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Seniors' Health Profile 2008

A Look at the Health of Older Adults in Fraser Health



Decision Support Services

Date: October 28, 2008

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Highlights

Health Determinants

Health determinants are non-medical factors or conditions that influence a person's health and their ability to age well. The social and economic conditions in which one lives, personal health practices, and the availability and accessibility of social, medical, and support services all play significant roles in determining the health of the senior population.

Socio-Economic Environment

Education

- * Thirty-six percent of Fraser Health seniors did not graduate from high school. The ability to access and understand health information improves with higher education.

Guaranteed Income Supplement

- * In 2006, roughly 4% of all seniors in Fraser Health collected the maximum Guaranteed Income Supplement (GIS), a federal income assistance plan for retired seniors with no income other than the Old Age Security Plan. How many of our seniors collected partial supplements is not known.

Seniors Living Alone

- * In 2006, 26% of Fraser Health Seniors were living alone.

Community Belonging

- * The majority of Fraser Health seniors reported having a somewhat strong to very strong sense of community belonging. There was much variation between our Health Service Delivery Areas (HSDAs) with percentages ranging from 58.1% in Fraser South to 78% in Fraser North.

Social Support

- * Socially isolated seniors are more likely to suffer poor physical or mental health than are seniors with active social lives. Over 60% of Fraser Health seniors reported high levels of social support.

Healthy living

Tobacco Use

- * Despite ongoing efforts to support and encourage cessation and prevention, some seniors continue to smoke cigarettes. Where Fraser East saw a decline in the proportion of current smokers among seniors between 2005 and 2007, Fraser South saw an increase.

Fruit & Vegetable Consumption

- * Canada's *Food Guide to Healthy Living* recommends that people eat at least five servings of fruits and/or vegetables each day. Unfortunately, less than 41% of our senior population achieves this daily target. A healthy, nutritious diet heavy in fruits and vegetables can help reduce the risk of cancer and other chronic conditions.

Leisure Time Physical Activity

- * In 2007, between 35% and 41% of Fraser Health seniors reported being active to moderately active during their leisure time pursuits. This was below the provincial average and was down from 2005 (42% to 47%).

Healthy Weight

- * While Fraser North and Fraser East showed a drop in the proportion of seniors reporting obese body weight from 2005 to 2007, Fraser South showed a 33% increase

Disease Prevention

Influenza Immunization

- * Over 90% of Fraser Health seniors living in residential care were immunized against the influenza virus.

Health Status

It is important to know how older adults view their own health and mental health and to understand why people are dying and what makes them sick.

General Health Status

Self-rated Health

- * The proportion of seniors reporting their own health as very good or excellent varied between HSDA. In Fraser South 32% of seniors reported very good to excellent self-rate health, whereas in Fraser East it was 37% and in Fraser North it was 42%.

Self-rated Mental Health

- * Larger proportions (58% to 62%) of seniors described their own mental health as very good or excellent compared to their general health status.

Life Expectancy at Age 65

- * In Fraser Health, someone aged 65-years today can expect to live another 22 years. This is significant given that someone born in 1943, and who is now aged 65, had a life expectancy of only 63 years at birth. Improved medical and diagnostic care contribute to increasing life expectancy.

Mortality

Leading Causes of Death

- * From 2002 to 2006, ischaemic heart disease remains the leading cause of death among men and women seniors.

Natural Causes

- * Cancer mortality has remained stable over the last ten years, whereas deaths from cardiovascular, cerebrovascular, and digestive systems diseases went down.

External Causes

- * Among external causes of death, accidental falls were the leading cause of death for Fraser Health seniors. Public education and fall prevention

strategies can help reduce the incidence of falls, especially for frail elders who are greatest risk of falling and least likely to regain physical function.

Morbidity

Hospitalizations

- * Men had higher hospitalization rates than women in all age groups examined.
- * Ischaemic and 'other forms of heart disease' were the leading causes of hospitalization in men, while this pattern does not exist in women

Chronic diseases are among the most common and the most costly health problems, yet many are largely preventable. Compared to younger people, older adults are more likely to have more than one chronic condition, with significant implications for their quality of life.

Cancer

- * Prostate, lung, and colorectal cancers were the most common cancers among senior men in 2006. Breast, lung, and colorectal cancers were the most common cancers among senior women in 2006.

Diabetes

- * Diabetes is a serious chronic condition that, when unmanaged, can lead to a number of disabling or life threatening complications. The prevalence of diabetes increases with age, and it is the single largest cause of blindness in Canada. The prevalence of diabetes among seniors has increased steadily over the last eight years, with 22% of Fraser Health seniors living with this disease in 2005/06 (*data based on a three-year rolling average covering 2004/05, 2005/06 and 2006/07 fiscal years*).

Osteoarthritis

- * Osteoarthritis can be a painful condition that limits physical activity. The prevalence of osteoarthritis have steadily increased over the past eight years with 29% of Fraser Health seniors having this disease in 2005/06 (*data based on a three-year rolling average covering 2004/05, 2005/06 and 2006/07 fiscal years*).

Stroke

- * A stroke is an emergency that requires immediate medical attention to save lives and to reduce debilitating outcomes. In 2007, roughly seven percent of Fraser Health seniors had a history of stroke.

Depression

- * Depression can often go undiagnosed among seniors because their symptoms frequently differ from the usual signs seen in younger groups. The prevalence of depression has increased among older adults, with approximately 27% of Fraser Health seniors suffering from depression in 2007.

I: Introduction

Welcome to the Fraser Health Seniors' Health Profile!

Defining 'seniors' as adults aged 65-years and older, this report profiles some of what we know about seniors who live in the different communities found within the boundaries of Fraser Health. We know that seniors are living longer than ever before and they are increasingly adopting a healthier lifestyle. Fraser Health has one of the largest seniors' populations among provincial health authorities, which is expected to increase 50% over the next ten years.

We know that older adults are often heavy users of the healthcare system and that their healthcare needs are generally more diverse and more complex than those of younger adults or children. While a growing seniors' population could increase demand on healthcare resources and various other services, this population is also an invaluable resource. With a lifetime of knowledge and life experience, seniors have much to contribute to society through volunteerism, civic participation, and community involvement. Fraser Health can help protect this resource and reduce the impact on healthcare utilization by encouraging seniors to adopt a healthy, active lifestyle and by providing supports for optimal aging.

In this Seniors' Health Profile, you will find a survey of how well we are doing with respect to seniors' health and a range of factors, called "health determinants," that affect health and other aspects of life as well. While expansive, this profile is an incomplete picture due to data availability. For example, we do not know the number of times seniors visit their physicians, yet we know that a considerable and increasing amount of morbidity among seniors is experienced outside of the hospital. Hospital utilization rates are reported as one proxy measure of morbidity. We hope that you will find this information useful in understanding our older adult population, who they are, where they live, their health and their illnesses, and the strengths and challenges facing our seniors, their families and caregivers, and our communities.

Planners and community service providers alike will find the information contained within to be helpful in highlighting issues, trends, or target groups that could benefit from intervention. Future Seniors' Health Profiles will track the changes in their health and the determinants of health, allowing us to monitor and improve upon the effectiveness of our strategies to support older adults and help them to age well.

II: Health Determinants

Population Demographics

Information on population characteristics such as sex, age structure, and growth rate is important for the planning of community services. Population growth and aging are projected to have a significant affect on the usage and costs of many services.

Social and Economic Environment

The social and economic conditions under which people live play an important role in determining their health. It is well documented that individuals in various socio-economic groups experience different health outcomes; those in poorer environments are more likely to experience poorer health outcomes. On the other hand, support from friends, from families, and from communities all contribute to good health.

The Physical Environment

The presence of natural or man-made hazards in our environment can affect our health. Contaminants in our air, water, food and soil at certain levels of exposure can cause a variety of health problems, including cancer, respiratory and gastrointestinal illness, birth defects and other illness. Safe water, clean air, workplace and community safety, good transportation, well designed neighbourhoods and safe housing all contribute to good health.

Healthy Living

Personal health practices can affect our health directly, for example, the foods we eat or whether or not we smoke or exercise. Our health behaviours are determined not only by the choices we make, but also by the choices available to us. A single parent with a long commute to work, for instance, may not have the time or energy to exercise despite the desire to do so. Maintaining a healthy body weight for our size contributes to good health.

Disease Prevention

Primary prevention describes measures that stop a disease or condition from occurring. Examples include better car design, pollution controls, food safety and immunization. Secondary prevention refers to measures that prevent further damage when a disease or condition has already occurred; for example, screening tests. Tertiary prevention is done when a disease has occurred and caused damage, in order to minimize the effect of the disease and prevent complications; for example, diabetic education or cardiac rehabilitation.



POPULATION DEMOGRAPHICS

Seniors Population Distribution

Definition

Where seniors (aged 65+) currently live within a geographic region.

19% of the FH senior population lives in Surrey.

Highlights

With an estimated 193,850 seniors living within the region in 2008, Fraser Health has the largest number of older adults among BC health authorities. Indeed, fully 12.5% of the Fraser Health population was aged 65 years or older in 2008. Of these older adults, 18.8% live in Surrey, while Agassiz/Harrison and Hope each have less than 1% of the total Fraser Health senior population.

However, less than 10% of the total Surrey population is aged 65 years and older. At 21.9%, South Surrey/White Rock had the largest proportion of seniors in its population. Hope's population includes 1,735 older adults, representing 20.4% of its total population.

What does this mean?

Fraser Health has a large population that is spread out over a large geographic region. There are vast differences in the size of the older adult population in of Agassiz/Harrison (1,667) or Hope (1,735) and the more urban LHAs such as Surrey (36,506) or Burnaby (28,813).

Population density can influence lifestyle, behaviours, and availability of services. Therefore, it is important to

plan and develop the location and delivery of services that take these differences into account.

Limitations

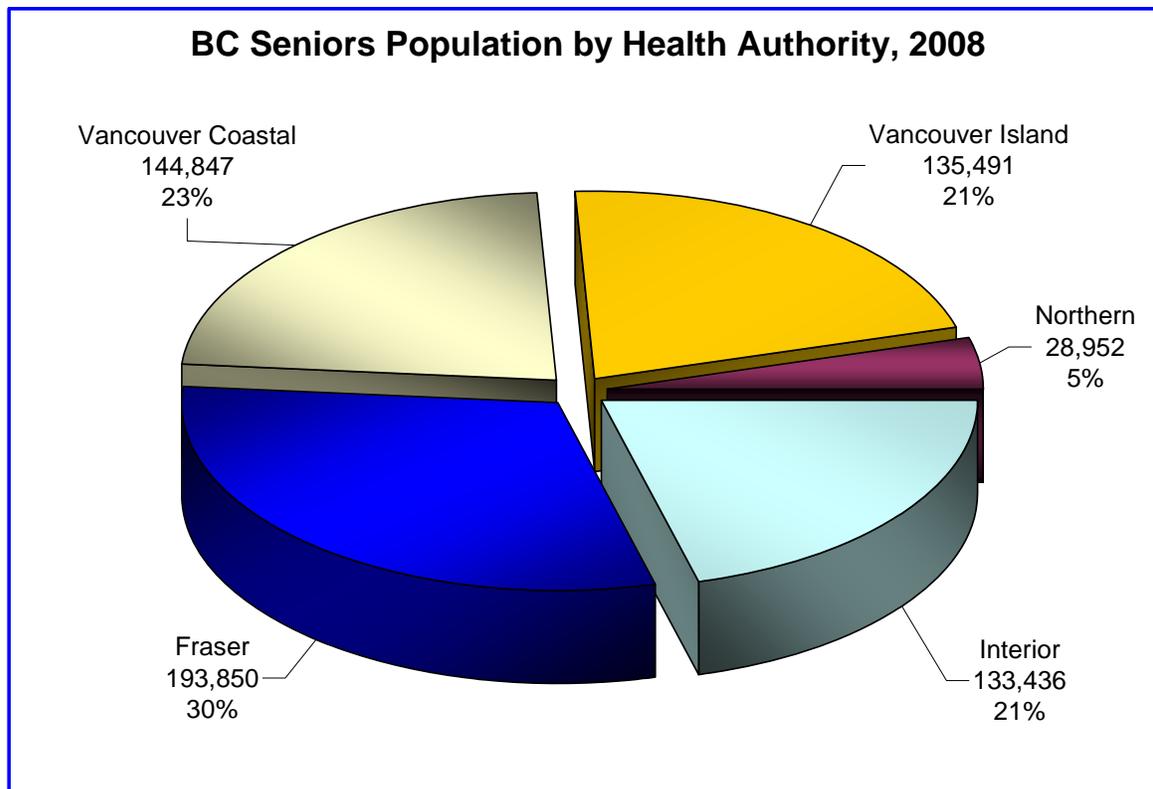
Population data are projected estimates based on Census results, which is done only every five years. Therefore, population estimates may not reflect current population dispersion as data may or may not accurately predict the movement of people in an out of the region or between communities.

P.E.O.P.L.E. 32 data sets consist of population estimates (1986-2006) which incorporate information from the 1986, 1991, 1996, 2001 and 2006 Censuses of Canada, and population projections which contain estimates from 1986 to 2006 and projections 2007-2036.

Fraser Health Senior Population by LHA, 2008

Local Health Area	65+ Population	% of FH
Burnaby	28,813	14.9%
Coquitlam	21,053	10.9%
New Westminster	8,105	4.2%
Maple Ridge	10,606	5.5%
Delta	14,104	7.3%
Surrey	36,506	18.8%
South Surrey/White Rock	18,440	9.5%
Langley	16,685	8.6%
Abbotsford	18,170	9.4%
Mission	4,496	2.3%
Chilliwack	13,470	6.9%
Hope	1,735	0.9%
Agassiz/Harrison	1,667	0.9%
Fraser Health Total	193,850	100.0%

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections.



Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections.

Seniors as a Proportion of the Total LHA Population, 2008			
Local Health Area	65+ Population	% of Area Population	Total All Ages
Burnaby	28,813	13.1%	219,641
Coquitlam	21,053	9.9%	212,912
New Westminster	8,105	12.6%	64,222
Maple Ridge	10,606	11.4%	93,276
Delta	14,104	13.7%	102,662
Surrey	36,506	9.9%	370,034
South Surrey/White Rock	18,440	21.9%	84,201
Langley	16,685	13.1%	127,827
Abbotsford	18,170	13.4%	135,184
Mission	4,496	10.9%	41,267
Chilliwack	13,470	16.2%	83,180
Hope	1,735	20.4%	8,514
Agassiz/Harrison	1,667	18.1%	9,204
FH	193,850	12.5%	1,552,124

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections.



Predicted Seniors Population Growth

Definition

Population growth is the sum of the natural rate of increase (births minus deaths) plus the migratory growth rate.

Population percent increase =

$$\frac{\text{End of period population} - \text{start of period population}}{\text{Start of period population}} (100)$$

P.E.O.P.L.E. 32 growth rates are based on population projections developed by BC STATS.

From 2008 to 2028, the senior population in FH is expected to increase by 242,307 older adults.

Highlights

Between 2008 and 2028, the Fraser Health senior population is expected to increase 125%. While it is anticipated that each health authority will see their older adult populations increase, FH will continue to be home to the largest number of seniors.

The number of seniors is expected to increase in each Fraser Health LHA, with growth estimates for Coquitlam (189%) and Surrey (172%) leading the way.

What does this mean?

Population growth is affected by a number of factors including: human migration as people move into or away from an area (urbanization, economic climate, and other reasons); the population age structure; and the number of babies each women has.

Without more effective prevention measures, large increases in the older adult population indicate increasing demand for health care and other types of social services.

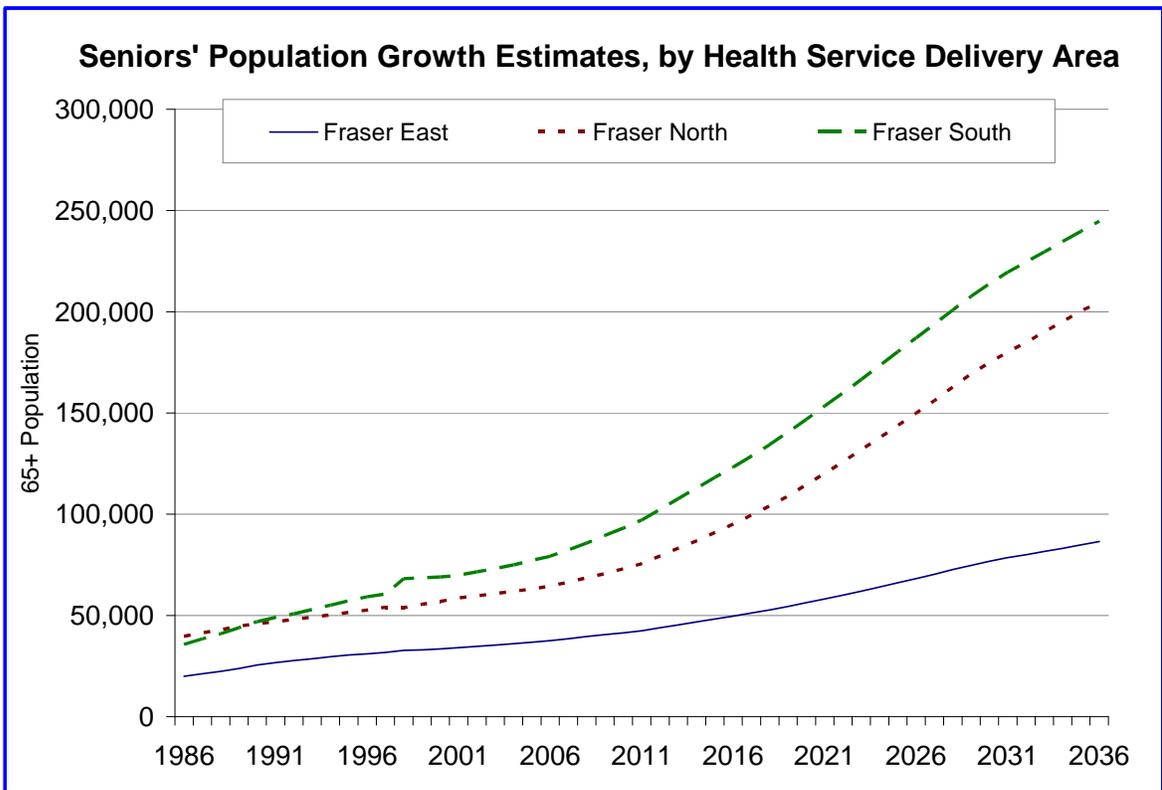
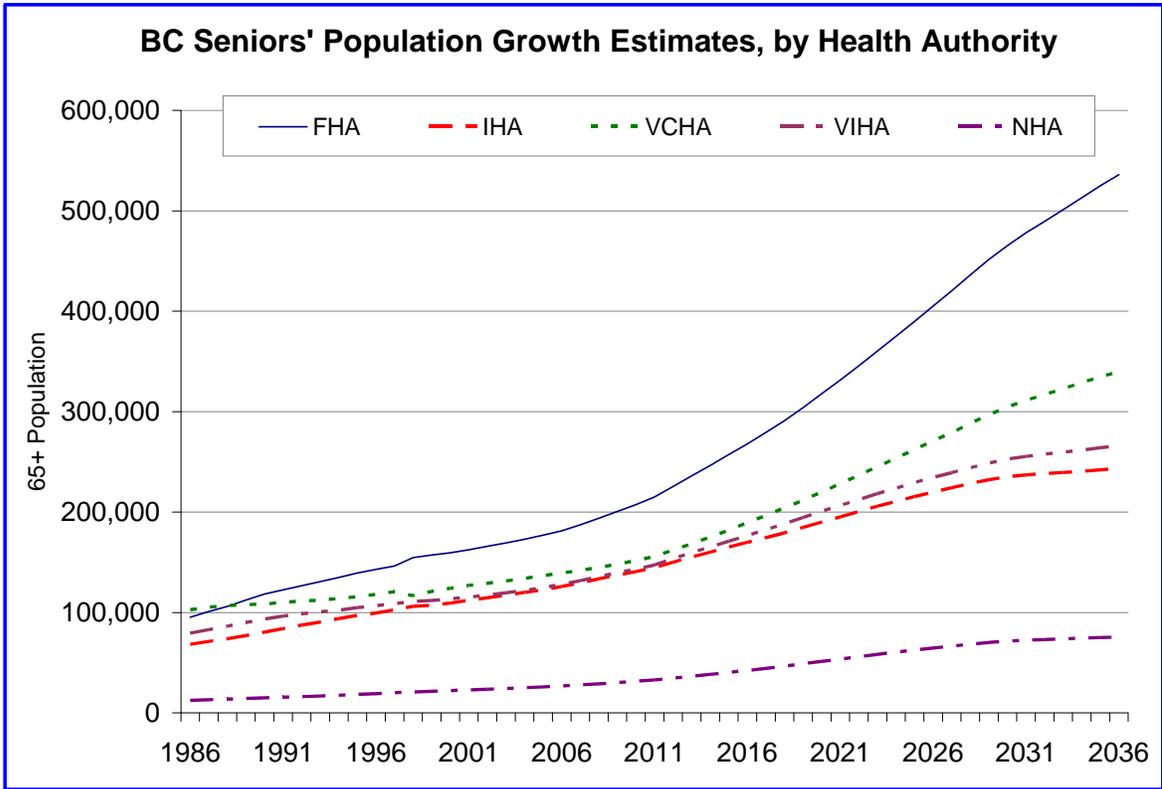
Limitations

Population projection models are sophisticated estimates based on previous census data, and are therefore only an indication of population growth. Projections do not take into account unexpected changes in population (e.g., natural disasters, economic downfall).

Projected Number of New Seniors, 2008 to 2028

Local Health Area	Increase	
	#	%
Burnaby	29,417	102.1%
New Westminster	9,216	113.7%
Coquitlam	39,813	189.1%
Maple Ridge	15,716	148.2%
Delta	15,252	108.1%
Surrey	62,704	171.8%
South Surrey/White Rock	14,205	77.0%
Langley	22,905	137.3%
Abbotsford	15,721	86.5%
Mission	6,036	134.3%
Chilliwack	9,356	69.5%
Hope	903	52.0%
Agassiz/Harrison	1,063	63.8%
Fraser Health Total	242,307	125.0%

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections



Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections.

Seniors Population by Age and Sex

Definition

This indicator reports the proportion of the older adult population (ages 65+) that is of a given sex and age group relative to the total population currently living within a geographic region.

Fraser Health's 75+ population is projected to grow by 31% over the next ten years

Highlights

In 2008, the majority of the FH senior population (29.4%) is between the ages of 65 and 69 years.

Women outnumber men in each age group shown. Among those aged 65- to 69-years, there are 1,532 more women than there are men. Among those aged 90-years and older, the number of women is more than double the number of men.

Projections indicate that the number of people aged 75-years and older is expected to grow by 16.9% over the next five years and by 30.6% over the next ten years.

Between 2008 and 2013, the oldest age group (90+) is expected to experience the largest growth (45.4%), while the youngest age group (65-69) will experience the second largest growth (36.1%) among senior age groups.

What Does This Mean?

Deaths and migration may change the age and sex distribution of the senior population in each community.

Shifts to a population's age structure, particularly increases in the number of very young or very old people, can have significant implications for the planning and delivery of services like childcare, education and healthcare.

With increased longevity, the number of older adults in the population is growing as the 'baby boom generation' ages, emphasizing the need to plan for increased health services over the next 20 years.

Society also benefits from a growing seniors population, which is a resource of experienced people with time to contribute to community life. Seniors have high rates of volunteerism and many enjoy sharing their knowledge and life experience with others.

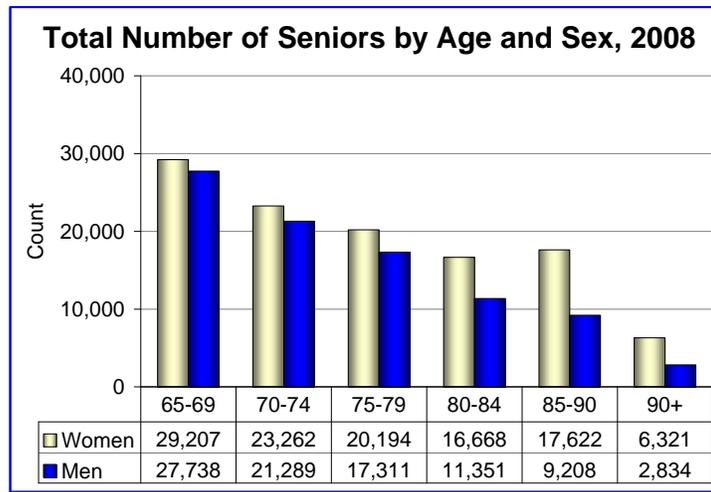
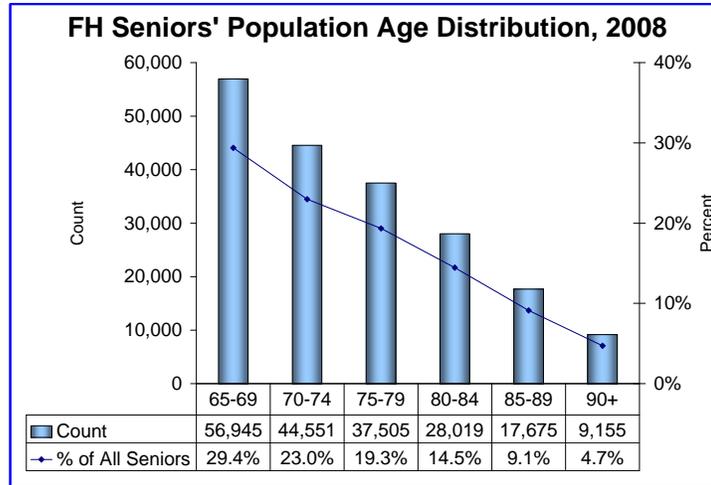
Limitations

Population projections are estimates based on the previous Census data, and therefore, are only an indication of population growth.

Senior Population by LHA, 2008

Local Health Area	Age Group	
	65-74 Yrs	75+ Yrs
Burnaby	14,831	13,982
New Westminster	3,838	4,267
Coquitlam	11,910	9,143
Maple Ridge	5,653	4,953
Delta	7,768	6,336
Surrey	20,977	15,529
South Surrey/White Rock	8,123	10,317
Langley	8,374	8,311
Abbotsford	8,869	9,301
Mission	2,455	2,041
Chilliwack	6,782	6,688
Hope	961	774
Agassiz/Harrison	955	712
Fraser Health Total	101,496	92,354

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections



Number of Seniors by Selected Age Groups						
Ages	2008	2013	2018	2023	2028	2033
65-69	56,945	77,507	96,703	117,935	135,407	137,364
70-74	44,551	54,533	73,877	92,006	111,946	128,304
75-79	37,505	40,359	49,548	67,189	83,464	101,648
80-84	28,019	30,673	33,220	41,062	55,636	69,161
85-89	17,675	19,670	21,712	23,775	29,445	40,119
90+	9,155	13,308	16,105	18,313	20,259	24,581
Total 75+	92,354	104,010	120,585	150,339	188,804	235,509

Percent Change Relative to 2008 Seniors' Population						
Ages	2003-2008	2008-2013	2008-2018	2008-2023	2008-2028	2008-2033
65-69	19.8%	36.1%	69.8%	107.1%	137.8%	141.2%
70-74	4.4%	22.4%	65.8%	106.5%	151.3%	188.0%
75-79	7.6%	7.6%	32.1%	79.1%	122.5%	171.0%
80-84	11.0%	9.5%	18.6%	46.6%	98.6%	146.8%
85-89	-6.6%	11.3%	22.8%	34.5%	66.6%	127.0%
90+	51.5%	45.4%	75.9%	100.0%	121.3%	168.5%
Total 75+	16.9%	12.6%	30.6%	62.8%	104.4%	155.0%

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 Projections.

Ratio of Seniors to Younger Adults

Definition

The ratio of people considered to be “dependent” and presumed not to be working (those under age 18-years or over 65-years) to people considered to be of working (18-64-years old) is called the “total dependency ratio.” The ratio of adults aged 65-years and older to those aged 18- to 64-years is called the “elderly dependency ratio.”

19% of the FH population are older than typical working ages of 18-64.

Highlights

At 18.9%, Fraser Health ratio of adults aged 65 and over to those aged 18-64 is smaller than that of BC (21.5%).

Among Fraser Health LHAs, the ratio of adults aged 65 and over to those aged 18-64 ranged from 14.3% in Coquitlam to 36.1% in South Surrey/White Rock. Of the five LHAs in Fraser East, only Mission (16.5%) had an elderly dependency ratio lower than the Fraser Health average.

All five Fraser East LHAs exhibited higher total dependency ratios than the FH average (data not shown).

The total dependency ratio in FH (50.9%) is comparable to that of BC (50.7%). In FH, children account for the larger proportion of the total dependency ratio than in BC overall (data not shown).

What does this mean?

Rapidly reproducing populations and those with short average life spans will

be made up of more children, whereas slowly reproducing populations and those with long average life spans will have relatively more older adults.

Assuming that people aged 0- to 17-years and those aged 65-years and older are not working (“dependent”) and that people aged 18- to 64-years are working (not “dependent”) gives a rough estimate of the number of dependent and working people in a population. A more accurate estimate needs information on who is and is not working and supporting themselves.

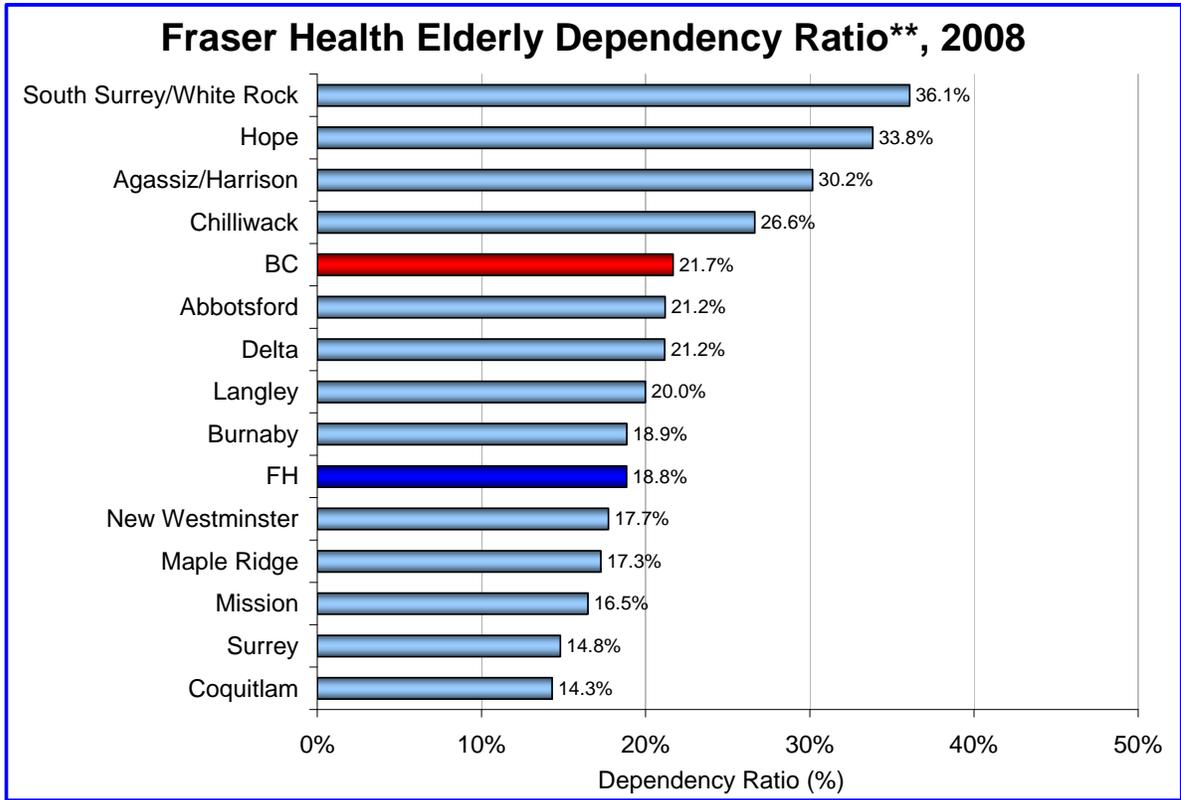
Areas with higher dependency ratios are likely to require more healthcare services than areas with lower dependency ratios, with older adults on average requiring more complex health care services than do children.

Limitations

This indicator is based solely on age, not on employment, so it does not take into account older or younger people who are working, nor those aged 18- to 64-years who are not working. The indicator does not take into account societal gains from unpaid work like volunteerism or older adults’ significant contribution to the care of others and participation in community life.

With the elimination of mandatory retirement at age 65 in BC as of January 1, 2008, increasing numbers of older adults will remain in the workforce^a.

^a Ministry of Attorney General, Government of British Columbia. *Frequently asked questions about eliminating mandatory retirement*. Retrieved January 24, 2008 from <http://www.ag.gov.bc.ca/mandatory-retirement/>



** Ratio of older adults aged 65 years and older to adults aged 18-64 years.

Source: BC Stats, BC Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 32 projections.

