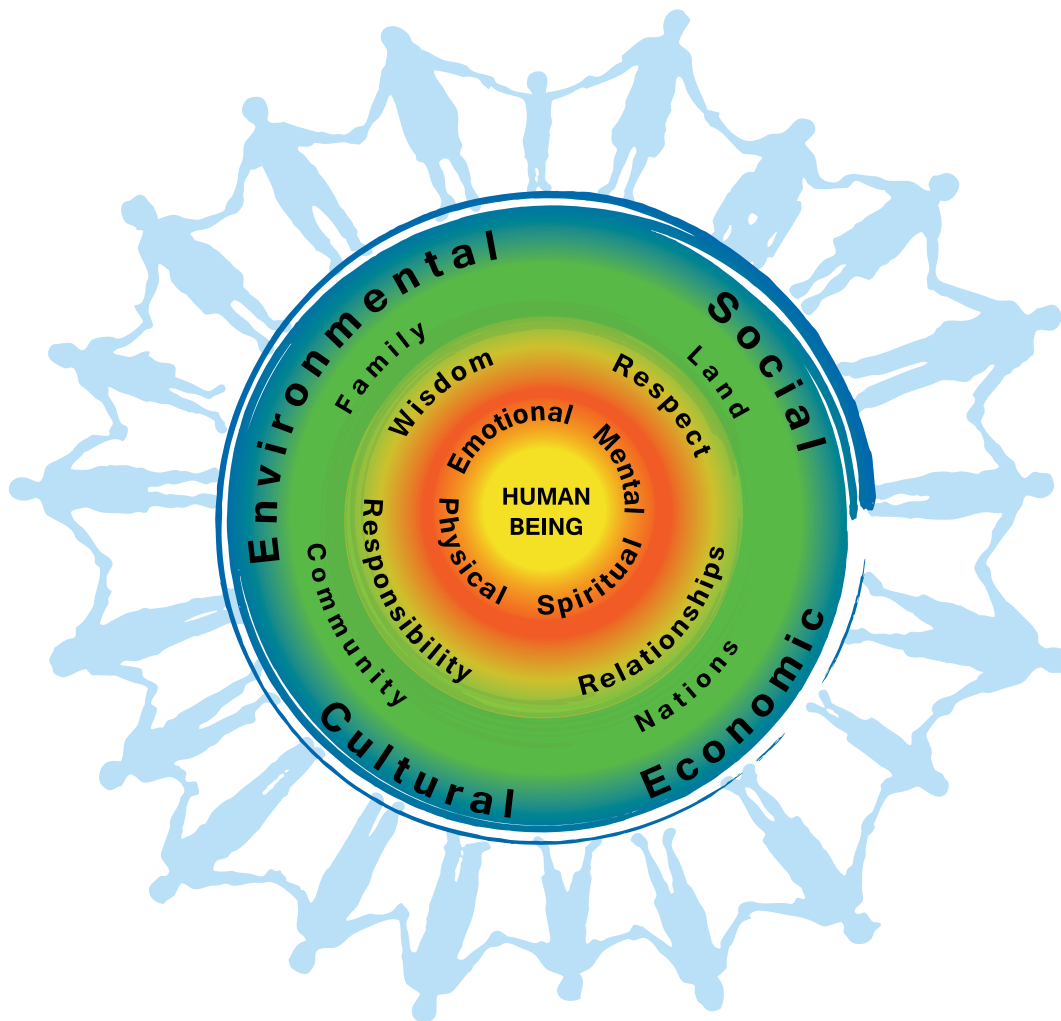


First Nations Health Status & Health Services Utilization

Summary of Key Findings | 2008/09 – 2014/15



First Nations Health Authority
Health through wellness



The First Nations Perspective on Health and Wellness

First Nations Health Status & Health Services Utilization

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NOTE TO READERS

All inferences, opinions and conclusions drawn in this publication are those of the author(s), and do not necessarily reflect the opinions or policies of the British Columbia Ministry of Health.

This report compares First Nations to Other Residents in the province on per capita use and associated costs in the categories in the BC Ministry of Health Health System Matrix (HSM) database. The analysis examined data for the years 2008/09 through 2014/15. The HSM database includes hospital, physician, chronic conditions, home and residential care service data. A linkage with the First Nations Client File (FNCF) allowed for an analysis into visits with general practitioners, medical specialists, mental health and substance use, diagnostics, ambulatory care, and other categories. This is the primary source of direct health utilization comparisons between First Nations and Other Residents in the province.

