



Profile of Aboriginal People

in the Fraser Health
Region 2010



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EXECUTIVE SUMMARY

This document provides an overview of the health determinants and health status of the Fraser Health Aboriginal population. It is both a description of the status quo and a stimulus for action.

The 2007 Provincial Health Officer's Annual Report: "*Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia*", described improvements in both health determinants and health outcomes for Aboriginal people across BC. This report explores the status of the Fraser Health Aboriginal people (19 per cent of the entire Aboriginal population in BC). There has been improvement, and more is required; Aboriginal people still lag behind other British Columbians and are at a disadvantage in areas that shape health and well-being including education, income, employment, smoking and other high-risk behaviours.

The second purpose of this profile is to assist in planning. The Tripartite First Nations Health Plan stipulates that each health authority is responsible for developing Aboriginal Health Plans that are consistent with the priorities of the Tripartite Plan and incorporate actions on issues unique to each region. Data and information provided in this profile will aid the Fraser Health Aboriginal communities in planning relevant health services and monitoring changes in health status.

Report highlights:

Population Demographics:

- In 2006, some 38,105 residents self-identified as Aboriginal, representing approximately three per cent of the total Fraser Health population.
- First Nations people account for 56 per cent of the Fraser Health Aboriginal population and Métis 40 per cent.
- 12 per cent or 4,590 reside on reserves while 88 per cent or 33,515 live off reserve.
- The Aboriginal population is much younger and has higher birth rates than the non-Aboriginal population.

Health Determinants:

- A smaller proportion of Aboriginal people (52 per cent) own their homes than the general population (70 per cent).
- 43 per cent of Aboriginal people live in dwellings that need minor or major repair compared with 29 per cent of other residents.
- Only about one-half of Aboriginal students who enrol in grade 8 go on to graduate with a high school diploma within six years compared to about 80 per cent of all students. In New Westminster and Burnaby school districts, only about one-third of Aboriginal students achieve a high school diploma in this time span.
- 12 per cent of the Aboriginal population aged 25 to 64 has some university education compared with 29 per cent of other residents.
- Halq'eméylem is now a provincially approved second language option for Fraser Valley students in grades 5 through 12.
- 22 per cent of on-reserve Aboriginal people aged 15-years and older were unemployed in 2006, this is more than four-times higher than the non-Aboriginal

- population (5.3 per cent).
- Aboriginal people earn less on average than other people.
- 23 per cent of Aboriginal people were in the low-income bracket, compared with 13 per cent of other residents.
- 52 per cent of Aboriginal lone-parent families had income at or below low-income cut-offs.

Maternal and Child Health:

- Status First Nations people have higher birth rates than other residents.
- The likelihood of a preterm birth (birth occurring prior to 37 weeks gestation) is higher among Status Indians (12 per cent) than among other residents (7 per cent).
- Although infant death is rare, rates are likely to be higher among Status Indians than among other residents.
- Status Indian children younger than 14-years of age experience dental surgery rates that are 3- to 4-times higher than rates for non-Status Indian children.
- The Early Development Instrument shows higher levels of vulnerability among Aboriginal kindergarten children in the following domains: a) physical health well-being b) social competence, c) emotional maturity, d) language and cognitive development, and e) communication and general knowledge.
- As of January 2009, nearly one-half (47 per cent) of Fraser Health children in care were Aboriginal despite Aboriginal people representing less than 3 per cent of the total population. Further, nearly 10 per cent of all Aboriginal children were in government care.
- Although trend data show teen pregnancy is in decline, the rate of teen pregnancy among Status teens is three times higher than among all other teens.

Disease and Injuries:

- Although life expectancy of Status Indians continues to increase, on average, a Status First Nations person is expected to live approximately 5 years less than a person born in the same period who is not Status Indian.
- In Fraser Health, the Status Indian population has higher overall death rates than other residents. Mortality trends show decreasing rates for everyone in Fraser Health including, Status Indians.
- Approximately 8 out of every 10 Status Indian deaths are premature (deaths before age 75) while only 4 out of 10 non-Status deaths are premature.
- Injury and suicide account for a much higher proportion of total deaths (27 per cent) in Status Indians than in other residents (6 per cent). Two specific injury-related causes – motor vehicle collisions and accidental poisonings – result in much higher mortality rates in Status Indians than in other residents.
- Suicide rates among Status Indian youth are approximately four to five times higher than among non-Status Indian youth.
- Prevalence of diabetes among Status Indians (6.9 per cent in 2006/07) continues to increase steadily, and remains higher than among other residents.
- Approximately 56 per cent of Aboriginal people are overweight or obese, the largest proportion among major ethnic groups in Canada. For example, only 15 per cent of Canadians of Chinese ethnic origin and 37 per cent of South Asians are overweight.
- Death rates from alcohol-related causes are nearly 4-times higher in Status Indians compared to other residents.
- Drug-induced mortality rates are 3- to 4- times higher in Status Indians although the gap between Status Indians and other residents has decreased considerably in the last decade.

Health Services:

- Compared to other health authorities, Fraser Health's Aboriginal population has the highest rates of mammogram and cervical cancer screening (83 per cent).
- Status Indians have lower rates of Medical Services Plan utilization in Fraser Health and across the province, including physician, laboratory and other diagnostic services.
- Status Indians are more likely to be hospitalized than non-Status Indians are.
- A Status Indian person is less likely to receive follow-up for mental health condition(s) within 30-days of discharge from hospital compared with a non-Status person.

As shown by the data in both this and the 2007 PHO's report, Aboriginal people's health and well-being continues to improve despite persistent gaps in social, economic and political environments. The Tripartite First Nations Health Plan and Fraser Health's commitment to partner with local service providers and communities increase Aboriginal people's role in the governance, management and delivery of health services and will further expedite this improving trend.

Based on this data and consultation with Aboriginal service providers and community leaders, the following key focus areas have been identified for action:

- ◆ Injury prevention – both unintentional causes such as motor vehicle collisions and intentional causes such as suicide;
- ◆ Obesity and related complications;
- ◆ Children in government care;
- ◆ Education;
- ◆ Substance use/Fetal Alcohol Spectrum Disorder (FASD);
- ◆ Teen pregnancy;
- ◆ Data collection and information needs.

MESSAGE FROM THE MEDICAL HEALTH OFFICER

Fraser Health's 2010 Aboriginal Health Profile is complete and ready for distribution to our partners and communities. It contains eight chapters, with information and discussions on population demographics, determinants of health, maternal and child health, diseases and injuries, and health service use. This is the first update on the health status of Fraser's Aboriginal people since the last Profile was released in 2002.

At first glance the data contained in the Profile may be discouraging; the gap between the health status of Aboriginal people and other residents of British Columbia is well known and much has already been said and written about it. This most recent data shows that the gap is still there, particularly with respect to poverty and its consequences, children and mothers at risk, chronic disease and injuries. But the raw data does not tell the whole story and there is also much to celebrate, both in the Profile and in the work that is being done by individuals, communities, the Health Authorities and by the Tripartite First Nations Health Management Team.

Fraser Health's 2002 Aboriginal Health Profile was based on data collected in 2000, and the current Profile is based on data collected in 2006. Between 2000 and 2006 the gap between the health status of Aboriginal people and other BC residents has narrowed in several important ways. Overall mortality of Aboriginal people has decreased since 2000 and the life expectancy of men has increased. Deaths due to injuries, motor vehicle crashes and poisonings in particular are less common. Infant mortality, the death of children under a year of age, has decreased. Unemployment rates among Aboriginal people are down. Another four years have passed since the data presented in this current Profile were collected and work on narrowing the gap has continued on many fronts.

In 2005 the Province of BC, the Government of Canada and the First Nations Leadership Council signed the Transformative Change Accord, which identified actions to close the gaps in health, education, housing and economic opportunities between First Nations people and other BC residents. The Tripartite First Nations Health Plan followed, with 29 specific action items to improve the health of BC's First Nations people. The implementation of these action items is ongoing and Fraser Health is an active partner in the process in our region. In 2007 the Fraser Health Aboriginal Health Plan was brought into being, soon followed by the formation of Aboriginal Health Improvement Committees in each of Fraser's three regions. The AHICs allow service providers and community leaders to deliver information and recommendations to Fraser's Aboriginal Health team. Other initiatives include making nurse practitioners available to Aboriginal communities, a new program to train Aboriginal students as licensed practical nurses and Fraser's Infant Mortality Review Committee. In the fall of 2009, First Nations Inuit Health, Fraser Health and the communities themselves participated in a remarkable collaboration to quickly and efficiently deliver H1N1 vaccine and antivirals to Aboriginal organizations and communities across Fraser.

Aboriginal communities in the Fraser region have countless programs and initiatives in place to improve the health and well-being of their community members and neighbors. Programs are provided by community health centers, including Stó:lō Nation Health Services and Seabird Island Health Services, as well as off-reserve Aboriginal centers, including Mission Friendship Centre and Kla'how'eya Aboriginal Centre. The Seabird Mobile Diabetes Team

provides diabetes screening, education and referrals to 17 communities across southern BC. The Stehiyáq Healing and Wellness Village opened its doors in May 2010 and provides healing and wellness services to Aboriginal youth whose lives are disrupted by substance abuse, trauma, grief, disconnection from culture, mental health concerns, or who have a connection to the youth justice system. The Chehalis Indian Band's new Snowoyelh facilities, including The Telalum Cottage (Family Safe House), The Snowoyelh House and Telmexw Awtexw (Medicine House) deliver health and wellness programs traditionally and effectively. These are just three of many community-led initiatives in the Fraser region.

This most recent Aboriginal Health Profile shows that there is still a gap between the health status of Aboriginal people and other Fraser residents – but it is reduced. As long as the gap exists we must continue our efforts to close it. It can be done – and the substantial progress since the last Profile was released in 2002 is testimony to the work done by individuals, communities and service providers. In partnership with all stakeholders the work will continue until Fraser's Aboriginal people enjoy the same health, well-being and quality of life as other residents.

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FOREWORD

CHAQUAWET - CHIEF WILLIE CHARLIE

I am honoured to provide an introduction to Fraser Health's 2010 Profile of Aboriginal People in the Fraser Region.

In Sts'ailes, the community I represent, we believe in the importance of a community of strong, healthy people from birth to the spirit world. We believe every area of well-being is connected and has an effect on one another. For example, with a healthy body we nourish stronger minds, develop our emotional health, and enhance our spirituality. We carry this holistic belief into practice by providing services that help our people develop these key areas of well-being.

We provide exercise facilities and other opportunities for our people to look after themselves physically. We emphasize the importance of proper hygiene and a healthy diet. We provide counselling and other services for individuals, families and groups. Spiritual cleansing practices and traditional herbal medicines also contribute to our people's well-being. We have a program building designed to honour the concept of the traditional longhouse. This building is used for spiritual healing sessions and talking circles. Directly adjacent to this building is a sweat lodge.

We at Sts'ailes believe that our spiritual practices are the foundation of overall well-being. In times of struggle it is this foundation that gives us the strength to work through our problems and stay healthy. We teach our young people the value of having a strong cultural foundation. We give credit to our Elders and ancestors for carrying on our sacred songs and ceremonies which give us a strong foundation for our holistic approach to health. Along with this spiritual foundation we've been very fortunate to have valuable health professionals working in our community to provide services from prenatal care to specialized services for our Elders.

The information in this profile is integral for planning these services because it helps us to understand where the need is greatest. I am also encouraged by the inclusion of cultural information in this report, such as the teaching of our traditional language, Halq'eméylem, in schools, because it shows that the importance of culture for developing Aboriginal people is being more understood and valued.

I firmly believe that cultural and contemporary ideologies of balanced health must work hand-in-hand to enhance and enrich the lives of all communities. This is fundamental to our approach to health in Sts'ailes.

Chaquawet
Chief Willie Charlie
Sts'ailes

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Chapter 1

INTRODUCTION

In a recent United Nations report¹ on the state of Indigenous people across the globe, the Secretariat of the United Nations Permanent Forum on Indigenous Issues states:

“The situation of indigenous peoples in many parts of the world continues to be critical: indigenous peoples face systematic discrimination and exclusion from political and economic powers; they continue to be over-represented among the poorest...indigenous peoples are dispossessed of their ancestral lands and deprived of their resources for survival, both physical and cultural...” (page 1).

This report further notes that in Canada the plight of Aboriginal people continues to be reinforced by the restrictions put on their ability to protect, meaningfully benefit from and freely dispose of their land and resources. Against a background of colonization longstanding cultural marginalization, the result has been economic stagnation, dependency on the welfare system, endemic poverty, poor educational attainment and deteriorating housing stock.

Increasingly, governments are recognizing the economic, social and political disparities Aboriginal people face, and are taking steps to reduce them. In Canada, key federal and provincial accomplishments include land claim settlements, the 2004 Federal Aboriginal Health Blueprint, the federal government’s apology for the residential schools experience and the Transformative Change Accord and resulting Tripartite First Nations Health Plan.

Transformative Change Accord: A New Vision for Aboriginal Well-being

In November 2005, the First Nations Leadership Council (FNLC), the Province of British Columbia and the Government of Canada signed an historic and important agreement called the Transformative Change Accord designed to achieve three goals:

- Close the social and economic gap between First Nations people and other BC residents in the areas of education, health, housing and economic opportunities over the next ten years;
- Reconcile Aboriginal rights and title with those of the Crown; and
- Establish a new relationship based on mutual respect and recognition.

Approximately a year after the Accord was written and after consultations with Aboriginal communities, the FNLC and the Province of British Columbia developed a 10-year plan for health: “The Transformative Change Accord: First Nations Health Plan”. The plan lays out 29 actions items aimed at reducing the health gap between First Nations people and other British Columbians organized around four themes:

- Governance, relationships and accountability;
- Health promotion/disease and injury prevention;
- Health services; and
- Performance tracking.

With the backing of the federal government and further consultations with Aboriginal communities, a new ten-year Tripartite First Nations Health Plan was signed by FNLC, and the Governments of Canada and BC making the Government of Canada an equal partner in the planning and implementation of a new structure for the governance of First Nations’ health services in BC.

Tripartite First Nations Health Plan

The plan is a roadmap for the federal, provincial and First Nations partners to explore, develop, test and implement new priorities, structures and processes over time to improve the health and well-being of First Nations people. It also supports the development of local health plans across the province and recognizes the fundamental importance of community solutions and approaches. A key deliverable of the Tripartite First Nations Health Plan was the establishment of a BC First Nations Health Council (FNHC), composed of representatives of the First Nations political organizations.

The Council and the province are jointly accountable for the outcomes of the Health Plan with progress being tracked using seven performance indicators:

- Life expectancy at birth;
- Mortality rates (deaths due to all causes);
- Status Indian youth suicide rates;
- Infant mortality rates;
- Diabetes rates;
- Childhood obesity; and
- Practising, certified First Nations health care professionals.

Why is a New Approach Needed?

A new approach to improving the health and well-being of Aboriginal people is necessary for two reasons:

1. Persistently poor outcomes in health, social, economic and political indicators among Aboriginal people as compared with the non-Aboriginal population; and
2. Current delivery models of health services do not meet the needs of Aboriginal people.

Aboriginal people have considerably lower levels of health and socio-economic status compared with the non-Aboriginal population. Publications such as the Royal Commission on Aboriginal Peoples and the BC Provincial Health Officer's Annual Reports have documented large gaps in almost all meaningful indicators. Status Indians have lower life expectancy, higher infant mortality rates, overall higher rates of mortality and premature mortality (when a person dies before the age of 75). A significant proportion of this excess morbidity and mortality is due to preventable causes such as motor vehicle collisions, falls, poisonings and suicide³. Status Indians also suffer from higher rates of obesity, type 2 diabetes, HIV/AIDS, smoking and mental health³. Fewer Aboriginal children graduate from high school and fewer go on to colleges and universities which contribute to low income levels and higher unemployment³. Aboriginal youth and adults are over-represented in jails and prison populations and are more likely to commit a crime¹.

The current model of health service delivery is not meeting the needs of Aboriginal people for a variety of reasons which include:

- *Fragmented service delivery*
Health services for Aboriginal people have been delivered by both the federal and provincial governments with the responsibilities for legislation, policy, planning and control assumed by different departments and ministries. The federal government takes responsibility for some services to Status Indians living on reserve, and the provincial government provides the remainder of care using services and facilities designed for mainstream Canadians. This approach often leads to fragmented services marked by overlaps, inequities and gaps and it lacks coordination and accountability. Measurement of health outcomes and client satisfaction are lacking.

- *Barriers to health services*
Health services may not be fully utilized by Aboriginal people because they are unavailable or inaccessible or both. Some common obstacles that prevent Aboriginal people from accessing health care services include lack of appropriate care, geographic location, discrimination by health care providers, cultural barriers, and financial resources. The multi-jurisdictional nature of health services for Aboriginal people is a key deterrent and Aboriginal people living in smaller communities or in rural areas struggle with both availability and access. Aboriginal people have identified the lack of culturally-appropriate care provided by culturally-competent health care workers as an important barrier to accessing and utilizing services. A key strategy to address this challenge is through the development of an Aboriginal health work force.
- *Lack of Aboriginal representation & voice*
Historically, health care planning has been top-down and Aboriginal people have had no voice in decision making and little control over the design and delivery of health programs and services. This has been especially problematic for non-Status Indians or those not residing on reserves as provincial governments have in the past taken little or no special responsibility for Aboriginal Health.
- *Narrow view of health*
The Aboriginal view of health and health services differs from the Western model. It is a holistic concept of health and well-being, rooted in history, culture, respect for others and spirituality. Health institutions, services and practitioners providing care to Aboriginal people should be culturally competent, sensitive and responsive to Aboriginal people and their needs.
- *History of abuse and discrimination*
Many of the poor social, economic and health outcomes seen in Aboriginal people today are a direct result of key historical events. Aboriginal people have experienced devastating loss as a result of colonization, cultural deprivation and systematic discrimination. Their social units and systems of governance have become fragmented and individuals and communities have become economically dependent on the federal and provincial governments. The legacy of these events is the health inequities Aboriginal people experience today, and closing the gap requires addressing the underlying issues.

What Will the New Approach Do?

A new approach to the health and well-being of Aboriginal people is culturally appropriate and takes a holistic view of health and well-being. It is committed to actions. Above all it requires substantial and significant input of Aboriginal people and communities into policy, planning and implementation of programs and services.

A central commitment in the Tripartite First Nations Health Plan is to involve Aboriginal people in the governance and accountability of health services through four key structures:

- *First Nations Health Governing Body* will design a new governance structure to ensure effective participation of First Nations in all matters concerning their health and well-being;
- *First Nations Health Council* will serve as the advocacy voice on health-related matters and be responsible for the planning and implementation of the Tripartite First Nations Health Plan;
- *First Nations Health Advisory Committee* will monitor the Aboriginal Health Plans of

health authorities, monitor health outcomes and recommend actions on closing gaps in health status;

- *Association of Health Directors and Other Health Professionals* will create and implement a comprehensive capacity development plan for the management and delivery of community-based services.

This approach is built on the principles of respect, recognition, transparency, trust, and commitment to actions. It recognizes that health service planning and provision will reflect the interests and vision of First Nations and will be rooted in their holistic view of health and well-being incorporating cultural knowledge and traditions.

Fraser Health's Role

Fraser Health continues to enhance its capacity to provide culturally appropriate services to Aboriginal people in Fraser Health through the Fraser Health Aboriginal Program and through partnerships and community enhancement projects.

The 2007-2010 Fraser Health Aboriginal Health Plan has three strategic priorities: (1) Improving health outcomes for Aboriginal people; (2) Improving access to culturally-appropriate services; and (3) Strengthening relationships and community capacity-building. A key component of Fraser Health's relationship-strengthening and community capacity-building with Aboriginal communities are Aboriginal Health Improvement Committees (AHICs), ten of which are held each year in various First Nations communities and Aboriginal organizations. They facilitate networking and communication among representatives from Fraser Health, Aboriginal communities and service organizations; and provide communities an opportunity to communicate their health concerns to Fraser Health. The Director of Aboriginal Health brings these concerns to Fraser Health Executive through the Aboriginal Health Operations Committee (AHOC), whose membership includes senior leaders in acute and community care. The AHOC provides direction and support to the Aboriginal Health Director; collaborates in planning and monitoring progress toward the goals of the Aboriginal Health Plan; and incorporates the perspective of Aboriginal voices from the AHICs to inform the planning, development and evaluation of Fraser Health services and programs that address the health needs of Aboriginal people.

Health services are provided to Aboriginal people in a number of culturally appropriate ways. Nurse Practitioners provide safe, accessible, and holistic primary health care to Aboriginal people in several on-reserve and urban Aboriginal settings. Aboriginal Health Liaisons and Aboriginal Mental Health Liaisons provide health system navigation to Aboriginal patients in hospital and community. Three on-reserve Integrated Health Clinics provide weekly maternal/child, dental, chronic disease management, and youth health services to First Nations clients.

A variety of educational sessions and awareness raising activities are provided for Aboriginal communities based on their identified needs, including such topics as chronic disease self-management, fall and injury prevention, healthy living, maternal & child health, and youth health. Fraser Health also works to build community capacity through activities such as promoting careers in health care to Aboriginal youth, assisting communities in developing pandemic plans, and developing tripartite partnerships. Additionally, Fraser Health funds direct service contracts with a number of community organizations. Building capacity within Fraser Health is also a key activity, and includes incorporating information about Aboriginal people into Fraser Health programs, and providing cultural competency training for Fraser Health staff.

Purpose of this Profile

This document provides an overview of the health determinants and health status of the Fraser Health Aboriginal population. It is both a description of the status quo and a stimulus for action.

The 2007 Provincial Health Officer's Annual Report: "*Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia*", indicated that both health determinants and health outcomes of Aboriginal people are improving across BC. The status of the Fraser Health Aboriginal people (19 per cent of the total BC Aboriginal population), is explored in this report. While there has been improvement, Aboriginal people lag behind other BC residents and do poorly in areas that shape health and well-being including education, income, employment, smoking and other high-risk behaviours.

The second purpose of this profile is to assist in planning. The Tripartite First Nations Health Plan stipulates that each health authority is responsible for developing Aboriginal Health Plans that are both consistent with the priorities of the Tripartite Plan and that incorporate actions on issues unique to each region. The data and information provided in this profile will aid the Fraser Health Aboriginal communities in planning relevant health services and monitoring changes in health status.

Although a cultural and holistic approach is necessary to improve the health and well-being of Aboriginal people, the indicators presented in this profile arise mainly from a bio-medical model of health. A more culturally relevant set of indicators, reflecting the Aboriginal view of health, should be developed at both the community and Fraser Health levels. The Fraser Health Aboriginal Health Program is supportive of developing Aboriginal-specific indicators based on the four action areas of the Tripartite First Nations Health Plan.

These four themes represent a deeply holistic view of health that differs from the 'cause-and-effect' bio-medical model. The First Nations Medicine Wheel encompasses the mental, emotional, physical and spiritual aspects of life (mind, heart, body and spirit) that continuously influence and support one another. Achieving good health requires maintaining a strong self-identify and finding balance between all four aspects. Aboriginal people believe the health of the individual is dependent on the health of the family, the community and the land, and health determinants therefore include self-governance, self-sufficiency and cultural restoration and renewal.

What this Profile Covers

- demographic data on all Aboriginal people in Fraser Health;
- overview of the non-medical determinants of health for all Aboriginal people: a broad set of factors that describe living and working environments, personal resources, and other factors that can impact an individual's health and well-being;
- a description of maternal and child health indicators for Status Indians only;
- a description of current health status and critical health problems facing Status Indians;
- identification of priority areas for action; and
- questions and factors to be considered in the development of strategies to reduce the gap in health status between Aboriginal and non-Aboriginal Fraser Health residents.

Chapter 2

DATA SOURCES & METHODS

A range of demographic, social, economic and health indicators have been used to construct this profile. These were compiled using data from a variety of published sources which include the Canadian Census, the BC Vital Statistics Agency and the Canadian Community Health Survey.

The scope of the profile includes key information to inform policy, programs and interventions designed to improve wellness. These include demographic indicators, labour force status, education and training, income, housing, and health status. For each category, the aim is to identify and describe the main characteristics of the population and to highlight outstanding features in the data. Assessment of change is only possible where reliable time series data are available.

In spite of the large array of data presented in this report, significant gaps remain. In particular, health status data is available for Status Indians only. In general, only information available at the Fraser Health level is included.

The findings are presented in five chapters. The first two provide an overview of the demographic, social and economic conditions of the Fraser Health Aboriginal people. The following three chapters report on health status and health service use of Fraser Health Status Indians.

DATA SOURCES

Health Status Data

Health data (including births, deaths, hospitalizations and MSP billings) are available for Status (or registered) Indians only. These data are captured through a linkage of the Indian Register, the Status Verification File and the BC Vital Statistics Agency. Status Indians are registered with Indian and Northern Affairs Canada and are assigned a band number, a personal membership number and a special designation on their health care cards. These unique identifiers are used by the various health databases to retrieve Status-Indian specific data.

The BC Vital Statistics Agency registers births with a Status Indian identifier based on parents' information while death registrations include band numbers for Status Indians. In many cases, the information on Aboriginal status in the Vital Statistics database is incomplete, so the Status Verification File which includes the entire Status Indian population in Canada has been used to verify the records. Métis and all other non-Status Indians are not included in the Status Verification File, and hence most health data cannot be retrieved for these Aboriginal people.

Demographic data

The Canadian Census is the primary source of demographic data (including population, social and economic indicators). These data are based on self-proclaimed Aboriginal identity and include all persons identifying with at least one Aboriginal group: North American Indians, Métis, and Inuit.

Aboriginal people are known to experience higher levels of under-coverage in the Census than other Canadians. There are several reasons for this including the exclusion of people from the Census who are homeless or living in rooming houses, and the decision of some Aboriginal people to not identify themselves as Aboriginal or to not complete the Census

form altogether. The demographic data may also include a number of Aboriginal people of mixed ancestry or those who may not strongly identify with the more traditional Aboriginal community. For all of these reasons, data from the Census must be interpreted with caution.

Lifestyle or Behavioural data

Limited data based on Statistics Canada's Canadian Community Health Survey (CCHS) are reported in this profile. Small sample sizes for the Aboriginal population minimize meaningful data extractions at the health authority level, and as a result, records were combined from Cycle 2.1 (2003) and the first six months of Cycle 3.1 (Jan-June 2005) of the CCHS. The question pertaining to Aboriginal identity was revised for the second half (July-December) of Cycle 3.1

INFORMATION GAPS

There are large gaps in the health determinants and health status information available for Fraser Health's Aboriginal people. The largest gaps are in data concerning non-Status Aboriginal people, including the Métis, Inuit and non-Status First Nations.

Currently, there is very little specific health information available for the Métis and Inuit people. Existing data come primarily from surveys which are done at the provincial or national level. Data on Status Indians is more complete but there are significant issues with the quality of that data that complicate interpretation and generalization. The most obvious data gaps and issues can be summarized as follows:

- Data availability and quality
 - fragmented
 - lack of appropriate ethnic identification
 - limited data, based on 'special' runs only
 - no health data for non-Status First Nations
 - data quality is affected by jurisdictional issues
- Data relevance
 - community-specific indicators not collected, reported
 - currently collected data is driven by accountability requirements
 - emphasis is on national-level accountability, not Aboriginal needs
- Ownership, mistrust and engagement
 - mistrust of externally imposed processes
 - lack of Aboriginal representation in decision-making
 - data often collected by non-Aboriginal agencies, lack of ownership by Aboriginal people
- Coordination and dissemination
 - there is a lack of infrastructure at all levels
 - tension exists between agencies which collect data and Aboriginal-owned processes
 - data often not available to Aboriginal people
 - human resources and financial commitments are inadequate in this area

While these deficiencies remain it will be difficult to comprehensively and accurately assess and address the health inequities experienced by Fraser Health's Aboriginal residents. The Tripartite Data Sharing Agreement is a new initiative intended to improve the quality of First Nations data, facilitate data sharing and ensure that federally and provincially held information on First Nations people is properly used and shared. Co-sponsored by the First

Nations Health Council, the government of BC and the federal government, the aim of the Agreement is to improve health service delivery to First Nations people and to build capacity and self-determination around the collection, use and dissemination of First Nations data.

ABORIGINAL PEOPLE

The term Aboriginal includes all Indigenous people of Canada. The Canadian Constitution recognizes three groups of Aboriginal people - First Nations or Indians (both Status and non-Status), Métis and Inuit. These are three distinct peoples, each with unique histories, languages, cultural practices and spiritual beliefs.

- **Métis** - a person of mixed ancestry whose history dates back to the days of the fur trade when Aboriginal people, particularly the Cree, married people of French, French-Canadian, Scottish or other European descent. They blended the elements of their heritage to create a distinct culture and identity, and sought a land base first in Manitoba, then in Saskatchewan, on which to build their own society. They have been recognized as an Aboriginal people under the Canadian Constitution, but do not benefit from a special status with the federal government.
- **Inuit** - the Inuit are people of Aboriginal descent in Northern Canada who generally reside in the Northwest Territories and Nunavut, although some live in Northern Quebec and Labrador. They are officially recognized as Aboriginal people in the Constitution. "Inuit" has replaced the term "Eskimo".
- **Status Indian or Registered Indian** - this is a person who is defined as an Indian under the Indian Act and assigned a number which is registered by the Department of Indian Affairs at birth. They are usually a member of a First Nation or Band. Persons who previously lost their status as Indians can now re-apply to be registered by way of Bill-C31. Status Indians can be either Treaty Indians or Non-Treaty Indians.
- **Non-Status Indian** - a person of Indian (First Nations) ancestry who is not registered with the Department of Indian Affairs. There are various reasons why persons of Indian ancestry may not be registered as Status Indians. For example, they may be persons or descendants of persons who lost their rights to be registered through disenfranchisement or through marriage to non-Indians before 1985, or those who have chosen not to be registered.
- **First Nations** - an Indian Band or an Indian community structured as a band but not recognized as such by the federal government. It is the term Aboriginal groups and Native political organizations frequently use to describe themselves. It means the first peoples of Canada.

Chapter 3

POPULATION DEMOGRAPHICS

This section presents demographic characteristics of Aboriginal people residing in Fraser Health. Characteristics such as age and sex are important for understanding the health and well-being of a population given that age is often the single most important predictor of health status and health service utilization. Understanding the demographic features of a community can provide insights into reasons for health and disease differences. Further, the current population distribution and projections for the future can assist in anticipating future demand for health services.

Aboriginal Population Characteristics

Description of population counts and their geographic distribution, age and sex composition, growth rates, and population breakdown by on-and-off reserve living status.

WHY IS IT IMPORTANT?

Population characteristics such as age, sex, growth and distribution can impact various aspects of health such as fertility, mortality, prevalence of activity limitation, chronic conditions and the use of health care services. For example, areas with higher proportions of older individuals will likely experience higher rates of chronic disease and the subsequent need for health services related to chronic disease and other elderly care. On the other hand, areas with younger populations will require a blend of services geared towards children and maternal health.

Age is also one of the best predictors of health service utilization. Normally, the young and the elderly are major consumers of health care resources. Communities that have a large population over the age of 85 can expect to have higher utilization of the most costly services - acute care, mental health, and institutional care. Areas with growth in the number of the younger elderly (65 to 74 years) can expect an increased demand for home support services.

HOW ARE WE DOING?

Overview

According to the 2006 Census, 2.7 per cent of the total Fraser Health population (or 38,105 total) identified themselves as Aboriginal. The Aboriginal population of BC was 196,070 or approximately 5 per cent of the total provincial population (TABLE 1).

TABLE 1. Summary Population Indicators, by Health Authority, 2006

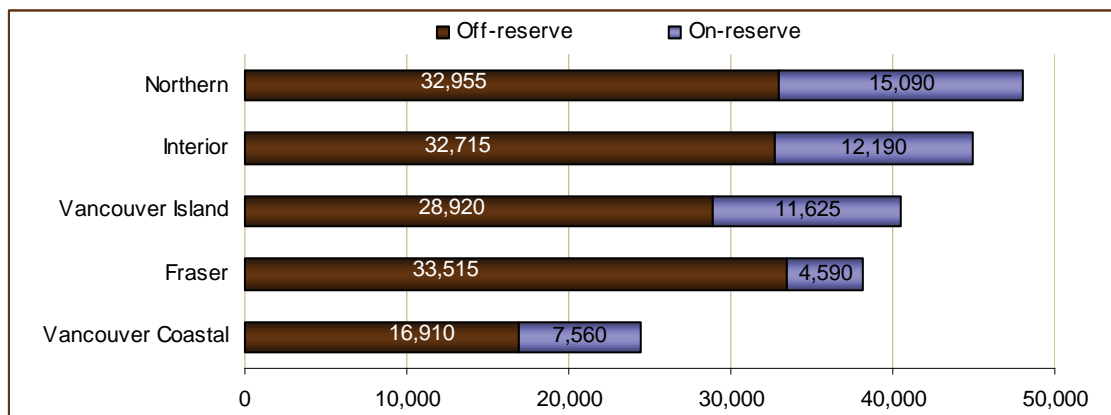
Indicator, 2006	Fraser	Interior	Van Coastal	Van Island	Northern	BC
Total pop'n, Aboriginal and non-Aboriginal	1,416,640	669,380	1,016,710	697,145	274,510	4,074,385
Total pop'n proportions	34.8%	16.4%	25.0%	17.1%	6.7%	100%
Aboriginal identity	38,105	44,900	24,470	40,550	48,050	196,070
Aboriginal identity as proportion of total pop'n	2.7%	6.7%	2.4%	5.8%	17.5%	4.8%
On-reserve Aboriginal identity	4,590	12,190	7,560	11,625	15,090	51,055
On-reserve as proportion of total Aboriginal	12.0%	27.1%	30.9%	28.7%	31.4%	26.0%
Off-reserve Aboriginal identity	33,515	32,715	16,910	28,920	32,955	145,015
Off-reserve as proportion of total Aboriginal	88.0%	72.9%	69.1%	71.3%	68.6%	74.0%

Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

Compared with the other health authorities, Fraser Health was home to 19.4 per cent of the total provincial Aboriginal population. As a proportion of the total population, Fraser Health had the second lowest percentage of Aboriginal people in the province, behind Northern Health (17.5 per cent), Interior Health (6.7 per cent) and Vancouver Island Health (5.8 per

cent). Fraser Health also had the lowest percentage (12.0 per cent or 4,590 total) of Aboriginal people living on reserves (FIGURE 1).

FIGURE 1. On and Off Reserve Population Counts, by Health Authority, 2006

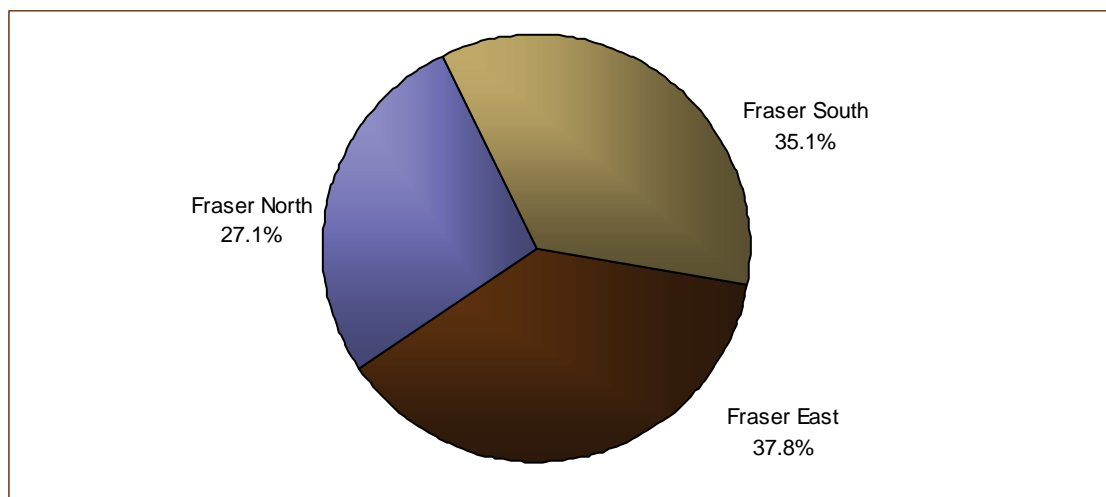


Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

Geographic Distribution within Fraser Health

Based on the 2006 census data, approximately 37.8 per cent of Fraser Health's total Aboriginal population reside in Fraser East, followed closely by Fraser South (35.1 per cent) (FIGURE 2). The remaining 27.1 per cent of Aboriginal people live in Fraser North.

FIGURE 2. Proportion of Aboriginal Population by HSDA, Fraser Health, 2006



Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

These proportions translate into a total 14,400 Aboriginal people in Fraser East, 13,375 in Fraser South and 10,325 in Fraser North. As a percentage of the total population, the Aboriginal population in Fraser East accounted for 5.7 per cent of the total, 2.1 per cent of Fraser South and 1.9 per cent of Fraser North (TABLE 2).

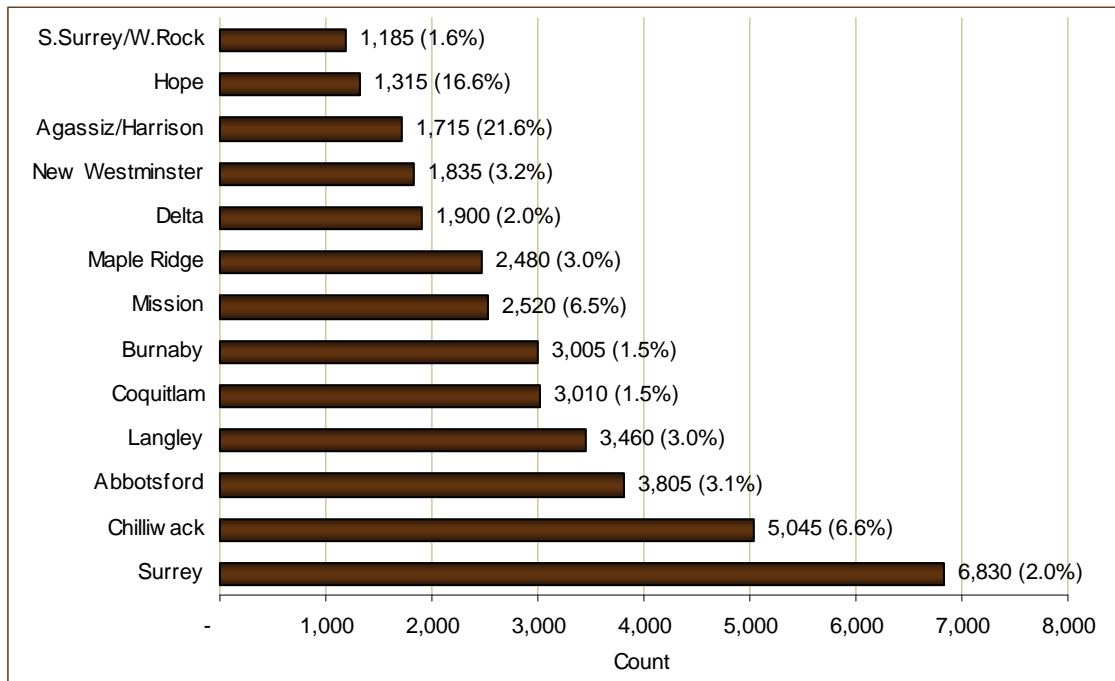
TABLE 2. Population Indicators, Fraser Health HSDAs, 2006

Indicator, 2006	Fraser East	Fraser North	Fraser South	Fraser Health	BC
Total pop'n, Aboriginal and non-Aboriginal	253,640	538,480	624,515	1,416,640	4,074,385
Total pop'n proportions, 2006	17.9%	38.0%	44.1%	34.8%	100%
Aboriginal identity	14,400	10,325	13,375	38,105	196,070
Aboriginal identity as proportion of total pop'n	5.7%	1.9%	2.1%	2.7%	4.8%

Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

As seen in FIGURE 3, the Surrey LHA had the highest number of Aboriginal people in Fraser Health (6,830), followed by Chilliwack (5,045) and Abbotsford (3,805). However, looking at the Aboriginal population as a proportion of the total population, the Agassiz/Harrison LHA had the highest percentage (21.6 per cent), followed by Hope (16.6 per cent) and Chilliwack (6.6 per cent).

FIGURE 3. Aboriginal Population Count and Aboriginal People as Percentage of Total Population, by Fraser Health LHAs, 2006

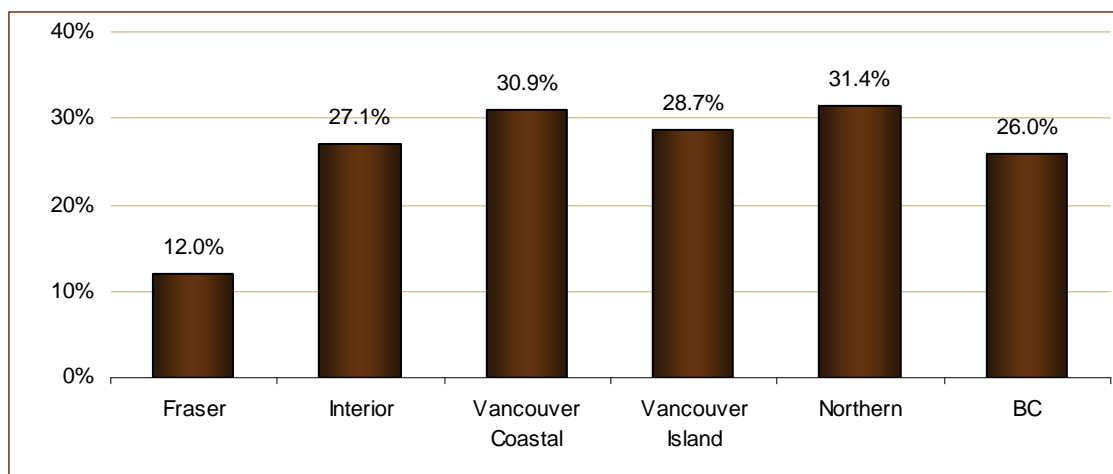


Source: 2006 Census, Statistics Canada.

Urban, Rural and On-Reserve Distribution

Most (74.0 per cent) of the provincial Aboriginal population live off reserve. As seen in FIGURE 4, Fraser Health had the lowest proportion of Aboriginal people living on-reserve among the five health authorities (12.0 per cent or 4,590 total) while Northern Health had the highest proportion living on reserve (31.4 per cent).

FIGURE 4. Proportion of Aboriginal Population Residing On Reserve, 2006



Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

Within Fraser Health, Aboriginal people in Fraser East are more likely to be living on a reserve and in a rural setting, than those Aboriginal people in Fraser North and Fraser South. For example, of the 12 per cent (or 4,590 total) Aboriginal population residing on reserve in Fraser Health, most (85 per cent or 3,880 total) were in Fraser East. In addition, a much higher percentage of Fraser East residents (33.9 per cent) reside in rural areas compared with Fraser North (3.5 per cent) and Fraser South (8.3 per cent). In Fraser Health, 83.3 per cent of the Aboriginal population live in urban settings.

TABLE 3. Aboriginal Population, On-Reserve and Rural Distribution, Fraser Health HSDAs, 2006

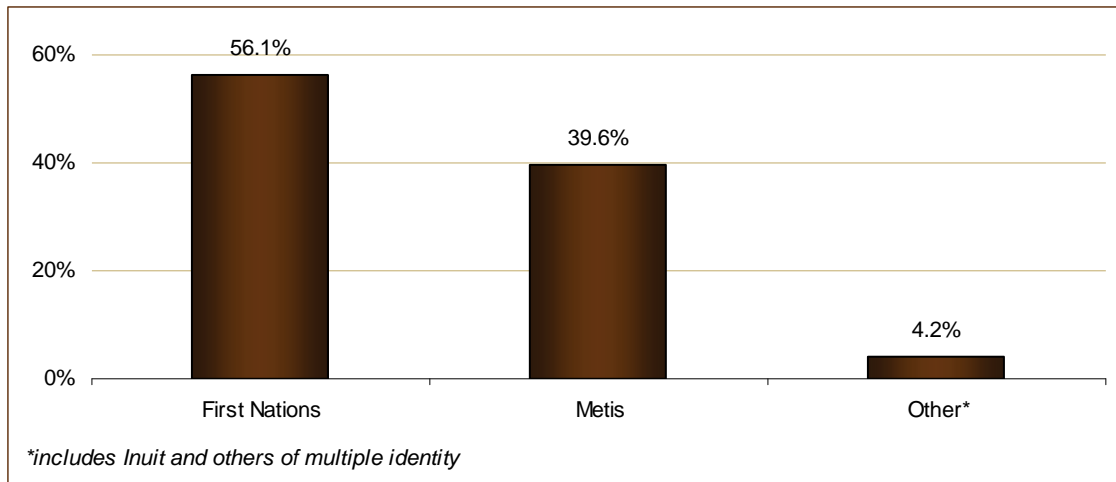
Indicator, 2006	Fraser East	Fraser North	Fraser South	Fraser Health	BC
Aboriginal identity	14,400	10,325	13,375	38,105	196,070
On-reserve Aboriginal identity	3,880	250	455	4,590	51,055
On-reserve as proportion of total Aboriginal	26.9%	2.4%	3.4%	12.0%	26.0%
Off-reserve Aboriginal identity	10,520	10,070	12,920	33,515	145,015
Off-reserve as proportion of total Aboriginal	73.1%	97.5%	96.6%	88.0%	74.0%
% Rural	33.9%	3.5%	8.3%	16.7%	34.6%

Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

Aboriginal Groups

Of the 38,105 Aboriginal people residing in Fraser Health, 56.1 per cent (or 21,390) fall under the North American Indian or First Nations classification, 39.6 per cent as Métis and 1 per cent as Inuit (FIGURE 5).

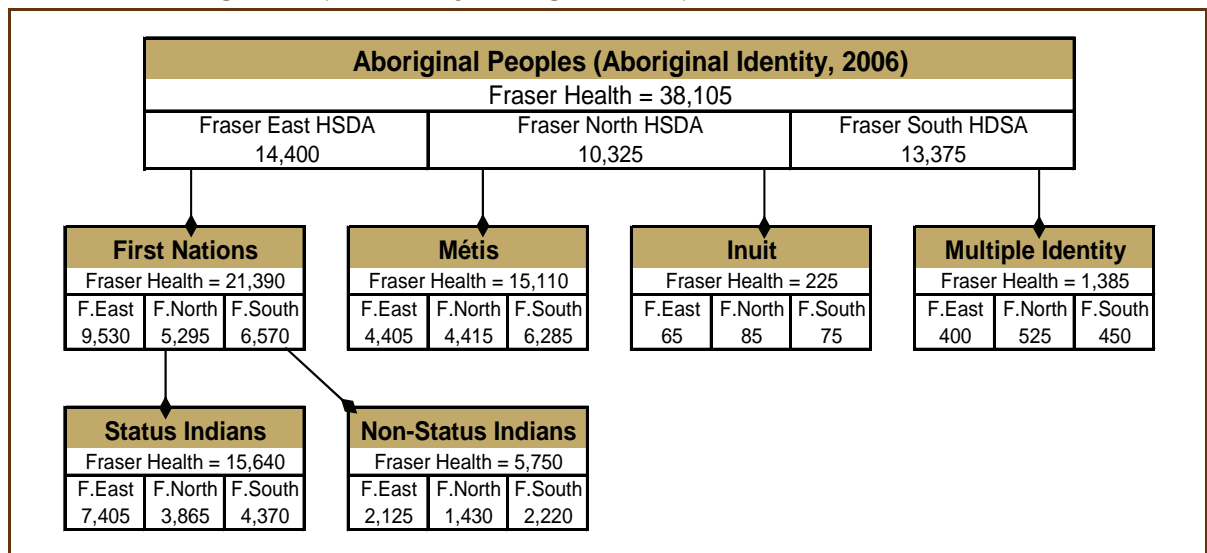
FIGURE 5. Proportion of Aboriginal Population by Aboriginal Group, Fraser Health, 2006



Source: Provincial Health Officer's Annual Report 2007. Victoria, BC.

The larger North American Indian category includes Status, non-Status, treaty and non-treaty Aboriginal people. While the treaty and non-treaty population breakdowns are not known at this time, close to three-quarters (73.1 per cent or 15,640 total) of First Nations people were Status (or registered) and the remaining (26.9 per cent or 5,750 total) were non-Status.

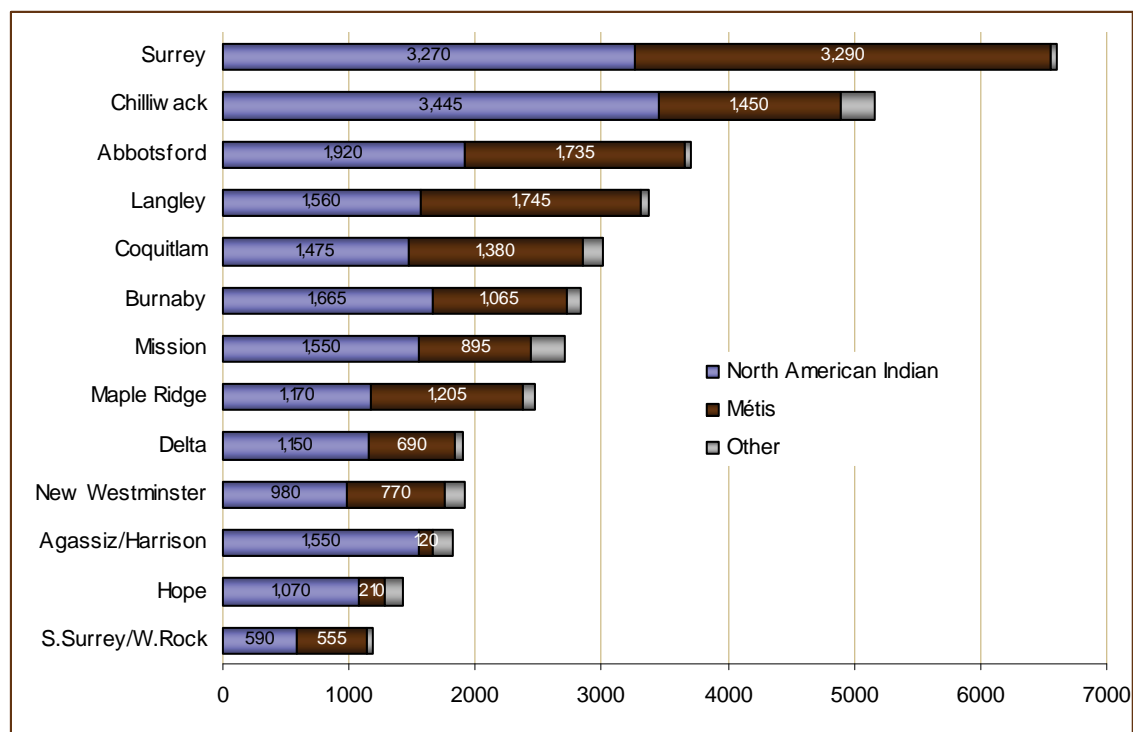
FIGURE 6. Aboriginal Population by Aboriginal Groups, Fraser Health, 2006



Source: 2006 Census, Statistics Canada.

As seen in FIGURE 7, Chilliwack LHA had the highest count of North American Indians, followed closely by Surrey, which also had the highest number of Métis people, followed by Langley and Abbotsford.

FIGURE 7. Aboriginal Population Counts by Aboriginal Groups, Fraser Health LHAs, 2006



Source: 2006 Census, Statistics Canada.

Growth Trends and Age Distribution

TABLE 4 summarizes the age specific Aboriginal population counts for Fraser Health and BC. As of 2006, there were a total of 6,655 children younger than ten in FH and 765 adults aged 70 and older. Fraser East was home to 43.7 per cent of Fraser Health's children age 0-9, while 34.6 per cent resided in Fraser South and 21.8 per cent in Fraser North. The 70+ age group represented 2 per cent of the total population.

TABLE 4. Aboriginal Population by Fraser Health HSDAs, by Age Groups, 2006

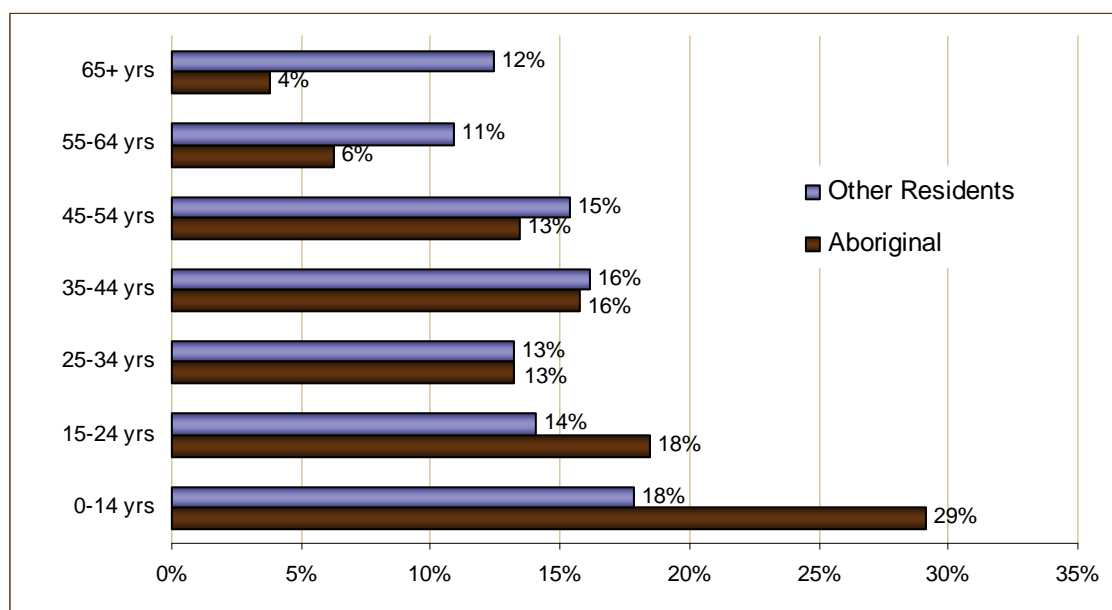
Age group	Fraser East	Fraser North	Fraser South	Fraser Health	BC
0-9	2,910	1,450	2,300	6,655	34,200
10-19	3,280	2,245	3,095	8,610	40,995
20-29	2,025	1,640	1,780	5,460	27,630
30-39	1,830	1,650	1,845	5,310	26,800
40-49	2,235	1,710	2,095	6,030	30,465
50-59	1,200	995	1,355	3,540	19,910
60-69	640	450	625	1,710	10,280
70+	295	185	285	765	5,800
All ages	14,405	10,325	13,375	38,105	196,075

Source: 2006 Census, Statistics Canada.

Currently, the Fraser Health Aboriginal population is much younger than the overall population (see FIGURE 8). While population proportional differences occur in all age

groups, the differences are most significant in the younger than 25 and older than 55 years age groups. The Aboriginal population has a much larger segment of children (0-14 years) and young adults (15 to 24 years) and a much smaller segment of older adults (Figure 8). For example, people under the age of 25 constitute 47.5 per cent of the Aboriginal population compared with 31.9 per cent for the non-Aboriginal population. Further, only 3.8 per cent of the Aboriginal population are in the 65+ age group compared with 12.5 per cent for the non-Aboriginal people.

FIGURE 8. Proportion of Population by Age Category, Fraser Health, 2006



Source: 2006 Census, Statistics Canada and PEOPLE 34 Projections, BC Stats.

TABLE 5. Population Counts and Growth Rate, Fraser Health HSDAs, Census Years

Population group	Count			Growth Rate	
	1996	2001	2006	1996-01	2001-06
Total Population:					
Fraser Health	1,261,176	1,400,712	1,485,375	11.1%	6.0%
Fraser East	230,885	248,795	266,521	7.8%	7.1%
Fraser North	488,663	545,389	564,555	11.6%	3.5%
Fraser South	541,628	606,528	654,299	12.0%	7.9%
BC	3,874,317	4,076,264	4,243,580	5.2%	4.1%
Status Indian:					
Fraser Health	19,907	23,388	26,133	17.5%	11.7%
Fraser East	8,556	9,788	11,095	14.4%	13.4%
Fraser North	5,766	6,759	7,147	17.2%	5.7%
Fraser South	5,585	6,841	7,891	22.5%	15.3%
BC	137,361	153,422	167,782	11.7%	9.4%
Aboriginal Identity:					
Fraser Health	---	32,945	38,105	---	15.7%

Source: 2006 Census, Statistics Canada; PEOPLE 34 Projections, BC Stats; and Provincial Health Officer's Annual Report 2007. Victoria, BC.

The Aboriginal population is increasing much more rapidly than the total population due to higher birth rates and an increase in the number of Aboriginal people self-identifying into one of the three Aboriginal groups. As seen in TABLE 5, the Status Indian population in Fraser Health increased by 11.7 per cent for the 2001 to 2006 period, approximately double the rate seen in the total Fraser Health population (6.0 per cent).

Within Fraser Health, Fraser South and Fraser East had higher rates of Status Indian population growth than Fraser North for the 2001 to 2006 period.

Fraser Health First Nations

Band is an administrative term used by the Canadian federal government referring to groups of Aboriginal people associated with reserve land who are governed by an elected chief and council in accordance with the Indian Act. Many bands today prefer the term First Nations. Bands or First Nations who are culturally or linguistically similar are often affiliated with a tribal council. Tribal councils are made up of the elected and/or hereditary chiefs of the member bands or First Nations.