SOCIO-ECONOMIC STATUS

Education

Definition

The 2006 Canada Census defines the highest level of education as the highest completed certificate, diploma and/or degree. Data are shown for the population aged 65-years and older.

36% of Fraser Health seniors did not graduate from high school

Highlights

According to the 2006 census, 36% of Fraser Health residents aged 65-years and older did not graduate from high school, which is slightly higher than the BC average of 34%.

Only 9% of Fraser Health seniors hold a Bachelor's or higher university degree, compared to 12% of all BC seniors.

Among Fraser Health LHAs, Surrey (46%) has the largest percent of seniors who did not graduate from high school, while South Surrey/White Rock (22%) had the smallest percent.

Delta (14%) and South Surrey/White Rock (14%) local health areas have the largest proportions of seniors with a Bachelor's or higher degree, larger than the BC proportion of 12%. Hope (5%) and Maple Ridge (5%) have the smallest proportions in Fraser Health.

What Does This Mean?

By giving people skills and knowledge needed to solve problems, education supports personal health and wellbeing. The ability to access and understand health information

improves with higher educational attainment.^b

Education is a strong predictor of health status among seniors; generally, the more education someone attains the healthier they are. Lower education levels can also increase the likelihood of functional illiteracy, which can make health prevention and healthcare access problematic as illiterate people cannot read prescription directions, health-based literature or instructions.

Higher educational attainment is generally associated with higher annual incomes. The lack of a high school diploma can restrict job opportunities; it can increase the risk of occupational accidents or diseases, and the likelihood of unemployment.

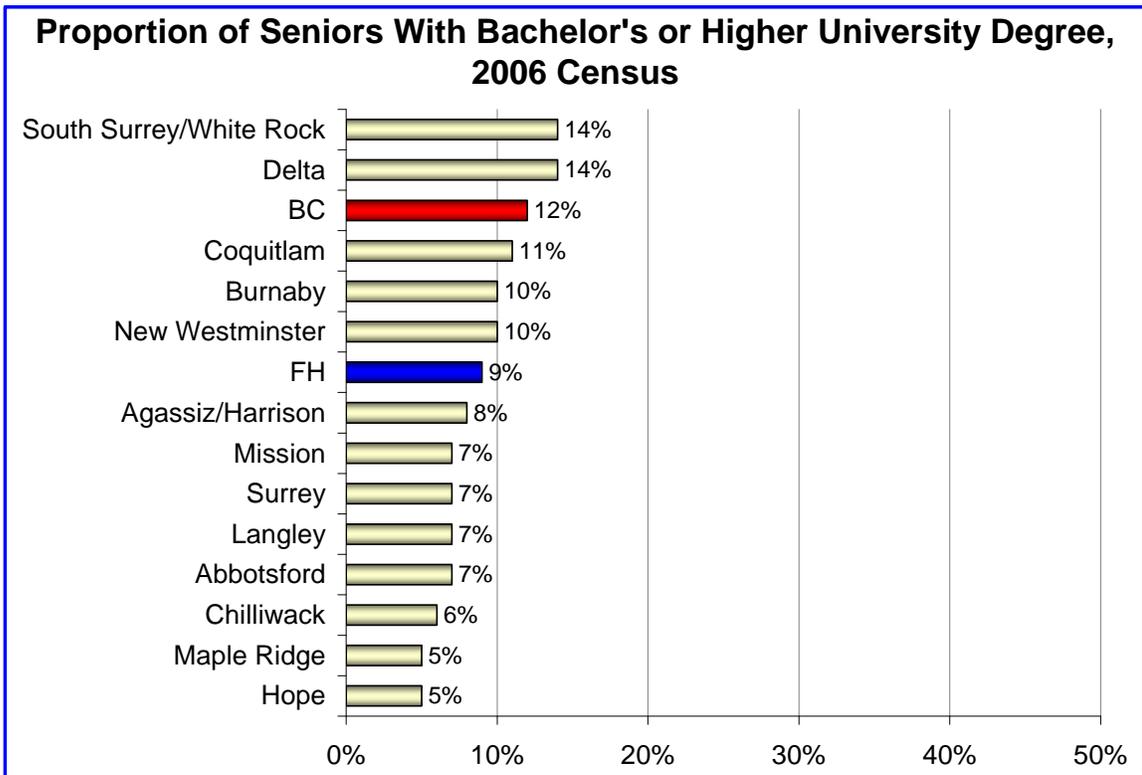
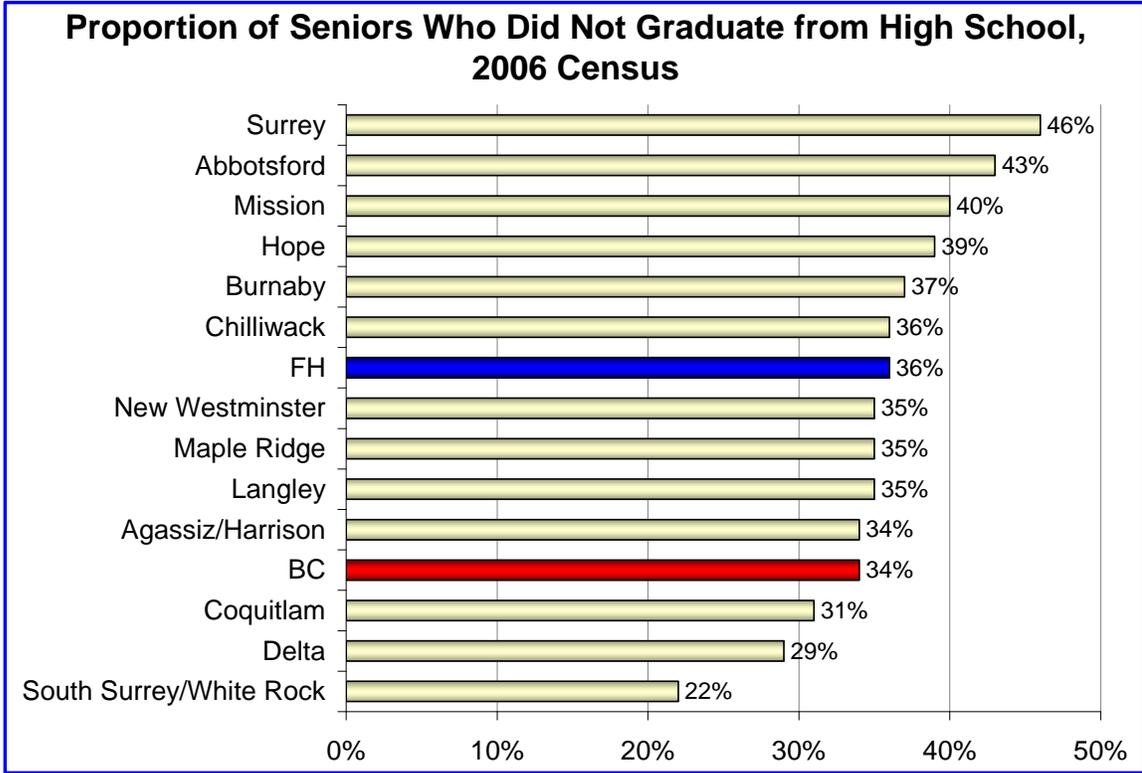
Older adults with higher education are more likely to remain in the workforce past the typical retirement age of 65, giving them more time to accumulate savings and make CPP contributions.^c Current graduation rates suggest that future seniors will have higher levels.

Limitations

This only measures formal education; people may be self-taught, acquiring knowledge and skills through the media, libraries and other resources.

^b Public Health Agency of Canada. (2004). *What determines health?* Retrieved June 10, 2008, from http://www.phac-aspc.gc.ca/ph-sp/determinants/determinants_e.html#education

^c American Council on Education. (2007). *Framing new terrain: Older adults & higher education*. Washington, DC: American Council on Education. Retrieved June 10, 2008 from <http://www.acenet.edu/Content/NavigationMenu/Programs/Services/CLLL/Reinvesting/Reinvestingfinal.pdf>



Source: Statistics Canada, Census 2006.^d

^d Acquired through PCensus.

Guaranteed Income Supplement

Definition

The proportion of the population aged 65-years and older with little or no income who receive the maximum Guaranteed Income Supplement (GIS). The GIS is a federal income assistance program for seniors 65+ payable to pensioners with limited or no income beyond the Old Age Security plan.

About 4% of Fraser Health residents aged 65+ receive the maximum supplement

Highlights

Overall, 4% of the FH population aged 65-years and older received the maximum GIS in 2006, which was higher than the BC average of 3.5% (data not shown).

In Fraser Health overall, a larger proportion of women (4.5%) than men (3.4%) received the maximum 2006 GIS, with a similar pattern evident at the provincial level (data not shown).

The proportion of men receiving the maximum 2006 GIS ranged from 0.7% in the South Surrey/ White Rock LHA to 6.5% in the Surrey LHA.

The proportion of women receiving the maximum GIS in 2006 ranged from 1.1% in the South Surrey/ White Rock LHA to 8% in the Surrey LHA.

Mission was the only LHA in Fraser Health with larger proportions of men than women receiving the maximum GIS in 2006.

What Does This Mean?

This is an indicator of poverty. Low income and poverty are associated with lack of adequate food, clothing, and shelter, which have significant implications for health and for social wellbeing.

Low income is often associated with increased emergency visits, increased rates for illness and death, and less healthy lifestyle.

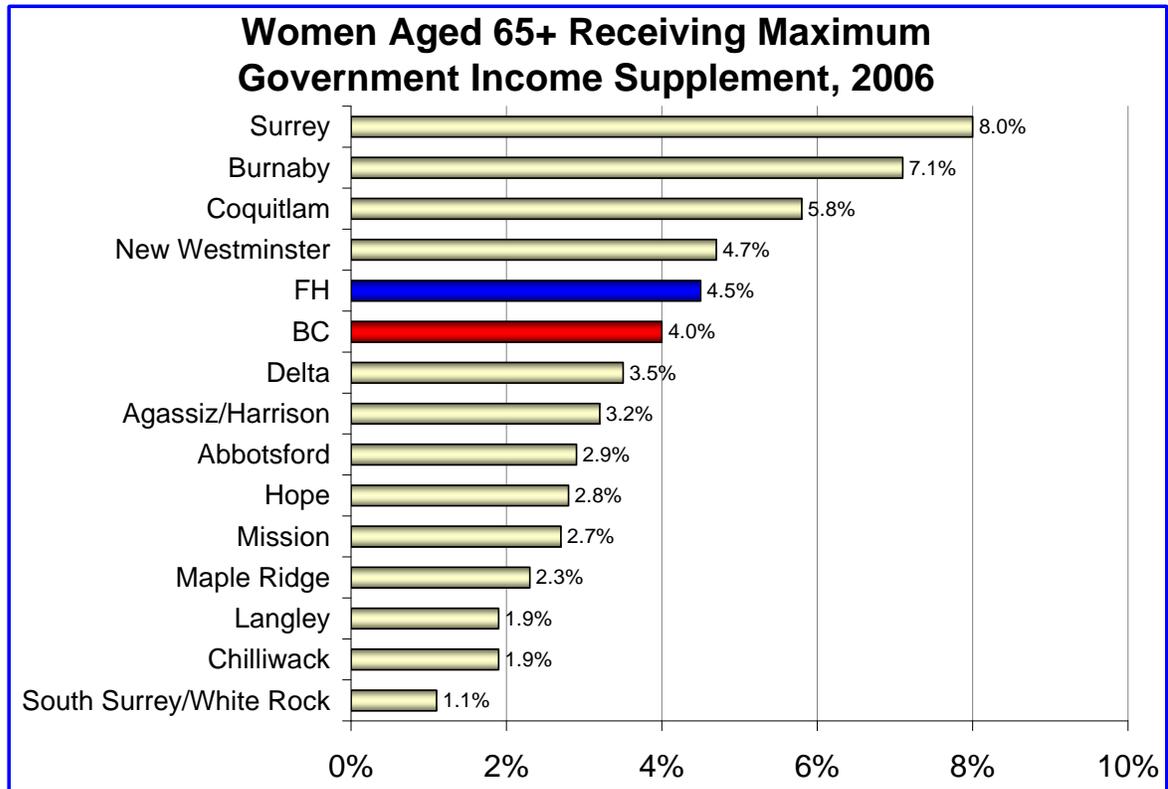
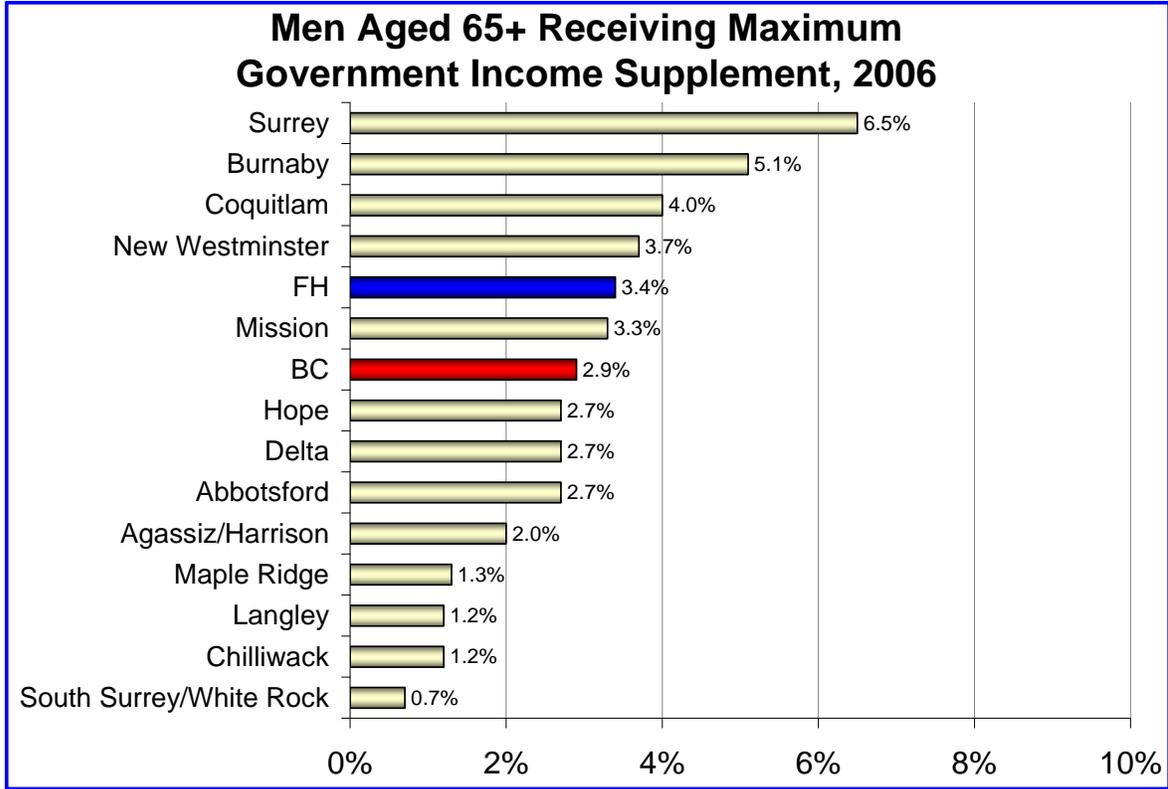
There are three different sources for retired Canadian seniors to derive revenue: 1) the Old Age Security plan, 2) CPP/QPP, and 3) private resources (including private pension plans).^e

Only those seniors who are eligible for the Old Age Security plan can receive GIS benefits. Receipt of the GIS is not automatic and seniors must apply for benefits each year. This income source is lost to those who do not apply because they are unable or not informed. Unfortunately, any eligible senior who does not apply not only misses out on the GIS supplement, but also misses out on provincial initiatives using the GIS as eligibility criterion.^e

Limitations

Data are limited to seniors receiving the maximum GIS, thereby excluding those receiving partial supplements.

^e National Advisory Council on Aging. (2005). *Aging in poverty in Canada*. (Policy paper No. Cat: H99-5/3-2005). Ottawa, ON: Minister of Public Works and Government Services Canada. Retrieved June 10, 2008 from <http://dsp-psd.pwgsc.gc.ca/Collection/H88-5-3-2005E.pdf>



Source: Ministry of Human Resources and BC STATS, in BC STATS' 2006 Statistical Profiles.

Seniors Living Alone

Definition

This indicator reports the proportion of seniors (ages 65-years and older) who reported that they lived alone on the 2006 Canadian Census.

In 2006, 26% of Fraser Health seniors were living alone

Highlights

Fraser Health (25.5%) had a slightly smaller proportion of older adults living alone in 2006 than the provincial average (27.3%).

Surrey (18.1%) LHA had the smallest proportion of seniors living alone in Fraser Health, while New Westminster (38.2%) LHA had the largest.

Four LHAs had larger proportions of seniors living alone compared to the BC average; two in Fraser South and two in Fraser North.

What Does This Mean?

Older adults value their independence and generally want to live in their own personal residences for as long as possible. Maintaining a household is often more difficult for those older adults who live alone.

The majority of Canadian seniors live with a spouse or someone else, yet roughly 28% live alone^f. Women are more likely to live alone than men are, and the likelihood increases with age,

in part due to women's longer life expectancy.

A British study found that seniors living alone are less likely to have someone to provide care in an emergency than those living with others.⁹ Researchers argued that seniors living alone were at increased risk of social isolation and were more likely to suffer a fall. Compared to those living with others, seniors living alone were found to have reduced health status and increased health risk behaviours.

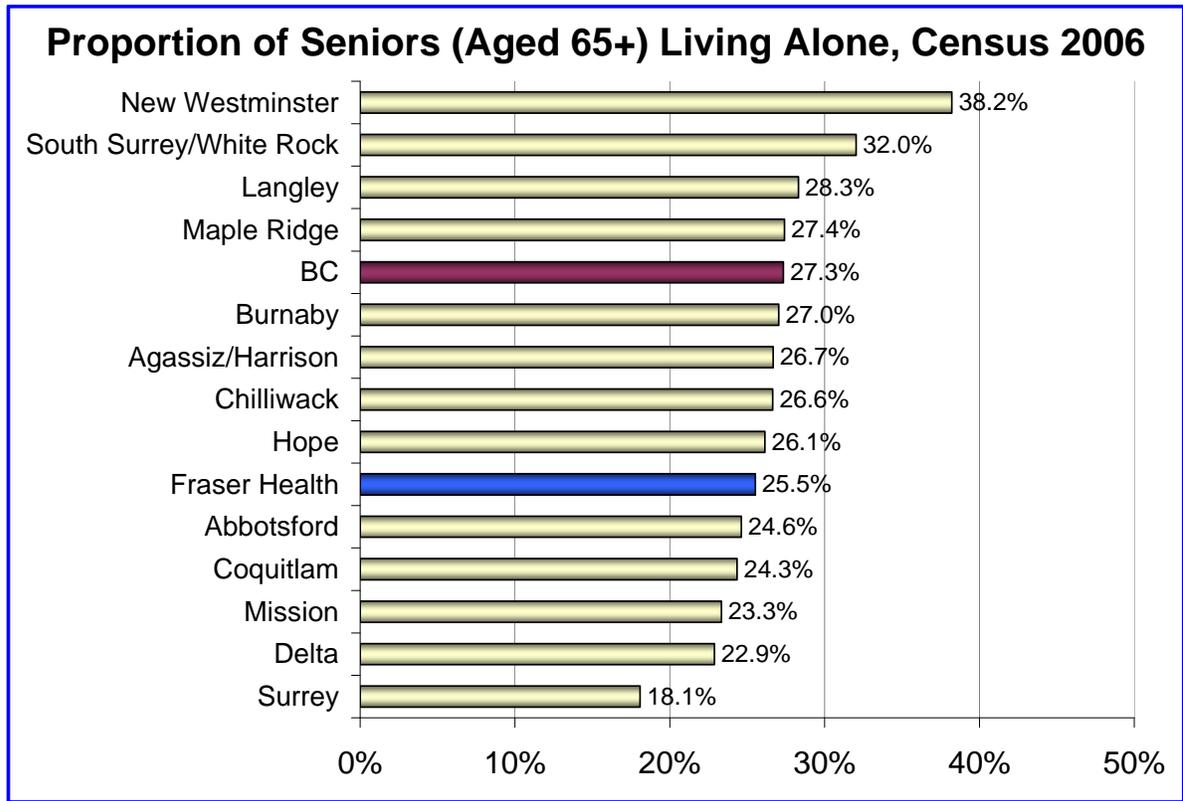
Home Support services help people to remain in their homes and to maintain their independence and improve their quality of life. For seniors living alone, Home Support services are invaluable; providing care, helping with the tasks of daily living, assisting medication management and others.

Limitations

Data on the proportion of seniors living alone does not take into account their ability to perform activities of daily living, whether they have friends and/or family who live nearby, or their general physical or mental abilities.

^f Statistics Canada. 2006 Census. Catalogue number 97-553-XCB2006019 Retrieved October 2, 2008 from <http://www12.statcan.ca/english/census/index.cfm>

⁹ Kharicha, K., Iliffe, S., Harari, D., Swift, C., Gillmann, G., & Stuck, A. E. (2007). Health risk appraisal in older people 1: Are older people living alone an 'at-risk' group? *British Journal of General Practice*, 57(537), 271-276.



Source: Statistics Canada, Census 2006

Community Belonging

Definition

This indicator reports the proportion of seniors (ages 65-years and older) who reported a very strong or somewhat strong sense of community belonging.

Data are from the cyclical Canadian Community Health Survey (CCHS), a telephone survey with one question asking respondents to describe their sense of belonging to their local community as very strong, somewhat strong, somewhat weak, or very weak.

77.5% of Fraser North seniors reported a strong sense of community belonging in 2007

Highlights

In 2007, Fraser North (77.5%) had the largest proportion of seniors reporting that they felt a somewhat to very strong sense of community belonging, which was statistically significantly higher than in BC (68.8%).

Between the 2005 and 2007 surveys, the proportion of seniors reporting a strong sense of community belonging dropped in Fraser East and in Fraser South. In 2007, the difference between Fraser South (58.1%) and BC (68.8%) was statistically significant.

What Does This Mean?

Seniors taking part in focus group activities argued that the feeling of belonging to their local community is greatly valued among older adults.^h

^h Bryant, T., Raphael, D., Brown, I., Cogan, T., Dallaire, C., Laforest, S., et al. (2002). *A nation for all ages? A participatory study of Canadian seniors' quality of life in seven municipalities*. Toronto, ON: York Centre for Health Studies, York University. Retrieved July 21, 2008 from <http://www.utoronto.ca/seniors/seniorsfinalreport.pdf>

Having family and friends who live locally can help seniors feel socially connected. Being active with religious/spiritual groups, participating in civic affairs, and volunteerism each help foster community belonging and can enable seniors to contribute and to share their wisdom and experience.

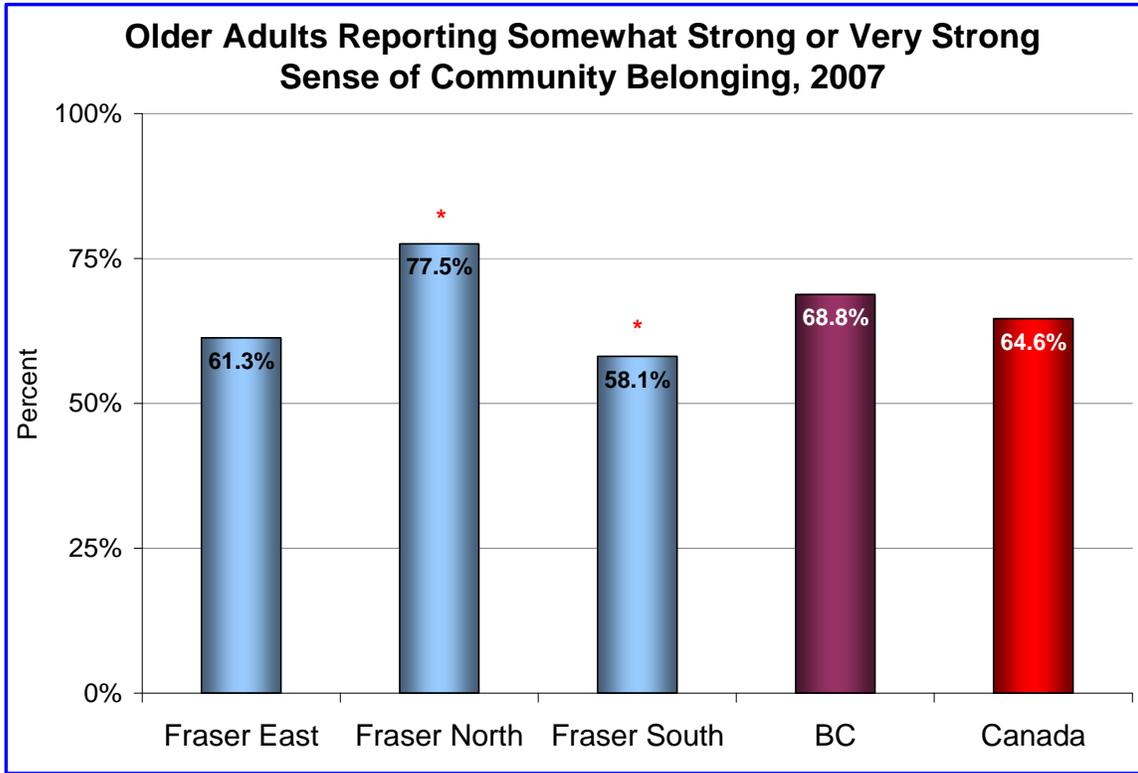
Lacking ties to community, socially isolated seniors are more likely to suffer poor physical or mental health, and they are more likely to die prematurely.ⁱ Social interaction can provide seniors with mental stimulation and companionship, and it is an avenue for sharing knowledge and norms related to healthy behaviours.

Canadian results from the 2005 CCHS showed that strong sense of community belonging has strong links with self-perceived general and mental health.ⁱ Those reporting a very strong sense of community belonging were almost twice as likely to report excellent or very-good general health as those with a weak or very weak sense were; likewise, they had over twice the odds of reporting excellent or very good mental health. In all likelihood, these linkages go both ways with physically and mentally healthy seniors being more likely to engage themselves in the community.

Limitations

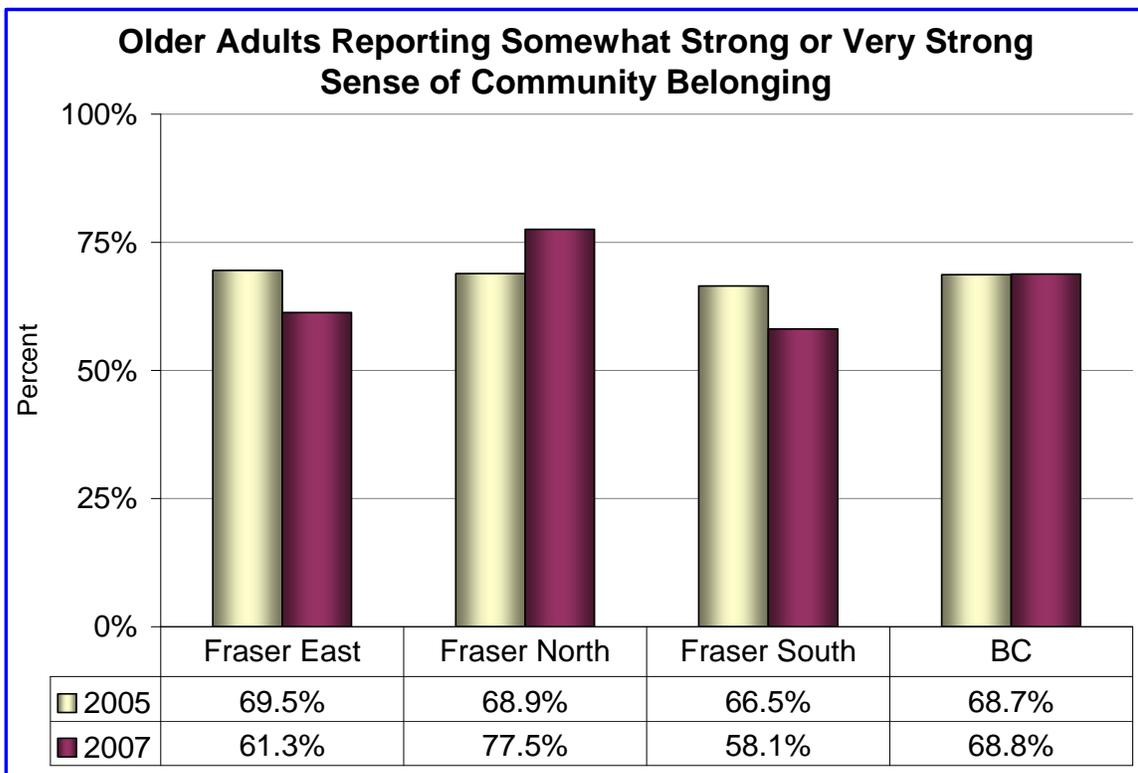
CCHS data are reported only at HSDA or BC level, so generalizing across Fraser Health is problematic with likely variation between communities.

ⁱ Shields, M. (2008). Community belonging and self-perceived health. *Health Reports*, 19(2), July 18, 2008. Retrieved July 21, 2008 from <http://www.statcan.ca/english/freepub/82-003-XIE/2008002/article/10552-en.pdf>



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant.

Source: Statistics Canada; Canadian Community Health Survey, 2007 (CCHS cycle 4.1).



Source: Statistics Canada; Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).

Social Support

Definition

This indicator reports the proportion of seniors (ages 65-years and older) who reported high levels of social support.

Data are derived from the cyclical Canadian Community Health Survey (CCHS), a telephone survey defining social support as having emotional and/or informational support when a respondent needs someone to listen or to confide in. Eight questions form a social support index with three support levels: low, medium, or high.

In 2005, older men reported higher social support than women

Highlights

The proportion of seniors reporting high levels of social support varied among Fraser Health HSDAs in 2005. Fraser South (65.2%) had the largest proportion, followed by Fraser East (63.9%). With 60.0% of participating seniors reporting high levels of social support, Fraser North had a similar proportion to BC overall (60.2%).

In each Fraser Health HSDA, men were more likely to report high levels of social support than women were. With similar rates between sexes, provincial data, however, did not mirror this pattern. Among Fraser Health HSDAs, 58.7% to 63.2% of women and 61.4% to 67.7% of men reported high levels of social support.

What Does This Mean?

As social animals, human beings need to interact with others. Seniors with an

active social network and emotional support tend to report higher levels of life satisfaction than those without.^j Social support can enhance health maintenance and disease prevention. Socializing, connecting with others, and having someone to confide in benefit health and well-being by promoting a healthy diet, by increasing chances that seniors remain physically active and by deterring depression.^j

Socially isolated seniors are more likely to suffer poor physical or mental health, and they are more likely to die prematurely.^k One study found that adequate emotional support and fewer feelings of loneliness decreased the risk of death.^l

Limitations

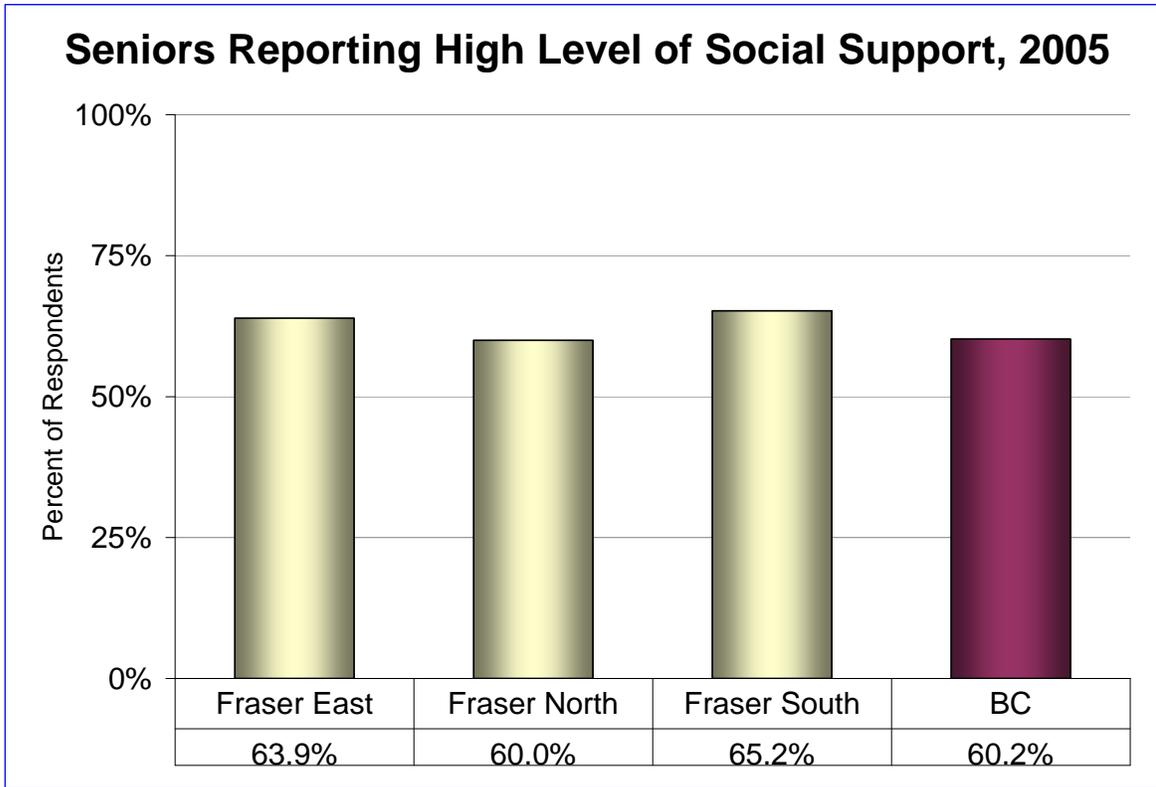
CCHS data are reported only at HSDA or BC level, so generalizations across Fraser Health are tentative.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded from the survey.

