2003

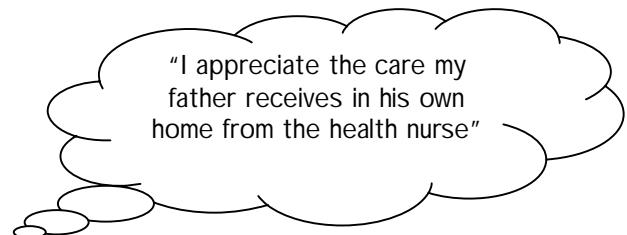
	Canada		Saskatchewan	
	Males	Females	Males	Females
Count	1,386,244	1,835,456	29,983	63,039
%	84.4	81.8	77.1	86.5

Source: Statistics Canada, CCHS 2.1;

Data suggests that, almost twice as many women as men received community-based care in 2003 (72,869 women to 38,911 men). The majority of these females also seemed to be satisfied with

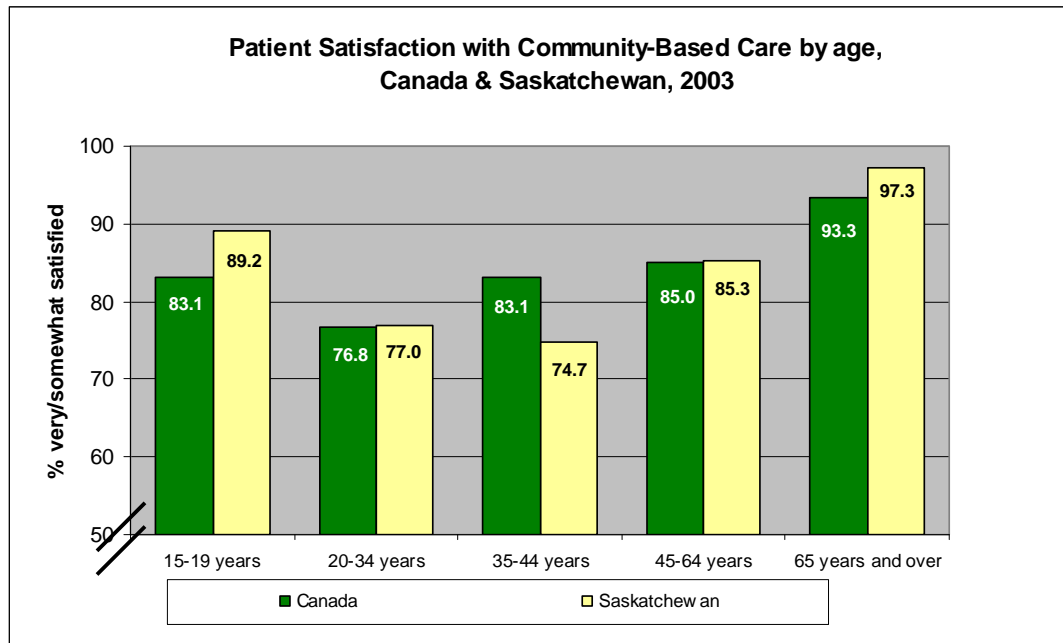
the services they received (fig 58). Estimates for Saskatchewan show that slightly more women (86.5%) than men (77.1%) were very or somewhat satisfied with community-based services.

Looking at Saskatchewan's data by age indicates some differences between age groups. The majority (97.3%) of seniors (aged 65+ years) were satisfied with community-based care in 2003. Only around three-quarters (74.7%) of adults aged 35-44 years felt the same way. In fact, it appears that the proportion of seniors who were satisfied with community-based care outweighs that of most other age groups, with the exception of 15-19 year olds where 89.2% of patients reported they were very or somewhat satisfied with care. Figure 59 outlines these results in more detail.



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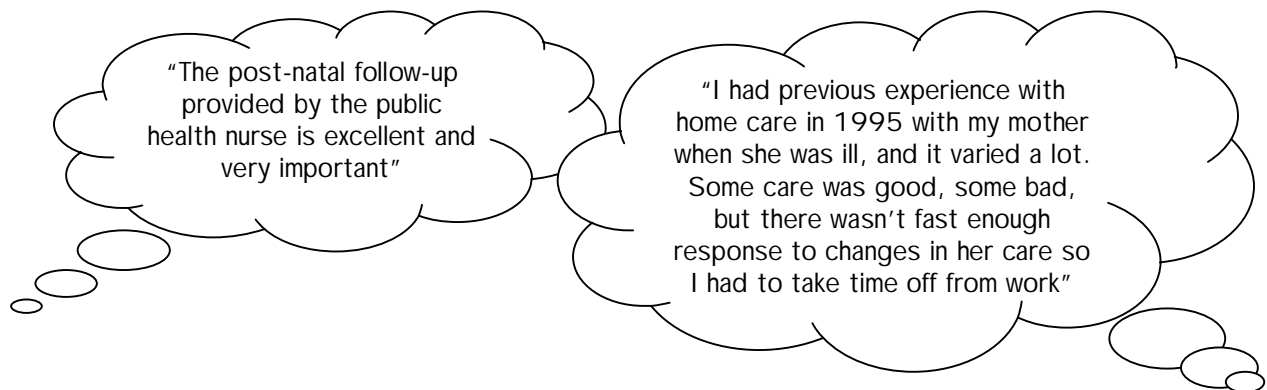
Figure 59 Satisfaction with community care by age, 2003



Source: Statistics Canada, CCHS 2.1;
Note, scale starts at 50% to highlight differences

Provincial/Territorial Comparison

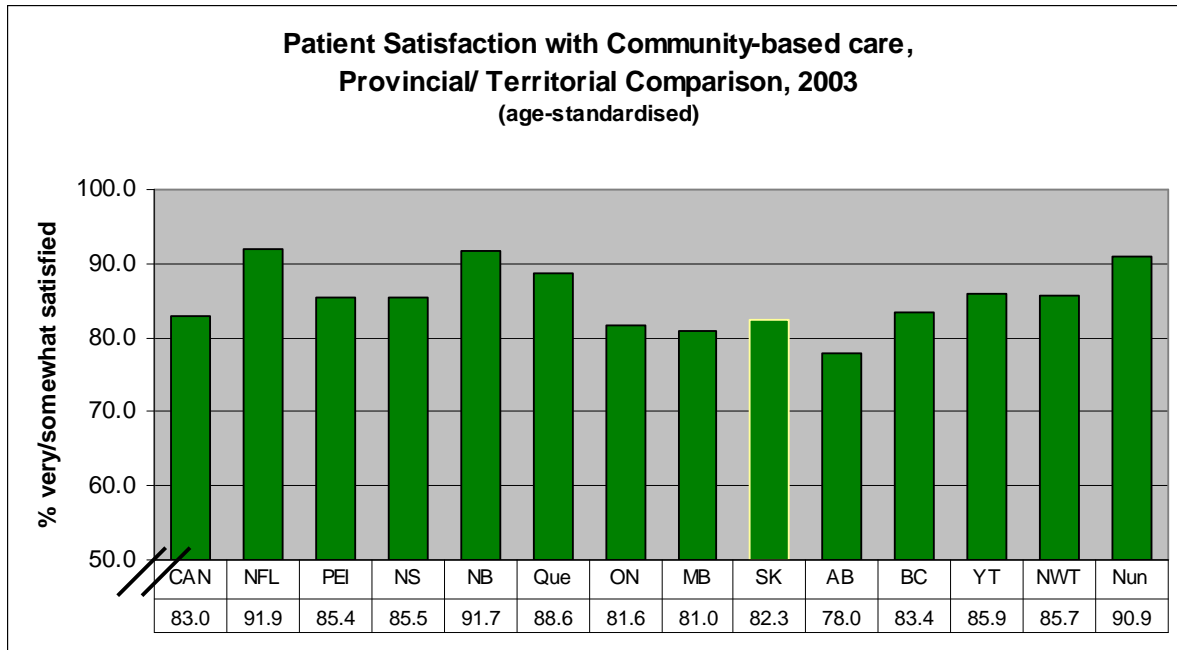
Age-standardised rates¹⁰² of patient satisfaction with community-based care in Saskatchewan (82.3%) are comparable to those observed at the national level (83.0%), and similar to other jurisdictions, Saskatchewan has the 4th lowest proportion of people very or somewhat satisfied with community-based care. This is in contrast to the other measures of patient satisfaction included so far in this report, where Saskatchewan has generally had one of the highest proportions of satisfied patients in the country.



¹⁰² Age-standardised rates are used to compare across provinces/ territories who have very different population age structures.

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Figure 60 Satisfaction with community care, Provincial/Territorial comparison



Source: Statistics Canada, CCHS 2.1;
Note, scale starts at 50% to highlight differences

Contributing Factors

It is difficult to identify specific factors that may contribute to satisfaction (or lack of it) with satisfaction measures of broad-based services such as community care. The needs and expectations of what one individual hopes to get from their outpatient drug and alcohol abuse clinic is likely to be very different from the needs and expectations of an elderly person who is dependent on home care services. That said, there are likely to be some common features that underlie quality of care. These include:

- Ease of access to these services,
- Availability and timeliness of being attended to,
- Interpersonal factors between users of the service and those providing the care, and
- Potential demographic factors such as age, gender, cultural background etc. that may all influence expectations of care and satisfaction with what is provided.

CHAPTER 4: HEALTHY PERCEPTIONS

Saskatchewan Progress Report

Many program initiatives have been undertaken or are under way in community-based care in order to enhance services provided to the residents of Saskatchewan. Some of these include:

- Development of an action plan for citizens with cognitive disabilities, including Fetal Alcohol Spectrum Disorder.
- The Kinship Centre in Regina, is a new comprehensive integrated service centre for behaviour disordered children and youth, and their families.
- Saskatchewan Health funds two provincial behaviour consultants to assist regional health authorities to plan for the complex care needs of residents of long term care facilities.
- Saskatchewan Health, in partnership with the regional health authorities, plans to review the provincial vision for mental health services.
- Saskatchewan Health, in partnership with the regional health authorities, plans to establish a provincial plan for continuing care.
- Saskatchewan Health, in partnership with the regional health authorities, plans to develop a provincial vision for children's mental health services.
- Saskatchewan Health, in partnership with the regional health authorities, is developing a strategy for the delivery of alcohol and drug services.

Further Information

- Visit Saskatchewan Health's website for the latest information on what we are doing to improve health care in Saskatchewan.

<http://www.health.gov.sk.ca/>

- For more information on community-based services in your area contact your local Regional Health Authority.

http://www.health.gov.sk.ca/ph_rha_contacts.html

Patient Satisfaction

Satisfaction with telehealth services

Key Messages

- Measures of patient satisfaction are becoming increasingly accepted as indicators of quality of care in the health system.
- The percentage of people aged 15 years and older in Saskatchewan who reported they were very or somewhat satisfied with telephone health/telehealth services was 86.0%. This was comparable to the national average (83.9%).
- The age-standardised rates for patient satisfaction with telehealth, suggests that Saskatchewan had the 9th highest rate throughout Canada in 2003 with 81.2% of users satisfied with the services.
- The majority of the users of these services were female. Of these female users, 90.0% reported they were very or somewhat satisfied with the services provided to them.
- Although there are limitations in interpreting survey data which does not distinguish between telephone health services and the telehealth service available in rural and remote areas of the province, it appears that the majority of the people in the province who had used these services in the last 12 months were, in general, satisfied with the care provided to them.
- More work is needed to fully understand the specific factors that contribute to feelings of satisfaction with telephone health lines and telehealth services specifically.

Introduction

Satisfaction with telehealth services is a new indicator for 2003, which reflects an increase in the use of technology to address the age-old problems of access to quality health care. This indicator applies to individuals who have used a telephone health line or telehealth service over a 12-month reference period. The most important limitation of this indicator for Saskatchewan is that there is no distinction made between satisfaction with telephone health line services such as HealthLine,

Saskatchewan Tele-health

A twelve-year old boy living in a remote northern community requires follow-up with a surgeon after paediatric surgery. Rather than make a 12-hour round trip to Saskatoon, the young patient and his family are able to attend a Telehealth site nearby and consult with the Saskatoon specialist through a two-way video link.

Source: Saskatchewan health Website:
http://www.health.gov.sk.ca/ps_telehealth.html

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the 24-7 telephone health advice line staffed by registered nurses which went into operation in August 2003 in the province, and satisfaction with telehealth services which provides clinical and educational services to rural or remote areas of the province through videoconference links with designated sites, and which can be used by patients, families, doctors, health providers and entire communities throughout the province. It is difficult to tell, therefore, from this data which way respondents interpreted this question, and whether satisfaction levels reflect use and contentment of the telephone health line, or Saskatchewan telehealth services, or both. (More information on data considerations can be found in [appendix-technical specifications](#)).

Figure 61 Map of telehealth sites in Saskatchewan

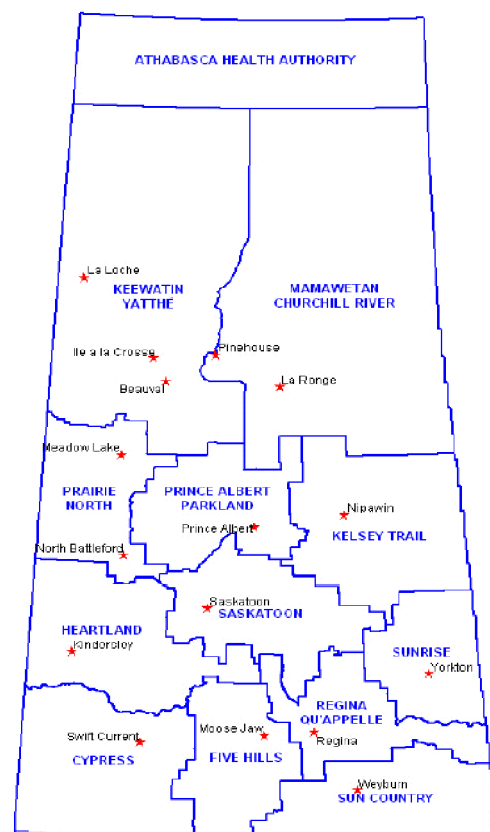
Source: Saskatchewan Health – Telehealth Services
Saskatchewan

Saskatchewan Profile

A total of 14,691* people in the province (aged 15 years and older) reported using a telephone health line or telehealth services in the last 12 months. Of these people, the vast majority, 86.0% reported that they were very or somewhat happy with the services they received.

