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First Nations and Inuit Health

Health Status of First Nations On-Reserve in Atlantic Canada 2013

Canada

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List of Acronyms

AANDC - Aboriginal Affairs and Northern Development Canada

ADI - The Aboriginal Diabetes Initiative

AFN - Assembly of First Nations

AHSOR - Aboriginal Head Start On-Reserve

BWA - Boil Water Advisory

CBRT - Community Based Reporting Template

CCHS - Canadian Community Health Survey

COHI - Children's Oral Health Initiative

CPNP - Canada Prenatal Nutrition Program

DNC - Do Not Consume

EHIS - Environmental Health Information System

EHO - Environmental Health Officer

EPHP - Environmental Public Health Program

eSDRT - Electronic Service Delivery Reporting Template

FASD - Fetal Alcohol Spectrum Disorder

FNIHB - First Nation's and Inuit Health Branch

FNIHB – AR - First Nation's and Inuit Health Branch, Atlantic Region

HCC - Home and Community Care

HIA & eHSD - Health Information Analysis & e-Health Solutions Directorate

IR - Indian Registry

IRS - Indian Residential Schools

MCH - Maternal Child Health Program

NIHB - Non-Insured Health Benefits

NNADAP - National Native Alcohol and Drug Abuse Program

PHAC - Public Health Agency of Canada

RHS - First Nations Regional Longitudinal Health Survey

SVS - Status Verification System

Forward

The five-year Strategic Framework for FNIHB's Public Health Role in First Nations Communities lists the six core functions of a public health system:

1. Health Surveillance
2. Population Health Assessment
3. Health Promotion
4. Disease and Injury Prevention
5. Health Protection
6. Emergency Preparedness and Response

Health surveillance is the routine and ongoing collection, analysis, interpretation, and dissemination of health related information.

Population health assessment is distinguished from surveillance by taking the population rather than a disease or health determinant as its unit of focus. The assessment also considers the complex causality by which the population and individual characteristics contribute to the health characteristics of a defined population.

This report is a deliverable of FNIHB Atlantic for the "health surveillance" function.

The third Annual health status report is based on the best data currently available to FNIHB Atlantic. It provides a snap shot of the health of First Nations communities in the Atlantic region at this point in time. As health status reporting continues to develop, so should opportunities to engage in discussion and take actions around:

- determining the role of health data in community health planning;
- identifying data sources for community health plans;
- using data from this report to inform services at the community level;
- accessing new data sources for future reports; and,
- improving data quality for future reports.

This report begins by reviewing the data sources used. It is important to be aware of data limitations and how they may impact the interpretation of results. It is equally as important to understand how the data limitations create new opportunities for discussion on improving the quality / quantity of health data. As the availability and quality of health data improves, health status reports will also improve.

To date, each health status report has included a section documenting a different health surveillance concept. Previously, this section has featured the relationship between health indicators and performance measurement, and the relationship between surveillance plans and community health plans. In this report the focus is on using health data and presents a case study about a community using its own data to inform action.

Communities have expressed an interest in receiving their community level information to assist with community health planning processes. To get access to data from FNIHB data holdings, health directors can request data specific to their communities by contacting Atlantic_Epis@hc-sc.gc.ca.

Regards,

Debra Keays-White, Regional Executive Officer
First Nations and Inuit Health Branch - Atlantic Region, Health Canada