TABLE 6. Aboriginal First Nations or Communities in Fraser Health

First Nation or Community	City or Area	Registered Band Membership	# of Reserves	Size of Reserves (hectares)
Aitchelitz Band	Chilliwack	40	3	554.6
Boothroyd Band	Boston Bar	261	19	1078.8
Boston Bar First Nation	Boston Bar	234	12	556.1
Chawathil First Nation	Hope	505	4	610.7
Cheam First Nation	Rosedale	460	3	473.2
Chehalis Indian Band	Agassiz	999	3	916
Katzie First Nation	Pitt Meadows, Fort Langley	484	5	340.7
Kwantlen First Nation	Fort Langley	193	6	556.3
Kwaw-kwaw-Apilt First Nation	Chilliwack	42	3	595.9
Kwikwetlem First Nation	Coquitlam	63	2	208.5
Leq' a: mel First Nation	Deroche	339	10	480.4
Matsqui First Nation	Matsqui	231	3	419.4
Peter's Band	Hope	121	3	197
Popkum First Nation	Chilliwack	8	2	149.7
Scowlitz Indian Band	Agassiz	235	3	236.7
Seabird Island Indian Band	Agassiz	779	1	2140.8
Semiahmoo First Nation	Surrey	82	1	129.1
Shxw'há:y Village	Chilliwack	319	1	255
Shxw'ow'hamel First Nation	Hope	158	3	389.7
Skawahlook First Nation	Agassiz	73	2	74.9
Skowkale First Nation	Sardis	228	2	68.4
Skwah First Nation	Chilliwack	473	7	885.2
Soowahlie Indian Band	Cultus Lake	349	2	523.1
Spuzzum First Nation	Yale	207	16	638.6
Squiala First Nation	Chilliwack	128	2	596.1
Sumas First Nation	Abbotsford	272	1	234.6
Tsawwassen First Nation	Delta	358	1	272.6
Tzeachten First Nation	Chilliwack	383	2	348.6
Union Bar First Nation	Hope	118	7	499.7
Yakweawioose	Sardis	63	2	84.2
Yale First Nation	Hope	151	16	217

Source: Registered Indian Population by Sex and Residence December 2007, Indian and Northern Affairs Canada

TABLE 6 summarizes the majority of Aboriginal First Nations or communities located in Fraser Health along with their band membership and the number and size of respective reserves. BC is home to approximately 200 bands or First Nations.

WHERE CAN WE IMPROVE?

Incorporate the characteristics of the Aboriginal population in future program and service planning given that the synopsis of the Fraser Health Aboriginal population differs substantially from the rest of the Fraser Health population. For example, the Aboriginal population:

- is much younger than the non-Aboriginal population;
- is composed of only 4 per cent of individuals above age 65 years (compared with 12 per cent for non-Aboriginal people);
- has higher fertility rates;
- has a large proportion of its residents living in Fraser East (37.8 per cent) compared with the non-Aboriginal people (17.9 per cent); and
- is growing at a much higher rate than the non-Aboriginal population.

LIMITATIONS

Although the data presented here have been aggregated to produce meaningful comparisons, these data may not allow meaningful assumptions about the various population characteristics at the smaller community level.

A growth rate of zero does not mean there are no changes in the population between the two measurement points, only that the net difference between births, deaths and migration is zero.

Population projections should be used cautiously. It can be problematic to use projections to look at specific age groups, small geographic areas, or to look too far into the future.

Population data used to delineate urban areas are obtained from the previous census. If significant population growth or decline has occurred since the previous census, the designation of an area as urban or rural may no longer reflect its current population or population density. As a result, it may no longer conform to the urban area delineation rules.

Dependency Ratio

The combined number of children and seniors as a percentage of the 'working' age population.

WHY IS IT IMPORTANT?

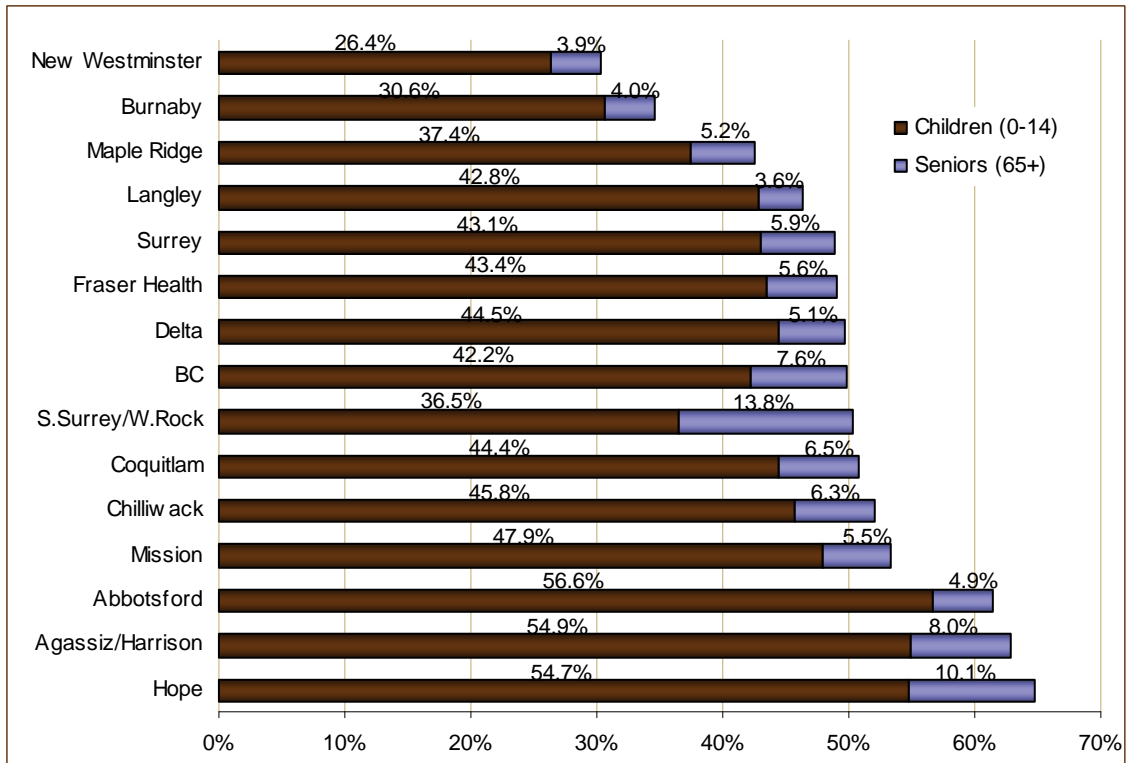
The dependency ratio reflects the size of those typically not in the labour force to those typically in the work force and is seen by economists as a measure of economic success for a geographic area. People age 65 and over and those under the age of 15 are more likely to be socially and/or economically dependent on the working age group. As the dependency ratio increases, there is often increased cost to the working age group for providing support to the children, for maintenance of pensions and social security services of the elderly, and for increased need of health care services. Thus areas with high dependency ratios tend to be economically challenged. It is anticipated that the retirement of baby boomers will result in an increased dependency ratio given that there will be a smaller number of people who are financially supporting this population cohort.

HOW ARE WE DOING?

Fraser Health's dependency ratio of 0.44 (or 43.6 per cent) for the total population means that there are approximately 44 dependents for every 100 working age people. The Fraser Health Aboriginal population dependency ratio of 0.49 (or 49.0 per cent) is mostly comprised of children and a relatively small proportion of seniors. The higher dependency ratios among the Aboriginal population seen in most areas of Fraser Health suggest an increased economic dependency on the working age group.

A rapidly growing population with a high fertility rate means that a relatively large proportion of the population consists of children, and this is the case for the Aboriginal people in Fraser Health as shown in FIGURE 9. The children's dependency ratio varies from a low of 26.4 per cent in New Westminster LHA to a high of 54.7 per cent in Hope LHA suggesting that there are approximately 6 children under the age of 15 for every ten individuals in the 15 to 65 age group.

FIGURE 9. Dependency Ratios, Children and Seniors, Aboriginal Population, Fraser Health LHAs, 2006



Source: 2006 Census, Statistics Canada and BC Stats, Ministry of Labour and Citizens' Services, P.E.O.P.L.E. 34 projections.

WHERE CAN WE IMPROVE?

Explore opportunities and best practices in this area.

LIMITATIONS

The dependency ratios do not consider the unemployed or those on social assistance who are also economically dependent.

Family Characteristics

The proportion of families in private households constituting lone-parent families and seniors (age 65 and older).

WHY IS IT IMPORTANT?

The well-being of neighbourhoods and communities is reflected by the social, economic, and political contexts of the families that make up these neighbourhoods and communities. Family structure is also an important characteristic of neighbourhoods. For example, lone-parent families are more likely to have lower incomes than families with both parents present, and therefore are more likely to have a lower standard of living and poorer health status. Single parents also have challenges trying to balance life's requirements associated with work and family. Research suggests that children of single parents more likely to be associated with negative social, behavioral and emotional outcomes.

Single parent families as well as seniors living alone are more likely to be socially isolated and experience higher rates of economic disparity¹. Seniors living alone could be at higher risk of 'falling through the cracks' of the health care system than those who live with at least one other person.

HOW ARE WE DOING?

The proportion of census families represented by lone or single parents was much higher for both Fraser Health and BC Aboriginal people compared with the non-Aboriginal population (TABLE 7). Among Aboriginal people in Fraser Health, nearly one-third (31.7 per cent) of all census families were lone parent families, a proportion much higher than the non-Aboriginal population residing in Fraser Health (19.2 per cent). The proportion of lone parent families was even higher (40.0 per cent) on reserve. Within Fraser Health, Fraser East had the highest proportion of lone parent families (35.6 per cent) and Fraser North, the lowest (27.6 per cent).

TABLE 7. Lone Parent Families as a Per cent of Families With Children Under 19, 2006

Area	On Reserve (%)	Off Reserve (%)	Total, Aboriginal (%)	Non-Aboriginal (%)
Fraser Health	40.0	30.7	31.7	19.2
Fraser East	40.6	34.4	35.6	21.3
Fraser North	*	27.1	27.6	19.7
Fraser South	*	29.9	30.2	18.0
BC	39.7	31.0	33.0	21.4

* data suppressed due to small numbers and unreliable quality

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

As seen in TABLE 8, approximately one-quarter of both Aboriginal and non-Aboriginal seniors age 65 and older reside alone and a further 7.3 per cent reside with relatives. A slightly higher percentage of Aboriginal seniors reside with non-relatives compared with the non-Aboriginal seniors.

TABLE 8. Living Arrangements, Seniors (65+), Fraser Health HSDAs, 2006

Indicator	Fraser Health	Fraser East	Fraser North	Fraser South	BC
Aboriginal People:					
Total # of persons 65+	1,445	565	345	535	9,845
% Living with Relatives	7.3	7.1	5.8	8.4	8.6
% Living with non-Relatives	3.8	2.7	5.8	4.7	2.9
% Living Alone	24.9	25.7	26.1	23.4	26.8
Other Residents:					
Total # of persons 65+	170,395	34,920	61,110	74,365	556,290
% Living with Relatives	7.5	4.9	7.7	8.6	5.3
% Living with non-Relatives	1.5	1.6	1.5	1.4	1.8
% Living Alone	25.5	25.3	27.6	23.9	27.3

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

WHERE CAN WE IMPROVE?

Explore root causes of lone parenthood, such as teen pregnancy and socioeconomic disparity, and develop long-term, culturally-appropriate strategies.

LIMITATIONS

The Census excludes institutionalized residents. Not all seniors living alone will be in good mental and physical health or have good social support and interaction. The economic status of seniors who live alone is generally good. Most seniors prefer to remain independent unless constrained by their finances. Consequently, this type of indicator is difficult to interpret without other determinants of health such as information about income and social support.

Chapter 4

NON-MEDICAL DETERMINANTS OF HEALTH

Non-medical determinants of health are a broad set of factors that describe our living and working environments, personal resources, and other factors that can impact an individual's health and well-being. These factors are important in determining the health status of individuals and families. They also shape our behaviours and influence access to care and health outcomes.

It is critical to acknowledge that all sources of social indicator data have drawbacks in terms of providing a meaningful representation of the social and economic status of Aboriginal people in Fraser Health. With census data, for example, there are concerns about the cultural relevance of information obtained from an instrument principally designed to establish the general characteristics of the Canadian population.

For example, economic status is generally measured by indicators such as income and levels of ownership of assets. However, among many Aboriginal groups, its measurement may be quite different. For example, in some Aboriginal communities a person's status can be largely determined by access to ritual or religious knowledge rather than to material resources. Thus materialistic considerations may be of less importance among the Aboriginal population, where the emphasis may be on building community wealth and support systems among families and neighbours. In addition, Census data identify discrete dwellings as households, but the basic economic and social units of consumption in many Aboriginal communities are often comprised of linked households rather than single units.

This chapter provides an overview of Aboriginal people's social and economic environment through the exploration of the housing stock, educational achievement at elementary, high school and post-secondary levels, labour force characteristics, income levels and the prevalence of low income.

Community Engagement

A process of building ongoing collaborative relationships with communities and organizations to ensure that communities and their members have a say in health decision-making, with the long-term vision of improving community well-being.

WHY IS IT IMPORTANT?

Aboriginal community involvement in the planning and delivery of their health services is essential to ensure that health care is culturally safe, appropriate, and tailored to the needs of specific communities.

HOW ARE WE DOING?

Aboriginal Health Improvement Committees (AHICs) facilitate networking and communication between Aboriginal communities and organizations, and increase knowledge, social awareness and understanding of all Fraser Health programs and services. AHICs provide Fraser Health Aboriginal Health with guidance and recommendations for the implementation and evaluation of the Aboriginal Health Plan. The AHIC meetings are open to anyone who works with the Aboriginal population or provides a health-related program or service within the Fraser Region. Committee members are comprised of representatives from Aboriginal-focused community-based organizations, government agencies, tribal councils, inter-tribal health organizations, health care providers who work with Aboriginal people, and Fraser Health.

A number of initiatives have emerged from the AHICs, including a youth empowerment workshop for teen girls, the Fraser Canyon health committee, chronic disease self-management leader training opportunities, the Fraser Canyon Health Clinic, a memory health information day, two FASD workshops, Spiritual Healers gatherings, and various healthy living projects, including a fitness workshop at Sumas First Nation and tobacco reduction training at North Fraser Metis Association. Additionally, the AHICs provide opportunities for Fraser Health to seek Aboriginal input on a range of projects. For example, the Mental Health & Addictions team attended an AHIC meeting to obtain Aboriginal input on their homelessness initiative.

WHERE CAN WE IMPROVE?

Increase participation at AHIC meetings. Increase uptake of AHIC recommendations by Fraser Health executive.

LIMITATIONS

The concept of Community Engagement is difficult to quantify and capture in a measurable way. For the purposes of this report, a descriptive, qualitative approach has been taken. Qualitative data presents challenges in measuring progress against benchmarks or analyzing trends over time.

Housing Characteristics

Three indicators related to housing provide information that shows the proportion of residents exhibiting certain housing characteristics including a measure of those who moved, proportion of owners to renters, and the physical condition of dwellings.

WHY IS IT IMPORTANT?

Shelter is a basic requirement of individuals. However, housing constitutes not only a physical living place but also a space where cultural and family interactions and socialization occur. Accordingly, the physical condition of a dwelling as well its suitability for individuals and families can significantly impact one's health and well-being¹. According to the Canadian Mortgage and Housing Corporation, acceptable housing can be summarized as those not needing significant physical repairs, are not crowded and are affordable.

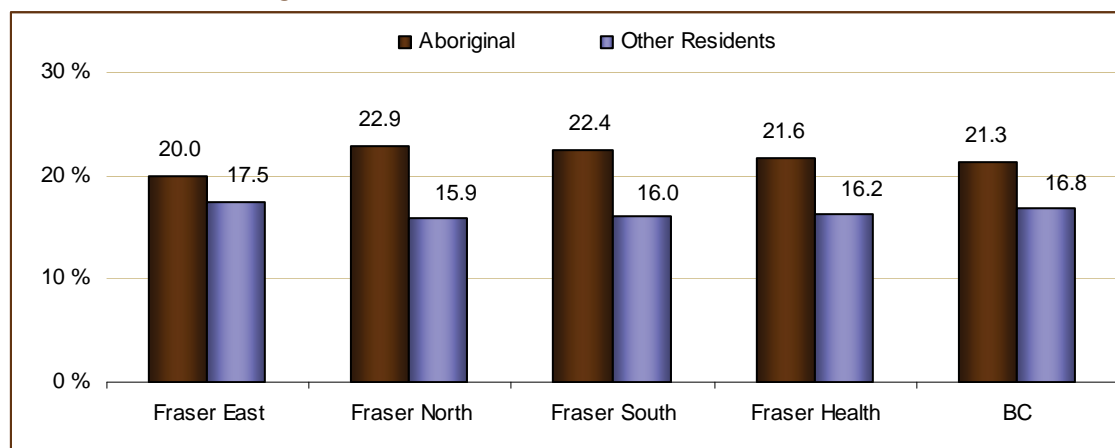
Inadequate housing is associated with a multitude of health problems. Mould, poor indoor air quality and overcrowding can lead to respiratory illnesses and infectious diseases such as tuberculosis and hepatitis A. Psychological effects such as depression and stress or tension between household members are associated with inadequate housing stock and crowding.

Barriers to affordable housing on-reserve include low income; construction costs for materials, labour, and utilities that are often higher due to remote locations; and land tenure and financing issues³. Due to provisions of the Indian Act, First Nations cannot own property on reserves, or seek mortgages for homes on reserve land, making it difficult to finance housing construction.

HOW ARE WE DOING?

Maintaining a stable residence is an important factor in building social connections with individuals, neighbourhoods and communities. Evidence suggests that families who frequently change addresses often have poor social outcomes at the family and community levels. Further, children who change schools frequently have lower math scores, more grade failures and higher levels of behavioural problems than those children who do not move.

FIGURE 10. Percentage of Persons Who Moved in the Past Year, Fraser Health HSDAs, 2006



Source: 2006 Census, Statistics Canada

In the 12 months prior to the census, a higher percentage of Aboriginal people (21.6 per cent) than other residents (16.2 per cent) moved to a new location in Fraser Health (FIGURE 10). Aboriginal people in all three HSDAs in Fraser Health had higher rates of mobility compared with the other residents.

The proportion of homeowners to renters is a major factor that contributes considerably to mobility. Given that home ownership provides security and stability, homeowners tend to move less frequently than renters.

Although dwelling tenure data for the Fraser Health Aboriginal population are currently unavailable, provincial data shows that compared with the total population, Aboriginal people have lower rates of dwelling ownership and higher rates of renters; nearly 70 per cent of the total BC population owned their homes compared with about 50 per cent of Aboriginal people.

Good housing is not only about stability and ownership, it also entails having the dwelling in quality physical condition. Dwellings in poor physical condition requiring major repairs can be a health and safety hazard which can lead to injuries, poor indoor air quality, sanitation issues, growth of mould and other harmful agents.

TABLE 9. Condition of Dwelling, Aboriginal and Other Residents, Fraser Health HSDAs, 2006

Indicator	Aboriginal People			Other Residents
	On Reserve**	Off Reserve	Total, Aboriginal	
% In good condition:				
Fraser Health	31.8	59.4	57.2	71.2
Fraser East	31.6	58.5	53.0	72.0
Fraser North	*	59.9	59.6	69.0
Fraser South	30.6	59.8	59.0	72.9
BC	31.2	54.3	50.0	68.7
% Needing minor repair:				
Fraser Health	32.8	30.0	30.2	22.8
Fraser East	30.8	31.8	31.5	22.3
Fraser North	*	28.0	28.2	23.8
Fraser South	47.2	30.2	30.7	22.0
BC	32.4	32.3	32.3	24.5
% Needing major repair:				
Fraser Health	35.1	10.6	12.6	6.1
Fraser East	38.5	9.8	15.5	5.7
Fraser North	*	12.1	12.2	7.3
Fraser South	22.2	9.9	10.3	5.1
BC	36.5	13.5	17.7	6.8

*data suppressed due to small numbers and unreliable quality

**this does not include band housing

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

Based on the 2006 Census, 57.2 per cent of Aboriginal people in Fraser Health described their dwelling as being 'in good condition', 30.2 per cent as 'needing minor repair' and 12.6 per cent as 'needing major repair' (TABLE 9). In comparison, 71.2 per cent of other residents described their dwelling as being 'in good condition', 22.8 per cent as 'needing minor repair' and 6.1 per cent as 'needing major repair'.

WHERE CAN WE IMPROVE?

Access to quality, affordable housing is essential for healthy individuals, families, neighbourhoods and communities. As the evidence indicates, Aboriginal people face major gaps in the areas of family and neighbourhood instability, low levels of home ownership and greater proportion of dwellings that are either unsuitable or require major repairs. Overcoming these housing inequities is complex given that the factors associated with housing are often structural and include Aboriginal people's higher unemployment, low wages and low income, low education levels, racism, colonization, residential schooling and the reserve system. For example, Indian Act provisions do not allow First Nations to own reserve land, prohibiting the acquisition of private financing for capital projects. In addition, individuals and families refrain from making any financial investments or significant upkeep and maintenance given that there are no financial incentives associated with band housing.

Daniel Brant, a member of the Tyendinaga Mohawk Territory who has extensive experience with housing policy, notes:

"The Indian Act is the primary prohibitive factor in the development of lands and successful housing programs on Indian lands. The legal concept of fixtures states that any built structure attached to land becomes part of the land and falls under... the Indian Act...Aboriginal people are seen as tenants on reserve land.....because housing is attached to the land there is no recognized economic value attached to the house."

Source: Aboriginal Housing in Canada: Building on Promising Practices. The International Housing Coalition (IHC). Case Study 3. 2006. Accessed on November 13, 2009:

http://www.intlhc.org/wuf/aboriginal_housing_canada.pdf

Based on issues raised by Aboriginal communities, organizations and First Nations, a recent policy paper from the BC Housing Policy Branch identified the following major challenges to closing the housing gap:

- lack of coordination between (and within) governments and among Aboriginal organizations;
- low incomes, lack of credit, and lack of programs to encourage home-ownership among Aboriginal people;
- administrative challenges to address and improve/modify service delivery associated with housing;
- lack of information on housing waitlists, client information and an unclear picture of the exact type and number of available units;
- costs and complexity of planning, lack of funding and affordable land; and
- the need for more culturally specific housing and services.

Source: Developing an Off-Reserve Aboriginal Housing Action Plan For British Columbia. A Discussion Paper to Support Community Engagement. Housing Policy Branch, Office of Housing and Construction Standards, Government of BC, January 2008.

Thus, addressing this complex issue is likely through engagement and partnerships among local, provincial and federal bodies. This may entail implementing housing authorities separate from Chief and Council, exploring options to create more home ownership opportunities for Aboriginal people, accessing private capital through innovative means, including alternate forms of land tenure, and the establishment of public/private partnerships.

A number of government initiatives have been implemented to help address housing issues for Aboriginal people. In 2007, the federal government announced it would create a \$300 million First Nations Market Housing Fund. The purpose of this fund is to support financing arrangements for housing on reserve and settlement lands where appropriate, while respecting the communal

ownership of reserve land. It will expand market-based housing on reserve by providing easier access to loans for homeownership and home renovation in First Nations communities.

In 2008, the First Nations Leadership Council, the province, and the federal government signed a First Nations Housing Memorandum of Understanding to develop a comprehensive approach to housing both on- and off-reserve that addresses issues along the full range of the housing continuum.

The Aboriginal Housing Initiative

Launched in 2007 and funded in part through a \$50.9 million grant from the Off-Reserve Aboriginal Housing Trust, the Aboriginal Housing Initiative will develop approximately 200 units of off-reserve Aboriginal housing for youth, women, elders, and those who are struggling with addiction.

This initiative will add 30 units of housing for those living in Fraser Health as follows:

- Spirit Bear Centre Society, Abbotsford – 10 units of housing
- Mission Native Housing / To'o Native Housing Society, Chilliwack – 20 housing units.

Aboriginal Housing Management Association

The Aboriginal Housing Management Association, a representative of 14 Aboriginal housing associations in B.C., is committed to the self-determination, management and delivery of affordable, quality housing to urban and rural Aboriginal people throughout the province.

The Association was created in the mid-1990s in anticipation of the transfer of federal social housing, including Aboriginal housing, from the federal to provincial governments. In 2004, the Province entered into an agreement with the Association to transfer administrative responsibility for 189 units of social housing, the first agreement of its kind in Canada and an important step toward aboriginal self management of social housing. With the federal-provincial devolution agreement, the Association has the opportunity to assume portfolio administration of a further 2,500 units.

Source: BC Housing (British Columbia Housing Management Commission e). Extracted November 12, 2009: http://www.bchousing.org/programs/Aboriginal_housing/AHI#overview.

Model: Seabird Island Sustainable Community Housing

This seven-unit dwelling pilot project developed and designed to capture the cultural and local environmental concerns of band members was a cooperative project between the Seabird First Nations, Canada Mortgage and Housing Corporation, and Indian and Northern Affairs Canada.

This project, built on the sustainable community housing principles, uses rainwater for toilets, three windmills for generating electricity and uses high quality and healthy materials to minimize future maintenance and protect the health of occupants from common irritants such as mould. These homes are also flexible enough to meet the changing needs of the occupants through its convertible, modular design.

Source: Aboriginal Housing in Canada: Building on Promising Practices. The International Housing Coalition (IHC). Case Study 3. 2006. Accessed on November 13, 2009.

LIMITATIONS

Data on condition of dwellings are not available for Band housing on Indian reserves.

Education

Education indicators summarized here include: grade to grade transition; Foundation Skills Assessment (FSA) scores for grades 4 and 7; high school completion rates; and the percentage of residents with university certificate, diploma or degree.

WHY IS IT IMPORTANT?

Along with income and employment, education is strongly associated with health and wellness. Educational attainment is an important determinant of socio-economic status and income. For example, education affects income and employment opportunities as higher education levels typically lead to higher paying jobs, more job options and greater employment. Lack of education and poverty are both associated with unhealthy lifestyles and poor well-being.

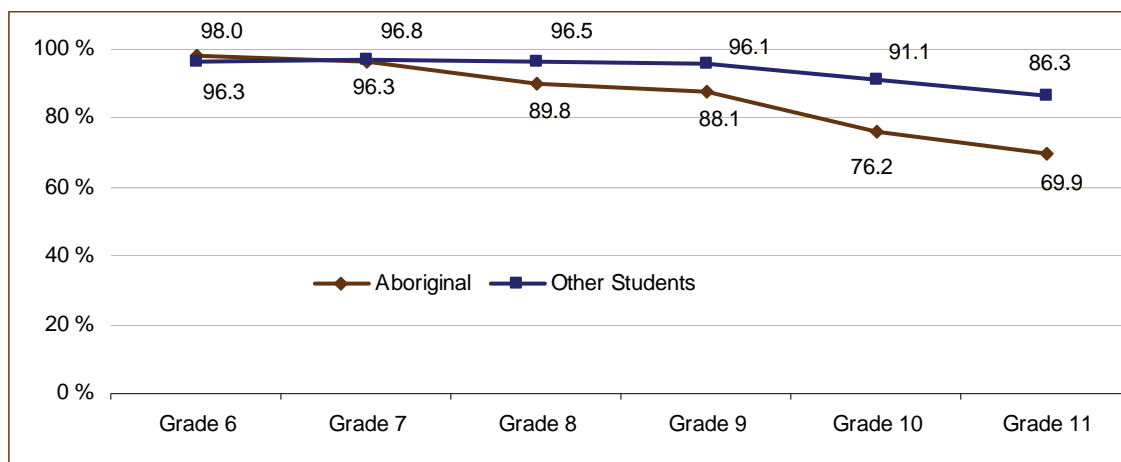
Low education levels can also increase the likelihood of functional illiteracy, making health prevention, healthcare access and self-management of chronic diseases problematic as illiteracy prevents people's ability to read health literature or instructions. Further, people lacking such skills are unable to take full advantage of today's changing work environment and may feel alienated from the broader society, and in turn, suffer physical and mental health problems⁴.

HOW ARE WE DOING?

Grade to Grade Transition

Evidence suggests that Aboriginal students are not as successful as non-Aboriginal students on most educational indicators including high school graduation, college and university completion and the progression of students from one grade to the next.

FIGURE 11. Percentage of Students* Making Successful Transition to a Higher Grade, Fraser Health, 2007/08

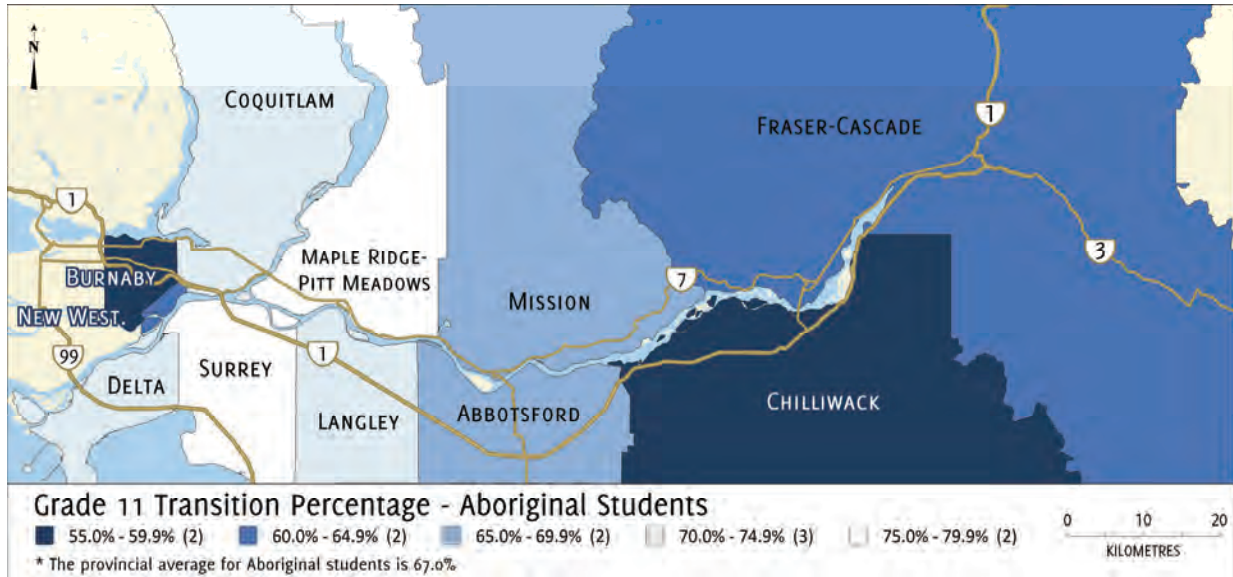


*public schools only.

Source: Analysis and Reporting Group, Ministry of Education.

As seen in FIGURE 11, the grade to grade transition gap between Aboriginal and other students in Fraser Health increases as students move to higher grades. Little difference exists in grades 6 and 7 but a larger proportion of Aboriginal students begin to drop out by grade 8 and this trend continuing to grade 11 where only 69.9 per cent of Aboriginal students in Fraser Health move to a higher grade compared with 86.3 per cent of non-Aboriginal students.

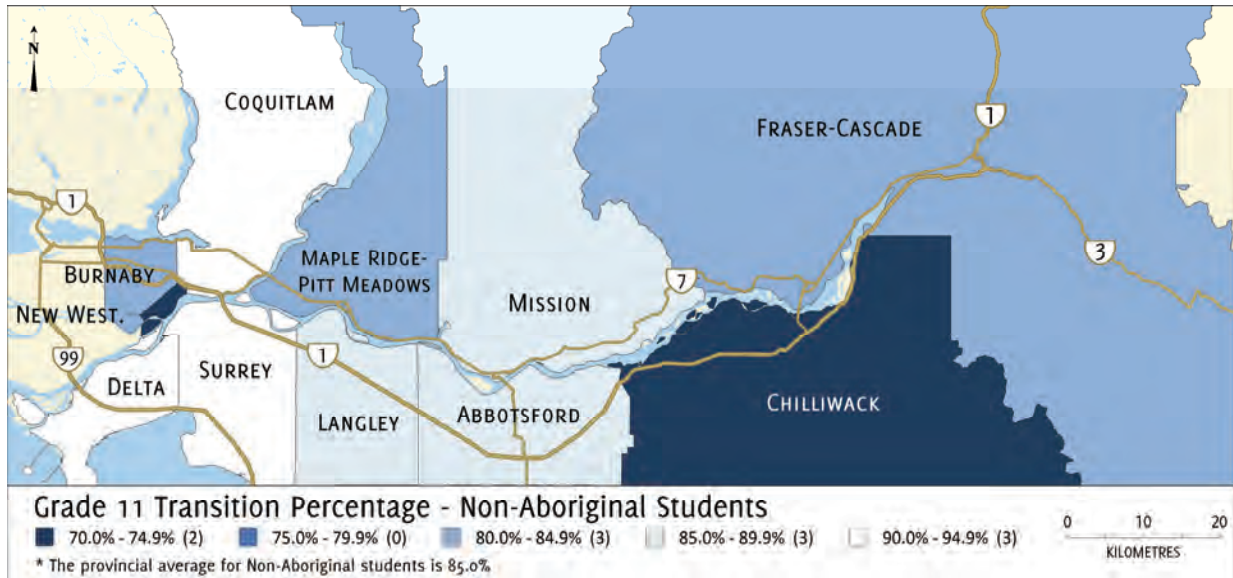
FIGURE 12. Percentage of Grade 11 Aboriginal Students* Making Successful Transition to a Higher Grade, Fraser Health by School District , 2007/08



*public schools only.

Source: Analysis and Reporting Group, Ministry of Education.

FIGURE 13. Percentage of Grade 11 Non-Aboriginal Students* Making Successful Transition to a Higher Grade, Fraser Health by School District , 2007/08



*public schools only.

Source: Analysis and Reporting Group, Ministry of Education.

As seen in FIGURE 12 and FIGURE 13, there was considerable variation between Fraser Health school districts in the percentage of grade 11 students' progression to a higher grade in 2007/08. Maple Ridge (77.2 per cent) and Surrey (76.8 per cent) school districts had the highest grade 11 transition rates in Fraser Health while the lowest rates were in Burnaby and Chilliwack school districts where, respectively, only 55.7 per cent and 58.4 per cent of Aboriginal grade 11 students transitioned to higher grades. A disparity of more than twenty percentage points exists between Aboriginal and non-Aboriginal students in Burnaby, Fraser-Cascade, Mission and Delta school districts.

Foundation Skills Assessment (FSA) Scores

The FSA is administered each year to grade 4 and 7 students in public and provincially funded independent schools. It provides an annual province-wide assessment of students' academic skills, in the areas of reading comprehension, writing, and numeracy.

The main purpose of the assessment is to allow schools to evaluate whether students are achieving basic skills and to enable schools to improve student achievement. Results given here provide the proportion of grade 4 and 7 students whose FSA scores fall in the following two categories: "Fully Meets Expectations" and "Exceeds Expectations". Levels of student performance are categorized as follows:

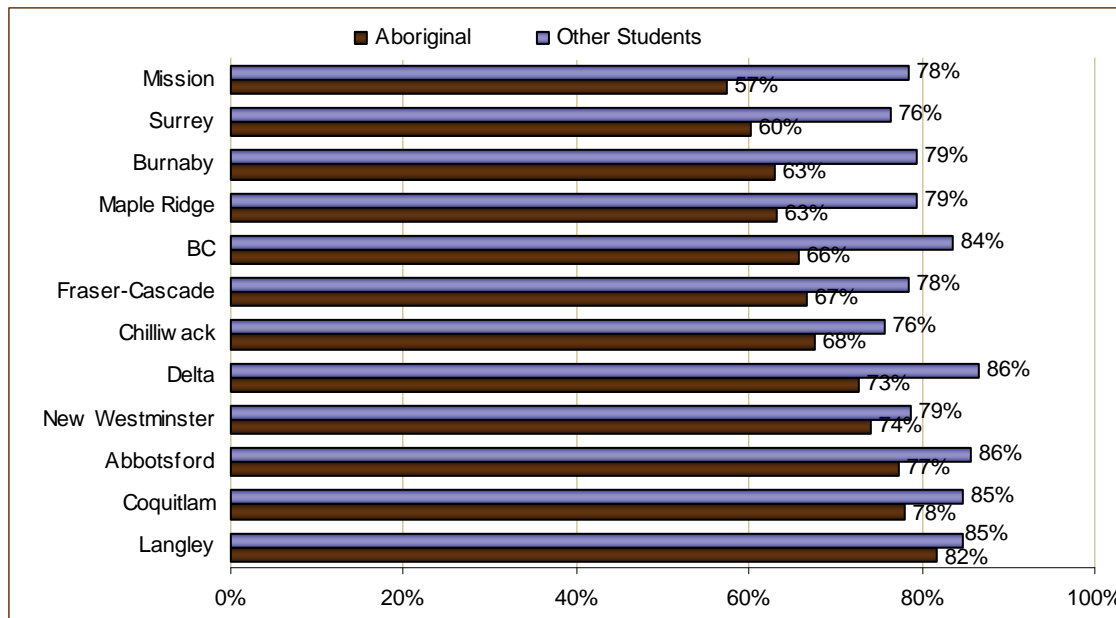
- Exceeds Expectations: the work exceeds grade-level expectations in significant ways; the student may benefit from extra challenge.
- Fully Meets Expectations: the work meets grade-level expectations; there is evidence that relevant prescribed learning outcomes have been accomplished.
- Minimally Meets Expectations
- Not Yet Within Expectations

Grade 4 FSA Scores

As seen in FIGURE 14, a smaller proportion of Aboriginal students met or exceeded expectations in reading than other students for all school districts in Fraser Health. The extent of this difference varied considerably across the eleven school districts, from a low of only 57.4 per cent of Aboriginal students meeting or exceeding expectations in the Mission school district to a high of 81.8 per cent in Langley. In addition, Aboriginal students in four Fraser Health school districts had lower reading scores than the provincial Aboriginal average.

More non-Aboriginal grade 4 students met or exceeded expectations in writing than Aboriginal students across all school districts in Fraser Health (FIGURE 15). For example, in all school districts in Fraser Health, Aboriginal students did not reach the provincial average of 83.5 per cent for non-Aboriginal students who met or exceeded expectations in writing. Again, the variability among Aboriginal students was considerable across Fraser Health. In the Delta school district, 80.0 per cent of Aboriginal students met or exceeded expectations in writing whereas only 41.4 per cent in Fraser-Cascade and 52.8 per cent in Mission school districts had similar results.

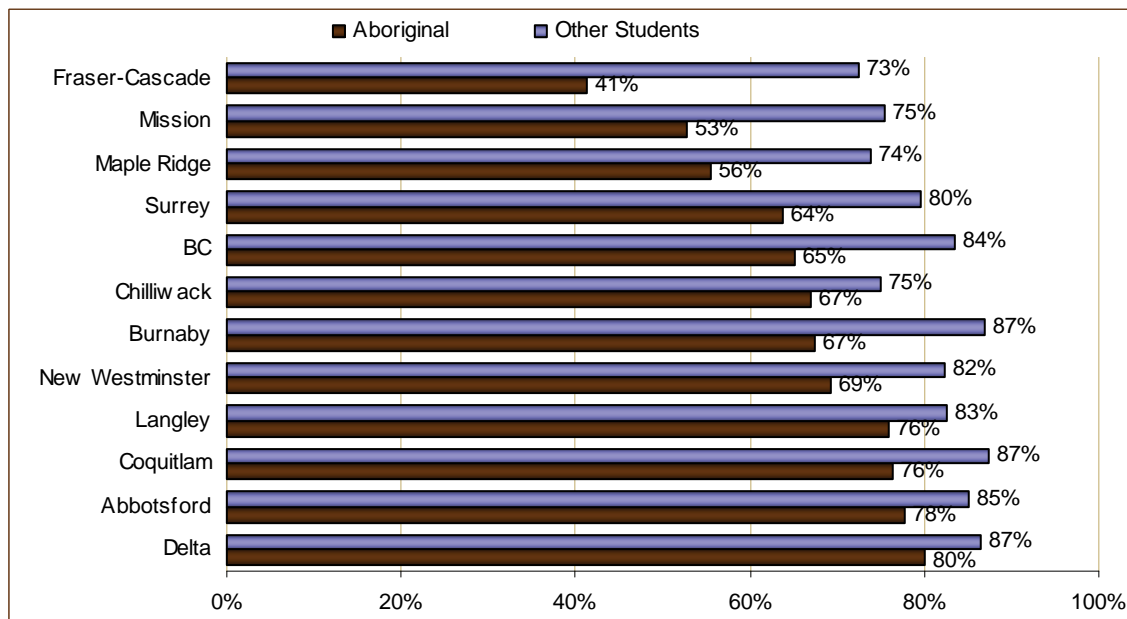
FIGURE 14. Grade 4 Reading, Foundation Skills Assessment Scores* That Meet or Exceed Expectations, by School District, 2008/09



*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: [Http://www.bced.gov.bc.ca/reporting/levels/catalogue.php](http://www.bced.gov.bc.ca/reporting/levels/catalogue.php)

FIGURE 15. Grade 4 Writing, Foundation Skills Assessment Scores That Meet or Exceed Expectations, by School District, 2008/09

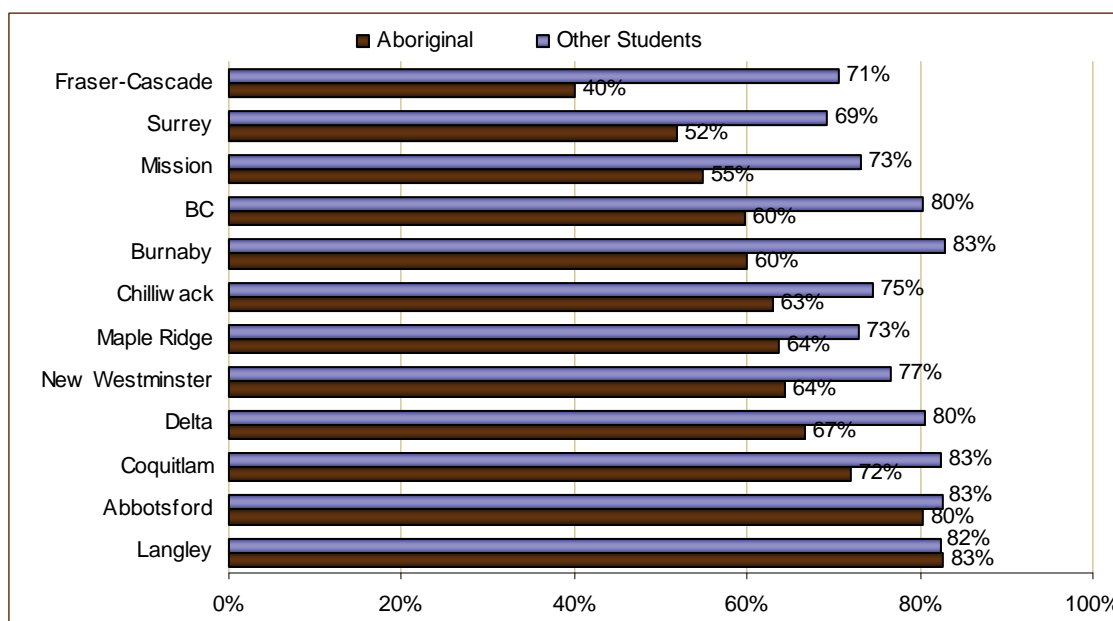


*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: [Http://www.bced.gov.bc.ca/reporting/levels/catalogue.php](http://www.bced.gov.bc.ca/reporting/levels/catalogue.php)

There was a 20 percentage point gap provincially among Aboriginal and non-Aboriginal students in numeracy for grade 4 students (FIGURE 16). Fraser Health school districts with lowest grade 4 numeracy FSA scores and the largest gaps between Aboriginal and non-Aboriginal students were Fraser-Cascade, Surrey, Mission and Burnaby. In Fraser-Cascade, only 40.0 per cent of Aboriginal students met or exceeded expectations in numeracy, compared with 70.6 per cent of non-Aboriginal students.

FIGURE 16. Grade 4 Numeracy, Foundation Skills Assessment Scores That Meet or Exceed Expectations, by School District, 2008/09



*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: <http://www.bced.gov.bc.ca/reporting/levels/catalogue.php>

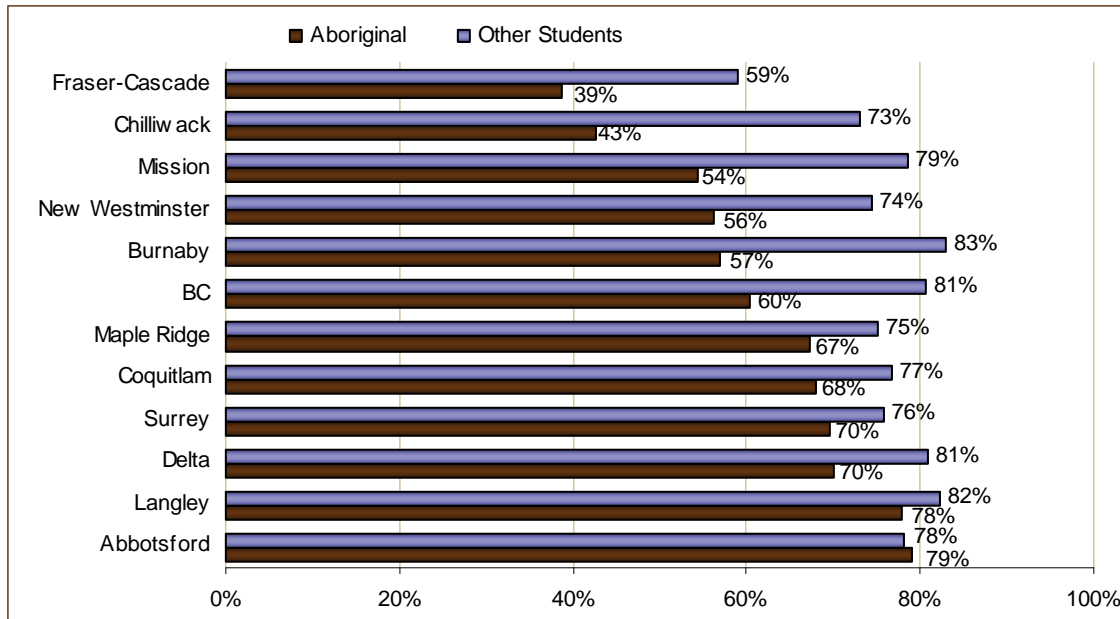
Grade 7 FSA Scores

The distribution of grade 7 reading, writing and numeracy FSA scores was similar to grade 4 scores in that scores varied considerably across Fraser Health school districts and that Aboriginal students in Fraser Health had much lower FSA scores in all three subject areas than non-Aboriginal students. In addition, the grade 7 numeracy scores were lower than reading and writing scores for both Fraser Health and BC.

In the reading comprehension component, Aboriginal students in the Abbotsford and Langley school districts had the highest reading scores in Fraser Health while Fraser-Cascade, Chilliwack, Mission, New Westminster and Burnaby had the lowest, including a considerable gap between the two population groups (FIGURE 17).

Provincially, 81.6 per cent of non-Aboriginal students met or exceeded expectations in grade 7 writing compared with 62.7 per cent of Aboriginal students. Among Aboriginal students, Delta school district (76.7 per cent) had the highest grade 7 FSA score in Fraser Health and Fraser Cascade had the lowest (41.9 per cent), followed by Surrey (58.0 per cent) and Maple Ridge (59.1 per cent).

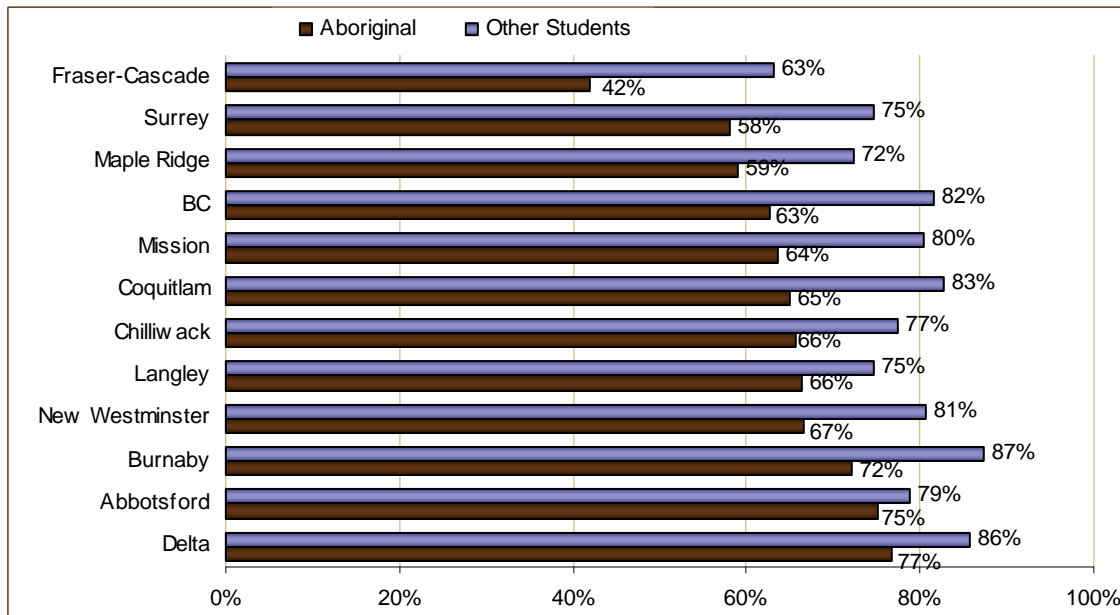
FIGURE 17. Grade 7 Reading, Foundation Skills Assessment Scores That Meet or Exceed Expectations, by School District, 2008/09



*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: [Http://www.bced.gov.bc.ca/reporting/levels/catalogue.php](http://www.bced.gov.bc.ca/reporting/levels/catalogue.php)

FIGURE 18. Grade 7 Writing, Foundation Skills Assessment Scores That Meet or Exceed Expectations, by School District, 2008/09

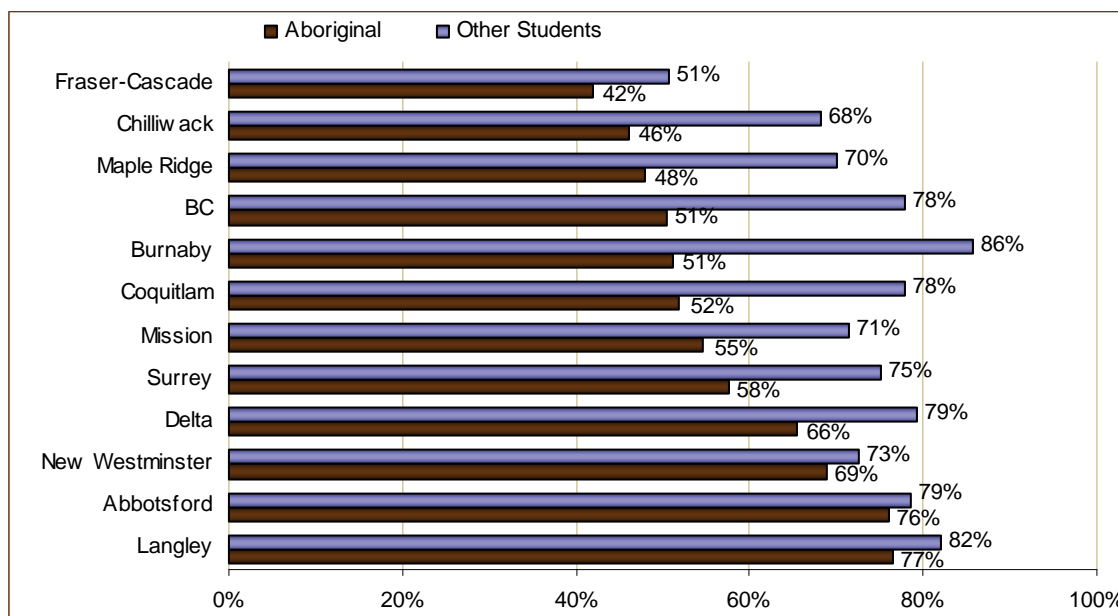


*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: [Http://www.bced.gov.bc.ca/reporting/levels/catalogue.php](http://www.bced.gov.bc.ca/reporting/levels/catalogue.php)

Some of the widest gaps between Aboriginal and non-Aboriginal students' FSA scores were evident in grade 7 numeracy (FIGURE 19). The provincial gap was 27 percentage points whereas it was 35 percentage points in Burnaby where 85.8 per cent of non-Aboriginal and only 51.2 per cent of Aboriginal students met or exceeded expectations in grade 7 numeracy.

FIGURE 19. Grade 7 Numeracy, Foundation Skills Assessment Scores That Meet or Exceed Expectations, by School District, 2008/09



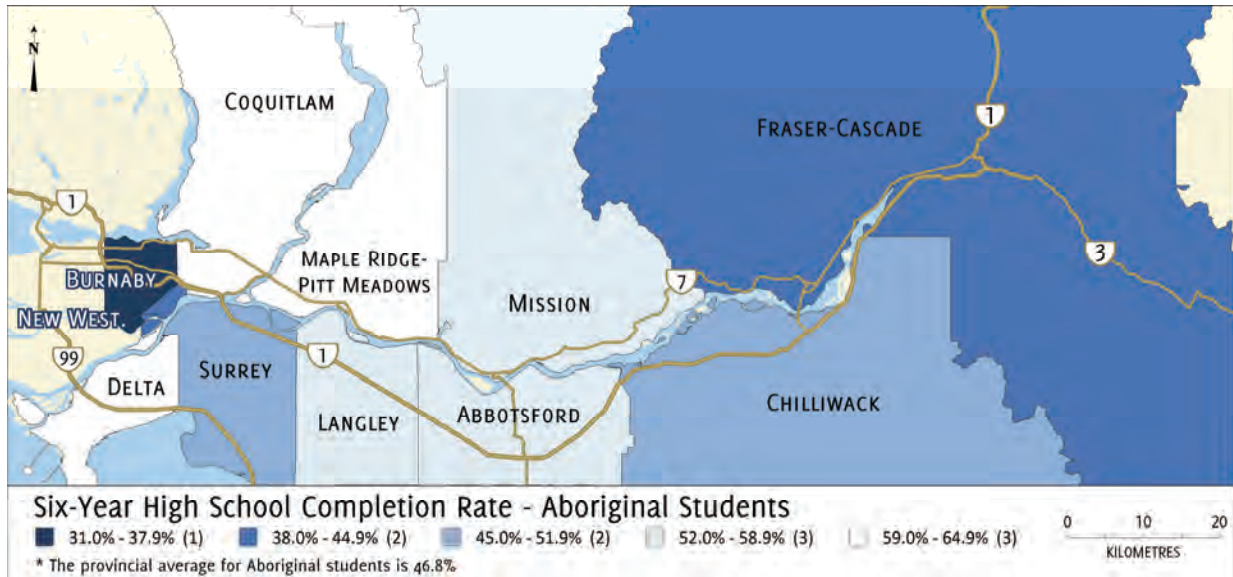
*for those who participated in the assessment with a known outcome only. Those with unknown performance level are excluded from the denominator. Includes both public and independent schools.

Source: Ministry of Education. Data retrieved Oct 2009 from: <http://www.bced.gov.bc.ca/reporting/levels/catalogue.php>

High School Completion

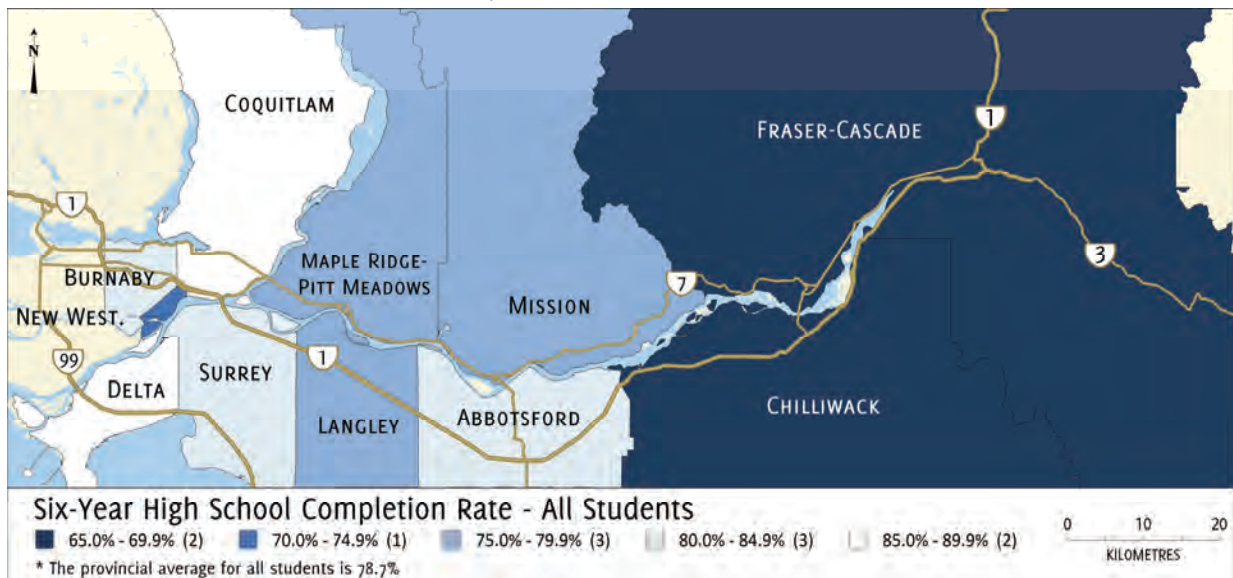
The progression of students from grade to grade directly impacts the proportion of students who go on to complete high school. All school districts in Fraser Health show considerable differences in the proportions of Aboriginal and total students who go on to complete high school within six years from the time they enrol in grade 8. Overall, Aboriginal students have much lower 6-year high school completion rates than the total student cohort (see FIGURE 20 and FIGURE 21). For example, only 32.4 per cent of Aboriginal students in the Burnaby school district graduate within six years of entering grade 8 compared with 81.9 per cent of All Students.