Looking at the data by gender is hampered by small sample sizes, especially for males where the data is too unreliable to be published. What we do know is that the majority of the users of these services were female (12, 657* people). Of these female users, 90.0%* reported they were very or somewhat satisfied with the services provided to them.

Again, small sample sizes does not permit a breakdown of these results by age, most of the data for Saskatchewan being too unreliable to publish by age group.



For Telephone Health Services in Saskatchewan Call:

HealthLine
1-877-800-0002

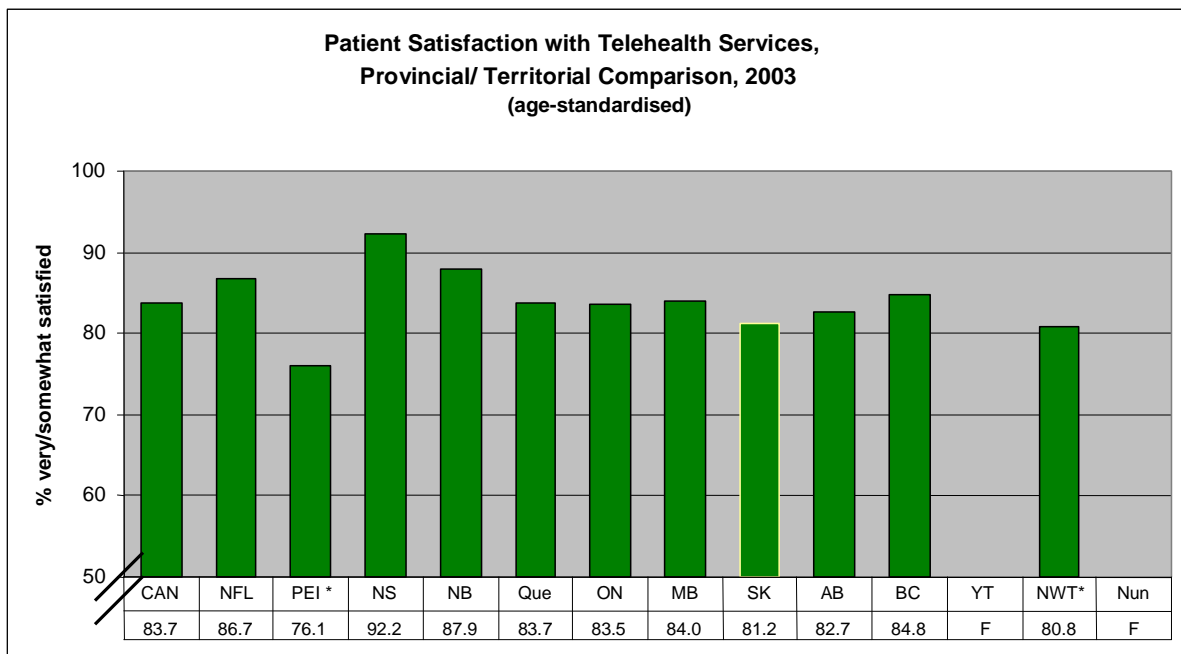
* Interpret with caution

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Provincial/ Territorial Comparison

The age-standardised¹⁰³ rate of people who are satisfied with telehealth services in Saskatchewan was 81.2% (fig 63). The national average in this year was 83.7%. In comparison to other jurisdictions for which data is available, Saskatchewan had the 9th highest proportion of respondents happy with these services. Again it is difficult to tell due to the nature of this question whether responses are comparable across the country. It is difficult to tell if respondents were rating their satisfaction for telephone health lines or telehealth services. It is likely that the understanding of this question was different from one jurisdiction to another shaped by the services currently available in that locality.

Figure 62 Satisfaction with telehealth, Provincial/Territorial comparison



Source: Statistics Canada, CCHS 2.1; Note, scale starts at 50% not 0% to highlight differences. * Interpret with caution, high sampling variability. F – too unreliable to publish

Contributing Factors

- Telehealth: Canada's diverse geography, transportation and climatic conditions, where 25-30% of the population reside in rural or northern isolated communities, creates problems of access to quality health care services. Telehealth services in Canada, have evolved, therefore, with a focus on rural, remote and northern communities. These network services have been created with the objective of eliminating distance as a barrier to health care, to support

¹⁰³ Age-standardised rates are used to allow comparisons across jurisdictions with very different age structures

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the delivery of essential clinical services from a distance, to improve access to specialist care, to improve recruitment and retention of health care providers in remote communities, and to reduce the need for travel and the sense of dislocation this can create¹⁰⁴. Satisfaction with these services, therefore, is likely to depend on individual need and experience with telehealth.

- Telephone health lines: Satisfaction with telephone health lines such as Saskatchewan's Healthline is also likely impacted upon by need for the service, and whether the information provided meets your expectations and is delivered in a way that is understandable by the user. Language barriers are a potential source of dissatisfaction with these services. In Saskatchewan service is provided in English but with translation available in a wide variety of other languages including French, Cree and Dene. TTY¹⁰⁵ access is also available for people with hearing or speech difficulties.

This first year of comparable data on satisfaction with telephone and telehealth services provides baseline information on the extent to which people who currently use these services are satisfied with them. Given the relatively small number of users of these services, and the fact that the majority are women, it will be interesting to observe trends in use and satisfaction with these services as more people become aware of their existence and start using them for a wider variety of purposes.

¹⁰⁴ Industry Canada. Information and Communications Technologies. Current Telehealth Applications <http://strategis.ic.gc.ca/epic/internet/inict-tic.nsf/en/it07545e.html>

¹⁰⁵ A TTY is also known as a TDD (Telecommunications Device for the Deaf)

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Saskatchewan Progress Report

In order to maintain and improve satisfaction with telehealth and telephone health services in the province current practices are continually being reviewed.

- The expansion of telehealth services in the province further improves access to health information and advice for people living in rural and remote areas of Saskatchewan. To date (2003-04) 351 educational sessions have been conducted, with 5,381 people attending, and a further 137 clinical sessions with a total of 309 patients seen. As of May, 2004, the telehealth network in the province expanded to include Yorkton, Kindersley, Weyburn, Moose Jaw, Swift Current and La Loche, bringing the total number of Telehealth sites to eighteen.
- Saskatchewan Health's HealthLine was launched in August 2003 to provide free and confidential 24-hour health advice. The number of calls logged is monitored to provide feedback on utilisation of this service. To date HealthLine has managed 65,819 calls. Calls have been received from every Health Region in the province with the majority coming from Saskatoon and Regina. Most callers tend to be between the ages of 26-60, with 75% of calls being symptom based.
- HealthLine is having a positive impact in terms of appropriate utilisation of health services. For example callers to HealthLine are asked at the end of the call where they would have gone if HealthLine was not available. From Jan. 1, 2004 to April 30, 2004, 1,863 callers indicated they would have gone to the Emergency Room. Of these 1,863 callers 546 were sent to Emergency Rooms. The remainder were directed to seek medical attention through a physician or health care provider or provided with information to manage at home.

Further Information

- For more information on Saskatchewan telehealth:
http://www.health.gov.sk.ca/ps_telehealth.html
- Saskatchewan's Healthline:
http://www.health.gov.sk.ca/ps_healthline.htm
- For more information on telehealth services around Canada and internationally:
<http://strategis.ic.gc.ca/epic/internet/inict-tic.nsf/en/it07545e.html#remote>

APPENDIX

Technical Specifications & Data Considerations

Chapter 1: Healthy People

(65-HLT) Self-reported health

Definition

Percent of the population aged 12 and older who report that their health is very good or excellent.

Rationale and Notes for Interpretation

Self-reported health is a general indicator of the overall health status of individuals. It can include what other measures may miss: incipient disease, disease severity, some aspects of positive health status, physiologic/psychological reserve, social and mental function.

Self-reported health data is collected using a five point reporting scale, ranging from excellent to poor. Studies indicate that when individuals rate their health in response to this question, they tap into information that has important predictive power relating to chronic disease incidence, functional decline and ultimately survival. Numerous longitudinal studies have found that self-reported health is predictive of mortality even when more objective measures such as clinical evaluations are taken into account. Inconsistencies between self-reported health data from population surveys and best estimates from epidemiological studies (under-reporting of undiagnosed conditions, over-reporting of some conditions, lack of information on condition severity) may explain why measures of self-reported health do not have credibility with all groups. This indicator applies to individuals, 12 years old and older living in private households.

Technical Specifications

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample.

Calculation: (Numerator/denominator) x 100, with weighting adjusted to reflect non-response.

Numerator: Estimated number of persons reporting excellent or very good health within a survey cycle for a given jurisdiction (response categories are excellent, very good, good, fair, poor).

Denominator: Total population aged 12 and over in the jurisdiction.

Source: Canadian Community Health Survey, 2003 and 2000/01; National Population Health Surveys (1994-95 to 1998-99).

References: Statistical Report on the Health of Canadians, ACPH, 1999, Health Reports, Vol. 11, No. 3 *How healthy are Canadians?*; NPHS and CCHS documentation and analysis found on www.statcan.ca/health_surveys, www.healthcanada.ca.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - Total, 12 years and over
 - 12 - 19 years
 - 20 - 34 years
 - 35 - 44 years
 - 45 - 64 years
 - 65 years and over.

Considerations for Indicator Quality and Comparability

APPENDIX: TECHNICAL SPECIFICATIONS

It is not known to what extent personal coping practices and social supports mitigate the effects of ill health on self-reported measures of health.

It is not known how wealth affects health and how income as a marker for social and economic conditions relates to health measures other than mortality and longevity.

The definition of health is determined by the individual when responding to this question and therefore will not be consistent for all respondents especially where pronounced gender and cultural differences exist.

Technical issues around the organization and interpretation of data may impact on an individual's self assessment

Responsibility to Produce the Data
Statistics Canada

(37 - HLT) Health adjusted life expectancy (HALE)

(37a-HLT) Health adjusted life expectancy (HALE) for overall population

Definition

Health Adjusted Life Expectancy (HALE) is an indicator of overall population health. It combines measures of both age- and sex-specific health status, and age- and sex-specific mortality into a single statistic. HALE represents the number of expected years of life equivalent to years lived in full health, based on the average experience in a population. In this sense, HALE is not only a measure of quantity of life but also a measure of quality of life.

Rationale and Notes for Interpretation

Canadians have been experiencing continuing increases in life expectancy for many decades. However, with the increasing prevalence of chronic disease, there has been an international debate as to whether or not these added years of life expectancy are years spent in good or poor health. By examining trends in HALE in conjunctions with trends life expectancy (LE), it is possible to assess whether Canadians' increasing life expectancy is associated with a "compression or an expansion of morbidity". In other words, if HALE increases more over time than LE, we can then conclude that added years of life expectancy are indeed more often years in better health. This example is one illustration of the use and interpretation of HALE.

As with life expectancy, HALE is a standardized statistical indicator. It is not the number of full health equivalent years a particular newborn (or person currently age 65) can actually expect to live. The reason is that mortality rates and levels of health status only for the observation period (e.g. 2001) are used, and these are averages for the entire population. Historically, mortality rates in Canada have been falling, so that the mortality rates individuals are likely to face in future years as they age may be lower. Canada does not yet have consistent data over a sufficiently long period to know what the trends in health status have been, or are likely to be in the future. Moreover, individuals' circumstances vary so that, for example, if they had become chronically ill at an early age, their particular health-adjusted life expectancy would be less.

This indicator should be presented by sex since HALE of women and men differs so much.

Coefficients of variation, confidence intervals (both of which are provided by Statistics Canada), and tests of significance must be analyzed before differences between provinces can be interpreted as real (statistically significant).

Technical Specifications

Exclusions: The National Population Health Survey Institutional component collects data on long-term residents (expected to stay six months or more) living in health care institutions with four or more beds. Institutions that exclusively provided short-term care, such as drug rehabilitation centres were excluded. Health care institutions in the Territories, on Indian reservations and Canadian Forces Bases, and within correctional facilities were excluded.

The CCHS excludes from its target population individuals living on Indian Reserves and on Crown Lands, residents of institutions, full-time members of the Canadian Armed Forces, and residents of certain remote regions. Persons less than 12 years of age are not surveyed.

APPENDIX: TECHNICAL SPECIFICATIONS

Part A: (average Health Utility Index (HUI) for institutional residents * percentage of population in institutions in the province) + (average HUI for household population * percentage of population in households in the province) = overall HUI score by sex and age group in each province.

Part B: Overall HUI by sex and age group * years of life lived in each age group = health adjusted years of life lived.

Part C: Health adjusted years of life lived are then summed and divided by the total number of persons surviving at given ages. This will provide HALE at birth and age 65 by province.

The following outline the sources used as well as the calculation of Coefficient of variation for HALE:

Data Sources Used

- 1996 Enumeration Areas by Income Tercile File
- 2000-2001 Abridged Life Tables by Income Tercile
- Canadian Community Health Survey, Cycle 1.1 (2000-2001)
- National Population Health Survey, Institutional File, Cycle 2 (1996-1997 cross-sectional file)
- 2001 Census Institutional Counts

1996 Enumeration Area by Income Tercile File

The enumeration area (EA) by income tercile file assigned each EA to a tercile based on income data from the 1996 Census. For each EA, the average household income was calculated and then assigned to a tercile. The first tercile contains EAs with the lowest incomes, the second tercile contains middle income EAs, and the highest income EAs are in the third tercile.