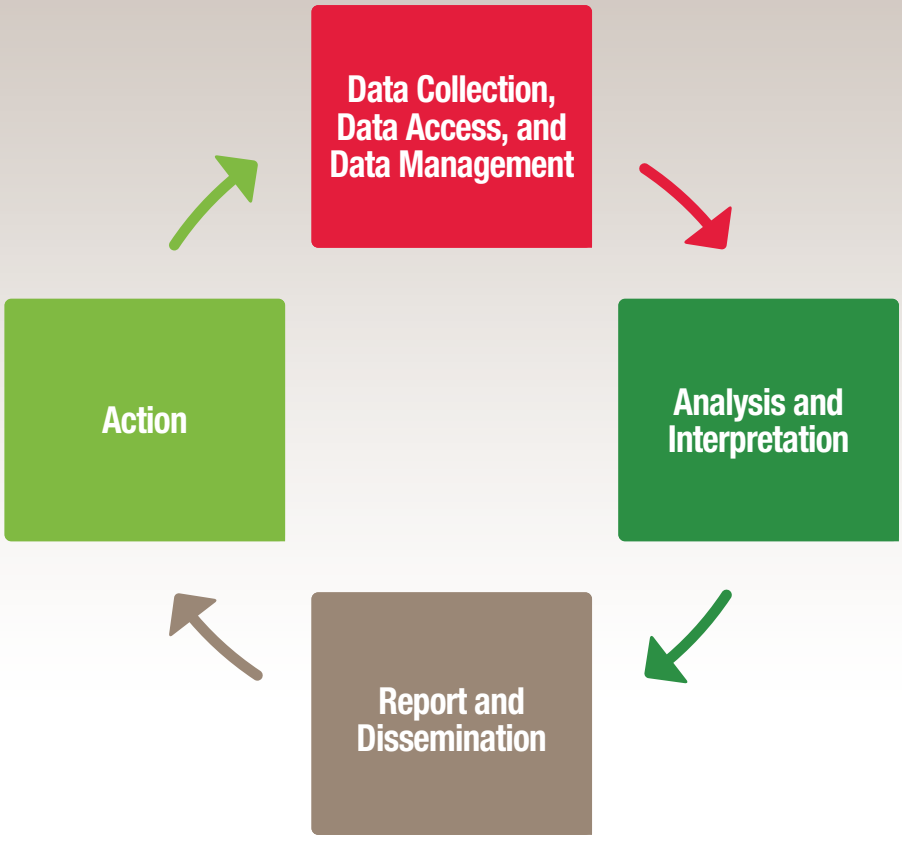
Section 1: Data Sources

Section 1: Introduction

The data in this report represent the best available data holdings at FNIHB (both regionally and nationally) from 2008 to 2012. These holdings consist of FNIHB program reports and the Non-Insured Health Benefits (NIHB) Pharmacy Claims database. Data from Aboriginal Affairs and Northern Development Canada (AANDC) and Statistics Canada are also included.

As the surveillance cycle in figure 1 illustrates, the available data influences eventual action. When reviewing data, it is important to be aware that data limitations can impact all aspects of the surveillance cycle. In other words, better quality data will lead to more confident interpretations and reports and more successful actions to improve health.

Figure 1. Surveillance Cycle



A limitation common to all FNIHB program data is that some communities do not submit reports or they submit incomplete reports. It is unclear how these missing data would change the results presented within this report. While this is a concern, it should be noted that for most programs, the amount of communities submitting reports and the completeness of reports has improved since the first version of the health status report.

Descriptions and limitations related to each data source used in this report are provided in subsections 1.1 and 1.2. It is hoped that the documentation of these limitations will continue to facilitate discussions on how to improve data quality.

1.1 FNIHB Program Data

Community Based Reporting Template
The Community Based Reporting Template (CBRT) is a form that communities complete to report program data on several different FNIHB funded programs simultaneously. It replaced some of the individual program reports.

The CBRT was introduced in 2008/09 as a reporting requirement of the new type of funding agreements between Health Canada and First Nations communities. As communities previous funding agreements expired, they have been rolled over to the new agreements and CBRT. As of 2011/12, there were 23 communities who were required to report on CBRT.

Table 1. Number of Communities Reporting by Program Area

Total Number of Communities Required to Report	**23**
Total Number of Communities Reporting	**19**
Total Number of Communities Reporting Aboriginal Head Start On Reserve	**25**
Total Number of Communities Reporting Maternal Child Health	**21**
Total Number of Communities Reporting Mental Wellness	**17**

Source: *Atlantic region CBRT reports (2011/12)*

For Aboriginal Head Start on Reserve (AHSOR), 13 communities had their data reported by 2 different organizations.