FIGURE 20. Aboriginal Students School Completion Rate, Fraser Health School Districts, 2007/08



Source: Analysis and Reporting Group, Ministry of Education.

FIGURE 21. All Students School Completion Rate, Fraser Health School Districts, 2007/08

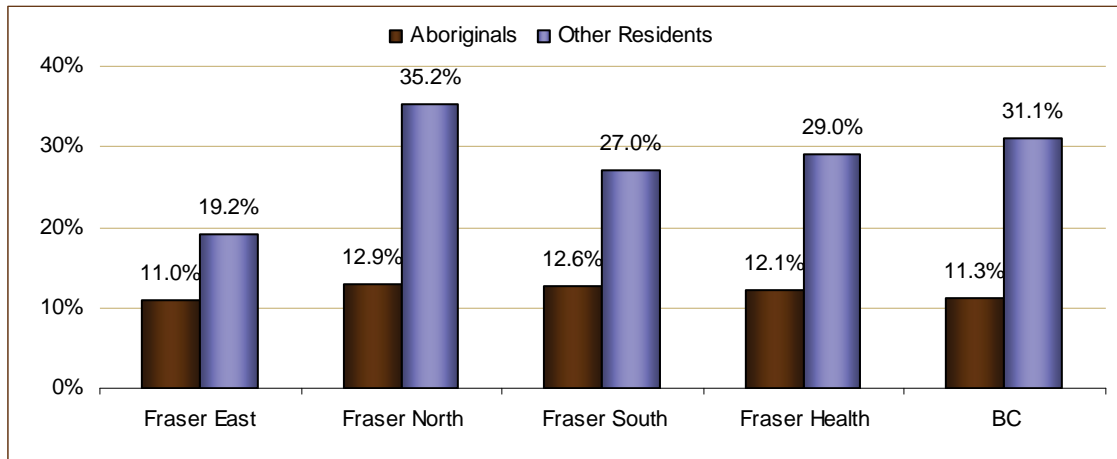


Source: Analysis and Reporting Group, Ministry of Education.

Post-Secondary Education

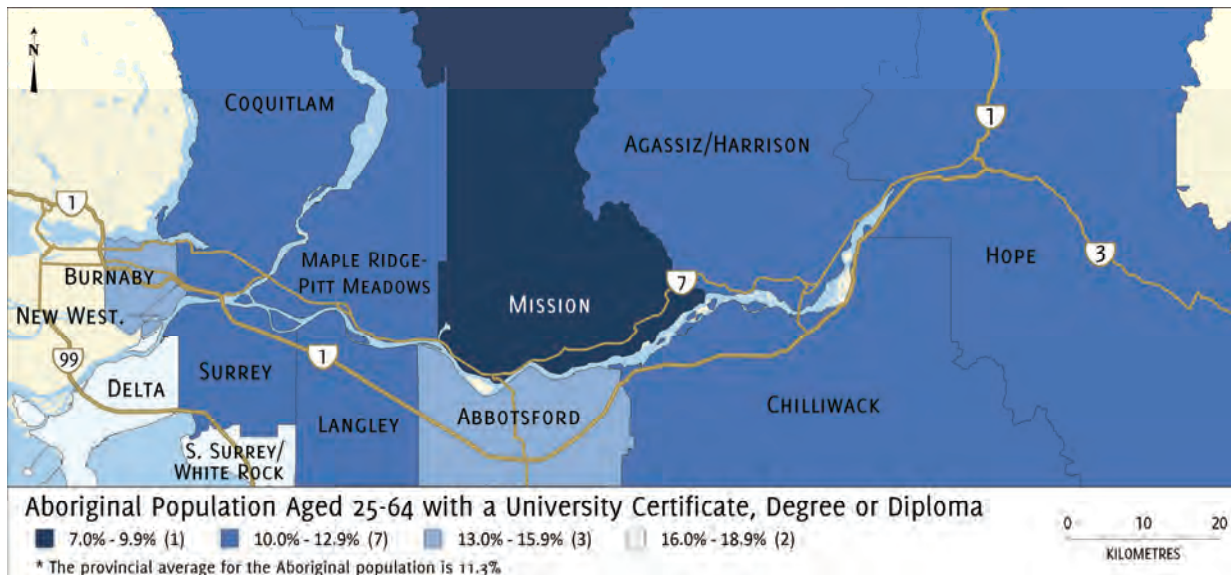
People with post-secondary education are more likely to be employed, to have stable and well-paying jobs, and are more likely to be both civically and socially involved¹. In Fraser Health, there is high variability in the percentage of residents with a university certificate, diploma or degree, with those in the western region having more educated residents than in the eastern regions of Fraser Health (FIGURE 22 and FIGURE 23). However, Aboriginal people have considerably lower rates of university education in all areas of Fraser Health. For example, 12.1 per cent of Aboriginal people compared with 29.0 per cent of other residents in Fraser Health are university educated.

FIGURE 22. Proportion of Population with University Certificate, Diploma or Degree, Age 25-64, 2006



Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

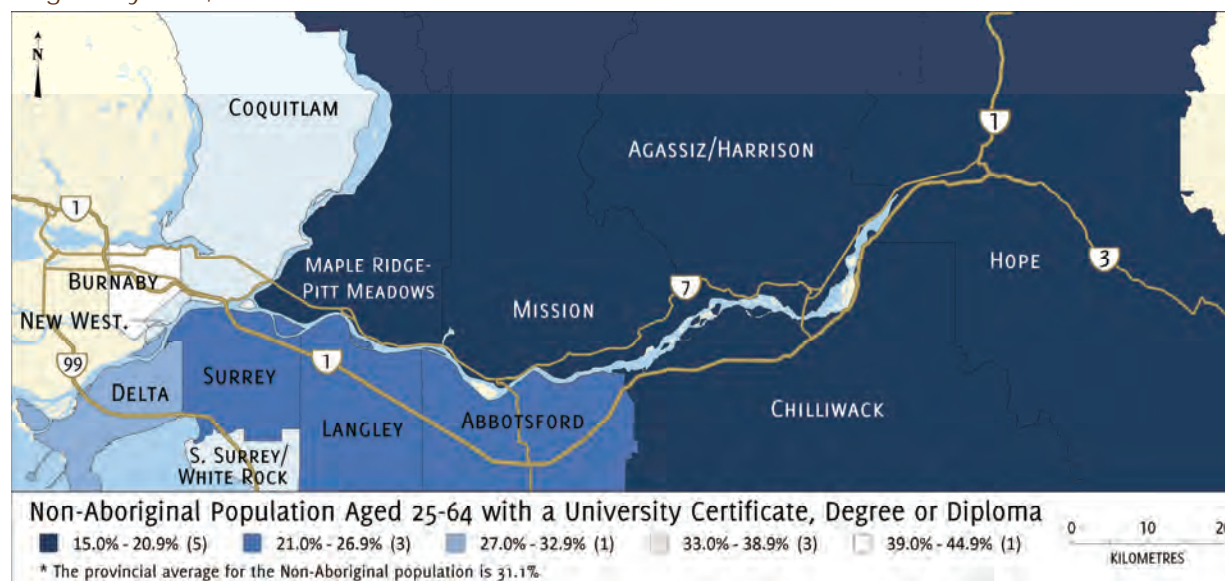
FIGURE 23. Proportion of Aboriginal Population with University Certificate, Diploma or Degree by LHA, 2006



Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

The proportion of Aboriginal people with a university certificate, diploma or degree varies from a low of 7.5 per cent in Mission LHA to a high of 17.0 per cent in South Surrey/White Rock LHA.

FIGURE 24. Proportion of non-Aboriginal Population with University Certificate, Diploma or Degree by LHA, 2006



Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

TABLE 10. Population Age 15-24 Who Either Worked or Attended School Between September 2005 and May 2006, Aboriginal and Other Residents

Area and Indicator	Aboriginal People			Other Residents
	On Reserve	Off Reserve	All Aboriginal	
Fraser Health:				
% who both went to school and worked	29.6	37.9	36.9	46.0
% who worked but did not go to school	30.2	30.9	30.9	28.9
% who went to school but did not work	22.8	21.8	22.0	20.3
% who neither worked nor went to school	17.3	9.3	10.3	4.7
BC:				
% who both went to school and worked	23.3	38.5	34.6	46.4
% who worked but did not go to school	30.1	34.3	33.2	29.5
% who went to school but did not work	25.7	19.2	20.9	19.7
% who neither worked nor went to school	20.9	7.9	11.3	4.5

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

TABLE 10 provides the distribution of high school and university age people attending school or working. Overall, a smaller proportion of Aboriginal youth in Fraser Health (36.9 per cent) were engaged in both school and work compared with non-Aboriginal youth (46.0 per cent). A much larger proportion of Aboriginal youth (10.3 per cent) neither worked nor went to school compared with non-Aboriginal youth (4.7 per cent) and this was true for both on reserve and off reserve youth. The percentage of youth who neither worked nor went to school was highest on reserve (17.3 per cent).

Compared with BC, a slightly larger proportion of Aboriginal youth in Fraser Health combined school and work; the difference between on and off reserve youth was less pronounced in Fraser Health than in BC.

Aboriginal Education Enhancement Agreements: Important impetus for school achievement

The Chilliwack School District's Local Education Agreement (LEA) is a district-specific version of the provincial Aboriginal Education Enhancement Agreement aiming to enhance the educational achievement of Aboriginal students. The LEA is a formal agreement between the Chief and Council of each community, the Chilliwack School District and the Ministry of Education. The LEA establishes collaborative partnerships through the design and delivery of school curriculum incorporating Aboriginal culture and language components.

As of April 2010, all school districts in Fraser Health except New Westminster had signed their LEAs.

Source: BC Ministry of Education

Halq'eméylem : language of the Stó:lō people

Halq'eméylem is the traditional language of the Stó:lō people; it consists of three dialects, Upriver, Downriver and Island. Each dialect has different sounds and a few different words. Halq'eméylem is spoken in the areas of central and upper Fraser Valley, Harrison Lake, and the lower Fraser Canyon. Halq'eméylem is spoken fluently by very few people today and is becoming an endangered language.

The revival of traditional languages is seen by Aboriginal people as an integral component in re-establishing their culture, history and identity. This re-establishment of cultural identity is an important first step in addressing the educational, economic and social disparities common to Aboriginal people.

As a result of Stó:lō peoples' continuing efforts, Halq'eméylem is now a provincially approved second language curriculum. Students in grades 5 to 12 from the Chilliwack, Fraser-Cascade and Gold Trail school districts have the option of learning Halq'eméylem as an accredited second language course, similar to French.

In addition, the University of the Fraser Valley and Simon Fraser University offer accredited Halq'eméylem courses and diploma programs aimed at students and university graduates wishing to incorporate Aboriginal education or First Nations option into their studies. For example, the University of the Fraser Valley's Modern Languages Institute offers an intermediate proficiency certificate in Halq'eméylem.

Source: BC Ministry of Education. Halq'eméylem Language To Revitalize Aboriginal Culture. News Release. June 20, 2008. Extracted September 11, 2009: http://www2.news.gov.bc.ca/news_releases_2005-2009/2008EDU0081-000955.htm

On-Reserve Schools

Lalme' Iwesawtexw Seabird Island School

Seabird Island School is a pre-school to grade 12 facility located on Seabird Island First Nation in Agassiz. One of its two buildings is dedicated to grades K to 6, and the second building is dedicated to grades 7 to 12. As they are close together, students and teachers create a community where

safety, education and respect are shared.

The origins of the current school go back to the 1960's when the Seabird Island Day School was closed by the Department of Indian Affairs. Soon after, the Band started a nursery in the school building and the parents continued to petition the Band leaders to open a local community school to have some control over their children's education.

In 1980, the Seabird Island Community School opened in the "Old School", offering nursery school, grades 1 and 2, and eventually expanding to grade 7. Neighbouring Chawathil, Ruby Creek, Peter's and Ohamil Bands were invited to register their children at the school. As the school continued to grow, the parents wanted to extend the school to grade 10 and to build a new facility.

The students moved into the new school in May of 1991. Grades were extended to include junior high up to grade 10. In 1992, Bands from Chilliwack were invited to send their children to Seabird School. The school now had enrolment from Hope, Rosedale and Chilliwack area Bands. In 1999, grades 11 and 12 were added along with the Dogwood diploma. The school had it's first Dogwood Graduates in June of 2000.

The new community school was named in memory of Mary (Lalme) Charles, a long time elder and resident of Seabird Island. Chairperson of the School Committee for many years, Lalme's dream was to have a Band controlled community school for the children of Seabird Island. *IWESAWTEXW* is Halq'emeylem for 'House of Learning'. From certain views of the building a canoe, an eagle, a clam, an owl and a salmon can be seen in the design. The majority of the construction crew came from Seabird and the neighbouring communities.

The school's vision is to have culturally based and quality curriculum that fosters, promotes, and protects language and cultural values. This is done through the school staff modeling First Nations culture, and through elementary and secondary curriculums offering a variety of enrichment activities and education, electives, tutoring options and Aboriginal cultural and language studies.

For example, the Cultural Identity Studies program begins in Nursery and continues through grade 12. The study of heritage, language, ceremonies and arts\crafts prepares the students to participate as proud and informed citizens in the processes of self-governance and treaty negotiations. An understanding of who First Nations people are prepares the students to grow into taking responsibility for the future generations, as the elders have for today's students.

Students also learn about their own First Nations history starting with Seabird Island, Sto:lo and other neighbouring nations. Halq'emeylem Language Students are introduced to the Halq'emeylem language of the Sto:lo through a variety of activities taught by fluent speakers. Traditional songs are learned and sung by students and staff at school and community ceremonies. Students participate in traditional ceremonies at the school and in the communities. Annual ceremonies may include Sto:lo new year, naming and first salmon celebrations. These ceremonies and others are built into the various subjects in each grade. Students may choose to learn drumming, singing, dancing and join the school's performers.

Chehalis Community School

The Chehalis Community School is a 27,000 square foot facility with full gym, computer lab, science lab, cultural education room, resource room, kitchen and carving room. The playground is similar to other schools with security fencing and play structures. There are currently 160 students with straight grades for preschool, kindergarten, one, two and eight and split grades at 3/4, 5/6, /6/7, 9/10, 11/12. The communities served by the school include Chehalis, Scowlitz and Laq'amel.

The school follows the provincial curriculum for all subject areas. Classroom teachers develop their year plans based on the provincial integrated resource packages (IRP's) and these are followed through on evaluations. The Cultural Education program follows the traditional teachings and language of the Chehalis people. Children are provided opportunities to take part in community based events throughout the year including a number of cultural events at the school.

Chehalis Community School has a strong partnership with the Sts'Ailes Early Education Center which offers daycare and Headstart to children ages 6 months to 4 years. Through this center, the children benefit from cultural teachings and Headstart and the 4-year old children have cultural education, physical education, and computer education at the big school.

The school's biggest challenge continues to be the stereotype that too many people place on First Nations schools with parents transferring their children to public schools as soon as their child achieves good academic standing in order to determine if they are able to compete in the public school environment. This is despite the fact that the Chehalis Community School is renowned for literacy, numeracy, cultural and athletics programs, exceptional staff, state of the art technology, offers the provincial curriculum, and provides small classes for all students.

WHERE CAN WE IMPROVE?

BC level data suggest that Aboriginal students typically start dropping out of school in grade 7 with drop-out rates increasingly higher in higher school grades. This suggests that intervention strategies are needed to keep Aboriginal students in school and to address existing barriers to higher education.

Indicators such as the Foundation Skills Assessment suggest that reduced school success among Aboriginal students are important contributors to poorer educational outcomes among Aboriginal students in later years. As shown in this report, FSA scores in school districts like Fraser-Cascade, Mission, Surrey and Maple Ridge are a cause for concern.

The six-year high school completion rates are also a concern for school districts such as Burnaby, New Westminster and Fraser-Cascade where less than 40 per cent of Aboriginal students who enrol in grade 8 go on to graduate in six years. These school districts also have elevated student dropouts as reflected in the proportion of Aboriginal students who make successful transitions from grade to grade. It is important to note that the lower achievement seen among Aboriginal students for these two indicators does not translate into a similar pattern for non-Aboriginal students in these school districts.

LIMITATIONS

Census data is not adjusted for the age structure of the LHA population. Areas with older populations may have a higher percentage of undereducated people.

The Foundation Skills Assessment (FSA) scores presented are for those who participated in the assessment with an outcome which falls in the following categories: Not Yet Meeting, Meeting, and Exceeding. Thus, students with an unknown performance level are excluded from FSA data presented here. The calculation of FSA scores has been scrutinized by critics claiming that there is potential for schools to purposely exclude students that are anticipated to do poorly on the assessment in order to elevate a school's rating³.

Some data are for public schools only and data for on-reserve schools is unavailable.

Labour Force Characteristics

Labour force characteristics refer to the working age population that are either employed, unemployed or currently looking for work.

WHY IS IT IMPORTANT?

Labour force characteristics such as labour force participation, employment and unemployment are considered key indicators of economic health. Stable labour force participation is integral to long term economic growth.

Employment status will often affect a person's health. For instance, when someone loses their job, not only does that person lose their income, they may also lose their personal work relationships, daily structure, self-esteem, and sense of self-worth. Unemployment can negatively affect emotional and mental well-being. It can also affect an individual's ability to afford housing, adequate and nutritious foods, and limits participation in many activities and opportunities, which can impact overall health.

Labour force indicator rates vary by sex, ethnicity, age structure, and by other social and economic factors. Groups such as Aboriginal people, which have younger populations (for example, higher proportion of children) and higher birth rates, will have lower labour force participation rates. Labour force participation rates also vary for on-or-off reserve Aboriginal people, and for Métis versus First Nations.

HOW ARE WE DOING?

With a relatively young population, it might be expected that Aboriginal people would be more represented in the labour force than other residents; however, the data suggest otherwise. Overall labour force participation for Aboriginal people in Fraser Health was 81.1 per cent, compared with 84.8 per cent for other residents (TABLE 11). Provincially, Aboriginal people had lower participation rate than Fraser Health. Within Fraser Health, Fraser East HSDA had the lowest labour force participation rate (79 per cent) and Fraser North the highest (83 per cent).

TABLE 11. Labour Force Participation Rate (%) by Sex, Aboriginal and Other Residents, Age 25-54, Fraser Health HSDAs, 2006

Area	On Reserve (%)			Off Reserve (%)			Total, Aboriginal (%)			Other Residents (%)		
	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both
BC	75.8	67.8	71.9	84.9	73.8	78.7	82.4	72.4	77.0	90.2	80.0	85.0
Fraser Health	80.1	72.3	76.4	87.6	77.3	81.7	86.5	76.8	81.1	90.8	79.2	84.8
Fraser East	78.6	73.8	76.1	86.3	75.8	80.3	83.8	75.4	79.1	91.7	79.2	85.3
Fraser North	*	*	*	88.6	78.7	83.1	88.6	78.3	82.8	90.0	79.2	84.4
Fraser South	87.0	*	80.0	87.7	77.3	81.8	87.9	77.3	81.9	91.2	79.2	85.0

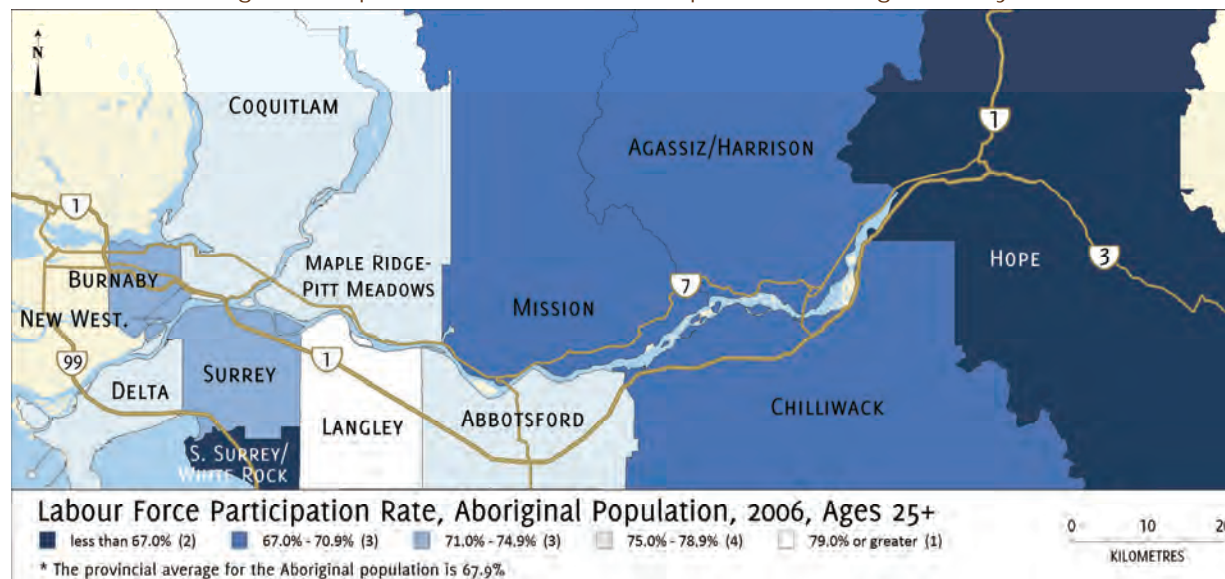
* data suppressed due to small numbers and unreliable quality

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

Off-reserve Aboriginal people had higher labour force participation rates than on reserve Aboriginal people, which was consistent across Fraser Health and BC. Labour force participation rates vary considerably by sex with males having higher labour force participation than females regardless of ethnicity, geography and on or off reserve living status. Both Aboriginal males and females living off reserve had higher rates of labour participation than those living on reserve.

Female labour force participation has changed in recent decades as increasing numbers of females have entered the work force⁴. Current data show that regardless of ethnicity, men still participate in the labour force at a much higher rate than women.

FIGURE 25. Aboriginal Peoples Labour Force Participation Rate, Age 25+, by LHAs, 2006



Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

Unemployment rates were much higher for Aboriginal people than other residents for both BC and Fraser Health (TABLE 12). Compared with BC, Fraser Health's unemployment rate was lower for both the Aboriginal people and other residents. Fraser Health's Aboriginal unemployment rate of 11.1 per cent was approximately double that of other residents (5.3 per cent). Aboriginal people in Fraser South (8.4 per cent) had the lowest unemployment rate in Fraser Health while residents of Fraser East had the highest (14.3 per cent). Similar to labour force participation rates,

TABLE 12. Unemployment Rate (%) by Sex, Aboriginal and Other Residents, Age 15+, 2006

Area	On Reserve (%)			Off Reserve (%)			Total, Aboriginal (%)			Other Residents (%)		
	Male	Female	Both	Male	Female	Both	Male	Female	Both	Male	Female	Both
BC	28.6	20.7	25.0	11.9	11.9	11.9	16.1	13.8	15.0	5.3	5.9	5.6
Fraser Health	24.8	19.2	22.3	8.7	10.7	9.7	10.6	11.6	11.1	4.6	6.1	5.3
Fraser East	27.3	20.6	24.2	9.5	11.9	10.9	14.6	14.1	14.3	4.8	5.9	5.3
Fraser North	*	*	*	8.7	11.7	10.3	9.0	12.1	10.6	5.0	6.2	5.6
Fraser South	*	*	*	8.3	8.9	8.6	8.1	8.8	8.4	4.2	6.0	5.1

* data suppressed due to small numbers and unreliable quality

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

unemployment among on-reserve Aboriginal people was much higher than those among off reserve. For example, 22.3 per cent of on-reserve Aboriginal people in Fraser Health were unemployed, compared with 9.7 per cent of off-reserve Aboriginal people.

Aboriginal males living on reserve had the highest rates of unemployment in Fraser Health, more than five-fold higher compared with other resident males (TABLE 12). Aboriginal males living on reserve also had higher rates of unemployment than Aboriginal females living on reserve while both off reserve and other resident males had lower rates of unemployment compared with females.

WHERE CAN WE IMPROVE?

The changing labour force in Fraser Health and across the province provides potential employment growth opportunities for the Aboriginal people. For example, the labour force participation rates among non-Aboriginal people continue to decrease as a result of baby boomers moving into older, retirement phases. Opportunities exist for the younger Aboriginal population to fill this labour force void.

This potential labour pool could make valuable contributions in reducing Fraser Health's expected labour shortages due to the aging population. However, ensuring that the Aboriginal community is in a position to produce a skilled labour pool will require addressing the existing gaps in pre-and-post secondary educational outcomes and increasing the number and retention of Aboriginal students entering post-secondary institutions.

LIMITATIONS

Unemployment rates do not include those that are not in the labour force. During recessions, people may become discouraged and actively remove themselves from the labour pool. Conversely, during times of good economic growth, unemployment rates may increase due to individuals returning to the labour force⁴. The labour force participation does not include Aboriginal people who hunt, fish and gather traditional foods for their own use. These activities do not generate income and thus are not reflected in these statistics.

Income

Median income refers to the middle point where exactly half of the population earns less and half earns more.

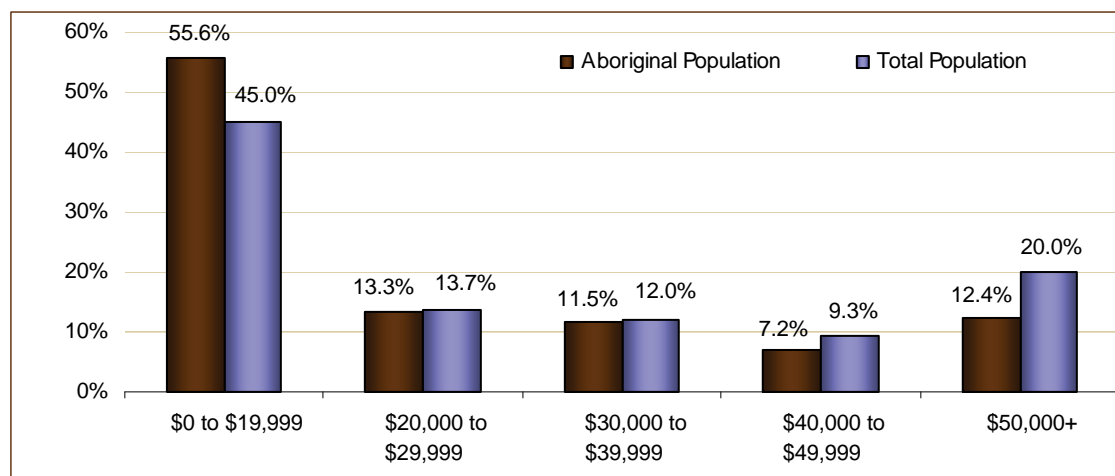
WHY IS IT IMPORTANT?

Income, like education, is an important social determinant as people with higher incomes tend to be healthier than those with lower incomes. Income influences living conditions, quality of housing, participation in college and post-secondary education and quality of foods, all of which affect health status. Groups that are most likely to have lower incomes include young people, the elderly, young families, lone parent families headed by females, immigrants and Aboriginal people.

HOW ARE WE DOING?

FIGURE 26 shows the proportion of annual income groups for Fraser Health's Aboriginal people and the total population. Overall, Aboriginal people were overrepresented in the lowest income bracket and underrepresented in higher income brackets. The largest gap is found in the under \$20,000 income group where 55.6 per cent of Aboriginal people in Fraser Health earn less than \$20,000 per year compared with 45.0 per cent of the total population. In contrast, a higher proportion of the total Fraser Health population is found in the higher income groups (\$40,000 and higher).

FIGURE 26. Total Income Distribution, Aboriginal and Total Population, Age 15+, Fraser Health, 2006

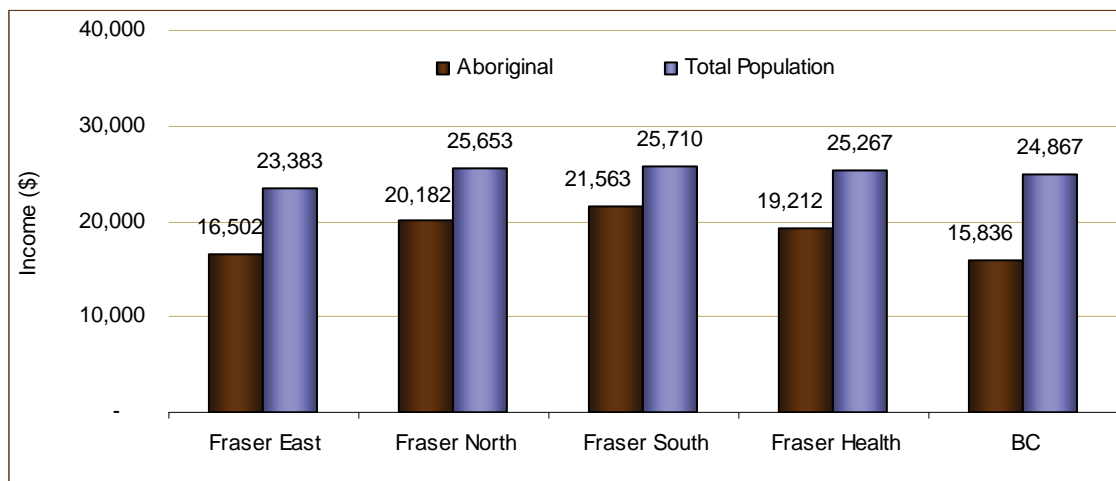


Source: 2006 Census, Statistics Canada

Median income for the Aboriginal and total population is presented in FIGURE 27. Significant disparities exist for Aboriginal people compared to the total population. The Fraser Health Aboriginal median income of \$19,212 suggesting that one-half of the population earns less than this amount, was \$6,055 (or 24 per cent) lower than Fraser Health's total population. Both Aboriginal people and non-Aboriginal people in Fraser East have the lowest median annual incomes in Fraser Health, with one-half of Aboriginal people aged 15 and older earning less than \$16,502 annually. The median annual income of Aboriginal people in Fraser Health (\$19,212) was higher than their provincial

counterparts (\$15,836). The percentage of Aboriginal people earning \$40,000 and over is 10 per cent lower than the equivalent percentage in the general Fraser Health population.

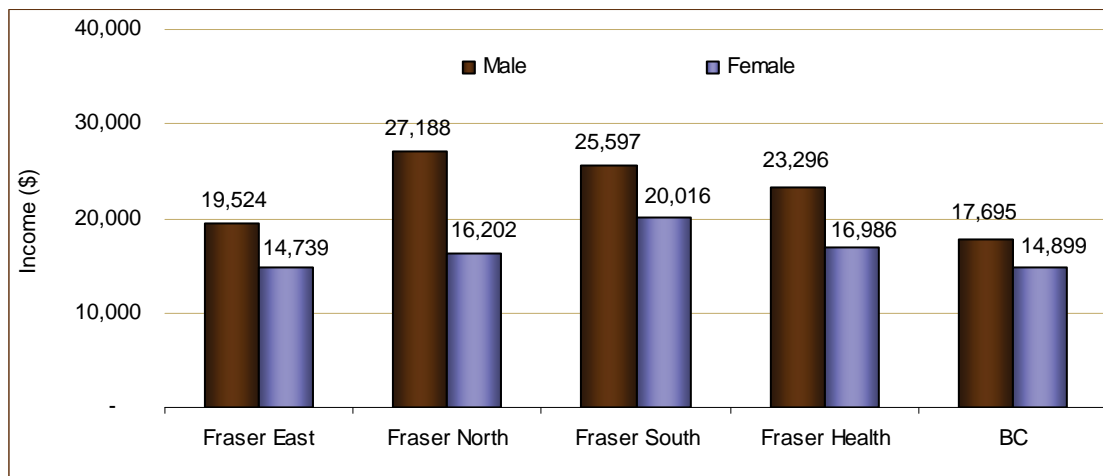
FIGURE 27. Median Annual Income, Age 15+, Aboriginal and Total Population, 2006



Source: 2006 Census, Statistics Canada

Aboriginal males earn more than females at both BC and in Fraser Health levels (FIGURE 28), with the gap being larger in Fraser Health than in BC. In Fraser Health, an Aboriginal male's median annual income in 2005 was \$23,296 and female's, \$16,986, a difference of \$6,310. The largest gap was seen in Fraser North where Aboriginal males earned approximately \$11,000 more annually than their female counterparts.

FIGURE 28. Median Income by Sex, Age 15+, Aboriginal Population, 2006



Source: 2006 Census, Statistics Canada

The median income distribution by local health area shows lower incomes among Aboriginal people across all LHAs (FIGURE 29 and FIGURE 30). The largest income gaps were seen in New Westminster, Chilliwack and Maple Ridge LHAs, with Aboriginal people in New Westminster earning \$12,604 less annually than the total population.

FIGURE 29. Aboriginal Population Median Annual Income, Fraser Health LHAs, 2006



Source: 2006 Census, Statistics Canada

FIGURE 30. Total Population Median Annual Income, Fraser Health LHAs, 2006



Source: 2006 Census, Statistics Canada

The link between education and income is well established as people with higher education generally earn higher incomes. In addition, enhanced educational outcomes can translate to better opportunities in the labour force and, in turn, a better paying job.

TABLE 13 depicts the average employment income by five education levels for Aboriginal people and other residents. Generally, the average employment income increases with increasing education for both Aboriginal people and other residents in Fraser Health and BC. For example, an Aboriginal person with less than high school graduation earned an average of \$33,109 annually compared with an average of \$50,438 annually for someone with a university certificate, diploma or degree.

The income gap between Aboriginal people and non-Aboriginal people persists even with equal education. For example, an Aboriginal person with a university education will earn approximately \$7,600 less annually than a non-Aboriginal person with similar educational attainment.

In addition, Aboriginal people living on reserve have substantially lower average employment incomes than those living off reserve and other residents. Compared with BC, Fraser Health Aboriginal people have higher average employment incomes.

TABLE 13. Average Employment Income* by Education Level, Age 25-54, Aboriginal and Other Residents, 2006

Area/Education level	Aboriginal People			Other Residents
	On Reserve	Off Reserve	Total, Aboriginal	
Fraser Health:	\$	\$	\$	\$
Less than high school graduation	28,842	33,590	33,109	38,592
With high school graduation	31,396	40,662	39,943	44,400
With apprenticeship or trades certificate or diploma	30,633	45,638	44,473	48,903
With college or other non-university cert or diploma	34,322	40,709	40,288	49,746
University certificate, diploma or degree	49,535	50,536	50,438	58,040
Average Employment Income	34,590	41,956	41,355	49,680
BC:	\$	\$	\$	\$
Less than high school graduation	30,185	34,696	33,523	38,520
With high school graduation	29,360	38,964	37,415	43,137
With apprenticeship or trades certificate or diploma	30,748	42,874	40,770	47,649
With college or other non-university cert or diploma	32,346	39,806	38,398	48,290
University certificate, diploma or degree	41,314	51,103	49,431	61,379
Average Employment Income	32,060	40,950	39,266	50,339

*among those working 40+ weeks mostly full-time

Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

Stó:lō Community Futures

The Community Futures Development Corporation of Stó:lō supports First Nation Communities within the traditional Stó:lō Territory through a range of community economic development initiatives and programs. They provide entrepreneurial services and access to capital through business development loans and funding initiatives, to existing and new Aboriginal businesses.

Specific services and initiatives of Stó:lō Community Futures include:

- business services to Aboriginal entrepreneurs
- a full business resource center
- loans for qualified Aboriginal businesses
- business counselling
- community economic development initiatives
- implementation of economic sector strategies throughout the Stó:lō Nation

Source: Stó:lō Community Futures Development Corporation. Extracted September 22, 2009:
<http://www.stolocf.com/>

WHERE CAN WE IMPROVE?

Through Aboriginal engagement, explore strategies to address the underlying factors associated with the socio-economic inequity Aboriginal people face. For example, improvement in educational outcomes will likely translate to improved opportunities in the labour force, and in turn, to improved income levels.

LIMITATIONS

Census data reports on income for the year prior to the Census and excludes any who did not participate in the 2006 Canada Census.

Low Income

Low income, a measure of Statistics Canada's Low Income Cut-Offs (LICO), is the proportion of persons in private households spending 20 per cent more than average on necessities such as food, shelter and clothing.

WHY IS IT IMPORTANT?

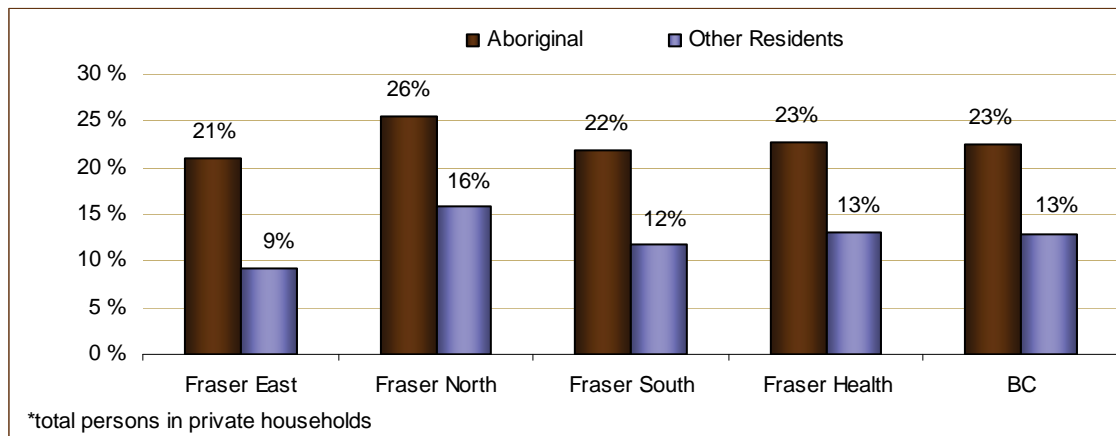
There is strong association between income and health status as people in the lowest income groups are more likely to have poorer health outcomes than those in the higher income groups.

Low income is also associated with poor health status. Low income restricts a family's ability to purchase adequate quantities of nutritious foods. People with little money to spend on food will purchase foods that minimize hunger but are not nutritious.

HOW ARE WE DOING?

As seen in FIGURE 31, there are striking differences in the proportions of Aboriginal people with low income compared with non-Aboriginal people. For example, in Fraser Health, 22.5 per cent of Aboriginal persons versus 13.0 per cent of the total population were low income. Over a quarter (25.6 per cent) of Aboriginal people in Fraser North were low income, the highest proportion in Fraser Health.

FIGURE 31. Prevalence* of Low Income After Tax, Aboriginal and Total Population, 2006



Source: 2006 Census, Statistics Canada

Although the distribution of low income after tax shows considerable variation among both the Aboriginal and the total population groups across Fraser Health's local health areas, the Aboriginal people had higher rates of low income in all areas of Fraser Health (FIGURE 32 and FIGURE 33). The low income rate among Aboriginal people varied from a low of 11.6 per cent in South Surrey/White Rock LHA to a high of 37.8 per cent in New Westminster LHA and 35.3 per cent in Agassiz/Harrison LHA. In Agassiz/Harrison LHA, an Aboriginal person was over four times more likely to be in the low income category compared with the total population.

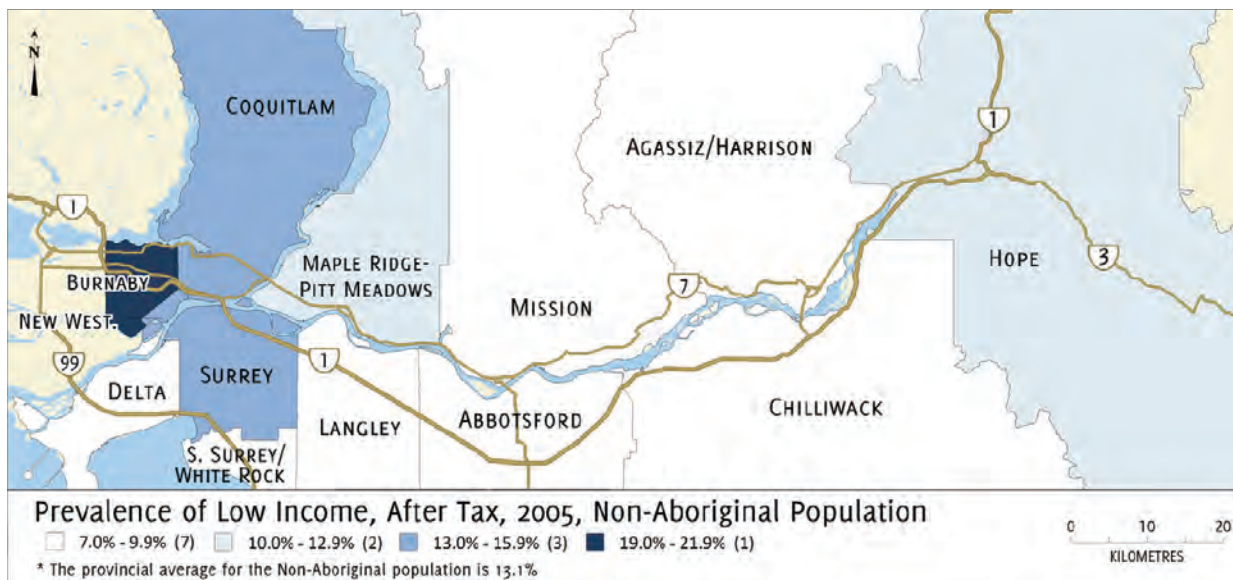
Low income data presented below illustrate the extent of low income disparity experienced by Fraser Health’s Aboriginal people. The situation is even worse for Aboriginal lone parents as the majority (52.0 per cent) living off reserve were at or below the low income category compared with 35.9 per cent of non-Aboriginal lone-parent families (FIGURE 34). Fraser East had the highest percentage (55.8 per cent) of low income among Aboriginal lone-parent families living off reserve in Fraser Health.

FIGURE 32. Prevalence* of Low Income After Tax for Aboriginal People, Fraser Health, 2005



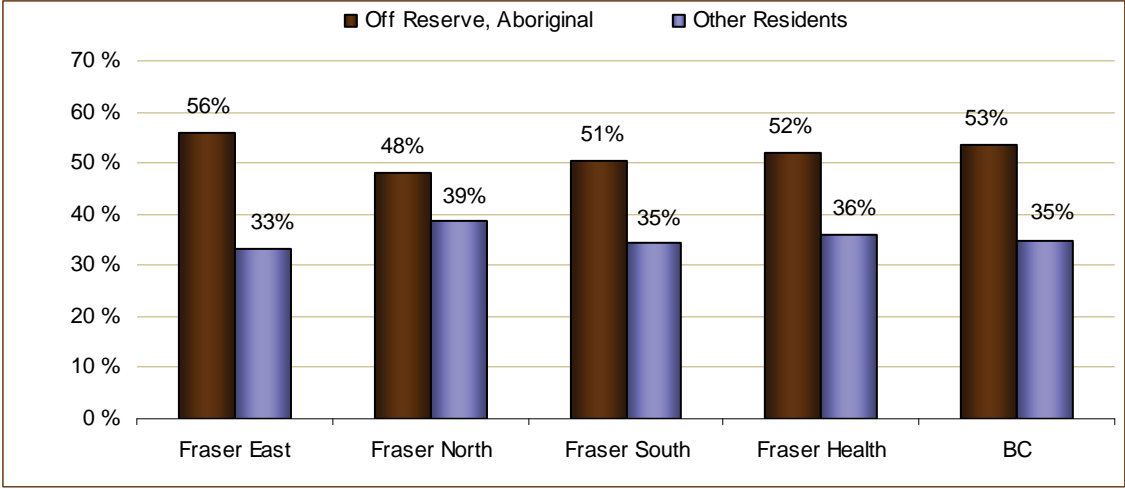
Source: 2006 Census, Statistics Canada

FIGURE 33. Prevalence* of Low Income After Tax for Other Residents, Fraser Health, 2005



Source: 2006 Census, Statistics Canada

FIGURE 34. Proportion of Lone-Parent Families with Children Under 19 Years At or Below Low Income, Off Reserve and non-Aboriginal Populations, 2006



Source: 2006 Census of Canada custom tabulations, Statistics Canada. Prepared by BC Stats.

WHERE CAN WE IMPROVE?

Provide free, culturally appropriate early childhood care and development programs located in easily accessible community-based Aboriginal centres. Invest in community development initiatives, including Indigenous language and literacy development. Provide education sessions on how to shop for healthy food on a budget. Increase access to social housing, food banks, and other social support programs.

LIMITATIONS

Income data is collected for 2005, the year prior to the Census. Average family income does not take into account family size, or how income is distributed among family members. Statistics Canada has clearly and consistently maintained that the LICOs are not measures of poverty; rather they reflect a consistent, well-defined methodology which identifies those who are relatively worse-off financially than average.

Chapter 5

MATERNAL & CHILD HEALTH

Pregnancy and childbirth are natural phenomena and a relatively healthy experience for women in Fraser Health. However, for those faced with a difficult pregnancy, birth or infant and child health-related issues, the experience can be challenging and is often associated with significant contact with the health care system.

Maternal and child health is measured through a wide array of indicators. Some of the key indicators – or those where Aboriginal data are available – are presented in this chapter and include: birth rates, low birth-weight babies, premature babies, infant mortality, dental surgeries in children, substance use during pregnancy, early childhood development, children in government care and teen pregnancy.

As indicated by the data presented in this chapter, both maternal and child health is much worse among Fraser Health's Aboriginal population than among non-Aboriginal people. For example, Aboriginal children have higher rates of preterm births, infant mortality, dental surgeries, and children in the care of government. Aboriginal mothers also have higher rates of teen pregnancy and substance use during pregnancy.

While the factors associated with this disparity are often complex and unknown, research evidence suggests that Aboriginal people's overall lower socio-economic status, effects of cultural and historical threats and injustices, overall lower health status, lower quality of food and shelter, higher rates of obesity and smoking all contribute to the poorer maternal and child health outcomes seen here. Consequently, further improvement in the health of pregnant women, new mothers, newborns and children will require public policy and social actions outside the healthcare system. However, given that the healthcare services play an integral role in maternal and child health outcomes, reorientation of the existing health care services to provide culturally-sensitive and culturally-appropriate care for Aboriginal people is critical to achieving better outcomes in maternal and child health.

Live Births

All live births, irrespective of the duration of the pregnancy and viability of birth, occurring among Status Indians and the total population.

WHY IS IT IMPORTANT?

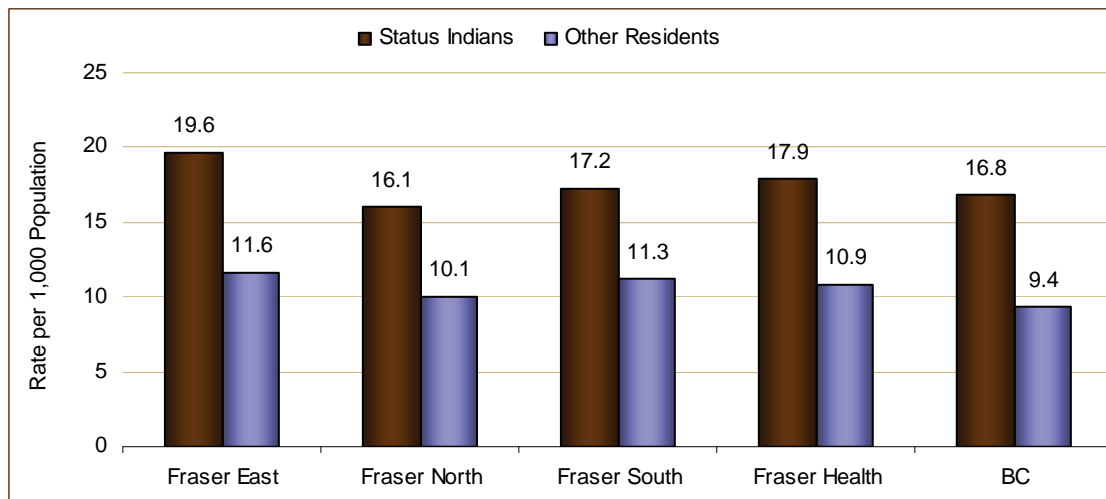
Knowing the numbers of births in Fraser Health is important for planning prenatal, perinatal, and neonatal health services and childcare services.

HOW ARE WE DOING?

In 2006, a total of 450 Status Indian babies were born in Fraser Health: 206 in Fraser East, 110 in Fraser North and 134 in Fraser South. For the 2002 to 2006 period, 46 per cent of all live Status Indian births were in Fraser East, 25 per cent in Fraser North and 29 per cent in Fraser South.

As seen in FIGURE 35, live birth rates vary considerably among Status Indians and other residents in Fraser Health with Status Indian birth rates being much higher than other residents. Within Fraser Health, the Fraser East HSDA had the highest birth rate among the Status Indian population.

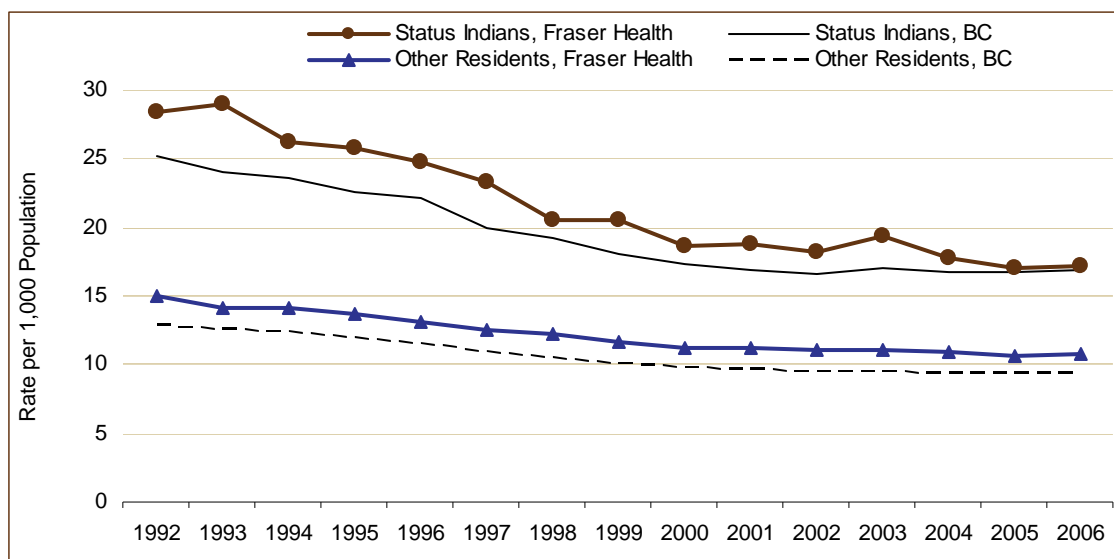
FIGURE 35. Live Birth Rate, Status Indians and Other Residents, 2002-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 36 depicts live birth rates for the 1992 to 2006 period for Status Indians and other residents. Birth rates continue to decline for both Status Indians and other residents, reflecting a pattern consistent with most developed countries.

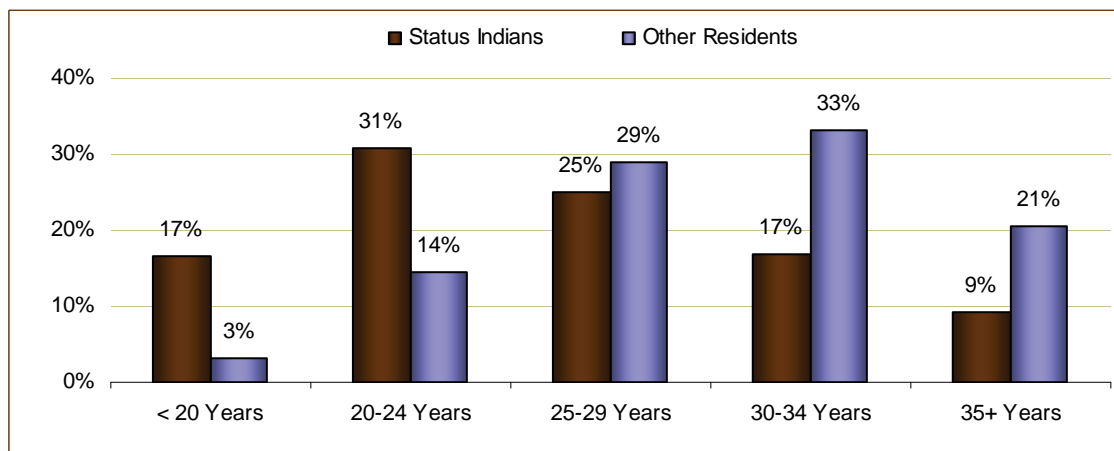
FIGURE 36. Live Birth Rate, Status Indians and Other Residents, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Maternal age (younger than 15 or older than 44) is a risk factor for numerous birth and infant related outcomes, including low birth weight. Mothers over the age of 35 are at higher risk of preeclampsia, gestational diabetes and large newborn infants, any of which may result in caesarean delivery. The risk of a baby having Down's syndrome increases with mother's age.

FIGURE 37. Proportion of Live Births by Maternal Age, Status Indians and Other Residents, BC, 1998-2004



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Although Fraser Health specific data were unavailable, BC-level data show that a much higher proportion of births occur in younger ages among Status Indians than other residents (FIGURE 37). For example, nearly 53.6 per cent of births occur in mothers age 30 and older among other residents compared with only 26.2 per cent among Status Indians. In addition, among Status Indians, a much higher proportion of births occur in the teenage group (discussed later in this chapter).

WHERE CAN WE IMPROVE?

Reduce births associated with potentially negative outcomes for both the baby and mother such as those occurring in teenage girls.

LIMITATIONS

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of live birth rates in this group.

Low Birth-Weight

Measures the number of live infants weighing less than 2,500 grams at birth among Status Indians and the total population.

WHY IS IT IMPORTANT?

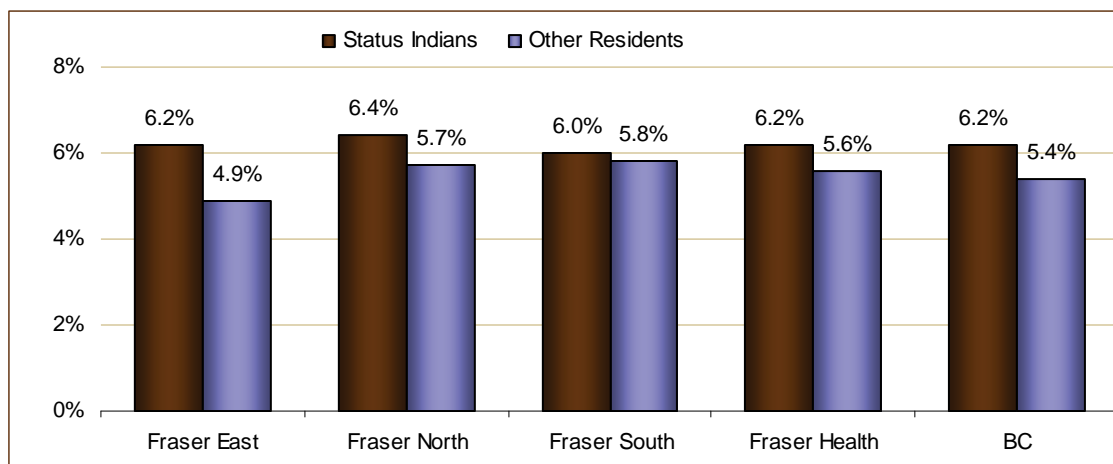
Low birth-weight has been linked to infant mortality, physical disability and long term health problems, including heart disease, diabetes, chronic respiratory problems, learning difficulties and cerebral palsy. Hospitalization rates for low birth weight infants are much higher than for those with a healthier weight.

The main causes of low birth-weight are premature birth (before 37th week), stunted growth for gestational age or both. Low birth-weight is also found in multiple pregnancies, which increases among women treated for infertility. Human physiology and genetics, the physical and social environment, nutrition and lifestyle, along with health service utilization can all influence birth-weight. Low birth-weight is associated with smoking, poor diet during pregnancy, alcohol and/or drug abuse, preeclampsia, poverty, low education, and very young and older mothers.

HOW ARE WE DOING?

Annually, Fraser health averages approximately 25 to 30 low birth weight babies of Status Indian origin. From 2002 to 2006, 6.2 per cent of all Status Indian live births in Fraser Health were low-weight births, a slightly higher rate than other residents (5.6 per cent) but similar to the BC rate for Status Indians (FIGURE 38).