Wilkins et al (2002)¹⁰⁶ classified 1996 Census EAs into income terciles based on income per single-person equivalent, which is a household size-adjusted average household income (pre-tax, post-transfer) at the EA level. Because of different costs of living, the income terciles were derived separately for each Census Metropolitan Area (CMA) or Census Agglomeration (CA), as well as for rural areas within each province.

Life Tables

A special abridged life table for Canada and the provinces was created based on 2000 and 2001 death data for each income tercile and by age group, sex, and province. Income terciles were assigned by the ecological approach using the work of Wilkins et al, where deaths as of 1995-97 were linked to 1996 Census EA terciles based on postal code of place of residence. The ratios of deaths by age group, sex, and province in 1995-97 were used to assign deaths in 2000 and 2001 to income terciles. This was done in the absence of postal codes tied to the latest deaths which would have made it possible to assign income terciles to 2001 geographic units (dissemination areas).

The tercile assigned deaths of 1995-97 excluded the institutional component of the population since the ecological approach to assign income levels was considered inappropriate for the population living in institutions. There were approximately 5% of deaths overall that were unassigned to terciles (mostly associated with the highest age groups) due to this exclusion of institutions. The 2000-2001 ratios were formed by taking the proportion of deaths in each tercile over the sum of deaths in all terciles. These ratios were then used to assign all deaths of 2000-2001, to account for the whole population (institutionalized component included). The distribution of deaths of institutionalized residents across terciles is therefore evenly distributed, instead of excluded.

Canadian Community Health Survey

The CCHS was used for calculating the average health utility index (HUI) by age groups, sex, province, and income tercile. As well, household population counts were also collected from the CCHS.

¹⁰⁶ Wilkins, Russell, Edward Ng, Jean-Marie Berthelot, and Francine Mayer. (2002). "Provincial Differences in Disability-Free Life Expectancy by Neighbourhood Income and Education in Canada, 1996". Technical Report to the Performance Indicators Reporting Committee (PIRC) of the Federal-Provincial-Territorial Conference of Deputy Ministers of Health.

APPENDIX: TECHNICAL SPECIFICATIONS

In order to calculate HUI and population counts by income tercile, respondents' enumeration areas were assigned to income terciles based on the 1996 EA by Income Tercile File mentioned above. While income data are collected by the survey, there is no way in which the survey income data could be linked directly to deaths. Therefore, the ecological approach for assigning respondents to terciles was applied to be consistent with the life table terciles.

Cycle 1.1 was used to be consistent with the 2000-2001 abridged life table as well as the institutionalized population count from the 2001 Census.

Persons under age fifteen were excluded from the calculations. The CCHS only collects data for respondents aged 12 and over. Persons 12 to 14 had to be excluded to match the age groupings in the abridged life tables. All respondents under age 15 were given a HUI score of 1.00.

National Population Health Survey

The 1996-1997 NPHS Institutional Component was used to produce the HUI for institutional residents since they were not part of the CCHS sampling frame. The average HUI was calculated by age groups (under 65 and 65+), sex, and region (Atlantic Provinces, Quebec, Ontario, the Prairie Provinces, and British Columbia). Because of the small sample size, especially among younger respondents, the HUI was only calculated for two broad age groups. The NPHS does not collect data at the provincial level, thus the regional grouping.

The ecological approach was considered inappropriate for the institutional population since their place of residence has more to do with health needs than choice of neighbourhood. Therefore, individual respondents could not be matched to an EA tercile and HUI could not be calculated by tercile for each respondent.

In order to assign terciles to persons living in institutions in a manner consistent with the assignment of terciles for household residents, the NPHS longitudinal file was analyzed. Respondents who lived in the community during the 1994 NPHS but moved into an institution in any subsequent cycle were coded to an EA tercile based on the postal code of their household in 1994. As a result, 39.1% of institutional residents were placed in the first tercile, 37.8% in the second tercile, and 23.2% in the third tercile. The above proportions were only used for assigning institutional population counts to terciles. The HUI was held constant across terciles for institutionalized residents.

In order to match the age groupings of the CCHS and life table, respondents under the age of 15 living in institutions were excluded and given a HUI value of 1.00.

Because of the small sample size, HUIs by region for the institutionalized population cannot be released.

Census Institutional Counts

A number of different data sources for the institutional counts were considered. The NPHS Institutional file could not be used because of different sampling frames between some of the provinces. As well, the NPHS would only provide counts regionally not provincially. The Residential Care Facility Survey could not be used because the age groupings did not match the age groupings of the abridged life table. As a result, the Census was judged to be the preferred data source for institutional population counts. In order to match the sampling frame of the NPHS (used for the HUI), only persons living in nursing homes, residences for seniors (persons less than 65 were excluded), and treatment centres and institutions for persons with a disability were included in the counts. Persons living in smaller treatment centres (group homes, for example) with less than 12 residents are included in the CCHS sampling frame.

The proportion of the population living in institutions or households for each age group, sex, province, and tercile were calculated in order to weigh the institutional and non-institutional HUIs.

Computation of the precision for the Health adjusted life expectancy (HALE):

This appendix explains how the different measures of precision were computed for the HALE. The primary objective is to obtain HALE standard errors in order to derive coefficients of variation (CVs) and confidence intervals (CIs).

HALE itself is computed using two sources of data; first mortality data is used to obtain the life expectancy part of the equation, then survey data is used to derive the health status-adjusted part. Both of these sources bring

APPENDIX: TECHNICAL SPECIFICATIONS

some sort of variability in the computation of the HALE. Therefore, when computing standard errors for HALE, the variability from both sources must be accounted for.

Mathers (1991)¹⁰⁷ presents the details of standard error calculations in the context of Disability free life expectancy (DFLE) which is arithmetically closely related to HALE. Equation C.14 from Appendix C of Mathers was used as the starting point for deriving the variance formulae for HALE. The equation was adapted and consists of the following:

$$V(HALE_a) = \sum_{i=a}^{w-1} l_i^2 \left[(1-f_i) n_i HUI_i + HALE_{i+1} \right]^2 V(q_i) / l_a^2 + \sum_{i=a}^w LL_i^2 V(HUI_i) / l_a^2$$

where,

- i = index representing the age group
- w = total number of age groups used for the derivation of HALE (w=20 in our case)
- a = specific age group for which the HALE is computed. Values of a=0 (HALE at birth) and a=15 (HALE at 65 yrs old) were used.
- l = number of survivors
- LL = number of Life years lived in this age group
- n = length of the age interval (most age intervals used were 5 years)
- HUI = global health utility index derived from both household and institution data sources
- HALE = health adjusted life expectancy
- f = fraction of age interval lived by individuals who die in the interval. This was calculated using l and LL as follows:

$$f_i = \left(\left\lfloor L_i / n_i \right\rfloor - l_{i+1} \right) / (l_i - l_{i+1})$$

The variances were therefore computed using this formula for each sub-population of interest, which were based mainly on the province * sex * income tercile variables.

The standard error can be obtained by taking the square root of the variance, while the CV for a specific estimate of HALE can be derived by taking the ratio between the standard error of the estimate and the estimate itself. Finally, the boundaries of the CI are obtained by adding and subtracting 1.96 times the standard error to the HALE estimate.

Details of computation

All parameters used in the variance equation presented above were already all defined for the calculation of the HALE itself. Only the variance of the HUI was left to compute in order to be able to compute the variance of HALE. The computation is examined in the next section below.

Variance of the HUI

The HUI used in the calculation of the HALE variance is computed using two survey data sources; the CCHS Cycle 2.1 survey data for the portion of the population living in households, and the NPHS Cycle 2 Institution survey data for the population that is institutionalized. In fact, the HUI is defined as:

$$HUI_i = (HUI_{i,hhld} \times p_{i,hhld}) + (HUI_{i,inst} \times p_{i,inst})$$

where,

- $HUI_{i,hhld}$ is the HUI computed specifically for age group i for the population living in households, using CCHS Cycle 2.1 data
- $p_{i,hhld}$ is the proportion of the whole population (households + health institutions) that is living in households.
- $HUI_{i,inst}$ is the HUI computed specifically for age group i for the population living in health institutions, using NPHS Cycle 2 Institution data

¹⁰⁷ Mathers, C. (1991). Health Expectancies in Australia, 1981 and 1988. Canberra: Australian Institute of Health/Australian Government Publishing Service.

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$P_{i,inst}$ is the proportion of the whole population (households + health institutions) that is living in health institutions.

Although technically both proportions $P_{i,hhld}$ and $P_{i,inst}$ are associated with some sampling error, for simplicity of calculation, they were both considered as constant when deriving the variance formula of the HUI. The variance equation was therefore defined as:

$$V(HUI_i) = (p_{i,hhld}^2 \times V(HUI_{i,hhld})) + (p_{i,inst}^2 \times V(HUI_{i,inst}))$$

where,

$V(HUI_{i,hhld})$ is the variance computed for the household population

$V(HUI_{i,inst})$ is the variance computed for the institutionalized population

Both survey data sources used are designed according to two different sampling plans, which must be reflected in the HUI variances calculations. Since CCHS uses a multistage stratified design, $V(HUI_{i,hhld})$ was computed using the bootstrap technique. This resampling technique is the method adopted by the survey in order to compute accurate sampling error measures (for more details about the method, consult the CCHS public-use microdata files (PUMF) users guides). As for $V(HUI_{i,inst})$, it was obtained using an exact variance formula since the NPHS Institution survey relies on a simpler design, that is, a simple stratified design.

Finally, a few technical points should be noted:

- For the institution population, since the HUI value for younger age groups could not be computed (because these age groups are not covered by the survey), a value of 1 was set for the HUI of these age groups. Consequently, for variance calculation purposes, the variance of these cases was set to 0.
- For a small number of cases, the variance of the HUI could not be computed since the sample available for the specific age group of the sub-population was 1. For those cases, a variance was imputed from a neighbouring group.
- Similarly, for some cases related to small sub-populations, the f parameter could not be estimated since the number of survivors (l) had not changed between the two age groups implicated in the calculation (resulting in a division by 0). In these cases, the f parameter was imputed by the mean of similar sub-populations.

Using the computed CV, HALE estimates were finally validated against the quality assurance guidelines. The guidelines stipulate that an estimate with a CV between 16.5% and 33.3% is marginal, and should be identified as such in the publication. As well, if the CV is greater than 33.3%, the estimate is considered to be of poor quality and should not be considered for publication. For further details about the quality assurance guidelines, consult any CCHS public-use microdata file users guide.

Source: NPHS, Institutional Component for HUI of persons living in institutions (1996-1997 cross-sectional sample), 2001 Census for counts of persons in long-term health care institutions (to match with sampling frame of the NPHS), CCHS Cycle 1.1 (common content) for HUI and counts of persons in households. 2000/2001 abridged life tables.

References: Berthelot, Jean-Marie. (2003). Health-adjusted Life Expectancy (HALE). In J-M Robine, C. Jagger, C.D. Mathers, E.M. Crimmins and R.M. Suzman (eds.), Determining Health Expectancies p.235-246. West Sussex, England: John Wiley & Sons Ltd.

Data Availability

- HALE will be calculated at birth and at age 65, by province and sex only.
- Data are not available for the territories

Considerations for Indicator Quality and Comparability

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

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HALE will be calculated at birth and age 65. However, HALE at birth will be based on data for those aged 15 and over.

Because of the small sample size for the institutional component of the NPHS the average HUI for institutional residents will be calculated for people under 65 and people aged 65 and over. As well, the NPHS provides only regional data so the average HUI for institutional residents will be calculated for the Atlantic Provinces, Quebec, Ontario, the Prairie Provinces, and British Columbia.

Responsibility to Produce the Data
Statistics Canada

(37b-HLT) Health adjusted life expectancy (HALE) by income

Definition

Health Adjusted Life Expectancy (HALE) is an indicator of overall population health. It combines measures of both age- and sex-specific health status, and age- and sex-specific mortality into a single statistic. HALE represents the number of expected years of life equivalent to years lived in full health, based on the average experience in a population. In this sense, HALE is not only a measure of quantity of life but also a measure of quality of life.

Rationale and Notes for Interpretation

Canadians have been experiencing continuing increases in life expectancy for many decades. However, with the increasing prevalence of chronic disease, there has been an international debate as to whether or not these added years of life expectancy are years spent in good or poor health. By examining trends in HALE in conjunctions with trends in life expectancy (LE), it is possible to assess whether Canadians' increasing life expectancy is associated with a "compression or an expansion of morbidity". In other words, if HALE increases more over time than LE, we can then conclude that added years of life expectancy are indeed more often years in better health. This example is one illustration of the use and interpretation of HALE.

As with life expectancy, HALE is a standardized statistical indicator. It is not the number of full health equivalent years a particular newborn (or person currently age 65) can actually expect to live. The reason is that mortality rates and levels of health status only for the observation period (e.g. 2001) are used, and these are averages for the entire population. Historically, mortality rates in Canada have been falling, so that the mortality rates individuals are likely to face in future years as they age may be lower. Canada does not yet have consistent data over a sufficiently long period to know what the trends in health status have been, or are likely to be in the future. Moreover, individuals' circumstances vary so that, for example, if they had become chronically ill at an early age, their particular health-adjusted life expectancy would be less.

This indicator should be presented by sex since HALE of women and men differs so much.

Coefficients of variation, confidence intervals (both of which are provided by Statistics Canada), and tests of significance must be analyzed before differences between provinces can be interpreted as real (statistically significant). HALE will be calculated by income tercile.