Electronic Service Delivery Reporting Template (eSDRT) – Home and Community Care
It is mandatory for all communities to submit monthly eSDRT reports. However, every year there are some communities that do not submit for every month. These reports are considered missing data or reports. Table 2 illustrates the decreasing proportion of missing reports over the past 3 years. It should be noted that there have been no missing reports from First Nations communities in either Prince Edward Island or Newfoundland and Labrador from 2009/10 to 2011/12.

Table 2. Percentage of eSDRT Reports Missing from Total Due, Atlantic First Nations On-Reserve Communities (2009/10 to 2011/12)

Reporting Year	Percentage of Reports Missing
2009 / 2010	9%
2010 / 2011	4%
2011 / 2012	3%

Source: *Atlantic region eSDRT reports (2010-2012)*

The eSDRT reports are used by communities to document hours of service, number of visits, age groups of clients using the services, the types of services that are delivered to the client, and the primary reasons for obtaining home care. It does not report health status. It allows communities to look at developing trends and the reasons why home care services are delivered or not delivered. It is helpful for community health planning purposes to know what populations are being served and what services are provided most often.

Data entry errors can result in under reporting in one category and over reporting in another. Currently, this issue is being addressed by more clearly defining the data entry categories and processes. New training is being planned for 2014/15.

The primary reasons reported for home care services do not reflect discreet numbers of clients; rather they reflect the number of occurrences. For example, one person may have been seen for diabetes 10 times, counting for 10 contacts; two people could have been seen for cardiovascular reasons, five times each, for a total of 10 contacts. The current eSDRT does not reflect the primary health concern only the reason that the homecare service is provided. For example the client's primary health issue may be diabetes but the client is showing up as wound care because that can be a complication of diabetes.

Environmental Health Information System (EHIS)
Environmental health officers (EHO) enter inspection data in the EHIS database. All 33 First Nations communities have an assigned EHO.

WaterTrax
WaterTrax is used by community-based water monitors and EHOs to record water quality data. In 2011/12, the majority of communities had a community based water monitor.

FNIHB Dental Database Service and Productivity Reports
Services provided by dental therapists and Children's Oral Health Initiative (COHI) service providers are entered into FNIHB's national web-based dental database. Seventeen First Nations communities have a dental therapist, 27 have a COHI aide (all communities with COHI have a dental therapist).

Immunization
It is mandatory for all 33 communities to report their immunization coverage rates, yet not all communities do so, and some reports are incomplete. Some children receive their immunizations off-reserve and are not being captured in the immunization report. Therefore, immunization coverage rates reported for the Atlantic region are likely to be under-reported.

Since 2008 there has been a steady increase in the number of communities who report immunization coverage (Table 3).

Table 3. Number of Atlantic First Nations On-Reserve Communities Reporting Immunization Coverage Rates (2008-2012)

Reporting Year	Number of Communities Reporting Immunization Coverage
2008	21
2009	26
2010	26
2011	30
2012	31

Source: *Atlantic region immunization coverage reports (2008-2012)*

Treatment Centre Data

NNADAP Treatment Centres are required to submit annual reports to FNIHB regarding the number of applications and admissions, demographics and substances used. Some centres gather client information using the Substance Abuse Information System (SAIS), while others use custom systems to track clients.

Teleform

It is mandatory for all 33 communities to report births, deaths and Notifiable Diseases to FNIHB. They do this by completing monthly reporting via a fax-based Teleform system. However, not all communities consistently report data each month. In some cases the Community Health Nurses who fill out the reports may not be aware of all deaths or of cases of notifiable diseases.

Table 4. Number of Atlantic First Nations On-Reserve Communities Reporting Live Births (2010-2012)

Reporting Year	Number of Communities Reporting Live Births
2010	25
2011	26
2012	25

Source: *Atlantic region Teleform community reports (2010-2012)*

Table 5. Percentage of Notifiable Disease Reports Missing from Total Due, Atlantic First Nations On-Reserve Communities Reporting Live Births (2010-2012)

Reporting Year	Percentage of Reports Missing
2009 / 2010	1%
2010 / 2011	2%
2011 / 2012	3%

Source: *Atlantic region Teleform community reports (2010-2012)*

For results using NIHB data, **information is not available** regarding the reason for prescribing the medications, whether the medications were used as prescribed, or if the medications were used by the person they were prescribed to.