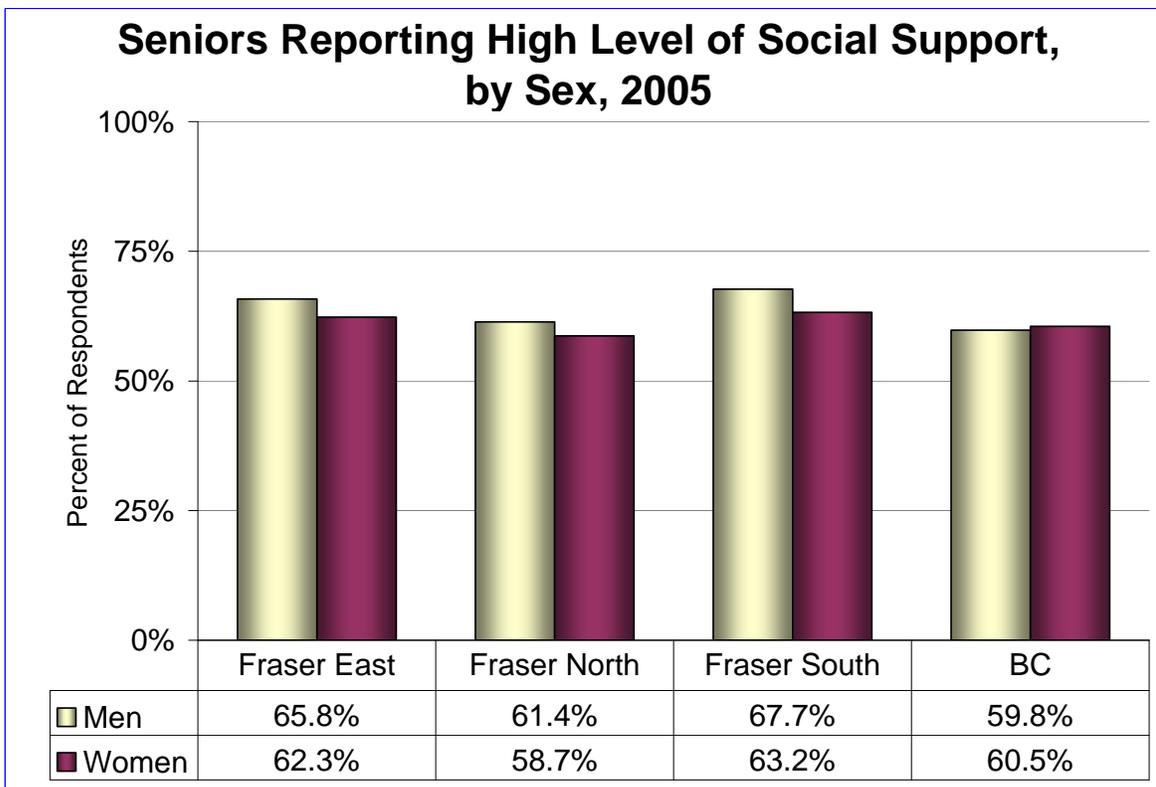
^j McReynolds, J. L., & Rossen, E. K. (2004). Importance of physical activity, nutrition, and social support for optimal aging. *Clinical Nurse Specialist, 18*(4), 200-206.

^k Shields, M. (2008). Community belonging and self-perceived health. *Health Reports, 19*(2), July 18, 2008. Retrieved July 21, 2008 from <http://www.statcan.ca/english/freepub/82-003-XIE/2008002/article/10552-en.pdf>

^l Penninx, Brenda W. J. H., van Tilberg, T., Kriegsman, Didi M. W., Deeg, Dorly J. H., Boeke, A. Joan P., & van Eijk, Jacques Th. M. (1997). Effects of social support and personal coping resources on mortality in older age: The longitudinal aging study Amsterdam. *American Journal of Epidemiology, 146*(6), 510-519.



Source: Statistics Canada, Canadian Community Health Survey, 2005 (CCHS cycle 3.1).



Source: Statistics Canada, Canadian Community Health Survey, 2005 (CCHS cycle 3.1).

Tobacco Use

Definition

This indicator reports the proportion of survey respondents (ages 65-years and older) who reported being Current Smokers during the cyclical Canadian Community Health Survey (CCHS). Current Smokers (including daily and occasional smokers), said that they had smoked at least 100 cigarettes during their lifetime, and had smoked in the 30 days preceding the survey.

The proportion of current smokers among Fraser East seniors was 6.2% in 2007

Highlights

Fraser East and Fraser South had smaller proportions of current smokers than in BC overall (Fraser North data were too unreliable to publish).

Between 2005 and 2007, proportions of current smokers decreased in Fraser East (9.1% to 6.2%) but increased in Fraser South (7.8% to 8.4%). BC also saw an increase during this timeframe (9.3% to 9.9%).

What Does This Mean?

Cigarettes are highly addictive and most Current Smokers are daily smokers. The more cigarettes a person smokes each day and the longer that a person smokes, the more toxic chemicals and gases are inhaled and the greater the harm to their health.

Smoking causes illness, disability and premature death. It is the single most significant cause of lung cancer and

chronic respiratory disease. Smoking causes other forms of cancer such as cancers of the lips, mouth, throat, pharynx, esophagus, breast, cervix, bladder, pancreas and kidney. It also causes diseases of the blood vessels including heart disease and stroke^m.

Smoking kills half of all persistent smokers and is by far the most significant cause of preventable illness and diseaseⁿ. Most seniors who smoke are considered to be persistent smokers who likely smoked for many years.

Quitting smoking greatly reduces the risk of developing related diseases, and it is never too late to quit. One study found that the risk of developing coronary heart disease drops 50% within one year of quitting.^o While the risks of lung cancer and COPD take longer to drop, a former smoker's risk is not dissimilar to one who never smoked after ten to fifteen years.

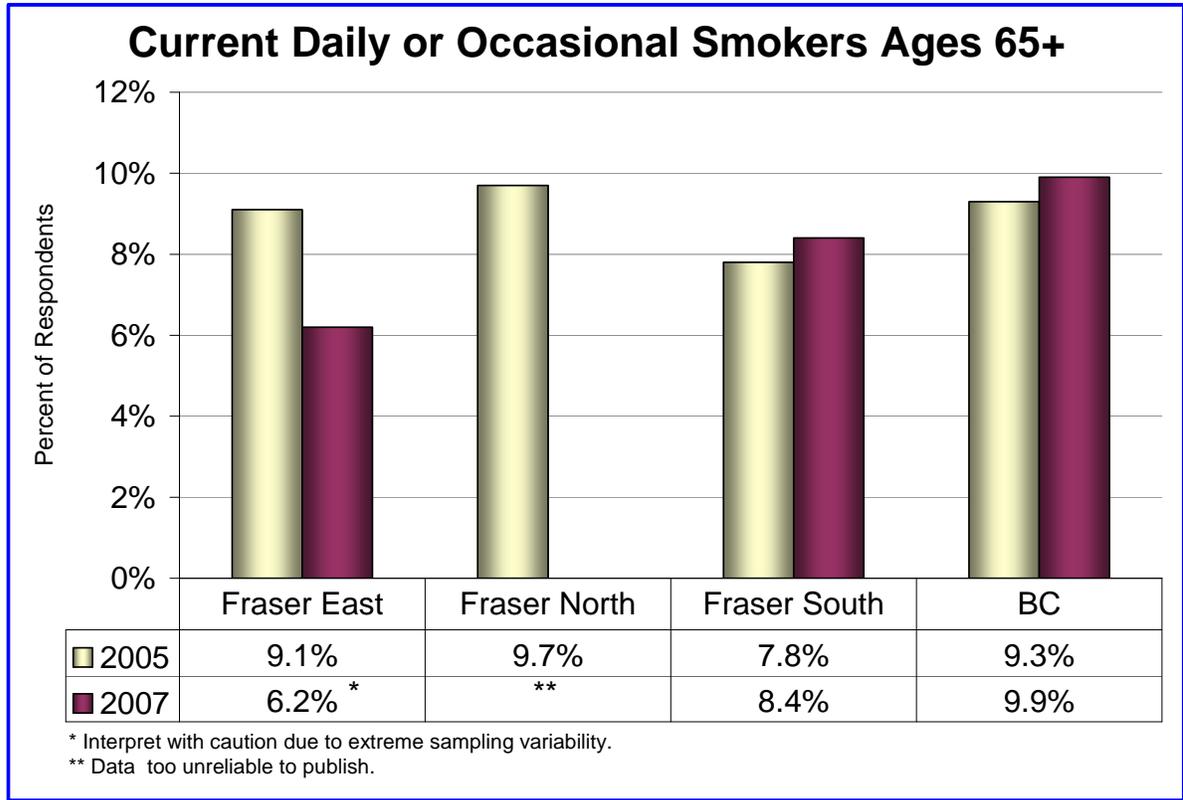
Limitations

Self-report methods are known to underestimate the prevalence of socially undesirable behaviours like smoking.

^m U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention, Office on Smoking and Health. (2004). *The health consequences of smoking: A Report of the Surgeon General*. Atlanta, GA: Author Retrieved August 29, 2007, from http://www.cdc.gov/Tobacco/sgr/sgr_2004/index.htm

ⁿ Doll, R., Peto, R., Boreham, J., and Sutherland, I. (2004). Mortality in relation to smoking: 50 years' observations on male British doctors. *British Medical Journal*, 328. Retrieved August 29, 2007, from <http://www.bmi.com/cgi/content/full/328/7455/1519>

^o Burns, D.M. (2000). Primary prevention, smoking, and smoking cessation: Implications for future trends in lung cancer prevention. *Cancer*, 89(Suppl. 11), 2506–2509.



Source: Statistics Canada, Canadian Community Health Surveys (CCHS cycles 3.1 and 4.1).

Fruit and Vegetable Consumption

Definition

This indicator looks at the proportion of seniors aged 65-years and older who consume five or more servings of fruit and/or vegetable each day as reported via the cyclical Canadian Community Health Survey (CCHS).

Less than half of all seniors consume five or more servings of fruits and/or vegetables daily

Highlights

Among Fraser Health HSDAs, Fraser East (40.5%) had the largest percentage of seniors who reported that they consume five or more servings of fruits and/or vegetables each day. In Fraser South, only 34.7% of seniors reported consuming five or more servings of fruits and/or vegetables each day.

The proportion of seniors consuming five or more servings of fruits and/or vegetables each day was lower in each Fraser Health HSDA than in BC (41.3%) or in Canada (41.7%).

What Does This Mean?

Eating the right type of foods, maintaining a healthy body weight, and being physically active are three very important factors in achieving long-term health and well-being. Canada's Food Guide to Healthy Living recommends that people consume 5 to 10 servings of fruits and vegetables per day.

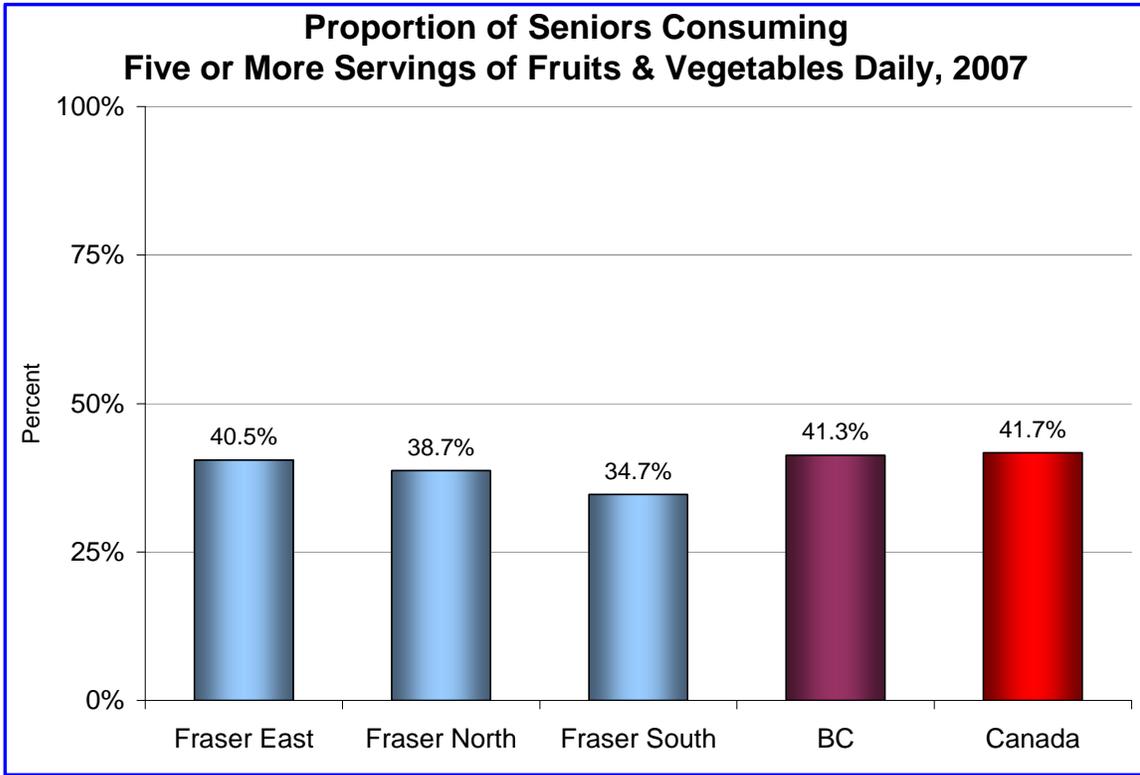
A healthy diet rich in fruits and vegetables can help reduce the risk of cancer and other chronic diseases. Naturally low in calories and fat, most fruits and vegetables are more filling than processed snack foods. Fruits and vegetables are also excellent sources of fibre, essential vitamins, minerals, antioxidants, and other nutrients, which contribute to overall good health and well-being.

Limitations

This indicator measures the number of servings consumed each day but does not measure the variety of fruits and vegetables eaten or the degree of processing, nor does it measure consumption from other food groups.

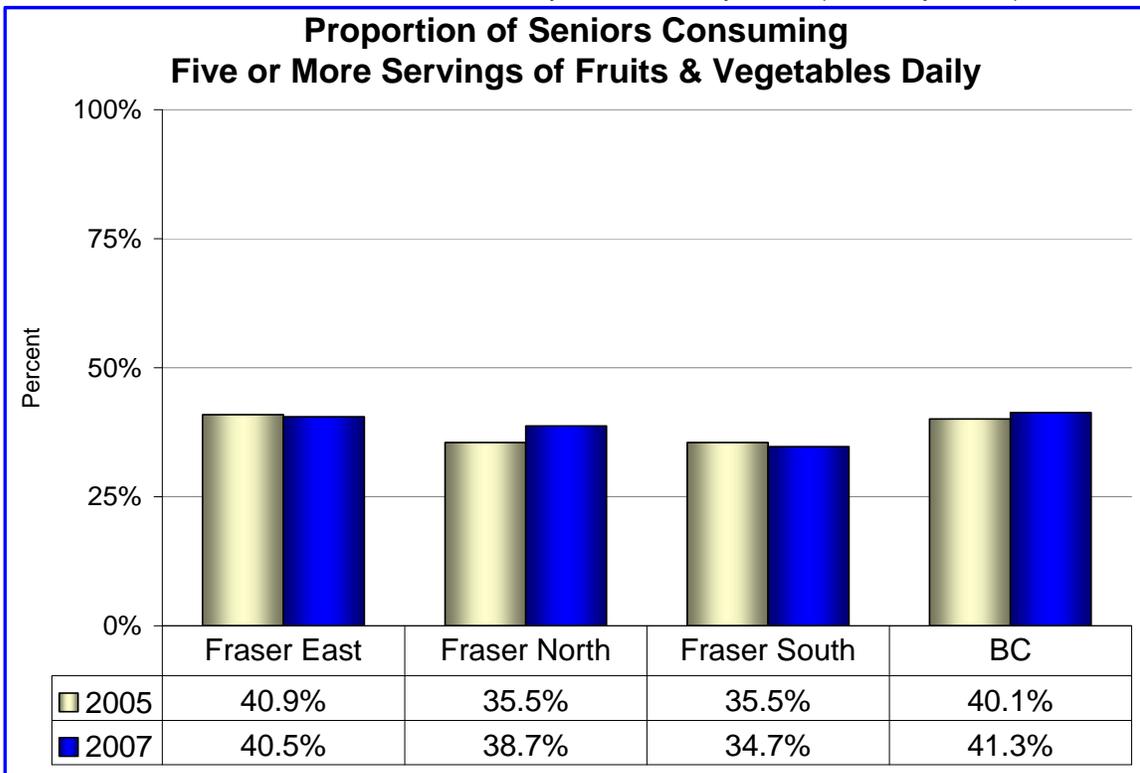
CCHS data are reported only at HSDA or BC level, making generalizations across FH problematic as individual communities may have variations in this measurement.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded from the survey.



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant.

Source: Statistics Canada; Canadian Community Health Survey, 2007 (CCHS cycle 4.1).



Source: Statistics Canada; Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).

Self-Reported Leisure Time Physical Activity Level

Definition

Leisure time physical activity level information is collected via the cyclical Canadian Community Health Survey (CCHS). Participants are classified as inactive, moderately active or physically active based on their average daily physical leisure time activities during the three months prior to the survey. Data are based on responses from people aged 65-years and older. An index of average daily energy expenditure is calculated by multiplying activity frequency by the average duration by the activity's energy cost (kilocalories per kilogram of body weight per hour). Activity levels are:

Inactive: <1.5 kcal/kg/day

Moderately active: 1.5-2.9 kcal/kg/day

Physically active: 3.0+ kcal/kg/day

In 2007, Fraser Health seniors were less active than BC seniors overall

Highlights

The proportion of Fraser South seniors (35%) reporting physically active or moderately active lifestyles was lower than in BC (44.6%) and the difference was statistically significant.

Between 2005 and 2007 each Fraser Health HSDA saw reduced proportions of seniors aged 65-years and older who reported being physically active or moderately active.

What Does This Mean?

A physically active lifestyle contributes to achieving and maintaining a healthy

weight. Evidence shows that regular physical activity helps prevent heart disease and stroke by strengthening heart muscles, lowering blood pressure, and maximizing the heart's functionality.^P

A physically active or moderately active lifestyle also helps reduce the risk of obesity, high blood pressure, Type-2 diabetes, osteoporosis, back pain, anxiety and depression.^Q By helping to maintain bone strength, regular activity reduces the likelihood of a fracture in the event of a fall.

Being active increases muscle strength, improves heart and lung fitness, and enhances flexibility, thereby helping seniors to maintain their physical function and their independence.^Q

Limitations

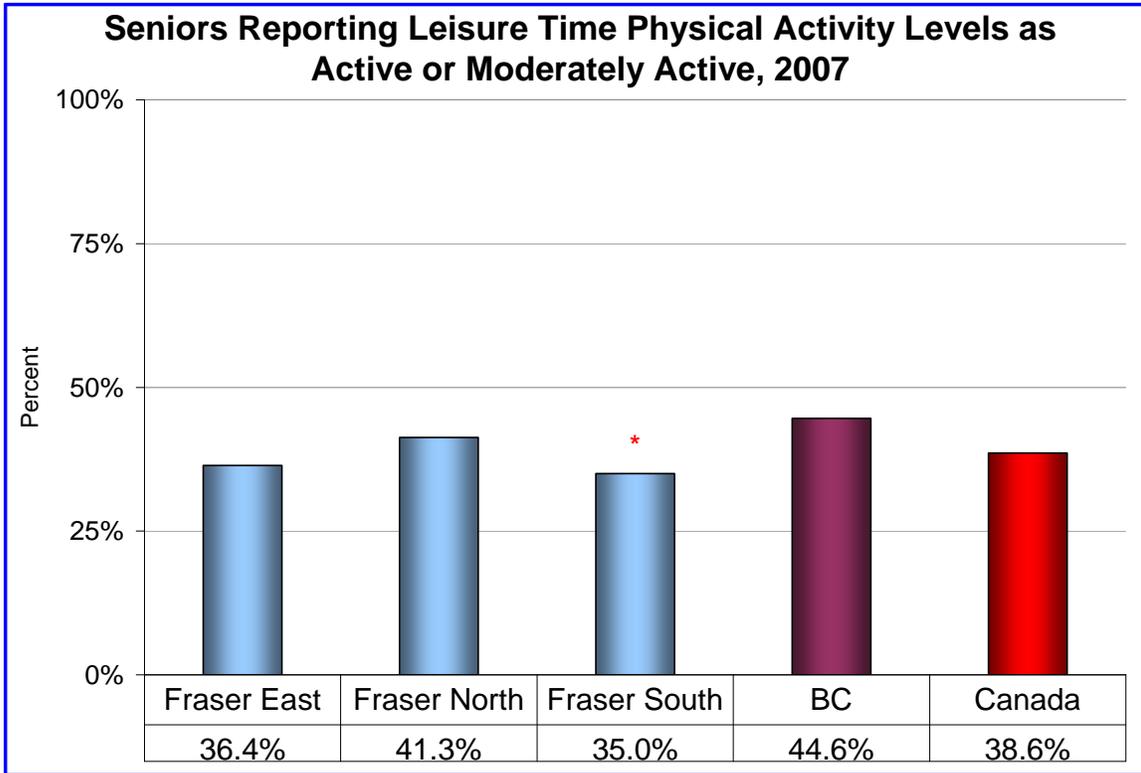
A major data limitation is that activities that take place outside of leisure time are not included.

CCHS data are reported only at HSDA or BC level, making generalizations across FH problematic since individual communities likely have variation.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded.

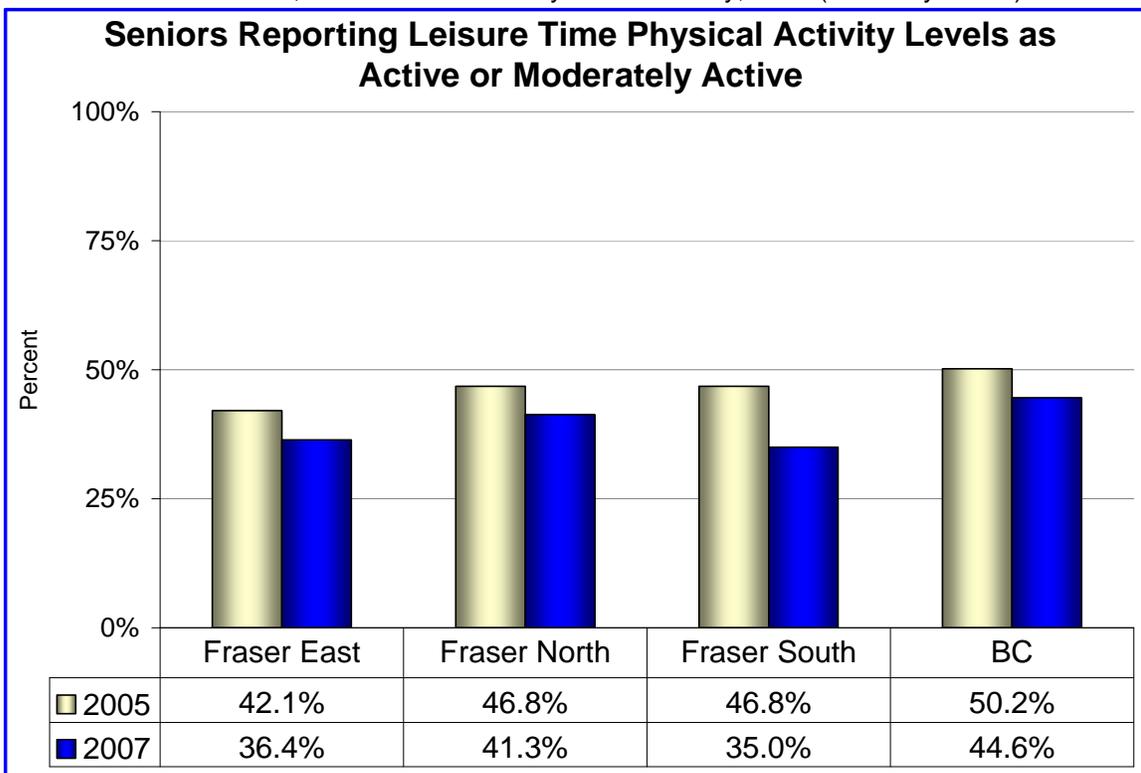
^P American Heart Association. *The benefits of daily physical activity*. Retrieved August 29, 2007, from <http://www.americanheart.org/presenter.ihtml?identifier=764>

^Q Health Canada. (2001). *Canada's physical activity guide to healthy active living for older adults*. Ottawa, ON: Health Canada. Retrieved August 5, 2008 from http://dsp-psd.pwgsc.gc.ca/Collection/H88-3-30-2001/pdfs/healthy/acthb_e.pdf



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant.

Source: Statistics Canada; Canadian Community Health Survey, 2007 (CCHS cycle 4.1).



Source: Statistics Canada; Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).

Healthy Weight: Self-Reported Body Mass Index

Definition

Self-reported Body Mass Index (BMI) is calculated using self-reported height and weight information collected via the cyclical Canadian Community Health Survey (CCHS).

BMI is given for respondents 65-years and older using internationally recognized BMI classifications:

Underweight	= <18.5
Normal weight	= 18.5 to 24.9
Overweight	= 25 to 29.9
Obese	= 30 or higher

36-47% of Fraser Health seniors were overweight or obese in 2007

Highlights

From 2005 to 2007, Fraser Health saw the proportion of overweight seniors decline in each HSDA. During this time, the proportion of obese seniors dropped in Fraser East and Fraser North, but went up in Fraser South.

Among Fraser Health HSDAs in 2007, the proportions of overweight seniors ranged from 28.9% in Fraser North to 34.3% in Fraser South. Fraser North (7%) had the smallest rate of obesity among seniors, and was statistically significantly lower than the provincial rate (13.1%).

What Does This Mean?

Obesity and overweight are linked to coronary heart disease hypertension, osteoarthritis, Type 2 diabetes, and certain cancers (i.e., endometrial, breast and colon).

Carrying excess weight increases the strain on the heart, influencing blood pressure, and increases blood cholesterol and triglyceride levels. Shedding ten to twenty excess pounds helps reduce the risk of heart disease and also helps those living with chronic diseases to manage their conditions better.

Standard BMI classifications may not be as relevant for people aged 75-years and older as they are for younger age groups^r. Abdominal fat is higher risk than fat carried elsewhere^s. Therefore, waist measurement may be a more relevant indicator of high-risk weight than BMI.

Limitations

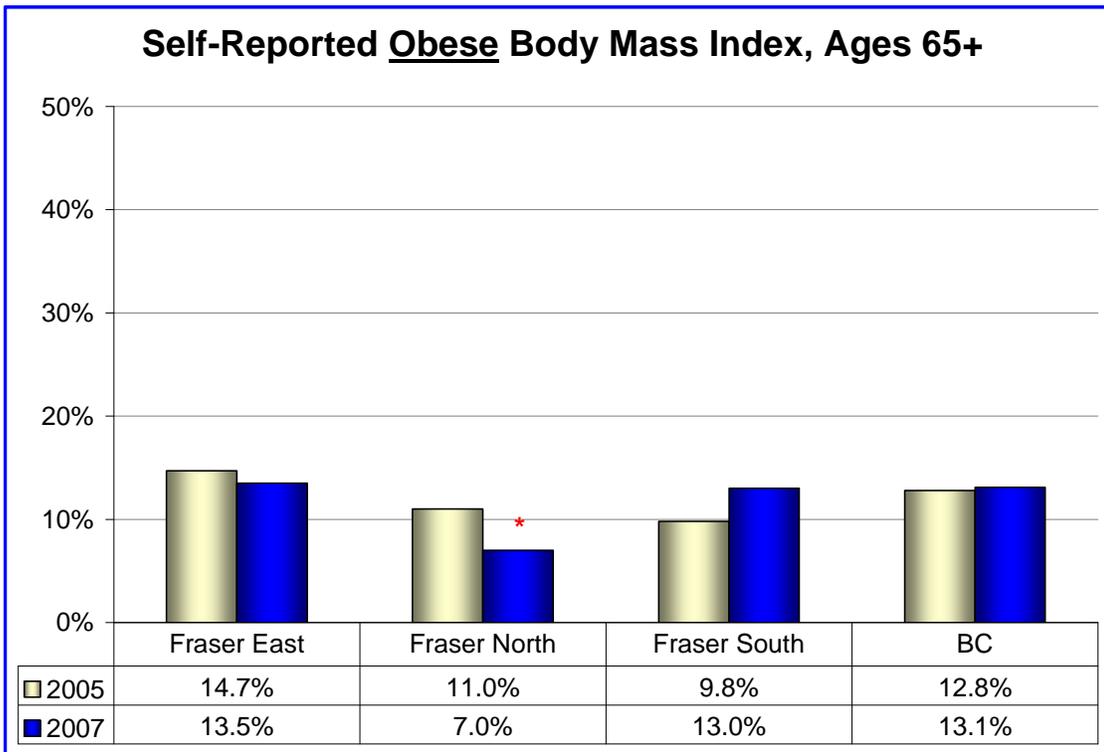
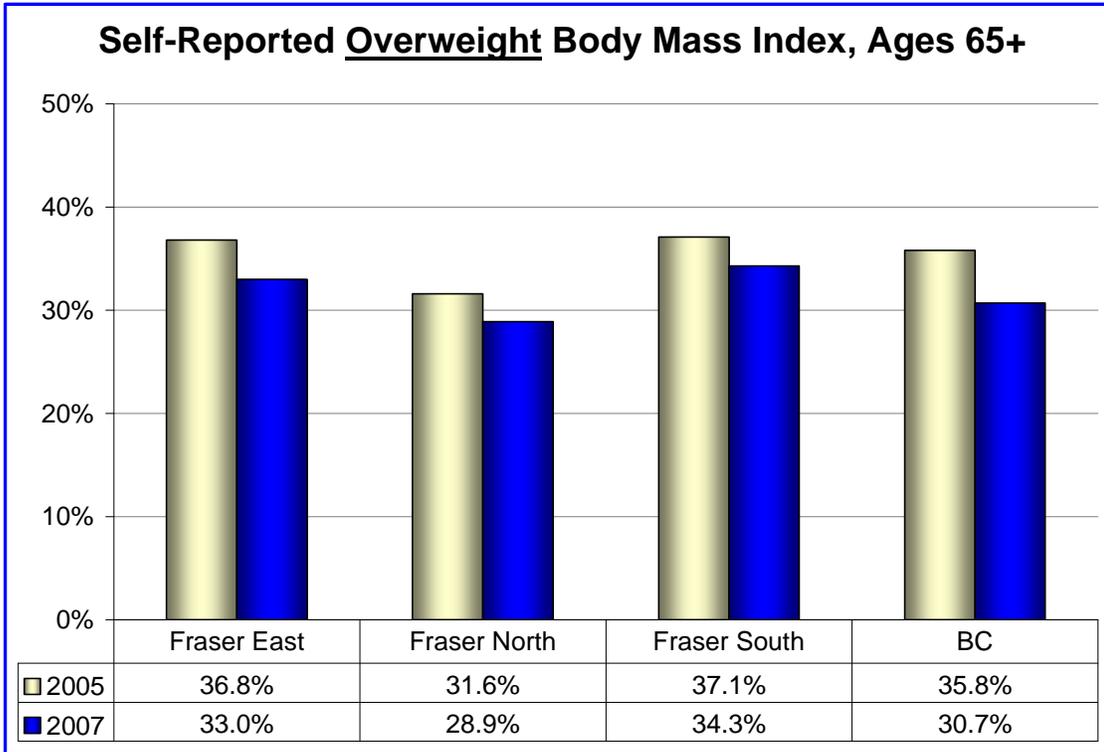
CCHS data are reported only at HSDA or BC level, making generalizations across Fraser Health problematic as individual communities may have variations in this measurement.

BMI data are based on self-reported information rather than actual physical measurements. BMIs that are high because of large muscle mass do not reflect the same health hazards as BMIs that are high due to extra fat.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded from the survey.

^r Waist-hip ratios better measure of death risk for older people than BMI. (2006). Retrieved August 6, 2008, from <http://seniorjournal.com/NEWS/Health/6-08-08-Waist-HipRatio.htm>

^s Dotinga, R. (2008). *Abdominal fat boosts dementia risk*. Retrieved August 6, 2008, from <http://www.caring.com/news/abdominal-fat-boosts-dementia-risk>



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant. However, tests of significance were done solely for 2007 data and are not available for 2005

Source: Statistics Canada; Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).