FIGURE 38. Low Birth Weight Births, Status Indians and Other Residents, 2002-2006

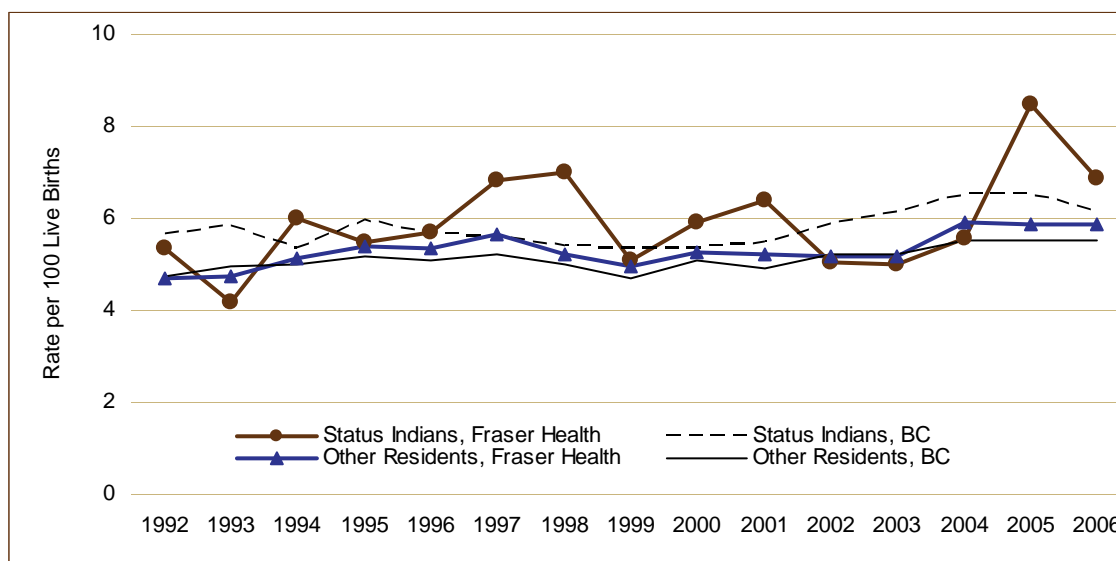


Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The rate of low birth-weight increased slightly for both Status Indians and other residents between 1992 and 2006. As seen in FIGURE 39, the Fraser Health Status Indian rate shows considerable variation due to small numbers, but the overall upward trend is evident. This increase in low birth-

weight is consistent with provincial and Canadian data but is a reversal from the 1970 to 1990 rate which showed a slight decline¹⁰.

FIGURE 39. Low Birth-Weight Births, Status Indians and Other Residents, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

As expected, a newborn's gestational age is closely related to his or her birth weight. The 2007 data for all births in Fraser Health show that regardless of ethnicity, almost three-quarters (74.3 per cent) of low birth-weight babies were born prematurely.

WHERE CAN WE IMPROVE?

Recent increases in low birth-weight rates is related to the increase in the preterm birth rate (discussed in the next section) and the higher rate of multiple births from infertility treatments.

Strategies for preventing low birth-weight babies are limited due to a multitude of risk factors and because the underlying causal mechanisms are not well understood. As a result, community-wide, sustained approaches that provide easy access to prenatal maternity services and focus on health promotion and the underlying causes are likely the best options.

LIMITATIONS

Low birth-weight data does not specify the cause of the low birth-weight. The age of the mother affects low birth-weight rates, and rates across LHAs were not adjusted for the age structure of the female population within the LHA.

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of low birth weight in this group.

Preterm (Premature) Births

The ratio of the number of live births delivered before 37 full weeks of gestation relative to the total number of live births

WHY IS IT IMPORTANT?

Preterm birth is the leading cause of neonatal and infant mortality with more than two-thirds of infant deaths without congenital anomalies related to preterm births. In addition, morbidity associated with preterm births includes low birth-weight, acute respiratory failure, gastrointestinal complications, immunologic deficiencies, as well as longer term motor, cognitive, visual, hearing, behavioural and growth problems⁵.

In recent years, preterm birth rates have been increasing in Canada and most other industrialized nations.

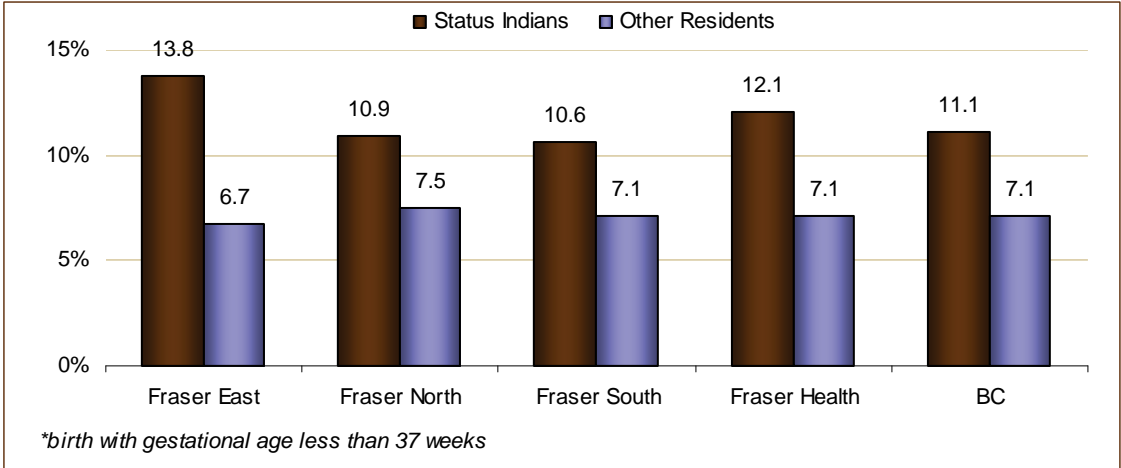
HOW ARE WE DOING?

In the last three years, Fraser Health has averaged approximately 60 preterm births per year for Status Indians.

As previously discussed, the gestational age of newborns is a relatively reliable predictor of birth weight. Regardless of ethnicity, 2007 data for all births in Fraser Health showed that 58.9 per cent of preterm births resulted in low birth-weight babies.

Aggregate data for 2002 to 2006 show that Status Indians had much higher rates of preterm births than other residents across Fraser Health (FIGURE 40). Approximately 12.1 per cent of all live births in Fraser Health Status Indians were preterm births compared with 7.1 per cent for other residents. In Fraser East HSDA, nearly 13.8 per cent of all live births in Status Indians were preterm, the highest percentage in Fraser Health.

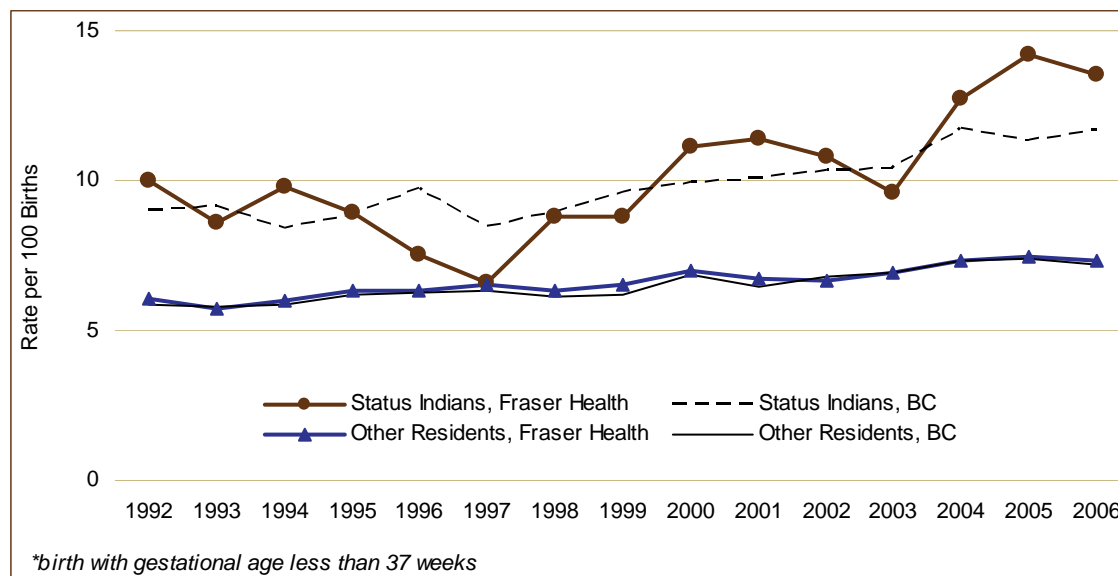
FIGURE 40. Preterm* Birth Rate, Status Indians and Other Residents, 2002-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

As shown in FIGURE 41, the Status Indian preterm rate has consistently been higher than other residents for the 1992 to 2006 period and has shown a steady increase. The gap in rates between Status Indians and other residents is widening.

FIGURE 41. Preterm* Birth Rate, Status Indians and Other Residents, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Risk factors associated with preterm birth include mother's age (<20 or >35 years), short stature (<62" or 157.5 cm), a previous preterm birth, pre-existing physical anomalies or medical conditions, multiple pregnancy (twins/triplets, etc.), primiparous (first delivery), infertility treatments, poverty, single marital status, smoking, high stress, illicit drug use and race/ethnicity⁵.

Aboriginal women of child bearing age are at risk for many of these risk factors.

LIMITATIONS

Length of gestation is based on the first day of the mother's last menstrual period which is subject to considerable error due to recall, post-conception bleeding, irregular or long/short menstrual cycles, delayed ovulation, and unrecognized fetal loss. Gestational age may be somewhat more accurate in recent years due to ultrasounds; however, regional variations may exist due to the availability and interpretation of these dating techniques.

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of preterm births in this group.

Infant Mortality

Infant mortality is the number of deaths occurring in infants age less than one year.

WHY IS IT IMPORTANT?

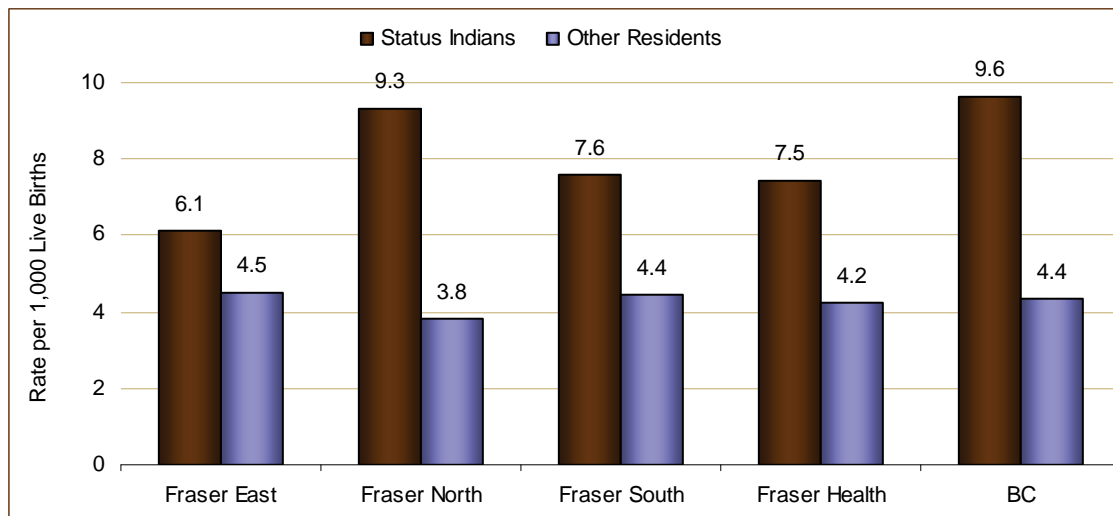
The infant mortality rate is considered to be an indicator of the level of social and economic development and the availability and quality of health services, including perinatal health care, as well as the effectiveness of preventive care and attention paid to the health of the mother and her child.

Low birth-weight is the principal risk factor for neonatal death⁵ (i.e., death within 28 days after birth). Causes of low birth-weight such as smoking, poor nutrition during pregnancy, and drug or alcohol use may be indirectly associated with infant mortality rates.

HOW ARE WE DOING?

Cumulative data from 1992 to 2006 show a total of 51 Status Indian infant deaths in Fraser Health, an average of approximately three Status Indian infant deaths per year.

FIGURE 42. Infant Mortality Rate, Status Indians and Other Residents, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

As seen in FIGURE 42, the Fraser Health infant mortality rate is much higher for Status Indians (7.5 deaths per 1,000 live births) than other residents (4.2 deaths per 1,000 live births). Within Fraser Health, the highest rate for Status Indians was in Fraser North (9.3 deaths per 1,000 live births) and the lowest in Fraser East (6.1 deaths per 1,000 live births).

Given the relatively small annual numbers of infant deaths among Status Indians in Fraser Health, a trend could not be established at this geographic level. However, provincial data show a small decline in the infant mortality rates for the Status Indian population from 1993 to 2006.

In order to more fully understand the causes, infant deaths can be further differentiated into neonatal deaths (deaths occurring in the first 28 days of life) and post neonatal deaths (deaths between 28 days and one year of age). For example, the causes of neonatal death tend to be different from the causes of post-neonatal death, with congenital anomalies and perinatal conditions being more prominent in the neonatal period, and SIDS (sudden infant death syndrome), infectious diseases, respiratory diseases and other environmental factors being more common in the post-neonatal deaths.

Of the 51 infant deaths among Fraser Health Status Indians between 1992 and 2006, 25 (or 49.0 per cent) were neonatal and 26 were post-neonatal TABLE 14. These proportions are different from other residents where 72.1 per cent of infant deaths were neonatal and 27.9 per cent were post-neonatal. This difference is reflected in the much higher post-neonatal mortality rates for Fraser Health Status Indians (3.8 post-neonatal deaths per 1,000 live births) compared with other residents (1.2 post-neonatal deaths per 1,000 live births).

The higher proportion of deaths during the post-neonatal period seen in Status Indians is contradictory to what is typically the case in developed countries where neonatal mortality rates are higher than post-neonatal rates.

TABLE 14. Neonatal and Post-neonatal Mortality Counts and Rate, Status Indians and Other Residents, 1992-2006

	Neonatal Mortality	Post-neonatal Mortality	All Infants
Fraser Health, count:			
Status Indians	25	26	51
Other Residents	721	279	1,000
Fraser Health, rate:			
Status Indians	3.7	3.8	7.5
Other Residents	3.1	1.2	4.2
BC, count:			
Status Indians	201	204	405
Other Residents	1,858	759	2,617
BC, rate:			
Status Indians	4.8	4.9	9.6
Other Residents	3.1	1.3	4.4

Rate per 1,000 live births.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The major causes of infant deaths are summarized in TABLE 15. SIDS was the second leading cause of infant mortality in Fraser Health Status Indians, accounting for a much higher proportion (37.3 per cent) of deaths than in other residents (11.0 per cent). On the other hand, the proportion of deaths from congenital anomalies was much lower for Status Indians than for other residents.

TABLE 15. Infant Mortality by Selected Causes of Death, Status Indians and Other Residents, Fraser Health, 1992-2006

Cause of Death	Status Indians		Other Residents	
	Count	Proportion of Total	Count	Proportion of Total
Perinatal conditions	22	43.1%	477	47.8%
SIDS*	19	37.3%	110	11.0%
Congenital anomalies	7	13.7%	289	29.0%
All Other Natural Causes	2	3.9%	83	8.3%
External Causes	n/a	n/a	23	2.3%
Infectious diseases	n/a	n/a	10	1.0%
Total	51	100%	1,000	100%

n/a=counts too small to report

*Sudden Infant Death Syndrome

Source: Provincial Health Officer. (2007). *Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007.* Victoria, BC.

WHERE CAN WE IMPROVE?

Increase awareness, education, and support services for Aboriginal mothers. Prenatal and neonatal care services designed in partnership with Aboriginal communities and organizations could improve outcomes for infants with birth-related diseases.

Support services aimed at reducing the impact of smoking, alcohol use and poor nutrition associated with low birth-weight, SIDS and infant mortality are required.

LIMITATIONS

Given that the death of an infant is a rare event in Fraser Health, one must be cautious when interpreting the data, especially for smaller geographies.

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of infant mortality in this group.

Dental Surgeries in Children

A measure of dental disease in children less than 14 years where dental surgical intervention was required.

WHY IS IT IMPORTANT?

Tooth decay, or dental caries, is a common illness for infants and children with dental caries being far more prevalent than any other paediatric illness³. This type of tooth decay, referred to as early childhood tooth decay is commonly caused by improper nursing bottle habits including sweetened pacifiers. It can also be seen in children who were exclusively breastfed. Tooth decay occurs when a liquid, such as breast milk, formula or juice bathes the teeth, allowing plaque bacteria to metabolize fermentable carbohydrate into acid. The acid attacks the teeth causing caries. A habit prone to cause early childhood tooth decay is allowing an infant to fall asleep with a bottle or while breastfeeding, which causes the milk to pool around the teeth.

In older children, poor oral hygiene and diets high in sugar and refined carbohydrates are the main causes of tooth decay. There is a strong link between oral health and income. Low-income children and new immigrants are more likely to have poor oral health. Risk of tooth decay is higher in families with low income, low education levels and for Aboriginal children⁶.

Oral disorders in children can have a significant impact on general health and well-being including pain, poor sleep and poor eating habits. Dental decay can be a contributing factor in “failure to thrive” which is associated with low weight and height. Periodontal disease, a chronic infection caused by bacteria that accumulate in plaque, is linked to multiple health problems including pre-term low birth-weight babies, heart disease, stroke, pneumonia, and chronic respiratory disease. Poor oral health can lead to poor nutrition and reduced quality of life due to pain, as well as chewing and speech problems⁷.

HOW ARE WE DOING?

As seen in TABLE 16, the rate of dental surgeries for Status Indian children aged 14 and younger was 1.8 times higher than the rate for other residents the same age in Fraser Health. Within Fraser Health, all three HSDAs had higher rates of dental surgeries for Status Indian children than rates for other Resident children. Fraser Health’s Status Indian child rate (7.8) was much lower than the BC average (21.0).

The highest rate of dental surgeries occurred in the 0-4 year age group with rates for Status Indian children nearly double that of other Resident children in all areas of Fraser Health.

TABLE 16. Dental Surgeries, Children Age 0-14 Years, Status Indians and Other Residents, 2006/2007

Indicator	Fraser East	Fraser North	Fraser South	Fraser Health	BC
Ages 0-4 years:					
Status Indians	15.6	17.3	9.9	14.3	39.7
Other Residents	7.2	9.6	5.3	7.2	10.5
Ratio: SI/OR	2.2	1.8	1.9	2.0	3.8
Ages 5-9 years:					
Status Indians	12.9	5.6	2.9	9.4	21.8
Other Residents	8.0	6.6	45.1	4.8	7.2
Ratio: SI/OR	1.6	0.8	0.1	2.0	3.0
Ages 0-14 years:					
Status Indians	8.8	8.7	5.8	7.8	21.0
Other Residents	5.0	5.3	3.4	4.4	6.1
Ratio: SI/OR	1.8	1.6	1.7	1.8	3.4

Rate per 1,000 children in each specific age group

Source: Provincial Health Officer. (2007). *Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007*. Victoria, BC.

WHERE CAN WE IMPROVE?

Good oral hygiene practices and a healthy diet, combined with regular dental visits beginning six months after the first tooth appears are recommended for preventing childhood tooth decay.

Brighter Smiles is an innovative initiative between UBC's Department of Pediatrics and Aboriginal people of Hartley Bay that has been very popular with the community because it combines the provision of health education to school children with community visits. Children incorporate daily "brush-ins", weekly fluoride rinses and receive incentives for taking part in these dental health activities.

LIMITATIONS

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of dental surgeries in this group.

Determinants of Healthy Beginnings

Some of the most important factors associated with healthy pregnancy, birth and childhood lie outside the healthcare system and include personal behaviours, socio-economic status, genetics and social factors such as the quality of housing and nutrition experienced by the mother and child. It also includes safe neighbourhoods, early childhood development opportunities and quality of schools.

Two behavioural indicators – maternal substance use during pregnancy and teen pregnancy – and two social/educational factors - early childhood development and children in government care – are presented here. Other important determinants of healthy beginnings such as breastfeeding, childhood immunizations, exposure to second-hand smoke, car restraint use, maternal education and economic status are not included due to the unavailability of data.

Substance Use During Pregnancy

The extent of substance use (for example, the use of drugs, alcohol and tobacco) while pregnant.

WHY IS IT IMPORTANT?

The relationship between maternal substance use and adverse pregnancy outcomes is well established. Maternal cigarette smoking during pregnancy is associated with preterm birth, spontaneous abortion, placental complications, stillbirth, SIDS (sudden infant death syndrome), asthma, and the risk of intrauterine growth restriction. Children of mothers who smoked during pregnancy can also have long term behavioural problems such as inattention and attention-deficit/hyperactivity disorders⁵.

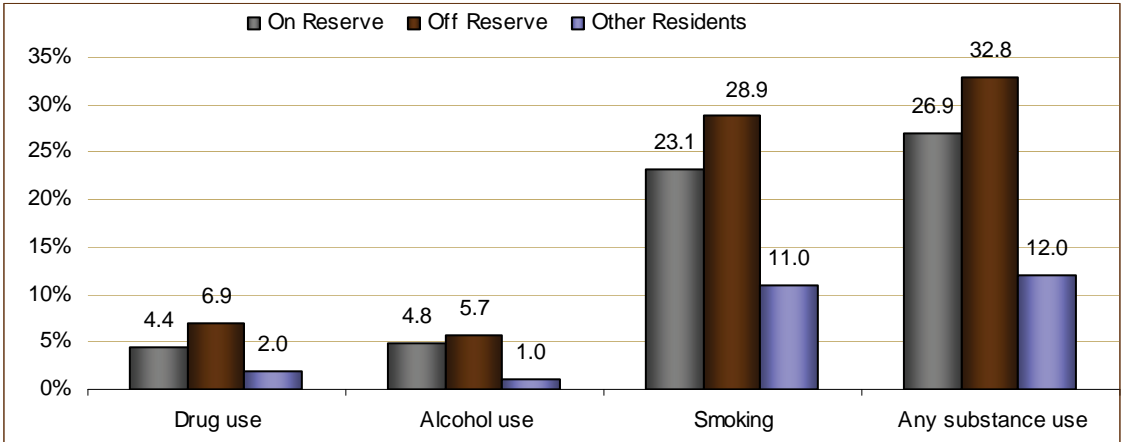
Fetal alcohol spectrum disorder (FASD) is a well documented consequence of maternal alcohol consumption. The cognitive, behavioural and physiological impairments associated with FASD can last over a person's lifespan including early adult alcohol abuse and alcohol dependence in the offspring⁵.

The literature also suggests that substance use during pregnancy is higher among women with low socioeconomic status and within vulnerable populations such as the Aboriginal people.

HOW ARE WE DOING?

BC data show that Status Indian mothers had a higher proportion of substance use during pregnancy than other residents (FIGURE 43). Overall, 26.9 per cent of on-reserve and 32.8 per cent of off-reserve Status Indians, compared with 12.0 per cent of other residents, reported using at least one of the three types of substances.

FIGURE 43. Substance Use During Pregnancy, Status Indians and Other Residents, BC, 1998-2004



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Cigarette smoking was the most common type of substance use during pregnancy with a much higher usage among on-reserve (23.1 per cent) and off-reserve (28.9 per cent) Status Indians than among other residents (11.0 per cent). Generally, off-reserve Status Indian pregnant women had higher rates of substance use than on-reserve Status Indians.

WHERE CAN WE IMPROVE?

Promote non-smoking among women in general and target programs to groups at risk, especially teenage females and assist pregnant women who smoke to stop smoking. Culturally sensitive and supportive programs addressing the root causes of substance use are needed.

Fetal Alcohol Spectrum Disorder (FASD) Workshops

Two FASD workshops were held at Douglas College and Tzeachten First Nation in May 2009, with over 200 people in attendance. Keynote speaker, Diane Malbin, Fetal Alcohol Syndrome Consultation Education and Training Services (FASCETS), presented an innovative understanding of FASD that calls for more holistic and integrated approaches that consider all facets of the person: physical, developmental, and cognitive.

According to Malbin, if FASD is viewed as a physical disability (e.g. brain damage from prenatal exposure to alcohol/drugs) and the primary symptoms are learning and other behavioural characteristics, then children with FASD would benefit from appropriate environmental accommodations (e.g., modifying school timelines, providing alternative instructional strategies, or recognizing developmental rather than chronological age) in a similar manner to accommodations made for more traditional physical disabilities (e.g., wheelchairs and ramps for people with paralysis). The shift in focus is seeing behaviours as symptoms, rather than as things to be changed. The process of implementation is enhanced by recognizing personal, historical, cultural, intellectual, institutional, and fiscal issues and associated with each child.

Source:

LIMITATIONS

Given these are socially undesirable behaviours and that known negative health consequences associated with substance abuse exist for the newborn, pregnant women are likely to underreport these behaviours.

Data for Aboriginal people who are not Status Indians are unavailable at this time so not much is known about the extent of substance abuse during pregnancy in this group.

Early Childhood Development

This is an indicator of early childhood development based on five measures: physical well-being, social competence, emotional maturity, language and cognitive development, and communication and general knowledge.

WHY IS IT IMPORTANT?

The broader environment where a child resides or experiences early in life is an important determinant of childhood well-being or risk. Research shows that early childhood development is an important predictor of school readiness, health, and coping skills across the entire life span. Emotional health in early childhood has immediate and long-term effects on a person's outlook in life, social interactions and ability to cope, while verbal skills are a measure of school readiness that allow a child to learn in the school environment, preparing him/her to succeed in education and work.

Research indicates that the first six years of life are critical to a child's development since the regions of the brain responsible for all the basic competencies needed to thrive are most sensitive to the environment. Consequences of poor development include lower economic participation, criminal activity, and many chronic diseases such as obesity, depression, heart disease, high blood pressure and type 2 diabetes⁸.

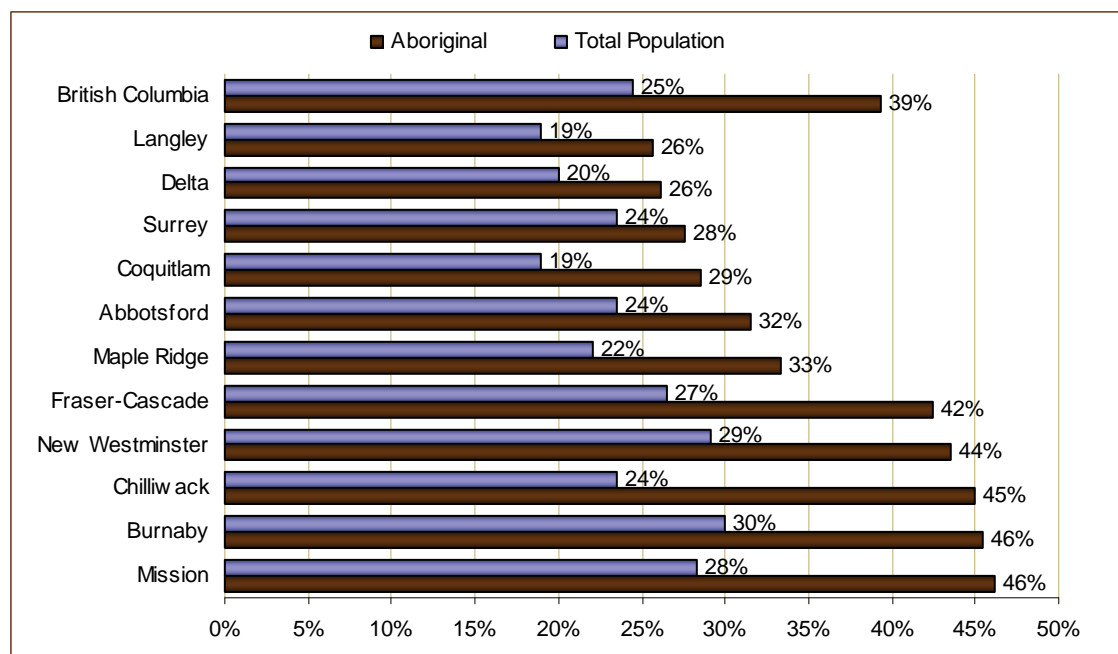
The Early Development Instrument (EDI) is a tool used to assess child development at kindergarten age. The EDI consists of five measures, namely, physical well-being, social competence, emotional maturity, language and cognitive development, and communication and general knowledge. These five dimensions are seen as critical markers in a child's development from birth to school age.

HOW ARE WE DOING?

The EDI allows us to estimate vulnerability rates for children in a given geographic area, as illustrated in FIGURE 44 where vulnerability is the EDI score for the bottom 10 per cent of children in BC. Children who fall below that score on an EDI scale are said to be vulnerable in that aspect of development. These children are, on average, more likely to be limited in their development on the identified EDI scale than children with scores above the cut-off.

Nearly two-out-of-five Aboriginal kindergarten children in BC are vulnerable on at least one of the five EDI scales. Simply put, approximately 35 per cent of Aboriginal children in Fraser Health arrive at kindergarten not meeting all of the healthy development benchmarks they need to succeed now and later in life. This rate is about 60 per cent higher than the rate for all kindergarten children in BC. In Fraser Health, vulnerability rates for at least one EDI are higher among Aboriginal children than the total kindergarten population across all school districts. Rates for Aboriginal children are highest in Mission, Burnaby and Chilliwack where approximately 46 per cent of Aboriginal kindergarteners are vulnerable on at least one EDI measure. The lowest rates are seen in Langley, Delta and Surrey. In Surrey, the rate among Aboriginal people is higher than the rate for all kindergarten children by 17 per cent, the smallest rate differential between the two population groups in Fraser Health.

FIGURE 44. Percent of Kindergarten Children Who Are Vulnerable on At Least One Early Development Instrument (EDI) by School District, Aboriginal and Total Children, Fraser Health



Source: The British Columbia Atlas of Child Development, 2005.

Note: Survey years differ for the school districts. Delta, Burnaby, Langley, New Westminster and Mission: 2003; Surrey: 2003 and 2004; Coquitlam and Abbotsford: 2001 and 2003; Chilliwack: 2002; Fraser-Cascade: 2002 and 2003; Maple Ridge: 2004.

TABLE 17. Percent of Total Kindergarten Children Who Are Vulnerable on the Five EDI Scales, by School District, Aboriginal and Total Kindergarten Children, Fraser Health

School district	Physical Health & Well-being		Social Competence		Emotional Maturity		Language & Cognitive Development		Communication & General Knowledge	
	Aborig	Total	Aborig	Total	Aborig	Total	Aborig	Total	Aborig	Total
Fraser East:										
Abbotsford	12.6	9.5	16.2	10.1	17.3	9.5	16.2	10.3	9.9	11.3
Chilliwack	23.3	9.7	27.1	10.2	24.1	11.1	28.1	11.4	15.0	5.9
Fraser-Cascade	24.2	10.8	21.2	12.3	18.2	11.4	39.4	14.1	24.2	10.3
Mission	34.6	12.5	19.2	12.2	7.7	11.5	34.6	13.9	7.7	9.2
Fraser North:										
Burnaby	27.3	9.7	15.9	11.0	18.2	8.2	22.7	12.6	13.6	14.2
Coquitlam	18.6	8.4	8.8	6.9	7.9	7.5	15.7	6.3	13.7	6.9
Maple Ridge	19.4	11.8	22.2	11.2	11.1	8.1	20.0	7.9	13.9	6.1
New Westminster	26.1	11.4	21.7	12.9	21.7	11.4	13.0	9.5	13.0	14.9
Fraser South:										
Delta	17.4	7.3	8.7	6.7	8.7	5.6	23.8	7.9	4.4	8.6
Langley	16.3	9.9	9.3	7.6	7.3	7.3	16.3	6.1	0.0	4.6
Surrey	14.7	8.3	11.3	8.0	5.5	7.4	14.7	10.3	3.5	10.3
BC	22.1	10.0	16.3	10.0	16.1	10.0	19.8	10.0	12.7	10.0

Source: The British Columbia Atlas of Child Development, 2005.

Note: Survey years differ for the school districts. Delta, Burnaby, Langley, New Westminster and Mission: 2003; Surrey: 2003 and 2004; Coquitlam and Abbotsford: 2001 and 2003; Chilliwack: 2002; Fraser-Cascade: 2002 and 2003; Maple Ridge: 2004.

TABLE 17 shows vulnerability rates on each of the five EDI scales for Aboriginal and the total kindergarten children. While the percentage of kindergarteners who are vulnerable for each measure show considerable variability among the Fraser Health school districts, the important point is that Aboriginal children have much higher rates of vulnerability for most of the development measures in nearly all the school districts within Fraser Health. The largest gaps between Aboriginal and total kindergarteners were generally in Fraser East and the least disparity generally in Fraser South. Two dimensions of vulnerability – physical health and well-being and language and cognitive development – generally had larger gaps between Aboriginal and total kindergarten children.

WHERE CAN WE IMPROVE?

Early childhood development can be enhanced at the family, neighbourhood, community and societal levels with strategies that account for the broad mix of services and programs required for developing social care and supporting early development. Intervention must ensure the elimination of existing barriers to families accessing services.

Aboriginal Head Start

The Aboriginal Head Start (AHS) Association of BC, funded by the Public Health Agency of Canada, provides support and leadership to urban AHS sites (12 in total) across the province, including two in Fraser Health. AHS is an early intervention preschool program to support early childhood development of Aboriginal children and to foster pride in their heritage before they enter the mainstream school system. The program focuses on 3 to 5 year olds with the purpose to bring them to the school readiness stage in order to help ensure an easy transition into kindergarten.

While many Head Start programs exist in Fraser Health, two are highlighted here.

Awahsuk Aboriginal Head Start – Surrey

This centre provides culturally relevant child development services in an inclusive, respectful and appreciative learning environment. Children, taught by elders and cultural teachers, learn about their culture, heritage, traditional languages, pow-wow dancing and other Aboriginal topics. Children graduating from Awahsuk receive their own regalia, representing an important cultural symbol.

Future 4 Nations Head Start - Mission

Future 4 Nations is an urban AHS preschool program, opened in 1997 providing services to a maximum of 20 children. The program employs five full-time staff and part-time special needs assistant, a part time cultural worker and two elders.

Source: www.ahsabc.net

Success By 6[®]: An Early Childhood Development Initiative

Success By 6[®] is an early childhood development initiative in BC funded by the United Way, Credit Unions of BC and the Ministry of Children and Family Development dedicated to providing all children with a good start in early years. The initiative helps to ensure that children ages 0 to 6 develop the emotional, social, cognitive, and physical skills needed to make a successful entry into the school system.

Success By 6 empowers community by engaging citizens in early childhood development, and funding programs that strengthen services for young children and their families. Funded programs include literacy, nutrition, children's play, parenting and family skills development.

Success By 6 and the Aboriginal Strategy

Success By 6 is working with Aboriginal communities to enhance the lives of young Aboriginal children and their families. Initial work began in 2004 with the completion of the Aboriginal Early Childhood Development (ECD) Community Engagement Project to determine the relevance of Success By 6 for Aboriginal people in BC and to explore the best possible ways to address the needs and priorities of Aboriginal children. In 2006, a process was established and funds allocated to develop a comprehensive Aboriginal strategy. Built on respect and principles that recognize the history and diversity of Aboriginal Peoples, their right to self-determination, and to build new initiatives through the use and enhancement of existing relationships and partnerships, this strategy established four priorities and goals:

- Aboriginal representation
 - *Increase meaningful Aboriginal representation and participation in local Success by 6 initiatives.*
- Capacity building
 - *Support the development of local partnerships and relationships.*
 - *Support Aboriginal children and families through community driven approaches.*
 - *Work with the Aboriginal communities to increase access to funding.*
- Cultural awareness
 - *Promote greater awareness and understanding of Aboriginal histories, issues and cultures, within the context of ECD.*
- ECD awareness and promotion
 - *Raise awareness of the importance of early years in Aboriginal communities.*

Currently, there are over 20 Success By 6 Aboriginal coordinators across BC dedicated to ensuring that children ages 0 to 6 have access to culturally appropriate programs and services that ensure healthy growth and development.

The Fraser Region Aboriginal ECD Network

The Aboriginal ECD Network was developed in early 2003 in order to achieve greater Aboriginal engagement with Early Childhood Development (ECD) and Supported Child Development (SCD) planning in the Fraser Region. The Network is made up of ECD and SCD service providers and stakeholders providing services and supports such as:

- leadership at a local and regional level on issues affecting Aboriginal children, families and communities;
- collaboration within the Fraser Region to provide professional development and opportunity in the fields of Aboriginal ECD and SCD;
- communication with and provision of advice to agencies and communities on ECD and SCD matters;
- positively influence, design where appropriate, those Aboriginal ECD and SCD activities presently occurring in or proposed for the Fraser Region.

Source: www.successby6bc.ca and <http://www.aboriginalcommunities.successby6fraser.ca.self-edit.com/viewcategory/0>

The 15 by 15 Policy Framework

15 by 15, A Comprehensive Policy Framework for Early Human Capital Investment, is an evidence-based approach put forward by the Human Early Learning Partnership (HELP) to reduce child vulnerability in BC. The framework proposes policy changes and provides recommendations to meet the BC Government's goal of lowering the provincial rate of early vulnerability to 15% by fiscal year 2015/2016 (from the current rate of 29 per cent). Specific recommendations of this framework include:

- Build on maternity and parental leave to enrich the benefit value and to extend the total duration from 12 to 18 months, reserving additional months for fathers;
- Build on existing employment standards to support mothers and fathers with children over 18 months to work full-time for pay, but redefine full-time to accommodate shorter annual working hour norms without exacerbating gender inequalities in the labour market;
- Build on income support policies to mitigate poverty among families with children;
- Build on pregnancy, health and parenting supports to ensure monthly developmental monitoring opportunities for children from birth through age 18 months, as their parents are on leave;
- Build on early education and care services to provide a seamless transition for families as the parental leave period ends in order make quality services for children age 19 months to kindergarten affordable and available on a full- or part-time basis, as parents choose;
- Build on the work of local ECD coalitions in community planning to enhance program coordination between all local services that support families with children from birth to age six.

Source: *15 by 15*, A Comprehensive Policy Framework for Early Human Capital Investment. August 2009. Human Early Learning Partnership, UBC.
Accessed on Dec 15, 2008 from: <http://www.earlylearning.ubc.ca/documents/2009/15by15-Full-Report.pdf>

LIMITATIONS

Data exclude kindergarten classes on reserve, but overall represent 80 per cent of Aboriginal kindergarten children in BC.

Children in Government Care

Children and youth aged 0 to 18 years taken into care by provincial child care authorities.

WHY IS IT IMPORTANT?

The rate of children in government care is a key indicator of children's risk and vulnerability associated with social, economic and behavioural factors. Children in care are more prone to poor health and life outcomes, including mental disorders, elevated risk from intentional and unintentional injuries, riskier sexual practices occurring at younger ages and poor educational attainment.

The majority of these children come from single-parent families and from families that are socially and economically disadvantaged. A disproportionate number of Aboriginal children and youth are in government care with data showing an increasing trend for Aboriginal children in care.

HOW ARE WE DOING?

Placing a child in care results from a complex process, initiated with a call to the Ministry of Children and Family Development concerning possible abuse, neglect or other protection needs of a child. Depending on the situation, these initial calls result in protection reports, which in turn become child protection investigations. If the investigation concludes that a child is in need of protection, the child is taken into custody unless other solutions are available.

As of January 2009, a total of 2,931 children in Fraser Health were in the care of the Ministry of Children and Family Development. Of this total, 46.9 per cent or 1,374 were Aboriginal and 53.1 per cent were non-Aboriginal (TABLE 18). Within Fraser Health, Fraser East had the highest proportion of children in care that are Aboriginal (51.8 per cent) and Fraser North, the lowest (41.6 per cent).

TABLE 18. Children in Care*, Fraser Health HSDAs, as of January 2009

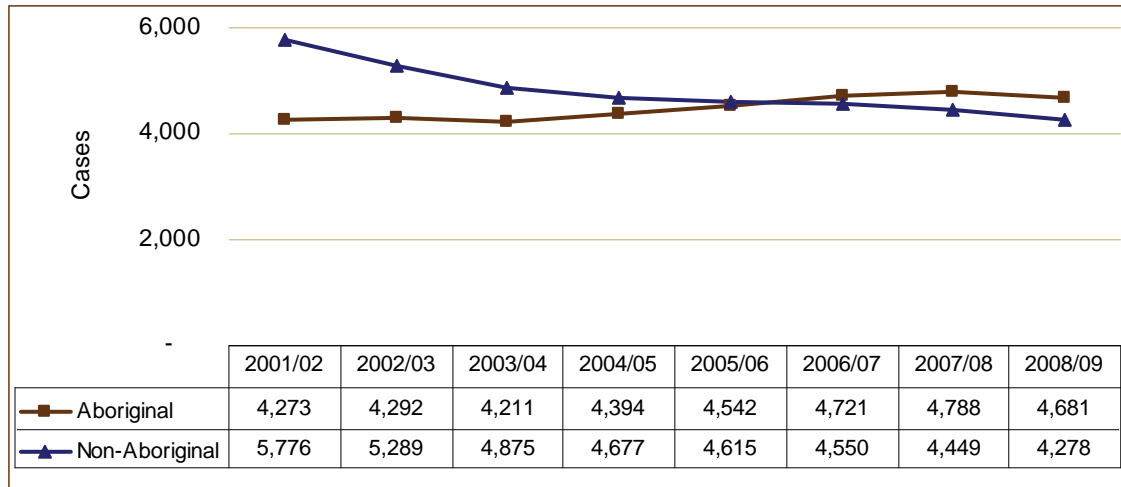
Indicator	Fraser East	Fraser North	Fraser South	Fraser Health	BC
Total number of children in care (CIC)	1,035	683	1,213	2,931	8,829
Number of Aboriginal children in care	536	284	554	1,374	4,644
Aboriginal CIC as % of total children in care	51.8%	41.6%	45.7%	46.9%	52.6%
Non-Aboriginal CIC as % of total children in care	48.2%	58.4%	54.3%	53.1%	47.4%

*the counts in this table exclude 131 children in care that are living out of province, and as a result, these numbers will not match the counts in the next chart.

Source: Provincial Health Officer. (2007). *Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007.* Victoria, BC.

Overall in BC, approximately one-half of all children in care were Aboriginal. While the overall number of children in care continues to decline in BC (FIGURE 45), the number of children in care who are Aboriginal has increased from 2001/02 to 2008/09; the proportion of children in care that are Aboriginal increased from 42.5 per cent in 2001/02 to 52.2 per cent in 2008/09.

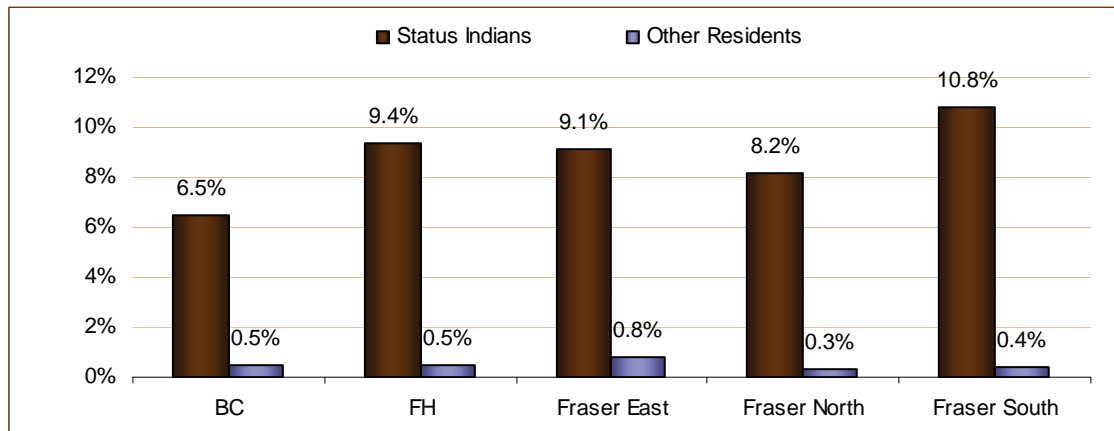
FIGURE 45. Total Number of Children in Care, Aboriginal and Other Children, BC, 2001/02-2008/09



Source: Aboriginal Children in Care. May 2009 Report. Ministry of Children and Family Development. Prepared by Research, Analysis and Evaluation Branch.

Approximately one out of every ten (9.4 per cent) Aboriginal children in Fraser Health were in government care compared with 0.5 per cent of non-Aboriginal children. Among the five health authorities in BC, Fraser Health had both the highest proportion and the largest number (1,974) of Aboriginal children in care.

FIGURE 46. Children in Care as % of total Respective Populations, as of January 31, 2009



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Provincial data show that Aboriginal children in care are younger than non-Aboriginal children and thus spend a longer time in care. On average, an Aboriginal child spends approximately 30 months in care⁹.

Education Experiences of Children in Care

Continuing Custody Order (CCO) is a court order that places a child or youth permanently in the

care of Ministry of Children and Family Development (MCFD) until their 19th birthday. This order is sought after a child or youth has been in the temporary custody of MCFD due to child protection concerns in their family home and the court has found that family reunification is not feasible. MCFD assumes guardianship of the child or youth and the role of the parent.

MCFD and the Ministry of Education have embarked on a joint process to assess, monitor and improve educational outcomes for children in care – and in particular, children in care under a Continuing Custody Order. As part of this process, cross-ministry educational guidelines have been prepared to assist educators, social workers and caregivers in developing goals and supports to improve educational outcomes.

The data below highlight the number of children placed under the CCO and their education outcomes. In BC, approximately 61 per cent of all children under the Continuing Custody Order were Aboriginal even though Aboriginal students account for only 10.8 per cent of the total student headcount (TABLE 19). Of the Aboriginal students under the CCO, only 18.0 per cent go on to graduate high school within six years of entry into grade 8. In Fraser Health specifically, a total of 1,414 students were under the CCO for the 2007/2008 school year.

TABLE 19. Education Outcomes of Children in Care, BC, 2008/2009

Indicator	All	Aboriginal		Non-Aboriginal	
		#	%	#	%
Total student headcount (public schools)	579,488	62,536	10.8%	516,952	89.2%
Children under a Continuing Custody Order	3,634	2,203	60.6%	1,431	39.4%
Six-Year High school completion rate for CCO children	27.0%	---	18.0%	---	36.0%

Source: Information Department, Ministry of Education. 2010. Aboriginal Report 2010 – How Are We Doing? Victoria, BC. <http://www.bced.gov.bc.ca/abed/perf2009.pdf>

BC Aboriginal Child Care Society

The BC Aboriginal Child Care Society is a provincial non-profit charitable society serving Aboriginal early childhood programs throughout British Columbia.

The goals of the Society are twofold. First, they help Aboriginal communities develop high quality, integrated, community child care services that are based on the children's culture, language and history. These services will promote healthy growth and development among our children. Second, they strive to build an Aboriginal child care network by undertaking research, development, advocacy and supporting communities to develop their own resources.

Specific services include:

- training workshops
- annual conferences
- newsletters
- a lending library
- rotating curriculum boxes
- a traveling child care advisor

Source: BC Aboriginal Child Care Society. Extracted September 22, 2009: <http://www.acc-society.bc.ca/>

WHERE CAN WE IMPROVE?

Explore ways to reduce the number of Aboriginal children and youth in care and to return these children and youth to their home communities. There is an ongoing shift in practice towards handling lower risk cases through referrals to community services or through family development response (FDR). FDR is a shorter, less intrusive alternative to a routine child protection investigation; however, it is more commonly used for non-Aboriginal children than for Aboriginal children. community resources to facilitate the use of FDR for Aboriginal children require further exploration⁹.

LIMITATIONS

The rate of children in care is a snapshot or point estimate for a particular time in the year. Consequently, the rate of children in care for other periods may vary throughout the year.

BC or Fraser Health children in care that are living out of province are not included in the data presented here.

Teen Pregnancy

The sum of all birth events (live births, still births, induced abortions and miscarriages) for teenage (age 12 to 19) females.

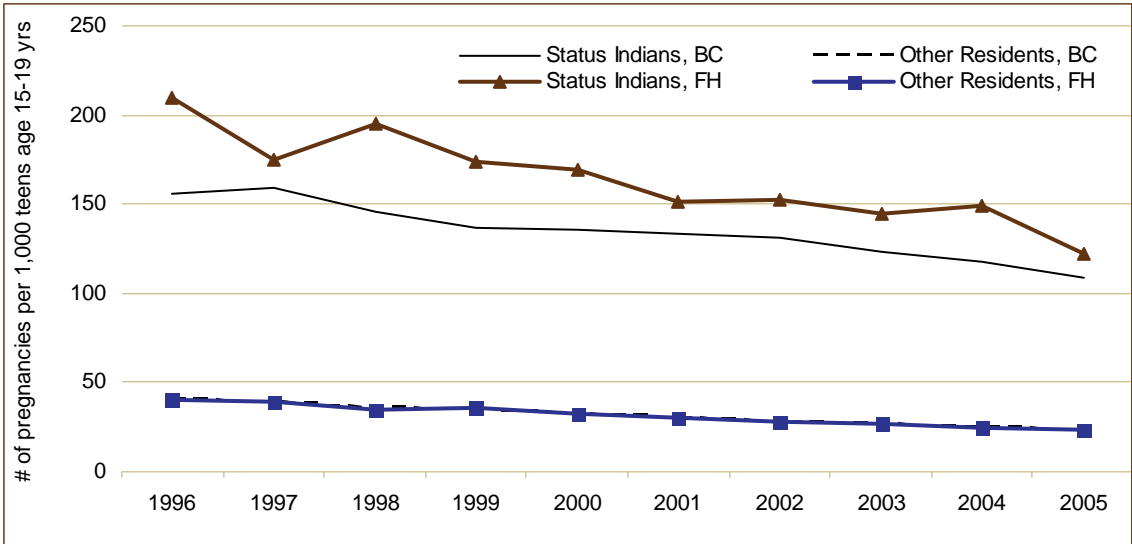
WHY IS IT IMPORTANT?

Teen pregnancy rates provide indirect information on unplanned pregnancies and whether or not youth use contraception. Evidence suggests that teen pregnancy can adversely affect the health of mother and baby as teen mothers are at a higher risk of facing health, social and economic concerns. Babies born to teenage mothers have higher mortality rates and are more likely to have lower birth weights. Historically, Aboriginal teen pregnancy rates are much higher than non-Aboriginal people. Aboriginal teen mothers are also younger, which predisposes them to lengthy cycles of dependency as well as economic and employment disparities. Teen mothers are also more likely to forego their education, placing them at a significant disadvantage for jobs that require post secondary education or training.

HOW ARE WE DOING?

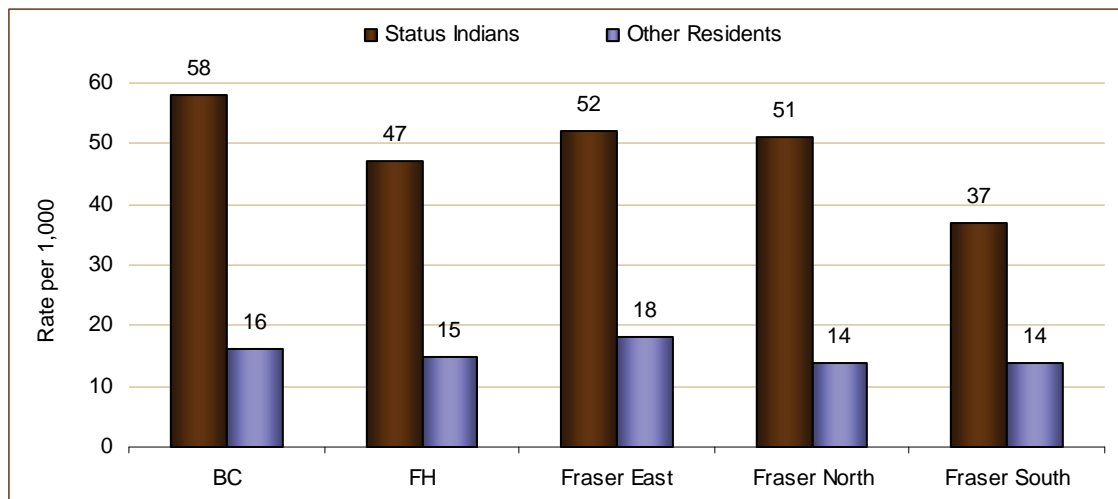
Overall, teen pregnancy rates have been declining for both Status Indians and other residents; however, the difference between Status Indians and other residents is substantial. Status Indian females aged 12 to 19 years have approximately a three-fold and those aged 15 to 19 years approximately a five-fold higher rate of teen pregnancy than other resident females of the same age.

FIGURE 47. Teen Pregnancy Rate*, Status Indians and Other Residents, Age 15-19 Years, 1996-2005



*Pregnancy rates per 1,000 females in the specified age group. Pregnancies include live births, stillbirths, induced abortions, and miscarriages resulting in hospitalization. Multiple birth events are only counted as one pregnancy.
Source: BC Vital Statistics Agency

FIGURE 48. Teen Pregnancy Rate, Status Indians and Other Residents, Age 12-19, 2006

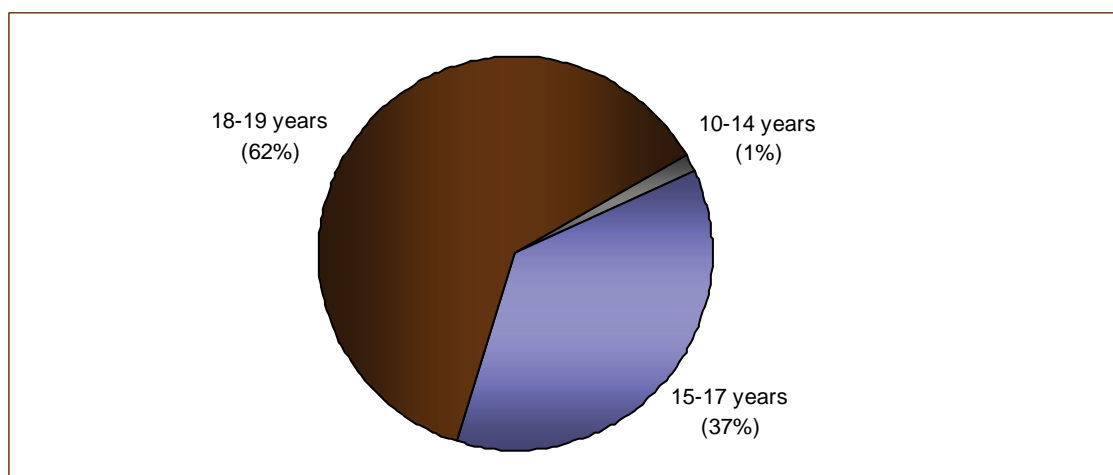


Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The outcomes associated with pregnancy (for example, birth, abortion, still birth and miscarriage) vary considerably in Aboriginal people compared with other residents. From 1999 to 2005, for every ten Status Indian pregnancies, 77.9 per cent resulted in a live birth and 18.5 per cent ended in abortion. This contrasts considerably in other residents, where only 32.5 per cent resulted in a live birth and 62.6 per cent ended in abortion.

Teens in the older age groups are more likely than those in the younger ages to be sexually active and this is reflected in the higher proportion of pregnancies in the 18 to 19 years age group (FIGURE 49). For example, this age group accounted for 61.9 per cent of the total teen pregnancies in Fraser Health Status Indians for the 2003 to 2005 period while the 15 to 17 year age group totalled 36.7 per cent of the total.

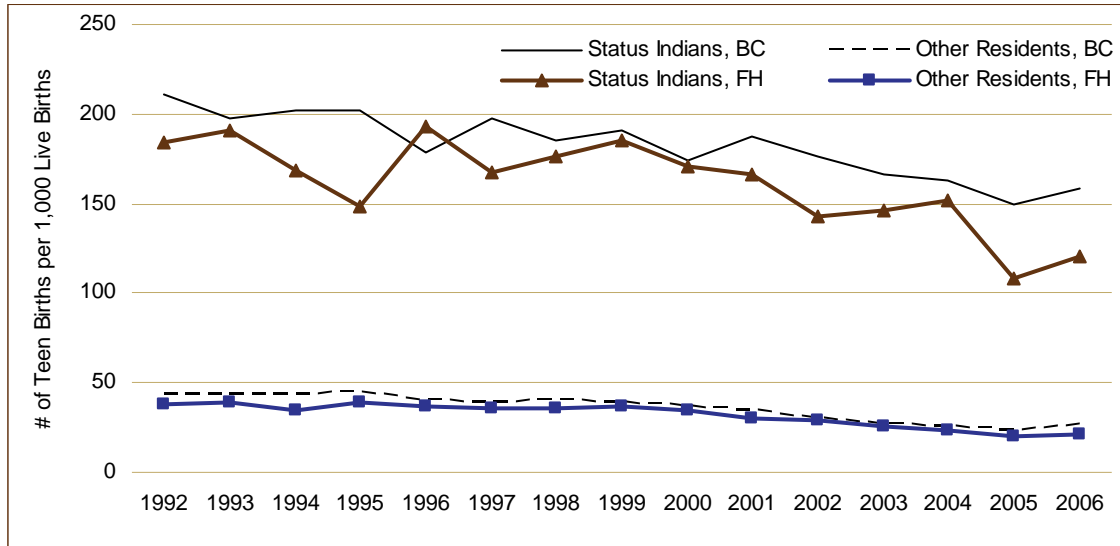
FIGURE 49. Teen Pregnancy Proportions by Age, Status Indians, Fraser Health, 2003-2005



Source: BC Vital Statistics Agency

The rate of live births in teens, called teenage mother rate and shown in FIGURE 50, continues to decline for Status Indians in Fraser Health. However, a Status Indian teenager is five times more likely to become a mother than a teenager who is not Status Indian.