Technical Specifications

Exclusions: The National Population Health Survey Institutional component collects data on long-term residents (expected to stay six months or more) living in health care institutions with four or more beds. Institutions that exclusively provided short-term care, such as drug rehabilitation centres were excluded. Health care institutions on Indian reservations and Canadian Forces Bases or within correctional facilities were excluded.

The CCHS excludes from its target population individuals living on Indian Reserves and on Crown Lands, residents of institutions, full-time members of the Canadian Armed Forces, and residents of certain remote regions. Persons less than 12 years of age are not surveyed.

The life tables exclude non-residents of Canada.

Calculation: Based on previous work by Wilkins et al (2002) 1996 life tables by income terciles were constructed using an ecological approach. Deaths were coded to the EA based on postal codes. Average income for each enumeration area (EA) was calculated and then EAs were

APPENDIX: TECHNICAL SPECIFICATIONS

assigned to the bottom, middle, or highest income tercile. The life tables were then constructed using deaths assigned to each income tercile. The 1996 percentage of deaths in each income tercile will be applied to the 2000/2001 life tables.

Using the EA link in the CCHS, respondents will be placed in one of the three income terciles. Mean HUI will be calculated for each tercile by age, sex, and province. The 1994 NPHS household longitudinal file was analyzed in order to determine the tercile distribution for institutional residents. The postal codes of respondents who lived in the community in 1994 but were living in an institution during a subsequent survey cycle were assigned to a tercile based on their EA of residence in 1994. This tercile distribution was then applied to determine the percentage of institutional residents in each income tercile.

HALE will be calculated for each province according to the method described below for each income tercile.

Part A: (average Health Utility Index (HUI) for institutional residents * percentage of population in institutions in the province) + (average HUI for household population * percentage of population in households in the province) = overall HUI score by sex and age group in each province

Part B: Overall HUI by sex and age group * years of life lived in each age group = health adjusted years of life lived

Part C: Health adjusted years of life lived are then summed and divided by the total number of persons surviving at given ages. This will provide HALE at birth and age 65 by province.

For details concerning the data sources and the calculations of Coefficient of variation for HALE, see technical notes for Indicator 37 a.

Source: NPHS, Institutional Component for HUI of persons in institutions (1996-1997 cross-sectional sample), 2001 Census for counts of residents living in long-term health care institutions (to match with sampling frame of the NPHS), CCHS Cycle 1.1 (common content) for HUI and counts of persons in households. 2000/2001 abridged life tables adjusted to 1996 income terciles.

References: Berthelot, Jean-Marie. (2003). Health-adjusted Life Expectancy (HALE). In J-M Robine, C. Jagger, C.D. Mathers, E.M. Crimmins and R.M. Suzman (eds.), *Determining Health Expectancies* p.235-246. West Sussex, England: John Wiley & Sons Ltd.

Wilkins, Russell, Edward Ng, Jean-Marie Berthelot, and Francine Mayer. (2002). "Provincial Differences in Disability-Free Life Expectancy by Neighbourhood Income and Education in Canada, 1996". Technical Report to the Performance Indicators Reporting Committee (PIRC) of the Federal-Provincial-Territorial Conference of Deputy Ministers of Health.

Data Availability

- HALE will be calculated at birth and at age 65 by sex only, income tercile, and province.
- The territories will be excluded.

Considerations for Indicator Quality and Comparability

HALE will be calculated at birth and age 65. However, HALE at birth will be based on data for those aged 15 and over.

Because of the small sample size for the institutional component of the NPHS the average HUI for institutional residents will be calculated for people under 65 and people aged 65 and over. As well, the NPHS provides only regional data so the average HUI for institutional residents will be calculated for the Atlantic Provinces, Quebec, Ontario, the Prairie Provinces, and British Columbia. The average HUI will be the same for all income terciles of institutional residents.

The ecological approach based on enumeration area (EA link) is not appropriate to use for institutional residents since institutional residents move to an institution not because of the neighbourhood but because of their need for health care. Thus neighbourhood income is not necessarily a reflection of the income of institutional residents.

APPENDIX: TECHNICAL SPECIFICATIONS

The EA link and coding of deaths to EAs is based on the average incomes in each EA in 1996. The tercile each EA was assigned to in 1996 is then applied to the 2000/2001 CCHS. As well, the same percentage of deaths in each income tercile in 1996 is applied to the 2000/2001 life tables (i.e. if 40% of deaths occurred in the lowest income tercile in 1996 then 40% of deaths occurred in the lowest income tercile in 2000/2001).

Responsibility to Produce the Data
Statistics Canada

(63-HLT) Prevalence of diabetes

Definition

The prevalence rate of diagnosed diabetes among health service users per 100 population.

Rationale and Notes for Interpretation

The period prevalence of diabetes gives an idea of the importance or burden of this disease at a given time and is widely used in public health monitoring and planning. It has been estimated that approximately 5% of all Canadians are affected by diabetes, thereby generating direct costs related to physician and hospital care, prescription drugs, and other costs borne by individuals, as well as indirect costs including premature death or disability (NDSS, 2003).

Technical Specifications

Exclusions: Persons younger than 20 year of age, New Brunswick and Newfoundland & Labrador.

Calculation: $(\text{Numerator}/\text{denominator}) \times 100$

Numerator: Number of cases in persons 20 years of age and older.

Denominator: Estimated population using health registry and census data for those persons 20 years and older.

Source: Health Canada (2003), Responding to the Challenge of Diabetes in Canada. First Report of the National Diabetes Surveillance System (NDSS) Ottawa.

Data Availability

- Data available for fiscal years 1997/98, 1998/99, 1999/2000.
- Data is only available for those 20 years of age and older.
- Data is included for all provinces and territories EXCEPT New Brunswick and Newfoundland and Labrador.
- Data is available by sex and age group (20-29, 30-39, 40-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-79, 80-84, 85+).
- Crude and age-standardized rates are available

Considerations for Indicator Quality and Comparability

Data is based on administrative data therefore its quality is constrained by the accuracy of those systems.

Data should not be used for trend analysis.

Some data produced for the September 2002 Comparable Health Indicators Reports may have changed due to updated provincial and territorial numbers therefore, data tables provided for the November 2004 Comparable Health Indicators Reports, replaces all previous data tables.

Minor variations in data will occur when comparing data with other federal and provincial/territorial publications because of reporting delays, different cut-off dates and date of access to Statistics Canada's population estimates.

The true prevalence of diabetes is unknown as many people may have diabetes but remain undiagnosed.

Note to Readers: Readers should be cautious when interpreting these data;
Disclosure of Limitations:

APPENDIX: TECHNICAL SPECIFICATIONS

- Three types of diabetes are included in the database: Type 1, Type 2, and gestational diabetes. Note that gestational diabetes is only included when coded as diabetes mellitus (ICD9 code 250).
- A baseline error rate of 20% to 25% exists in the published (1999/2000) data;
- This level of error is accepted by Health Canada and by those national experts identified by Health Canada;
- Since 1997-98, these data have been accumulating false positives. For the data published here this may not have a significant impact. Health Canada plans to work to reduce these errors so that by the time it publishes the 2001-02 data, this accumulation will not become significant; and
- This “baseline error rate” is likely to vary by age and sex groups.

Responsibility to Produce the Data
Health Canada

(44-HTL) Mortality rate for acute myocardial infarction (AMI)

Definition

The number of deaths of individuals where the underlying cause of death is one of those specified, per 100,000 population, that would be observed in the population if it had the same age composition as the reference or “standard” population.

Rationale and Notes for Interpretation

Age-standardized cancer or AMI or cerebrovascular disease death rate trends may indicate long-term success in reducing deaths from these diseases, compared with other provinces and countries. Lower death rates indicate success in cancer or cardiovascular disease prevention, detection, and treatment.

Technical Specifications

Exclusions: Deaths of non-residents of Canada.

Calculation: The age-standardized death rate for each cancer site (colon/rectum, female breast, and prostate) and for acute myocardial infarction and cerebrovascular disease is calculated by multiplying each observed age-specific death rate by the standard population in the corresponding age-group, summing the results, multiplying the sum by 100,000 and then dividing the product by the total standard population. The 1991 Canadian Census population is used as the standard population.

Causes of death are classified according to the ICD-9 from 1979 to 1999. The year 2000 and subsequent years available are coded to ICD-10. The selected causes are presented here with corresponding codes from each ICD revision.

Cause	ICD-9	ICD-10	Impact of ICD-10
colorectal cancer	153-154	C18-C21	-
lung cancer	162	C33-C34	2% decrease
breast cancer	174	C50 (and specify sex=F)	-
prostate cancer	185	C61	3.3% increase
acute myocardial infarction	410	I21-I22	2.7% decrease
Cerebrovascular disease	430-438	I60-I69 *	6.9% increase
selected cerebrovascular diseases **	430-432, 434, 436	I60-I66	?

* I60-I69 does not include a category comparable to ICD-9 code 435, transient cerebral ischemia (ICD-10 G45)

** PIRC refers to “all stroke” for this subset which is not an accurate description. The STC Vital Statistics classification experts would refer to this unconventional grouping as “selected cerebrovascular diseases”.

Source: Statistics Canada, Vital Statistics, and Demography Division; ISQ.

References: Statistics Canada Vital Statistics Death Databases.

APPENDIX: TECHNICAL SPECIFICATIONS

Data Availability

- Age-standardized mortality rate is reported per 100,000 (1991 Canadian Census standard population) and to one decimal place, though attention should also be drawn to any qualifications on data quality provided by Statistics Canada/ISQ.
- Age-standardized mortality rate is reported for each sex separately where applicable.
- Results from the most recent mortality data available at the national level (2001) are reported.
- Over 20 years of data (1979-2001) available for Canada, the Provinces and the Territories, however, the time series comparability is broken by the implementation of ICD-10 for 2000 data.

Considerations for Indicator Quality and Comparability

Note regarding comparable reporting over time: From 1979 to 1999, the underlying cause of death was coded using ICD-9; beginning with 2000, the underlying cause of death was coded using ICD-10, thus introducing discontinuity to the trend data. To help users interpret the impact of the conversion, i.e., the extent to which it affects comparability, a sample of the data for 1999 were also coded to ICD-10. Bridge coding reveals a significant impact on comparability (break in series) for lung cancer and prostate cancer death, unintentional injuries, AMI, and cerebrovascular disease deaths due to the implementation of ICD-10.

Responsibility to Produce the Data

Statistics Canada

Chapter 2: Healthy Practices, Healthy Places

(67-HLT) Physical activity

Definitions

- a) Percentage of population aged 12 and over who report a physical activity index of "active".
- b) Percentage of population aged 12 and over who report a physical activity index of "inactive".

Rationale and Notes for Interpretation

Maintaining physical activity is associated with a range of health benefits. Many studies have shown that regular physical activity confers major heart health benefits and that inactivity is a major risk factor for heart disease. Recent evidence from the National Population Health Survey supports this conclusion, and also shows that physically active individuals are less likely to become depressed.

Technical Specifications

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.

Calculation: (Numerator/denominator) x 100

The physical activity index is based on an individual's energy expenditure (EE). EE is calculated using the frequency and duration per session of physical activity, as well as the MET (metabolic) value. The MET is the energy cost of the activity expressed as kilocalories expended per kilogram of body weight per hour of activity, doing a physical activity during the past 3 months, the number of times and time spent on each activity. A physical activity index is calculated to determine energy expenditure values (EE). The derived physical activity index results in the following categories:

Description	Definition
Active	Average 3.0 +kcal/kg/day of energy, or exercise required for cardiovascular health benefit
Moderate	Average 1.5-2.9 kcal/kg/day, some health benefits but little cardiovascular
Inactive	Energy expenditure below 1.5 kcal/kg/day

Numerator: a) Number of individuals reporting combined active (≥ 3.0 kcal/kg/day) and moderately active levels of physical activity (1.5-2.9 kcal/kg/day).

b) Number of individuals reporting an inactive level of physical activity (< 1.5 cal/kg/day)

Denominator: Total population aged 12 and over.

Source: Canadian Community Health Survey – Cycle 2.1 2003 and Cycle 1.1 2000/01;

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

National Population Health Survey, 1994/95 to 1998/99.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - Total, 12 years and over
 - 12 - 19 years
 - 20 - 34 years
 - 35 - 44 years
 - 45 - 64 years
 - 65 years and over.

Considerations for Indicator Quality and Comparability

It is not known how well self-reported data on physical activity patterns corresponds to actual activity

The extent to which underlying factors such as social, environmental, and economic conditions have on an individual's level of physical activity are not known.

The only way to collect data about physical activity is through surveys. However, some populations are systematically under-represented in surveys. For example northern residents may not be surveyed because of fewer telephones in the North or the inability of interviewers to access rural and remote populations. Data collection in the Yukon, the Northwest Territories and Nunavut is more costly.

Readers should be cautioned in the interpretation of changes over time for this indicator as some differences in the indicator rates between some jurisdictions and between years can be explained partly by the effect of how information is collected within each jurisdiction and within each year rather than being due to real changes. However, the exact nature of these differences is unknown.

Responsibility to Produce the Data

Statistics Canada

(66-HLT) Teenage smoking rates

(66a-HLT) Teenage smoking rates: Proportion current teenage smokers

(66b-HLT) Teenage smoking rates: Proportion daily smokers

Definition

Percentage of population aged 12 - 19 (inclusive) reporting they are current smokers (current includes daily and occasional smokers) at the time of the interview and percentage of population aged 12 - 19 (inclusive) reporting they are daily smokers at the time of the interview.

Rationale and Notes for Interpretation

Tobacco use is the leading cause of preventable illness and death in Canada. Health Canada estimates that smoking is responsible for more than 45,000 deaths per year. The indicator is the proportion of those aged 12-19 who report current smoking. Because of the addictive nature of nicotine, youth smoking is of particular concern. It is estimated that approximately eight out of every 10 people who try smoking become habitual smokers.