DISEASE PREVENTION

Influenza Immunization Coverage

Definition

This indicator reports the proportion of residents living in Long Term Care (LTC) facilities immunized against influenza. LTC facilities are those licensed residential facilities with at least half of the residents aged 65-years and older. Data include FH-owned, FH-contracted, private pay, and mental health LTC facilities.

Generated through the cyclical, Canadian Community Health Survey (CCHS), community data report the proportion of respondents, ages 65-years and older, who reported having had a 'flu shot' less than one year prior to the survey.

More seniors living in care were immunized for influenza than those in the community were

Highlights

The proportion of Fraser Health's LTC facility residents receiving influenza vaccination each year increased dramatically from 2000/01 to 2003/04, but rates have stabilized since at just over 90%.

Among Fraser Health LHAs during 2007/08, influenza immunization rates for care facility residents ranged from 86.3% in Langley to 97.5% in South Surrey/White Rock. In Fraser East HSDA, Mission (97.2%) was the only LHA to have higher rates than the Fraser Health average.

For seniors living in the community, Fraser North was the only HSDA to show rate increases from 2005 to 2007. In 2007, Fraser Health HSDAs had rates ranging from 54.2% in Fraser South to 70.7% in Fraser North.

A larger proportion of seniors living in care facilities were immunized for influenza than of those living in the community.

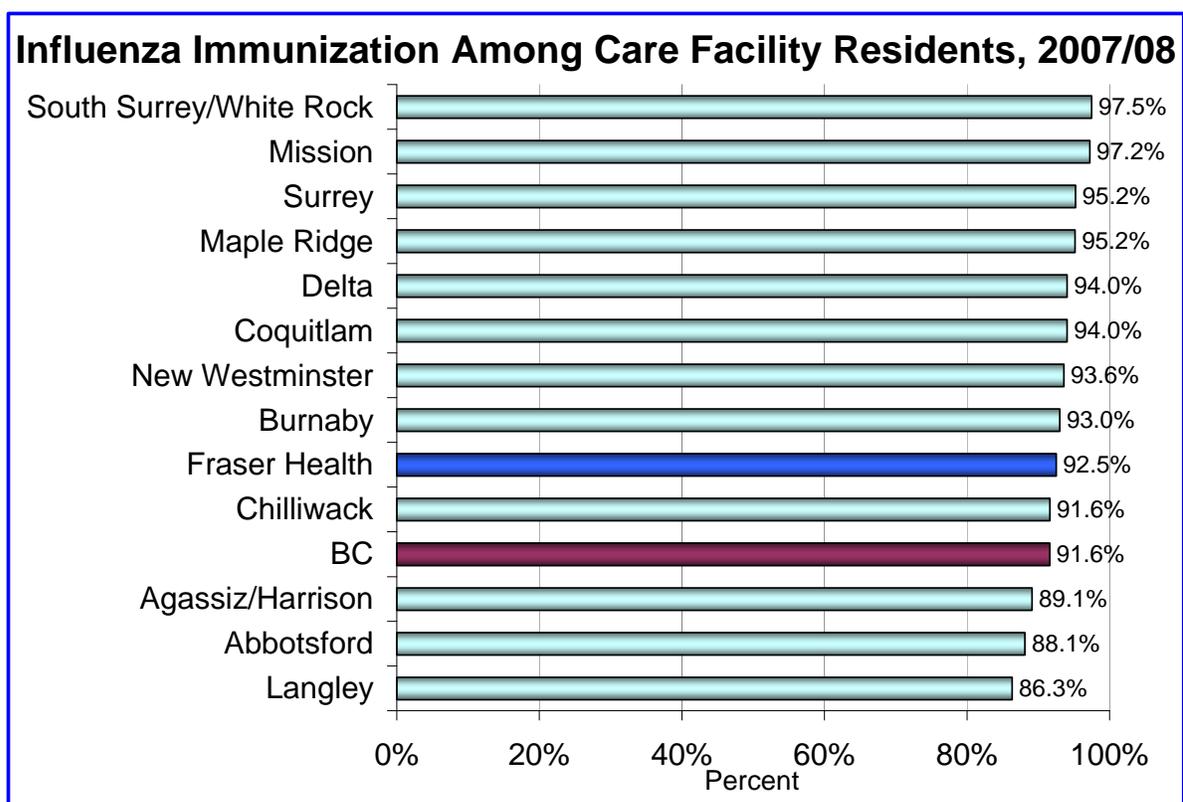
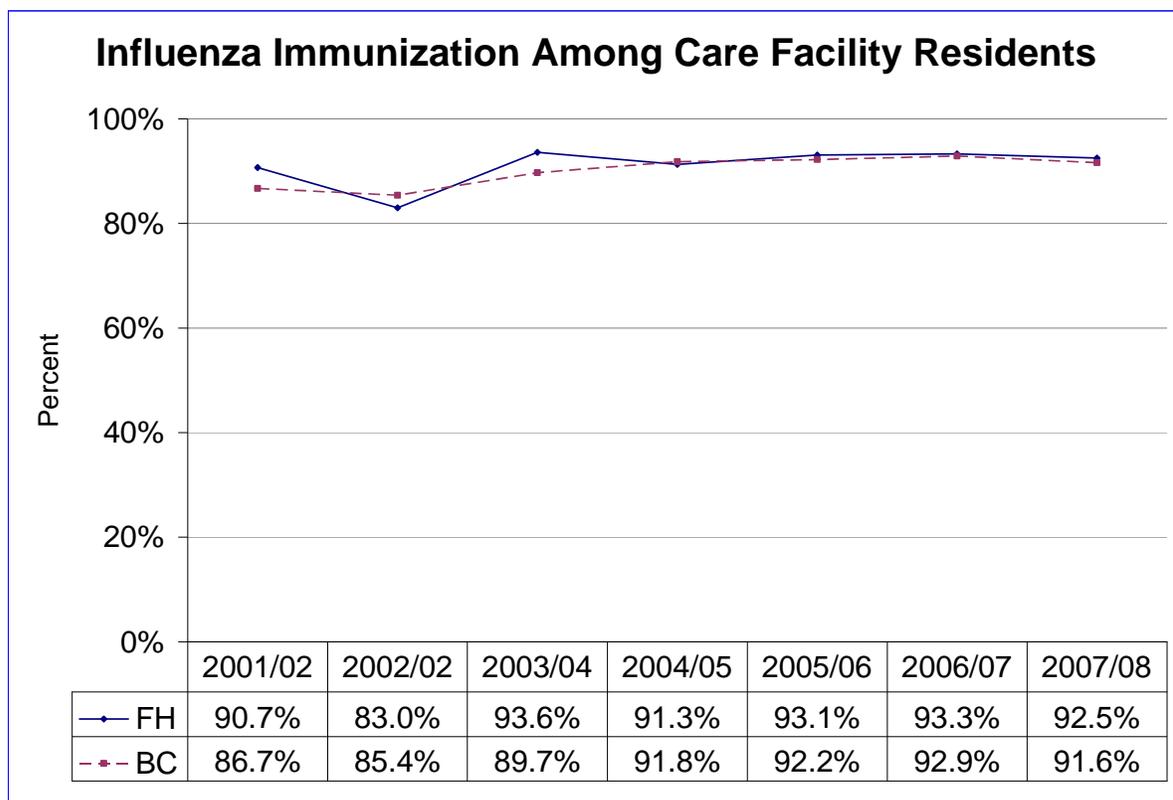
What Does This Mean?

Influenza, or 'the flu,' is caused by an influenza virus and can be a serious respiratory infection among the elderly, particularly those with pre-existing medical conditions. Symptoms can include headache, fever, runny nose, sore throat, muscle pain, cough, and extreme tiredness.[†]

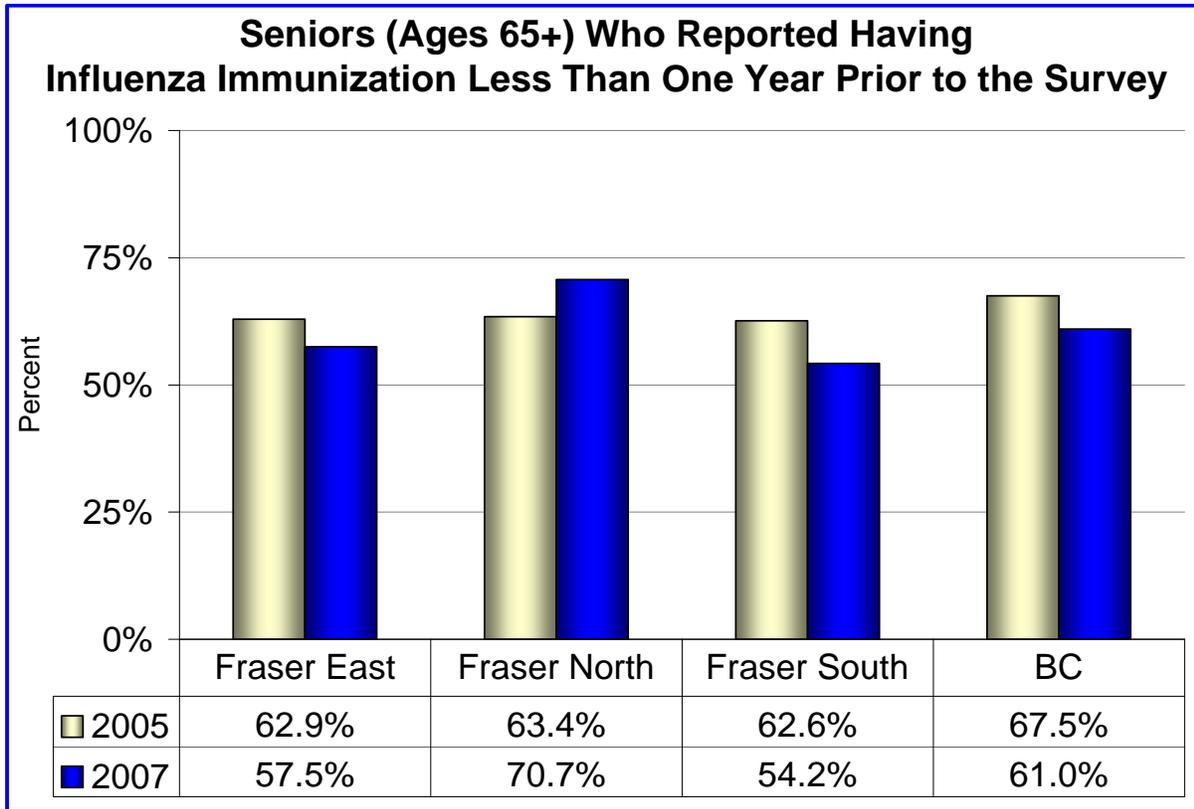
Influenza reduces the body's ability to fight other infections, which is of great concern for seniors. The most common complication among older adults is bacterial pneumonia. Such secondary infections and other complications are sometimes fatal, so protection against influenza is critical.[†] The risk of influenza and complications increases with age; many doctors advise all seniors, their household members and caregivers to be vaccinated against influenza each year.

Easily spread by breathing, coughing, sneezing and face-to-face contact, the

[†] Ministry of Health, BC, & BC Centre for Disease Control. (2007). Why seniors should get the influenza (flu) shot. *BC Health Files*, (12a) Retrieved January 29, 2008 from <http://www.bchealthguide.org/healthfiles/pdf/hfile12a.pdf>



Source: BCCDC and Decision Support Services, Fraser Health Authority, 2007/08.



Source: Statistics Canada, Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1)

virus can also spread when someone touches a surface contaminated by droplets an infected person had coughed or sneezed, and then touches his/her own mouth, nose, or eyes.[†]

Because their client populations are typically comprised of vulnerable older adults living in close quarters, it is very important to protect residents of LTC facilities by immunizing residents, staff members, and frequent visitors.

Vaccination protects against infectious disease for those immunized and for those around them. When enough of a population is immunized against influenza, the circulation of the disease is lessened, so fewer people are affected.

Other ways to reduce the risk of catching influenza are regular hand washing, eating well, and exercising.

Older adults and their caregivers need access to the highest quality of information, so that they can make informed decisions about the benefits and risks of immunization. Inadequate funding in public health can also contribute to low immunization rates.

Survey Data: CCHS data are reported only at the HSDA or BC level, making generalizations across FH problematic as individual communities may have variations in this measurement.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded from the survey.

Limitations

Facility Data: Due to continuing refinement of data collection processes, changes in the geography of health area boundaries, and changes in the denominators at each facility, data on immunization of LTC facility residents may not be comparable from one year to the next. However, assuming that overall reporting practices remain consistent, trend analyses can be assessed.

Screening Mammography Program (SMP)

Definition

Screening Mammography Program (SMP) participation rates represent the number of women screened as a proportion of all women within the specified 10-year age group.

Screening mammography participation rates decline as age increases

Highlights

In 2007, women aged 60-years and older accounted for 51% of all new breast cancer diagnoses and for 72% of related deaths in Fraser Health (data not shown).

In 2006, women aged 60-years and older accounted for 35% of the total volume of screening mammograms in Fraser East, 29% in Fraser South, and 27% in Fraser North.

Among Fraser Health HSDAs, 2%-3% of those aged 80-years and older had a screening mammogram in 2005 or 2006. This represents a dramatic reduction compared to those aged 70- to 79-years where participation ranged from 37% to 43% among HSDAs. This again represents a drop from the next youngest group (ages 60-69) whose rates ranged from 47% to 51%.

What Does This Mean?

Breast cancer is the most frequently diagnosed cancer among women in BC. It is the second leading cause of death due to cancer. A mammogram is a breast x-ray that can show cancer two or three years before the cancer is large enough to be detected through

physical examination of the breast. Screening mammography can identify abnormal cell growth and increase the likelihood of early detection of breast cancer. Mammography screening reduces breast cancer mortality because a woman's chance of survival increases with early detection.

Factors such as smoking and vitamin D insufficiency, increase a woman's risk of developing and dying from breast cancer.^{u, v} On the other hand, the risk is lower among those who have given birth and those who breastfeed their infants.

There are also inherited risk factors that are being intensively researched. Studies show that postmenopausal hormone replacement therapy (HRT) is linked to a slightly higher rate of acquiring breast cancer, but because it tends to be a less invasive form, women on HRT are less likely to die of breast cancer.^w

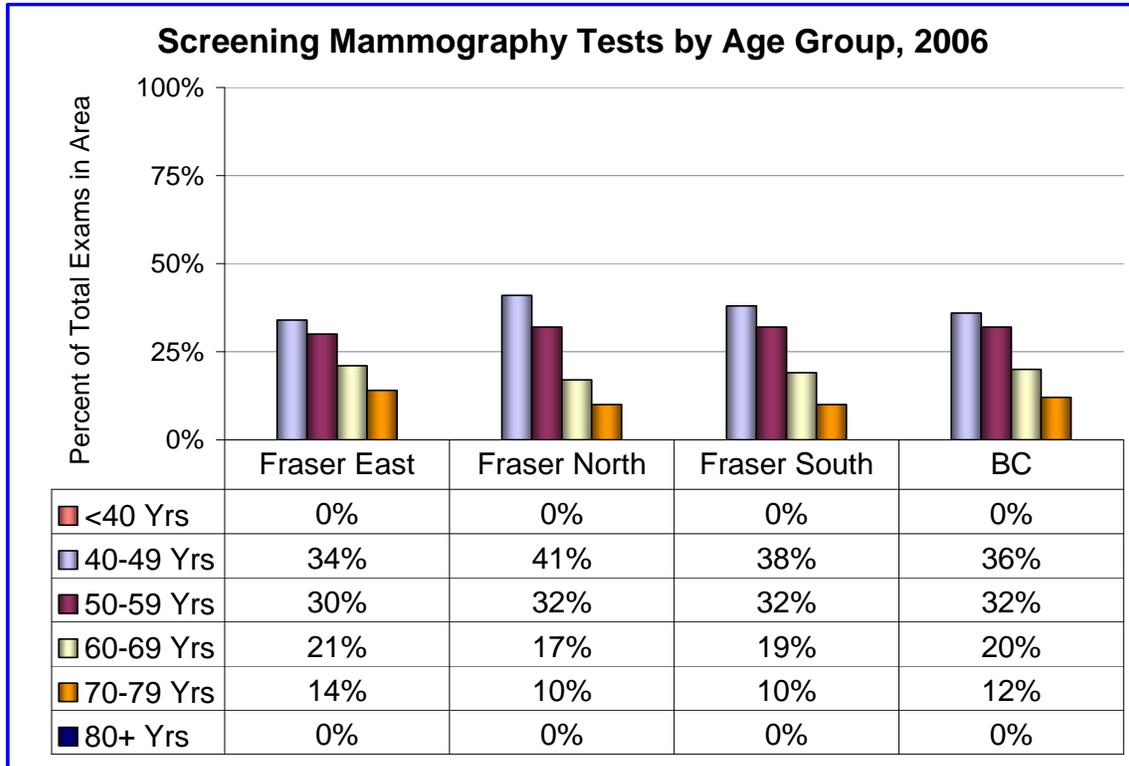
Increased SMP participation in BC is attributable to the 1997 introduction of invitation letters. As well as inviting women who have never had a mammogram and do not have breast

^u Reynolds, P., Hurley, S., Goldberg, D.E., Anton-Culver, H., Bernstein, L., Deapen, D., et al. (2004). Active smoking, household passive smoking, and breast cancer: Evidence from the California teachers study. *Journal of the National Cancer Institute*, 96 (1). Retrieved August 29, 2007, from

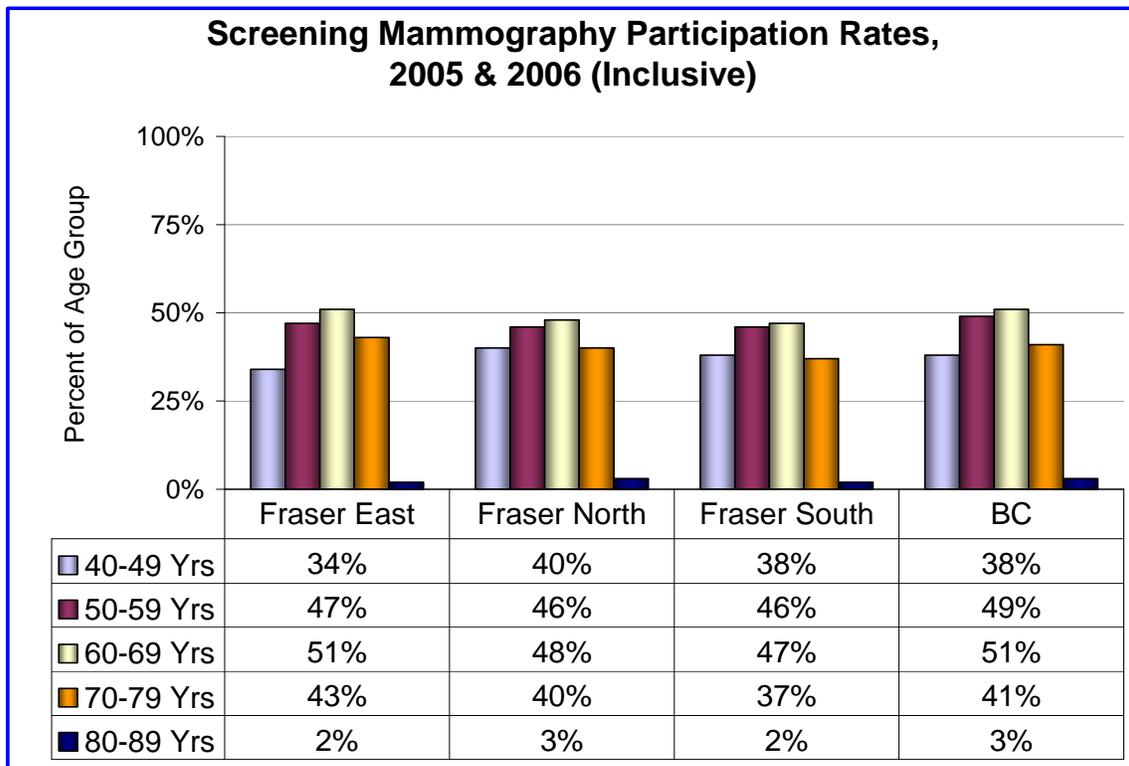
<http://jnci.oxfordjournals.org/content/vol96/issue1/index.dtl>

^v Lappe, J. M., Travers-Gustafson, D., Davies, K. M., Recker, R. R., & Heaney, R. P. (2007). Vitamin D and calcium supplementation reduces cancer risk: Results of a randomized trial. *American Journal of Clinical Nutrition*, 85(6), 1586-1591. Retrieved August 22, 2008 from <http://www.ajcn.org/cgi/reprint/87/3/794>

^w *Estrogen-only HRT slightly ups breast cancer risk.* (2006). Retrieved August 29, 2007, from http://www.breastcancer.org/risk/environmental/new_rese_arch/20061225b.jsp



Note: The total for each region is 100%.



Source: Screening Mammography Program of BC, 2006/2007 Annual Report; BC Cancer Agency



cancer to schedule an appointment, these letters: 1) provide information on associated risk factors; 2) explain why mammograms are necessary; and 3) describe the SMP and its recall processes.

Despite overall increases to SMP participation in BC, women aged 80-years and older are much less likely to take part. Among women aged 75-years and older, studies have found that advanced age and impaired functional status inhibit the likelihood of mammogram use.^x

For many women, it is not easy to access screening mammography.

Limitations

Rates were calculated based on women in each age group living in the Fraser Health area at the time that the mammogram was done.

^x Blustein, J., & Weiss, L. (1998). The use of mammography by women aged 75 and older: Factors related to health, functioning, and age. *Journal of the American Geriatrics Society*, 46(8), 941-946. Retrieved July 31, 2008 from <http://ovidsp.tx.ovid.com/spb/ovidweb.cgi>

III: Health Status

General Health Status

It is important to know how we rate our physical and mental health. There is an increased risk of death in those who report that their health is poor. Our emotional and psychological well-being is also important. Poor coping skills for dealing with stress can make a person vulnerable to health problems. Trend information on other general health status indicators helps identify new issues.

Mortality

It is important to look at the reasons why people are dying. Many deaths may be untimely and unnecessary because effective public health and medical interventions exist.

Morbidity

It is important to look at what is making people sick. Chronic diseases are among the most common and costly health problems, yet many can be prevented to a large degree. Compared to younger people, older adults are more likely to have more than one chronic condition, with serious effects for their quality of life. By age 65, 77% of men and 85% of women in Canada have at least one chronic condition; in 2003, an estimated 33% of Canadian seniors aged 65-years and older had three or more chronic conditions^y.

^y Gilmour, H., & Park, J. (2005). Dependency, chronic conditions and pain in seniors. *Health Reports (Supplement)*, 16, 21-31. Retrieved October 2, 2008 from <http://www.statcan.ca/english/freepub/82-003-SIE/2005000/pdf/82-003-SIE20050007443.pdf>



GENERAL HEALTH STATUS

Self-Rated Health

Definition

Self-rated health is a commonly used measure which describes health status based on the respondent's personal judgement. Self-rated health reflects not only physical health, but also a general sense of well-being.

Data are generated through the cyclical Canadian Community Health Survey (CCHS) in which one question asks respondents to rate their own health as: excellent; very good; good; fair; or poor. The proportions of older adults who rated their own health as excellent or very good are reported.

In Fraser North, 42.1% of seniors rated their own health as excellent or very good

Highlights

In 2007, Fraser North (42.1%) had the largest proportion of seniors rating their own health as excellent or very good among Fraser Health HSDAs. This was the only HSDA to show an increase compared to 2005 results.

With 31.5% of seniors reporting their own health as excellent or very good in 2007, Fraser South had the smallest proportion in Fraser Health.

However, none of the HSDAs had proportions that were statistically significantly different from BC in 2007.

What Does This Mean?

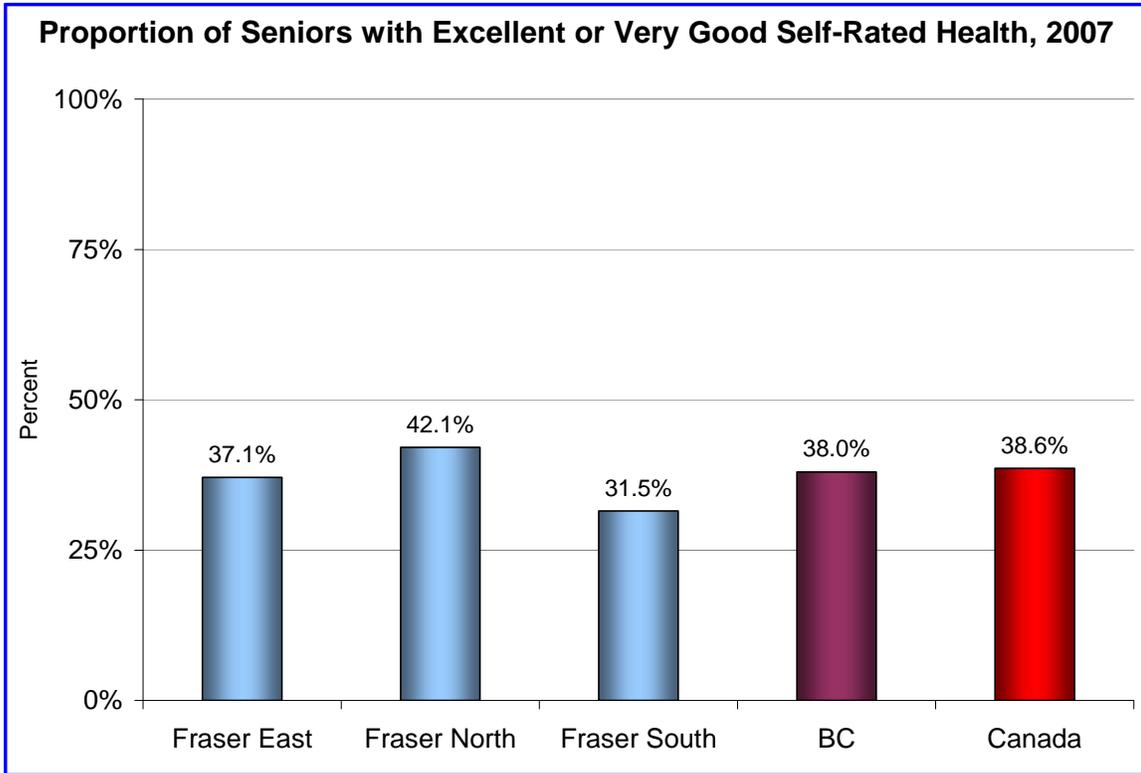
The majority of respondents aged 65-years and older in each HSDA did not rate their health as excellent or very good. This suggests that older adults in Fraser Health feel that their health and well-being could be better.

Self-reported health is generally accepted as reflecting aspects of health and well-being that are not captured in other self-report or objective measures such as emerging disease, disease severity, discrete physiological and psychological resources, and social and mental function.

Limitations

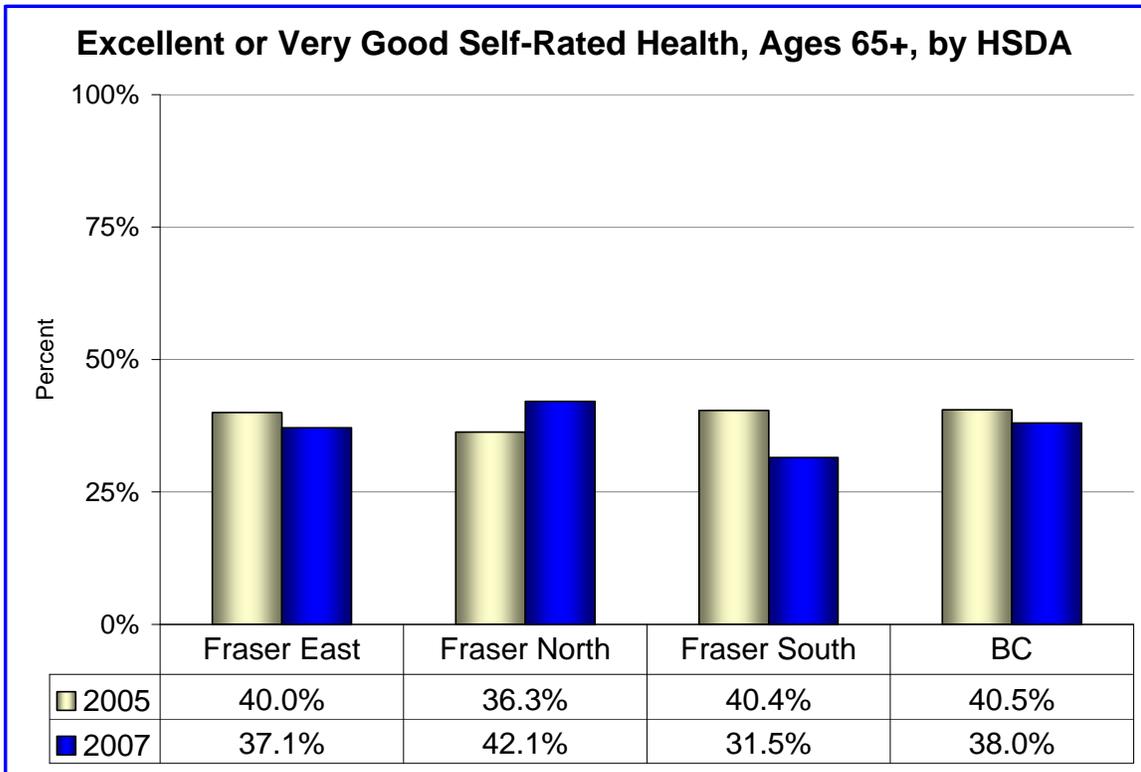
CCHS data are reported only at the HSDA or BC level, making generalizations across FH problematic as individual communities may have variations in this measurement.

Full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions are excluded from the survey.



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant.

Source: Statistics Canada, Canadian Community Health Survey, 2007 (CCHS cycle 4.1).



Source: Statistics Canada, Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).

Self-Rated Mental Health

Definition

Self-rated mental health measures respondents' health status based on her/his personal judgement, reflecting psychological health as well as a general sense of well-being.

Data are generated through the cyclical Canadian Community Health Survey (CCHS) with one question asking respondents to rate their own mental health as: excellent; very good; good; fair; or poor.

58% to 62% of seniors in Fraser Health HSDAs enjoy excellent or very-good self-rated mental health

Highlights

The majority of older respondents in each Fraser Health HSDA gave favourable mental health self-ratings, suggesting that most older residents enjoy good mental health. Self-ratings were higher for mental health than for overall health status.

Between 2005 and 2007, the percent of seniors who rated their own mental health as excellent or very-good dropped in each HSDA, despite increases at the provincial level

What Does This Mean?

Depression, irritability, and memory loss are not inevitable with age. While disorders like dementia or delirium are more common in older adults than in younger age groups, most mental

conditions are no more prevalent among seniors.^z

Physiological changes, retirement, and the loss of a spouse and/or peers can be life altering, with profound affects on an older adult's mental health and emotional well-being. Everyone copes with such life transitions differently, so some seniors will have a more difficult time than others will. The loss of independence and ability, the loss of income and routine, or the loss of one's social support network can lead to depression, anxiety, or even suicide, but such outcomes are not inevitable.^z

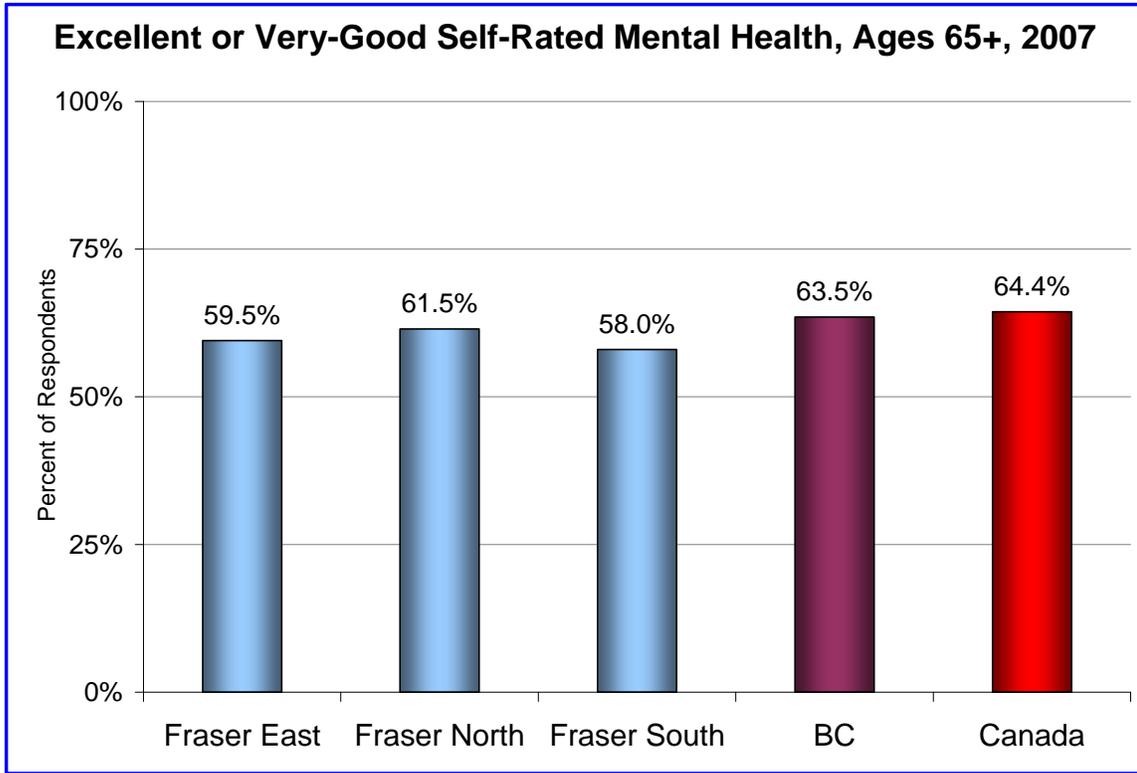
Evidence suggests that this single-item indicator of self-rated mental health can predict functional decline, health service usage, and overall well-being.