FIGURE 50. Teenage Mother (< 20 years) Rate*, Status Indians and Other Residents, 1992-2006



*number of teen births (less than 20 years) per 1,000 live births.

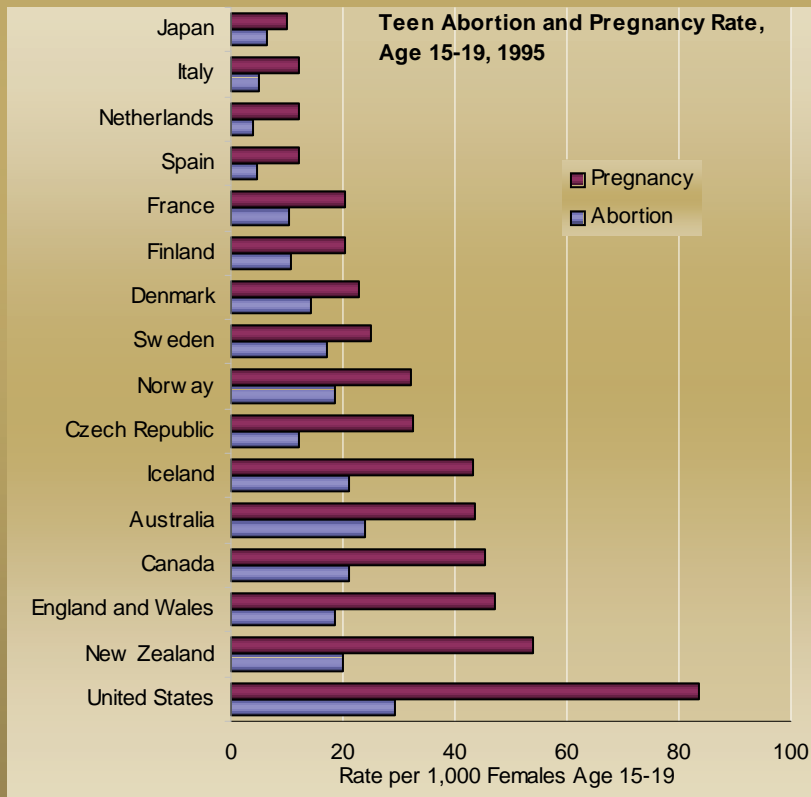
Source: Provincial Health Officer. (2007). *Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007.* Victoria, BC.

International Perspective on Teen Pregnancy

Teen pregnancy data for most industrialized countries show that the teen pregnancy rate is on the decline, and this is consistent with the Fraser Health level data presented above. Even with this declining trend, how do the teen pregnancy rates in Canada – and in Fraser Health particularly – compare with other developed nations? While data beyond 1995 were unavailable, the chart below provides a comparison of teen pregnancy and abortion rates for 15 developed countries. Canada had one of the highest teen pregnancy rates in this group, with rates similar to Australia and England and Wales. The United States had the highest teen pregnancy and abortion rates, a well-established and known pattern for some time.

In light of these comparisons, the overall teen pregnancy rates shown for Fraser Health are a cause for concern and the 1996 Fraser Health Status Indian teen pregnancy rate of 210 pregnancies per 1,000 females age 15 to 19 is alarming.

The gap in teen pregnancies seen in these countries is partially attributable to differences in socioeconomic disadvantage experienced by adolescents and to the degree of sex education available to adolescents. Sweden's success in reducing teen pregnancy rates is credited to both improved sex education and improved provision of contraceptives services to adolescents.



Source: Singh S and Darroch, JE. Adolescent Pregnancy and Childbearing: Levels and Trends in Developed Countries. *Family Planning Perspectives*, 2000, 32(1):14-23.

WHERE CAN WE IMPROVE?

Engage the Aboriginal community in further discussion of this issue, especially the negative outcomes associated with teenage pregnancy, and explore strategies aimed at reducing teen pregnancy among Aboriginal youth.

Aboriginal Perspective

From a First Nations perspective, children and family are integral components of a healthy community. Children are welcomed into the family and placed at the centre of the family with early motherhood perceived as normal, especially in the context of a healthy family unit built on traditional values with strong ties to the extended family and community.

However, the environment in which teen motherhood traditionally occurred in the past has changed considerably due to Aboriginal people's deteriorating economic, political and cultural fabric. Today, Aboriginal teenage girls are likely to face overwhelming challenges associated with healthier life style choices. These challenges include the lack of access to good schools, post-secondary education, stable and rewarding employment opportunities, viable housing options, and the lack of health services related to sexual health, birth control, pregnancy, child health and maternal health. These challenges are magnified for teenage girls living in remote communities and on some reserves.

Regardless of how early motherhood is perceived, evidence regarding the negative consequences of teenage pregnancy is irrefutable. From the Aboriginal people's perspective, the timing and the environment into which births occur is the key issue. Future actions about programs and services providing opportunities for alternative healthier lifestyle choices for Aboriginal teenage girls may be most effective.

Source: Government of Canada, Policy Research Initiative and Research and Analysis Directorate at Indian and Northern Affairs Canada. 2008. Hope or Heartbreak: Aboriginal Youth and Canada's Future. Horizons, 10(1).

LIMITATIONS

Age at pregnancy is determined by when the pregnancy ends, not by conception. Data do not include miscarriages that did not require medical intervention.

Data for Aboriginal teenagers who are not Status Indians are unavailable at this time so not much is known about the extent of teen pregnancy in this group.

Chapter 6

DISEASE & INJURIES

This chapter summarizes health status indicators and conditions for the Status Indian population and all other residents.

Health status is the physical, mental and social well-being of a population and can be assessed objectively through measures such as births, deaths and disability or subjectively through community health surveys. Whether objective or subjective, the availability of health status data for the Aboriginal population is very limited, and as a result, only a partial picture of Aboriginal people's well-being is possible at this time. For example, health status data are available for Status Indians only and not the entire Aboriginal population. This equates to approximately 41 per cent of Fraser Health's total Aboriginal population. In addition, data constraints do not allow community-level assessment since data are unavailable beyond the health service delivery areas.

Life Expectancy at Birth

Life expectancy at birth is the average number of years that a newborn can expect to live if the mortality trends that exist when the baby is born continue.

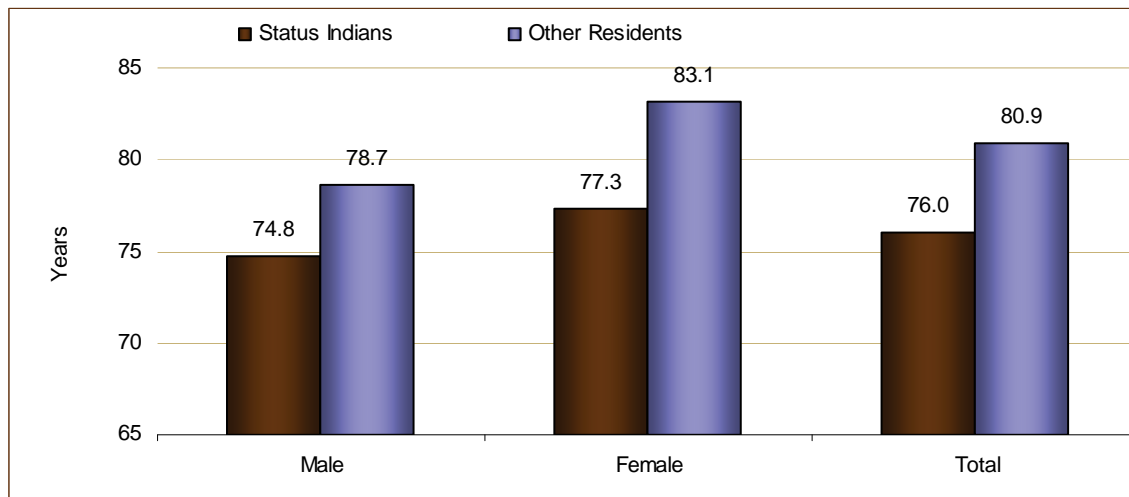
WHY IS IT IMPORTANT?

Life expectancy is considered a reliable indicator of the overall health of the population and can be used for comparisons over time and across jurisdictions. Life expectancy tends to be higher for females, for the wealthy and for married couples.

HOW ARE WE DOING?

FIGURE 51 illustrates life expectancy at birth for both male and female Status Indians and other residents. On average, a Status Indian person in Fraser Health is expected to live 76.0 years while a non-Status Indian person is expected to live 80.9 years, nearly five years longer than a Status Indian person. For Status Indian males, life expectancy at birth was 3.9 years less than other resident males; for Status Indian females, it was 5.8 years less than other resident females.

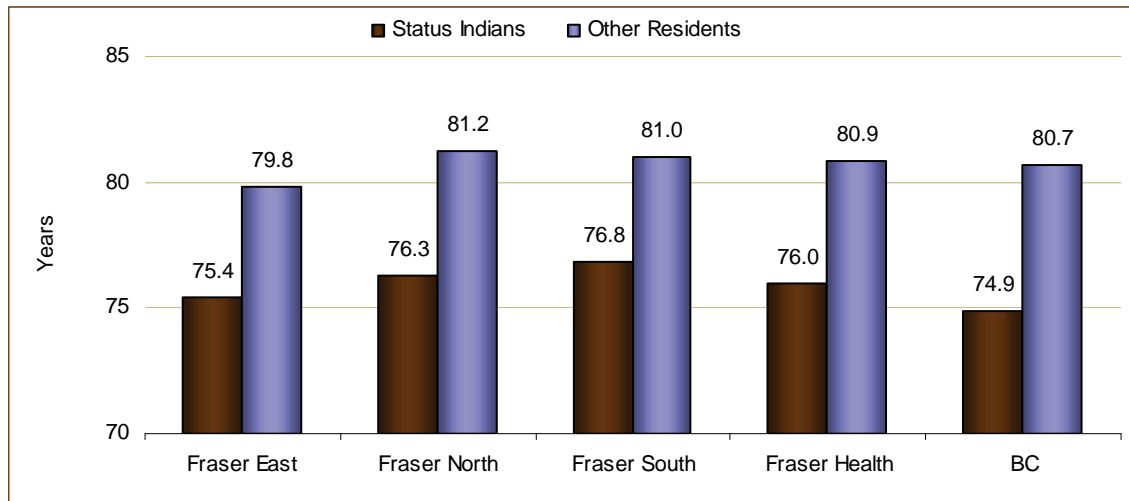
FIGURE 51. Life Expectancy at Birth, by Sex, Status Indians and Other Residents, Fraser Health, 2002-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Life expectancy for Status Indians living in Fraser Health (76.0 years) was higher than the BC average (74.9 years) (FIGURE 52). Status Indians in all three areas of Fraser Health had lower life expectancy compared with other residents with the gap varying from a low of 4.2 years in Fraser South to a high of 4.9 years in Fraser North. Status Indians in Fraser East had the lowest life expectancy while those in Fraser North had the highest.

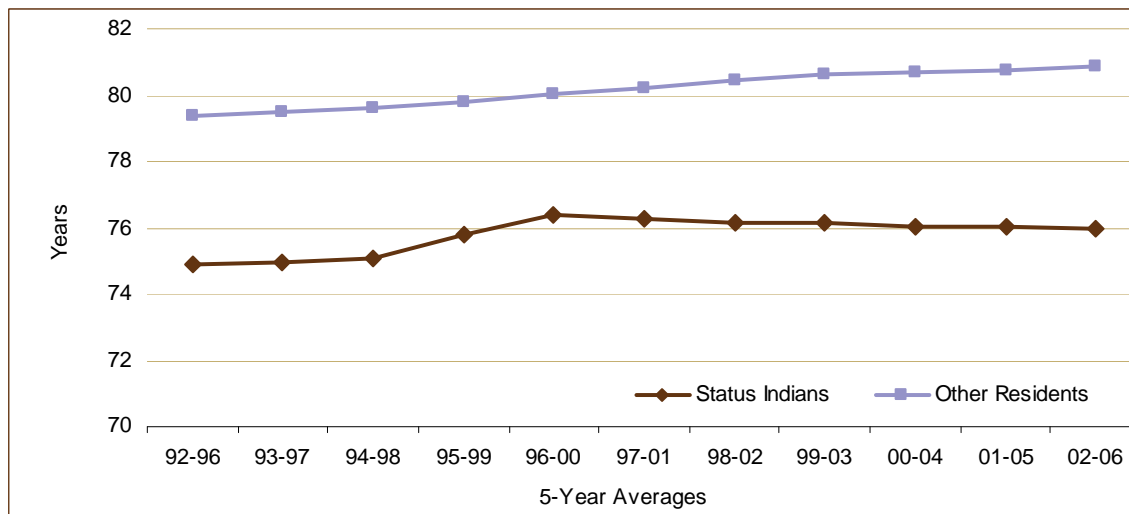
FIGURE 52. Life Expectancy at Birth, Status Indians and Other Residents, 2002-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 53 shows the life expectancy trend for Fraser Health Status Indians and other residents. While life expectancy for both Status Indians and other residents has increased overall during the 1992 to 2006 period, the increase among Status Indians appears to have stagnated at approximately 76 years.

FIGURE 53. Life Expectancy at Birth, by Sex, Status Indians and Other Residents, Fraser Health, 1992/96 to 2002/06



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Address the leading causes of death where the gap in mortality rates between Status Indians and other residents is considerable. These include infectious diseases, chronic liver disease/cirrhosis, HIV and external causes of death such as motor vehicle collisions, suicide and accidental poisoning.

LIMITATIONS

The methodology used to calculate life expectancy can vary between different regions, affecting comparability since different methods can alter estimates by a fraction of a year.

Life expectancy is a prediction based on current mortality figures, measuring years of life without consideration for quality of life or health status.

Mortality

Mortality data presented here provide counts and rates for major causes of death for both Status Indians and other residents.

WHY IS IT IMPORTANT?

To best understand mortality trends in a population, mortality counts are often converted into crude rates, age-specific rates and age-standardized rates or ratios. The simplest rate, the crude death rate, is the number of deaths divided by the number of people in the population. This rate depicts the "true" picture of death in a community although it is greatly influenced by the population's age structure. For example, an older population would likely have a higher crude death rate whereas a younger population may have a higher crude birth rate. In order to mitigate the affect of age and to make meaningful geographic comparisons, age-standardized rates are used.

HOW ARE WE DOING?

Over the fifteen-year period from 1992 to 2006, a total of 1,083 (an average of 72 per year) residents of Status Indian origin died in Fraser Health (TABLE 20). These deaths represented 11.3 per cent of all BC Status Indian deaths, with the majority (574 or 53.0 per cent) occurring in Fraser East, followed by Fraser North (257 or 23.7 per cent) and Fraser South (252 or 23.3 per cent).

TABLE 20. Total Number of Deaths by Sex, Status Indians, 1992-2006 total

Geography	Male	Female	Total
Fraser East	321	253	574
Fraser North	122	135	257
Fraser South	117	135	252
Fraser Health	560	523	1,083
BC	5,319	4,299	9,618

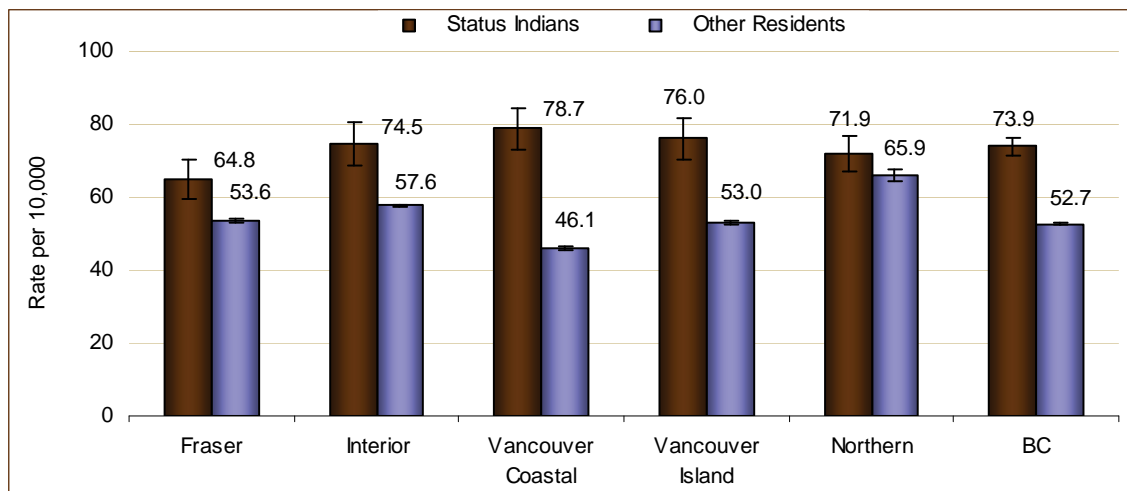
Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

In order to make meaningful geographical comparisons and minimize the effect of age, death counts are age standardized and converted into rates as shown in FIGURE 54. These rates show that, regardless of where they live in BC, Status Indians have higher death rates than other residents. For example, the overall age-standardized mortality rate (ASMR) for all-cause mortality in BC was considerably lower for other residents (52.7 deaths per 10,000 population) compared with Status Indians (73.9 deaths per 10,000 population).

Fraser Health had the lowest Status Indian mortality rate across all health authorities in BC (64.8 deaths per 10,000 population) while Vancouver Coastal had the highest (78.7 deaths per 10,000 population). Fraser Health's other residents rate of 53.6 deaths per 10,000 population was 11.2 deaths per 10,000 lower than Fraser Health Status Indians' mortality rate.

The mortality rates shown in FIGURE 54 indicate that the difference in mortality between Status Indians and other residents for all health authorities are statistically significant, i.e., these differences are not due to small numbers or other statistical errors.

FIGURE 54. Deaths From All Causes, Age-Standardized Mortality Rate, Status Indians and Other Residents, by Health Authority, BC, 2002–2006

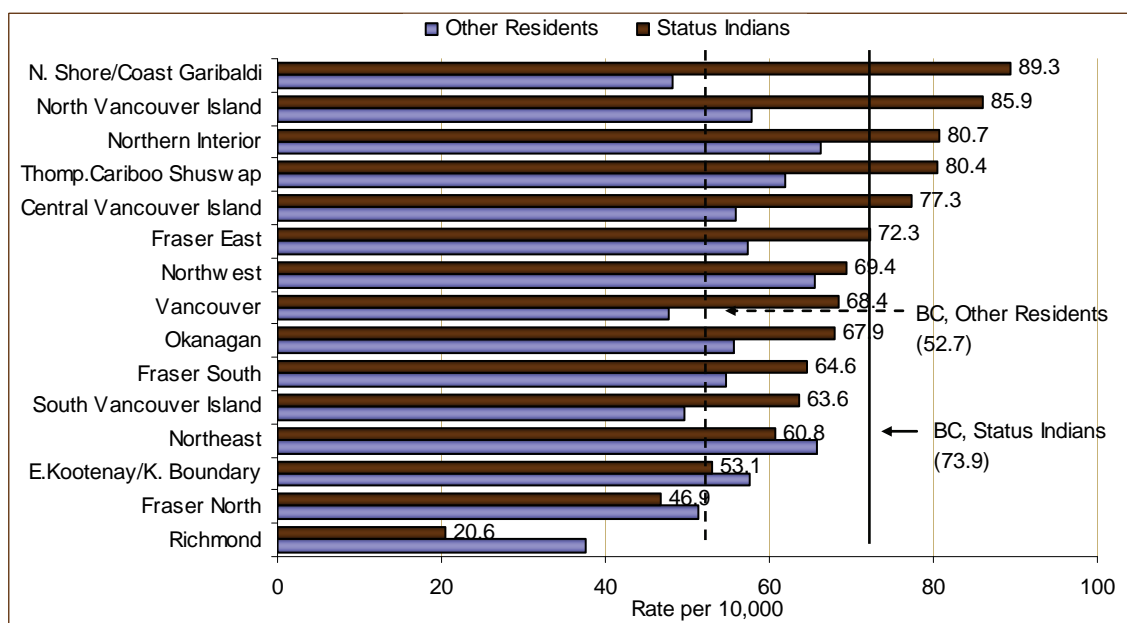


Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Further, death rates for the fifteen BC health service delivery areas, including Fraser East, Fraser North and Fraser South, show great variability between both groups

FIGURE 55. Deaths From All Causes, Age-Standardized Mortality Rate, Status Indians and Other Residents, by Health Service Delivery Area, BC, 2002–2006



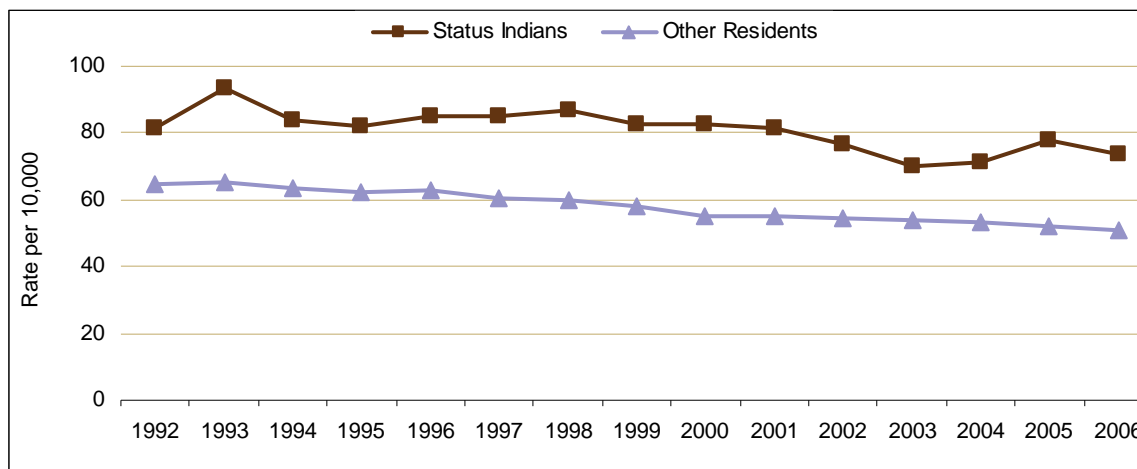
Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Fraser North had the lowest all-cause mortality rates in Fraser Health for both Status Indian and

other residents while Fraser East had the highest rates for both groups. Of note is that Fraser North's Status Indian mortality rate of 46.9 deaths per 10,000 population was lower than the mortality rate of 51.2 deaths per 10,000 population for other residents.

Since 1993, provincial data show that the ASMR for all causes has declined for both Status Indians and other residents although the gap between the two groups has remained relatively constant (FIGURE 56).

FIGURE 56. Deaths From All Causes, Age-Standardized Mortality Rate, Status Indians and Other Residents, BC, 1992–2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

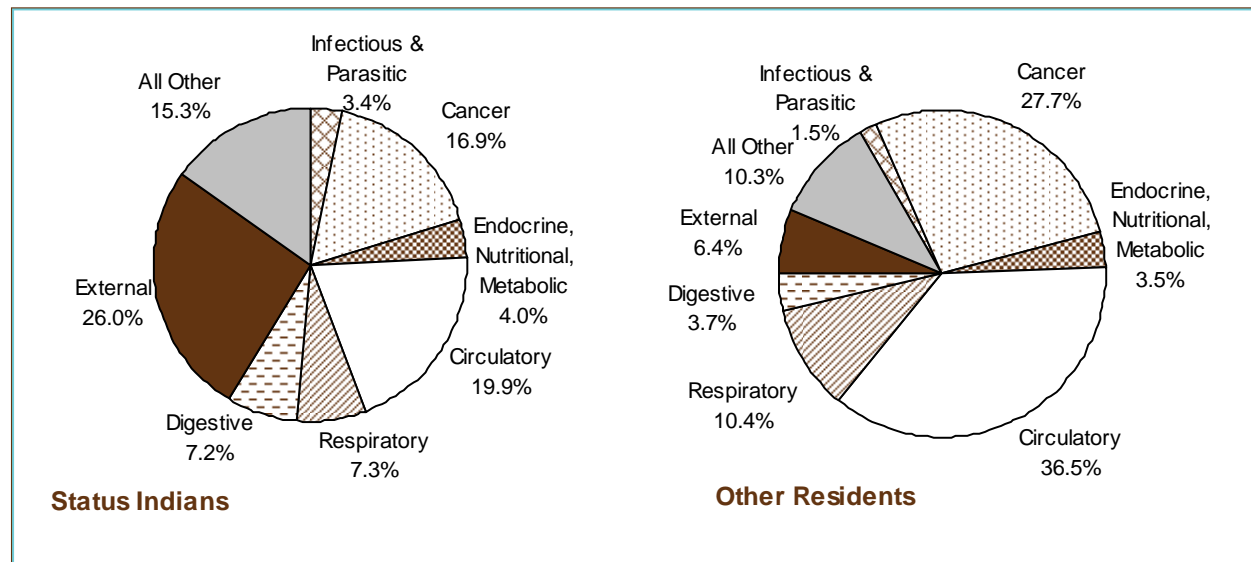
The leading causes of death, by total counts between 1992 and 2006, are summarized in TABLE 21. The five leading causes of death were ischemic heart disease, motor vehicle collisions, accidental poisoning, suicide and cerebrovascular disease (i.e., stroke). From 1992 to 2006, ischemic heart disease and stroke were also the leading causes of death for other residents. Deaths due to motor vehicle collisions, accidental poisoning and suicide ranked higher for the Status Indian population than for other residents where deaths due to lung cancer, chronic lung disease and pneumonia/influenza ranked third through fifth respectively.

TABLE 21. Leading Causes of Mortality by Sex, Status Indians, Fraser Health, 1992 to 2006

Cause of Death	Male	Female	Total
External Causes	167	115	282
Motor Vehicle Collisions	40	30	70
Accidental Poisoning	41	44	85
Accidental Falls	9	5	14
Suicide	33	19	52
Circulatory System	113	102	215
Ischemic Heart Disease	60	39	99
Cerebrovascular Disease	23	32	55
All Cancers	84	99	183
Lung Cancer	20	23	43
Female Breast Cancer	-	23	23
Colorectal Cancer	8	11	19
Prostate Cancer	10	-	10
Respiratory System Disease	37	42	79
Pneumonia & Influenza	12	21	33
Chronic Lung Disease	18	11	29
Digestive System Disease	33	45	78
Chronic liver disease/Cirrhosis	19	21	40
Endocrine, Nutritional, Metabolic	19	24	43
Diabetes	18	17	35
Infectious & Parasitic Diseases	16	21	37
HIV Disease	10	5	15
All Other	91	75	166
All Causes	560	523	1083

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 57. Major Causes of Death as a Proportion of Total Deaths, Status Indians and Other Residents, Fraser Health, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 57 shows the proportion of deaths attributed to each major cause of death - or the relative

mortality burden of each disease - for Fraser Health Status Indians and other residents. In Status Indians, circulatory diseases and cancer accounted for 36.8 per cent of total deaths whereas they accounted for a larger proportion of deaths (64.2 per cent) in other residents. The proportion of deaths from external or injury-related causes was significantly different for the two groups: 26.0 per cent in Status Indian deaths and only 6.4 per cent in other residents.

While FIGURE 57 provides the proportional impact of the leading causes of death for each of the two population groups, TABLE 22 displays mortality rates or the risk of dying from major causes for Status Indian and other residents. Death rates for most causes except cancer and circulatory causes were higher in Status Indians in all three HSDAs. Among Status Indians, death rates from external causes were particularly high across all Fraser Health compared with other residents.

Further, the overall death rates for Status Indians were higher in Fraser East than either Fraser North or Fraser South.

TABLE 22. Age-Standardized Mortality Rate by Major Cause, Status Indians and Other Residents, 1992–2006

Major Cause of Death	Status Indians			Other Residents		
	Fraser East	Fraser North	Fraser South	Fraser East	Fraser North	Fraser South
Circulatory/Cardiovascular	25.3	16.6	16.6	21.2	20.9	20.5
Cancer	14.8	11.3	15.3	17.0	16.4	15.9
External	12.0	9.6	7.2	4.8	3.7	3.9
Respiratory	8.8	6.0	4.0	6.0	6.1	5.7
Digestive	7.2	3.5	4.5	2.2	2.2	2.0
Endocrine, Nutritional, Metabolic	3.4	3.2	3.8	2.2	2.0	2.0
Infectious & Parasitic	1.4	1.3	1.9	0.9	0.9	0.9
Perinatal Conditions	0.2	0.7	0.6	0.3	0.3	0.3
Congenital Anomalies	0.1	0.2	0.7	0.4	0.3	0.3
All Other Causes	7.0	6.6	6.6	4.5	4.3	4.4
All Causes	80.8	59.6	61.4	60.5	58.1	56.8

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Address the leading causes of death such as external or injury-related deaths and cardiovascular disease as these two categories comprise the majority of deaths among Fraser Health Status Indians.

LIMITATIONS

Only ASMRs calculated to the same standard population are comparable. The ASMR is a theoretical value used for rate comparison and does not represent the actual observed death rate. ASMR data are calculated for single years and for aggregated five year periods.

Premature Mortality/Potential Years of Life Lost

Potential years of life lost (PYLL) is a count of years lost for deaths occurring prior to age 75.

WHY IS IT IMPORTANT?

PYLL is an indicator of premature death, emphasizing the causes of death that occur at younger ages over those that occur at older ages.

Deaths due to external causes such as motor vehicle collisions, accidental poisoning and suicide typically have higher PYLLs as they tend to occur among younger age groups. Deaths due to congenital abnormalities also occur very early in life resulting in numerous life years lost.

HOW ARE WE DOING?

From 1992 to 2006, Fraser Health averaged 59 premature deaths (deaths prior to age 75 years) per year in the Status Indian population for a total of 891 deaths over the 15 year span. A higher proportion of deaths in Status Indians (82.3 per cent) were premature than in other residents (42.1 per cent). Approximately one-half (51.0 per cent) of these premature deaths occurred in Fraser East, followed by 25.8 per cent in Fraser North and 23.2 per cent in Fraser South.

Fraser Health Status Indians averaged 30.2 PYLLs for each premature death compared with 17.0 PYLLs for other residents. This means that, on average, each premature Status Indian death occurred at a younger age than other residents (age 44.8 years for Status Indians versus 58.0 years for other residents).

As shown in FIGURE 58, the PYLL rate (which measures the number of years lost for premature death per 1,000 population) for Status Indians was higher than for other residents across all health service delivery areas in the province. In Fraser Health, Fraser East had the highest PYLL rate among the three HSDAs, and the largest disparity between Status Indians and other residents. Both Fraser East's and Fraser North's Status Indian PYLL rates were nearly double that of other residents.

Motor vehicle collisions were the leading cause of premature death among Status Indians, followed by accidental poisoning and suicide (FIGURE 59). This differs from other residents where ischemic heart disease and lung cancer were the two leading causes of PYLL.

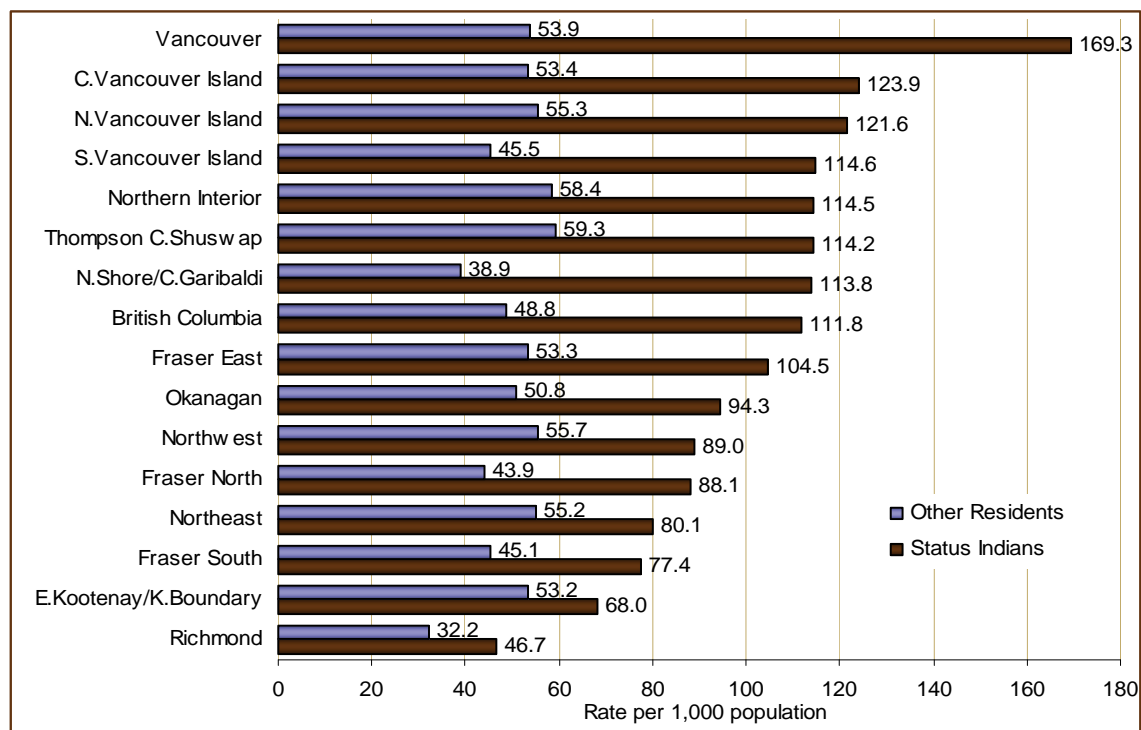
WHERE CAN WE IMPROVE?

Increase education and awareness around seatbelt use and accidental poisoning. Increase access to culturally safe and appropriate addictions services for Aboriginal people.

LIMITATIONS

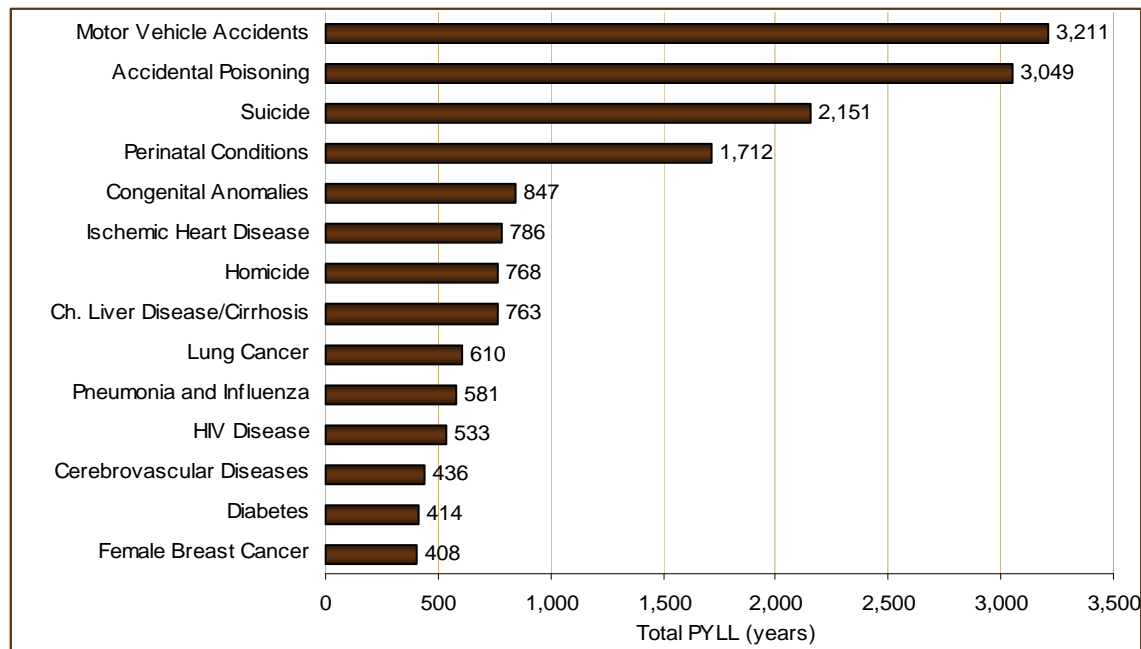
PYLLs are only comparable when age standardized to the same standard population.

FIGURE 58. Potential Years of Life Lost Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 59. Total Number of PYLL Years by Cause, Status Indians, Fraser Health, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Chronic Disease

The main categories of chronic disease include cancers, cardiovascular disease, chronic respiratory diseases, diabetes, mental illness and musculoskeletal disease such as arthritis.

Chronic diseases may last many years and a complete cure may never be achieved. Although chronic diseases can occur at any age, they are more common and cause greater disability among the older age groups.

Chronic diseases are of considerable importance because they are a major cause of disability, hospitalization, death and potential years of life lost. The following section provides an overview of chronic diseases in Status Indians for which data are available, specifically, HIV, diabetes and cardiovascular disease.

HIV

This indicator reports newly positive tests of the human immunodeficiency virus (HIV) along with death rates due to HIV disease.

WHY IS IT IMPORTANT?

HIV is transmitted by sexual contact, blood-to-blood contact (for example, injection drug use), and perinatally (from a pregnant woman to her child). Rates of newly tested cases increase if more people become infected, or if more testing is done that picks up people with previously undiagnosed infection, or both. HIV infection puts people at greater risk of opportunistic infections such as oesophageal candidiasis, pneumocystis pneumonia, disseminated herpes simplex, and cancers such as Kaposi's sarcoma, cancer of the cervix, or non-Hodgkin's lymphoma. People infected with HIV/AIDS are more likely to develop tuberculosis than people who are not infected.

Aboriginal people are especially vulnerable to HIV infection due to social, economic and political disparity. They are also over-represented in groups at high risk for HIV infection, including injection drug users, sex trade workers and inmates.

HOW ARE WE DOING?

For the 2001 to 2008 period, Fraser Health averaged close to eight new positive tests of HIV among Aboriginal people. While Aboriginal people represent only 2.7 per cent of the Fraser Health population, they accounted for 8.8 per cent of all new positive HIV tests (TABLE 23).

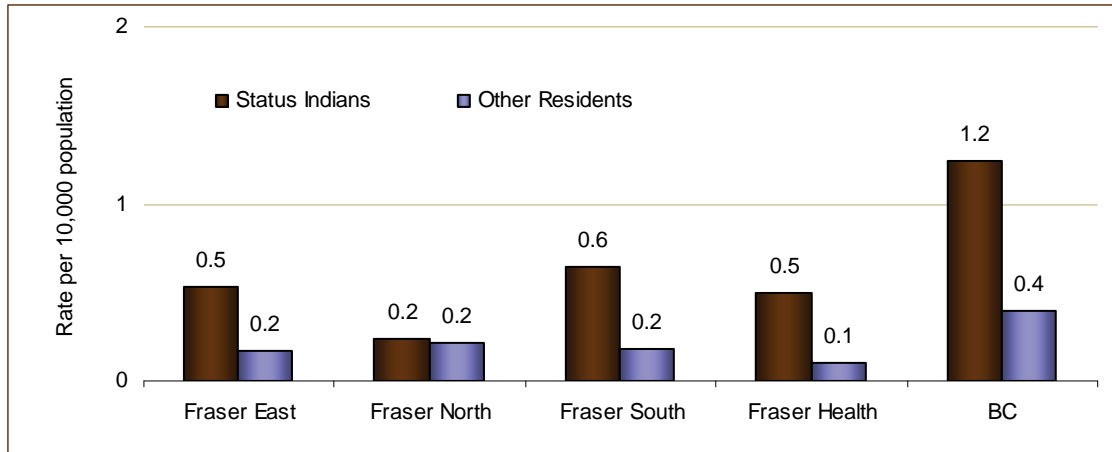
TABLE 23. New Positive HIV Cases, Fraser Health and BC, 2001-2008 total

Measure	Fraser Health	BC
Case counts:		
Aboriginal people	62	486
Other Residents	640	2,681
Total	702	3,167
Case proportions:		
Aboriginal people	8.8%	15.3%
Other Residents	91.2%	84.7%
Population proportions, 2006 Census		
Aboriginal people	2.7%	4.8%
Other Residents	97.3%	95.2%

Source: HIV/AIDS Cube, BCCDC

Aggregate data for 1992 to 2006 show that mortality from HIV disease was higher among Status Indians than other residents in Fraser Health and in BC as a whole. In Fraser Health, the highest mortality rates were seen in Fraser East and Fraser South.

FIGURE 60. HIV Disease, Age-Standardized Mortality Rate, 1992-2006 Average



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Develop a comprehensive network of testing, treatment options and increase uptake of highly active antiretroviral therapy (HAART) among Aboriginal clients.

Transmission of HIV occurs through unprotected sexual intercourse, needle-sharing and pregnancy, delivery and through breast feeding (from an infected mother to her infant), thus, prevention strategies must minimize Aboriginal people's exposure to these risk factors and their root causes.

Kla'how'eya HIV/AIDS Support & Education

The Kla'how'eya HIV/AIDS Program provides HIV/AIDS and Hepatitis C support, education, and outreach services to the clients of Kla'how'eya Healing Centre and other Aboriginal people living with HIV/AIDS or Hepatitis C. Activities include education sessions at Kla'how'eya, condom distribution, meal supplements, alcohol and drug counselling, and outreach at various sites, including Positive Haven, Surrey Aboriginal Youth Centre, and Surrey Memorial Hospital.

What is Fraser Health Doing?

Fraser Health attempts to prevent the transmission of HIV by reducing the prevalence of high-risk behaviours such as having unprotected sex and sharing drug equipment.

Fraser Health has created a team of HIV nurses that provides HIV post-test counselling, partner notification, case management, and outreach. The HIV nurses help to identify and test those who have been exposed to HIV (contact tracing). The team, in collaboration with support workers and community organizations, also provides support to those living with HIV. This includes needle exchange and harm reduction supply distribution, a high protein food bank, and advocating for adequate housing and support for those who have HIV or AIDS. Fraser Health promotes HIV testing to diagnose the estimated 700 individuals in Fraser Health who have HIV but do not know (2006 estimates).

Fraser Health is working with physicians and a variety of organizations to improve access to care for those who have HIV. Fraser Health created an HIV clinic at Surrey Memorial Hospital and funds specialist and general practitioners through alternate payment to improve access to HIV care. Treating those who have HIV and qualify for Highly Active Antiretroviral Therapy (HAART) can substantially decrease their chances of transmitting the infection, by reducing the quantity of virus in their blood and other infectious body fluids. Fraser Health also facilitates access to methadone maintenance therapy and other addiction treatment, which helps reduce risky behaviours.

LIMITATIONS

When a case address is unavailable, the ordering physician's address is used instead. Therefore, a community where more people with HIV go for diagnosis may have higher reported rates than actual rates among its residents. In addition, HIV cases in the general population are not separated from cases in regional correction facility inmates.

Over time, the HIV surveillance system in BC has undergone significant changes that affect HIV rates. Because of these changes and other limitations of the surveillance system, caution is needed when interpreting HIV trends. It is important to understand the various changes and limitations before interpreting the data.

The surveillance system is based on newly diagnosed HIV infections. Data may not reflect new infections (incidence) accurately because not everyone is tested soon after contracting the disease. Some newly diagnosed infections are chronic infections that were acquired years ago but are only now detected. Many individuals with chronic infection are being detected with the increased efforts to test people at risk of HIV, as reflected in how rates increased after contact tracing was improved and HIV became a reportable disease.

With increased testing and identification of the chronically infected, the pool of undiagnosed people infected with HIV will shrink over time. Therefore, a decline in the numbers of new HIV positive tests over time may not reflect an actual reduction in the incidence of HIV; rather this may be due to there being fewer undiagnosed individuals.

HIV testing in BC began in 1985 and the BCCDC Sexually Transmitted Disease Control Division estimated the HIV infection rates from anonymous laboratory test results from 1985 to 2002. In May 2003, HIV became a reportable communicable disease in BC, affecting the rate of newly diagnosed infections in different ways. For example, designated Public Health Nurses specially trained in Partner Counselling and Referral Services have since worked with HIV-infected clients to identify, locate, and notify exposed partners. This has helped to identify HIV infected contacts sooner, which may have increased the rate of newly diagnosed HIV infections over time. In contrast, HIV becoming a reportable disease has facilitated the removal of duplicate testing in individuals with known HIV infection, which can decrease the rate.

Furthermore, since 2004, the BCCDC is better able to track HIV positive individuals identified from immigration medical examinations. The inclusion of individuals who contracted HIV outside of the province in HIV rates for BC or Fraser Health may obscure the effects of local programs to reduce HIV transmission, which do not have an effect outside of BC. Nevertheless, HIV infected individuals immigrating to BC can put others in BC at risk of acquiring the infection, so prevention services must consider these individuals. These individuals also need treatment for their HIV infection and related co-morbidities, which can have a significant impact on the use of acute care and primary care services in Fraser Health. Therefore, both infections diagnosed in BC and infections diagnosed outside BC are reported.

Collecting accurate case data is an important process with frequent delays in gathering data on ethnicity or exposure route, which inflates the proportion of unknown or unidentified cases in the annual CD report. Case data are updated as this information becomes available, so the rates of unknown or unidentified cases will change in subsequent annual reports; the number of unknown cases for 2008 will be lower in next year's report.

Still, reporting ethnicity or routes of exposure is limited as some individuals are not comfortable reporting their ethnicity, drug use, or their types of sexual contacts. This can lead to an under-representation of some ethnic groups and exposure routes, like men who have sex with men (MSM) or injection drug use (IDU).

Diabetes

The two indicators presented here provide the proportion of persons with diabetes for residents registered in the Primary Health Care diabetes registry and an estimate of the number of deaths from diabetes.

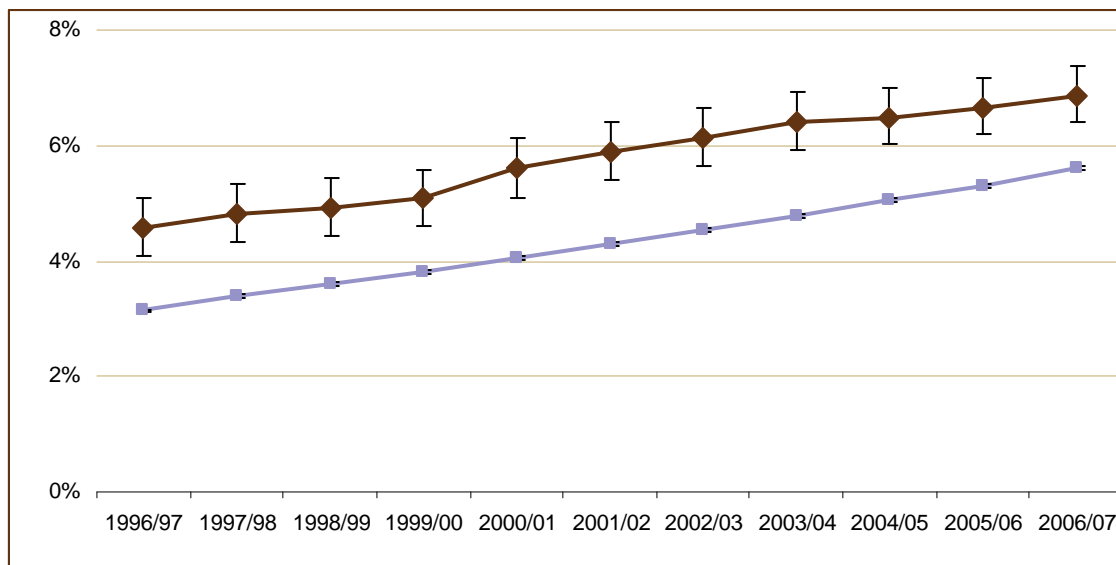
WHY IS IT IMPORTANT?

Diabetes is a serious chronic condition affecting the body's ability to produce and/or use insulin properly. Diabetes can lead to a number of disabling or life threatening conditions such as blindness, amputation, neuropathy, renal disease, heart disease and other complications. Diabetes is preventable and its onset can be delayed through healthy eating, maintaining a healthy body weight, and being physically active. Regular medical check-ups and care can help prevent complications from diabetes. Among Aboriginal people, diabetes prevalence continues to grow, becoming one of the most common chronic conditions despite this disease being virtually unknown before the 1950's.

HOW ARE WE DOING?

The prevalence of diabetes among Status Indians in Fraser Health continues to increase. In 2006/07, the age-standardized diabetes prevalence rate was 6.9 per cent for Status Indians compared with 5.6 per cent for other residents (FIGURE 61).

FIGURE 61. Diabetes, Age-standardized Prevalence Rate, Status Indians and Other Residents, Fraser Health, 1996/97 to 2006/07



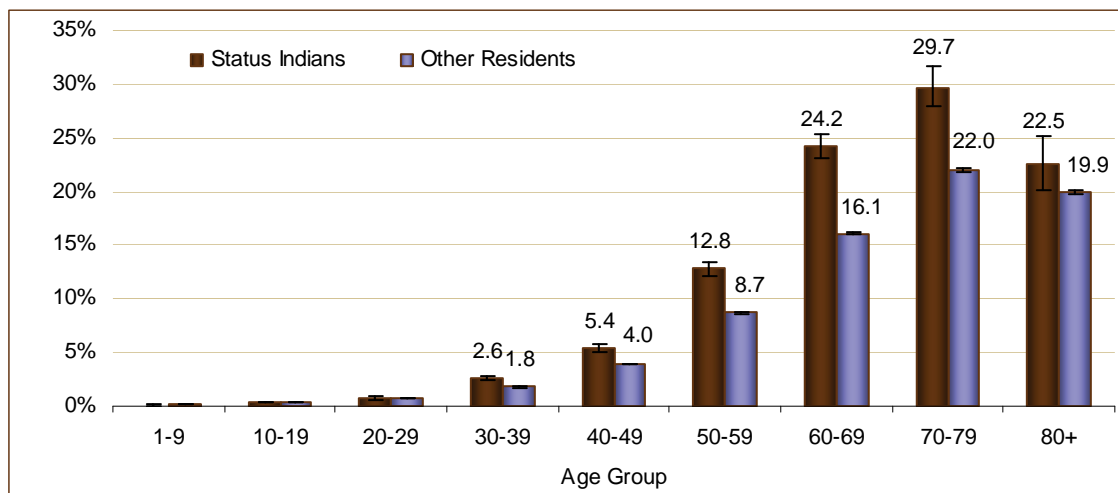
Note: 95% confidence interval ($p < 0.05$).

Source: 2008/09 GLE Performance Requirements, Ministry of Health Services

Type 2 diabetes occurs primarily among people 50 years and older, with prevalence increasing with age (FIGURE 62). Among BC's Status Indians, the prevalence of diabetes is higher in most age groups with prevalence increasing from 5.4 per cent in the 40 to 49 year age group to a high of 29.7

per cent in the 70 to 79 year age group. Nearly 12.8 per cent of Status Indians in the 50 to 59 age group have diabetes compared with approximately 8.7 per cent of other residents.

FIGURE 62. Diabetes, Age-Specific Prevalence Rate, Status Indians and Other Residents, BC, 2006/2007

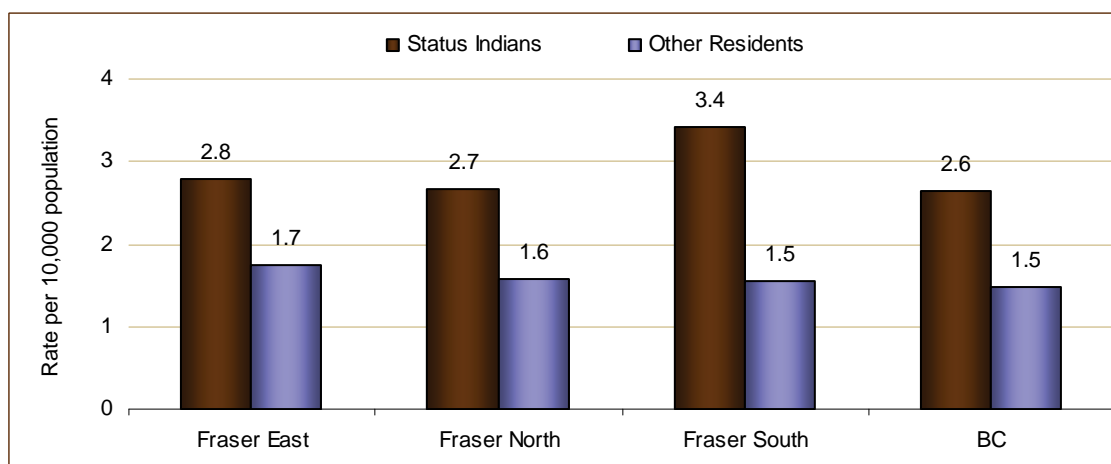


Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Aggregate data for 1992 to 2006 show that mortality from diabetes was higher among Status Indian populations than other residents across all three areas of Fraser Health (FIGURE 63).

FIGURE 63. Diabetes, Age-Standardized Mortality Rate, 1992-2006 Average



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Develop and deliver culturally appropriate programs in consultation with the Aboriginal community to increase awareness, prevention and self-management of diabetes. Earlier screening opportunities

and awareness given that type 2 diabetes at younger ages in Aboriginal people.

A 2006 report by the Assembly of First Nations, *A First Nations Diabetes Report Card*, recommends a comprehensive approach to diabetes prevention and management combining traditional and cultural well-being practices and access to modern health services. The report's specific recommendations to address diabetes include:

- access to and consumption of traditional foods and foods that are safe, secure and nutritious;
- development of physical activity strategies that eliminate access barriers for Aboriginal people;
- access to primary care services and centres which respect language and culture and are close to where Aboriginal people live;
- establish programs providing diabetes care, management and treatment based on Aboriginal holistic wellness strategy;
- develop initiatives that develop sustainable funding, prevention strategies, supply of health care workers and surveillance systems to measure gaps and progress.

Diabetes Education and Prevention at Seabird Island First Nation

The Seabird Island First Nation provides diabetes nutrition information to a number of First Nations communities, including Seabird Island, Cheam, Skwah, Scowlitz, Shxw'ow'hamel and Kwaw-kwaw-aplit. Services are tailored to each community's demographics, traditional knowledge, and sense of culture and community. One of the most successful projects is the Community Cooks program, which increases awareness of the role that nutrition plays in preventing and managing diabetes, and provides participants with an opportunity to prepare healthy meals as part of the program. Other activities include:

- smart shopping/label reading sessions at grocery stores
- field trips to local herb gardens
- active living initiatives
- one-on-one and group diabetes support programs
- a parenting program in which parents learn about infant & child nutrition, food preparation, portion sizes, and fun recipes for kids.

LIMITATIONS

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

Death rates due to diabetes may be underestimated because other diseases are more likely to be specified as the underlying cause of death. A Statistics Canada study of all deaths from 1990 to 1993 found that diabetes was coded as the "underlying cause of death" in only 28 per cent of cases in which diabetes was mentioned on death certificates; in the remaining 72 per cent, diabetes was mentioned as a contributing cause.

Cardiovascular Disease

The prevalence and mortality associated with the two major components of cardiovascular disease – ischemic heart disease and stroke – are profiled for both Status Indians and other residents.

WHY IS IT IMPORTANT?

Cardiovascular diseases are the leading cause of death in Fraser Health. It is a broad term encompassing many diseases that affect the circulatory system, including ischemic heart disease, cerebrovascular disease (stroke), heart failure, peripheral vascular disease, rheumatic heart disease, and congenital heart disease. Ischemic heart disease is the most common cardiovascular disease for both men and women.

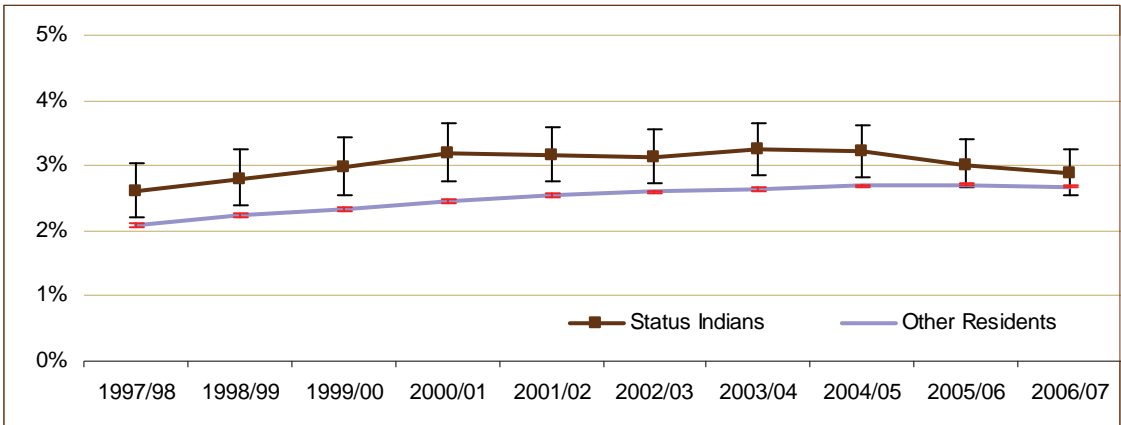
Stroke is a major cause of death and disability among seniors. Generally, deaths due to stroke are in decline, but stroke survivors often live with some level of physical impairment or reduced function.

While some risk factors, like age, family history, or sex, cannot be changed, many risk factors can be avoided or reduced. Smoking, high-fat diets, being overweight, high blood cholesterol, physical inactivity, and high blood pressure all increase the risk of cardiovascular disease. A diet high in fibre and low in salt and fat can help lower blood pressure and maintain a healthy body weight¹².

HOW ARE WE DOING?