Technical Specifications

The data are based on the question: At the present time do you smoke cigarettes daily, occasionally or not at all?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.

Calculation: $(\text{Numerator/denominator}) * 100$

Numerators: Number of individuals, aged 12 - 19 who report: (a) current smoking; (b) daily smoking.

Denominator: Total population aged 12 - 19.

Source: Canadian Community Health Survey 2003 and 2000/01; National Population Health Survey, 1994-95 to 1998/99.

Data Availability

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

- Crude rates reported of (a) daily smokers; and (b) occasional smokers, aged 12 - 19.
- Data available for Canada, the provinces and the territories.

Considerations for Indicator Quality and Comparability

The only way to collect data about smoking is through surveys. However, some populations are systematically under-represented in surveys. For example northern residents may not be surveyed because of fewer telephones in the North or the inability of interviewers to access rural and remote populations. Data collection in the Yukon, the Northwest Territories and Nunavut is more costly.

This indicator relies on individuals' self-reporting smoking habits. Smokers inevitably under-report their consumption, and there is some suggestion that respondents may partially modify their perceptions to reflect greater social desirability, or simply may be unable to accurately determine the regularity of their smoking habit. However, since under-reporting is consistent for both women and men, and among all age groups, year-to-year comparisons can be made with a degree of confidence.

Responsibility to Produce the Data

Statistics Canada

(68-HLT) Body mass index

Definition

Percent of adults who report a [computed] body mass index in specified categories, ranging from underweight to obese.

Body mass index (BMI) is based on self-reported height and weight, and calculated for persons 18 years of age and over, excluding pregnant women. Due to different rates of growth for individuals under 18 years of age, the standard BMI is not considered a suitable indicator for this group. BMI is calculated as weight (in kilograms) divided by height (in meters) squared.

Rationale and Notes for Interpretation

Obesity has been identified as a major risk factor contributing to a number of chronic illnesses such as diabetes and heart disease. BMI is the most common method of determining if an individual's weight is in a healthy range. Data on height and weight are based on self-report survey responses. Individuals may not always report reliably. The effect of excess weight as a risk factor for various diseases increases with BMI above the threshold of 25; this is a widely used standard in the health literature.

Technical Specifications

Exclusions: Everyone less than 18 years of age, persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample. Also excluded are pregnant women, and persons measuring less than 914 centimetres (3 feet) or greater than 210.8 centimetres (6 feet 11 inches) in height.

Calculation: (Numerator/denominator) x 100

Numerators: Population aged 18 years and over reporting a BMI in each of the four categories shown under requirements below.

Denominator: Total population aged 18 years and over.

Source: Canadian Community Health Survey, Cycle 2.1 2003, Cycle 1.1 2000/01;
National Population Health Survey, 1994/95 to 1998/99.

Data Availability

- Data available for Canada, the provinces and the territories, by sex.
- Results are presented as a distribution with the following categories:

<18.5	(underweight)
18.5 - 24.9	(acceptable weight)
25.0 - 29.9	(overweight)
≥30.0	(obese)
30.0 - 34.9	(obese Class I)
35.0 - 39.9	(obese Class II)
≥40.0	(obese Class III)

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

- Results from the most recent year (2003) are reported.
- Crude and age-standardized data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - Total, 18 years and over
 - 18 - 34 years
 - 35 - 44 years
 - 45 - 64 years
 - 65 years and over.

Considerations for Indicator Quality and Comparability

The definition for BMI has been modified from the one used with previous data released by Statistics Canada, in order to respect the latest guidelines from Health Canada, which in turn, correspond to those of the World Health Organisation.

The extent to which underlying factors such as social, environmental, and economic conditions have on an individual's weight are not known

BMI does not distinguish between lean muscle mass weight.

The information for this indicator was collected through a survey. However, some populations are systematically under-represented in surveys. For example northern residents may not be surveyed because of fewer telephones in the North or the inability of interviewers to access rural and remote populations. Data collection in the Yukon, the Northwest Territories and Nunavut is more costly.

Readers should be cautioned in the interpretation of changes over time for this indicator as some differences in the indicator rates between some jurisdictions and between years can be explained partly by the effect of how information is collected within each jurisdiction and within each year rather than being due to real changes. However, the exact nature of these differences is unknown.

Responsibility to Produce the Data

Statistics Canada

(69-HLT) Immunization for influenza, aged 65 plus ("Flu Shot")

Definition

Proportion of population 65 and over who report having a flu shot in the past year.

Rationale and Notes for Interpretation

The indicator reports time of last immunization. Individuals aged 65 and over who have not been immunized in the past year are asked why not. Data are available from the CCHS for a subset of the sample, but will allow for estimates at provincial and national levels.

Technical Specifications

This indicator is usually reported as the proportion of individuals reporting immunization within certain time frames. The questions asked are: Have you ever had a flu shot? When did you have your last flu shot?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.

Calculation: $(\text{Numerator}/\text{denominator}) \times 100$

Numerator: Estimated population 65+ reporting immunization: a) <1 year ago; b) 1 or more years ago; c) never.

Denominator: Total population aged 65+.

Source: Canadian Community Health Survey (sub sample) Cycle 2.1, 2003 and Cycle 1.1, 2000/01. National Population Health Survey, 1996/1997, cross sectional sample, health file (household component).

Data Availability

- Data available for Canada, the provinces and the territories.
- Response categories above presented by the following age breakdowns: 65 to 74, 75+.

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - Total, 65 years and over
 - 65 - 74 years
 - 75 years and over.

Considerations for Indicator Quality and Comparability

It is not known how accurate self-reported measures are for the populations, especially the senior population where problems of memory and recall are likely to be a factor.

Responsibility to Produce the Data

Statistics Canada

(61-HLT) Incidence rate for chlamydia

Definition

Incidence rate of reported genital infections, by calendar year.

A confirmed case is defined as laboratory confirmation of infection - detection of *C trachomatis* by appropriate laboratory techniques in genitourinary specimens.

Rationale and Notes for Interpretation

This is a common sexually transmitted infection (STI), which may result in female infertility and ectopic pregnancy. The higher incidence rates relative to other STIs may be a more sensitive indicator of change in risk behaviours and reflect the effectiveness of primary and secondary prevention.

The new diagnostic test introduced around 1997 (nucleic acid amplification test or NAAT) initially accounted for some of the increase in incidence. However, since the incidence of Chlamydia and other sexually transmitted infections have continued to increase, it can be assumed there has been a true increase in the number of cases, which are not attributable to the new test.

Technical Specifications

Exclusions: None.

Calculation: (Numerator/denominator) x 100,000

Numerator: Reported cases of genital chlamydia infection.

Denominator: Total population by age group.

Source: Notifiable diseases reporting system.

Data Availability

- Report as a rate per 100,000 population per year.
- Data is available from 1995 to 2002. (2002 data is provisional).

Considerations for Indicator Quality and Comparability

Provinces/territories may use their own data to report on age breakdowns as data at this level are not available from Health Canada.

Provinces/territories update their reportable disease data frequently, even after Health Canada finalizes the data for a given period, so provinces/territories always have the most up-to-date data for their respective jurisdictions.

The introduction of non-invasive and more sensitive tests for chlamydia can increase the reported rate in a jurisdiction; timing of the implementation of such tests should be noted.

Some data produced for the September 2002 Comparable Health Indicators Reports may have changed due to updated provincial and territorial numbers therefore, data tables provided for the November 2004 Comparable Health Indicators Reports, replaces all previous data tables.

Minor variations in data will occur when comparing data with other federal and provincial/territorial publications because of reporting delays, different cut-off dates and date of access to Statistics Canada's population estimates.

It is not known how many cases of sexually transmitted infections go unreported or undiagnosed.

APPENDIX: TECHNICAL SPECIFICATIONS

Responsibility to Produce the Data
Health Canada

Chapter 3: Healthy Programs, Healthy Services

(33-DM) Self-reported wait times for diagnostic services **(33a-DM) Median wait time for diagnostic services**

Definition

Reported median wait time for diagnostic services.

Wait time refers to the length of time, in weeks, between the patient being referred for a specialized service and receiving the service, during the 12 months prior to the survey.

The median is the 50th percentile of the distribution of wait times: half the patients wait less and half wait longer than the median number of weeks. Patients who have not yet received the service are excluded from the indicator calculation.

Note: Diagnostic tests include non-emergency MRIs, CT Scans, and angiographies only.

Rationale and Notes for Interpretation

This indicator refers to the wait time in weeks, between the patient being referred for a diagnostic service and receiving the service, during the 12 months prior to the survey.

Technical Specifications

Exclusions: Persons less than 15 years of age, persons living in Nunavut, the Yukon, the Northwest Territories, on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample. Individuals waiting for services and who needed the service within the last year are also excluded from the calculation of this indicator.

Source: Health Services Access Survey, 2001 and Health Services Access Survey, supplement to the Canadian Community Health Survey, 2003.

Data Availability

- For 2001, data available for Canada (*excluding the Territories*), and for Prince Edward Island, Alberta and British Columbia.
- For 2003, data available for Canada (*excluding the Territories*), and all provinces.
- Crude and age-standardized data available.

Considerations for Indicator Quality and Comparability

Sampling was done, in 2001, to obtain reliable national estimates (*excluding the Territories*) and provincial estimates for Prince Edward Island, Alberta and British Columbia. In 2003, sampling permits reliable estimates at both the national (*10 provinces*) and provincial levels.

Comparable data about who is waiting for what, and for how long, is limited. One of the challenges is agreeing on how best to define wait times, i.e., when waiting actually begins and ends.

Health Services Access Survey (HSAS) data are based on self-reported information and as such suffer from recall bias, and has not been clinically validated.

Reliable estimates at the national and provincial levels could not be produced for all the variables, given that, in some cases very few individuals may actually need services or experience difficulties at various times. In some cases, sample sizes were too small for meaningful data to be published.

The data do not reflect the waiting times of those still waiting at the time of the survey, only those who completed their waiting and received care. Respondents could report waiting times in days, weeks or months and it is likely that many may have rounded their waiting times. For these reasons, direct comparisons of waiting time estimates presented in this report with estimates based from other sources, such as waiting time registries, health administrative data and physician reports, should be made with extreme caution.

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

Direct comparisons between the results from the 2001 HSAS and the 2003 HSAS cannot be made because of changes in the manner in which the data were collected.

This indicator is subject to respondent recall. That is, respondents must remember the time between the decision about the need for the service and the date when they received the service

Responsibility to Produce the Data
Statistics Canada

(33b-DM) Distribution of wait times for diagnostic services

Definition

Distribution of reported wait times for diagnostic services.

Wait time refers to the length of time, in weeks, between the patient being referred for a diagnostic service and receiving the service.

The indicator is the percent of those requiring a diagnostic service that waited less than 1 month, between 1 to 3 months or more than 3 months to receive the service, during the 12 months prior to the survey. Patients who have not yet received the service are excluded from the indicator calculation.

Rationale and Notes for Interpretation

This indicator refers to the wait time in weeks, between the patient being referred for a specialized service and receiving the service, during the 12 months prior to the survey.

Technical Specifications

Exclusions: Persons less than 15 years of age, persons living in Nunavut, the Yukon, the Northwest Territories, on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample. Individuals waiting for services and who needed the service within the last year are also excluded from the calculation of this indicator.

Source: Health Services Access Survey, 2001 and Health Services Access Survey, supplement to the Canadian Community Health Survey, 2003.

Data Availability

- For 2001, data available for Canada (*excluding the Territories*), and for Prince Edward Island, Alberta and British Columbia.
- For 2003, data available for Canada (*excluding the Territories*), and all provinces
- Crude and age-standardized data available.

Considerations for Indicator Quality and Comparability

See *Considerations for Indicator Quality and Comparability* from 33a-DM above.

Responsibility to Produce the Data
Statistics Canada

(1-PC) Difficulty obtaining routine or on-going health services

Definition

Percent who required routine or on-going health services for self or a family member in the past 12 months and experienced difficulties obtaining them at any time of day based on population 15 years of age and over.

Rationale and Notes for Interpretation

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

The ability to obtain routine care when needed is believed to be important in maintaining health, preventing health emergencies and preventing the inappropriate use of services (e.g., use of hospital emergency rooms for non-emergencies).

Technical Specifications

Exclusions: Persons less than 15 years of age, persons living in Nunavut, the Yukon, the Northwest Territories, on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.

Calculation: (Numerator/denominator) x 100
Numerator: Persons indicating they experienced difficulty accessing routine or on-going care at any time of day
Denominator: In 2003: population aged 15 years and over requiring routine or on-going health services.
Source: Health Services Access Survey, supplement to the Canadian Community Health Survey, 2003.

Data Availability

- For 2003, data available for Canada (*excluding the Territories*), and all provinces.
- Crude and age-standardized rates are available.

Considerations for Indicator Quality and Comparability

In 2003, sampling permits reliable estimates at both the national (*10 provinces*) and provincial levels.

This indicator only present the distribution of the people reporting difficulty accessing routine or on-going health care services and does not measure in any way the degree of difficulty.

Data from 2001 and 2003 for these indicators should not be compared because of changes in the way the data were collected.

Health Services Access Survey (HSAS) data are based on self-reported information and as such suffer from recall bias, and has not been clinically validated.

Reliable estimates at the national and provincial levels could not be produced for all the variables, given that, in some cases very few individuals may actually need services or experience difficulties at various times. In some cases, sample sizes were too small for meaningful data to be published.

The perceived need for a service as defined by the population may be different from what providers and policy-makers consider as medically necessary services. Public perceptions of need (that are not addressed in the HSAS) may impact upon perceptions of adequate access to health services. Individual differences in the understanding about what constitutes routine health care will affect the perceptions if asked about access to routine health care.