Limitations

The survey leaves it to respondents to define 'mental health,' making it difficult to determine whether they framed the question in terms of the psychological, emotional, and/or cognitive elements of mental health.

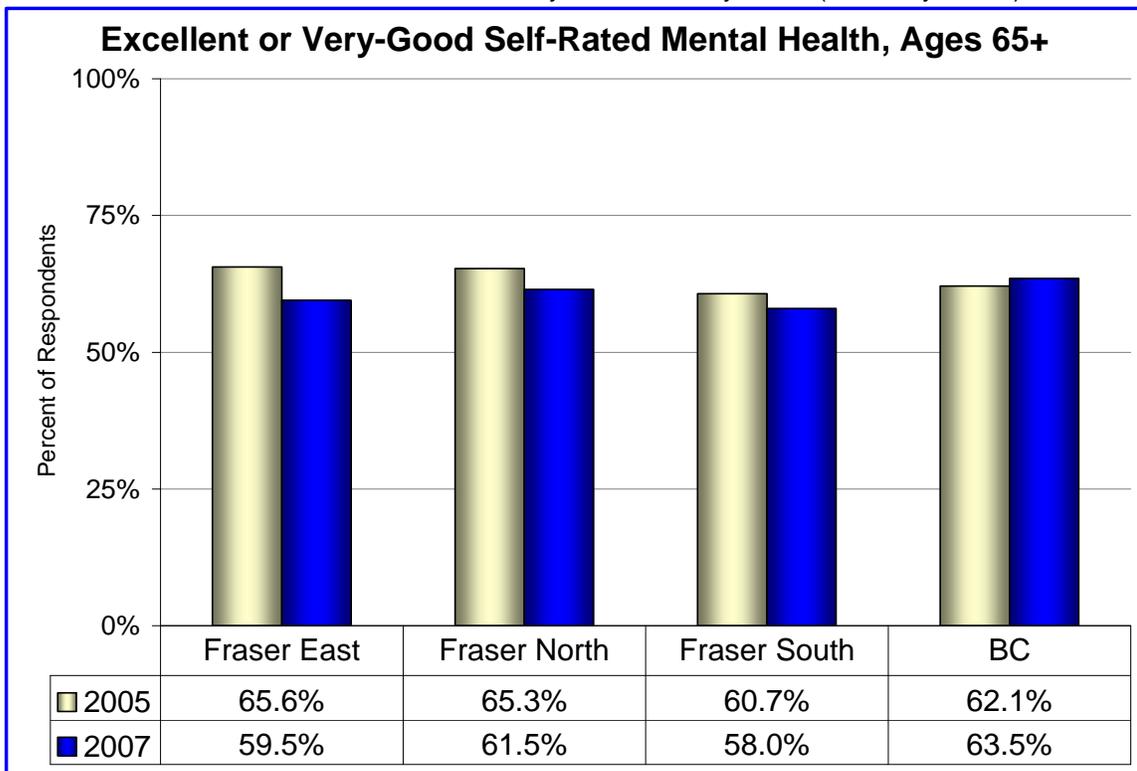
The survey excludes full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, people without telephones and residents of institutions.

^z Powell, S. (2004). Meeting the mental health needs of seniors. *Stride Magazine's Senior Care Canada*, 1st Quarter 2004 Retrieved July 9, 2008 from <http://seniorcarecanada.com/articles/2004/q1/mental.health/>



Note: * A red asterisk indicates that the difference from the BC rate is statistically significant.

Source: Statistics Canada; Canadian Community Health Survey, 2007 (CCHS cycle 4.1).



Source: Statistics Canada; Canadian Community Health Survey, 2005 & 2007 (CCHS cycles 3.1 & 4.1).

Life Expectancy at Age 65

Definition

Life expectancy at age 65 represents the average numbers of years that an older adult can expect to live at age 65 if current conditions and mortality trends continue throughout his/her life. It is calculated on the basis of age-specific mortality rates and is reported as the number of years. Data are five year averages (2003 to 2007).

At age 65, Fraser Health seniors can expect to live another 21.6 years

Highlights

In Fraser Health, those aged 65-years can expect to live roughly another 21.6 years, which is close to expectations at the BC level (21.8 years). Without considering sex, the number of years that someone aged 65 can expect to live ranged from 19.1 years in Hope to 23.7 years in Agassiz/Harrison. Five of thirteen Fraser Health LHAs exhibited longer life expectancy at age 65 than the BC average.

When sex is considered, evidence shows that at age 65, women in Fraser Health are expected to live almost three more years than men. The life expectancy at age 65 for women in Fraser Health is an additional 22.9 years, while for their male peers it is 20.1 years.

Among Fraser Health LHAs, Hope exhibited the lowest life expectancy for both sexes (20.4 years for women and 18.0 years for men) while Agassiz/

Harrison had the longest (24.9 years for women and 22.7 years for men).

What Does This Mean?

Life expectancy is an indicator of the population's health status and the level of mortality. Life expectancy can be calculated at birth or at a specific age such as age 65. For someone born in 1943, their life expectancy was about 63 years; yet those born in 1943 who have not died are now aged 65-years and can expect to live another 21.6 years, almost 24 years longer than expected at birth.^{aa}

Life expectancy is typically higher for people with higher incomes and/or with higher education as well as people pursuing healthy lifestyles.

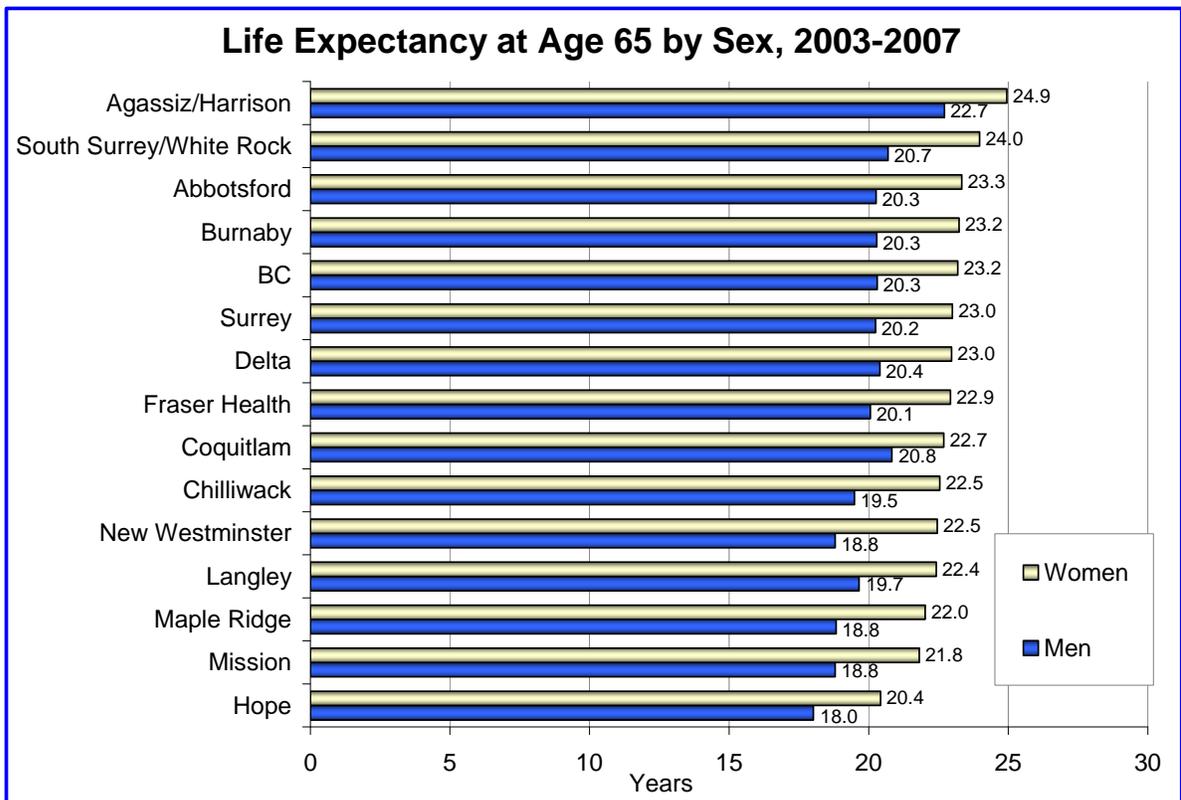
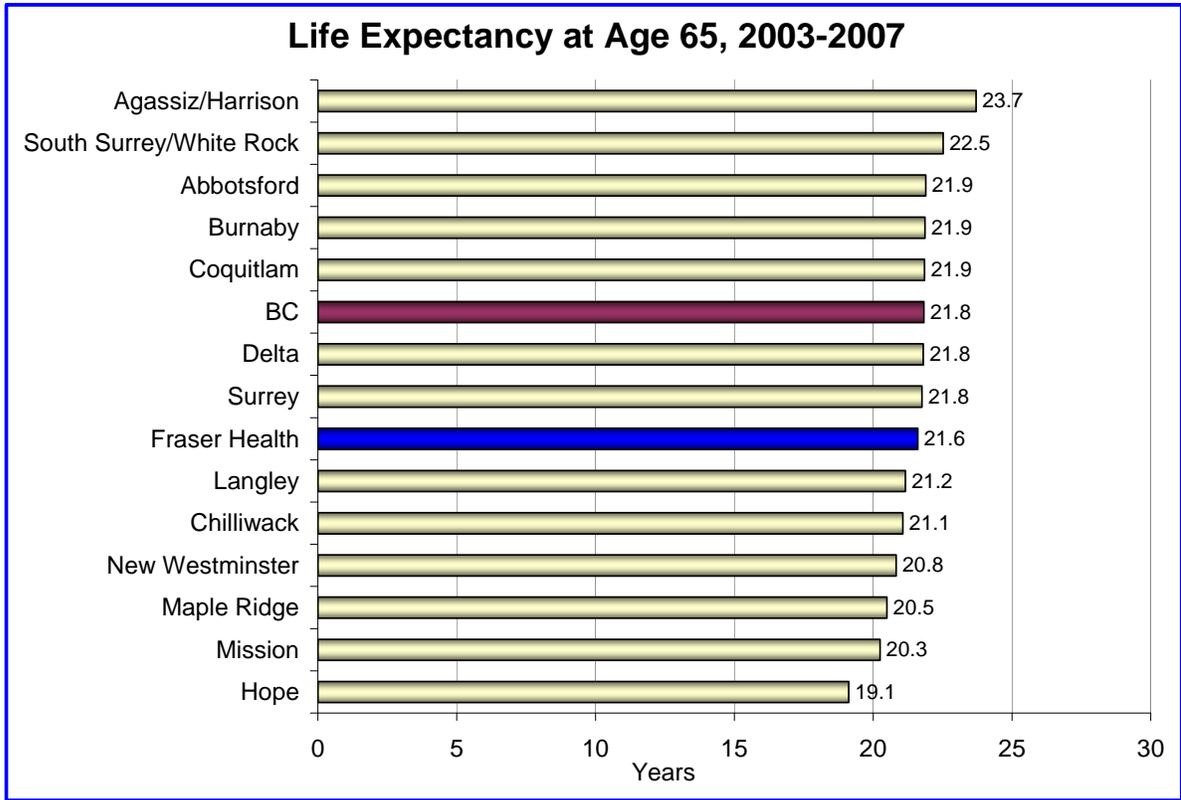
Lower life expectancy is also associated with high-risk behaviours and factors such as smoking, high blood pressure and extremes of body weight.

Limitations

The calculated life expectancy is a prediction based on current mortality figures. As time passes, mortality patterns change and life expectancy calculations can change also.

Life expectancy measures years of life without consideration for the quality of life, health status or activity limitations.

^{aa} Center for Disease Control, United States. (2004). Estimated life expectancy at birth in years, by race and sex: Death-registration states, 1900-28, and United States, 1929-2002. *National Vital Statistics Reports*, 53(6). Retrieved June 5, 2008 from http://www.cdc.gov/nchs/data/dvs/nvsr53_06t12.pdf



Source: BC STATS, Ministry of Labour and Citizens' Services, as of March 2008.

MORTALITY

Leading Causes of Death

Definition

Mortality data are expressed as age-specific rates (ASR) and represent the number of deaths resulting from specific causes per 10,000 population in the age group specified. Data are aggregated for a five-year period, 2002 to 2006.

Causes of death are based on the diagnostic classification using ICD10 codes (International Classification of Diseases–10th revision).

Ischaemic heart disease was the leading cause of death among seniors during 2002-2006

Highlights

From 2002 to 2006, ischaemic heart disease was the leading cause of death among seniors in Fraser Health.

For those aged 65- to 84-years, the top five leading causes of death ranked the same for both sexes, yet the ASR for ischaemic heart disease among men (67.3) was much higher than the ASR among women (36.1).

Among men and women aged 65- to 84-years, pneumonia/influenza ranked as the ninth leading cause of death. Rates jump dramatically among those aged 85-years and older with pneumonia/influenza ranked second among men (169.9) and fourth among women (112.8).

While ischemic heart disease was the leading killer among men and women

aged 85-years and older, other leading causes differed between sexes.

What Does This Mean?

‘Leading causes of death’ shows the ASR due to specific causes. Death-related statistics are more readily available and more reliable than illness data.

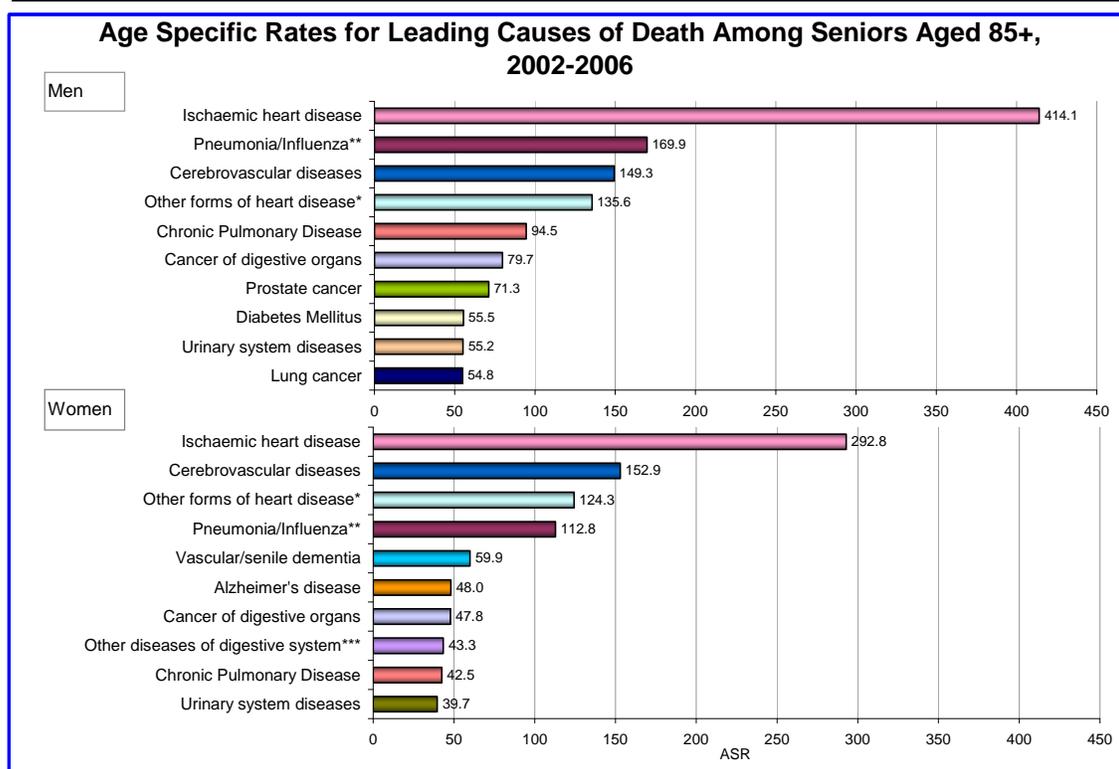
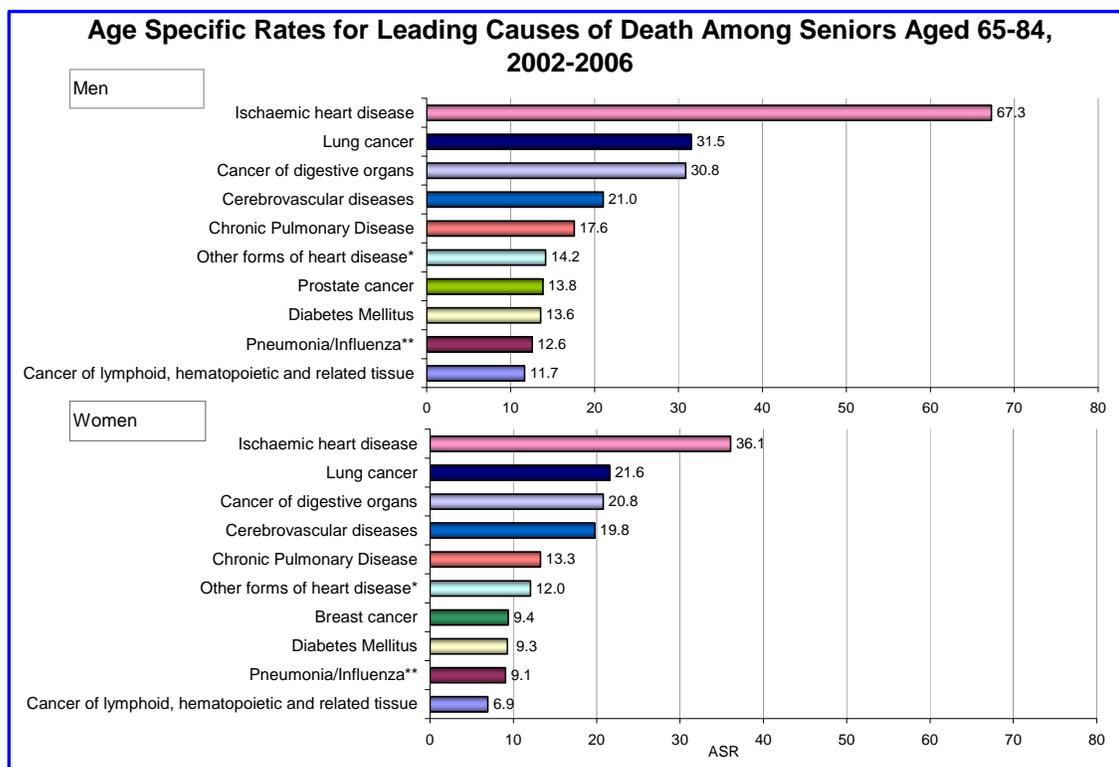
While this data deals only with fatal diseases, it can help in determining the importance of some serious health problems among older adults.

Despite a steady decline in associated deaths since the 1960s, cardiovascular diseases (heart disease and stroke) continue to be the leading causes of death in BC. The majority of cardiovascular diseases are preventable. Risk factors for heart disease and stroke include smoking, vitamin D insufficiency, high blood pressure, high blood cholesterol, diabetes, alcohol abuse, a sedentary lifestyle, and excess weight.

Limitations

Autopsies are not generally performed and identification of the underlying cause of death may be inaccurately recorded, particularly in older adults. Selecting only one cause of death could underestimate the relative importance of other contributing causes of death.

The number of deaths provides no information on the number of sick people or the occurrence of non-fatal illnesses.



* Excludes: Ischaemic, chronic rheumatic and pulmonary heart diseases, pulmonary circulation diseases and hypertensive diseases.

** Excludes hypostatic

*** Excludes liver

Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.

Age-Specific Mortality Rate, by Natural Cause

Definition

The age-specific mortality rate (ASR) summarizes death rates for specified ages with a given population. The ASR represents the death rate per 10,000 population within specified age groups in the defined region, in this case Fraser Health residents aged 65- to 84-years and 85-years and older.

Aggregating five-year ASRs helps to stabilize rates when single-year death counts have small numbers, enabling trend analyses. ASRs are given for common, natural causes of death: cancers and diseases of the cardiovascular, cerebrovascular, respiratory, and digestive systems.

Cardiovascular death rates are declining among the elderly

Highlights

Over the last ten years, each cause of death shown had much higher ASRs among those aged 85-years and older than among those aged 65- to 84-years. Rates have declined in each category for both age groups, except for cancer and respiratory disease deaths among those aged 85-years and older, which remained stable.

For 65- to 84-year-olds, cancer deaths produced the highest ASR, although the rate was stable over the last ten years. The lowest ASR for this group was for digestive system mortality.

Among those aged 85-years and older, cardiovascular disease had the highest ASRs over the last ten years. Cardiovascular disease ASRs for this older age group ranged from 270.3 in

Agassiz/Harrison to 607.8 in Delta. In contrast, ASRs for cardiovascular diseases among those aged 65- to 84-years ranged from 56.5 in Coquitlam to 91.9 in Maple Ridge.

What Does This Mean?

Cause-of-death statistics help identify serious health problems that may be more or less important in different regions and for different age groups.

Cancer mortality includes deaths from all forms of malignant neoplasms.

Cardiovascular mortality includes deaths that involve the heart and body (e.g., ischaemic heart diseases, hypertension, and hypertensive diseases).

Cerebrovascular mortality includes deaths involving blood vessels in the brain (e.g., stroke from haemorrhage, blood clots and other diseases).

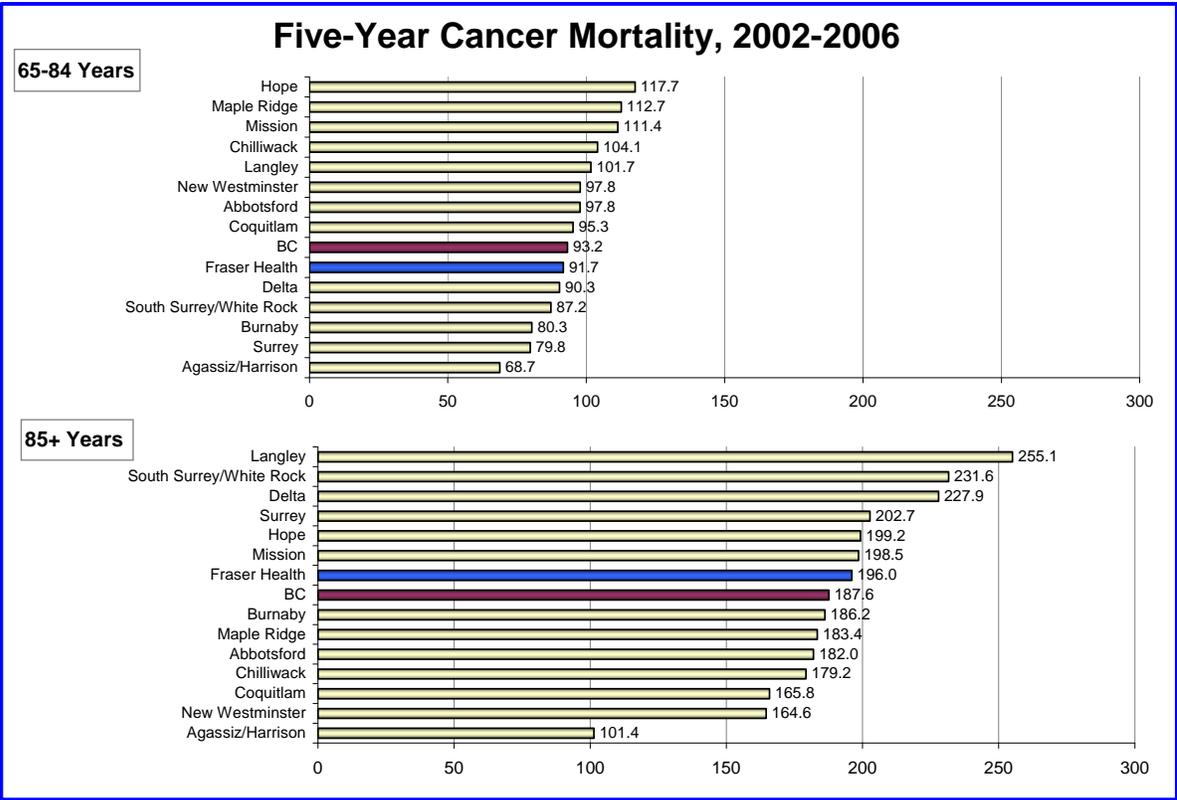
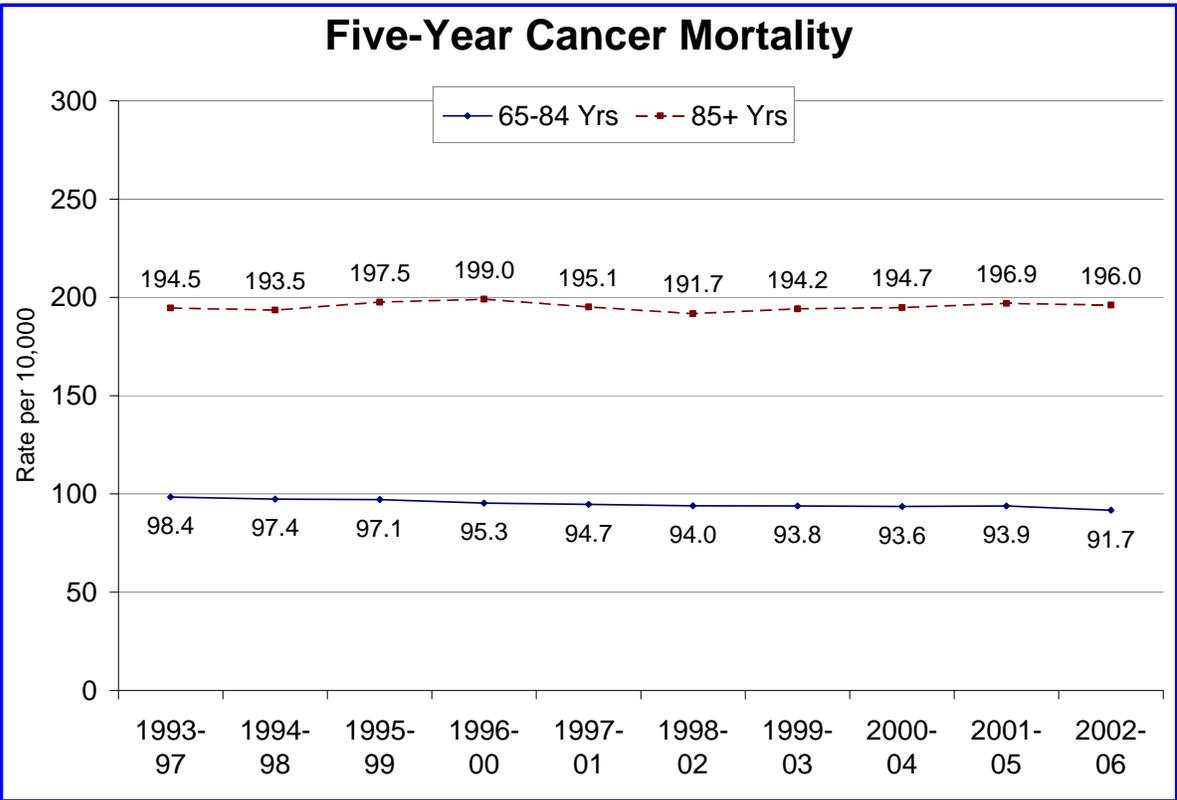
Respiratory system mortality can be due to chronic obstructive pulmonary disease, emphysema, influenza, pneumonia, asthma, and others, but excludes respiratory system cancers.

Digestive system mortality can be due to gastrointestinal haemorrhage, liver diseases, diseases of the pancreas, intestinal obstruction and others.

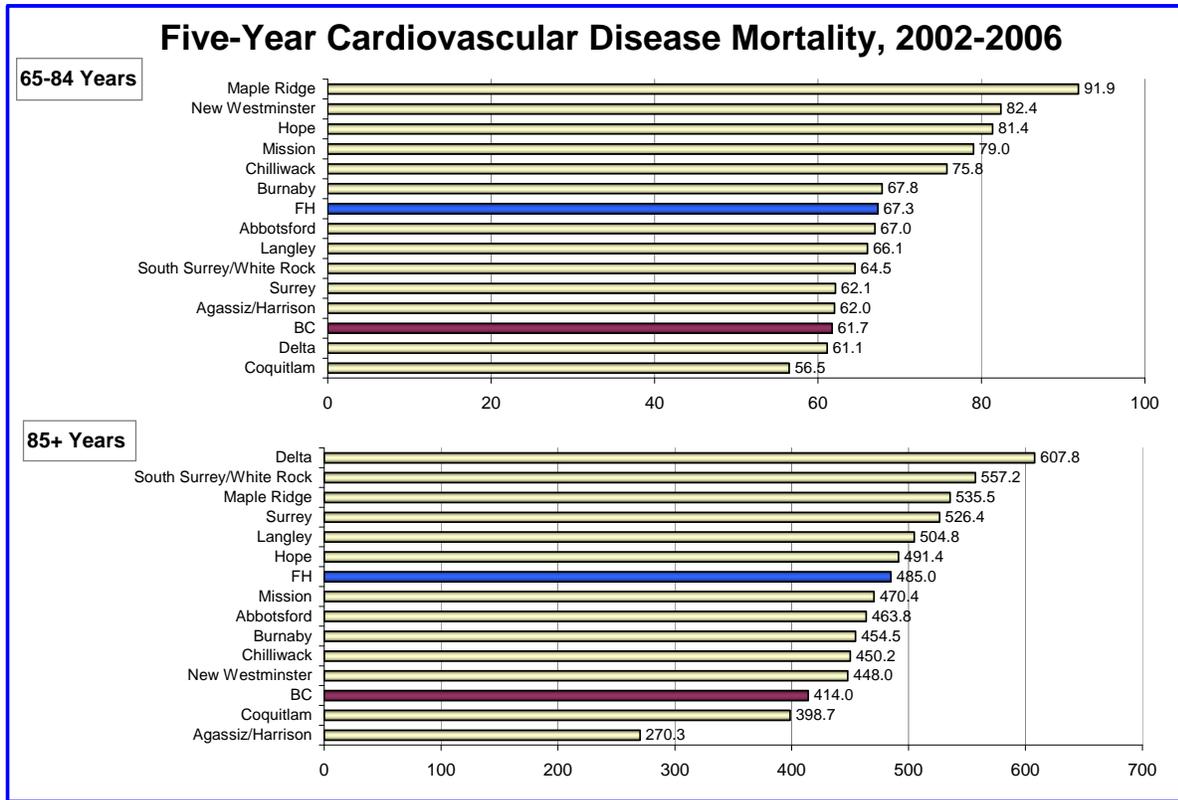
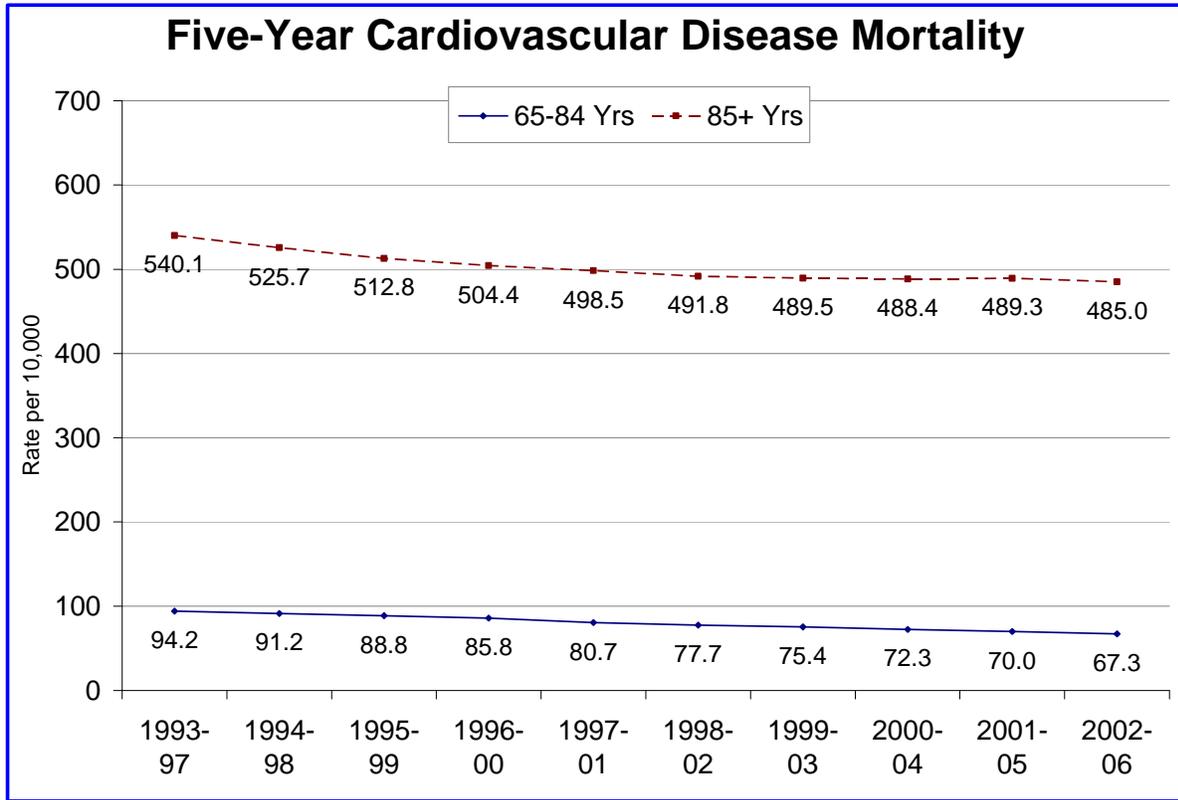
Further investigation into regional differences and into specific diagnoses within these broad disease categories might important information.