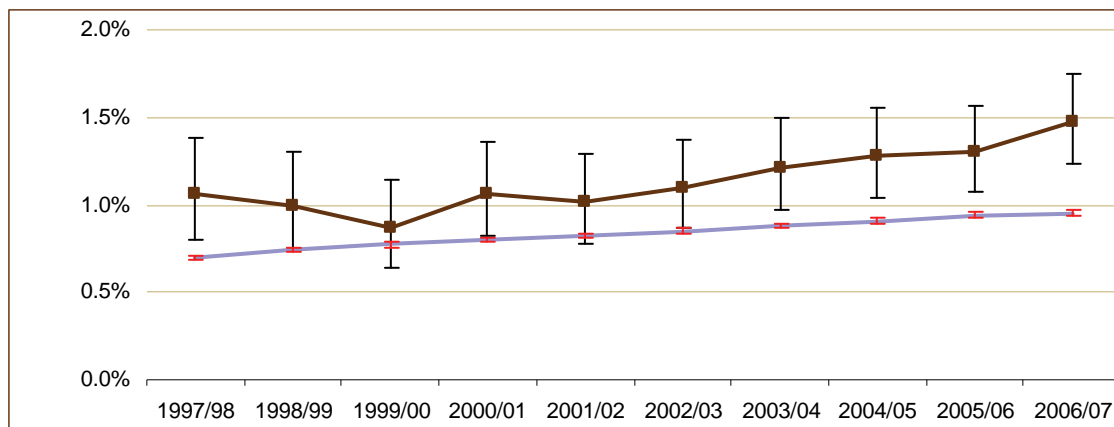
In Fraser Health for the fiscal year 2006/07, there were approximately 330 Status Indians living with diagnosed ischemic heart disease (IHD) with further 168 residents who were diagnosed with stroke. The age-standardized prevalence rates of IHD and stroke, shown in FIGURE 64 and FIGURE 65, indicate that Status Indians have higher rates of both IHD and stroke compared with other residents.

FIGURE 64. Ischemic Heart Disease, Age-Standardized Prevalence Rate, Status Indians and Other Residents, Fraser Health, 1997/1998 to 2006/2007



Note: 95% confidence interval (p<0.05).
 Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 65. Stroke, Age-Standardized Prevalence Rate, Status Indians and Other Residents, Fraser Health, 1997/1998 to 2006/2007

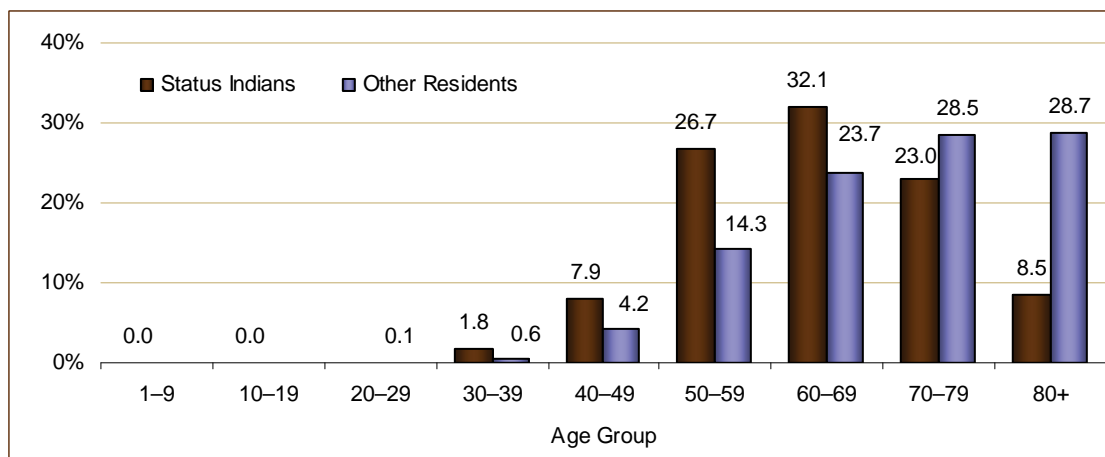


Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

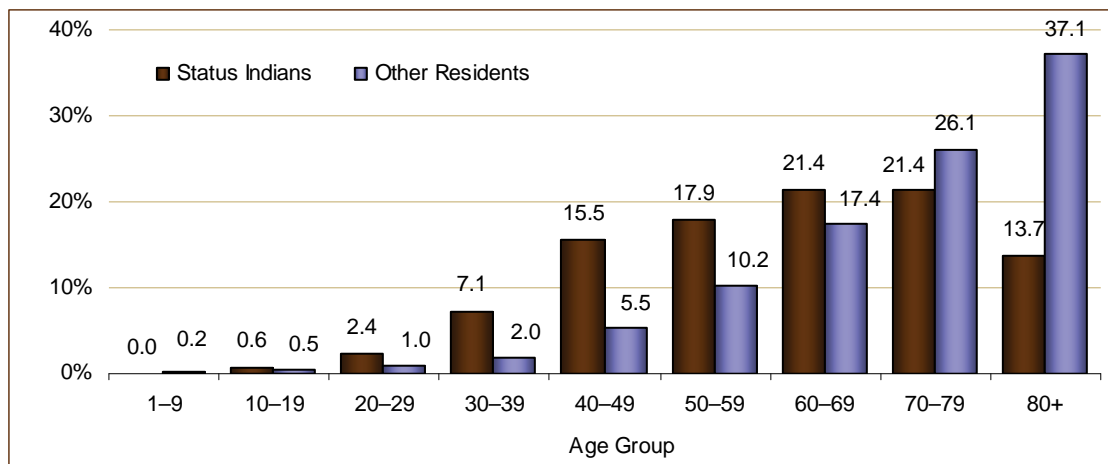
The prevalence of IHD and stroke by age group suggests that both IHD and stroke occur at younger ages among Status Indians than among other residents (FIGURE 66 and FIGURE 67). For example, nearly 58.8 per cent of IHD cases in Status Indians occurred in the 50 to 69 age group compared with 38.0 per cent in other residents.

FIGURE 66. Prevalence of Ischemic Heart Disease, by Age Group, Status Indians and Other Residents, Fraser Health, 2006/2007



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 67. Prevalence of Stroke, by Age Group, Status Indians and Other Residents, Fraser Health, 2006/2007

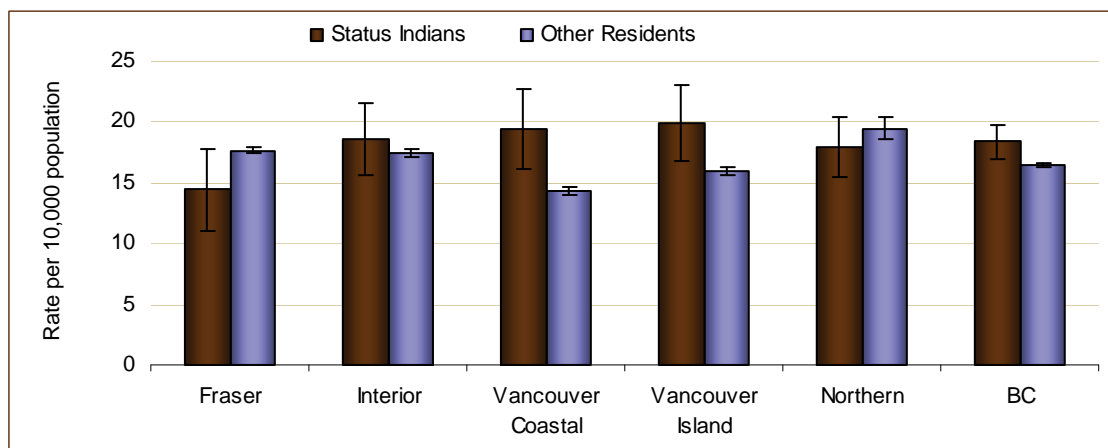


Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Mortality data show that between 1992 and 2006, cardiovascular disease accounted for the second highest number (215 deaths or 19.9 per cent) of deaths in Fraser Health Status Indians. Specifically, IHD accounted for 46.0 per cent (or 99 deaths) and stroke for 25.6 per cent (or 55 total deaths) of all cardiovascular disease deaths.

Adjusting mortality data for age shows that cardiovascular disease was the second leading cause of death for Status Indians and the leading cause for other residents. Overall in BC, there is little difference in cardiovascular disease death rates during 2002 to 2006 between Status Indians and other residents; the same held true in Fraser Health (FIGURE 68).

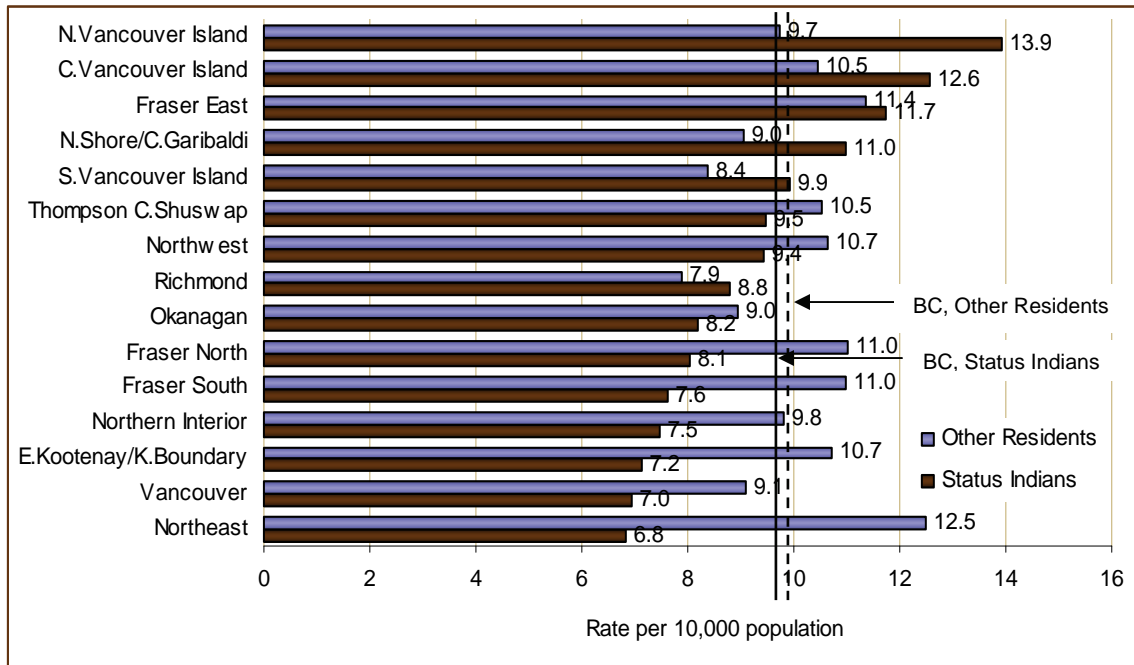
FIGURE 68. Circulatory or Cardiovascular Disease, Age Standardized Mortality Rate, Status Indians and Other Residents, by Health Authority, 2002-2006



Note: 95% confidence interval ($p < 0.05$).

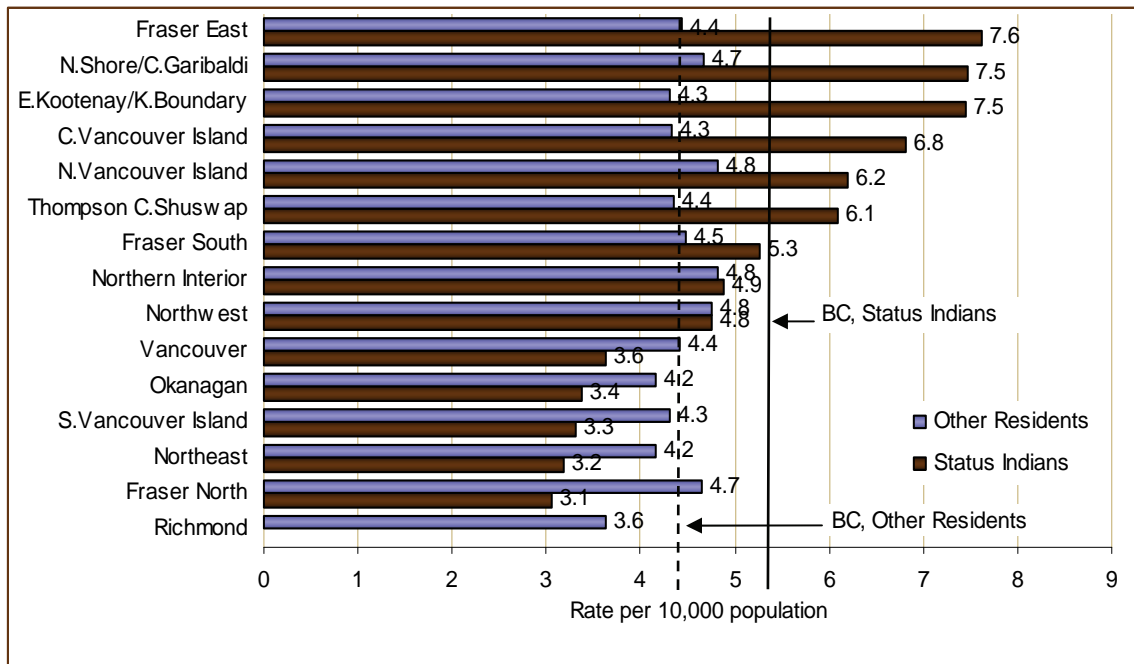
Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 69. Ischemic Heart Disease, Age Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 70. Stroke, Age Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

IHD and stroke mortality rates show considerable variability across the province. However, HSDA-level variability is much more uniform for other residents than for Status Indians. Fraser East not only has the highest death rates for both IHD and stroke among Status Indians in Fraser Health, it also ranks third in IHD and first in stroke among all BC HSDAs.

WHERE CAN WE IMPROVE?

Address the underlying causes of death through Aboriginal perspectives given that prevalence rate of cardiovascular disease is increasing among Status Indians. The Canadian Heart and Stroke Foundation recommends that the Aboriginal community address risk factors such as smoking, high blood pressure, obesity, and type 2 diabetes as they are more prevalent in this population group.

The Canadian Heart Health Strategy and Action Plan proposes the following strategies to address cardiovascular disease among both Aboriginal people and non-Aboriginal people:

- create heart healthy environments through education, legislation, regulation and policy;
- help Canadians lead healthier lives by developing common messages about risk factors, providing self help tools and by bringing screening and follow-up to community settings;
- address heart health by actively involving Aboriginal people in developing their own solutions and plans and providing culturally-appropriate support;
- support chronic disease prevention and management programs as well as specialized cardiac care within the primary health care system;
- build the knowledge infrastructure to enhance prevention and care by ensuring we have more accurate, timely information and efficiently share it. Support focused knowledge development;
- increase the number of Aboriginal health service providers, particularly those with a cardiac specialization.

A key to these initiatives, especially those involving treatment, rehabilitation and management of cardiovascular disease, is ensuring that Aboriginal people receive localized, culturally-appropriate care and services.

Chronic Disease Self-Management Program

The Chronic Disease Self-Management Program is a free education workshop designed to give people living with chronic disease the skills and tools to help manage the daily challenges of their condition. The course, titled 'Living a Healthy Life with Chronic Conditions', is led by volunteers – the majority of which live with chronic health conditions themselves.

Fraser Health Aboriginal Health partners with the University of Victoria Centre on Aging to deliver chronic disease self-management leader training as well as self-management workshops. Workshops and training sessions have been held at several locations throughout the Fraser region, including the Mission Friendship Centre, Kekinow Native Housing and Kla-how-eya Aboriginal Centre in Surrey, as well as the communities of Hope, Kwantlen First Nation, Katzie First Nation, and Sto:lo Nation.

LIMITATIONS

The Primary Health Care Registry (PHC) is cumulative and includes anyone who met the case definition from 1992/93 onward. Cases are only removed if they are no longer in BC or are deceased. Those who met the case definition at one time and who may no longer meet the case definition remain in the register.

Determinants of Chronic Disease

This section provides an overview of selected risk factors associated with chronic disease. For several of the major chronic diseases, risk factors are remarkably similar and include genetics, lifestyle, socioeconomic status and the historical context of Aboriginal culture. Although the broader environmental determinants (discussed in earlier chapters) remain key upstream contributors to chronic disease generally, some of the more immediate risk factors such as hypertension, physical activity, body mass index and smoking are previewed here. These risk factors are common to many chronic diseases and are likely to cluster in vulnerable populations. As a result, opportunities for prevention and management focusing on chronic diseases in general rather than on specific diseases do exist.

Hypertension

The prevalence of hypertension for all residents registered in the Primary Health Care (PHC) patient registry.

WHY IS IT IMPORTANT?

Hypertension, or high blood pressure, is the leading modifiable risk factor for stroke and a major risk factor for heart disease, the two leading causes of hospitalization and death in Canada^{13, 16}.

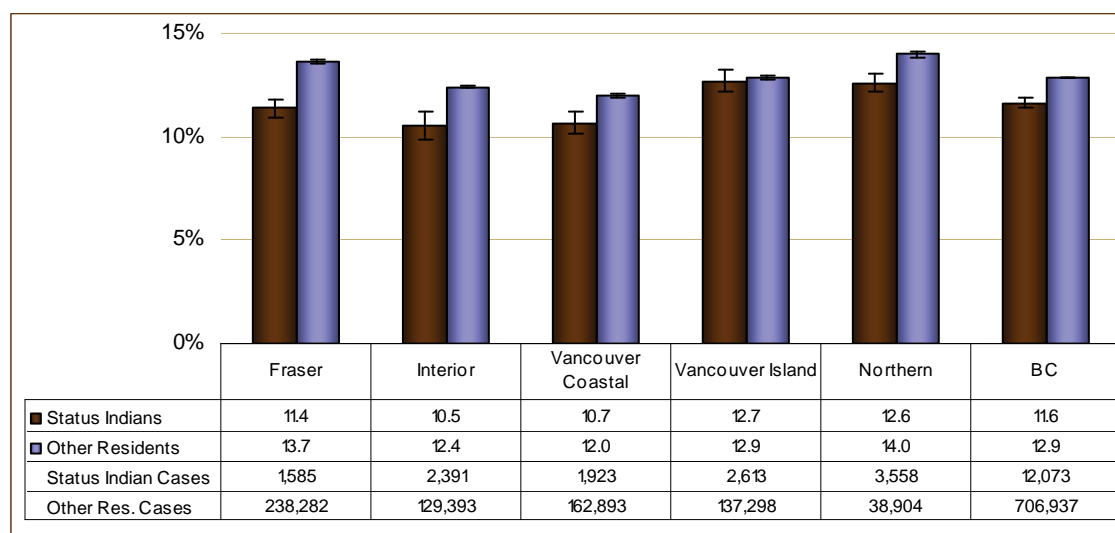
Uncontrolled hypertension has the potential to cause serious bodily harm, damaging arterial walls, accelerating the hardening of arteries, or it can lead to an enlarged heart or heart failure. In turn, damage or hardening of the arteries can lead to heart disease, heart attack, stroke, kidney failure, loss of sight, or aneurysms¹³.

Although some risk factors cannot be changed, many can be controlled, including tobacco use, drinking alcohol, physical activity, and being overweight¹³.

HOW ARE WE DOING?

For the 2006/07 fiscal year, there were 1,585 Status Indians diagnosed with hypertension in Fraser Health representing approximately 13 per cent of the total Status Indian cases in BC (FIGURE 71). The Status Indian age-standardized prevalence rate of 11.4 per cent was lower than other residents (13.7 per cent) and similar to the provincial average.

FIGURE 71. Prevalence Rate and Case Counts of Hypertension, Status Indians and Other Residents, by Health Authority, BC, 2006/2007

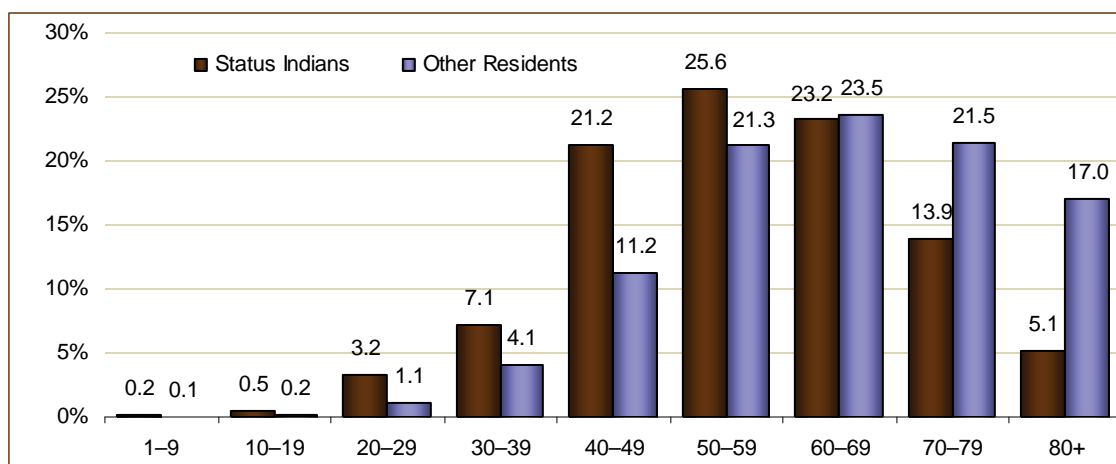


Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 72 shows age-specific rates of hypertension which peak at almost 26 per cent among Fraser Health Status Indians in the 50-59 year age group. Approximately 21 per cent of Status Indians age 40 to 49 years had hypertension compared with only 11 per cent of other residents. Generally, Status Indians experience higher prevalence of hypertension at younger ages compared with other residents where hypertension occurs more frequently in the older age groups.

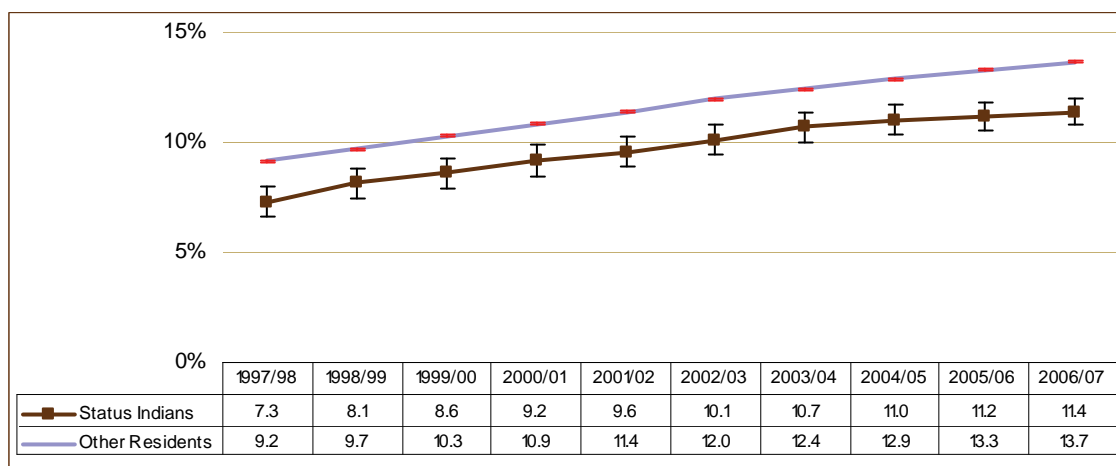
FIGURE 72. Prevalence of Hypertension by Age Group, Status Indians and Other Residents, Fraser Health, 2006/2007



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The age-standardized prevalence rate of hypertension is steadily increasing for both Status Indians and other residents in Fraser Health for the 1997/98 to 2006/07 period (FIGURE 73).

FIGURE 73. Prevalence of Hypertension, Status Indians and Other Residents, Fraser Health, 1997/'98-2006/'07



Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Explore causative factors associated with higher prevalence of hypertension in younger ages and the steady increase in hypertension prevalence rate. Additional best practice in this area can be found in the cardiovascular disease section of this chapter.

LIMITATIONS

The Primary Health Care Registry (PHC) registry is cumulative and includes anyone who met the case definition from 1992/93 onward. Cases are only removed if they are no longer in BC or are deceased. Those who met the case definition at one time and who may no longer meet the case definition remain in the register.

Diet

Importance of traditional diet and how it has change over time is explored.

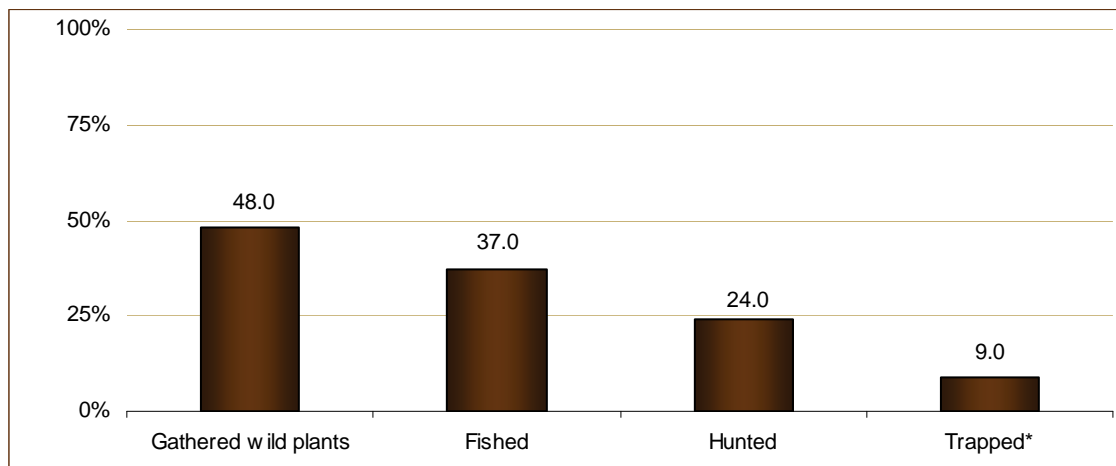
WHY IS IT IMPORTANT?

One of the most crucial social determinants of health for the Aboriginal community is the loss of traditional foods. The impact associated with the loss of traditional diet has both social costs and more direct nutritional implications. Initial costs to the individuals begin with the shift from the consumption of healthier traditional foods to the consumption of western foods with high fat, salt and sugar content. These patterns of nutritional shift have been associated with increase in diet-related chronic diseases such as obesity, heart disease, diabetes and hypertension. Social costs include the loss of cultural and spiritual connections to food and historical customs and traditions.

HOW ARE WE DOING?

As seen in Figure 75, off-reserve Aboriginal people continue to engage in various traditional food harvesting practices. Due to a more urban population base in Fraser Health, the proportions seen in FIGURE 74 would be lower for Aboriginal people residing in Fraser Health.

FIGURE 74. Percentage of Those Harvesting Traditional Foods in the Past 12 Months, Age 15+, Aboriginal People Living Off Reserve, BC, 2006



* Interpret with caution due to high sampling variability
Source: Aboriginal Peoples Survey, 2006

Access to Fish

Fish, especially salmon, have always held an important place and a long history with the Aboriginal people in the Fraser Health areas. Aboriginal communities located in the Northwest are among the oldest known fishing cultures in the world¹⁴. Evidence suggests that coastal First Nations people relied heavily on marine-based foods, up to 90 per cent of protein source according to one study¹⁴. In salmon-rich waters of the Fraser River Delta, consumption reached 1,000 pounds per person year in and year out. Annually, vast quantities of salmon were dried or smoked to last until the following year. Such figures are much higher than current salmon consumption levels among First Nations

people, mainly due to dramatic changes in the harvesting of salmon resources from the 19th century onward which saw more and more salmon being caught and processed in commercial fisheries in response to increased demand from overseas¹⁴.

There are two broad categories of Aboriginal fisheries: a fishery for food, social and ceremonial purposes and the commercial fishery. The Aboriginal food fishery has been recognized by the Supreme Court of Canada as a right guaranteed in the Canadian Constitution, and thus has priority over all other fishing. The commercial fishery, on the other hand, is not recognized as an Aboriginal right and is often separately negotiated on a case-by-case basis as part of the treaty process. In areas where land claims settlements have not been finalized, the Aboriginal Fisheries Strategy is the primary mechanism utilized by the Aboriginal people and the Fisheries and Oceans Canada (DFO) to negotiate annual harvests for both food and commercial purposes.

Salmon are by far the most important species for the Aboriginal food fishery with Fraser River stocks accounting for majority of the annual harvest. However, the salmon fishery continues to be under considerable threat for viability from declining stock, cyclical stock and spawning patterns, over fishing and other natural threats. The most pronounced changes occurred as a result of dwindling populations of coho salmon which triggered unprecedented closures and resulted in the implementation of conservation methods. Consequently, Aboriginal people's right to fish has come under considerable pressure in the past two decades.

With Fraser River being the largest watershed in BC and home to numerous First Nations, it remains a focal area for both conflict and conservation efforts. One issue of sizeable concern is that currently there is no formal or functional agreements among the First Nations along the Fraser River on matters related to salmon harvesting and conservation. Given that the First Nations are competing among themselves for portions of increasingly scarce salmon stock, the tendency has become to fish as hard as possible before the fish pass. This has resulted in bitter disputes, competition, distrust and inequity of catch among the First Nations during periods of low salmon runs.

Conservation and weakened salmon stocks have especially impacted First Nations ability to catch salmon for commercial purposes¹⁵. Resources have been distributed to assist in more selective fishing techniques such as fishwheels, profiled on the following page.

Fish as a Traditional and Important Food Source

"Fish is a very important food to our people. Traditionally, when fish came up the Harrison River at Chehalis, we would stay in the Longhouse for ten days and the men would fish and the ladies would smoke and salt the fish and prepare the meals. It really brought our family together. To this day some families still continue to gather along the river when the fish comes in."

Sumas Lake was important because it supplied our people with lots of food. There were over 10,000 people living in the area using the lake as a resource because there was so much food. They wanted the farmland and told us they were going to drain it. Our Chiefs got people together telling us not to worry, 'they will never drain the lake because it is too big'. But, in time, the lake was successfully drained and turned into farmland.

As a young boy, I heard the Elders talk about the draining of the lake and how it cost our people our livelihood. They were heartbroken that we had no more lake or culture. Not only did we lose the fish and wildlife but we lost a spiritual connection. I was told that our land used to be over 13,000 acres, but because of certain things like the draining of the lake, Sumas First Nation is now under 600 acres."

Ray Silver (Xeyteleq), Sumas First Nation Elder

Fishwheel at Katzie First Nation, Pitt Meadows

Rick Bailey, a member of the Katzie First Nation in Pitt Meadows, has fished his entire life and is very knowledgeable with Fraser River and its salmon runs. As a gillnet commercial fisherman, Bailey has seen a marked decline in fish abundance and diversity resulting in, like many other commercial fishermen, severe reductions in fishing allowance. He sees that fishing methods must evolve in response to the fact that salmon fishing has changed for good and are not as abundant as they once were.

He, along with his business partner, obtained a scientific license to operate a fishwheel anchored on Fraser River adjacent to the Katzie's reserve. The overall intention of this conservation-focused project is to show that it's possible to target certain species of salmon while live-releasing any fish caught from weaker stocks.

The use of fishwheels is somewhat recent in BC but they have been used for hundreds of years and are integral part of fishing on many rivers, especially once salmon stocks began to decline. Fishwheels work through wheels anchored on floating platforms which turn round and round with three or four baskets attached to the wheel dipping into the river and out again. As the baskets exit the water, any fish caught in them can be taken out or released back into the river.

Source: Garner, K., Parfitt, B. April 2006. First Nations, Salmon Fisheries and the Rising Importance of Conservation. Report to the Pacific Fisheries Resource Conservation Council.

Physical Activity and Body Mass Index

These indicators describe the proportion of people who are moderately or physical active during leisure time and the proportion of people age 18 and older who are either overweight or obese.

WHY IS IT IMPORTANT?

Regular physical activity helps prevent heart disease and stroke by strengthening heart muscles, lowering blood pressure, and maximizing the heart's functionality¹⁹.

A physically active or moderately active lifestyle also helps reduce the risk of obesity, high blood pressure, type-2 diabetes, osteoporosis, back pain, depression and anxiety¹⁹. As a result, the level of physical activity performed by individuals is highly correlated to the overall health of populations.

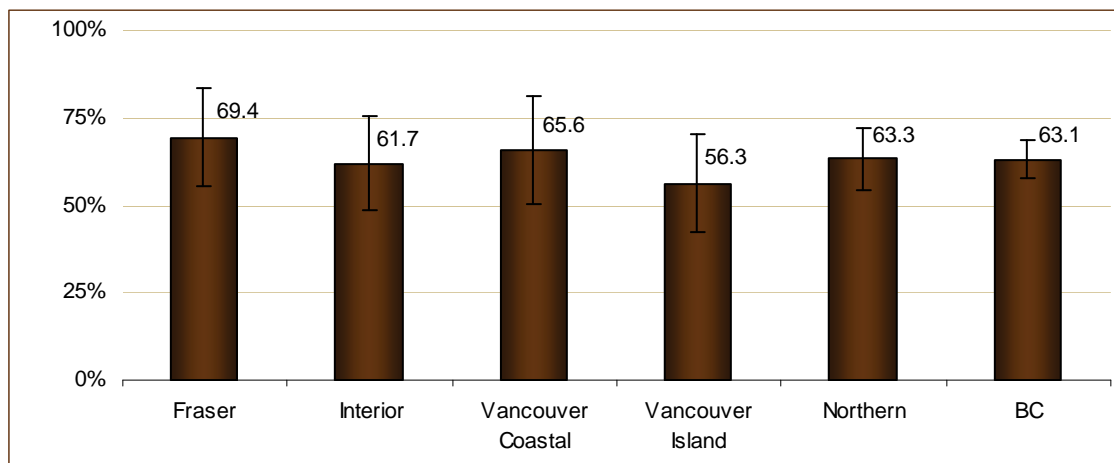
Overweight and obesity are linked to a wide range of health problems such as coronary heart disease, hypertension, osteoarthritis, type 2 diabetes, and some cancers. The risk of type 2 diabetes is estimated to increase by 4.5 per cent for every kilogram of weight gain²⁰.

HOW ARE WE DOING?

Physical Activity

According to the 2003 and 2005 Canadian Community Health Surveys, approximately 7 out of 10 Aboriginal people in Fraser Health said that they were moderately or physically active (FIGURE 75). Although not statistically significant, Fraser Health has a higher proportion of active Aboriginal people than the other health authorities.

FIGURE 75. Aboriginal People Who are Moderately or Physically Active, Age 12+, by Health Authority, 2003-2005



Note: 95% confidence interval ($p < 0.05$).

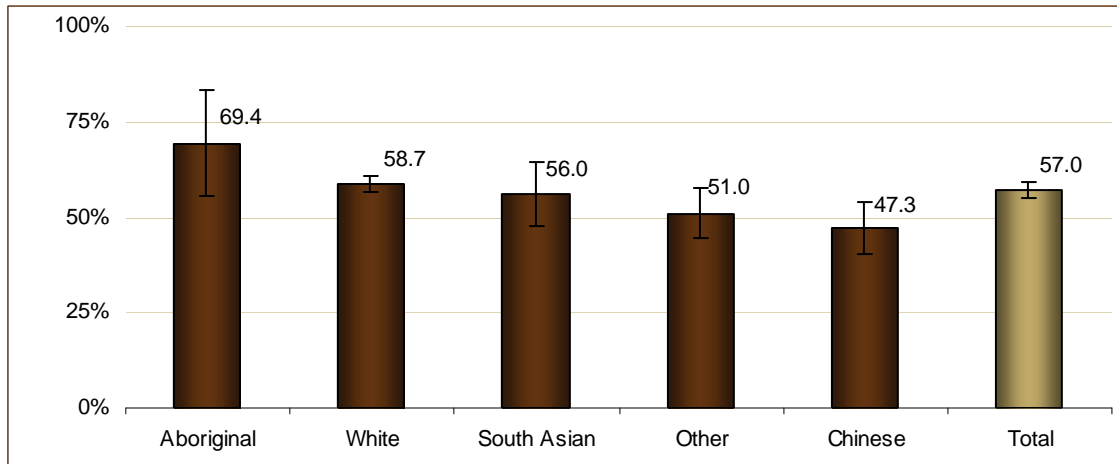
Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Fraser Health Aboriginal people have achieved the BC Healthy Living Alliance (BCHLA) target of

increasing the proportion of the active population to 70 per cent by 2010.

This higher proportion of Fraser Health Aboriginal people who are moderately or physically active translated to them having the highest proportion of the population who are active compared with other major ethnic groups in Fraser Health (FIGURE 76). For example, 57.0 per cent of the total Fraser Health population aged 12 and over were moderately or physically active.

FIGURE 76. Moderately or Physically Active, Age 12+, by Ethnicity, Fraser Health, 2003-2005



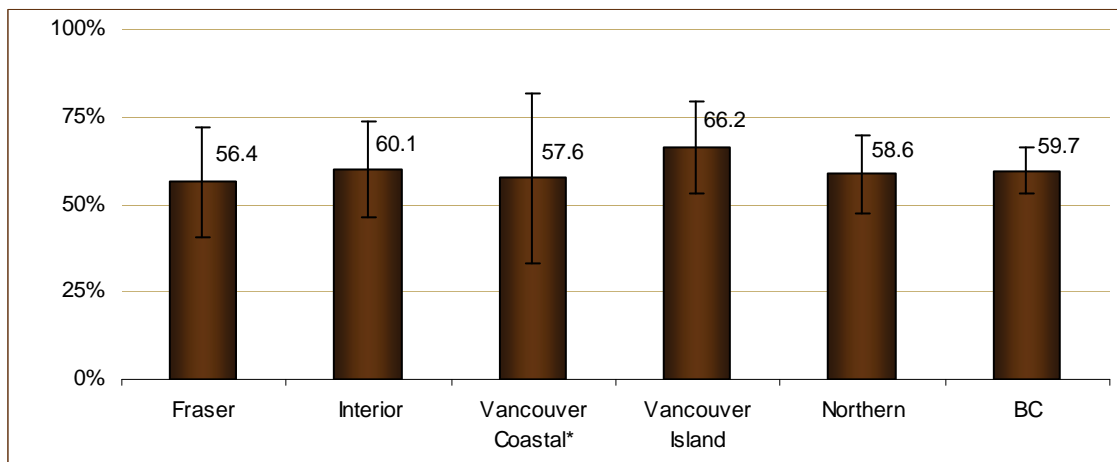
Note: 95% confidence interval ($p < 0.05$).

Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Body Mass Index (BMI)

In BC, approximately 60 per cent of Aboriginal people age 18 years and older were either overweight or obese whereas in Fraser Health 56.4 per cent were overweight or obese (FIGURE 77), the lowest proportion among health authorities.

FIGURE 77. Aboriginal People Who are Overweight or Obese, Age 18+, Health Authority, 2003-2005



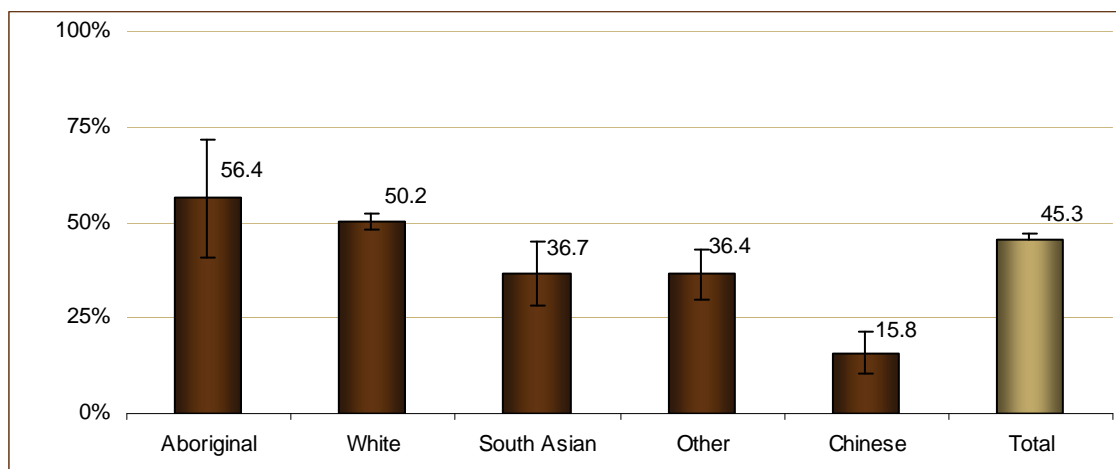
* Interpret with caution due to high sampling variability

Note: 95% confidence interval ($p < 0.05$).

Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Fraser Health's prevalence of overweight or obese by ethnicity indicates that Aboriginal people had the highest proportion of people who were overweight or obese (56.4 per cent) (FIGURE 78). South Asians (36.7 per cent) and Chinese (15.8 per cent) had the lowest proportions of overweight or obese people.

FIGURE 78. Prevalence of Overweight or Obese, Age 18+, by Ethnicity, Fraser Health, 2003-2005



Note: 95% confidence interval ($p < 0.05$).

Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Mission Friendship Centre Healthy Living Challenge

Fraser Health and the Mission Friendship Centre (MFC) partnered to hold a Healthy Living Challenge in the summer of 2009. The MFC Healthy Living Challenge encouraged MFC staff, elders and clients to “Eat Well, Be Active, and Save Tobacco for Tradition”. The goal of this challenge was to increase the knowledge and awareness of healthy lifestyle behaviours among MFC staff, elders and clients as well as to foster behaviour changes for health and well-being. The challenge included a number of activities and promotions to encourage staff and clients to participate and improve their health: specifically, an 8-week physical activity portion; a 5-week healthy eating portion; and a 9-week tobacco cessation portion. Participants were actively involved in the planning of goals and activities, and set a goal to collectively add up their steps to reach their imaginary destination of Hilo, Hawaii for the physical activity portion of the challenge.

Participants in this challenge made significant improvements in their healthy eating, physical activity, and tobacco cessation knowledge, as well as increasing their intake of fruits and vegetables and increasing the amount of moderate physical activity they engaged in. Additionally, their feeling of connection to the MFC community increased as a result of participating. Seven people quit smoking, and as of October 2009, none of them had started again. MFC is now a smoke-free establishment.

The success of the MFC Healthy Living Challenge and the enthusiasm of the participants to maintain their healthy lifestyle changes led to a second Healthy Living Challenge at MFC in the summer of 2010.

WHERE CAN WE IMPROVE?

Physical activity levels are not uniform within groups, as males, younger people, educated and those with higher incomes generally have higher physical activity levels⁴. Therefore, it is important to identify and target physical activity and healthy eating programs to Aboriginal youth and other individuals who are prone to inactivity and poor diet.

LIMITATIONS

A major data limitation is that physical activities other than leisure time activities are not taken into account. 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.

Prevalence data are highly variable due to small numbers so all interpretations must consider applicable confidence intervals.

BMI is calculated from self-reported data rather than physical measurements.

Body types that are athletic, muscular, very tall, very lean or very short will have very high or very low BMIs that may not reflect the same health hazards as BMIs that are high due to extra fat or low due to malnourishment. For these body types and ethnic groups where BMI may be an inaccurate measure of health risk, the waist-to-hip ratio is considered a better predictor since it specifically measures abdominal obesity²¹.

Tobacco Use

The proportion of people 15 years and older who reported being current cigarette smokers. Smoking attributable mortality (SAM) is an estimate of the number of deaths caused by cigarette smoking.

WHY IS IT IMPORTANT?

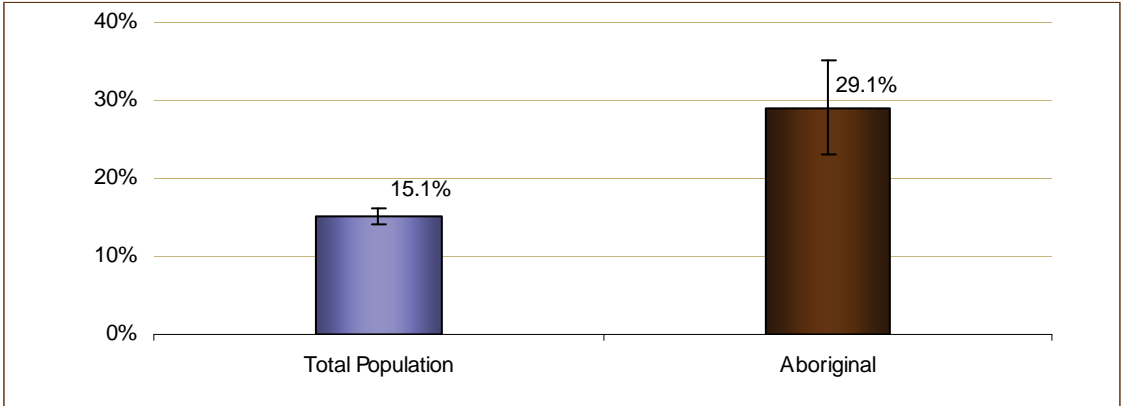
Although tobacco represents a positive aspect of Aboriginal culture, its non-ceremonial use is considered a health risk. Smoking causes illness, disability, and premature death and is the single most significant cause of lung cancer and chronic respiratory disease. Smoking also harms those indirectly exposed to tobacco smoke, particularly children and partners of regular smokers.

Tobacco use and smoking varies across population groups. Males and people with low income and less education tend to have higher smoking rates. Historically, smoking rates among the Aboriginal population have exceeded that of the general population.

HOW ARE WE DOING?

Despite declines in smoking prevalence in the past decades, a significant proportion of Aboriginal people continue to smoke on a daily basis (FIGURE 79). According to the Tobacco Attitudes and Behaviours Survey, the smoking rate among the Aboriginal population age 15 years and older was 29.1 per cent, compared with 15.1 per cent among other residents. This two-fold difference is consistently supported by other population surveys.

FIGURE 79. Current Smokers, Age 15+, BC, 2008



Note: 95% confidence interval (p<0.05).
Source: Tobacco Attitudes and Behaviours Survey Report. BC Stats. April 2009

Smoking Attributable Mortality (SAM), an estimate of the number of deaths where smoking is a contributing factor, shows that Status Indians had lower SAM rates than other residents in all three HSDAs of Fraser Health (FIGURE 80). Despite these rates, SAM is a substantial contributor to Status Indians mortality as Fraser Health averaged nearly eight deaths annually between 1992 and 2006 (TABLE 24). The majority (58.4 per cent) of these deaths were males, with males having consistently higher age-standardized mortality rates than females among both Status Indians and other residents.

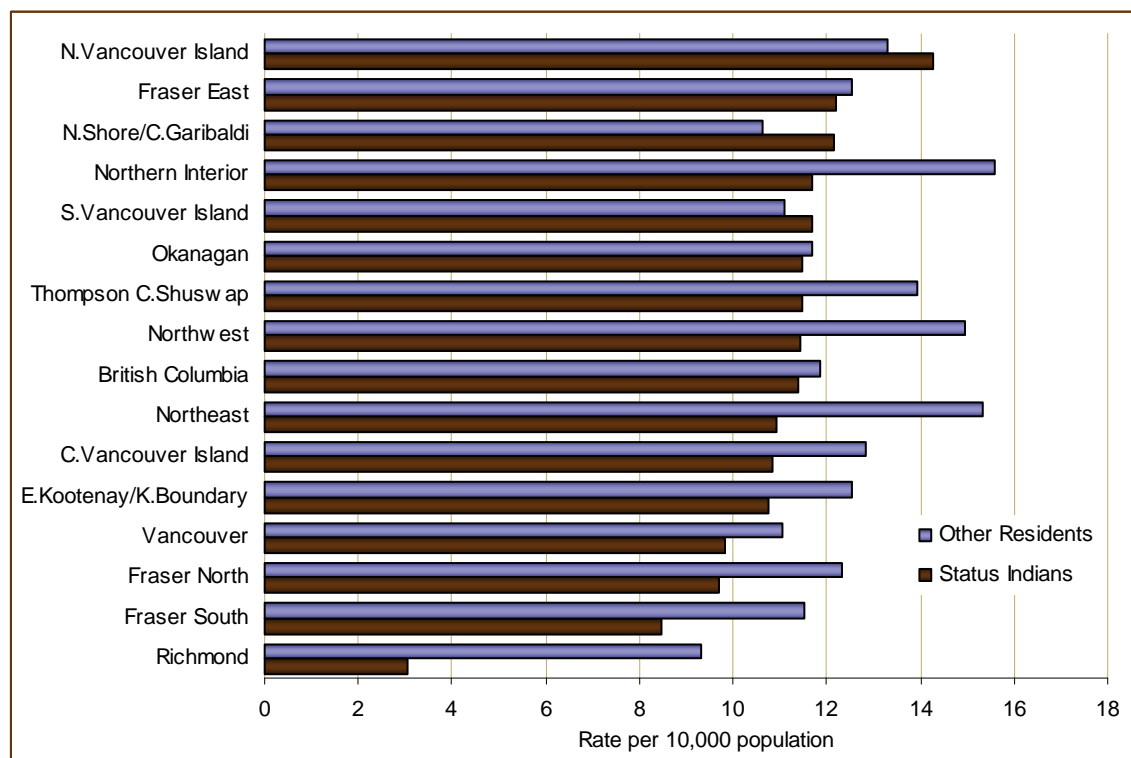
Despite having double the smoking rates of other residents, smoking attributable mortality rates are lower among Status Indians. This may be because Status Indians are much more likely to die at a younger age than other residents, well before the impact of smoking related diseases are realized.

TABLE 24. Smoking Attributable Mortality, Counts and Age Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	45	16	12	73
Female	28	13	12	53
Total	73	29	23	125
Rate, Status Indians				
Male	16.0	13.5	10.6	n/a
Female	9.0	7.4	7.4	n/a
Total	12.2	9.7	8.5	n/a
Rate, Other Residents				
Male	17.6	18.1	17.5	n/a
Female	8.5	8.3	7.7	n/a
Total	12.5	12.3	11.5	n/a

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 80. Smoking Attributable Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 80 shows the distribution of age-standardized death rates across BC with Fraser South and Fraser North rates being somewhat lower than Fraser East for Status Indians.

WHERE CAN WE IMPROVE?

With Aboriginal community engagement, explore education programs, cessation services and community awareness activities aimed at Aboriginal youth and families.

LIMITATIONS

Survey data underestimates smoking rates and other socially undesirable behaviours because some smokers may be reluctant to admit they smoke.

External (Injury) Causes of Death

External causes of death and disability include injury and violent deaths and are categorized into two main components: unintentional and intentional. Injuries that are purposefully self-inflicted (suicide and suicide attempt) or inflicted by another person (homicide and assaults) are considered intentional injuries. Those traditionally labelled “accidents”, such as falls, traffic collisions, poisonings, drownings, etc., are considered unintentional causes.

External causes are the leading cause of death and potential years of life lost (PYLL) among Status Indians. The following external causes are summarized in this section:

- motor vehicle collisions,
- accidental poisonings,
- alcohol related mortality,
- drug-induced deaths, and
- suicide including youth suicide.

Motor Vehicle Collisions

Death counts and age standardized mortality rates resulting from motor vehicle collisions.

WHY IS IT IMPORTANT?

Motor vehicle collisions remain one of the leading causes of death and premature mortality, especially for Status Indians. Death and disability from motor vehicle collisions results in reduced quality of life, lost productivity, high health costs and a significant burden on health resources.

HOW ARE WE DOING?

Motor vehicle collisions (MVC) were the second leading cause of external or injury-related deaths accounting for a total of 70 deaths among Fraser Health Status Indians from 1992 to 2006. As seen in TABLE 25, two-thirds of these deaths occurred in Fraser East which translated to Fraser East's higher age-standardized mortality rates for both Status Indians and other residents.

All MVC deaths were premature (death before age 75) with an average 46 years lost per death. This means that, on average, each MVC death occurred at age 29 years.

TABLE 25. Motor Vehicle Collisions Mortality, Counts and Age Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

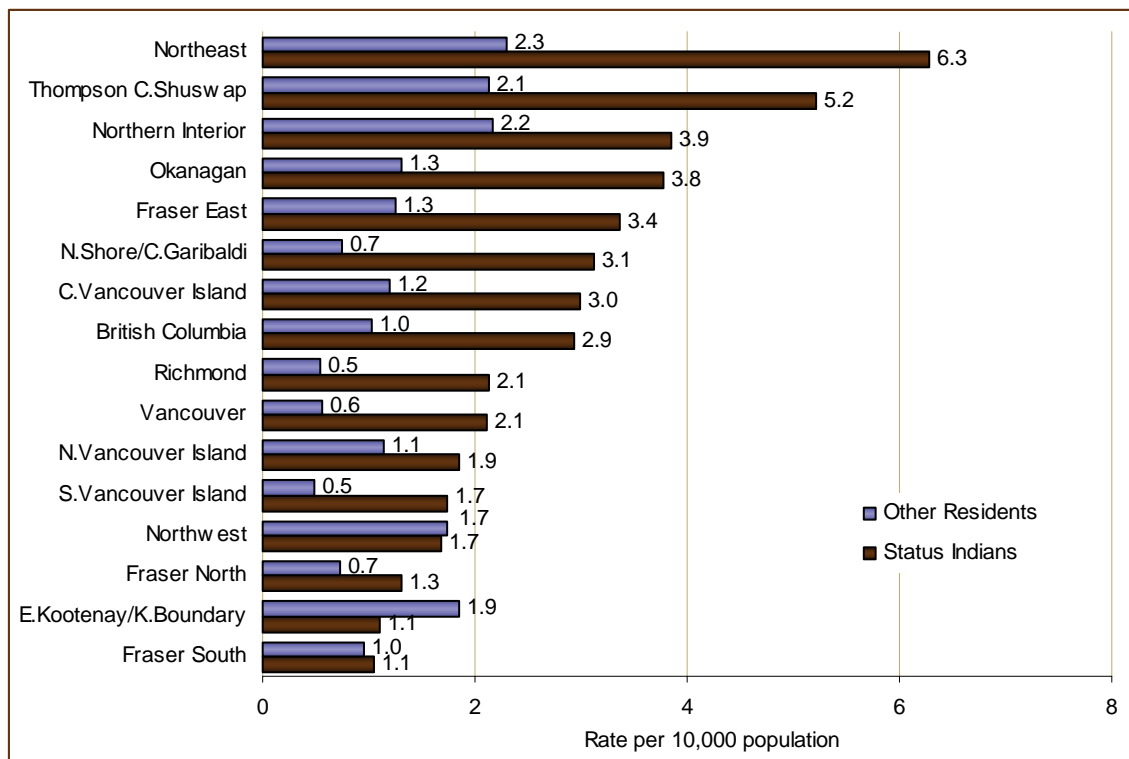
Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	27	6	7	40
Female	19	7	4	30
Total	46	13	11	70
ASMR, Status Indians				
Male	4.5	1.1	1.4	n/a
Female	2.4	1.4	0.8	n/a
Total	3.4	1.3	1.1	n/a
ASMR, Other Residents				
Male	1.8	1.1	1.4	n/a
Female	0.7	0.4	0.5	n/a
Total	1.3	0.7	1.0	n/a

Age Standardized Mortality Rate per 10,000 population.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The distribution of age-standardized mortality rates for motor vehicle collisions across BC show considerable variation for both Status Indians and other residents (FIGURE 81). Among Status Indians, Fraser East had higher rates than Fraser North, Fraser South and the provincial average.

FIGURE 81. Motor Vehicle Collisions, Age Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Age-standardized Mortality Rate per 10,000 population.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Given that motor vehicle collisions are one of the leading causes of death for Status Indians, injury prevention strategies must remain a priority area for action to reduce the burden of death and disability. Prevention programs aimed at road safety and driver awareness, seatbelt use, proper use of child seats and drinking while impaired are some important areas of action³.

A 2008 study by the BC Injury Research and Prevention Unit to determine the extent of motor vehicle restraint use among BC Aboriginal occupants during fatal motor vehicle crashes found that only 46 per cent were using seat belts. The study also noted alcohol-impaired drivers were more likely to speed and less likely to wear motor vehicle restraint.

LIMITATIONS

Motor vehicle collision data for Fraser Health Aboriginal people are currently unavailable; as are related hospitalizations and other morbidity data.

Accidental Poisonings

Death counts and age-standardized mortality rates resulting from accidental poisoning.

WHY IS IT IMPORTANT?

Although deaths from accidental poisonings (such as accidental intake of wrong medication, illicit drug overdoses, alcohol poisoning, consumption of organic solvents, or exposure to gases, vapours, pesticides, etc.), have declined for some years³, they remain a significant health issue and are leading contributors to premature mortality. In addition, death and disability from accidental poisoning are completely preventable.

HOW ARE WE DOING?

Among Status Indians, accidental poisoning is the leading cause of external or injury-related death in Fraser Health. From 1992 to 2006, accidental poisoning accounted for 85 total deaths or 30.1 per cent of all injury-related deaths (TABLE 26). Although the sex breakdown at the Fraser Health level showed little difference, at the HSDA level, males were more likely to be killed from accidental poisoning in Fraser East than in Fraser North or Fraser South. The opposite was true for Fraser North and Fraser South as these areas had higher rates of mortality among females than males.

All 85 Status Indian accidental poisoning deaths were premature deaths (death prior to age 75) with each death occurring, on average, at age 29.