The HSM data provides observations on the *performance of the health system* for First Nations, and in particular, primary care services. The key findings in this report can be used to support planning new health services or providing enhancements to existing services; to inform decision-making with respect to future investments to address health priorities in the regions; and to provide evidence to support implementation of the directions of the partnership accords between the First Nations Health Authority (FNHA) and regional health authorities.

RESULTS¹

In 2014/15, \$354 million was spent on the First Nations health services captured in the HSM, an annual increase of 3.3% per capita from 2008/09 spending. There are different health spending patterns for First Nations compared to Other Residents. In 2014/15, hospital per capita costs were 22% higher for First Nations, and emergency department per capita costs were over two times higher for First Nations, but primary care services such as physician and surgeon utilization, diagnostic imaging and laboratory testing had lower per capita costs compared to Other Residents.

¹ The release of these HSM results has followed the FNHA data governance protocol, with with an initial release via webinars to the First Nations Health Council and First Nations Health Directors Association, then to Chiefs and Health Directors. This Summary of Key Findings will be followed by region-specific analyses and the development of similar key finding reports in each of the regions.

CHRONIC CONDITIONS

First Nations prevalence rates for seven conditions, including hypertension, Alzheimer's/dementia, and breast and lung cancers, were similar to the rates of Other Residents, and in two instances—cancer first encounter and prostate cancer—the rates were lower. Although First Nations prevalence rates for 17 chronic conditions were higher than Other Residents, in the majority of these conditions, the differences between these two populations were stable between 2008/09 and 2014/15. In four conditions—diabetes, osteoarthritis, chronic obstructive pulmonary disease and chronic kidney disease—the gap in rates between First Nations and Other Residents decreased. Only in three conditions—asthma, dialysis and epilepsy—did the difference between these two populations increase, due to a rise in the First Nations rate.

* First Nations rate is lower than the Other Residents rate.

** First Nations rate is higher than the Other Residents rate (cervix cancer and transplants are also higher and are not shown).