Limitations

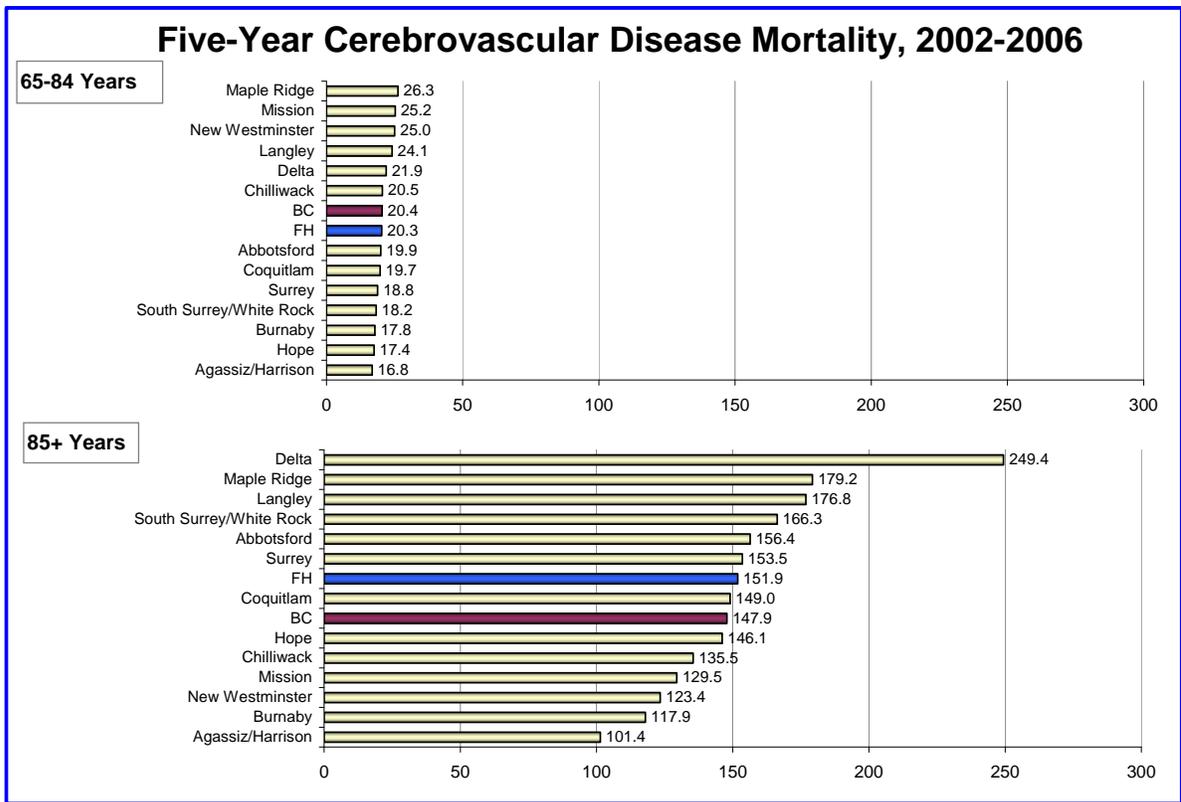
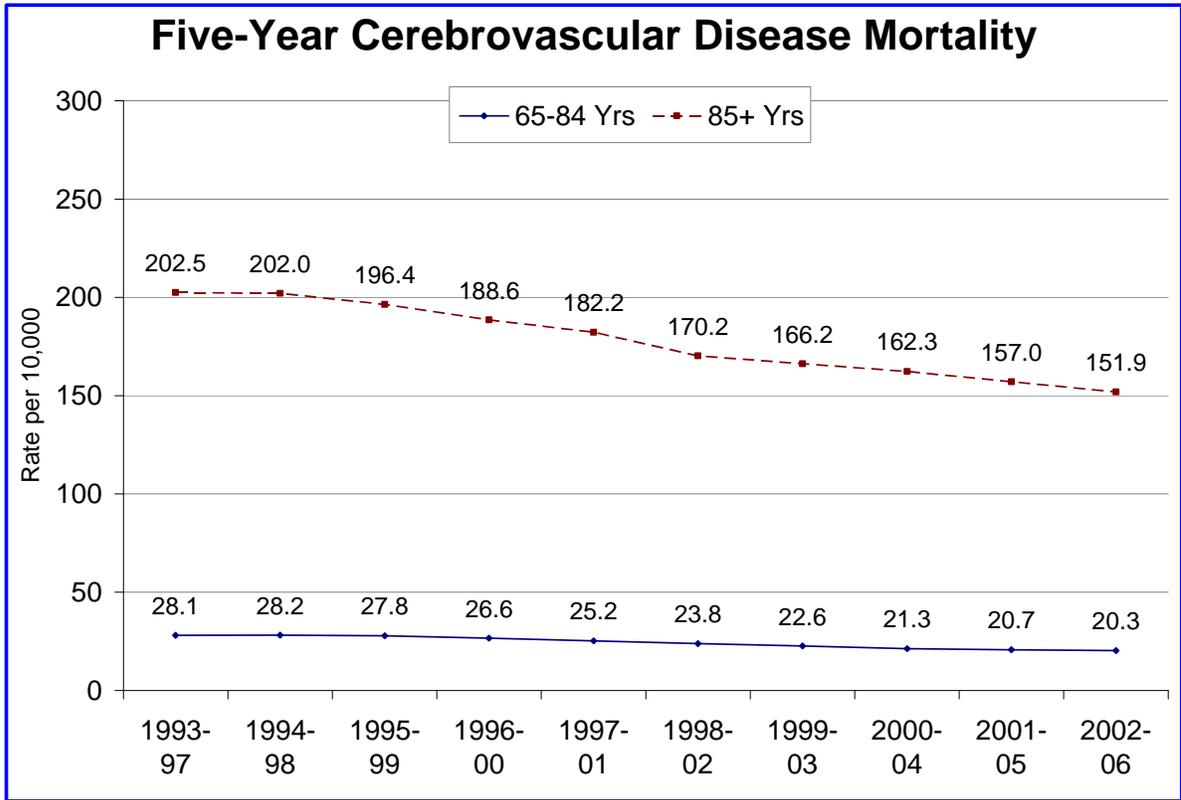
Mortality does not tell us how many older adults live with a given disease.



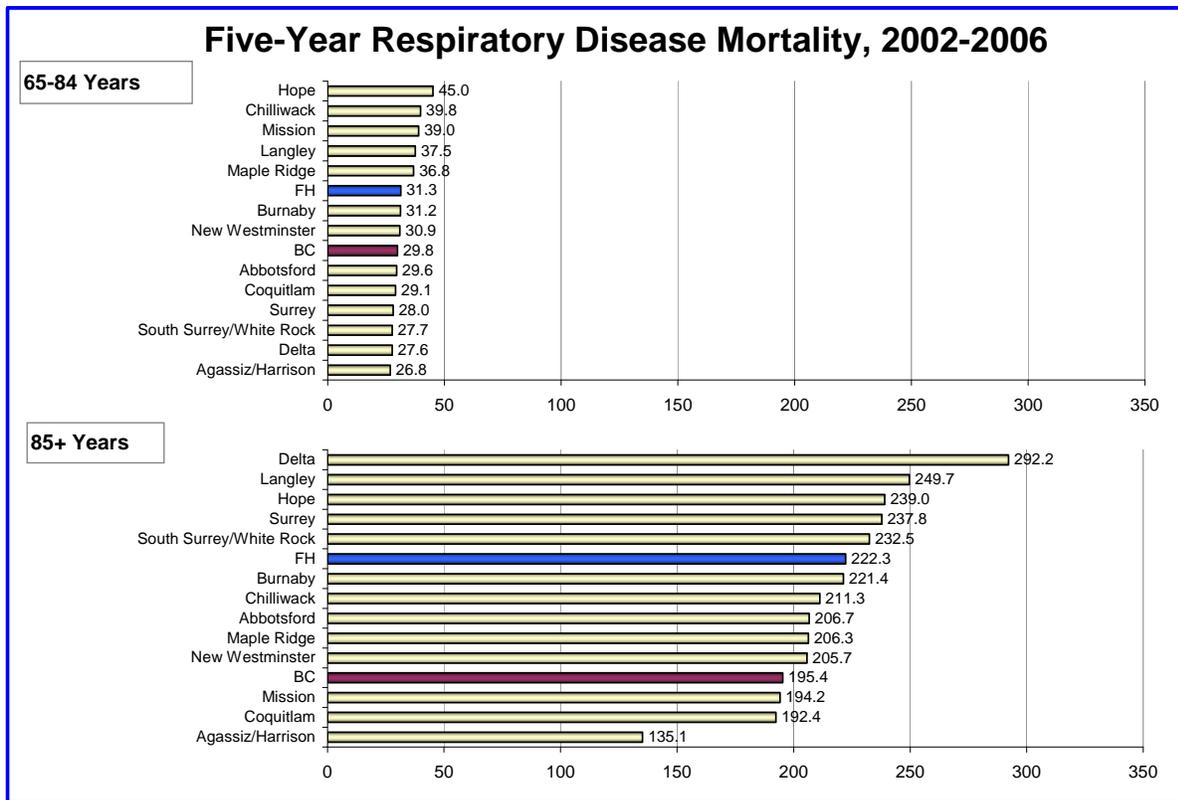
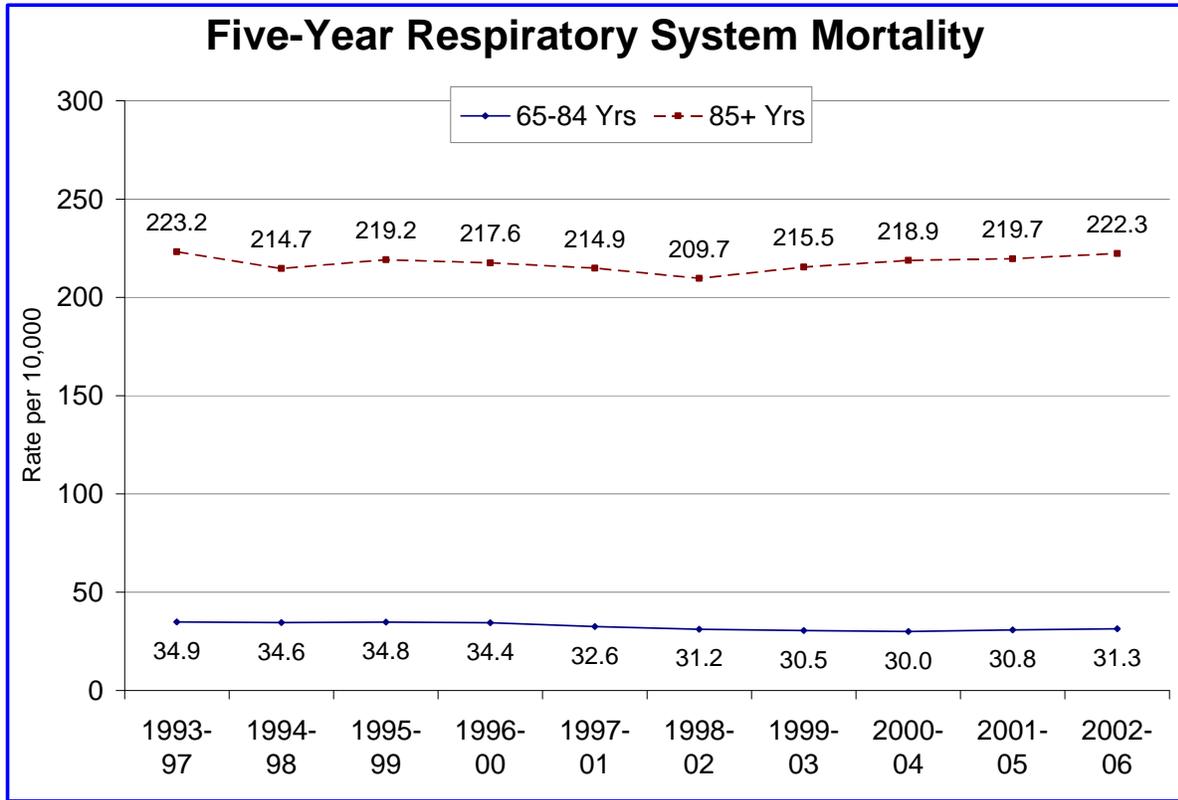
Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.



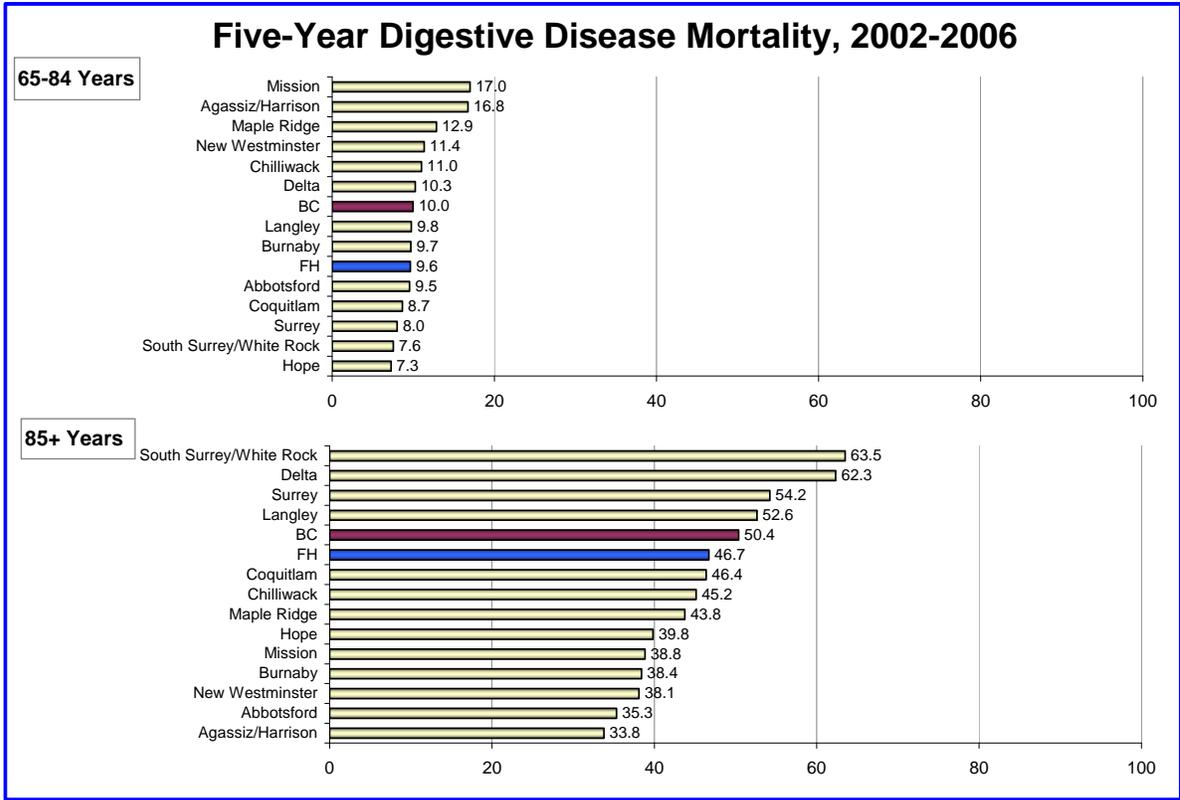
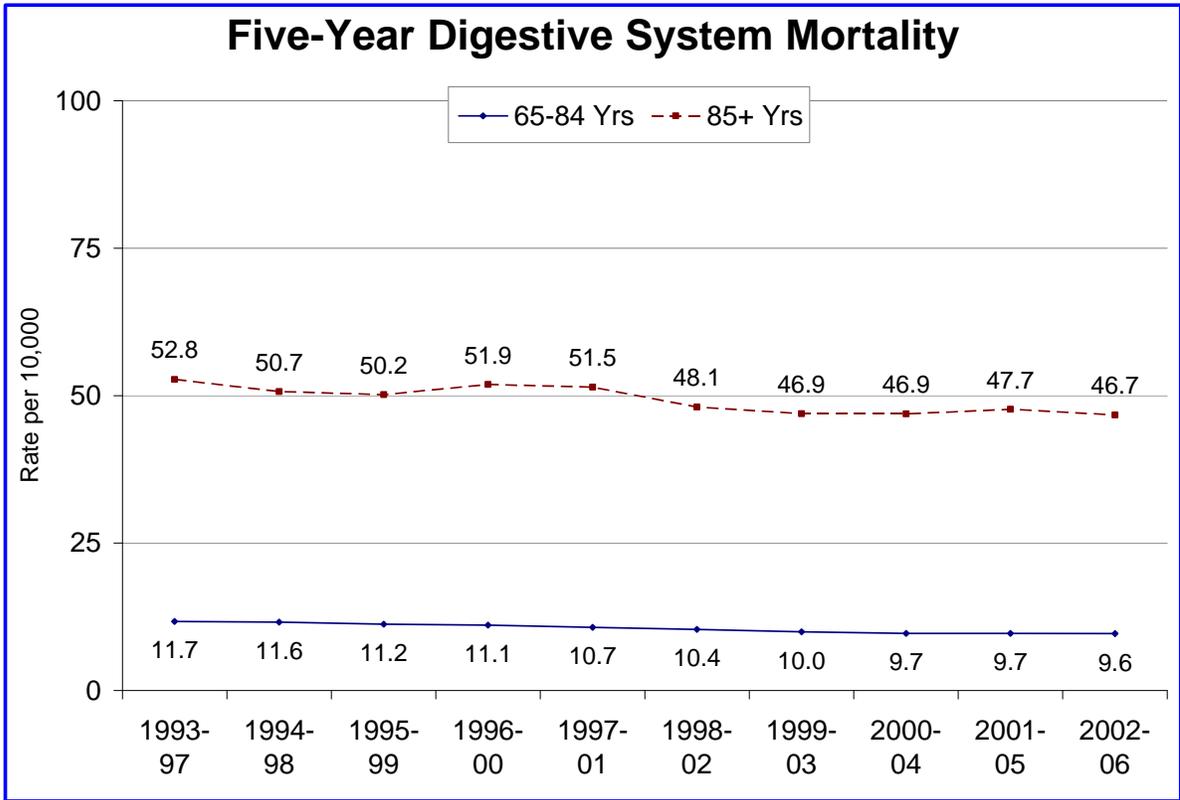
Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.



Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.



Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.



Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.

Age-Specific Rate of Death, by External Cause

Definition

The age specific rate (ASR) of death reports the rate of death per 10,000 population within a specific age group, in this case ages 64-84 years and 85+ years. Designed to allow detailed analysis of the cause of death within a particular age group, the ASR can be used to monitor trends within a region.

The data shown represent five-year aggregate ASRs, which are useful as they help to stabilize rates when single-year death counts are small.

Accidental Falls was the leading external cause of death for seniors

Highlights

In Fraser Health, the five leading external causes of death were the same for both age groups, although the fourth and fifth ranked causes were reversed. With an ASR of 21.4 among those aged 85-years and older, accidental falls was the leading external cause in both groups.

The accidental falls ASR for those aged 65-84 years remained stable since 1992-96, while the ASR declined for those aged 85-years and older.

For the 2002-06 period, the ASR for motor vehicle accidents (MVAs) was 1.3 for the younger seniors and 1.9 for the older seniors.

Suicide ASR trends fluctuated for both age groups, ranging from 1.1 to 1.6.

What Does This Mean?

Statistics on external causes of death help to identify serious problems that might affect different age groups differently. Deaths due to external causes such as falls, MVAs or suicide are largely preventable.

Public education and fall prevention strategies help to reduce the incidence of falls, particularly among the frail elderly at greatest risk of falling and least able to regain functionality. Risk factors for falls among seniors include: advanced age, vitamin D deficiency chronic and acute illnesses (e.g., stroke, arthritis), poor vision, slower reflexes, poor balance, and muscle weakness.

Although MVA deaths are beyond health authority control, identifying problematic areas can help determine resource allocation. Key risk factors associated with aging that can impair driving ability include: visual decline, hearing loss, restricted mobility, poor reaction time, medication usage, drowsiness, and dementia or brain impairment.^{bb}

Suicide is a cause of premature death showing the seriousness of mental health problems, including depression. Men aged 85-years and older have the highest rate of completed suicide among all age groups in Canada.^{cc}

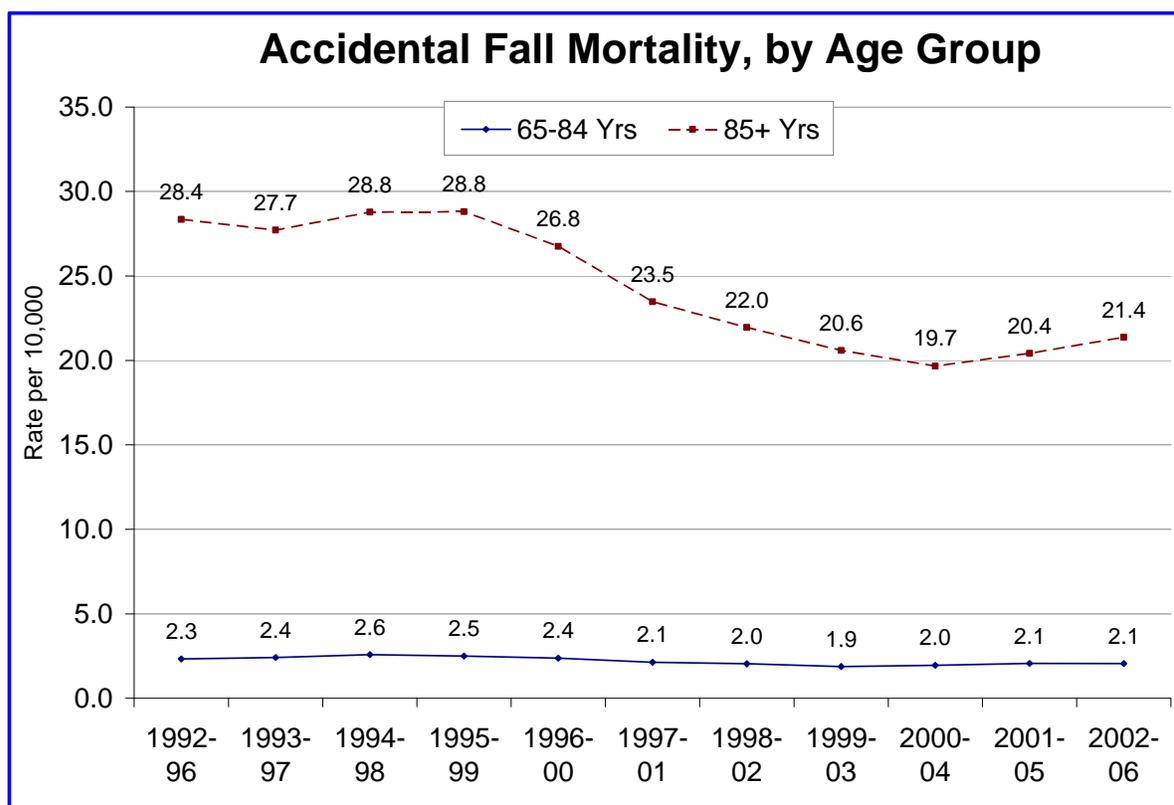
^{bb} de Benedictis, T., Kemp, G., Russell, D. & White, M. (2008). Senior citizen driving: Warning signs and helping an unsafe driver to stop driving. Retrieved June 10, 2008, from

http://www.helpguide.org/elder/senior_citizen_driving.htm

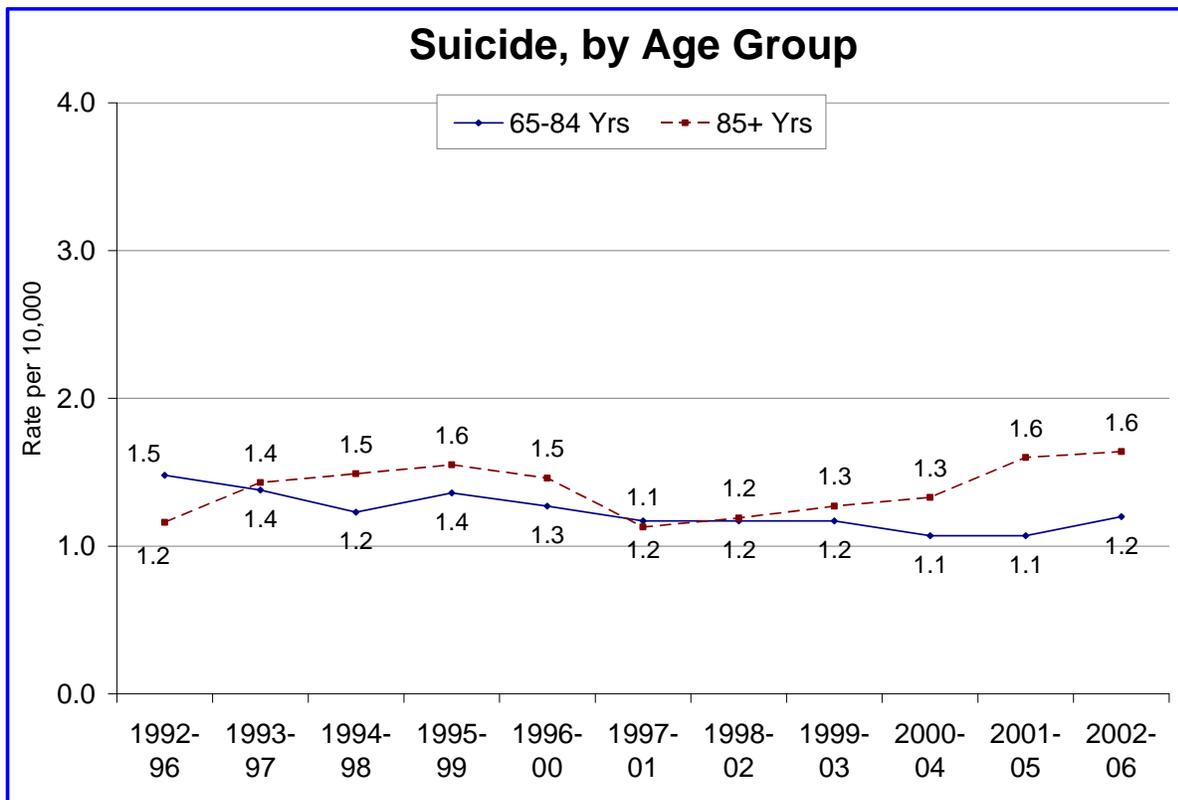
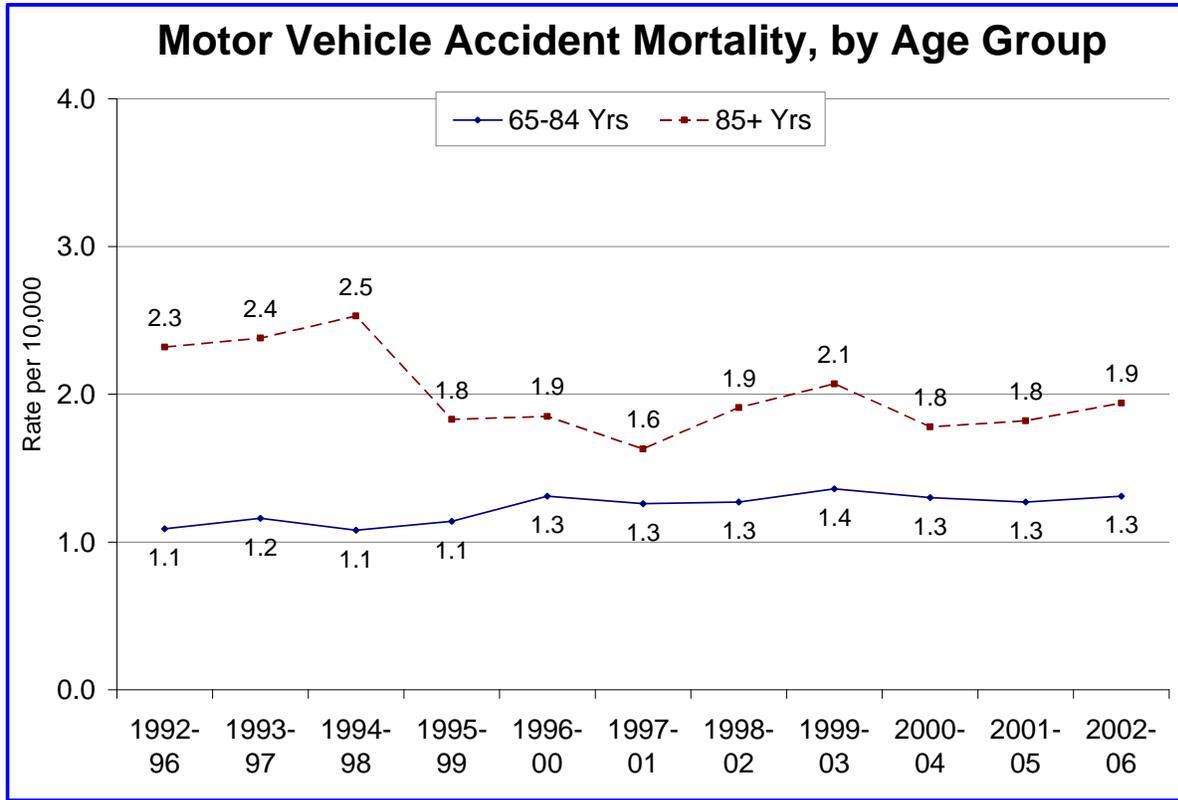
^{cc} BC Partners for Mental Health and Addictions Information. (2006). *Suicide: Following the warning signs*. Retrieved June 6, 2008, from

<http://www.heretohelp.bc.ca/publications/factsheets/suicide>

Leading External Causes of Death by Age Group, 2002-2006		
	Age-Specific Rate/10,000	Number of Deaths
65- to 84-Years		
Accidental falls	2.1	158
Motor vehicle accidents	1.3	101
Suicide	1.2	92
Complications of medical and surgical care	0.3	21
Other accidental threats to breathing	0.2	17
85-Years and Older		
Accidental falls	21.4	209
Motor vehicle accidents	1.9	19
Suicide	1.6	16
Other accidental threats to breathing	1.6	16
Complications of medical and surgical care	0.6	6



Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.



Source: Vista Database, BC Vital Statistics Agency, Ministry of Health Services.

For all age groups, depression is a significant cause of suicide, yet seniors are less likely to be diagnosed with clinical depression. Relative to younger cohorts, seniors tend to exhibit less obvious symptoms and are less inclined to acknowledge feelings of sadness or depression. Older adults with depression may complain of bodily ailments that have no apparent medical cause.^{dd, ee}

Other suicide risk factors for seniors include social isolation, loss of a spouse, decline in health, and the loss of social roles. Physically less able to recover from injury and generally opting for more lethal methods than younger people, seniors are more likely to complete a suicide attempt.^{cc}

Suicide can be prevented through the availability of appropriate mental health services, through increased public awareness of suicide risk and prevention factors. It is important that caregivers, family members, friends and health care professionals learn to recognize suicide-warning signs, including depression, desperation, hopelessness, helplessness, and the loss of interest in activities or relationships previously enjoyed.

Limitations

Age-specific rates should not be used to compare mortality rates in different geographic regions with differing age structures.

^{dd} National Institutes of Mental Health. (2008). *Depression: How do older adults experience depression?* Retrieved June 10, 2008, from

<http://www.nimh.nih.gov/health/publications/depression/complete-publication.shtml#pub8>

^{ee} Gallo, J. J., & Rabins, P. V. (1999). Depression without sadness: Alternative presentations of depression in late life. *American Family Physician*, 60, 820-826. Retrieved August 26, 2008 from

<http://www.aafp.org/afp/990901ap/820.html>



MORBIDITY

Leading Causes of Hospitalization

Definition

The cause of hospitalization is coded as the principal diagnosis as extracted from patient hospital records. This is the diagnosis that the physician considers to be most responsible for the patient’s hospital stay. Data are grouped by diagnostic short code.