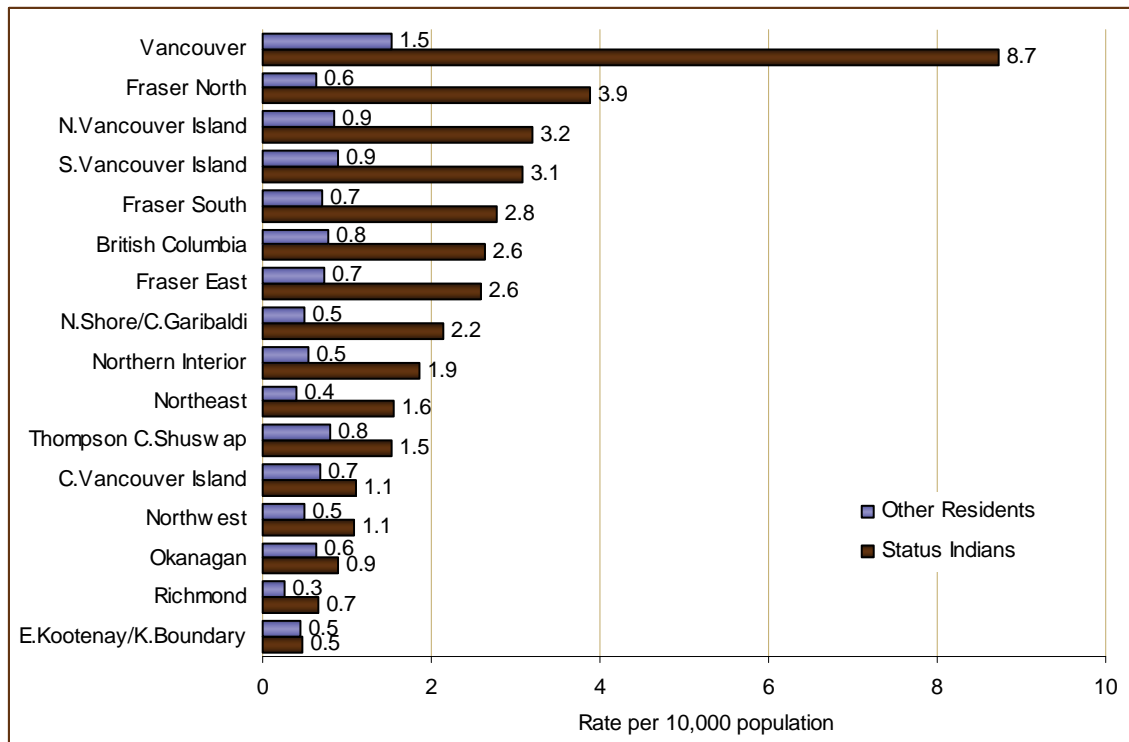
TABLE 26. Accidental Poisoning Mortality, Counts and Age-Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	21	11	9	41
Female	10	20	14	44
Total	31	31	23	85
ASMR, Status Indians				
Male	3.6	2.5	2.2	n/a
Female	1.7	4.7	3.2	n/a
Total	2.6	3.9	2.8	n/a
ASMR, Other Residents				
Male	1.0	1.1	1.1	n/a
Female	0.4	0.2	0.3	n/a
Total	0.7	0.6	0.7	n/a

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The age-standardized mortality rate at the HSDA level shows that in Fraser Health, Status Indians had higher rates of accidental poisoning deaths than other residents (FIGURE 82). With the exception of Vancouver HSDA, Fraser North Status Indians had the highest rate of accidental poisoning deaths in the province compared with other residents.

FIGURE 82. Accidental Poisoning, Age-Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Collaborate with Aboriginal communities to review the burden of death and disability from accidental poisoning and to develop local strategies to reduce the impact at the community level.

LIMITATIONS

Only a limited set of data is available for accidental poisoning and is further constrained by the level of geography.

Suicide

Suicide mortality and hospitalizations for the total population and for youth aged 15-24 years.

WHY IS IT IMPORTANT?

Suicide is an important preventable cause of death and of potential years of lost life. A suicide death has considerable impact on family, friends and community. Risk of suicide differs between groups of people with suicide rates among Status Indians being much higher than among the general population. As noted by the Provincial Health Officer in the 2001 annual report, the only ethically acceptable target is to achieve comparable health Status between Aboriginal people and the general population.

Suicide is typically underestimated so the actual number of deaths from suicide may be higher because information regarding the nature of the death may only become available after the original death certificate is complete. In some situations, assessing whether the death was intentional may be difficult since a death can only be certified as a suicide when the victim's intent is clear.

HOW ARE WE DOING?

Aggregate data for 1992 to 2006 showed 52 suicide deaths among Status Indians in Fraser Health. Suicide was clustered in males who accounted for 63.5 per cent (or 33 in total) of these deaths. All 52 of these deaths occurred before age 75 with an average loss of 41 years per death (TABLE 27). This means that, on average, each suicide death in Fraser Health occurred at age 34 among Status Indians.

TABLE 27. Suicide Mortality, Counts and Age-Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

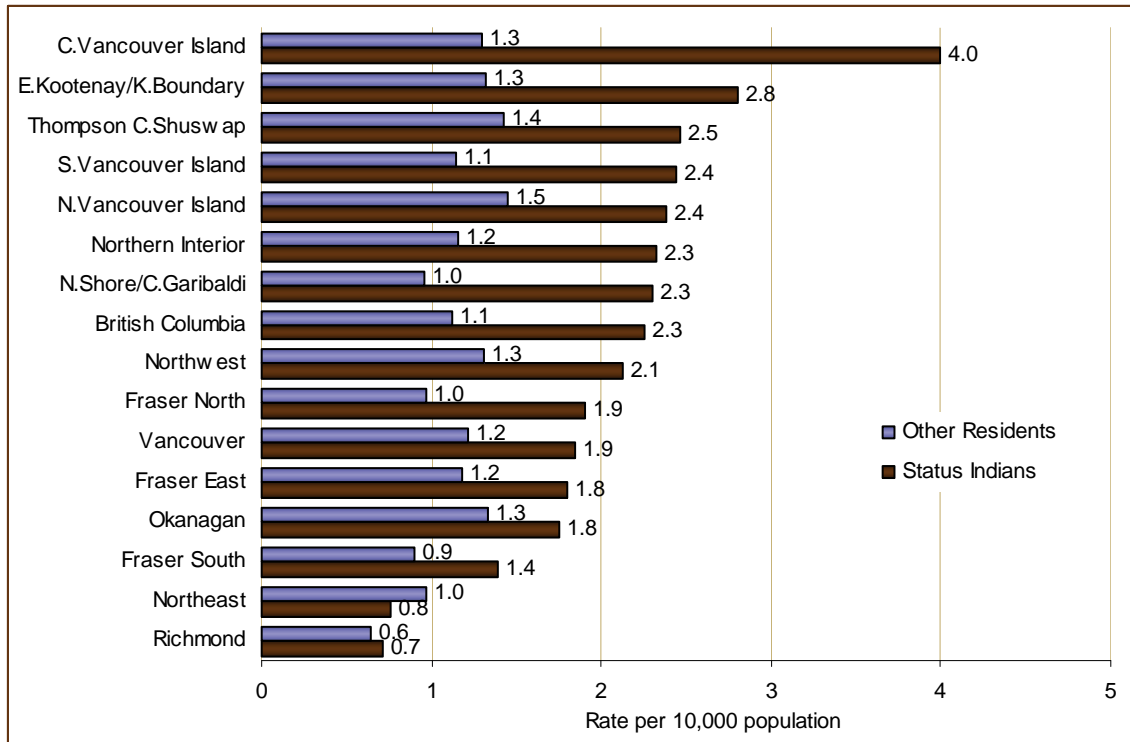
Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	13	11	9	33
Female	12	5	2	19
Total	25	16	11	52
ASMR, Status Indians				
Male	1.9	2.7	2.2	n/a
Female	1.7	1.3	0.7	n/a
Total	1.8	1.9	1.4	n/a
ASMR, Other Residents				
Male	1.8	1.5	1.4	n/a
Female	0.5	0.5	0.4	n/a
Total	1.2	1.0	0.9	n/a

Age-standardized Mortality Rate per 10,000 population.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Overall, Status Indians had higher rates of suicide than other residents for most HSDAs in BC (FIGURE 83). Although Fraser Health HSDAs had lower rates of suicide compared with BC, Status Indian rates were higher than other resident rates.

FIGURE 83. Suicide, Age Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006

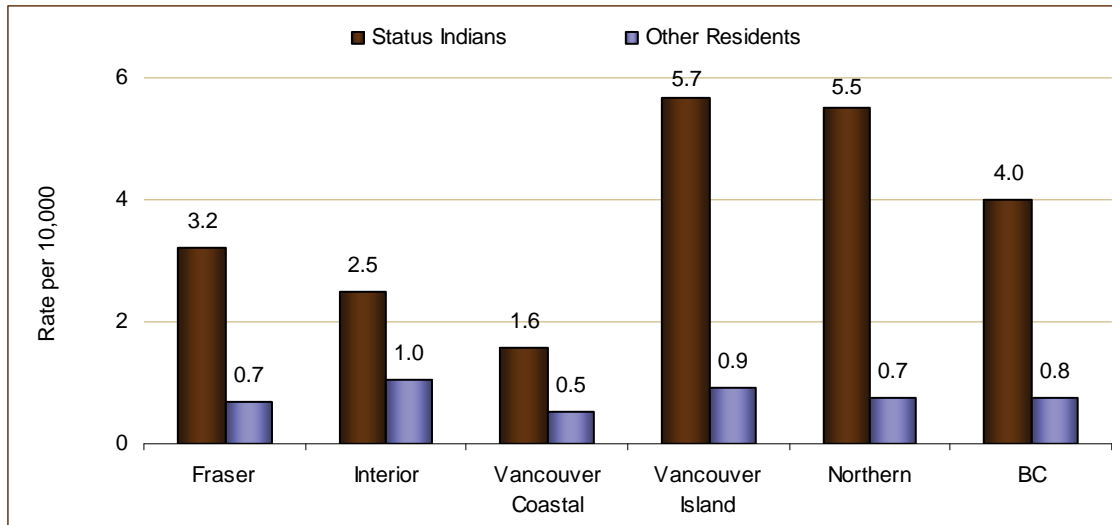


Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Youth Suicide (age 15 to 24)

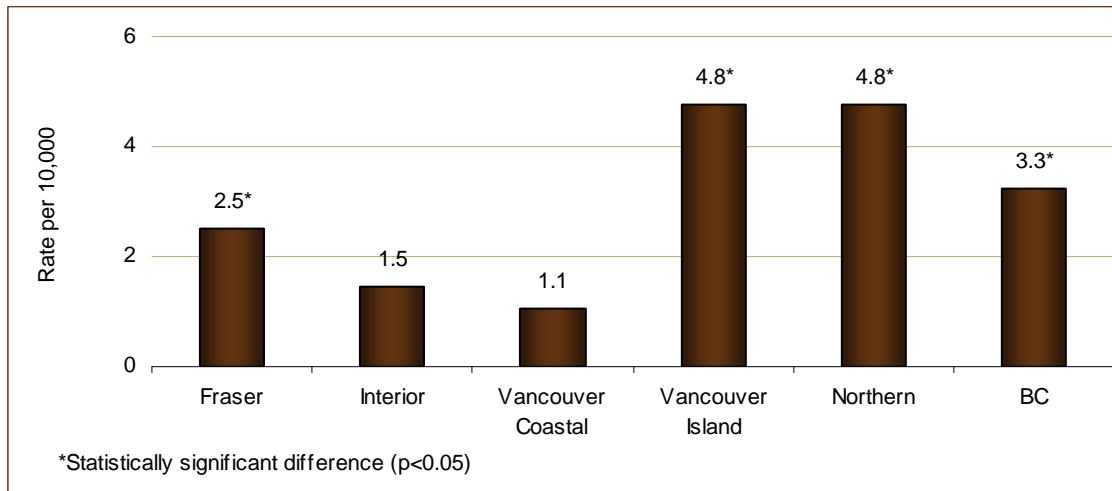
In Fraser Health, the youth suicide rate for Status Indians was 3.2 per 10,000 population for the period 2001-2005, compared to a rate of 0.7 for other residents (FIGURE 84). Although based on small numbers, this 4.6 fold higher chance of suicide in Status Indians was statistically significant. The rate difference was smaller for Fraser Health than for BC overall (FIGURE 85). Also, it should be noted, that these rates were calculated based on five youth suicides among Status Indians and 65 youth suicides among other residents in Fraser Health.

FIGURE 84. Youth Suicide, Age Standardized Mortality Rate, Age 15-24 Years, by Health Authority, 2001-2005



Source: British Columbia Vital Statistics Agency, Knowledge Management and Technology Division, Ministry of Health

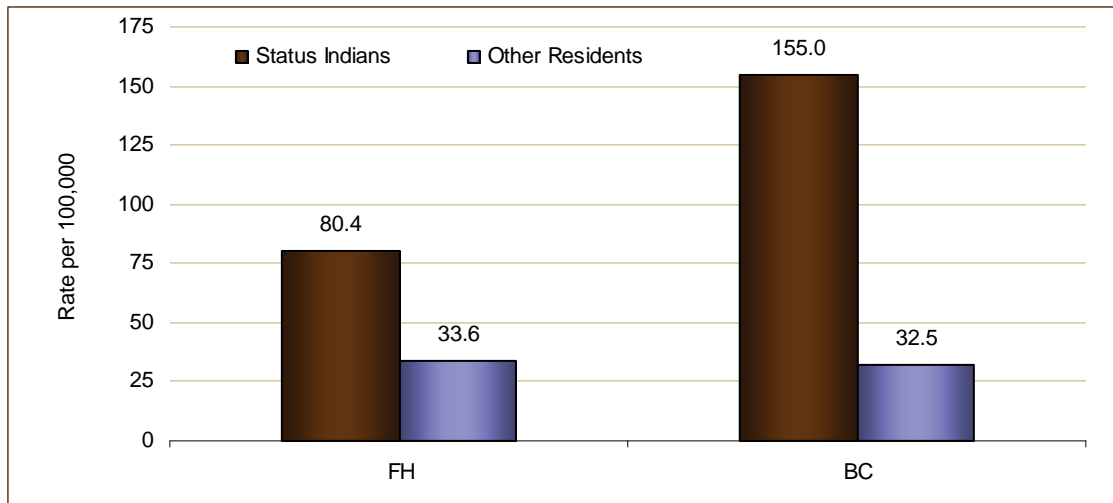
FIGURE 85. Gap in Youth Suicide, Age Standardized Mortality Rate, Age 15-24 Years, by Health Authority, 2001-2005



Source: British Columbia Vital Statistics Agency, Knowledge Management and Technology Division, Ministry of Health

Rates of hospitalization from suicide or attempted suicide were much higher for Fraser Health Status Indians (80.4 per 100,000 population) than for other residents (33.6 per 100,000 population). Fraser Health's hospitalization rate for Status Indians was approximately one-half of the provincial rate.

FIGURE 86. Suicide/Attempted Suicide Hospitalization Rate, 2006/07



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Aboriginal Perspective

A BC study by Chandler and Lalonde showed that suicide rates among First Nations bands vary considerably and this variability is strongly associated with the number of 'protective factors' present in a particular band. The First Nation communities that had all six of these protective factors had youth suicide rates that were approximately one-quarter (21.5 per 100,000) of the rates compared to communities with no protective factors (83.8 per 100,000). The six protective factors used in this study were:

- bands making progress to secure Aboriginal title or their traditional lands,
- bands making progress towards self-government and some degree of community control,
- input over educational services,
- input over police and fire protection,
- input over delivery of health services, and
- presence of facilities to build, enhance and preserve cultural activities.

Further, a national study by Health Canada found that the two most common causes of suicide among Aboriginal people were the rapid disintegration of traditional values and the breakdown of both the nuclear and extended family.

Source: Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007.

With Aboriginal community engagement, explore strategies aimed at reducing suicide rates among Aboriginal youth that address the risk factors associated with suicide. Studies, as well as evidence from this report, show that Aboriginal people have higher rates of alcohol consumption and abuse, drug abuse, experience and witness more physical abuse and mental abuse, and are likely to feel more isolated and lonely than non-Aboriginal people.

Aboriginal elders acknowledge that Aboriginal people, especially youth, often find themselves struggling between two cultures: one with traditional Aboriginal values encompassing spirituality, unity, equality and respect but which historically has been discouraged, and the other, which often contradicts these traditional ideals. This leads many feeling isolated, doubtful, and without a sense of belonging.

Chehalis Community School Youth Outreach Program

The Chehalis Community School Youth Outreach Program provides youth outreach services for the students of Chehalis community school. Helping students deal with personal, school, and family issues, this program is one of the best support services available to students. It has made a true difference in their lives.

Program activities include:

- facilitated talking circles
- coached sports teams (e.g. soccer, volleyball, baseball and basketball)
- connections to Big Brothers and Big Sisters
- an in-school mentoring program
- spirit days
- team meetings for kids at risk
- social skills development programs
- weekly girls group
- school dances
- an annual bike rodeo

LIMITATIONS

Currently, data on youth suicide are limited and only available for youth who are Status. Community-level or sub-Fraser Health level data are unavailable at this time.

The classification of suicide for hospitalizations is determined by the receiving physician in the emergency intake and/or by ambulance personnel. Only a small proportion of suicide attempts are admitted to hospital since the majority are not serious enough to require hospitalization.

Suicide is typically underestimated. The actual number of deaths from suicide may be higher because information regarding the nature of the death may only become available after the original death certificate is complete. In some situations, assessing whether the death was intentional may be difficult since a death can only be certified as a suicide when the victim's intent is clear.

Alcohol and Drug-Induced Deaths

Death rates from alcohol and drugs where alcohol or drug(s) were either a direct factor or a contributing factor in the cause of death.

WHY IS IT IMPORTANT?

The association between excessive alcohol and drug consumption and their health, social, legal and economic implications for individuals and society is well established. Alcohol is directly associated with liver cirrhosis, gastritis, pancreatitis, alcohol poisoning and indirectly with cardiovascular disease, cancer, suicide and homicide. Substance use differs across cultures with practices, beliefs and patterns of use often underlain with their common beginnings as medicinal agents, religious vehicles and social norms. Excessive alcohol use and illicit drug use are influenced by the social and economic environments including economic status, education, social identity, peer norms and role models. Alcohol and drug use continues to be a significant issue in the Aboriginal community.

HOW ARE WE DOING?

Fraser Health averaged close to nine alcohol-related deaths per year among Status Indians from 1992 to 2006 (TABLE 28). Approximately 57 per cent of the total Status Indian deaths (or 128) occurred in Fraser East and this is reflected in Fraser East having the highest death rate in Fraser Health. Sex was a factor in the distribution of alcohol-related mortality as 58.8 per cent of the total Status Indian deaths were clustered in males. Age-standardized mortality rates were also higher for males than for females in Fraser East and Fraser North.

TABLE 28. Alcohol-Related Mortality, Counts and Age-Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

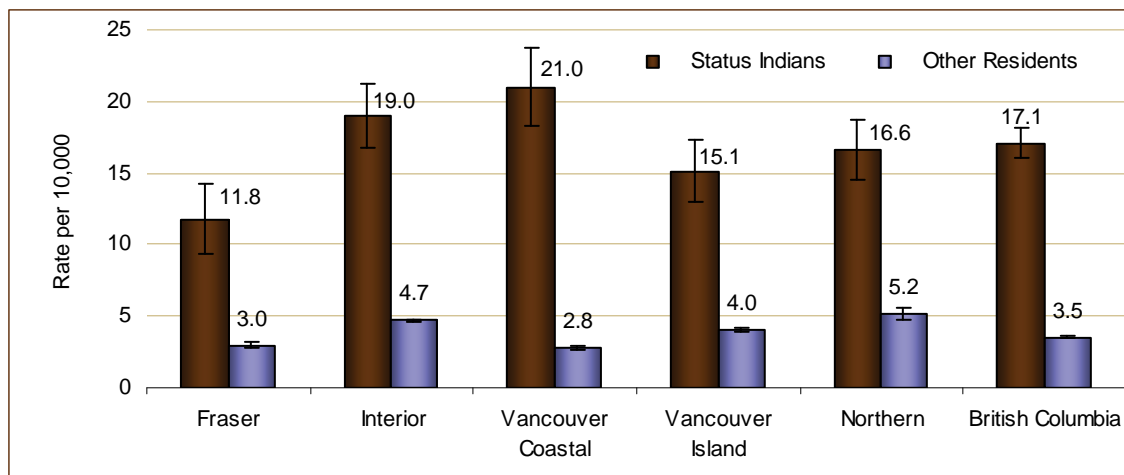
Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	86	28	19	133
Female	42	29	22	93
Total	128	57	41	226
ASMR, Status Indians				
Male	23.1	14.0	6.8	n/a
Female	8.0	9.6	5.9	n/a
Total	14.9	11.3	6.2	n/a
ASMR, Other Residents				
Male	4.8	5.6	4.6	n/a
Female	1.2	1.2	1.1	n/a
Total	3.0	3.2	2.7	n/a

Age-standardized Mortality Rate per 10,000 population.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Age-standardized mortality rates from 2002 to 2006 were lowest in Fraser Health for both Status Indians and other residents (FIGURE 87). However, the alcohol-related death rate was approximately four-times higher among Status Indians than among other residents in Fraser Health.

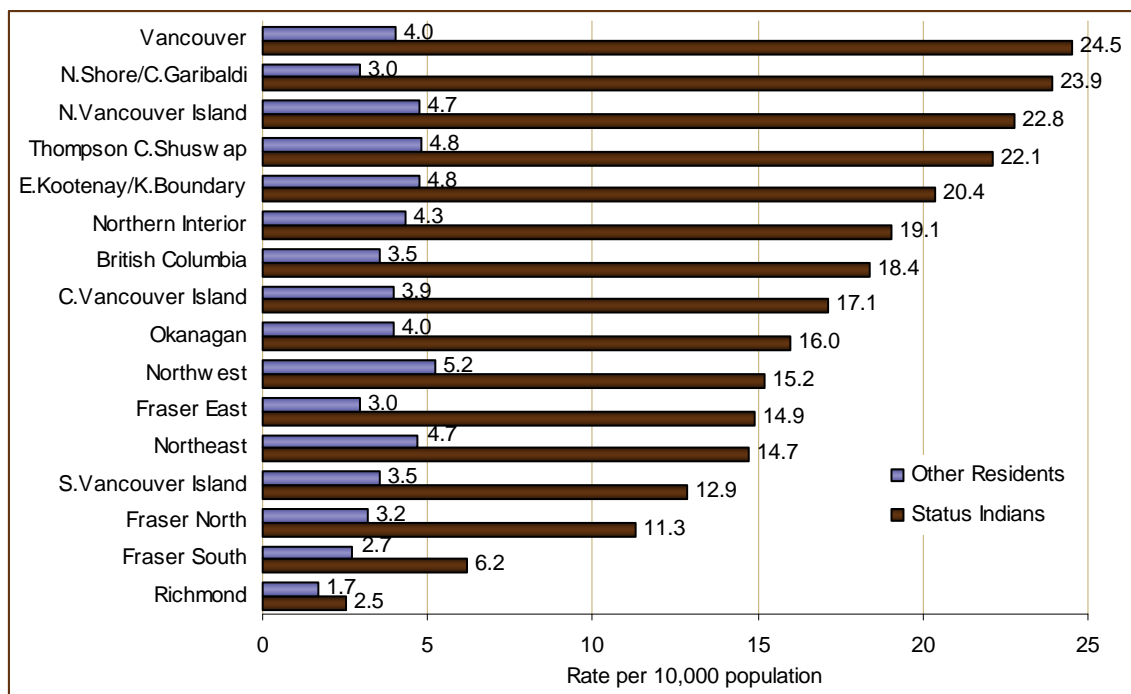
FIGURE 87. Alcohol-Related, Age Standardized Mortality Rate, Status Indians and Other Residents, Health Authority, 2002-2006



Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 88. Alcohol-Related, Age-Standardized Mortality Rate, Status Indians and Other Residents, BC HSDAs, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Age-standardized mortality rates at the HSDA level also reinforce the substantial disparity in alcohol-related mortality between Status Indians and other residents (FIGURE 88). Generally, Fraser Health HSDAs had lower age-standardized mortality rates than most other provincial HSDAs.

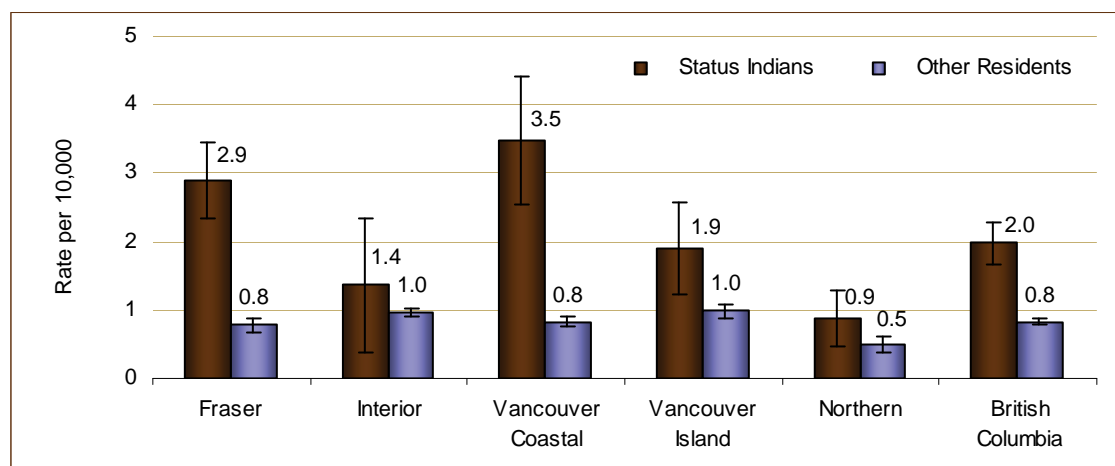
From 1992 to 2006, Fraser Health averaged approximately six drug induced deaths annually (or a total of 97 deaths) among Status Indians (TABLE 1). Overall, 56.7 per cent of drug induced deaths were among females, a reversal from alcohol-related mortality where a similar proportion of deaths were among males. Interestingly, in Fraser East, a higher proportion of drug induced deaths occurred in males, whereas the opposite was true for Fraser North and Fraser South. In addition, age-standardized deaths rates were much higher among Status Indians than among other residents.

TABLE 29. Drug-Induced Mortality, Counts and Age-Standardized Mortality Rate, Status Indians and Other Residents, Fraser Health, 1992-2006

Indicator	Fraser East	Fraser North	Fraser South	Fraser Health
Count, Status Indians				
Male	21	11	10	42
Female	14	24	17	55
Total	35	35	27	97
Rate, Status Indians				
Male	3.6	2.8	2.5	n/a
Female	2.3	5.3	3.8	n/a
Total	2.9	4.2	3.3	n/a
Rate, Other Residents				
Male	1.3	1.3	1.3	n/a
Female	0.7	0.5	0.5	n/a
Total	1.0	0.9	0.9	n/a

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 89. Drug-Induced, Age-Standardized Mortality Rate, Status Indians and Other Residents, Health Authority, 2002-2006

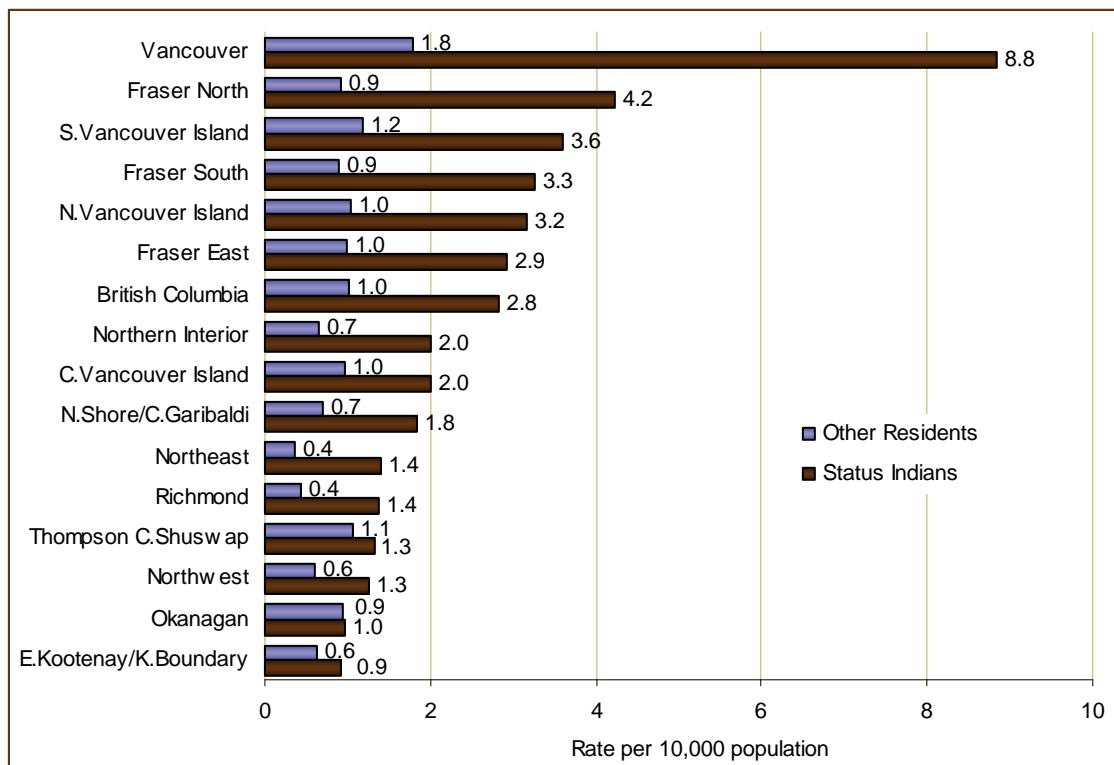


Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

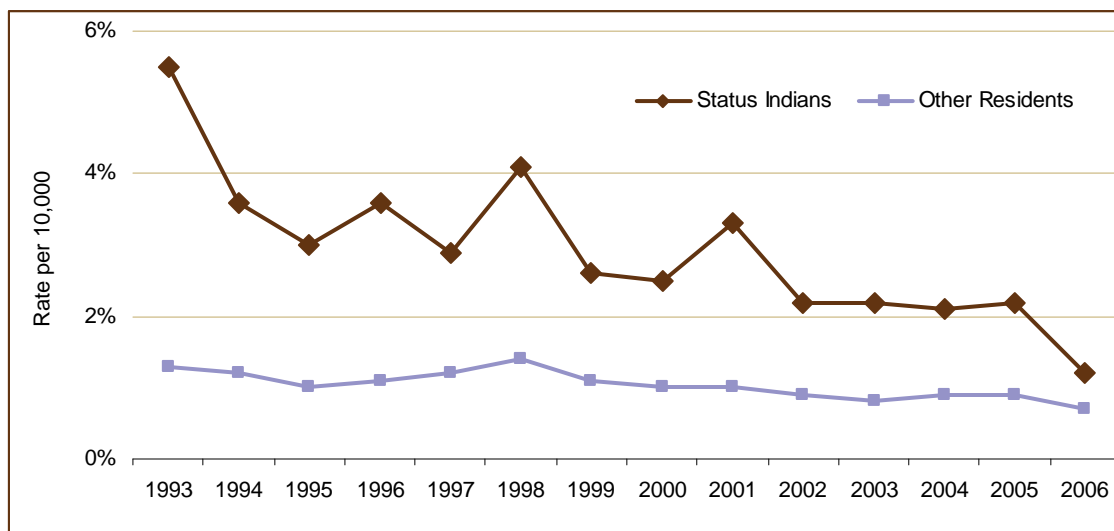
Health authority data show that Fraser Health had one of the highest drug-induced death rates among Status Indians in the province and statistically significantly higher rates than other residents in Fraser Health (FIGURE 89). Age-standardized death rates for the fifteen BC HSDAs show higher rates among Status Indians than other residents (FIGURE 90). The Fraser Health HSDAs had some of the highest rates in BC.

FIGURE 90. Drug-Induced, Age-Standardized Mortality Rate, Status Indians and Other Residents, Health Authority, 1992-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 91. Drug Induced Mortality, Age Standardized Mortality Rate, Status Indians and Other Residents, BC, 1993-2006



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Although data at the Fraser Health level were unavailable, BC rates in FIGURE 91 show that there was a considerable decline in drug-induced death rates for the Status Indian population.

The issue of substance abuse is further reinforced by a recent survey at a Sto:lo Health Career Fair where Aboriginal high school students identified drug, alcohol and smoking/tobacco use as the top three greatest health problems facing their communities.

Stó:lō Nation Day Treatment Program

The Stó:lō Nation Day Treatment Program empowers First Nations people to live a healthier lifestyle free of addiction through knowledge from their rich cultural heritage. Through a partnership with Chilliwack Community Connections and Substance Abuse Management (SAM), a range of services are offered, including stress management, harm reduction, cognitive skills, goal setting, historic trauma healing, medicine wheel teachings, healing circles, drum making workshops, traditional art therapy, sweat lodge ceremonies, traditional food/herbs, and Elders teachings. The program operates three days a week, and is open to all Aboriginal people both on- and off-reserve. Transportation to the program is provided.

Mattagami First Nation's Policy to Reduce Alcohol-Related Harm

Considered the first policy of its kind in Canada, the Mattagami First Nation in 1993 implemented a policy to reinforce moderate and appropriate drinking practices on its territory to reduce alcohol-related problems at community social gatherings. An important goal of this policy was to model good social standards to youth around alcohol consumption. This policy established areas where permit-drinking was allowed and those areas where alcohol was prohibited (waterfront, fields, picnic areas, etc.). Youth under the legal drinking age were not permitted to attend any alcohol-permitting gatherings except for weddings, anniversaries and reunions provided they vacated these events by 8:00pm.

The policy also required servers to ensure that underage and intoxicated individuals were not served alcohol, that there was no "last call" announced and clearly-marked signs and pictures in and around facilities promoting responsible drinking.

Source: Lauzon, R. et al. Matagami First Nation's Policy to Reduce Alcohol-Related Harm. *The Canadian Journal of Native Studies* XVIII, 1(1998):37-48.

WHERE CAN WE IMPROVE?

Develop a coordinated approach to address the health and social issues associated with alcohol and drug use.

The literature suggests a multitude of harm reduction measures used by Aboriginal people with those addressing the root causes of substance abuse as being critical. Treatment services must also

provide a holistic approach intertwined with family and community involvement. *The National Framework for Action to Reduce the Harms Associated with Alcohol and Other Drugs and Substances in Canada* recommends that strategies be developed and implemented by the Aboriginal people themselves, are culturally sensitive, empowering and build local capacity are considered effective and sustainable. This framework also advocates for strategies that focus on children and youth with the goal of delaying first use of substances and its associated problems in the future. Children and youth are strongly influenced by adults so problematic substance use by parents and neighbours can lead to, first, experimentation and, second, to continual use. An example of a policy that produces a social environment modeling appropriate drinking styles for youth is summarized next.

LIMITATIONS

At this time, only mortality data are available so a comprehensive picture of this issue cannot be formulated with hospitalization and other morbidity data.

For deaths indirectly related to alcohol, alcohol must be noted on the death certificate as a contributing factor otherwise the death is not attributed to alcohol. Drug-induced deaths exclude accidents, homicides, and other causes indirectly related to drug use, alcohol-related deaths and smoking-attributable mortality.

Mental Health

Prevalence of common mental health conditions by ethnic groups at BC level.

WHY IS IT IMPORTANT?

Mental health is of particular concern to the Aboriginal people, arisen from not because Aboriginal people are biologically predisposed to higher levels of mental health but because so many suffer from alcohol and drug abuse, suicide, accidents and violence, unemployment, and incarceration. The impact of these health problems in the Fraser Health Aboriginal communities is highlighted throughout this document

The factors contributing to mental health problems among Aboriginal people are numerous but most have been attributed to the long history of discrimination and oppression, colonization, forced assimilation, residential school trauma and the loss of land, language and culture. An article by Canadian Mental Health researcher Laurence Kirmayer and colleagues further reinforces this point:

The policies of forced assimilation have had profound effects on Aboriginal peoples at every level of experience from individual identity and mental health, to the structure and integrity of families, communities, bands and nations. Narratives and life histories suggest that the residential school experience has had enduring psychological, social and economic effects on survivors.

Source: Kirmayer L, Simpson C, Cargo M. Healing traditions: culture, community and mental health promotion with Canadian Aboriginal peoples. *Australasian Psychiatry* 2003; 11(s1):s15-s23.

HOW ARE WE DOING?

While some mental health-related outcomes – such as suicide, alcohol and drug use, and mental health follow-up – are detailed in other chapters of this report, this section provides a broad and provincial-level view of mental health conditions for which data are available.

As seen in FIGURE 92, approximately 11% of the BC Aboriginal population self-identified as having mental health problem, a higher proportion than the total population and the other ethnic groups.

Similarly, Aboriginal people were also more likely to feel depressed and have an anxiety disorder than the total population and the other ethnic groups (FIGURE 93 and FIGURE 94).

WHERE CAN WE IMPROVE?

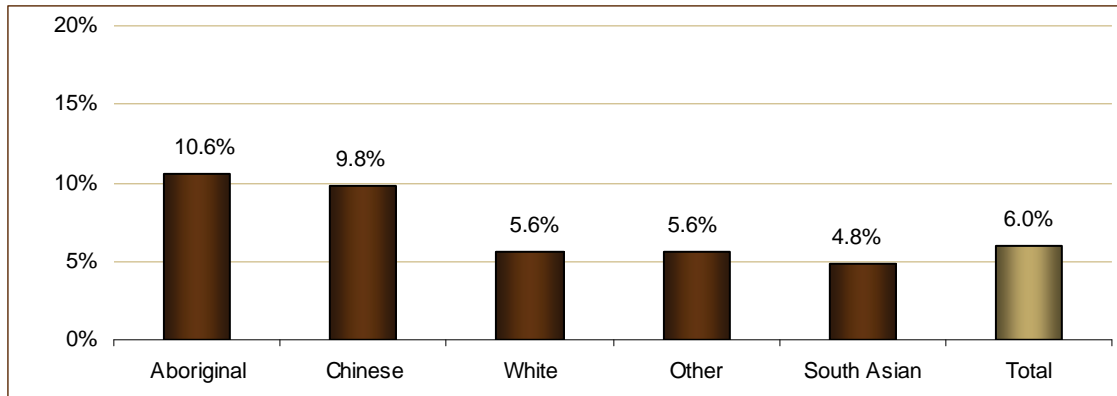
Promoting mental health and well-being using holistic, community-specific, culturally-appropriate initiatives instead of the disease model.

Reduce barriers to the mental health system and services used by Aboriginal people. Increase the availability of Aboriginal mental health care providers and provide cultural awareness training to non-Aboriginal mental health professionals.

LIMITATIONS

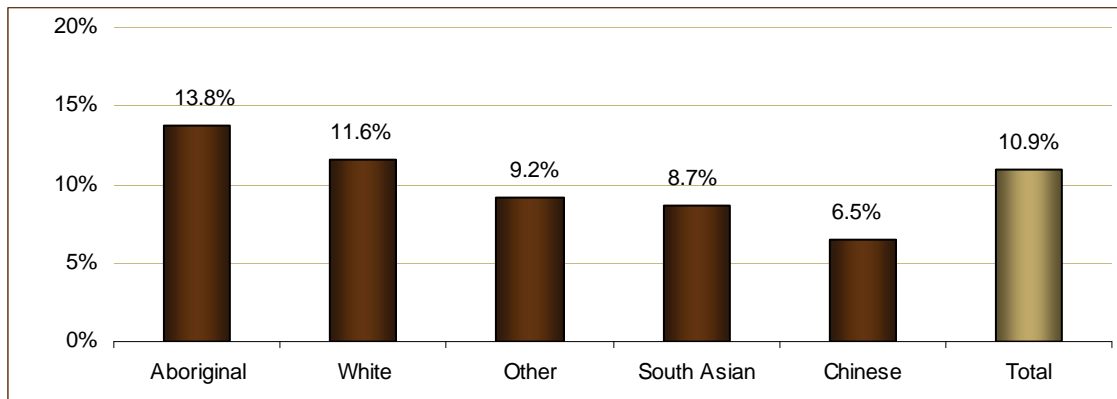
Only limited data in the area of mental health exist for the Aboriginal people. The survey data presented above, while available at the HSDA level, are too unstable to report at that geography.

FIGURE 92. Proportion of Population with Self-Perceived Mental Health, Age 12+, by Ethnicity, BC, 2003-2005



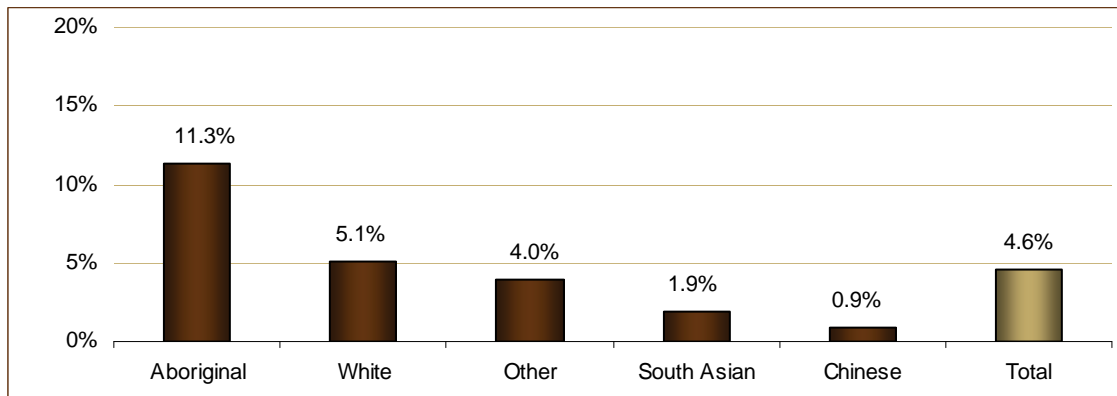
Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

FIGURE 93. Proportion of Population Who Felt Depressed for More Than Two Weeks in Past 12 Months, Age 12+, by Ethnicity, BC, 2003-2005



Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

FIGURE 94. Proportion of Population with an Anxiety Disorder, Age 12+, by Ethnicity, BC, 2003-2005



Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Chapter 7

HEALTH SERVICES

To achieve and maintain health, it's essential to have health services that effectively promote and protect health, relieve pain and suffering, restore function, and provide compassionate and culturally-appropriate care. Equal access to quality health care on a timely basis is one of the determinants of health.

For services of proven effectiveness, such as mammography screenings and cervical cancer screenings in females, utilization rates tell us whether services are reaching those who need them. Treatment services such as hospitalizations and community clinics indicate the consequences of identified health problems in the Status Indian community.

This section describes a limited aspects of the health cares system, particularly patterns of use of disease prevention and early detection services, leading causes of hospitalizations, the distribution and extent of prescription drug use and follow-up services associated with mental health patients.

Preventive Screening Services

Data for two preventive services, breast cancer screening and cervical cancer screening (Pap smear test), are reported from the 2003 and 2005 Canadian Community Health Surveys.

WHY IS IT IMPORTANT?

Breast cancer is the most frequently diagnosed cancer among women in BC and is the second leading cause of death due to cancer. Screening mammography is an important strategy in the early detection of breast cancer. Mammograms are breast x-rays that can show cancer two or three years before the cancer is large enough for someone to detect through physical examination of the breast. Mammography screening helps identify abnormal cell growth, increasing the likelihood of early detection of breast cancer. Studies have shown that screening mammography reduces the number of deaths due to breast cancer.

The BC Screening Mammography program has established a long-term target of screening 70 per cent of the 50-69 years age group, every two years.

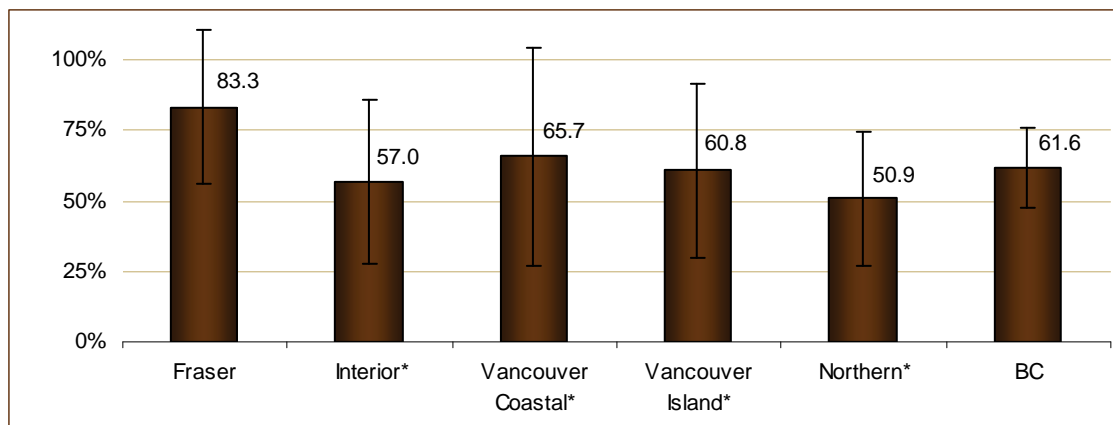
The Cervical Cancer Screening Program of BC, established in British Columbia in 1949, is a preventive program for the early detection of cervical cancer. Cancer of the cervix used to be a major cause of death among women in British Columbia. However, since the early 1960s there has been a major decrease in the death rate from this disease because of screening, early diagnosis and treatment. The program has been effective in reducing the number of women getting cancer of the cervix by 85 per cent and deaths from cancer of the cervix by 78 per cent.

All women who have had sexual intercourse are at risk of cervical cancer; however, some women's risk is greater than others. The risk increases for women with multiple sexual partners, have a sexual partner who has had multiple partners, have an infection of the cervix caused by some types of HPV (human papillomavirus), are infected with HIV, smoke and don't use condoms. Scientific studies show that women who have never had a Pap smear, or have not had a Pap smear in the last five years and are over the age of 50, are at high risk of developing cervical cancer.

HOW ARE WE DOING?

In BC, according to the 2003 and 2005 Canadian Community Health Surveys, Aboriginal people reported mammography rates of anywhere from a low of 50.9 per cent in Northern Health to a high of 83.3 per cent in Fraser Health (FIGURE 95). The BC average was 61.6 per cent.

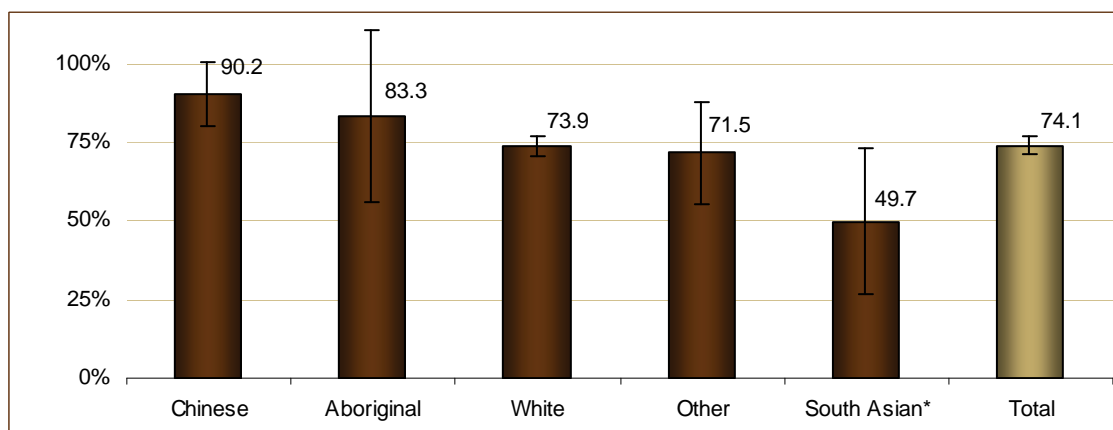
FIGURE 95. Had Mammogram Screening in Past 2 Years, by Aboriginal Identity, Age 40-79, Health Authority, 2003-2005



* Interpret with caution due to high sampling variability Note: 95% confidence interval ($p < 0.05$).
 Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

Comparing Fraser Health’s population by ethnicity indicates that Canadians of Chinese ethnic origin reported the highest percentage of mammogram screening, followed closely by Aboriginal people, with South Asians having the lowest rate (FIGURE 96).

FIGURE 96. Had Mammogram Screening in Past 2 Years, by Ethnicity, Females Age 40-79, Fraser Health, 2003-2005

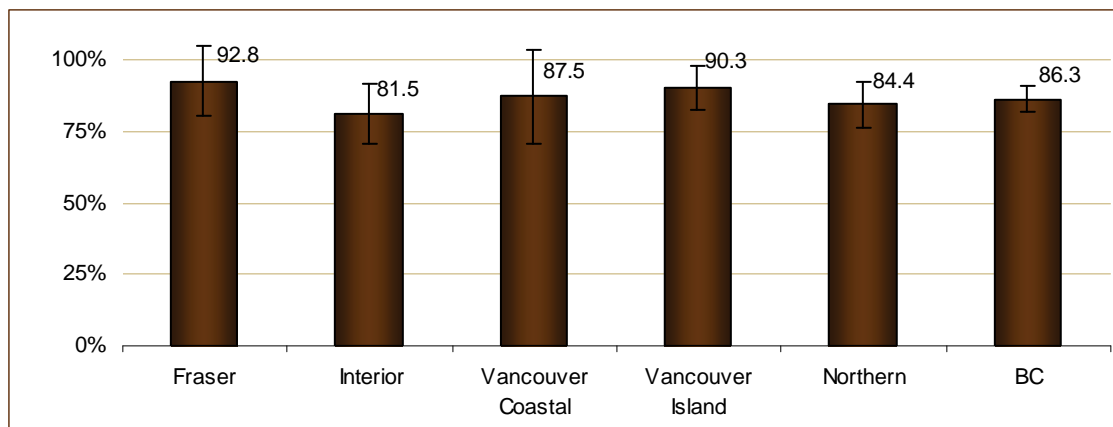


* Interpret with caution due to high sampling variability Note: 95% confidence interval ($p < 0.05$).
 Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

In the same survey, approximately 93 per cent of Aboriginal females age 12 and over in Fraser Health reported having cervical cancer screening in the past three years (FIGURE 97).

In Fraser Health, Aboriginal people and Chinese females age 12 and over had similar reported rates of cervical cancer screening (FIGURE 98).

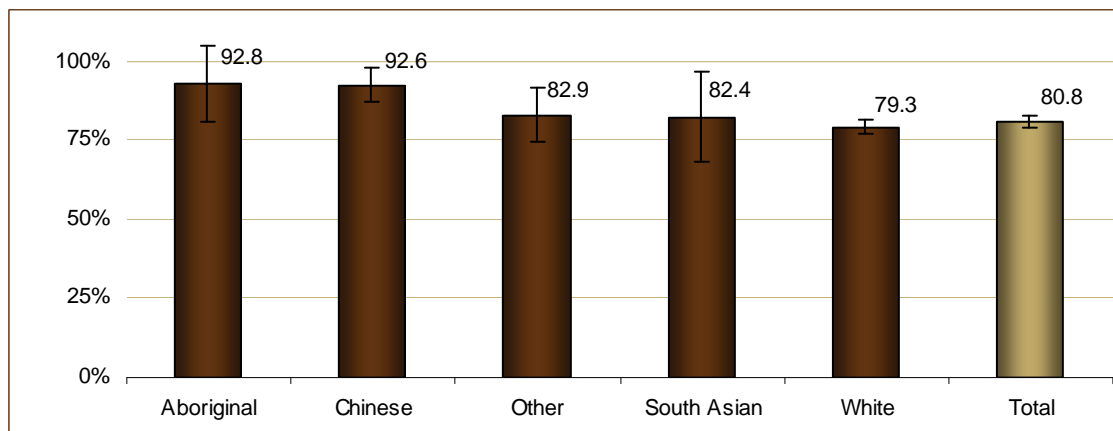
FIGURE 97. Had Cervical Cancer Screenings (Pap Smear Test) in Past 3 Years, by Aboriginal Identity, Females Age 12+, Health Authority, 2003-2005



Note: 95% confidence interval ($p < 0.05$).

Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

FIGURE 98. Had Cervical Cancer Screenings (Pap Smear Test) in Past 3 Years, by Ethnicity, Fraser Health, Age 12+, 2003-2005



Source Note: 95% confidence interval ($p < 0.05$).

Source: Statistics Canada, Canadian Community Health Survey, Cycle 2.1 (2003) & Cycle 3.1 (2005) Combined.

WHERE CAN WE IMPROVE?

The Canadian Community Health Survey results showing Aboriginal people having one of the highest rates of mammography and Pap smear tests compared with other Canadian ethnic groups presented above are contradictory to existing research which suggests that First Nations women have lower participation rates in most preventive screening services³.

LIMITATIONS

The reported mammography rates are for women who were 40 to 79 years while the reported cervical screening rates are for females age 12 and above.

Due to small numbers, the screening data are highly variable and require caution when interpreting.

Treatment and Support Services

Treatment and support services presented here include Medical Services Plan utilization and the leading causes of hospitalization in Status Indians and other residents.

WHY IS IT IMPORTANT?

Contact with physicians provides a measure of accessibility, availability and need for services. Utilization increases with age and is higher for women than men because of childbearing and reproductive health. Utilization has an inverse relationship with income: those with lower incomes tend to have more visits to medical doctors although if service use and availability is underlain with social, economic and cultural barriers, services may be under-utilized.

Rate of hospitalizations show the primary reasons why people are admitted to hospital. While data presented here account for only a small percentage of all diagnosed cases, the information provided can be used to help rank health problems in a community.

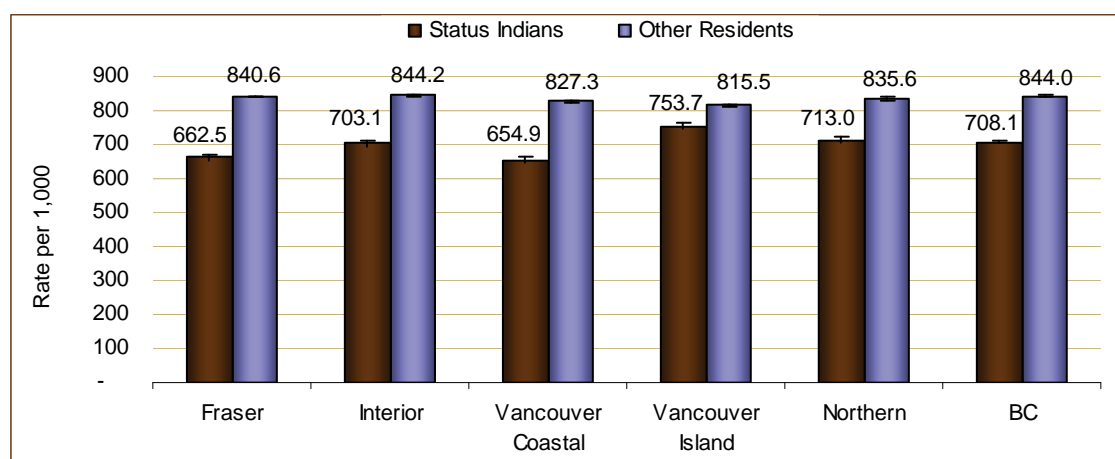
HOW ARE WE DOING?

Medical Service Plan Utilization

The rate of medical service plan (MSP) utilization shown in FIGURE 99 include physician, laboratory, and diagnostic services that are paid on the basis of individually billed fee-for-service arrangements.

Overall, Status Indians had lower rates of MSP services utilization in BC and across all health authorities, including Fraser Health for the fiscal 2006/2007.

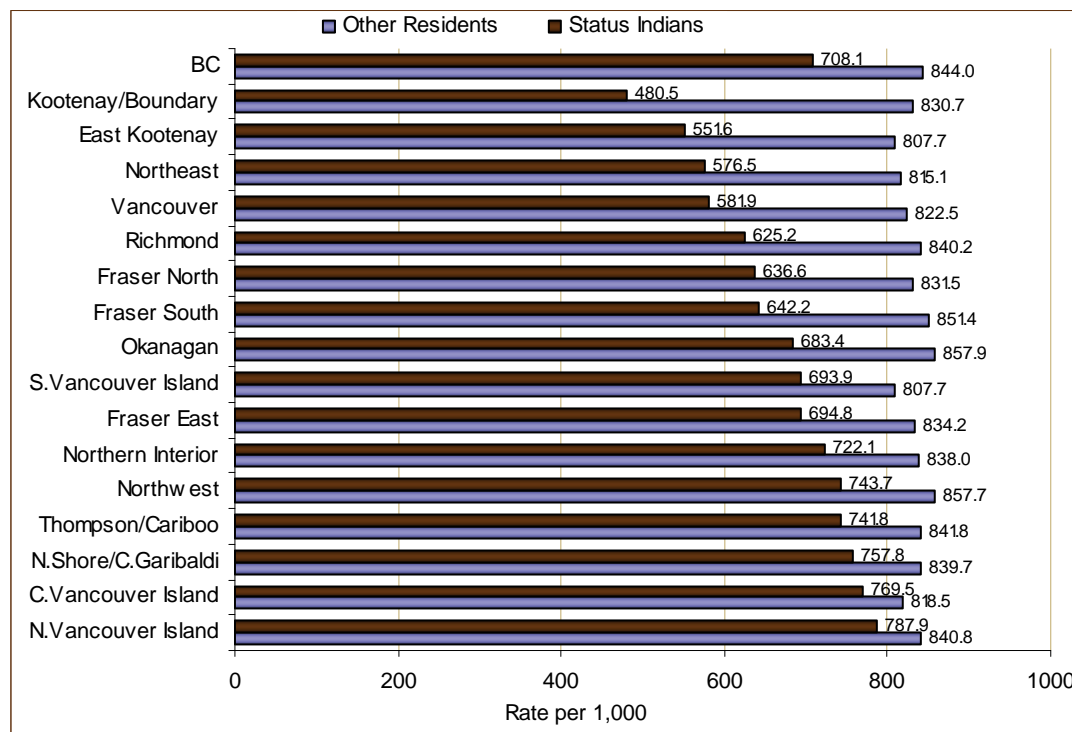
FIGURE 99. Medical Service Plan Utilization, Age-Standardized Rate, Status Indians and Other Residents, by Health Authority, BC, 2006/2007



Notes: Includes all services for which payment is claimed from MSP. Data excludes third party agencies such as ICBC or WCB, form fees and incentives, payments for services under the Reciprocal Agreement, and claims in progress. Individuals with an unknown location of residence were included at the provincial level only. 95% confidence interval ($p < 0.05$). Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

MSP utilization rates at the health service delivery area level show a uniform pattern in other residents but a variable distribution in Status Indians (FIGURE 100). Within Fraser Health, Fraser North Status Indians' utilization rate of 636.6 was the lowest while Fraser East's highest at 694.8.