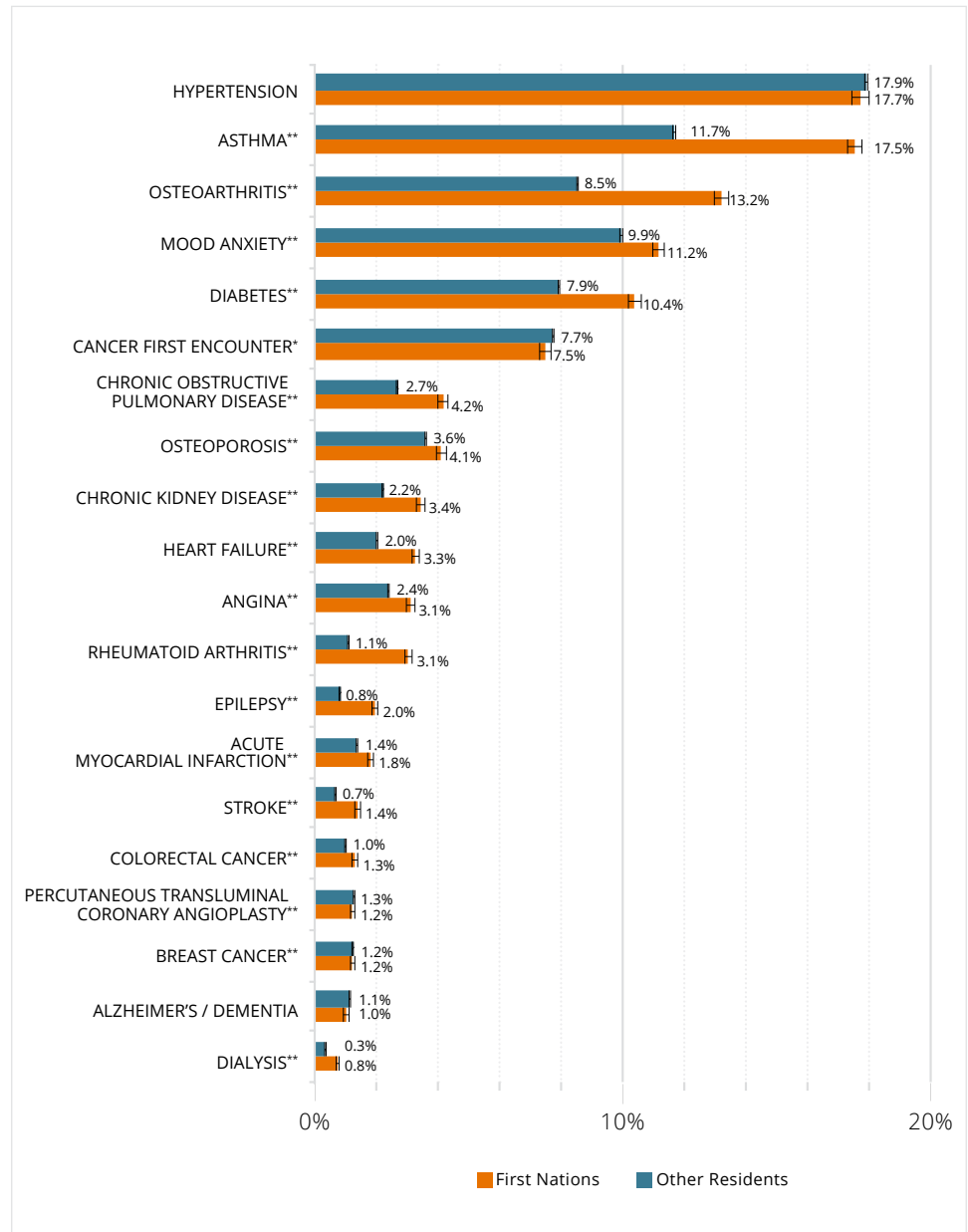


FIGURE 1: First Nations and Other Resident prevalence rates, BC chronic condition registries, 2014/15.

**FIRST NATIONS WERE
THREE TIMES
MORE LIKELY THAN
OTHER RESIDENTS
TO:**



have
RHEUMATOID
ARTHRITIS

**FIRST NATIONS WERE
TWO TIMES
MORE LIKELY THAN
OTHER RESIDENTS
TO:**



have had a
STROKE

The elevated rates of 17 chronic conditions show that a greater understanding is required about the structural determinants of health, which are the root causes of chronic disease (note: some conditions with very low prevalence rates are not shown in Figure 1). In addition:

Diabetes: *Due to the continued high rates of diabetes and its complications, such as cardiovascular disease, health systems should focus on tertiary prevention strategies, such as those that screen for early diabetes complications (eye, foot and kidney abnormalities). Secondary prevention strategies that promote regular monitoring of blood sugar and blood pressure levels should also be enhanced.*

Cancer: *The comparatively higher rates of colorectal cancer and cervix cancer suggest that screening strategies (fecal occult blood test and Pap smear) should be emphasized. In general, as other cancer rates are becoming closer to the norm, a greater investment in cancer prevention strategies is needed, such as supporting the expansion of First Nations traditional methods of wellness and healing.*

Asthma: *Asthma rates increased in the 18-49 year olds in all regions. Research has indicated that asthma in First Nations communities may be of greater concern when housing is substandard or in need of repairs, as humidity can build in the home and result in growth of moulds, particularly in climates where there is high humidity such as coastal areas of BC, or in areas prone to flooding. Low household income and environmental tobacco smoke are other factors that have been linked to respiratory diseases, including asthma.² The increasing asthma rates indicate a need for future policy, planning and investments to address these social determinants of health.*

BETWEEN 2008/09 AND 2014/15:

- **ASTHMA RATES INCREASED IN ALL FIRST NATIONS FEMALE AGE GROUPS**
- **HYPERTENSION RATES INCREASED IN ALL ADULT MALE FIRST NATIONS AGE GROUPS**

² Gisèle M. Carrière, Rochelle Garner and Claudia Sanmartin. 2017. Housing conditions and respiratory hospitalizations among First Nations people in Canada. Health Reports 82-003-X. Ottawa: Statistics Canada. <http://www.statcan.gc.ca/pub/82-003-x/2017004/article/14789-eng.htm>

HEALTH SERVICES

Over 80% of First Nations who were 50 years and older visited a single general practitioner (GP) practice at least 50% of the time in 2014/15, indicating continuity of care with their family physician. However, in all age groups, this attachment with a single practice declined from 2008/09, with the greatest decrease seen in the 0-17 age group.