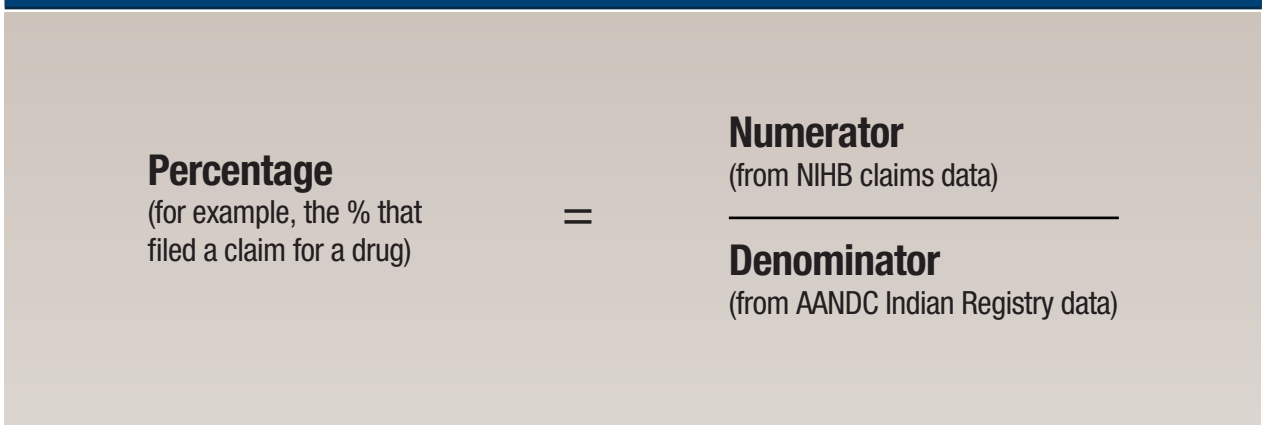
Unlike most other data sources, the percentage of missing reports has increased slightly since 2009/10. Enhanced vigilance in 2009/10 in sending in reports was likely related to the sensitivity around reporting for H1N1 during that time.

Non-Insured Health Benefits (NIHB) Pharmacy Claims Database

The NIHB database is a valuable and unique tool for estimating First Nations health. The following limitations should be considered when interpreting information based on NIHB data:

- The place of residence for claimants (on- or off-reserve) cannot be identified.
- Prescriptions paid by cash, other drug plans, or through NIHB in another region are not captured in this report.
- The numerator and denominator are from different data sources.
- Approximately two-thirds of eligible First Nations band members access at least one prescription per year; estimates of medication usage based on the pharmacy claims database may underestimate utilization for the Atlantic First Nations population (Figure 2).
- Information is not available regarding the reason for prescribing the medications, whether the medications were used as prescribed, or if the medications were used by the person they were prescribed to.

Figure 2. How percentages using NIHB data are calculated



1.2 Aboriginal Affairs and Northern Development Canada Indian Registry

The Indian Registry (IR) includes all Registered Indians (persons registered under the Indian Act) living on-reserve, off-reserve, outside Canada and those in institutions. Key demographic data includes age, sex, and residence (on- or off-reserve). The following limitations should be considered:

- Delays in reporting births and deaths.
- Information about individuals moving on- or off-reserve may not be captured as residence is usually only reported to AANDC at the time of birth or death of an individual.
- Only registered First Nations are included in the registry so the on-reserve population may not be accurately reflected.

In this report, with the exception of the NIHB data, AANDC's on-reserve population counts are used as the denominator for all rate calculations.