FIGURE 100. Medical Service Plan Utilization, Age-Standardized Rate, Status Indians and Other Residents, BC HSDAs, 2006/2007



Notes: Includes all services for which payment is claimed from MSP. Data excludes third party agencies such as ICBC or WCB, form fees and incentives, payments for services under the Reciprocal Agreement, and claims in progress. Individuals with an unknown location of residence were included at the provincial level only.

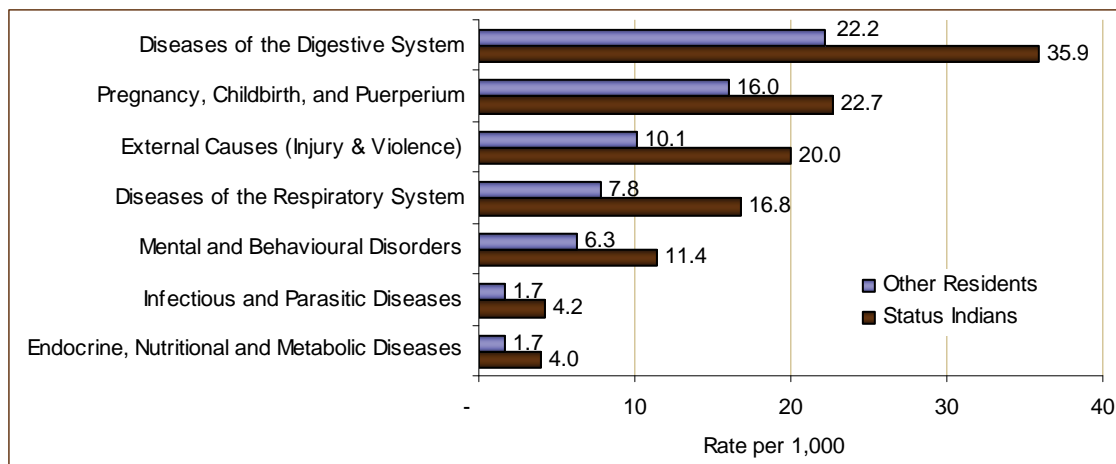
Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Reasons for Hospitalizations

Hospitalization data for the Status Indian people is limited at the health authority level, so BC level data by top seven major categories of disease are shown in FIGURE 101. Age-standardized hospitalization rates for the 2004/05 to 2006/07 period were much higher for Status Indians compared with other residents across all causes.

Specifically, digestive system diseases was the leading cause of hospitalization in both Status Indians and other residents including conditions related to the upper gastro-intestinal tract, gallbladder, pancreas and oral cavity. Hospitalizations related to pregnancy and childbirth are expected to be higher among Status Indians given their higher birth rates. The leading causes of hospitalization in the external category among Status Indians were falls, motor vehicle accidents, assaults and self-inflicted causes which all had much higher hospitalization rates in Status Indians than other residents. Hospitalization rates of Influenza and pneumonia and chronic lower respiratory diseases were substantially higher in Status Indians than other residents. Within the mental and behavioural disorders category, differences in the rates of hospitalizations were tempered except for hospitalizations due to psychoactive substance use which were more than four-fold higher in Status Indians.

FIGURE 101. Top Seven Causes of Hospitalization by Major Category, Age Standardized Rate, Status Indians and Other Residents, BC, 2004/05-2006/07

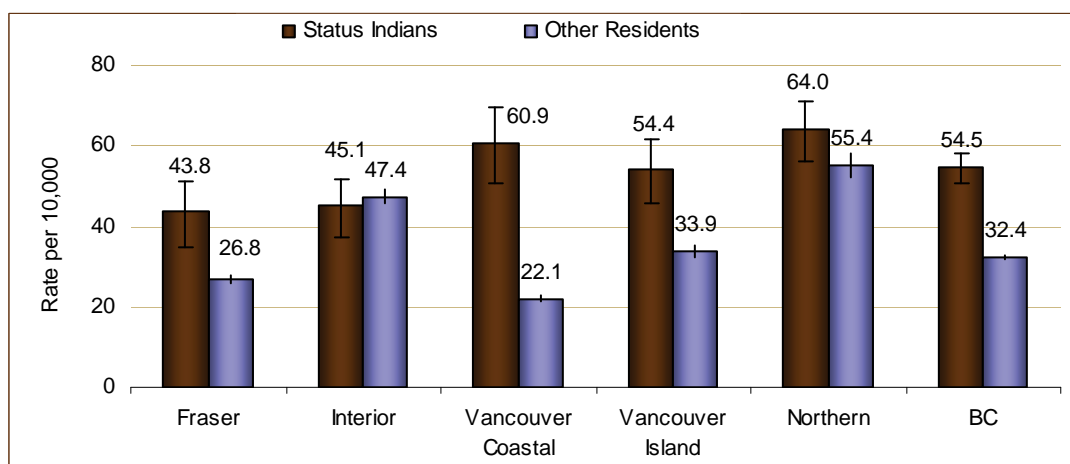


Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Preventable admissions are hospital admissions that occur from conditions that could be managed in the community (for example, diabetes, asthma, alcohol or drug abuse). As seen in FIGURE 102, Status Indians were much more likely to be hospitalized from preventable admissions in all health authorities except Interior.

Within Fraser Health, Status Indians living in Fraser North were more than twice as likely to be hospitalized from preventable causes compared with other residents.

FIGURE 102. Preventable Hospital Admissions, Status Indians and Other Residents (Under 75 Years), by Health Authority, BC, 2006/2007



Note: 95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Explore reasons why Status Indians have lower MSP utilization rates compared with other residents. Develop strategies to reduce the rates of hospitalization in Status Indians including those that are preventable. Increase access to culturally safe and appropriate models of primary health care, including salaried funding structures for primary care practitioners.

LIMITATIONS

Data refer to inpatient cases discharged from a hospital. Since a person 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 give information only on illnesses that require admission to hospital. Illnesses can be treated at home, in a doctor's office, in hospital emergency departments, or in other settings and therefore the data do not provide complete information on the affect of specific illnesses on the population or the healthcare system.

Hospitalization data capture only the serious cases of a disease.

The MSP data presented here are for fee-for-service events only and exclude services that are provided on a salary basis and thus not individually charged to patients.

Prescription Drugs Use

Utilization rates of leading prescription drugs among Status Indians and other residents.

WHY IS IT IMPORTANT?

Prescription drug use is a marker for circulating illnesses, both acute and chronic. Evidence suggests that Canadians are among the heaviest consumers of psychotropic medication in the world²⁵.

Virtually any prescription drug can be consumed for reasons other than its medical purpose; however, it is usually drugs with psychotropic properties that are the focus of abuse. Some of the more popular prescription drugs for abuse include opiate-based drugs for pain relief, tranquillizers, stimulants, amphetamines, sedatives and barbiturates.

HOW ARE WE DOING?

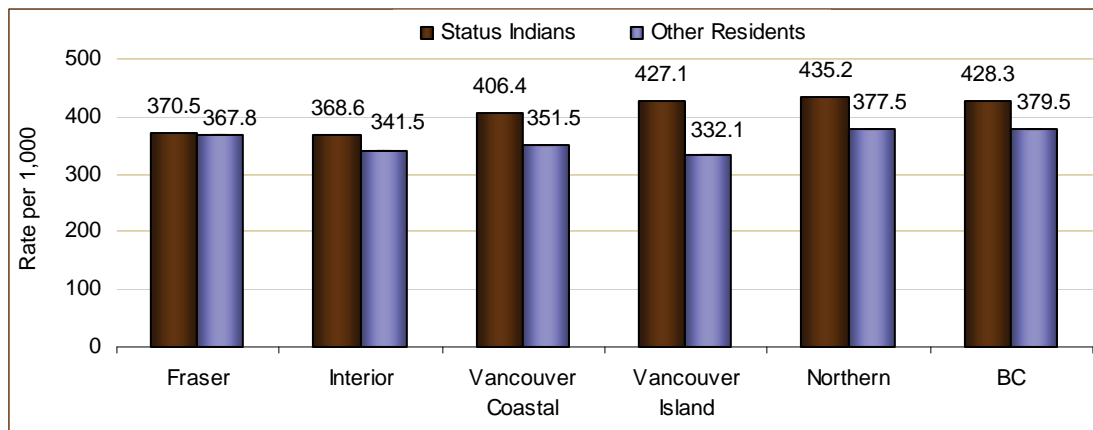
The prescription drug use data presented here are for agents used to treat infections, depression, anxiety, manic, bipolar and psychotic disorders, and attention deficit disorders. These data are counts of individuals receiving prescriptions rather than numbers of prescriptions per patient for a given drug.

Anti-Infectives

Anti-infectives include antibacterials, antibiotics, antifungals, antiprotozoans and antivirals.

Data for 2006 show that, provincially, Status Indians had higher prescription rates for anti-infectives than other residents, although usage was similar in Fraser Health with approximately 37 per cent of residents prescribed anti-infectives (FIGURE 103).

FIGURE 103. Individuals Receiving Prescriptions for Anti-Infectives, Status Indians and Other Residents, by Health Authority, BC, 2006

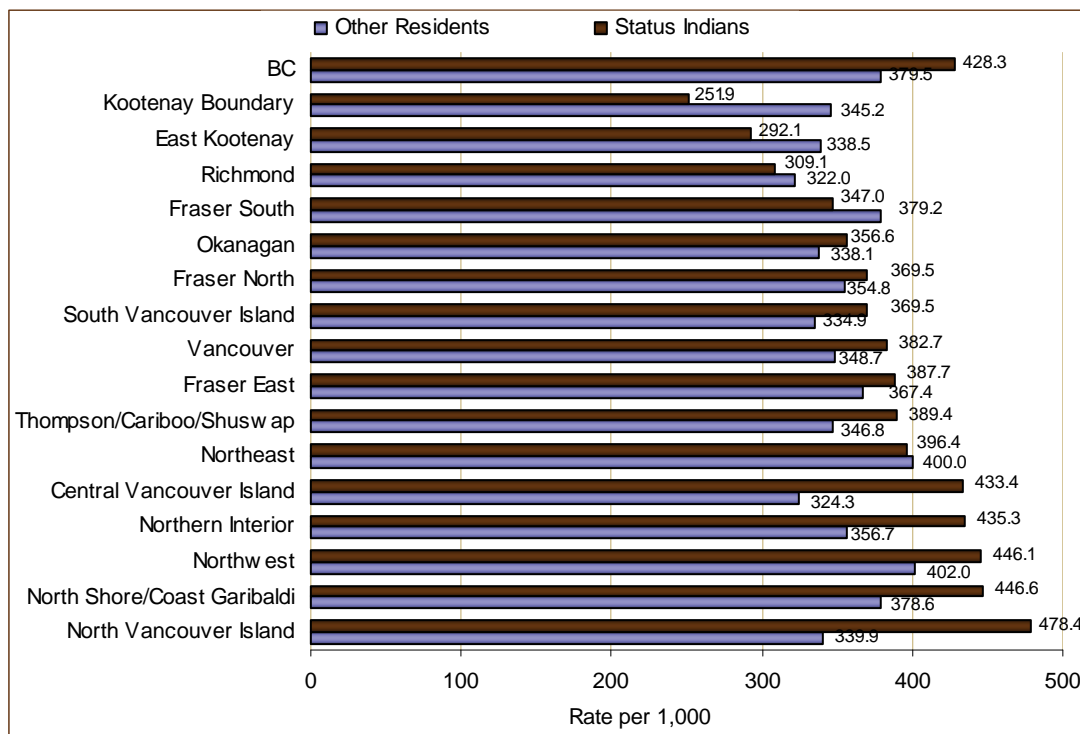


Note: Individuals with an unknown location of residence were included at the provincial level only.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

All three HSDAs in Fraser Health had lower rates of anti-infective prescriptions among Status Indians compared with the provincial average (FIGURE 104).

FIGURE 104. Individuals Receiving Prescriptions for Anti-Infectives, Status Indians and Other Residents, BC HSDAs, 2006



Note: Individuals with an unknown location of residence were included at the provincial level only.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

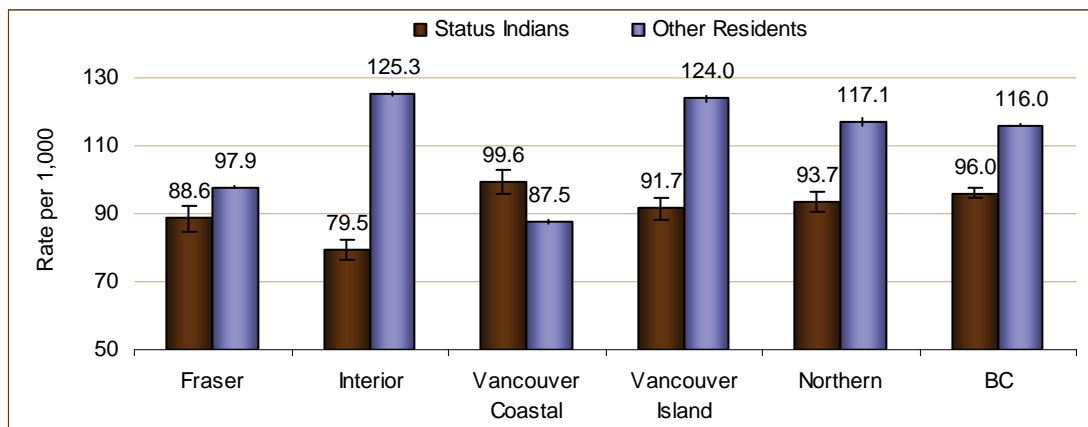
Antidepressants

Psychiatric agents used for managing depression are among the most commonly prescribed drugs by medical psychologists, psychiatrists and general practitioners³.

The prescription rate for antidepressants varies considerably across the province with Status Indians generally having lower rates than other residents but with other residents showing greater variability across the province (FIGURE 105). The difference in the prescription rates among Status Indians and other residents was much lower in the two mostly urban health authorities: Fraser Health and Vancouver Coastal.

Data at the HSDA level show Status Indians with lower levels of antidepressant prescription rates except for Vancouver HSDA which had higher rates in Status Indians (FIGURE 106).

FIGURE 105. Individuals Receiving Prescriptions for Antidepressants, Status Indians and Other Residents, by Health Authority, BC, 2006

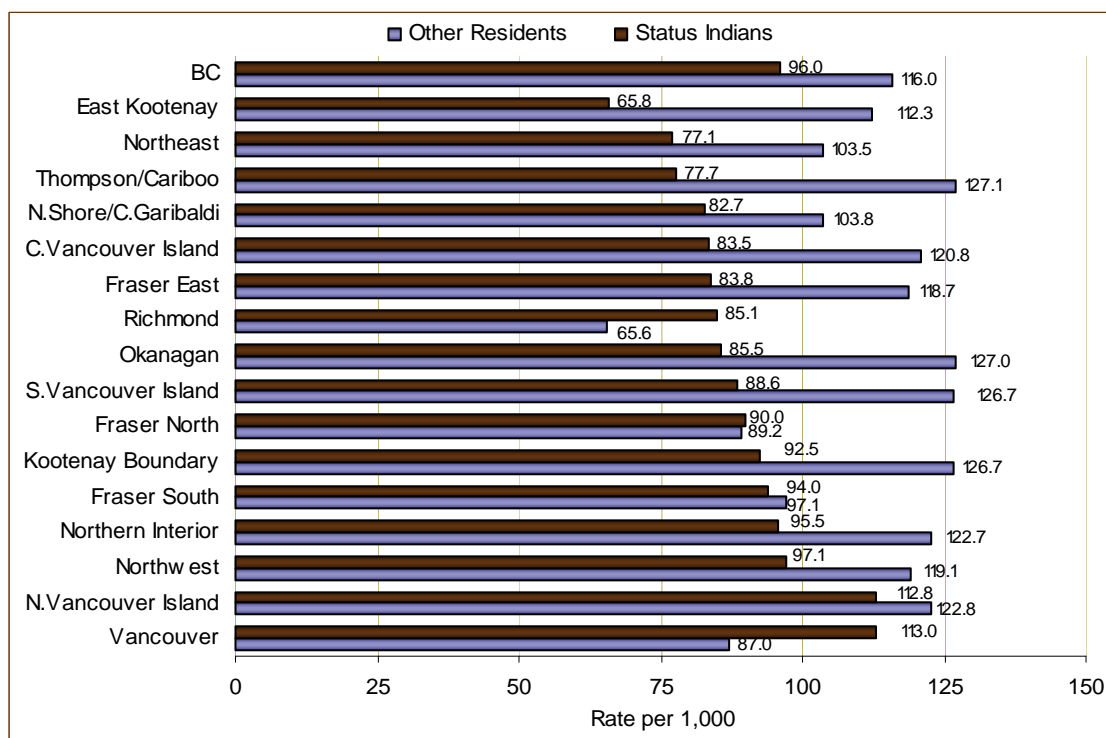


Note: Individuals with an unknown location of residence were included at the provincial level only.

95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 106. Individuals Receiving Prescriptions for Antidepressants, Status Indians and Other Residents, BC HSDAs, 2006



Note: Individuals with an unknown location of residence were included at the provincial level only.

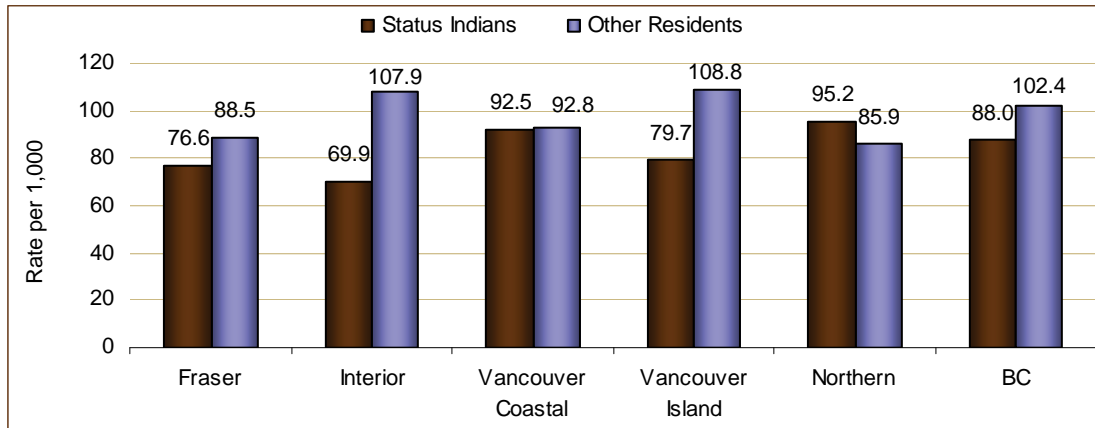
Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Anxiolytics

These drugs are used for short-term relief of extreme anxiety and nervousness caused by psychological problems.

Anxiolytics were prescribed to approximately 9 per cent of Status Indians and 10 per cent of other residents in BC (FIGURE 107). The prescription rate was lower among Fraser Health Status Indians than other residents.

FIGURE 107. Individuals Receiving Prescriptions for Anxiolytics, Status Indians and Other Residents, by Health Authority, BC, 2006

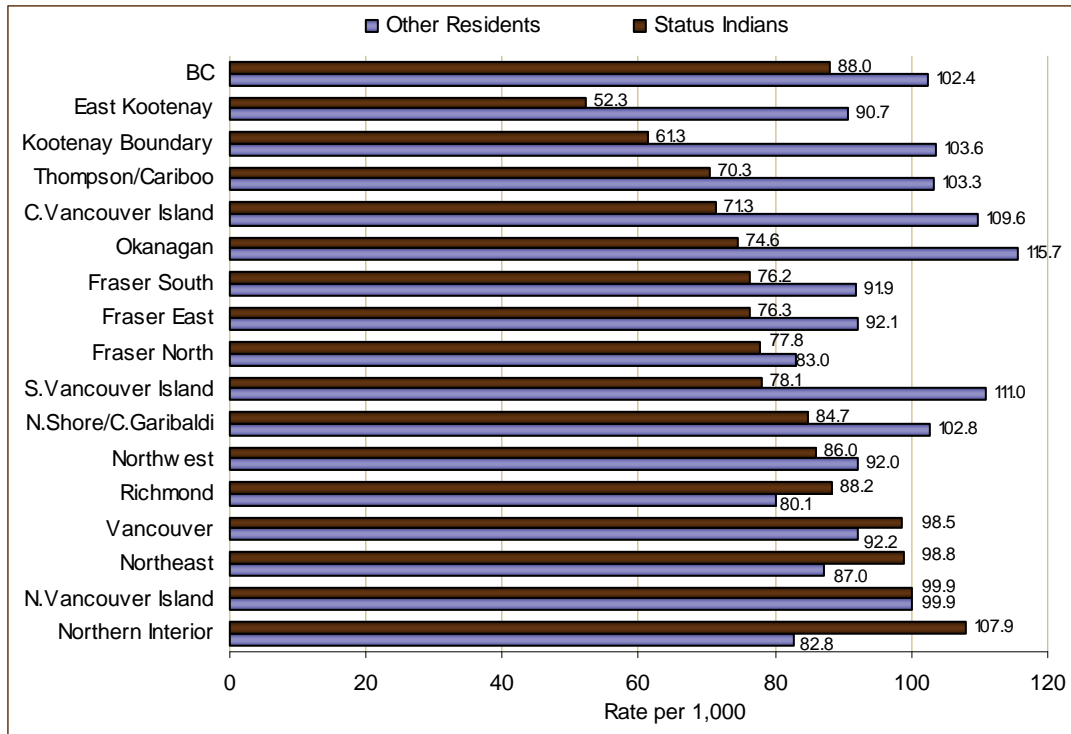


Note: Individuals with an unknown location of residence were included at the provincial level only.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

HSDA level prescription rates show considerable variation across the province for both groups (FIGURE 108).

FIGURE 108. Individuals Receiving Prescriptions for Anxiolytics, Status Indians and Other Residents, BC HSDAs, 2006

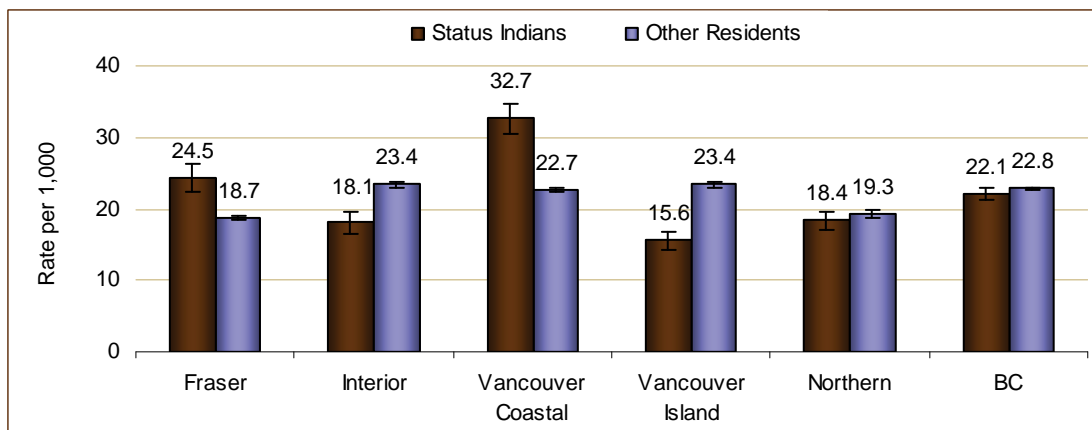


Note: Individuals with an unknown location of residence were included at the provincial level only.
 Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

Antipsychotics

These agents are used to treat psychotic disorders such as schizophrenia, manic depression and paranoia.

FIGURE 109. Individuals Receiving Prescriptions for Antipsychotics, Status Indians and Other Residents, by Health Authority, BC, 2006

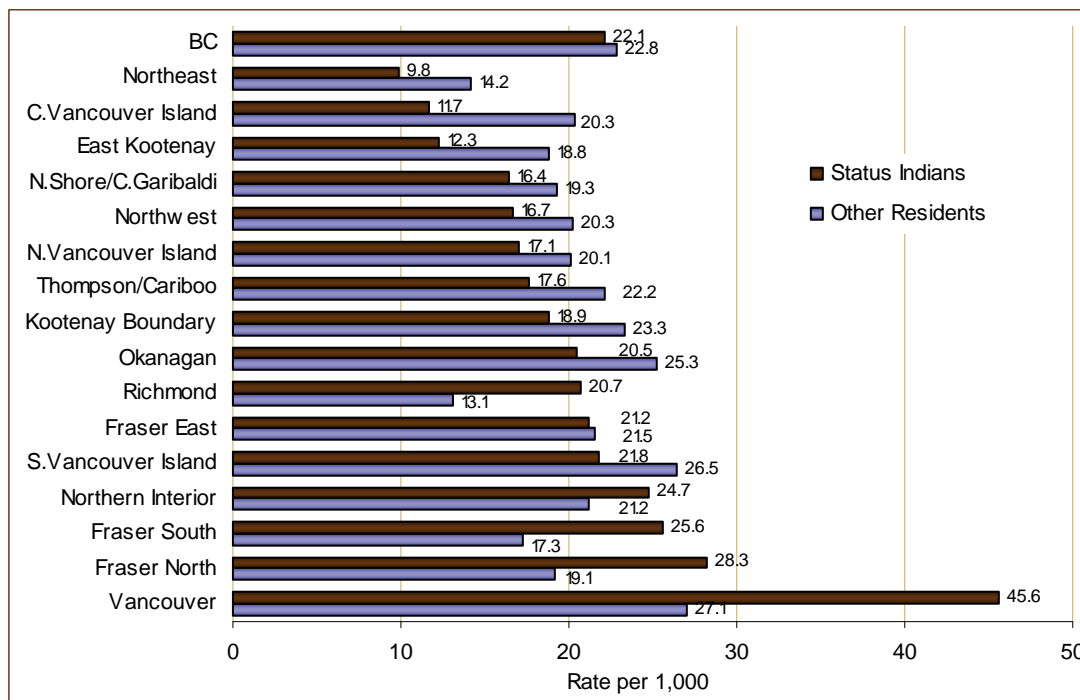


Note: Individuals with an unknown location of residence were included at the BC level only. 95% confidence interval (p<0.05).
 Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

The rate of antipsychotics was statistically significantly higher for Status Indians than other residents living in Fraser Health and Vancouver Coastal (FIGURE 109). This difference was also reflected at the HSDA level with Vancouver, Fraser North and Fraser South all having the highest antipsychotics rates among Status Indians in the province and much higher rates than in other residents.

BC aggregate data show that prescription rates for antipsychotics continue to increase among both groups.

FIGURE 110. Individuals Receiving Prescriptions for Antipsychotics, Status Indians and Other Residents, BC HSDAs, 2006



Note: Individuals with an unknown location of residence were included at the provincial level only.
 Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

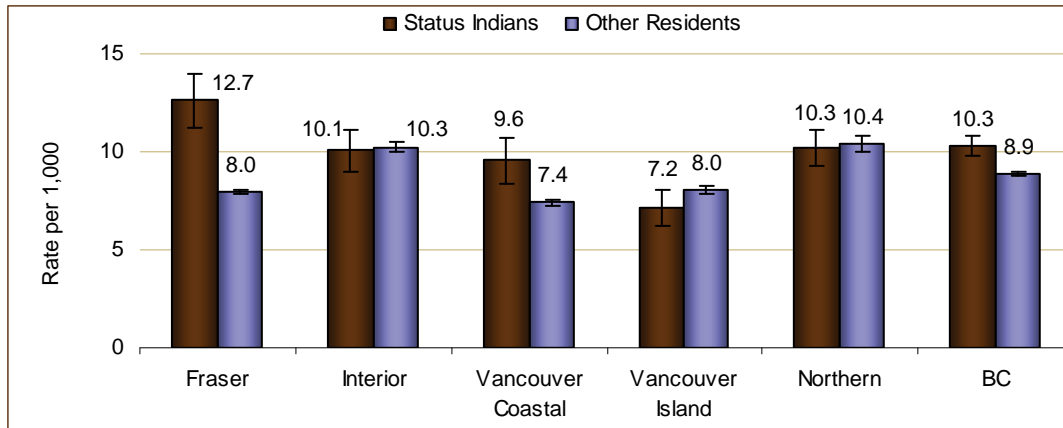
Cerebral Stimulants

Cerebral stimulants provide temporary sense of alertness and well-being and are used for treating attention deficit disorders and attention deficit hyperactivity disorders in children.

Overall, prescription rates for cerebral stimulants are relatively low compared with the other agents discussed above. Fraser Health had the highest rate in the province and statistically significantly higher rate in Status Indians than other residents (FIGURE 111).

At the HSDA level, Fraser South's Status Indian rate of 17 per 1,000 was highest in the province and much higher than other residents (FIGURE 112).

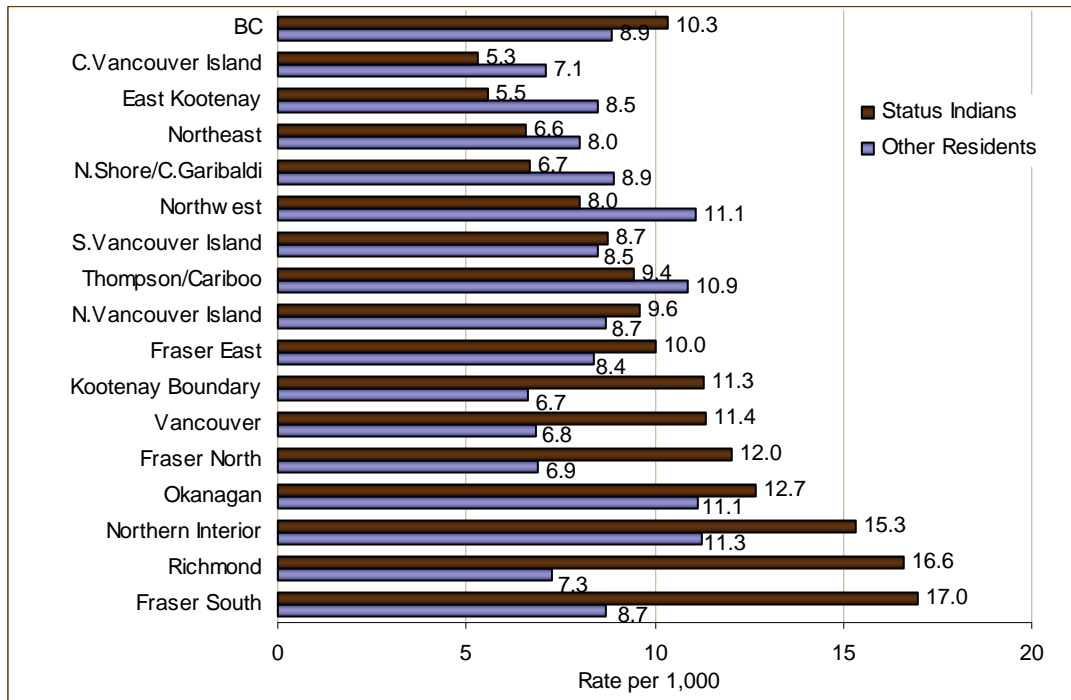
FIGURE 111. Individuals Receiving Prescriptions for Cerebral Stimulants, Status Indians and Other Residents, by Health Authority, BC, 2006



Note: Individuals with an unknown location of residence were included at the provincial level only.
95% confidence interval ($p < 0.05$).

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

FIGURE 112. Individuals Receiving Prescriptions for Cerebral Stimulants, Status Indians and Other Residents, BC HSDAs, 2006



Note: Individuals with an unknown location of residence were included at the provincial level only.

Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Take a multi-disciplinary approach to address the social context of prescription drug use, including racism, historical trauma, and abuse. Provide school-based drug use intervention, mental health screening, and youth empowerment skills. Provide culturally safe, accessible mental health support services for Aboriginal people

LIMITATIONS

The prescription data are based on individuals receiving prescriptions rather than number of prescriptions per patient. Tracking the actual number of prescriptions per person is difficult since dosages and the frequency of prescriptions vary considerably. As a result, these data do not determine the extent of prescription drug use.

Mental Health Patient Follow-up

The proportion of patients receiving follow-up after hospital discharge from mental health centres or medical practitioners.

WHY IS IT IMPORTANT?

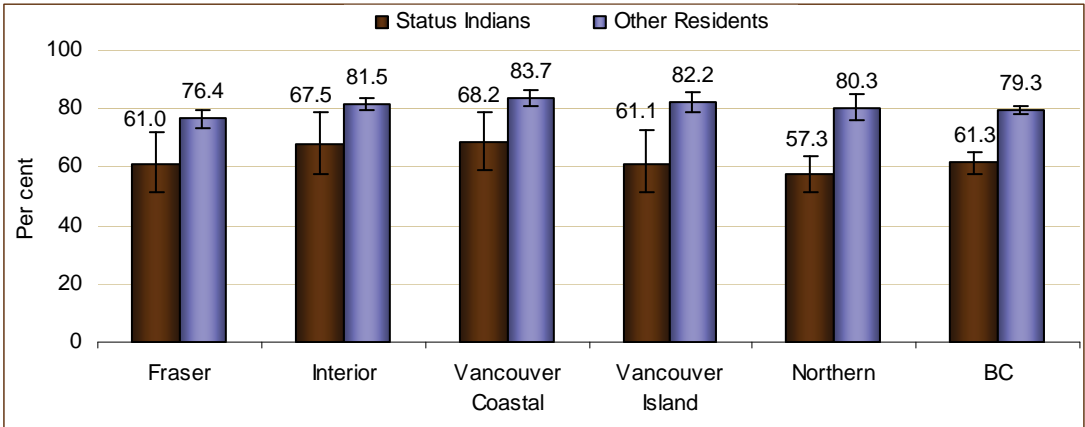
Mental health affects people of all ages and symptoms can alter how they think and behave. Depression, for example, is one condition that affects large number of people that often feel hopeless, detached from life and suicidal. Mental disorders are an important cause of hospitalization.

Evidence suggests that providing early support to patients discharged from hospital due to mental health related disorders is important for recovery, stability, and lower levels of readmission³.

HOW ARE WE DOING?

As seen in FIGURE 113, 61.3 per cent of Status Indians and 79.3 per cent of other residents in BC received a 30-day community follow-up for mental health conditions once they were discharged from hospital. The extent of follow-up in Fraser Health was similar to the BC average but lower than Vancouver Coastal which had the highest proportion of clients receiving follow-up in both populations.

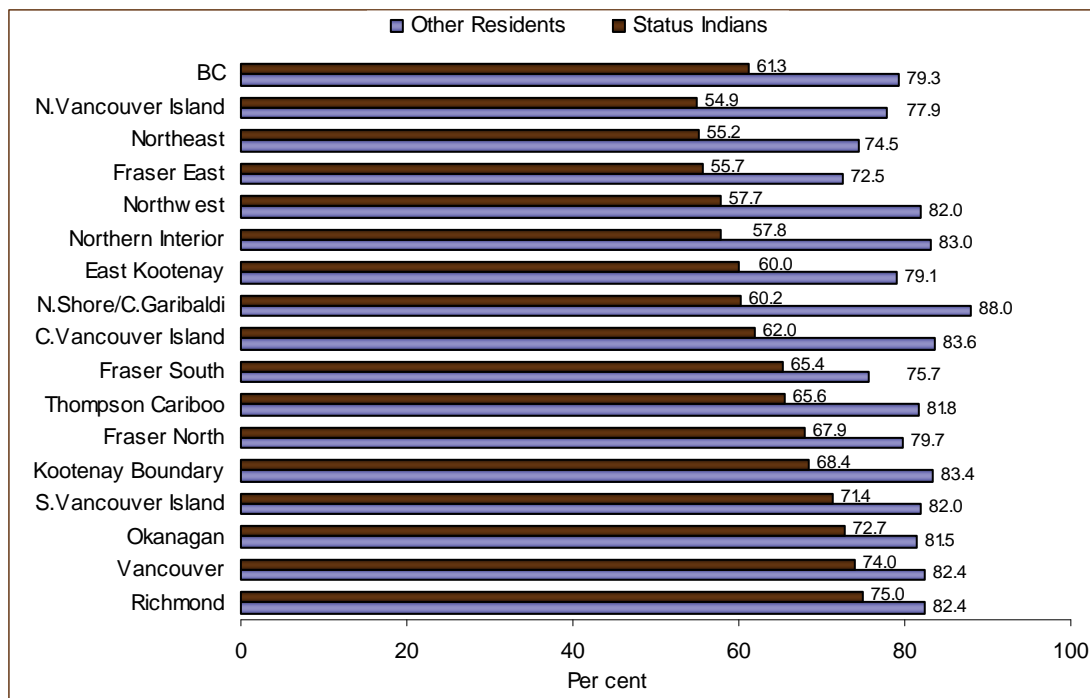
FIGURE 113. Follow-up for Mental Health Clients (All Types), Status Indians and Other Residents, Ages 15–64 Years, by Health Authority, BC, 2006/2007



95% confidence interval (p<0.05).
 Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

As seen at the HSDA level, a lower percentage of Status Indians received follow-up in all HSDAs compared with other residents (FIGURE 114). Within Fraser Health, Fraser East had the lowest level of follow-up (55.7 per cent) while Fraser North had the highest (67.9per cent).

FIGURE 114. Follow-up for Mental Health Clients (All Types), Status Indians and Other Residents, Age 15–64 Years, BC HSDAs, 2006/2007



Source: Provincial Health Officer. (2007). Pathways to Health and Healing: 2nd Report on the Health and Well-being of Aboriginal People in British Columbia. Provincial Health Officer's Annual Report 2007. Victoria, BC.

WHERE CAN WE IMPROVE?

Explore reasons why follow-up rates are lower for Status Indians than other residents given the prevalence of mental disorders in the Aboriginal community.

LIMITATIONS

Identification of patients who are Status Indian in both the mental health centres database and the MSP Claims database has always been a challenge but system improvements have been made to enhance this data collection weakness.

Chapter 8

CONCLUSION & RECOMMENDATIONS

CONCLUSION

Aboriginal people in Fraser Health continue to experience social, economic and health status disparities in comparison with the non-Aboriginal population. In spite of recent improvements in many indicators, this report shows that Status Indians still have lower life expectancy, higher infant and child mortality rates, higher rates of injury and death from motor vehicle collisions, falls, accidental poisonings and suicide, and higher alcohol-related mortality.

The overwhelming evidence and Aboriginal people's consensus is that the root causes of these health inequities are found in their historical, social, economic and political experiences rather than the biologic determinants of health. Events such as colonization, the disenfranchisement of Aboriginal people from their rights to self-determination, the fragmentation of families and communities, and the associated economic and social degradation have been identified as the underlying causes of the inequities in Aboriginal people's health and well-being. The health disparities highlighted in this document are unfortunately not unexpected when Aboriginal people's income, employment, education and housing stock are taken into consideration.

Continued efforts to reduce the health inequities affecting Aboriginal people will require more than an appreciation of their health status and an understanding of its determinants. Access to and use of health care services is key to improving health. Significant social and structural barriers still exist for the Fraser Health Aboriginal people in accessing and using mainstream health services.

Another critical issue is the significant shortage of or lack of access to meaningful data on Aboriginal health determinants and health outcomes. Limited data on determinants and outcomes are available for Status Indians, but none for non-Status Indians and other Aboriginal people, despite the fact they account for over 40 per cent of Fraser Health's Aboriginal population. Better data are required to identify areas of need, create culturally appropriate health programs and to evaluate policies, programs and services.

Despite the disparities and inequities there is much to celebrate and reason to hope. Aboriginal people's overall health status has improved since the last Profile was released in 2002, in spite of persisting gaps in the social, economic and political factors that shape the outcomes. Important new initiatives such as the Tripartite First Nations Health Plan and Fraser Health's partnerships with local communities and service providers ensure the effective participation of Aboriginal people in the governance and management of their health care services. This, above all, will lead to ongoing improvement until the gaps close completely.

RECOMMENDATIONS

The following recommendations are based on local and national best practices as well as discussion with Aboriginal health directors and managers in the Fraser Health Region. General guiding principles applicable to all health and wellness programs are provided first, followed by recommendations for seven specific priority areas: injury prevention, obesity and its complications, children in government care, education, substance use/FASD, teen pregnancy and data collection and information.

OVERALL GUIDING PRINCIPLES

Any initiative aimed at improving the health and well-being of Aboriginal people must incorporate the following principles during planning and implementation to ensure its sustainability, acceptance and success.

- Programs should be community-developed, community-led and tailored to the needs of individual communities.
- Initiatives must incorporate the traditional/cultural values and practices of individual communities into all programming.
- Programs should be welcoming, nonjudgmental, and culturally safe and relevant.
- Elders play a vital role in preserving and passing on their lived experiences and understandings of life. Effective programs should incorporate Elders and their teachings, and use intergenerational approaches involving Elders and young people.
- Provide programs that increase Aboriginal people's connection to their culture.
- Programs should address the social determinants of health, including poverty, education, housing, literacy levels, unemployment and access to health services.
- Programs must acknowledge and be compliant with OCAP (Ownership, Control, Access and Possession) principles, meaning that Aboriginal communities own, protect and control information about their people.
- Programs should include long term planning and be sustainable.
- Programs should support both individual and population-based efforts.

RECOMMENDATIONS

Injury Prevention

1. Develop injury prevention programs in collaboration with community members, including setting priorities, making decisions, planning and implementation. Injury priorities must reflect the specific needs and priorities of individual communities.
2. Develop and provide injury prevention training opportunities for Aboriginal practitioners.
3. Establish dedicated community-based Injury Prevention Coordinator positions.

Obesity and its Complications

4. Plan physical activity journeys in collaboration with community participants. Involve the participants as much as possible in making decisions about planning activities, choosing their imaginary destination (the collective "goal" for the healthy living program), preparing the chart and tracking progress.
5. Provide pre- and post-natal healthy eating classes for new/expecting mothers.
6. Have healthy eating classes for parents and grandparents to learn about infant & child nutrition, food preparation, portion sizes, and fun recipes for kids.

7. Develop school-based healthy living programs, including healthy eating and physical activity lessons, physical education classes that are focused on healthy lifestyles, school morning snack programs, and school policies banning pop and chips on school grounds.
8. Provide participants with smart shopping/label reading sessions at grocery stores, including how to shop for healthy food on a budget.
9. Incorporate nutrition/healthy eating programs with community kitchen programs (i.e., provide participants with healthy cooking skills followed by a practical, hands-on meal preparation activity).
10. Provide education about Indigenous herbs, local medicinal plants and other traditional foods.

Children in Government Care

11. Provide a comprehensive range of community-based child and family health services, including parenting skills (both traditional and western childrearing practices) for parents and grandparents; sharing and healing circles; cultural teachings; traditional language education; youth health programs; and day care services.
12. Support and partner with culturally-based child and family support agencies.
13. Recommend community-based prevention and support service provision prior to removing Aboriginal children from their homes.

Education

14. Integrate Indigenous knowledge throughout school practices and curriculum.
15. Include education about the ongoing effects of colonization and racism in the education curriculum.
16. Build strong relationships with students, communities and parents, as well as organizations within the community and externally.
17. Allocate additional funding for cultural and language education, literacy and special education.
18. Provide support to students through mentorship programs.
19. Provide a secure and welcoming environment for students and their families.
20. Employ a high percentage of Aboriginal staff, and support staff professional development.
21. Maintain high expectations for students, focusing on academic achievement and long-term success.
22. Measure and report adult high school completion rates.

Substance Use/Fetal Alcohol Spectrum Disorder

23. Ensure that pre-natal education and outreach, home visitation and mentoring services are available and welcoming to Aboriginal women who are pregnant.
24. Provide pregnant women with holistic support that includes support on substance use issues, in combination with support on other health and social concerns such as nutrition, mental health problems, experience of childhood abuse, trauma, violence in the home, loss of cultural identity, poverty, homelessness, child custody, and other issues that may affect pregnant women.
25. Support and empower Aboriginal people to identify their own substance use issues and work toward reducing their substance use.
26. Provide a continuum of alcohol treatment options for Aboriginal people, including day programs, outpatient counselling, residential treatment, mobile treatment and retreats.
27. Provide timely FASD assessment for Aboriginal children, in order to identify and provide support to children with FASD.
28. Provide education programs on parenting children with FASD for parents and grandparents.

Teen Pregnancy

29. Develop workshops and programs for Aboriginal girls that build self-esteem and include education on healthy relationships.

30. Create an environment within education and support programs that is safe, non-judgmental and respectful of Aboriginal youths' choices.
31. Develop community-based youth initiatives that emphasize skill development, such as community-based arts and recreational programs, for Aboriginal youth.
32. Provide male and female Aboriginal youth with information on pregnancy, birth and parenting a newborn.
33. Increase access to contraception and sex education.
34. Provide support for parents in talking to their children about sexuality.
35. Provide life skills support and education for young Aboriginal parents that includes pre and post-natal education, parenting education and resources, traditional cultural and present childrearing practices, community resources, employment search, counselling, advocacy, transportation and nutrition support, and cultural education.
36. Provide parenting support and programs for grandparents who are primary caregivers.
37. Provide home-based support and education programs for young Aboriginal parents.

Data Collection and Information

38. Improve overall data availability and quality for Aboriginal people who are not Status Indians (Métis and other non-Status Aboriginal people) in order to understand their health and well-being.
39. Enhance data sharing agreements and protocols for more timely data through the Tripartite Data Sharing Agreement.
40. Establish systems to capture ethnic identity of clients during service episodes.

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GLOSSARY

Aboriginal ancestry

Refers to those persons who reported at least one Aboriginal ancestry (North American Indian, Métis or Inuit) to the ethnic origin question. 'Ethnic origin' refers to the ethnic or cultural origins of the respondent's ancestors. 'Aboriginal ancestry' was referred to as 'Aboriginal origin' prior to the 2006 Census. The content of the variable remains unchanged in 2006 compared with previous censuses.

Aboriginal household

Any single-family household where at least one spouse, common-law partner or lone parent is considered part of the Aboriginal identity population, or at least 50% of the household members are considered to be part of the Aboriginal identity population. Any multiple-family household where at least one of the families in the household is an Aboriginal household. Any non-family household where at least 50% of the household members are considered to be part of the Aboriginal identity population.

Aboriginal identity

Refers to those persons who reported identifying with at least one Aboriginal group, that is, North American Indian, Métis or Inuit, and/or those who reported being a Treaty Indian or a Registered Indian, as defined by the *Indian Act* of Canada, and/or those who reported they were members of an Indian band or First Nation. In 1991 and previous censuses, the Aboriginal population was defined using the ethnic origin question (ancestry). The 1996 Census included a question on the individual's perception of his/her Aboriginal identity. The question used in the 2006 and 2001 censuses is the same as the one used in 1996.

Age-standardized mortality rate

An estimate of the number of deaths from a cause that would occur if the Fraser Health and BC populations had the same age distribution as the 1991 Canadian population (per 10,000).

Alcohol-related deaths

Those deaths due directly to alcohol as well as where alcohol was a contributing factor.

Body Mass Index

Is a measurement used to estimate a person's healthy or normal weight based on their height. It is calculated using self-reported height and weight information collected via the cyclical Canadian Community Health Survey (CCHS). BMIs are reported for respondents aged 18+ and use internationally recognized BMI classifications:

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

Children in government care

Children and youth aged 0 to 18 years taken into care by the provincial child care authorities.

Condition of dwelling

Refers to whether, in the judgement of the respondent, the dwelling requires any repairs (excluding desirable remodeling or additions). Minor repairs refer to the repair of missing or loose floor tiles, bricks or shingles, defective steps, railing or siding, etc. Major repairs refer to the repair of defective plumbing or electrical wiring, structural repairs to walls, floors or ceilings, etc.

Current cigarette smokers

This indicator reports the percentage of 15 years and older who reported being current cigarette smokers on the 2008 Tobacco Attitudes and Behaviours Survey. Current smokers are those that had smoked at least 100 cigarettes during their lifetime and had smoked in the 30 days preceding the survey.

Dependency ratio

The number of people in "dependent" age groups per 100 people in the "independent" or working age population. The "dependent" age groups are those generally presumed to be too young (aged 0–14) or too old (aged 65+) to work; the "independent" group are those of typical working age, 15–64. Child and elderly dependency rates can be added together for a total dependency ratio.

Drug-induced deaths

Deaths that include drug use or abuse, accidental poisoning by drugs, suicide by drugs, and adverse effects of drugs and medication as an underlying cause of death.

EDI scale

The instrument is administered in the form of a checklist that can be filled out by a kindergarten teacher after a child is known for 2 to 3 months. The vulnerability cut-off is the EDI score of the bottom 10% of the children in BC. Children who fall below that score on an EDI scale are said to be vulnerable in that aspect of development. These children are, on average, more likely to be limited in their development on the identified EDI scale than children with scores above the cut-off.

Education measures

Education data comes from the Canadian Census and the BC Ministry of Education. Data from the Census represent the highest level of schooling, as the highest grade or year of elementary or secondary school attended, or the highest year of post secondary schooling completed (university or other non-university).

FSA scores

The FSA is administered each year to grade 4 and 7 students in public and provincially funded independent schools. It provides an annual province-wide assessment of students' academic skills, in the areas of reading comprehension, writing, and numeracy.

The main purpose of the assessment is to allow schools to evaluate whether students are achieving basic skills and to enable schools to improve student achievement. Results given here provide the proportion of grade 4 and 7 students whose FSA scores fall in the following two categories: "Fully Meets Expectations" and "Exceeds Expectations". Levels of student performance are categorized as follows:

- Exceeds Expectations: the work exceeds grade-level expectations in significant ways; the student may benefit from extra challenge.
- Fully Meets Expectations: the work meets grade-level expectations; there is evidence that relevant prescribed learning outcomes have been accomplished.
- Minimally Meets Expectations
- Not Yet Within Expectations

Gestational age

The interval between the date of delivery of the fetus or newborn and the first day of the mother's last normal menstrual period. "Full term" pregnancies average about 40 weeks (38 to 41 weeks). See indicator comment section for comments on accuracy of dating gestational age.

Grade transition rates

The percentage of students who made a transition to a higher grade anywhere in the BC school system.

Hospitalizations

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, excluding newborns and surgical daycare. Data are analyzed by place of residence, so data include FH residents hospitalized outside of the FH region.

Hospitalizations rate

The total number of hospital separations from suicide or attempted suicide relative to the total population expressed per 100,000.

Labour force participation rate

The percentage of persons aged 25 to 54 whom either are employed or currently looking for work. It excludes those not looking for work, such as full-time students, homemakers, retired persons or discouraged persons.

Leisure time physical activity

Refers to the how much one exercises. People are classified as inactive, moderately active, or physically active based on their average daily physical leisure time activities during the past three months. 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

Live birth

The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows any other evidence of life such as heartbeat, umbilical

cord pulsation, or definite movement of voluntary muscles, whether the umbilical cord has been cut or the placenta is attached. A live birth is not necessarily a viable (capable of sustaining life) birth.

Live birth rate

The live birth rate is the number of live births per 1,000 population in a given time period. The rate may be calculated over a 5-year period because single year rates can fluctuate from year to year.

Lone parent families

A lone parent family refers to a mother or a father, with no spouse or common-law partner present, living in a dwelling with one or more children under age 19. Children refer to blood, step- or adopted sons and daughters (regardless of age or marital status) who are living in the same dwelling as their parent, as well as grandchildren in households where there are no parent(s) present.

Low income after tax

The proportion of persons in private households below the after-tax Low Income Cut-Offs (LICO), i.e., families spending 20% more than average on necessities such as food, shelter and clothing.

The 1992 Family Expenditure Survey, which found that families in Canada spend on average 43% of their after-tax income on food, shelter and clothing. Low income families are defined as those families spending more than 63% of their income on necessities. The after-tax LICO takes into account the reduced daily spending power of families because of income taxes paid.

Median annual income

The amount of income where one-half of individuals earn income less than the median and one-half earn more than the median, for ages 15 and above reporting income on the Census.

Mental health 30-day follow-up

Acute or rehabilitation mental health clients, aged 15–64, who received at least one follow-up at a community mental health centre, or from a general practitioner or psychiatrist (Medical Services Plan fee-for-service) within 30 days from hospital discharge. Includes all locations except inpatient locations. Clients whose length of stay at Riverview Hospital is 180 days or more are excluded. MH Hospital Separations include those with a diagnosis of ICD-10 F50-F52, F55, F59, F530, F531, F840, F841, F843-F845, F848, F849, Z55-Z57, Z60-Z63, Z65, Z72, Z73, Z281, Z640, Z641, Z644, R410, G312, and G442. Medical Services Plan (MSP) visits are restricted to those with a diagnosis of ICD-9 290-314, V61, V62, 04A, or 50B.

Moved in past year (movers)

Indicates whether the person lived in the same residence on Census Day (May 16, 2006), as he or she did one year before (May 16, 2005).

Movers

Persons who, on Census Day, were living at a different address than the one at which they resided one year earlier.

Multiple birth

When a pregnancy results in the development of two or more fetuses.

Owner occupied dwelling

Refers to a private dwelling, other than one situated on a farm and occupied by a farm operator, which is owned or being bought by some member of the household.

Post-term birth

A delivery after the end of the 42nd week of gestation (post-mature infant).

Potential years of life lost

The number of years of life lost when someone dies before age 75 (which is the presumed normal life expectancy used for the calculation). Data are shown as rates per 1,000 men or women, directly age-standardized to the 1991 Census population. PYLL data are calculated for single years and for an aggregated five-year period (2003 to 2007).

Preterm birth

A fetus or infant delivered before the 37 completed weeks (259 days) gestation (premature infant).

Prevalence of diabetes

An age-standardized percentage of persons with diabetes in a population during a fiscal year, for the Status Indian population compared to other British Columbians in each health authority. Data include residents registered in the

Primary Health Care diabetes registry. The registry case definition is for one of the following scenarios to occur within 365 days:

- one hospitalization with a diabetes diagnosis; or
- two medical visits with a diabetes diagnosis; or
- 2 or more insulin prescriptions; or
- 2 or more prescriptions for an oral antihyperglycemic (excluding metformin); or
- 1 insulin prescription plus 1 prescription for an oral antihyperglycemic (excluding metformin); or
- 1 prescription for metformin plus 1 prescription for an antihyperglycemic (excluding metformin); or
- 2 prescriptions for metformin plus 1 medical visit with a diabetes diagnosis.

Private household

refers to a group of persons (other than foreign residents) who occupy a private dwelling and do not have a usual place of residence outside of Canada. Private households include those living in economic families and unattached individuals. Economic families refers to a group to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law or adoption.

Rural areas

Sparsely populated lands lying outside urban areas. Within rural areas of Canada, population densities and living conditions can vary greatly. Included in rural areas are:

- Small towns, villages and other populated places with less than 1,000 population according to the previous census;
- Rural fringes and census metropolitan areas and census agglomerations that may contain estate lots, agricultural, undeveloped and non-developed lands;
- Remote and wilderness areas;
- Agricultural lands.

Screening Mammography Program (SMP) participation rates

Represent the number of women aged 50-69 at time of screening screened as a proportion of all women aged 50-69. The target is to screen 70% of women ages 50-69 every two years.

Seniors living arrangements

Proportion of population in private households (non-institutionalized) aged 65+ by their living arrangements: those living with relatives, those living with non-relatives and those living alone.

Six-year Dogwood Completion Rate

The percentage of grade 8 students who graduate with a Dogwood (diploma) within six years. The inverse of this rate is NOT equivalent to a "drop-out" rate as students may graduate after the six year period.

Smoking attributable mortality

An estimate of the number of deaths in a population caused by cigarette smoking, is also presented for Fraser Health health service delivery areas.

The absence on death certifications of complete and reliable data on smoking requires the use of estimation techniques to approximate the extent of smoking-attributable deaths. Estimation methods, while not precise, may at least provide a general indication of the extent of such deaths.

Smoking-attributable deaths are derived by multiplying the smoking-attributable mortality percentage expressed as a decimal fraction by the number of deaths aged 35+ in each of 19 specified cause of death categories. These categories are comprised of selected malignant neoplasms, circulatory system diseases, and respiratory system diseases.

Stillbirth

A product of conception of 20 or more weeks gestation or fetal weight of 500 grams or more, which did not breathe or show other signs of life at delivery. At what gestational age a miscarriage becomes a stillbirth depends on the policy or law of that province, region, or country.

Teen pregnancy rate

The sum of all birth events (live births, still births, induced abortions and miscarriages resulting in hospitalization) per 1,000 teenage females.

Unemployment rate

The percentage of persons aged 15 years and over who are currently unemployed and looking for work.



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