First Nations had lower rates of use of physician services in 2014/15 compared to Other Residents, including GPs seen outside of hospitals, medical specialists, surgeons, oncologists and physical rehabilitation physicians. Their use of laboratory testing was also lower.

Increasing availability and accessibility of specialists and diagnostic testing can prevent or reduce the severity of health complications. Decreased primary care use may represent a missed opportunity to prevent chronic conditions or diagnose and manage complications.

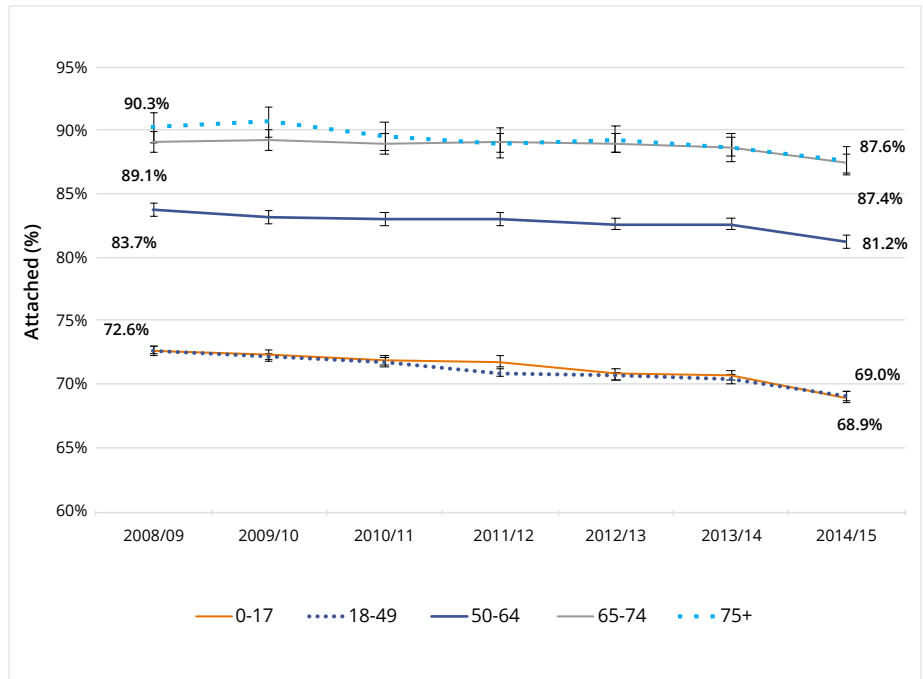
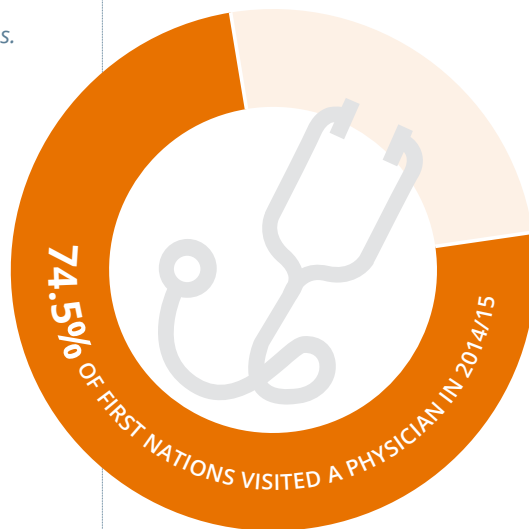


FIGURE 2: General Practitioner attachment rates by age group, First Nations, 2008/09 - 2014/15



FIRST NATIONS WERE 2X MORE LIKELY THAN OTHER RESIDENTS TO SEE A GENERAL PRACTITIONER IN HOSPITAL

FIRST NATIONS WHO WERE NOT ATTACHED TO A GP WERE MORE LIKELY TO VISIT THE EMERGENCY DEPARTMENT

EMERGENCY DEPARTMENT UTILIZATION

The analysis of visits to physicians in emergency departments (EDs) revealed four findings:

- (1) ED user rates increased between 2008/09 and 2014/15 in all regions and provincially for both First Nations and Other Residents;
- (2) First Nations females were more likely to visit the ED than First Nations males;
- (3) First Nations rates were considerably higher than Other Residents—at up to 20 percentage points for females; and
- (4) There was variability in these rates among the regions.

Issues with accessing physicians in their offices, whether it be because there are too few physicians or the care is not culturally safe, can result in increased ED use. It may be that the ED is the only place to see a physician or that persons have become ill because of inadequate primary care and need care urgently.