1.3 Other Considerations about Data Sources

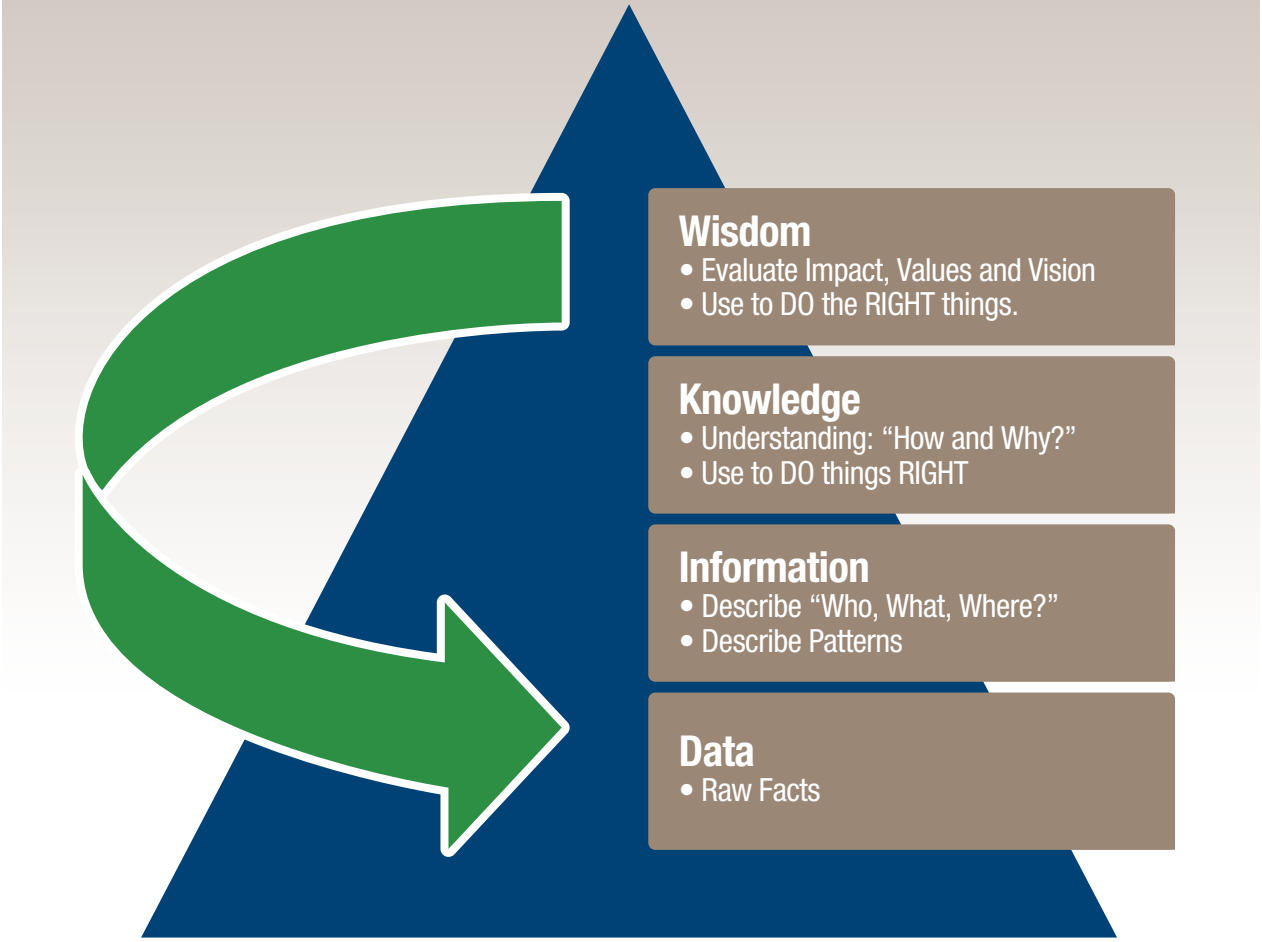
Ideally, Health Status information is reported by calendar year. However, as some FNIHB programs request data from communities based on fiscal year, there are some sections of this report that are reported by calendar year and some by fiscal year. It is important to note the time frame of what is being reported on, especially in reference to comparative information.