Ratings of good access to health care (expressed in experiences of barriers to receiving that care), therefore, although reflective of patient satisfaction may actually tell us little about expected health outcome. A direct correlation between improved access to health care services and improved health status remains difficult to obtain.

Responsibility to Produce the Data

Statistics Canada

(2-PC) Difficulty obtaining health information or advice

Definition

Percent who required health information or advice for self or a family member in the past 12 months and experienced difficulty obtaining it at any time of the day based on population 15 years of age and over.

Rationale and Notes for Interpretation

Access to information or advice is believed to be important to maintaining health and ensuring appropriate access to health services.

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

Technical Specifications

Exclusions:	Persons less than 15 years of age, persons living in Nunavut, the Yukon, the Northwest Territories, on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.
Calculation:	$(\text{Numerator/denominator}) \times 100$
Numerator:	Persons indicating they experienced difficulty accessing health information or advice at any time of day.
Denominator:	In 2003: Population aged 15 years and over requiring health information or advice.
Source:	Health Services Access Survey, supplement to the Canadian Community Health Survey, 2003.

Data Availability

- For 2003, data available for Canada (*excluding the Territories*), and all provinces.
- Crude and age-standardized rates are available.

Considerations for Indicator Quality and Comparability

In 2003, sampling permits reliable estimates at both the national (*10 provinces*) and provincial levels.

This indicator only presents the distribution of the people reporting difficulty accessing health information or advice and does not measure in any way the degree of difficulty.

Data from 2001 and 2003 for these indicators should not be compared because of changes in the way the data were collected.

See 1-PC above for additional notes on indicator quality and comparability.

Responsibility to Produce the Data

Statistics Canada

(3-PC) Difficulty obtaining immediate care

Definition

Percent who required immediate care for a minor health problem for self or a family member in the past 12 months and experienced difficulty obtaining it at any time of day based on the population aged 15 years and over.

Rationale and Notes for Interpretation

The ability to obtain needed care for emergent but minor health problems is believed to be important in restoring health, preventing health emergencies, and preventing the inappropriate use of services (e.g., use of hospital emergency rooms for non-emergencies).

Technical Specifications

Exclusions:	Persons less than 15 years of age, persons living in Nunavut, the Yukon, the Northwest Territories, on First Nation Reserves and on Crown lands, residents of institutions, full-time member of Canadian Armed Forces and residents of certain remote regions are excluded from the sample.
Calculation:	$(\text{Numerator/denominator}) \times 100$
Numerator:	Persons indicating they experienced difficulty accessing immediate care at any time of day
Denominator:	In 2003: Population 15 years of age and over requiring immediate care at any time
Source:	Health Services Access Survey, supplement to the Canadian Community Health Survey, 2003.

Data Availability

- For 2003, data available for Canada (*excluding the Territories*), and all provinces.

APPENDIX: TECHNICAL SPECIFICATIONS

- Crude and age-standardized rates are available.

Considerations for Indicator Quality and Comparability

In 2003, sampling permits reliable estimates at both the national (*10 provinces*) and provincial levels.

This indicator only present the distribution of the people reporting difficulty accessing immediate care and does not measure in any way the degree of difficulty.

Data from 2001 and 2003 for these indicators should not be compared because of changes in the way the data were collected.

See 1-PC above for additional notes on indicator quality and comparability.

Responsibility to Produce the Data

Statistics Canada

(30-DR) Prescription drug spending as a percentage of income

Definition

Percent of households spending over given percentages (0%, 1%, 2%, 3%, 4% and 5%) of total after tax income out-of-pocket on prescription drugs.

Rationale and Notes for Interpretation

This indicator will provide a measure of the extent to which households are burdened by prescription drugs costs.

Technical Specifications

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Data from the territories are not available due to data quality issues.

Source: Statistics Canada, Survey of Household Spending 1997, 1998, 1999, 2000, 2001, 2002.

Note: Only includes out-of-pocket spending on prescription drugs i.e. does not cover drug expenses paid by a third party i.e. private or public drug plan. If prescription drugs are covered by a plan but the household pays a certain percentage of the cost of the drugs, the cost to the household is included in the amount spent on prescription drugs. Over-the-counter medications are not included. The numbers for private and public premiums are not included in out-of-pocket spending and cannot be reported separately because the numbers would be too small.

There are a number of reasons why households may spend more than the maximum paid under a provincial prescription drug plan. These reasons include:

- The FAMEX and SHS are a household survey. Thus, multiple families or a number of non-related persons (room-mates, for example) could be in one household.
- In some cases, insurance premiums for a provincial prescription drug plan may have been reported as prescription drug spending.
- Households could live in more than one province in a survey year, but would be coded as living in the province at the time they were surveyed.
- People who change insurers may not request the required documentation from their previous insurer to ensure that they do not spend more than the maximum.
- Prescription drug spending while persons are temporarily outside of their home province may not be covered under the provincial plan.
- Spending could be on prescription drugs not covered under the provincial formulary.

Data Availability

Data from the three territories are not available due to data quality issues.

Considerations for Indicator Quality and Comparability

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

If prescription drugs are covered by a plan but the household pays a certain percentage of the cost of the drugs, the cost to the household is included in the amount spent on prescription drugs

There is a chance that individuals may have confused spending on prescription medications, with what they spend on all drugs (i.e., including over-the-counter medications).

Responsibility to Produce the Data
Statistics Canada

(17-OI) Wait times for cardiac bypass surgery

(17a-OI) Median wait time for cardiac bypass surgery

(17b-OI) Distribution of wait times for cardiac bypass surgery

Definition

Median number of days waited between cardiac catheterization and Coronary Artery Bypass Grafts (CABG) surgery, and distribution of wait times, for adults (aged 20 and older) who received CABG surgery in the period in question.

Rationale and Notes for Interpretation

Provincial/territorial health systems/health authorities have a role in achieving reasonable wait times for services by ensuring effective management of wait lists and operating room schedules, effective bed utilization strategies, and appropriate budget allocation for prevention, treatment, and follow-up care. Wait times are commonly used as indicators of the efficiency of the system. A variety of factors can impact the wait times such as the demographics of the population, treatment patterns of physicians, the number of emergency surgeries, which have higher priorities in use of resources, nurse shortages, or job action.

Technical Specifications

- Include only those patients age 20 or older who had “isolated” Coronary Artery Bypass Grafts (CABG) surgeries, uncomplicated by any other procedure (e.g. valve repair or replacement). Coronary Artery Bypass Grafts surgeries are identified by CCP code 48.1 or CCI code 1.IJ.76
- The age of the patient (age 20 or older) should be calculated as of March 31 at the end of fiscal year.
- The median wait time in days (rounded to whole numbers) should be calculated from the date of cardiac catheterization and the date of their CABG surgery. If data for this definition are not available, indicate this definition has been used (for example, wait time from the date the decision was made by the surgeon, with the patient’s agreement, that surgery was required to the date of surgery)
- The distribution of wait times is the percent of cardiac bypass surgery patients who waited less than 15 days, 15 to 42 days, 43 to 180 days, and more than 180 days.
- Typically, patients needing surgery are categorized according to their assessed urgency of surgical need, for example, emergent (or emergency), urgent, semi-urgent and elective, but there are differences in the urgency rating processes across the country. Because of these differences, include CABG cases for all levels of urgency. If only non-emergent (non-emergency) cases are tracked, report the percent of total CABG cases that they represent in the period in question in addition to the indicator.
- If the patient was removed from the wait list for any other reason other than surgery was performed (i.e. cancelled by physician or patient, died, etc.), the patient should not be included in the wait time calculations.
- Report data for patients resident in the jurisdiction; if non-residents cannot be separated, report the percent of total cases that they represent in the period in question in addition to the indicator.
- Jurisdiction wait times systems usually track waiting times for surgeries performed in the jurisdiction. If data does not include all surgeries performed in the jurisdiction or include wait times for residents who received their surgeries outside the jurisdiction, report the percent of total cases that they represent in the period in question.
- The median is the 50th percentile of the distribution of wait times: half the patients who had their surgery in the specified period waited less and half waited longer than the median number of days. Patients who have not yet received the service are excluded from the indicator calculation.
- If median wait times are not available, means may be reported instead, along with a clear explanation of the difference between the two measures.
- If it is not possible to report annual data, report on wait times at end of the fiscal year, specifying the period covered. (E.g. For surgeries completed between January and March of 2003).

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Calculation: Median wait time in days for patients who received cardiac bypass surgery.

Distribution: Percent of cardiac bypass surgery patients who waited less than 15 days, 15 to 42 days, 43 to 180 days, and more than 180 days.

Source: Provincial/Territorial administrative databases.

Data Availability

- All provinces and territories except Quebec, Prince Edward Island, Yukon, Nunavut and Northwest Territories.
- No Canadian average
- Annual data for 2002/03.

Considerations for Indicator Quality and Comparability

Given the current limitations on comparability of data on wait times, all jurisdictions may not be able to report according to the technical specifications due to differences in the way data are collected in each province/territory.

Jurisdictions will use administrative data, to the extent possible, to report on wait times. The systematic collection and reporting of wait time data in Canada is relatively new. It is recognized that not all jurisdictions will be able to report on wait time indicators according to consistent definitions. Any differences from the definitions outlined above are to be identified with data are provided. Because of these issues, caution should be used when making comparisons between jurisdictions. As systems for monitoring wait times are further developed, it is expected that more comprehensive reporting on waiting times will be possible.

All levels of urgency are included.

CABG procedures for which no prior cardiac catheterization procedure could be identified are excluded. Only "isolated" CABG cases "uncomplicated by any other procedure" (e.g. va;ve replacement or repair) are included. To determine the best way to identify an "isolated" CABG surgery exclusions (CABGs complicated by another procedure) were based on a list that was used to identify isolated CABG surgery in a study published on the Ontario Cardiac Care Network website.

- Veena Guru, Yanyan Gong, Deanna M. Rothwell, Jack V. Tu. "Report on Cardiac Surgery in Ontario Fiscal Years 2000 & 2001" The Institute for Clinical Evaluative Sciences, Toronto, Ontario, Canada. In collaboration with the Steering Committee of the Cardiac Care Network of Ontario. Appendix 6.

Additional note: A strike by health service workers in September and October of 2002 is likely at least part of the explanation for the changes in waiting time distribution over the year and for the longer waits in 2002-2003, relative to the 2000-2001 PIRC calculation.

Responsibility to Produce the Data Jurisdictions

(SK only) Wait times for surgical specialities in Saskatchewan

Definition

The distribution of wait times for surgical specialties in Saskatchewan completed within the target time frames outlined by the Saskatchewan Surgical Care Network guidelines introduced in March 2004.

Rationale and Notes for Interpretation

In March 2004 new Target Time Frames for surgery were released. Although measurement of wait time against these guidelines is in its infancy, preliminary data from the first 6 months of operation can provide a baseline for the measurement of progress towards the performance goals for the surgical care system in Saskatchewan.

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

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Technical Specifications

- Based on data for seven health regions (Saskatoon, Regina-Qu'Apelle, Prince-Albert Parkland, Five Hills, Sunrise, Prairie North, Sunrise).
- Includes patients of all ages.
- Waiting times for the Registry data start from the date the booking form is received by the Regional Health Authority and go to the date the surgery is actually received
- Excludes cataract cases, dental cases, and ophthalmology cases with no booking date
- Includes surgery cases for all levels of urgency.
- If the patient was removed from the wait list for any other reason other than surgery was performed (i.e. cancelled by physician or patient, died, etc.), the patient should not be included in the wait time calculations.

Calculation

Distribution: Percent of cardiac bypass surgery patients who waited less than 24 hrs, 3weeks, 6 weeks, 3 months, 6 months, 1 year, 18months, more than 18 months.

Source: Saskatchewan Health administrative databases.

Data Availability

- Saskatchewan only
- No Canadian average
- Data is preliminary and available only for January to June 2004

Considerations for Indicator Quality and Comparability

Jurisdictions will use administrative data, to the extent possible, to report on wait times. The systematic collection and reporting of wait time data in Canada is relatively new. This data is, therefore, not comparable at this time to surgical wait time data that maybe produced by other jurisdictions in Canada.

Responsibility to Produce the Data

Jurisdictions

(15-HC) Home care clients per 100,000 population, all ages

Definition

The number of (distinct) individuals who received publicly funded home care, per 100,000 population. Home care services include a variety of health and support services including home nursing care, rehabilitation therapy and home support services which provide personal assistance with daily activities, such as bathing, dressing and grooming. These services are delivered in the home or community setting.

Rationale and Notes for Interpretation

Home care provides a variety of health and supportive services to enable individuals with health related problems to remain in their own homes. Home care may also reduce the use of hospital services by preventing a hospital admission or reduce hospital stays by providing post-acute care.

Technical Specifications

- Distinct Clients are all those who received at least one home care service in the fiscal year.
- Double counting should be avoided to the extent possible. Each client should be counted only once in the fiscal year at the provincial level, regardless of the number of services that they received, the number of different service providers they had, where they received the service in the jurisdiction, and the number of separate episodes of care they had in the year.

Exclusions: Clients who were only assessed but did not receive any additional service should be excluded.

APPENDIX: TECHNICAL SPECIFICATIONS

Calculation: (Numerator/denominator) x 100,000.
Numerator: Number of distinct individuals receiving publicly funded home care services
Denominator: Total population.
Source: Provincial/Territorial administrative databases.

Data Availability

- All provinces and territories except Quebec and Northwest Territories.
- No Canadian average.
- Annual data, 2002/03.
- Newfoundland will be submitting based on altered definitions.

Considerations for Indicator Quality and Comparability

Currently, there is variation between jurisdictions in how their home-care programs are named, organized, and delivered. Therefore, there may be differences between the definition outlined above and each jurisdiction's operational definitions of their programs. Because of these issues, and the variation between jurisdictions on the types of services included in 'home care', caution should be used when making comparisons between jurisdictions.