Integrated solutions involving First Nations communities and provincial health systems are required to improve access to primary care services, and could include nurse practitioners and other non-physician primary care providers.

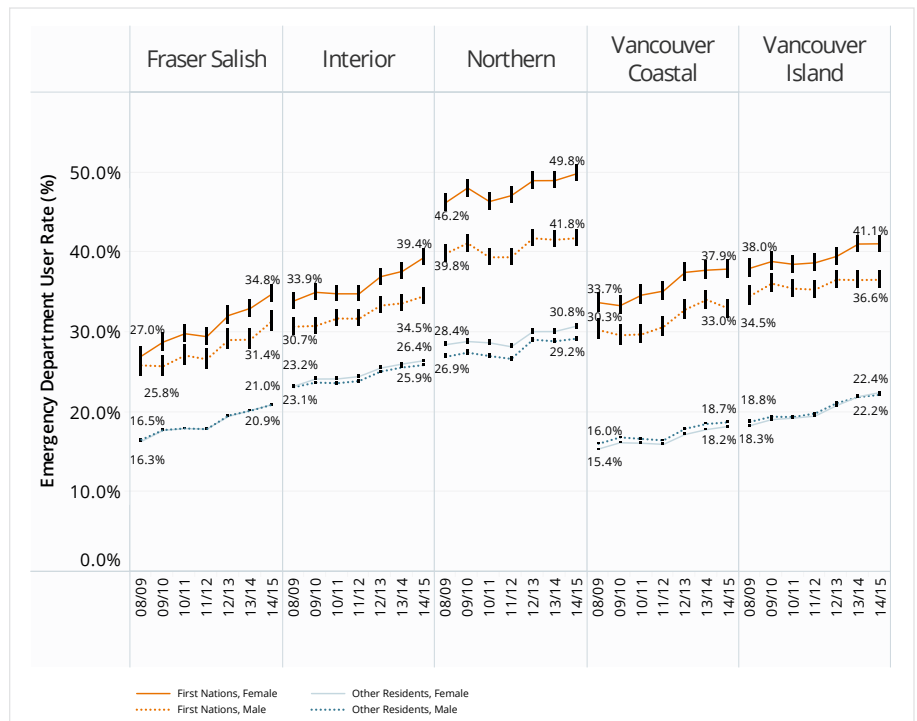
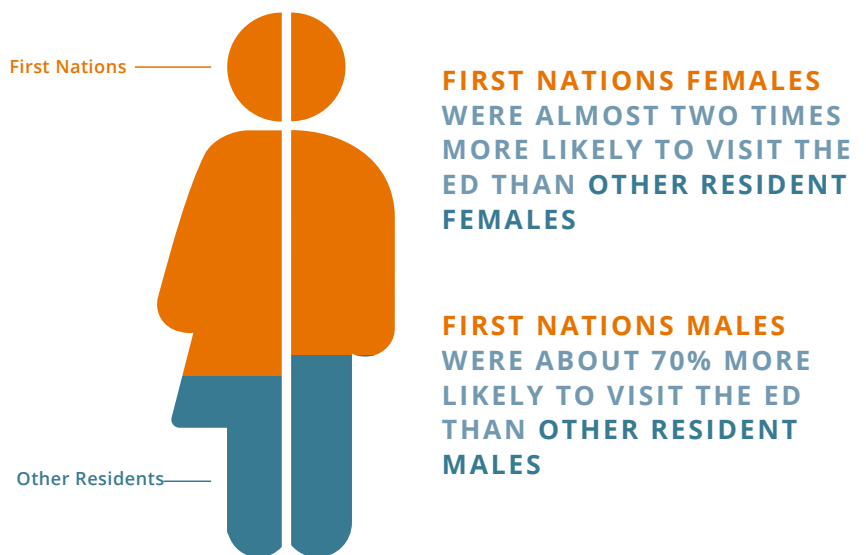


FIGURE 3: Emergency department user rates, First Nations and Other Residents, 2008/09 - 2014/15



MENTAL HEALTH AND WELLNESS

In 2014/15, physician user rates for mental health services were higher among First Nations in age groups younger than 65 years compared to Other Residents. These First Nations rates were comparatively less for the older age groups. First Nations in all age groups were more likely to be hospitalized for mental health reasons compared to Other Residents. In addition, for those First Nations aged 18-49 years who were hospitalized for mental illness in 2014/15, 18% were readmitted within 30 days, a higher rate than what was seen in 2008/09.