Data are for acute/rehabilitation in-patients aged 65-years and older, excluding surgical daycare. Data are analyzed by place of residence, so data include FH residents hospitalized outside of the FH region.

Cardiovascular and respiratory illnesses were significant causes among FH seniors

The twelve top diagnoses are shown for those aged 65- to 74-years and for those aged 75-years and older. Excluded from this analysis was the category “persons encountering health services for specific procedures and health-care,” which refers to follow-up medical surveillance or care to consolidate treatment or to deal with residual states.

Highlights

In 2007/08, Fraser Health men had higher hospitalization rates than women in each age group examined. Rates increased with age among both sexes.

Among Fraser Health LHAs, Hope (274.5) had the highest rate of

inpatient discharges among those aged 65-years and older, while Surrey (192.0) had the lowest.

In 2007/08, arthrosis (a degenerative joint disease) was the leading cause of hospitalization among women aged 65- to 74-years. Respiratory problems and cardiovascular diseases were also ranked among the leading causes of hospitalization for women in this age group.

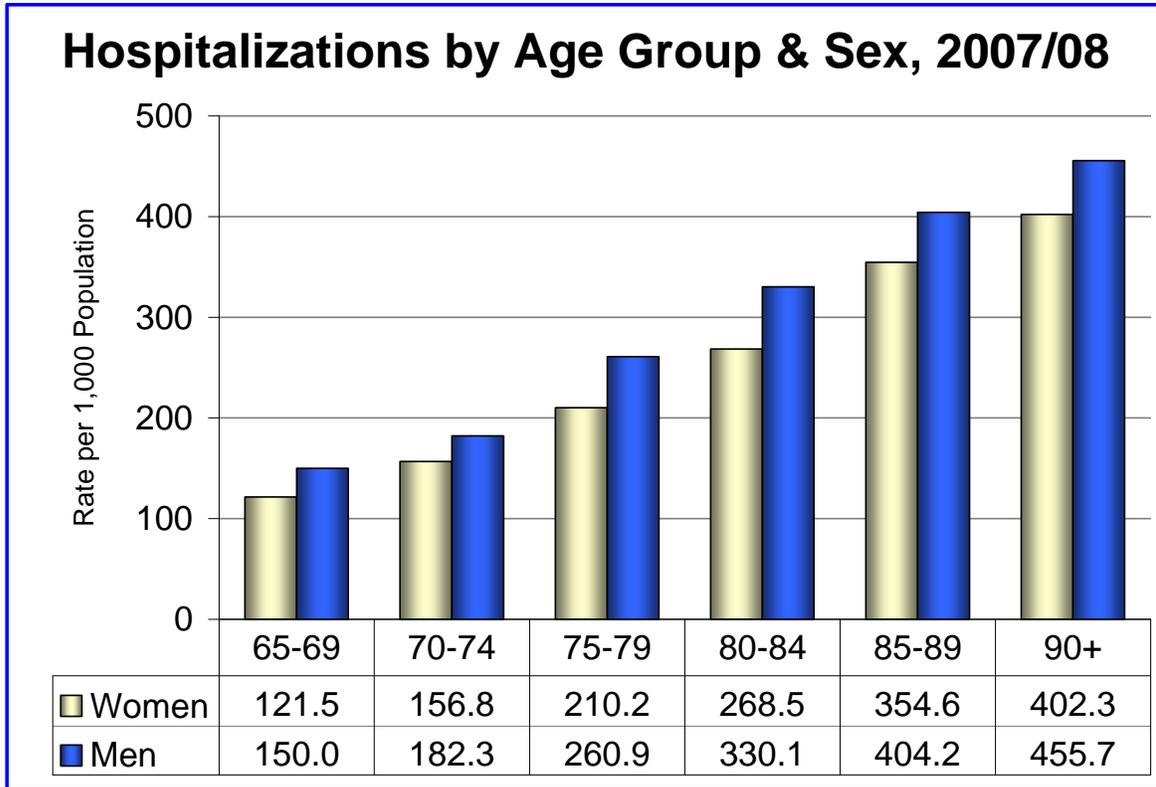
Among women aged 75-years and older, ‘other forms of heart disease’ were the leading causes of hospitalization; followed by ‘injuries to the hip and thigh’ and ‘chronic lower respiratory disease.’

‘Ischaemic heart disease’ and ‘other forms of heart disease’ were the two leading causes of hospitalization for men aged 65- to 74-years and for men aged 75+.

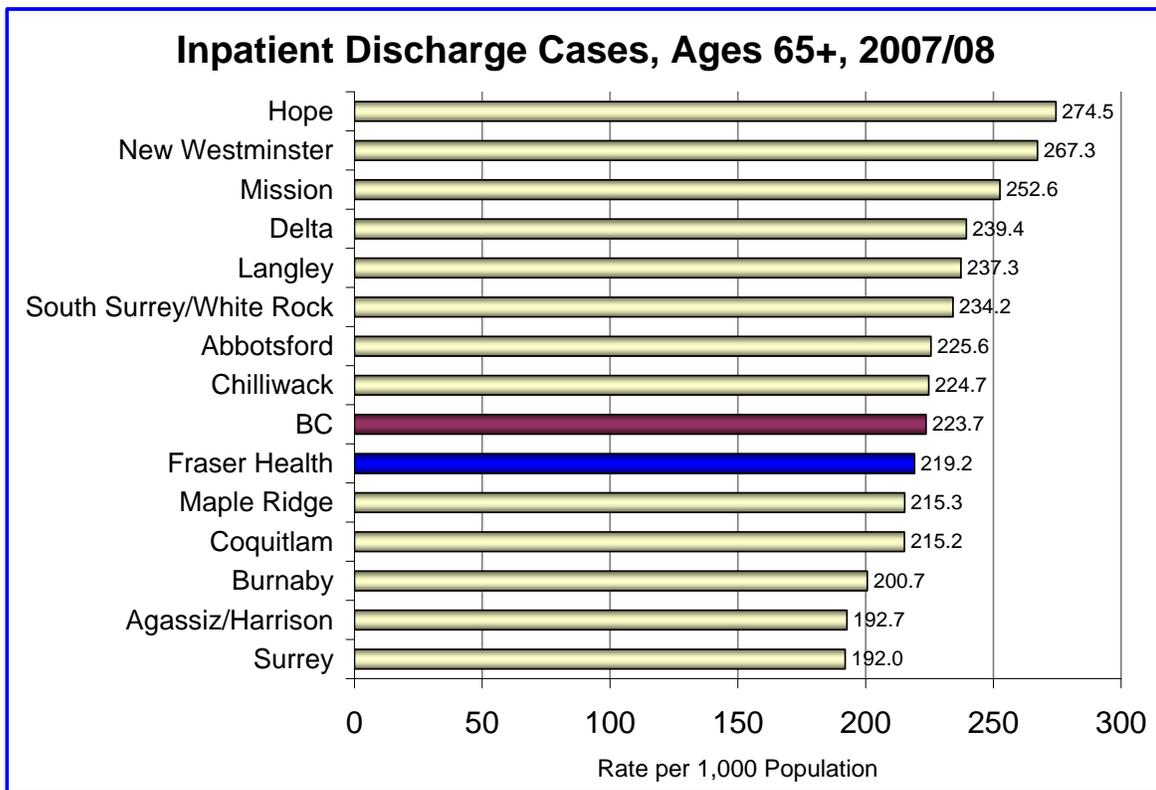
What Does This Mean?

This indicator shows the primary reasons for why older adults are admitted to hospital, and the differences between sexes. While presented data only account for a small percentage of all diagnosed illnesses, they can be used to help rank health problems in a community.

The consequences of illness include short-term or long-term disability, as well as the utilization of healthcare resources and the economic burden to the community.



Source: BC Ministry of Health, Health*ideas* v2.1 Summary Reports.



Source: BC Ministry of Health, Health*ideas* v2.1 Summary Reports.

WOMEN

2007/08

65 - 74 Years Old

Diagnosis	Cases	Days	Case Rate	% Total Discharges
Arthrosis	530	2,262	10.5	7.6%
Chronic lower respiratory diseases	374	3,351	7.4	5.4%
Ischaemic heart diseases	358	2,727	7.1	5.2%
Other forms of heart disease	357	2,516	7.1	5.1%
Other diseases of intestines	250	2,168	5.0	3.6%
Complications of surgical and medical care, not elsewhere classified	218	2,732	4.3	3.1%
Cerebrovascular diseases	211	2,735	4.2	3.0%
Symptoms and signs involving the circulatory and respiratory systems	169	534	3.3	2.4%
Noninflammatory disorders of female genital tract (N80-N98) (153)	168	464	3.3	2.4%
Malignant neoplasms of digestive organs	134	1,744	2.7	1.9%
Malignant neoplasm of breast	133	259	2.6	1.9%
Disorders of gallbladder, biliary tract and pancreas	133	603	2.6	1.9%
All Causes of Hospitalization	6,940	63,416	137.5	100%

75+ Years Old

Diagnosis	Cases	Days	Case Rate	% Total Discharges
Other forms of heart disease	1,405	13,919	26.8	9.6%
Injuries to the hip and thigh	875	11,847	16.7	6.0%
Chronic lower respiratory diseases	730	8,106	13.9	5.0%
Ischaemic heart diseases	686	4,817	13.1	4.7%
Cerebrovascular diseases	558	9,084	10.6	3.8%
General symptoms and signs	531	6,054	10.1	3.6%
Arthrosis	505	3,000	9.6	3.5%
Other diseases of intestines	495	3,777	9.4	3.4%
Influenza and pneumonia	443	4,820	8.4	3.0%
Other disorders of urinary system	384	3,674	7.3	2.6%
Symptoms and signs involving the circulatory and respiratory systems	333	1,270	6.3	2.3%
Injuries to the hip and thigh	875	11,847	16.7	6.0%
All Causes of Hospitalization	14,613	167,155	278.3	100%

Source: BC Ministry of Health, Health*ideas* v2.1 Summary Reports.

MEN**2007/08****65 - 74 Years Old**

Diagnosis	Cases	Days	Case Rate	% Total Discharges
Ischaemic heart diseases	830	5,571	17.6	10.7%
Other forms of heart disease	589	4,093	12.5	7.6%
Arthrosis	340	1,459	7.2	4.4%
Chronic lower respiratory diseases	315	3,734	6.7	4.1%
Diseases of male genital organs	272	695	5.8	3.5%
Complications of surgical and medical care, not elsewhere classified	263	3,129	5.6	3.4%
Cerebrovascular diseases	260	3,619	5.5	3.4%
Malignant neoplasms of digestive organs	207	2,293	4.4	2.7%
Malignant neoplasms of male genital organs	202	1,012	4.3	2.6%
Other diseases of intestines	181	1,546	3.8	2.3%
Diseases of arteries, arterioles and capillaries	167	1,853	3.6	2.2%
Symptoms and signs involving the circulatory and respiratory systems	165	537	3.5	2.1%
All Causes of Hospitalization	7,737	70,896	164.5	100%

75+ Years Old

Diagnosis	Cases	Days	Case Rate	% Total Discharges
Other forms of heart disease	1,172	10,505	32.3	10.1%
Ischaemic heart diseases	860	6,607	23.7	7.4%
Chronic lower respiratory diseases	666	7,221	18.3	5.8%
Influenza and pneumonia	474	4,974	13.0	4.1%
Cerebrovascular diseases	438	6,233	12.1	3.8%
Diseases of male genital organs	362	1,192	10.0	3.1%
General symptoms and signs	352	3,376	9.7	3.0%
Other diseases of intestines	339	2,800	9.3	2.9%
Other disorders of urinary system	282	2,296	7.8	2.4%
Arthrosis	278	1,513	7.7	2.4%
Injuries to the hip and thigh	261	3,928	7.2	2.3%
Complications of surgical and medical care, not elsewhere classified	258	2,712	7.1	2.2%
All Causes of Hospitalization	11,569	123,681	318.4	100%

Source: BC Ministry of Health, Health *ideas* v2.1 Summary Reports.



In Fraser Health, cardiovascular, respiratory, and joint diseases were significant causes of hospitalization among older adults. These older adults live with varying degrees of disability, which may affect their quality of life and use of healthcare resources.

Many of the risk factors for cardiovascular disease such as smoking, sedentary lifestyle, high blood pressure and high cholesterol are preventable and/or treatable.

Limitations

This data refers to inpatient cases discharged from a hospital. As seniors may be admitted to and discharged from a hospital more than once in a year, the data represent hospitalization events only, not the number of individuals with a specific illness.

Hospitalization rates provide information only on illnesses requiring hospital admission. Illnesses can be treated at home, in a doctor's office, in hospital emergency departments or other in settings, and therefore the data do not provide complete information on the impact of specific illnesses on the population or the healthcare system.

Hospitalization data reflect only the serious cases of a disease.

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Cancer Incidence

Definition

For a specified time period, this indicator measures the number of new cancer cases occurring among the population ages 65-years and older. Data represent the age-standardized incidence rates (ASIR) per 100,000 population aged 65-years and older. Fraser Health and provincial data are annual figures, whereas data for local health areas represent 5-year aggregations.

In 2006, the ASIR for all cancers was higher among men than among women in all Fraser Health LHAs

Highlights

In 2006, prostate cancer was the most common cancer among senior men (806) while breast cancer was the most common among senior women (336). Lung and colorectal cancers were the next most common types of cancers for both men and women.

Between 2002 and 2006, the Fraser Health ASIR for all cancers dropped from 1,998 to 1,780 per 100,000. A similar decline was seen in BC overall.

Over the five year period from 2002 to 2006, the ASIR for all cancers among men ranged from 2,120 in Agassiz/Harrison to 2,638 in Chilliwack LHAs. During the same timeframe, the all cancer ASIR among women ranged from 1,317 in Surrey to 1,775 in New Westminster LHAs.

What Does This Mean?^{ff gg}

Cancer is characterized by the uncontrolled growth and spread of abnormal cells in some parts of the body. The most common cancers in Canada are breast (among women), prostate (among men), lung and colorectal; a similar distribution of cancers is seen in FH areas.

The primary risk factors for leading cancers are smoking or exposure to second-hand smoke, diet and nutrition, occupation, alcohol consumption, genetic factors and physical inactivity. From 70% to 90% of lung cancer can be attributed to smoking. Smokers who develop cancer will improve their odds of survival if they quit smoking.

Cancer cases and deaths can be reduced through early detection and screening, such as: mammography or colonoscopy. People with a family history of breast, colorectal and/or prostate cancer should discuss early detection screening with their doctor and they should consider clinical surveillance. The best approach to prostate screening, such as prostate specific antigen (PSA) or rectal exam, has long been debated, with established professional groups recommending different screening guidelines. Despite the ongoing

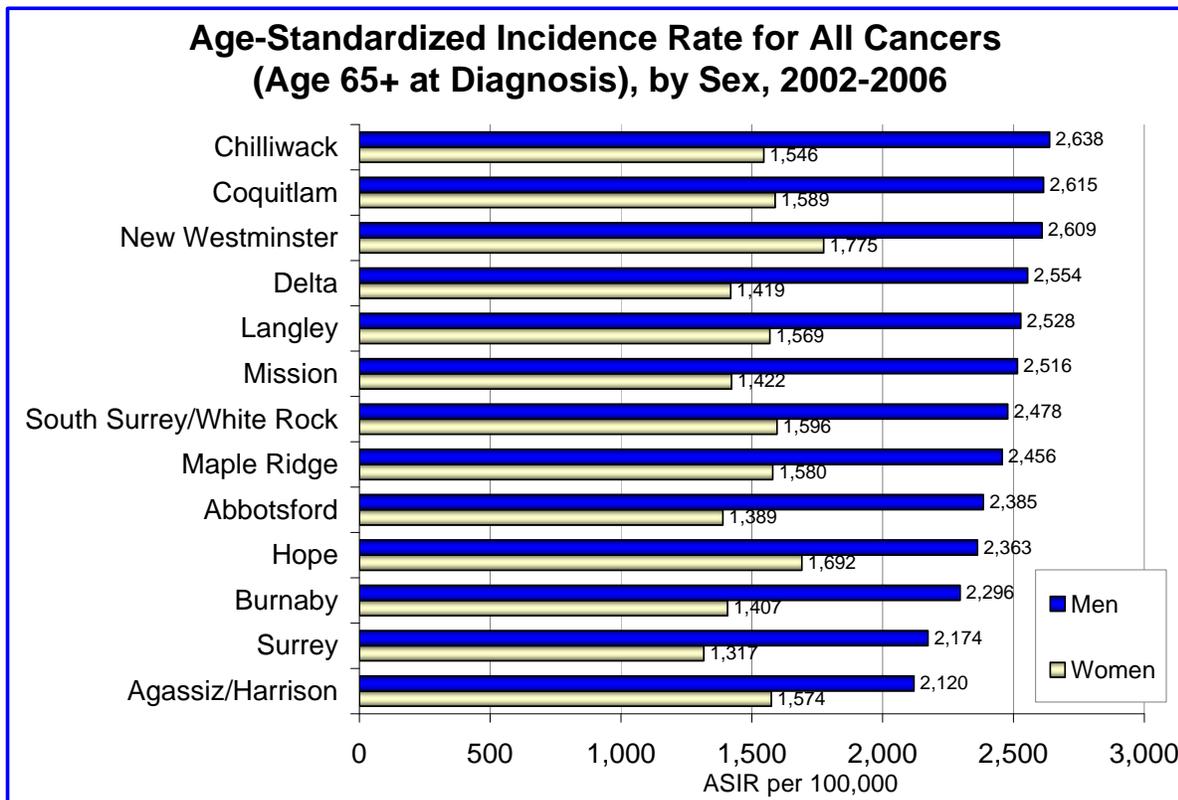
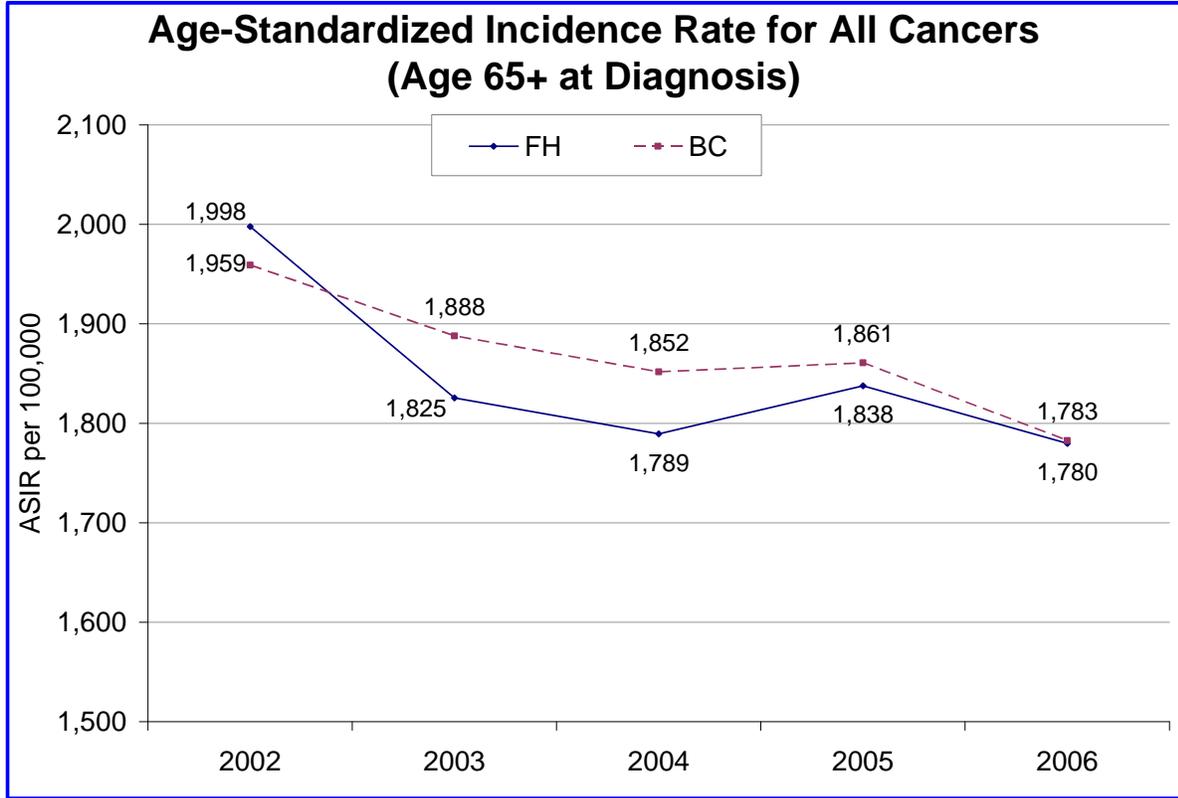
^{ff} Health Canada. (2007). *Diseases and conditions, cancer*. Retrieved July 7, 2007 from http://hc-sc.gc.ca/dc-ma/cancer/index_e.html

^{gg} Canadian Cancer Society. (2005). *Stats at a glance*. Retrieved July 7, 2007 from http://www.cancer.ca/ccs/internet/standard/0,3182,3172_14411_langld-en,00.html

Most Common Cancers Among Seniors (Ages 65+), by Sex 2006			
<i>Fraser Health</i>			
Men		Women	
Cancer Type	ASIR	Cancer Type	ASIR
Prostate	806.4	Breast	336.2
Lung	330.1	Lung	225.5
Colorectal	298.6	Colorectal	186.4
All Other Cancers	183.6	All Other Cancers	152.2
Bladder	182.1	Body of Uterus	80.6
Non-Hodgkin Lymphoma	101.4	Non-Hodgkin Lymphoma	64.9
Leukemia	58.6	Pancreas	51.6
Kidney	50.8	Bladder	47.1
Pancreas	46.9	Ovary	43.2
Melanoma	46.7	Leukemia	39.2
<i>BC</i>			
Men		Women	
Cancer Type	ASIR	Cancer Type	ASIR
Prostate	746.5	Breast	344.6
Colorectal	310.6	Lung	244.1
Lung	306.4	Colorectal	206.8
All Other Cancers	190.2	All Other Cancers	145.5
Bladder	180.3	Non-Hodgkin Lymphoma	68.8
Non-Hodgkin Lymphoma	95.7	Body of Uterus	68.4
Leukemia	58.0	Bladder	46.1
Melanoma	57.6	Ovary	44.7
Pancreas	48.4	Pancreas	43.1
Kidney	48.0	Leukemia	36.5

Note: Data include in-situ bladder cancer and exclude non-melanoma skin cancer.

Source: BC Cancer Agency, BC Cancer Registry; Retrieved May 2008.



Source: BC Cancer Agency, BC Cancer Registry; Retrieved May 2008.

disagreement about what age to begin screening, what method to use and what thresholds indicate a positive result, screening has been associated with the detection of early-stage treatable cancers. Having a mammogram every two years is recommended for woman aged 50-years and older.

Cancer predominantly affects the elderly, with 44% of new cases and 60% of deaths occurring among those aged 70-years and older. As the population is aging, cancer prevention and screening are becoming important parts of individual and population health.

Limitations

Incidence refers to the identification of new cancer cases not cancer-related deaths. Some cancers are readily curable while others are not.

New diagnostic methods can influence rates for certain cancer sites (i.e. prostate) due to better identification and/or earlier detection.

Age-standardized rates in areas with smaller populations, like Hope and Agassiz/Harrison, are considered to be unstable because small changes in the number of cases have large effects on the rates.

a) Diabetes Mellitus (DM)

Definition

The prevalence of diabetes mellitus (DM) among older adults represents all cases among ages 65-years and older registered with the Primary Health Care (PHC) patient registry during the time shown. Data are expressed as a percentage of the population ages 65-years and older.

Based on a 3-year moving average (2004/05, 2005/06, and 2006/07 data), data shown are crude, age-specific prevalence rates.

Approximately 22% of Fraser Health seniors are diabetic

Highlights

The age-specific prevalence rate for diabetes among seniors aged 65-years and older is slightly higher in Fraser Health (21.5%) than in the province overall (19.5%).

Among Fraser Health's local health areas, Surrey (25.4%) has the highest prevalence of diabetes among seniors.

South Surrey/White Rock (15.8%) and Agassiz/Harrison (18.0%) and Hope (19.3%) LHAs had lower prevalence of diabetic seniors than BC.

What Does This Mean?

Diabetes is a serious chronic condition affecting the body's ability to produce and/or to properly use insulin. Left unmanaged, diabetes can lead to a

number of disabling or life threatening complications, including hypertension, heart disease, stroke or premature death. Diabetes is the single largest cause of blindness in Canada, and a leading cause of kidney failure and lower limb amputations.^{hh}

The prevalence of diabetes increases with age; the Public Health Agency of Canada estimates that 18% of all Canadians 60-years and older have diabetes.ⁱⁱ Age increases the risk of developing Type 2 diabetes, and for those with the disease, age can also cause insulin production to decrease and glucose intolerance to increase.^{jj}

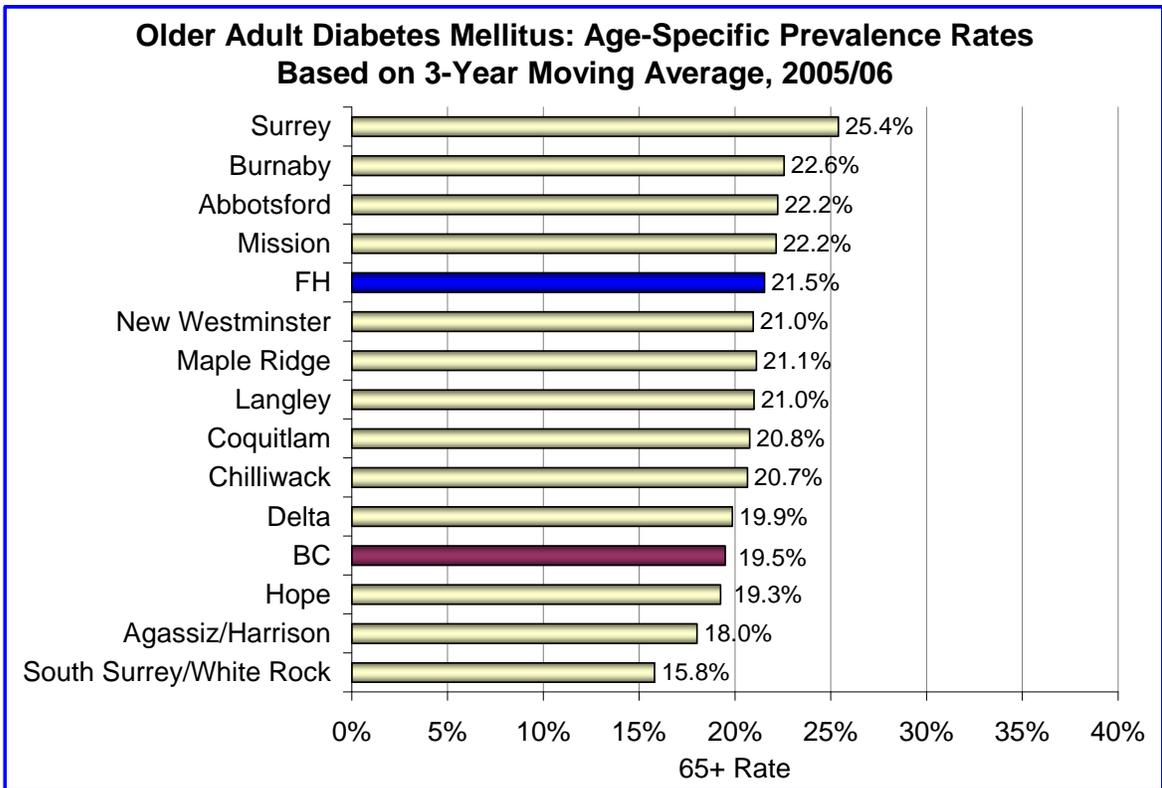
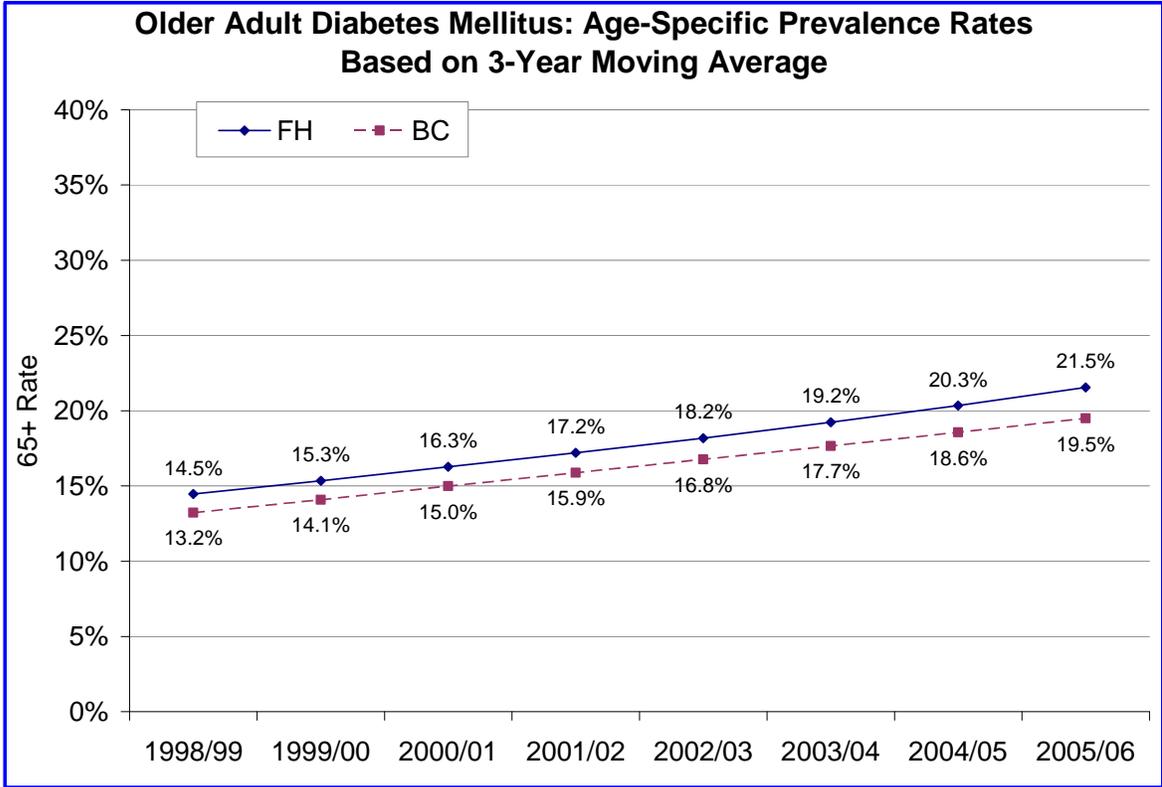
Typical symptoms for diabetes include frequent urination, excessive thirst and extreme hunger. However, physiological changes associated with aging make diagnosing diabetes in older adults more difficult as they may not present with classic symptoms.^{kk} For instance, elderly patients may, in fact, be dehydrated presenting with dry eyes, dry mouth, confusion, incontinence, or other complications. Treatment plans for elderly diabetics must not only consider the usual

^{hh} Sanmartin, C., & Gilmore, J. (2006). *Diabetes care in Canada: Results from selected provinces and territories, 2005*. Retrieved April 4, 2007, from <http://www.statcan.ca/english/research/82-621-XIE/2006002/diabetic.htm>.

ⁱⁱ Public Health Agency of Canada. (2007). *National diabetes fact sheet Canada 2007*. Retrieved May 21, 2008, from <http://www.phac-aspc.gc.ca/ccdpc-cpcmc/diabetes-diabete/english/pubs/ndfs-fnr07-eng.html>

^{jj} *Seniors and diabetes*. (May 13, 2008). Retrieved May 20, 2008, from http://www.dlife.com/dLife/do/ShowContent/daily_living/seniors

^{kk} Chau, D. L., Shumaker, N., & Plodkowski, R. A. (2003). Complications of type 2 diabetes in the elderly. *Geriatric Times*, *IV*(2), May 20, 2008.



Source: Ministry of Health, PHC Diabetes Registry as of November 2007.



complications associated with DM, treatment plans must also consider cognitive impairment, falls and impaired function.

Prevention strategies and enabling people to manage their diabetes are important tasks that could help to reduce the economic impact of DM. Maintaining a healthy body weight along with a nutritious diet and regular exercise may prevent the onset of Type 2 diabetes. Control of blood sugar levels and blood pressure reduces the risk of complication.

Limitations

Registry inclusion criteria for diabetes require one of the following scenarios to occur within a 365 day period:

- a) one hospitalization with a diabetes diagnosis,
- b) two medical visits with a diabetes diagnosis,
- c) 2 or more prescriptions for insulin,
- d) 2 or more prescriptions for oral anti-hyperglycemic (not including metformin),
- e) 1 prescription for insulin and 1 for oral anti-hyperglycemic (excluding metformin),
- f) 1 prescription for metformin plus 1 prescription for some other oral anti-hyperglycemic, or
- g) 2 prescriptions for metformin plus 1 medical visit with a diagnosis of diabetes.