Some jurisdictions are not able to identify and remove "duplicate" clients who receive services in two or more regions within the same province.

Volume measures of how many people use home care do not indicate how well these needs are being met, or the quality of the home care services provided.

The diversity in the range and orientation of services creates difficulties when comparisons between provinces and territories are being made. Provincial and territorial definitions of home care differ and include a diverse range of services. Publicly funded home care programs exist in every province and territory in Canada, as does the jurisdictional responsibility for providing home care services. Since each program has undergone its own unique development in response to community needs, service delivery varies across the country. The lack of commonality in standards for service delivery and information collection makes comparison difficult and makes it hard to share best practices.

Responsibility to Produce the Data Jurisdictions

(12-PC) Hospitalisation rate for ambulatory care sensitive conditions

Definition

Age-standardized inpatient hospitalisation rate for conditions where appropriate ambulatory care prevents or reduces the need for admission to hospital.

Rationale and Notes for Interpretation

Hospitalization rates for conditions, which may often be cared for in the community are one indicator of appropriate access to community-based care. These are long-term health conditions, which can often be managed with timely and effective treatment in the community, without hospitalization. These conditions include diabetes, asthma, alcohol and drug dependence and abuse, neurosis, depression, and hypertensive disease. Although preventive care, primary care and community-based management of these conditions will not eliminate all hospitalisations, such steps could prevent many of them.

Health care professionals generally believe that managing these conditions before a patient requires hospitalisation improves the patient's health, contributes to better overall community health status, and often saves money because community-based care usually costs less than hospitalisation. Optimizing the management and treatment of these conditions will contribute to both improved patient health outcomes and more efficient resource utilization.

The hospitalisation rates for these conditions tend to vary from place to place; for example, there are large rural/urban differences. One factor influencing the variation in rates is likely to be the extent to which

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preventive care and management within the community are available and accessible. Tracking hospitalisation rates for these conditions over time can provide an indicator of the impact of community- and home-based services. Variations over time, and differences between regions, should be examined to determine the extent to which they are attributable to the accessibility and quality of community-based care, hospital admitting practices, or the prevalence and acuity of these chronic health conditions.

Technical Specifications

Exclusions: Patients not treated as inpatients in acute care hospitals (e.g., those seen only in an emergency department or chronic care institution).

Calculation: Standardised rates are age-adjusted using a direct method of standardisation based on the July 1, 1991 Canadian population.

Diagnosis code(s): Based on the Alberta Health reference below, primary diagnosis code of:

Most responsible diagnosis	ICD-9 or ICD-9-CM code(s)	ICD-10 code(s)
Diabetes	250	E10, E11, E13, E14
Drug and alcohol dependency	291, 292, 303, 304, 305	F10, F11, F12-F19 (excluding F12.6, F13.6, F14.6, F15.6, F16.6, F17.6, F18.6 and F19.6), F55
Neurotic depressive disorders	300, 311	F32.0, F32.9, F34.1, F40, F41, F42, F44, F45.0, F45.1, F45.2, F48, F53.0, F68.0, F99
Hypertension	401,402, 403,404, 405	I1
Asthma	493	J45

Numerator: Number of ACSC inpatient separations from acute care hospitals (discharges and deaths) during the year, by age and gender categories.

Denominator: Population by age and gender categories, either from census or census estimates, for the year.

Source: Hospital Morbidity Database, CIHI. Census, Statistics Canada; ISQ.

References: Alberta Health. (1998, Dec). Health authority business plan and annual report requirements, 1999-2000 to 2001-2002. Edmonton, AB: Alberta Health. p. 22.

Anderson, G.M. (1996). Common conditions considered sensitive to ambulatory care. In V. Goel, J.I. Williams, G.M. Anderson, P. Blackstien-Hirsch, C. Fooks, & C.D. Naylor (eds.), *Patterns of Health Care in Ontario. The ICES practice atlas (2nd edition.)*. Ottawa, ON: Canadian Medical Association. p. 104-110.

Billings, J., Anderson, G.M., & Newman, L.S. (1996, Fall). Recent findings on preventable hospitalizations. *Health Affairs*, 15(3), p. 239-249.

Billings, J., Zeital, L., Lukomnik, J., Carey, T.S., Blank, A.E., & Newman, L. (1993, Spring). Impact of socio-economic status on hospital use in New York City. *Health Affairs*, 12(1), p. 162-173.

Manitoba Centre for Health Policy and Evaluation (MCHPE). *Ambulatory Care Sensitive (ACS) conditions*.
http://www.umanitoba.ca/centers/mchpe/concept/dict/ACS_conditions.htm.

Data Availability

This indicator will be available for the years 1995/96 – 2001/02, for total population, males and females. Data are available for all provinces and territories.

Considerations for Indicator Quality and Comparability

A re-abstraction study designed to examine the consistency of coding for this indicator yielded a 10.8% discrepancy rate overall. In the majority of discrepant records, however, an ACSC condition did appear as a diagnosis on the patient record, although not as a most responsible diagnosis. It is important to note that this discrepancy rate represents an overall average and cannot be directly attributed to individual facilities, provinces or territories. Only 13 of 272 re-abstracted records did not have an ACSC condition recorded in any diagnosis field. Almost half of these (6) were originally coded as neurotic or depressive disorders, and all of these records were re-abstracted as a mental disorder, although the re-abstracted condition did not strictly

APPENDIX: TECHNICAL SPECIFICATIONS

qualify as ACSC. This suggests that the ACSC indicator is consistently coded and may be compared inter-jurisdictionally and across time, with one exception. These discrepancy rates represent an overall average and cannot be directly attributed to individual facilities, provinces or territories.

Caution is advised when comparing 2001/02 rates with previous years rates for provinces coding in ICD-10-CA/CCI. It is important to note that some of the differences identified may not be due to the implementation of ICD-10-CA/CCI but may reflect other factors such as the establishment or withdrawal of programs and services specific to the conditions comprising this indicator.

Hospitalisation rates for ACS conditions tend to vary over time and between regions. Further examination of these differences is needed to determine the extent to which these variations are attributable to the accessibility and quality of community-based care, hospital admitting practices or the prevalence and acuity of these chronic health conditions.

The relative contribution of demographic factors like age, gender, income, education, etc. on hospitalisation rates for ACS conditions are unknown.

This indicator is not sensitive enough to answer questions on what proportion of people admitted to the hospital require unique hospital services, and how often is admission a reflection of poor a ambulatory care.

Hospitalisation rates for ACSC can be affected by several factors, which makes it difficult to distinguish whether differences are a reflection of better or worse ambulatory care. Factors include severity of the conditions, changes in the incidence of the disease, propensity of the individuals to see care, improved treatments for conditions that reduce overall disease incidence, changes in the availability of hospital beds and increased rates of death before admission to hospital.

Responsibility to Produce the Data

CIHI

(24-OI) 30-day in-hospital acute myocardial infarction (AMI) mortality rate

Definition

The risk-adjusted rate of all cause in-hospital death occurring within 30 days of first admission to an acute care hospital with a diagnosis of acute myocardial infarction (AMI).

Rationale and Notes for Interpretation

AMI is one of the leading causes of death in Canada. There are effective strategies for treating and preventing AMI. Thirty-day AMI inpatient mortality provides effective strategies for treating and preventing AMI. A lower risk-adjusted mortality rate following AMI may be related to quality of care. The 30-day in-hospital mortality rate is highly correlated with total mortality during this period, following AMI. Reporting measures of 365-day survival and age-specific mortality rates help to provide a broader perspective on AMI treatment and prevention. To enable comparisons across regions, a statistical model was used to adjust for differences in age, sex and co-morbidity.

Technical Specifications

Calculation: A logistic regression model is fitted with age, gender, and select co-morbid conditions as independent variables. Coefficients derived from the logistic model are used to calculate the probability of in-hospital death following AMI for each case (episode). The expected in-hospital death rate of a province/territory is the sum of these case probabilities divided by the total number of cases. The risk-adjusted mortality rate (RAMR) is calculated by dividing the observed in-hospital death rate of each province/territory by the expected in-hospital death rate of the region and multiplying by the average in-hospital death rate. A 95 percent confidence interval for the RAMR is also calculated. The co-morbid conditions entered in the model, coefficient values and the method used to calculate confidence intervals are available upon request.

Denominator (Index Episode)

APPENDIX: TECHNICAL SPECIFICATIONS

Inclusion Criteria:

1. Most responsible diagnosis of AMI (ICD-9 or ICD-9-CM 410 or ICD-10 I21, I22)
2. Admission between April 1, and March 1 of the following year (period of case selection ends March 1 to allow for 30 days of follow-up)
3. Age at admission between 20 and 105 years
4. Gender recorded as male or female
5. Admission to an acute care institution
6. Length of stay of 3 or more consecutive days

Exclusion Criteria:

7. Records containing an invalid Health Card Number
8. Records indicating that a provincial resident was seen in a facility outside of the province (to prevent duplicate counts)
9. Patients who had an AMI admission within one year prior to the date of the index episode
10. Records where AMI is coded as a complication

Numerator: Number of deaths from all causes that occur in-hospital within 30 days of admission for AMI.

Denominator: Total number of AMI episodes in an 11-month period.

Source: Hospital Morbidity Database, CIHI.

References: Hosmer, D.W., Lemeshow, S. (1995). Confidence interval estimates of an index of quality performance based on logistic regression models. *Statistics in Medicine*, 14, p. 2161-2172.

Tu, J.V. et al. (1999). Acute myocardial infarction outcomes in Ontario. In C.D. Naylor & P.M. Slaughter (eds), Cardiovascular Health & Services in Ontario: An ICES Atlas. Toronto: Institute for Clinical Evaluative Sciences, p. 84-100.

Tu J.V. et al. (1999). Acute myocardial infarction outcomes in Ontario (Methods Appendix). In Naylor CD & Slaughter PM (eds), Cardiovascular Health & Services in Ontario: An ICES

Atlas (Technical and methods appendices). Toronto: Institute for Clinical Evaluative Sciences.

Data Availability

- This indicator will be available for the years 1999/2000 – 2001/02, as a 3-year average for total population.
- Where available, single year rates will be provided.
- Rates for Newfoundland, British Columbia and Quebec are not available due to differences in coding of: AMI (Newfoundland & Labrador), Emergency Room admissions (British Columbia) and diagnosis type (Quebec).
- Rates for the Northwest Territories and Nunavut are not available due to small numbers.

Considerations for Indicator Quality and Comparability

A 2-year study designed to assess the consistency of coding for acute myocardial infarction (AMI) found that 4.2% (year 1) and 7.9% (year 2) of cases re-abstracted had a diagnosis other than AMI recorded as the most responsible diagnosis. This suggests that the overall level of agreement is high and that the indicator is based on data consistently coded. It is important to note that these rates represent an overall average and cannot be directly attributed to individual facilities, provinces or territories.

There is no evidence that implementation of the ICD-10-CA classification has significantly affected inter-jurisdictional comparability of the 30-day in-hospital AMI mortality rates. Definition changes related to AMI that came into effect with ICD-10-CA are not material to the 30-day in-hospital AMI mortality rates and therefore this indicator can be compared between jurisdictions coding in ICD-9/ICD-9-CM and ICD-10-CA, as well as between the three individual years of data.

Longer-term mortality for AMI may depend on a range of factors that cannot be measured adequately using hospital-based administrative data; such as initial treatment decisions made by the patient and physician, patients' subsequent hospitalisations, the quality of outpatient care, the patients' living conditions or ability to adhere to medical or medication regimens.

Responsibility to Produce the Data

CIHI

APPENDIX: TECHNICAL SPECIFICATIONS

Chapter 4: Healthy Perceptions

(5-PC) Patient satisfaction with overall health care services

Definition

Percentage of the population aged 15 and over who rate themselves as either very satisfied or somewhat satisfied with the overall health care services received.

Rationale and Notes for Interpretation

This indicator applies to individuals who have received any health care services over a 12-month reference period. The individual's assessment of the satisfaction with the services is measured. The indicator applies to individuals, 15 years old and older living in private households.

Technical Specifications

For health care services, the following question was asked: Overall, how satisfied were you with the way health care services were provided? Were you: ... very satisfied? ... somewhat satisfied? ... neither satisfied nor dissatisfied? ... somewhat dissatisfied? ...very dissatisfied?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Persons less than 15 years of age are not asked this question.

Calculation: (Numerator/denominator) x 100

Numerator: Number of individuals reporting "very satisfied" or "somewhat satisfied" with the way the health care services were provided.

Denominator: Total population aged 15 and older who received health care services in past 12 months.

Source: Canadian Community Health Survey: 2000/01, 2003.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - 15 - 19 years
 - 20 - 34
 - 35 - 44
 - 45 - 64
 - 65 - 74
 - 75 years and over.

Considerations for Indicator Quality and Comparability

Individual definitions of satisfaction can vary significantly and will be impacted by personal expectations relationships with health care providers and isolated negative experiences.

Comparability between measures of patient satisfaction as measured by different researchers, for different purposes, using different instruments can be hampered.

It is not known whether survey respondents understood the questions on satisfaction to the same degree.

It is not known what impact demographic factors like gender and age have on a patient's rating of satisfaction.

Responsibility to Produce the Data

Statistics Canada

(28-OI) Patient satisfaction with hospital care

Definition

Percentage of the population aged 15 and over who rate themselves as either very satisfied or somewhat satisfied with the way hospital services were provided.

Rationale and Notes for Interpretation

APPENDIX: TECHNICAL SPECIFICATIONS

These indicators apply to individuals who have received health care services at a hospital over a 12-month reference period. The individual's assessment of the satisfaction with the services is measured. The indicator applies to individuals, 15 years old and older living in private households. Respondents were only asked about their most recent visit within the previous year.