Substance use services showed a much greater disparity in rates between populations, compared to mental health. Across all age groups, physician rates were two to three times higher for First Nations compared to Other Residents, and hospital user rates were four to six times higher.

These statistics point to a need for investment in community-based mental health supports including traditional healers, nurse practitioners and other primary care providers, and mental health clinicians who are trained in the prevention and treatment of mood and other mental health disorders.

BETWEEN 2008/09 AND 2014/15:



- **USE OF PHYSICIAN AND HOSPITAL SERVICES FOR MENTAL HEALTH REASONS INCREASED AMONG FIRST NATIONS MALES**
- **MOOD ANXIETY RATES INCREASED IN FIRST NATIONS YOUNGER THAN 50 YEARS OF AGE**

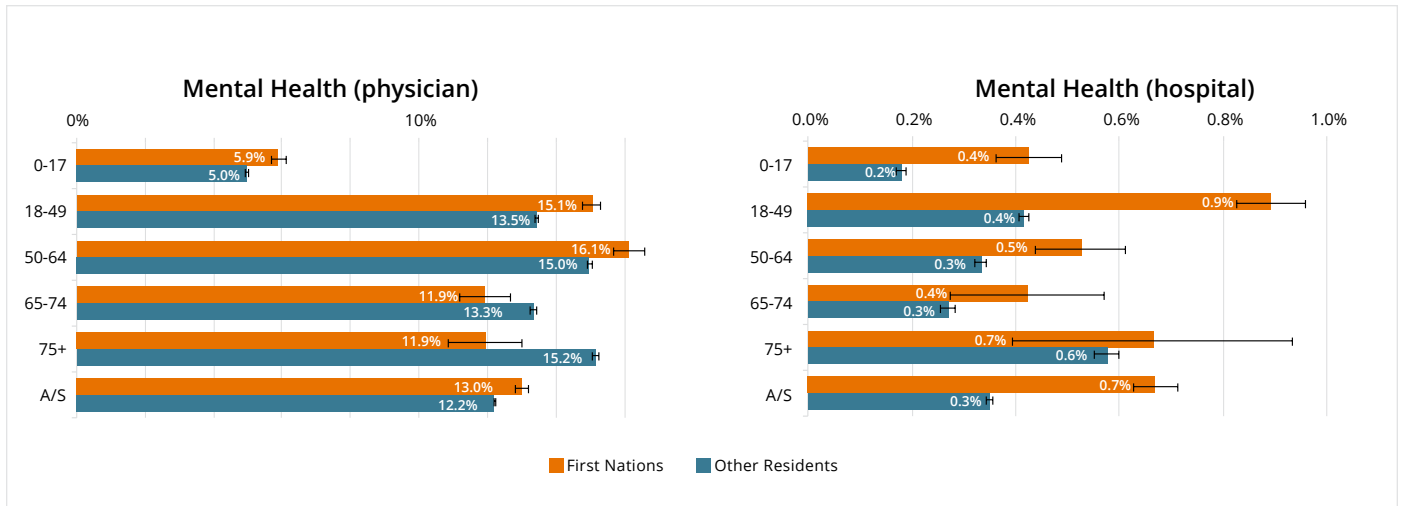


FIGURE 4: Mental health physician (left) and hospital (right) user rates by age group, First Nations and Other Residents, 2014/15