To protect client confidentiality, any registry cells with less than five cases are suppressed and totals adjusted prior to data distribution.

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b) Osteoarthritis (OA)

Definition

The prevalence of osteoarthritis (OA) in seniors represents all cases among ages 65-years and older registered in the Primary Health Care (PHC) patient registry during the time shown.

Based on a 3-year moving average (2004/05, 2005/06, and 2006/07 data), data shown are crude, age-specific prevalence rates expressed as a percentage of the 65+ population.

Approximately 29% of Fraser Health seniors have osteoarthritis

Highlights

The prevalence of OA among seniors has increased in Fraser Health and in BC, with consistently higher rates in the health authority. In 2005/06, 29% of Fraser Health seniors had OA.

Among Fraser Health's LHAs in 2005/06, the prevalence of OA ranged from 23.6% in Hope to 34.9% in South Surrey/White Rock.

What Does This Mean?

Arthritis occurs when cartilage (the material that cushions bone ends) wears down. While there are many different forms, osteoarthritis is the most common form of arthritis and it is the most frequent joint problem among seniors^{ll}. Indeed, the Public Health Agency of Canada estimates that OA affects 85% of Canadians by age 70.^{ll}

^{ll} Public Health Agency of Canada. (2000). *Arthritis info-sheet for seniors*. Ottawa, ON: Minister of Public Works and Government Services Canada. Retrieved August 6, 2008 from http://www.phac-aspc.gc.ca/seniors-aines/pubs/info_sheets/arthritis/pdf/arthritis_e.pdf

Characterized by pain, stiffness, and/or swelling in or around a joint, arthritis can be a painful condition and is one of the main factors leading older adults to limit their activities.^{ll} Finger joints are the most likely joint to be affected, though OA can also cause pain in knees, hips, shoulders, elbows, wrists or the back.^{mmm}

While a large number of seniors are affected by OA, not everyone develops the condition as they age.^{ll} Along with age, risk factors include vitamin D deficiency, excess weight, injury, heredity, and lack of physical activity. Symptoms like fatigue, pain, and stiffness may lead people to avoid exercise; ironically, this can worsen arthritic issues.^{ll}

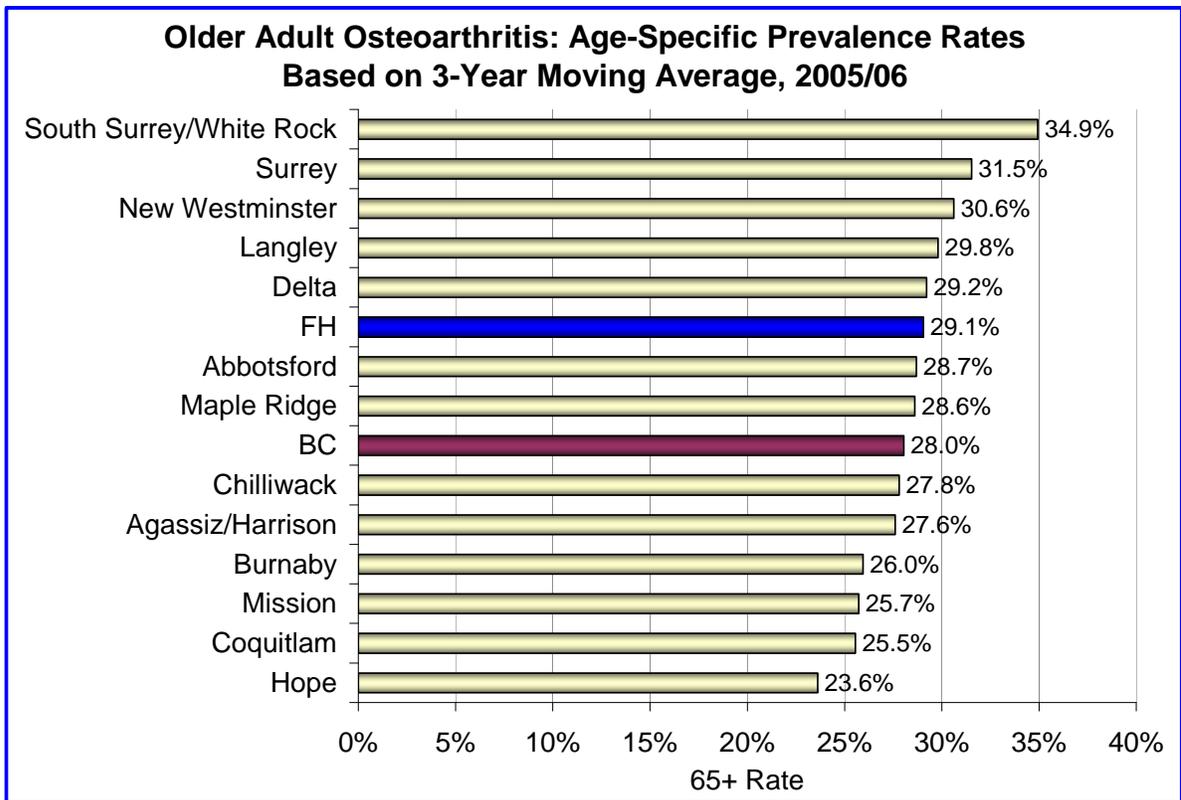
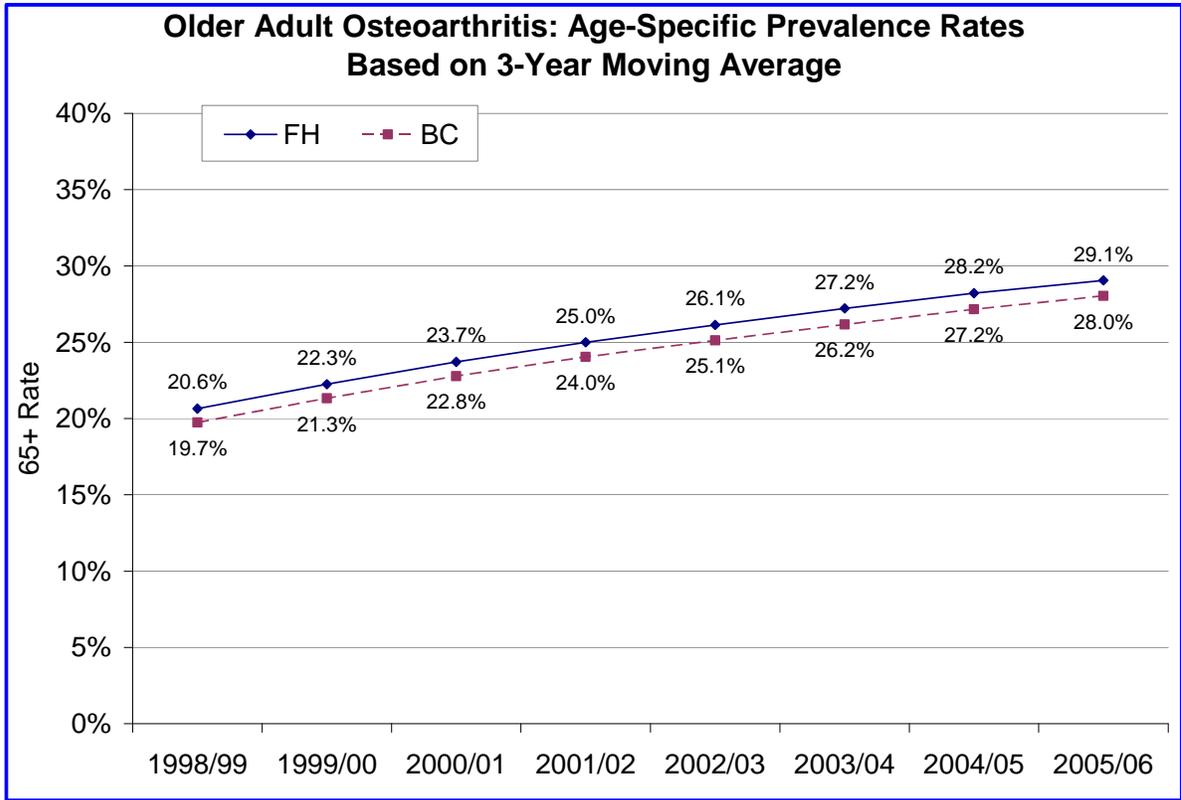
Some risk factors like age, sex and heredity cannot be changed, but it is possible to reduce one's chances of developing this condition. Adopting a healthy lifestyle with regular exercise helps strengthen supportive muscles and maintain joint mobility. Weight control helps reduce stress on joints and the spine.^{ll}

Limitations

Osteoarthritis registry criteria are one hospitalization **or** two medical visits with an osteoarthritis diagnostic code within the specified 365 day period.

To protect client confidentiality, any registry cells with less than five cases are suppressed and totals adjusted prior to data distribution.

^{mmm} Woolston, C. (2008). *Health after 60: Arthritis (osteoarthritis) (seniors)*. Retrieved August 5, 2008, from <http://www.ahealthyme.com/topic/srarth>



Source: Ministry of Health, PHC Osteoarthritis Registry as of November 2007.

c) Stroke

Definition

The prevalence of stroke in seniors represents all clients aged 65-years and older with a history of stroke who are registered in the Primary Health Care (PHC) patient registry during the time shown.

Based on a 3-year moving average (2004/05, 2005/06, and 2006/07 data), data shown are crude, age-specific prevalence rates expressed as a percentage of the 65+ population.

Approximately 7% of Fraser Health seniors have a history of stroke

Highlights

The prevalence of stroke among seniors has increased in Fraser Health and in BC, with similar proportions for both regions. In 2007, roughly 7% of seniors had a history of stroke.

Among Fraser Health LHAs, six had lower prevalence rates for stroke than in BC (one had an equivalent rate). In 2007, stroke prevalence ranged from 5.5% in Chilliwack to 8% in Langley.

What Does This Mean?

A stroke can occur when the flow of blood is cut off to part of the brain and brain cells in the affected area become damaged or dieⁿⁿ. Stroke is a major cause of death and disability among seniors^{oo}. Deaths due to stroke are in

decline, but stroke survivors often live with some level of physical impairment or reduced function.

Common outcomes following a stroke include impaired vision, trouble using or understanding language, paralysis or weakness on one side of the body, tiredness, depression, and mental difficulties.ⁿⁿ, ^{oo} Following a stroke, many seniors require assistance with the activities of daily living.

A stroke is an emergency requiring immediate action to save lives and to reduce debilitating outcomes.^{oo} When it comes to stroke, “time is brain” as the longer it takes to reach treatment, more brain cells die. Recognizing symptoms quickly is imperative, and the acronym FAST can help people recognize the onset of stroke.

FAST^{pp}

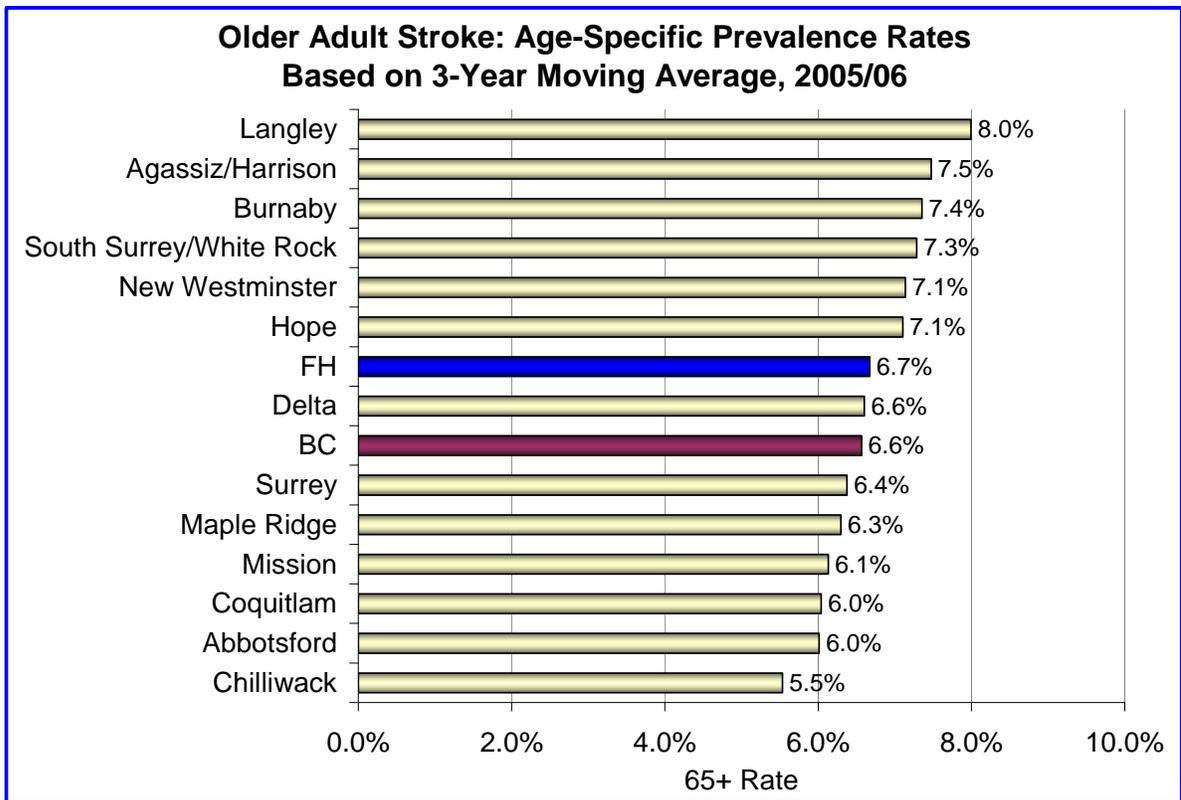
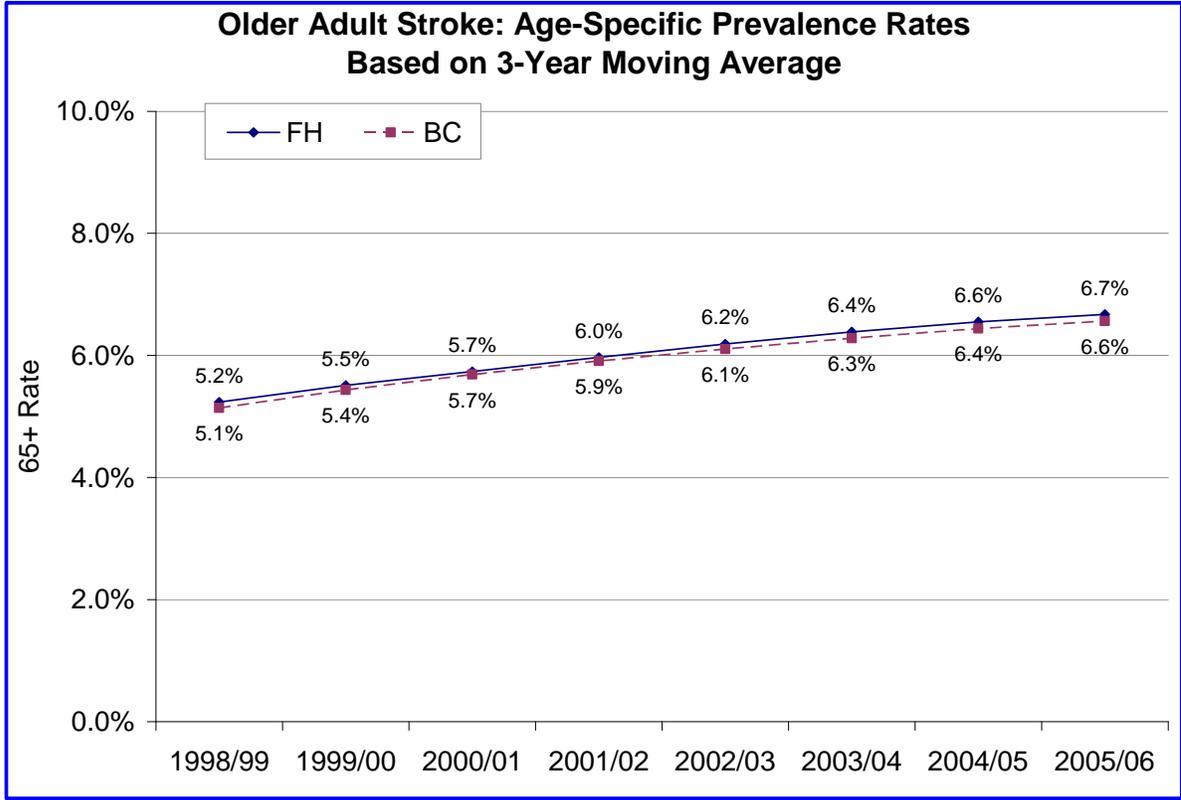
F = FACE	Ask the person to smile. Does one side of the mouth or face droop?
A = ARMS	Ask the person raise both arms. Does one arm drift downward or cant' be raised?
S = SPEECH	Ask the person to repeat a sentence. Can they repeat it correctly? Do they slur the words?
T = TIME	If the person exhibits any problems with these it's time to call for emergency help

Other symptoms include the sudden onset of any of the following: a severe headache; numbness or weakness in face, arms, legs, or one side of the body; confusion, slurred speech, or

ⁿⁿ Public Health Agency of Canada. (2005). *Stroke info-sheet for seniors*. Retrieved August 7, 2008, from http://www.phac-aspc.gc.ca/seniors-aines/pubs/info_sheets/stroke/pdf/stroke_e.pdf

^{oo} About.com. *Senior health: Stroke research and treatment*. Retrieved August 7, 2008, from http://seniorhealth.about.com/od/stroke/Stroke_Research_and_Treatment.htm

^{pp} Quan, K. (2006). *FAST test for stroke: National stroke association test for stroke symptoms*. Retrieved August 8, 2008, from http://healthfieldmedicare.suite101.com/blog.cfm/fast_test_for_stroke



Source: Ministry of Health, PHC Stroke Registry as of November 2007.

trouble swallowing; loss of consciousness; unsteady gait, dizziness, loss of balance; and dim vision particularly if in one eye.^{pp} Medical attention should be sought immediately with sudden onset of any of these symptoms.

Despite leaving debilitating after-effects, for many people the brain can learn to compensate. Rehabilitation is key to recovery and encourages the brain to relearn after a stroke.ⁿⁿ

While stroke is most common among older adults, stroke can occur at any age. Other stroke risk factors include high blood pressure, a history of heart disease, physical inactivity, smoking, and heavy drinking.ⁿⁿ A diet high in fibre and low in salt and fat can help lower blood pressure and maintain a healthy body weight.

Limitations

The registry criteria for stroke are one hospitalization **or** two medical visits with a stroke diagnostic code in the specified 365 day period.

To protect client confidentiality, any registry cells with less than five cases are suppressed and totals adjusted prior to data distribution.

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d) Depression

Definition

The prevalence of depression among seniors represents all clients aged 65-years and older who have a history of depression and who are registered in the Primary Health Care (PHC) patient registry during the time shown.

Based on a 3-year moving average (2004/05, 2005/06, and 2006/07 data), data shown are crude, age-specific prevalence rates expressed as a percentage of the 65+ population.

Roughly, 27% of Fraser Health seniors suffer from depression

Highlights

The prevalence of depression among Fraser Health seniors has increased in concert with increases in among BC seniors in general. In 2007, the prevalence of depression in Fraser Health (26.7%) seniors was similar to the prevalence in BC (26.4%) in 2007.

Among Fraser Health LHAs, South Surrey/White Rock (31.9%) had the highest prevalence of depression among seniors. The lowest rates in Fraser Health were seen in Hope (20%) and Agassiz/Harrison (20.3%).

What Does This Mean?

Depression is not an inevitable part of aging, yet there are factors common to many seniors that increase their risk.⁹⁹

Medical issues (e.g., low vitamin D, hypothyroidism, chronic pain), retire-

ment, and the loss of spouse and/or peers can be life altering with profound affects on seniors' mental health and well-being. Everyone copes with life transitions differently, so some seniors will have a more difficult time than others. The losses of independence and ability, of income and routine, and of one's social support network can lead to depression or even suicide.⁹⁹

Depression often goes undiagnosed in seniors as signs and signals often differ from those common in younger groups.^{rr} Loss of appetite, poor concentration and fatigue are typical signs of depression for older adults, signs that are often mistaken as being normal parts of aging. Many seniors with depression stop doing things they previously enjoyed and it can be hard to understand the cause of such behavioural changes.

Optimal medical care, socializing, connecting with others, and having someone to confide in can all benefit health and well-being by promoting a healthy diet, by increasing chances that seniors remain physically active and by deterring depression.^{ss}

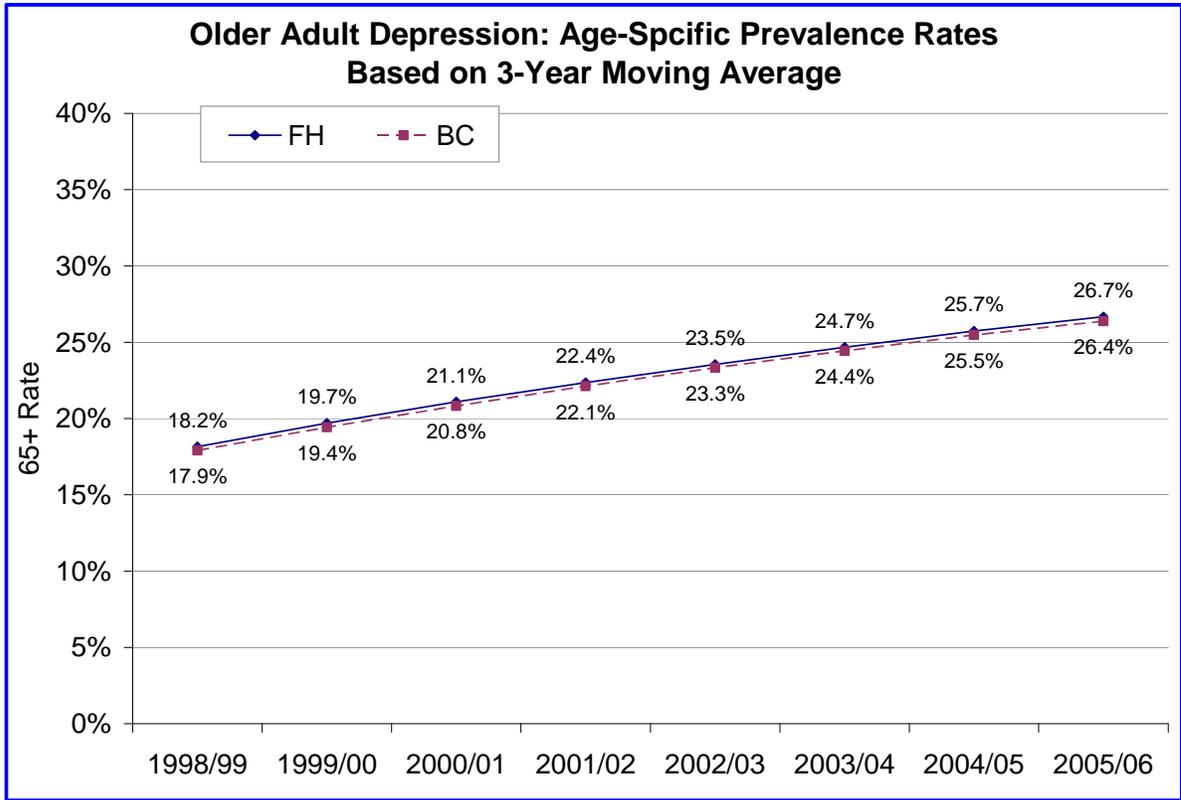
Limitations

The registry criteria for depression are one hospitalization **or** two medical visits with a depression diagnostic code in the specified 365 day period.

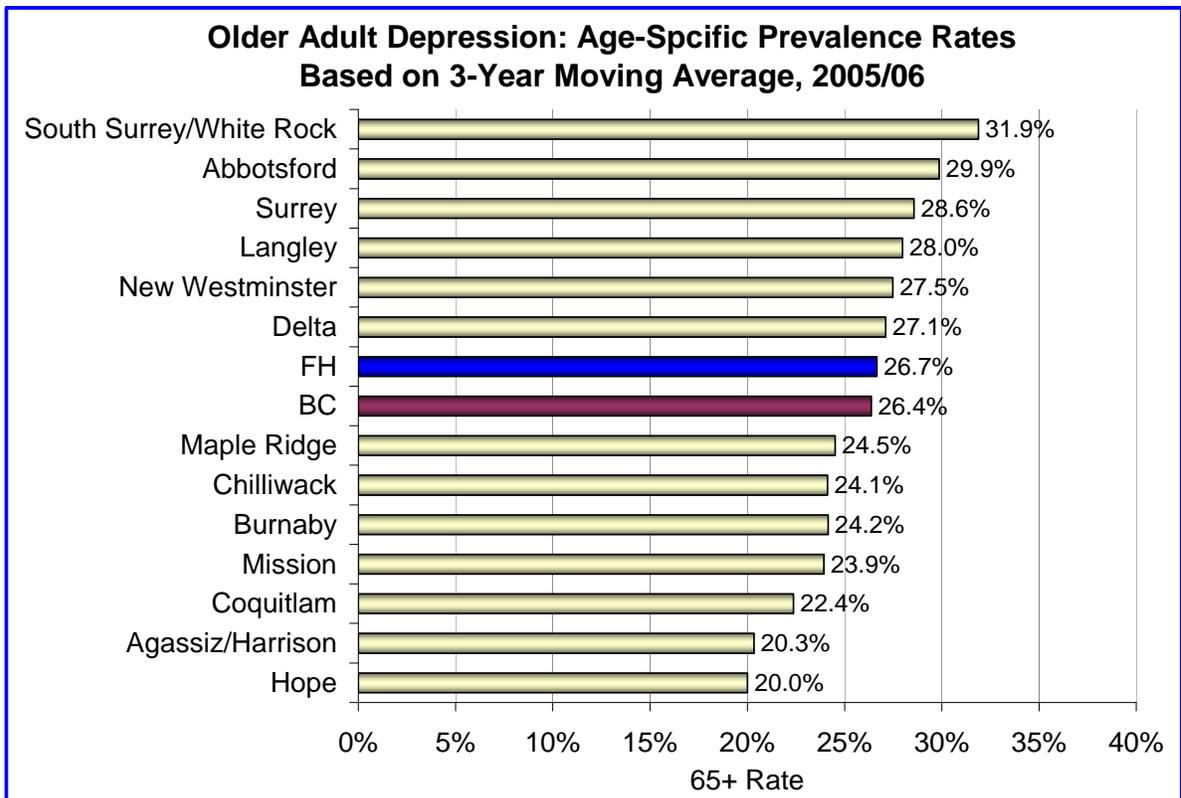
⁹⁹ Powell, S. (2004). Meeting the mental health needs of seniors. *Stride Magazine's Senior Care Canada, 1st Quarter 2004*. Retrieved July 9, 2008, from http://seniorcarecanada.com/articles/2004/q1/mental_health/

^{rr} O'Brien, S. *How to spot depression in adults 50-plus: These keys can help you spot depression in older adults*. Retrieved August 8, 2008, from http://seniorliving.about.com/od/seniordepression/a/senior_depress.htm

^{ss} McReynolds, J. L., & Rossen, E. K. (2004). Importance of physical activity, nutrition, and social support for optimal aging. *Clinical Nurse Specialist, 18*(4), 200-206.



Source: Ministry of Health, PHC Depression Registry as of November 2007.



Source: Ministry of Health, PHC Depression Registry as of November 2007.

e) Pain or Discomfort that Prevents Activities

Definition

Based on responses to the cyclical Canadian Community Health Survey (CCHS), this indicator presents the proportion of senior respondents (ages 65-years and older) who reported that pain or discomfort prevents them from doing a few, some or all activities.

In 2007, 21% - 32% of Fraser Health seniors reported pain/discomfort that prevented their activities

Highlights

Compared to BC (23.1%), in 2007 Fraser East (31.7%) had a larger proportion of older adults reporting that pain or discomfort prevents activities, and the difference was statistically significant.

Results for Fraser North (24.3%) and Fraser South (20.5%) should be interpreted with caution because statistical analyses revealed large coefficients of variation between 16.6% and 33.3%.

What Does This Mean?

Pain is subjective and each person experiences pain differently. Even mild pain or discomfort can be bothersome, especially if it is chronic, long-term pain. Although pain becomes more common as people age, pain is not caused by aging per se. Rather, diseases and injuries that cause pain are simply more common in seniors.^{tt}

Typical pain problems for older adults include back, leg, arthritic or cancer pain, pain following a stroke, and pain

associated with other conditions like fibromyalgia, osteoporosis, or stomach ulcers.^{tt}

Among older adults, chronic pain tends to negatively affect self-rated health and overall happiness.^{uu} When older adults are prevented from doing their regular activities because of pain, this can set off a cascade of detrimental effects for their health and wellbeing. Effects of pain can include low energy, poor physical functioning (e.g., sitting, walking, housecleaning, home maintenance, etc.), poor sleep, loss of independence, less socializing, and a reduced sense of well-being.^{tt}

Effective pain management can help older adults to remain independent. Managing pain can involve medication to relieve symptoms, physiotherapy, occupational therapy, massage-therapy and/or psychological therapy for coping strategies.^{tt}

Limitations

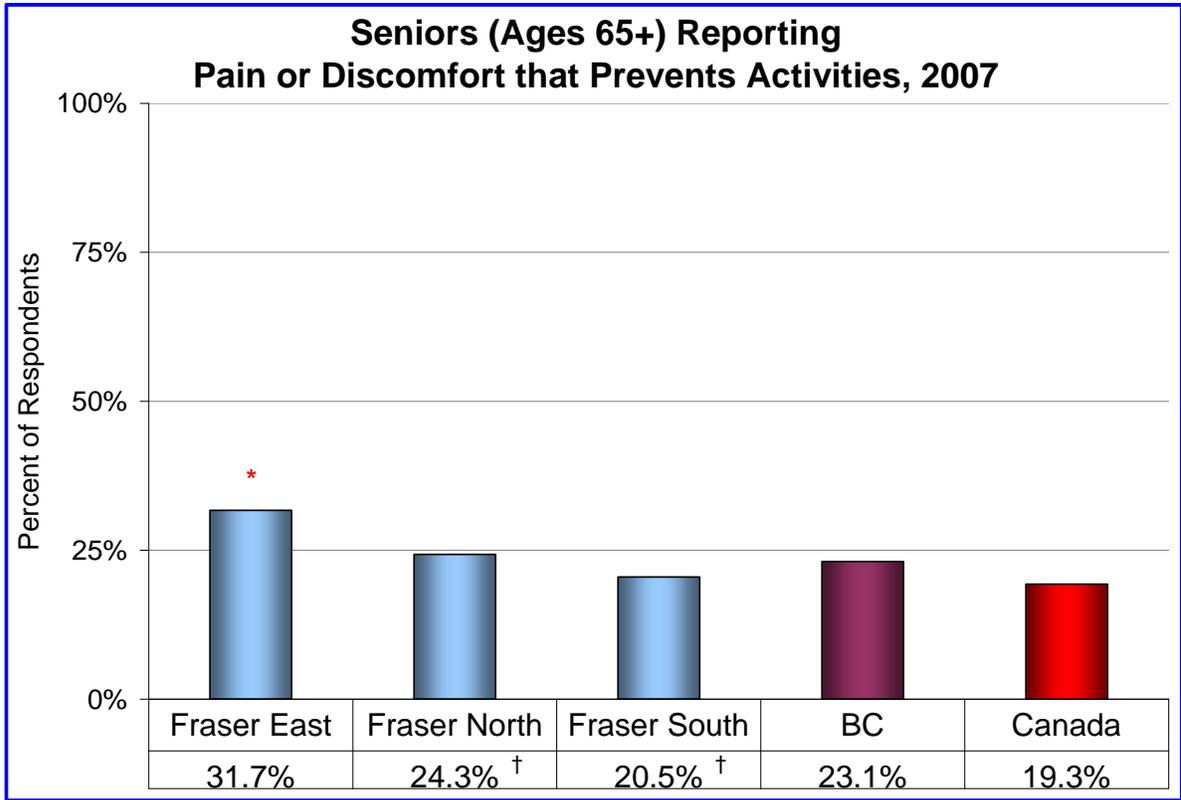
Seniors who wish to be more active will likely report more limitations from pain than those who do not wish to be active.

CCHS data are reported only at the HSDA or BC level, so generalizing across FH is problematic with likely variation between communities.

The CCHS survey excludes full-time employees of the Canadian Armed Forces, people living on Indian Reserves or on Crown Lands, and residents of institutions.

^{tt} Hadjistavropoulos, T., & Green, S. *Chronic pain among seniors*. Retrieved August 13, 2008, from <http://www.cpa.ca/publications/yourhealthpsychologyworksheetsheets/chronicpainamongseniors/>

^{uu} Ramage-Morin, P. L. (2008). Chronic pain in Canadian seniors. *Health Reports*, 19(1), 1-17. Retrieved from <http://www.globalaging.org/health/world/2008/pain.pdf>



Notes: * A red asterisk indicates that the difference from the BC rate is statistically significant.

† Interpret with caution since coefficients of variation range from 16.6% to 33.3%.

Source: Statistics Canada, Canadian Community Health Survey, 2007 (CCHS cycle 4.1).