Technical Specifications

For hospital services, the following question was asked: Thinking of this most recent hospital visit, how satisfied were you with the way hospital services were provided? Were you: ... very satisfied? ... somewhat satisfied? ... neither satisfied nor dissatisfied? ... somewhat dissatisfied? ... very dissatisfied?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Persons less than 15 years of age are not asked this question.

Calculation: (Numerator/denominator) x 100

Numerator: Number of individuals reporting "very satisfied or "somewhat satisfied" with the way hospital services were provided.

Denominator: Total population aged 15 and older who received any health care services in hospital in the past 12 months.

Source: Canadian Community Health Survey: 2000/01, 2003.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - 15 - 19 years
 - 20 - 34
 - 35 - 44
 - 45 - 64
 - 65 - 74
 - 75 years and over.

Considerations for Indicator Quality and Comparability

See '*Considerations for Indicator Quality and Comparability*' for overall health care above.

Readers should be cautioned in the interpretation of changes over time for this indicator as some differences in the indicator rates between some jurisdictions and between years can be explained partly by the effect of how information is collected within each jurisdiction and within each year rather than being due to real changes. However, the exact nature of these differences is unknown.

Responsibility to Produce the Data
Statistics Canada

(34-HR) Patient satisfaction with physician care

Definition

Percent of population 15 years old and older who rate themselves as either very satisfied or somewhat satisfied with the care received from a physician - family doctor or medical specialist (excluding services received in a hospital).

Rationale and Notes for Interpretation

These indicators apply to individuals who have received health care services over a 12-month reference period. The individual's assessment of the satisfaction with the way physician care was provided is measured. The indicator applies to individuals, 15 years old and older living in private households. This indicator is based on the respondent's most recent visit to a physician.

Technical Specifications

For physician care, the following questions were asked: Thinking of this most recent care from a physician: how satisfied were you with the way physician care was provided? Were you: ... very satisfied? ... somewhat satisfied? ... neither satisfied nor dissatisfied? ... somewhat dissatisfied? ... very dissatisfied?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Persons less than 15 years of age are not asked this question.

Calculation: (Numerator/denominator) x 100

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

Numerator: Number of individuals reporting “very satisfied” or “somewhat satisfied” with the service provided.
Denominator: Total population aged 15 and older who used health care services in past 12 months.
Source: Canadian Community Health Survey: 2000/01 and 2003.

Data Availability

- Data available for Canada, the Provinces and the Territories.
- Crude and age-standardized data available.
- Available by sex and age-group: 15 - 19
20 - 34
35 - 44
45 - 64
65 - 74
75 years and over.

Considerations for Indicator Quality and Comparability

See ‘*Considerations for Indicator Quality and Comparability*’ for overall health care above.

Responsibility to Produce the Data

Statistics Canada

(7-PC) Patient satisfaction with community-based care

Definition

Percentage of the population aged 15 and over who rate themselves as either very satisfied or somewhat satisfied with community-based services received. The CCHS definition for ‘community-based care’ includes any health care received outside of a hospital or doctor’s office (e.g., home nursing care, home-based counselling or therapy, personal care, community walk-in clinics).

Rationale and Notes for Interpretation

This indicator applies to individuals who have received any community-based care over a 12-month reference period. The individual’s assessment of the satisfaction with the care is measured. The indicator applies to individuals, 15 years old and older living in private households.

Technical Specifications

For community-based care, the following question was asked: Overall, how satisfied were you with the way community-based care was provided? Were you: ... very satisfied? ... somewhat satisfied? ... neither satisfied nor dissatisfied? ... somewhat dissatisfied? ...very dissatisfied?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Persons less than 15 years of age are not asked this question.

Calculation: (Numerator/denominator) x 100

Numerator: Number of individuals reporting “very satisfied” or “somewhat satisfied” with the way the community-based care was provided.

Denominator: Total population aged 15 and older who received community-based care in past 12 months.

Source: Canadian Community Health Survey: 2000/01, 2003.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group: 15 - 19 years
20 - 34
35 - 44
45 - 64
65 - 74
75 years and over.

Considerations for Indicator Quality and Comparability

See ‘*Considerations for Indicator Quality and Comparability*’ for overall health care above.

Responsibility to Produce the Data

Statistics Canada

N.B.: The indicators in this appendix are numbered according to the framework developed by the F/P/T Performance Reporting Technical Working Group but presented in the order in which they appear in the Saskatchewan report.

APPENDIX: TECHNICAL SPECIFICATIONS

(9-PC) Patient satisfaction with telephone health line or tele-health services

Definition

Percentage of the population aged 15 and over who rate themselves as either very satisfied or somewhat satisfied with the telephone health line or tele-health service received.

Rationale and Notes for Interpretation

This indicator applies to individuals who have used a telephone health line or tele-health service over a 12-month reference period. The individual's assessment of the satisfaction with the services is measured. The indicator applies to individuals, 15 years old and older living in private households.

Technical Specifications

For tele-health services, the following question was asked: Overall, how satisfied were you with the way the tele-health service was provided? Were you: ... very satisfied? ... somewhat satisfied? ... neither satisfied nor dissatisfied? ... somewhat dissatisfied? ...very dissatisfied?

Exclusions: Persons living on First Nation Reserves and on Crown lands, residents of institutions, full-time members of Canadian Armed Forces, and residents of certain remote regions are excluded from the sample. Persons less than 15 years of age are not asked this question.

Calculation: $(\text{Numerator}/\text{denominator}) \times 100$

Numerator: Number of individuals reporting "very satisfied" or "somewhat satisfied" with the way the tele-health service was provided.

Denominator: Total population aged 15 and older who used tele-health services in past 12 months.

Source: Canadian Community Health Survey: 2003.

Data Availability

- Crude and age-standardised data available by sex for Canada, the provinces and the territories.
- Supplementary data also available by sex and age-group:
 - 15 - 19 years
 - 20 - 34
 - 35 - 44
 - 45 - 64
 - 65 - 74
 - 75 years and over.

Considerations for Indicator Quality and Comparability

At this point there is nothing leading us to think there has been misunderstanding of this survey question that would lead to poor quality of the responses or misinterpretation of the question.

This module is only asked of those respondents aged 15 or over. Respondents are asked if they have ever used a telephone health line, and if so they are asked to rate the quality of this service.

Telephone health line or tele-health service was defined as: Phone based services, which offers health information often provided by a nurse or other health specialists. There must be live interaction. Automated systems are excluded.

Please note that there are no telephone health line or tele-health services offered in Nunavut.

There is no distinction made between satisfaction with telephone health line services such as *HealthLine* (in Saskatchewan), the 24-7 telephone health advice line staffed by registered nurses which went into operation in August 2003 in the province, and satisfaction with telehealth services which provides clinical and educational services to rural or remote areas of the province through videoconference links with designated sites, and which can be used by patients, families, doctors, health providers and entire communities throughout the province. It is difficult to tell, therefore, from this data which way respondents interpreted this question, and whether satisfaction levels reflect use and contentment of the telephone health line, or Saskatchewan telehealth services, or both

Individual definitions of satisfaction can vary significantly and will be impacted by personal expectations relationships with health care providers and isolated negative experiences.

Comparability between measures of patient satisfaction as measured by different researchers, for different purposes, using different instruments can be hampered.

APPENDIX: TECHNICAL SPECIFICATIONS

It is not known whether survey respondents understood the questions on satisfaction to the same degree.

It is not known what impact demographic factors like gender and age have on a patient's rating of satisfaction.

Responsibility to Produce the Data
Statistics Canada

Technical specifications and data considerations for indicators not featured in this report can be found at <http://www.cihi.ca/comparable-indicators> or <http://www.statcan.ca/english/freepub/82-401-XIE/2002000/index.htm>

Notes on Interpreting Summary Tables

J	better than average	ì	Slight increase
K	similar to average	í	Slight decrease
L	worse than average	N/A	data not available

NOTES ON STATISTICAL SIGNIFICANCE

Notes on Statistical Significance

Statistics Canada national survey data used to populate some indicators in this report often did not have either sufficient sample sizes to estimate the true population value or had a low response rate to a specific category of response, e.g., insufficient response from 20-35 year olds in Saskatchewan. As a result, differences in the rates for individual jurisdictions, or within age and sex subsets for certain indicators using survey data often were not large enough to be *statistically significant* and should be used with caution.

Whenever a large number of comparisons are made, or comparisons are made based on smaller samples from a larger group (as is the case with survey data), there is the possibility that by chance or by accident the sample selected may not be a reflection of the group from which the sample was chosen. If you write the numbers 1-100 on pieces of paper and select 6 numbers from a hat, you might get 4 even numbers and 2 odd numbers even though half of all of the numbers are even and the other half are odd. Whenever you take samples from a larger group, there is a possibility the sample won't be a reflection of the group from which the numbers were chosen.

When researchers and analysts say a difference is *statistically significant*, they mean the difference between the numbers is large enough to probably represent a real difference between those numbers, and is not due to chance alone. Statistical tests are used to estimate the chances that differences are real.

Significance levels show you how likely a result is due to chance. The most common level used to indicate that the gap between a pair of scores is large enough to be regarded as representing a real difference between groups is < 0.05 . In other words, there is a less than 5% probability that the results are due to chance alone, and that we are 95% confident that the results represent real differences. These confidence levels become important when making statements of fact about real world phenomenon. For example, if a doctor told you he was 95% certain that your drug treatment would be successful you may be more inclined to adopt that treatment than if he was only 50% confident that there was a real effect of that treatment on your health.

Sometimes, apparent differences in performance between jurisdictions, age groups, sex, or over time are not large enough to convincingly show that the amounts actually differ from each other. In other words the differences are not large enough to support a convincing statistical argument that one amount actually differs from other amounts. This is not to say that with a larger sample, or if information was taken from everyone in the population, that there wouldn't be differences, its just that with the information that is currently available, it cannot be said with a high degree of certainty that there are true differences between the amounts. Furthermore, statistical significance, although useful for telling us whether real differences are present, does not tell us anything about *practical significance*. Large sample sizes can result in every difference being statistically significant, but this does not necessarily mean that these differences are clinically meaningful. In other words, small changes that are not statistically significant may still be of public health interest. For example, despite the fact that the differences in diabetes rates between Saskatchewan and Canada as a whole are not large enough to be statistically different from each other does not mean that continuing to fund diabetes prevention and education programs is of no value. Changes in the rates of diabetes, all be they small and not statistically significant continue to be of importance and of *practical significance* in the province.

As such, statistical significance is merely a guide to interpreting research findings and is not an absolute measure of relevance with respect to public health policy and planning.

Since the reader can compare differences in many ways in this report, the following graphs are highlighted as they contain **some** comparisons that are not statistically significant. Details on

NOTES ON STATISTICAL SIGNIFICANCE

comparisons that are large enough to reach significance can be obtained by contacting the authors of this report.

- Figure 1 Self-reported health by gender, Canada & Saskatchewan, 2003
- Figure 2 Self-reported health by Age, Canada & Saskatchewan, 2003
- Figure 3 Self-reported health trend 1994/5- 2003
- Figure 4 Self-reported health, Provincial/ Territorial Comparison, 2003
- Figure 5 HALE: Years of Healthy Life at Birth & Age 65, Canada & Saskatchewan, 2001
- Figure 6 HALE: Provincial Comparisons, 2001
- Figure 7 HALE by income, at Birth and at age 65, Canada & Saskatchewan, 2001
- Figure 13 Physical Activity by Gender, 2003
- Figure 14 Physical Activity by Age, 2003
- Figure 15 Physical Activity, Provincial/ Territorial Comparison, 2003
- Figure 16 Small steps: Trends in Physical Activity in Saskatchewan
- Figure 17 Current and Daily Teen Smokers, Canada & Saskatchewan, 2003
- Figure 18 Current Teen Smokers by Gender
- Figure 19 Current Teenage Smokers by Age, 2003
- Figure 20 Current Teenage Smokers, Provincial/ Territorial Comparison
- Figure 21 Current Teenage Smokers, Trend 1994-2003
- Figure 23 Overweight and Obesity, Canada & Saskatchewan, 2003
- Figure 24 Overweight & Obesity by Age, 2003
- Figure 25 Overweight & Obesity Trends, 1994-2003
- Figure 26 Overweight & Obesity, Provincial/ Territorial Comparison, 2003
- Figure 27 Influenza Immunisation 65+ years, 2003
- Figure 28 Influenza immunisation trends
- Figure 29 Age-standardised rates for flu immunisation
- Figure 33 Distribution of wait times for diagnostic services, 2003
- Figure 34 Difficulty obtaining routine care, Provincial comparison, 2003
- Figure 35 Difficulties obtaining health information, Provincial comparison, 2003
- Figure 36 Difficulty obtaining immediate care, Provincial comparison, 2003
- Figure 38 Prescription drug spending, 1997-2002
- Figure 39 Prescription drug spending, provincial comparison, (> 0%)
- Figure 40 Prescription drug spending, provincial comparison (> 5%)
- Figure 49 Patients very or somewhat satisfied with overall health services, 2003
- Figure 50 Satisfaction with overall health service by age, 2003
- Figure 51 Satisfaction with overall health service, Provincial/Territorial comparison
- Figure 52 Patients very or somewhat satisfied with hospital services, 2003
- Figure 53 Satisfaction with hospital services by age, 2003
- Figure 54 Satisfaction with hospital services, Provincial/Territorial comparison
- Figure 55 Patients very or somewhat satisfied with physician care, 2003
- Figure 56 Satisfaction with physician care by age, 2003
- Figure 57 Satisfaction with physician care, Provincial/ Territorial comparison
- Figure 58 Patients very or somewhat satisfied with community-based care, 2003
- Figure 59 Satisfaction with community care by age, 2003
- Figure 60 Satisfaction with community care, Provincial/Territorial comparison
- Figure 62 Satisfaction with telehealth, Provincial/Territorial comparison