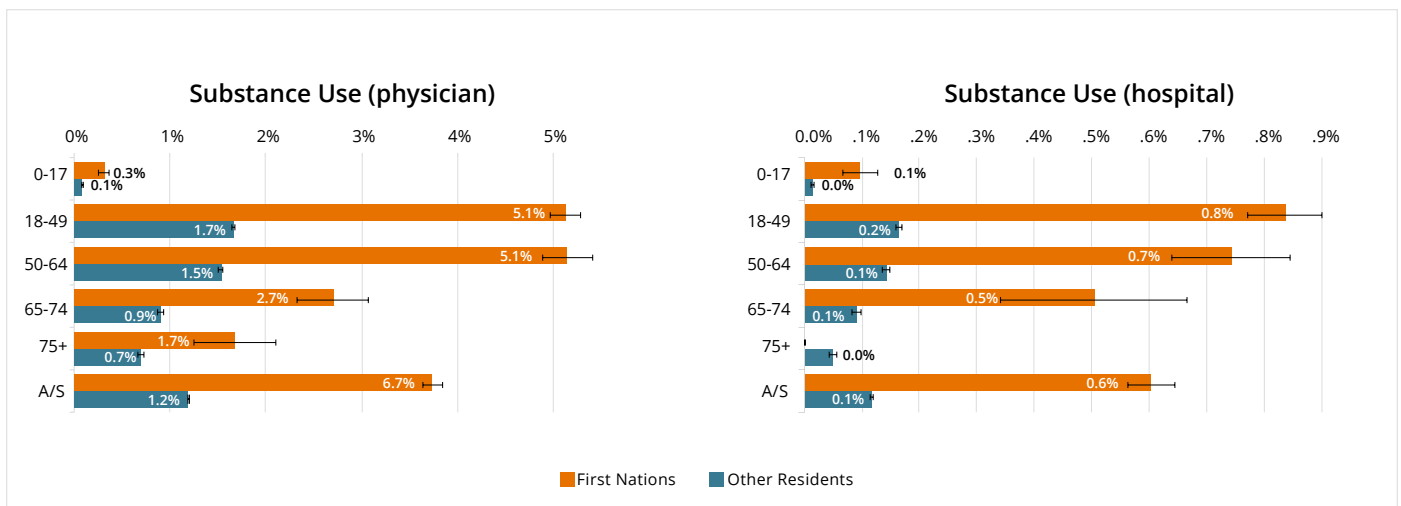


FIGURE 5: Substance use physician (left) and hospital (right) user rates by age group, First Nations and Other Residents, 2014/15
 First Nations 75+ hospital data omitted because of low numbers.

FRAIL AND HIGH NEEDS ELDERS

In 2014/15, First Nations who were 50 years and older and who were at the end of life, were frail or had a high complexity of chronic diseases, when compared to Other Residents:

- were less likely to visit a single GP practice and more likely to be admitted to hospital either by direct entry or through the ED;
- if 65-74 years of age, were less likely to access GP care outside of hospitals, mental health and substance use physician services, medical specialists and surgeons; and
- if 75 years and older, were less likely to stay in hospital awaiting discharge after their acute care needs were met.

These findings build on the above message to improve primary and community care delivery—in this case, to Elders with complex chronic conditions and/or who are frail. The hospitalization data could indicate that First Nations prefer to return home as soon as possible and not wait for placement in a residential care facility. As a result, home and community care programs must be ready to accommodate these discharged clients who may require continuing care.

COMPARED TO ALL PERSONS AGED 50 TO 64 YEARS OF AGE, THOSE WHO WERE THE SAME AGE BUT FRAIL AND HIGH NEEDS WERE:



**3X MORE LIKELY
TO HAVE**

DIABETES



**3X MORE LIKELY
TO HAVE**

OSTEOARTHRITIS



**2X MORE LIKELY
TO HAVE**

HYPERTENSION

CHILDREN AND YOUTH

First Nations children and youth's access to paediatric care increased between 2008/09 and 2014/15, a finding which was replicated in most regions; however, when assessed against Other Residents, their rates of use were lower provincially and in some regions. The chronic diseases of note in this aggregated 0-17 age group data were asthma and mood anxiety disorders. Mood anxiety disorders increased in males and females, as did asthma rates in females between 2008/09 and 2014/15.

These findings may indicate that First Nations children and youth are receiving routine care, but still require increased access.

One of the ways of assessing the burden of poor oral health in children is through hospitalization rates for dental caries (tooth decay). The provincial rate for First Nations children requiring dental treatment for cavities compared to Other Residents was consistently higher at a five to six times difference for all years of this analysis.

There is a complex range of interrelated factors that can influence this observed difference such as the increased availability of private dental offices in urban environments where dental extractions can be safely performed on young children, a generally lower availability of regular dental care in First Nations communities, the degree of access to fluoridated water, fluoride rinses and varnish treatments, as well as diet, dental hygiene practices, social determinants of health including socio economic conditions, and culturally safe dental services.

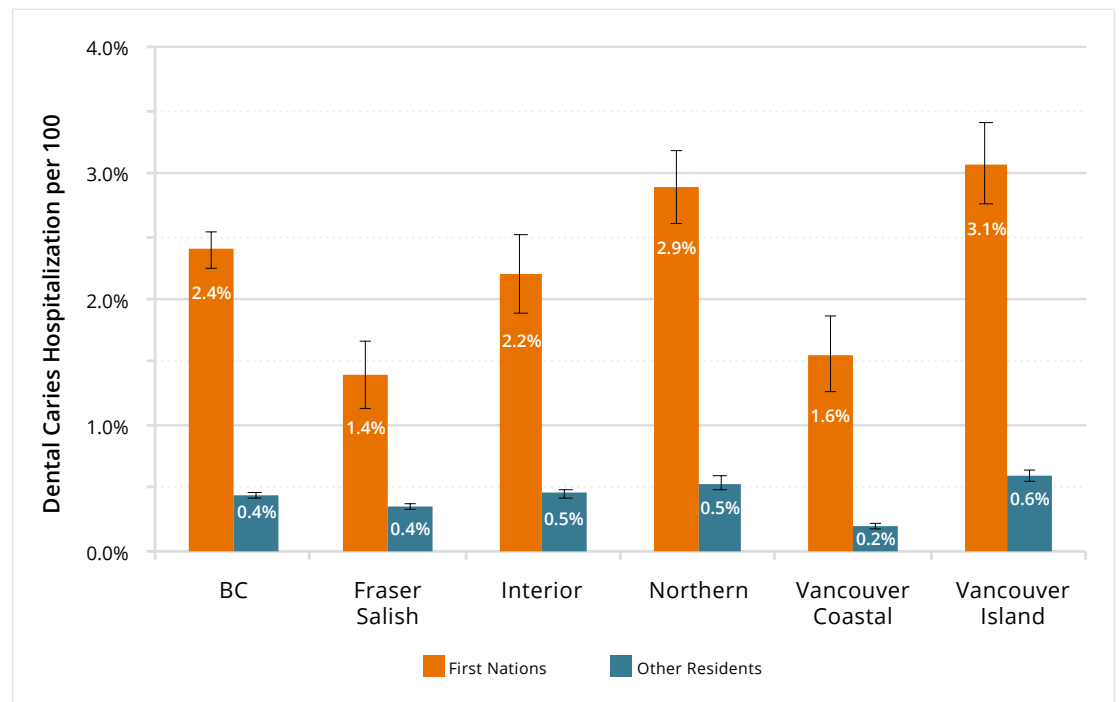


FIGURE 6: Hospitalization rates for dental caries, First Nations and Other Residents, 0-17 years of age, BC and regions, 2014/15

SUMMARY

The HSM results support the following proposed actions with respect to First Nations health services:

- Addressing population health promotion at individual and community levels to reduce rates of chronic conditions among First Nations;
- Improving primary care access in communities to reduce ED admissions;
- Prioritizing mental health and substance use needs as indicated by communities; and
- Improving overall access to health services, in particular for the elderly, children and youth.

GLOSSARY

Access	Access to services in this document relates to the percent utilization of services (number of users per 100 population). Utilization can be influenced by many variables, including availability of/and geographic proximity to services, cultural acceptability of services, health needs of the population, and personal desire to access services.
Health System Matrix database	The HSM is a database that holds cost and utilization data across a broad scope of health services in British Columbia, including hospital and physician care, community supports for daily living, and residential care.
Health services utilization	Health services delivered by health professionals and used by clients.
Cancer First Encounter	The HSM includes data on persons for the year of their cancer diagnosis only.
First Nations Client File (FNCF)	The FNCF is a dataset that's created by linking together Indigenous Services Canada's Indian Registry and BC's Medical Services Provider (MSP) info. The result is a list of all status First Nations who live, or have lived, in BC. The dataset has basic demographic information and MSP numbers, and does not contain any health information. However, it is a powerful tool for examining real health outcomes for First Nations people in BC, by linking the file to other administrative health databases via the MSP number. Once linked, researchers can see exactly how health outcomes differ for First Nations, relative to the rest of BC, and policy experts can use that knowledge to design programs to target those differences. Because of the sensitivity of the FNCF and its linkages, it is rigorously governed by the Data and Information Planning Committee, a Tripartite body (Ministry of Health, FNHA and Health Canada) that collaborates to use the FNCF optimally, ethically, and in a manner that is consensus-driven.
Frail elderly	The elderly who use services provided by the provincial health authorities to support activities of daily living. Frail persons may live in residential care or in their homes.

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