Section 2: Using Health Data

2.1 Introduction

The pyramid in Figure 3 shows how large amounts of raw data are condensed and used (Ackoff, 1989). In order for data to lead to positive action, it must be sorted into patterns, understood in a context, and applied to decisions. Evaluation of the impact of these decisions then influences priorities for future action and future data collection.

Figure 3. Knowledge Cycle



The Health Status Report contains information from a range of data sources. Results are shown by year and by location to show trends over time or across populations. In this report, you can compare averages for First Nations within Atlantic Provinces, within the Atlantic Region, and/or across Canada. When possible, averages for all Canadians or all Atlantic Canadians are also included for comparison.

Many of the indicators in this Health Status Report can be also analyzed and reported for individual communities. Upon request, data from a single community is rolled up and reported to the Health Director in a way that protects the identity of individual clients. Community-level data can show trends within a single community over time, and show a First Nation how it's members are doing compared to other groups in their province, region, or across the country.

Requests can be made to Atlantic_epis@hc-sc.gc.ca for a detailed Menu of Indicators that FNIHB Atlantic can provide Health Directors about their own communities.

2.2 Data Use Success Story: Miawpukek

The Health Centre of Miawpukek First Nation in Newfoundland has combined information from provincial partners, Health Centre records, and community members to change diabetes prevention and management. As a result, their clients are enjoying better health and staffs are working with partners to offer more services, more effectively. How did they turn data into action? Read the following success story based on their 2014-19 Community Health Plan and an Interview with LPN Maggie Organ!

The Evidence

Research with partners showed that the community's Diabetes prevalence was 12%, and had been rising. Health Staff had observed that most of their chronic disease clients had diabetes and related ailments. Foot problems were preventing numerous clients from coming to the Health Centre, requiring them to receive wound care and other treatments through home visits. A chart review conducted from 2002-2007 revealed that cholesterol and blood sugar screening was conducted infrequently. In 2012, a community survey showed that Diabetes was still among the top five health concerns. Obesity and smoking rates threaten to increase the burden of diabetes and other chronic disease and the demand on fixed resources.

The Actions

Blood sugar is screened with all bloodwork for youth and adults, and screening through finger pricks has been held at the school to catch youth with early signs of elevated glucose levels.

Healthy nutrition across the lifespan is a focus of the nutrition programming offered by the health centre. As such, they try and demonstrate healthy eating in as many venues as possible. They offer healthy snacks with all their community based work starting with prenatal care. They provide daily snacks, such as fruit and milk, at the school, daycare, afterschool and youth center. They provide weekly snacks for the elder's group, a monthly elders meal and healthy snacks for all staff meetings.

Health Centre Clients diagnosed with diabetes have their blood sugar monitored monthly or as needed. Cholesterol and blood pressure is also tested routinely. Special diabetes clinics are held at the health centre every week for testing, treatments, and advice on nutrition and weight control. A fitness room has a treadmill for safe winter walking. Health Centre LPNs have been trained in advanced foot care. Rather than contracting a specialist to provide this service a few times a year, the Health Centre now provides one full day of foot care appointments, every week. The Health Centre calls clients to remind them of appointments, and arranges referrals to off-reserve appointments such as eye testing. There is coordination between the Health Centre and provincial services on follow-up when a client is discharged from treatment for complications.

Widespread prevention messages and increased testing is having a positive impact on health behaviors and outcomes.

The 2012 health survey identified that healthy eating is more common, clients are more likely to initiate follow-up care, and that hypertension is under control to the point that “it is rare to get chest pain calls now.”

The Successes

School-based blood sugar screening has enabled Health Centre staff to work with parents and at-risk students on prevention practices. All students have access to free healthy snacks, and school staff and grocery stores are being engaged in making good nutrition accessible. Students are getting coordinated attention from parents, teachers, and the Health Centre to prevent or manage concerns that could impact their learning and future health.

Widespread prevention messages and increased testing is having a positive impact on health behaviors and outcomes. The 2012 health survey identified that healthy eating is more common, clients are more likely to initiate follow-up care, and that hypertension is under control to the point that "it is rare to get chest pain calls now." Adults with diabetes access nutrition support, testing, and weight management at a one-stop, weekly source of help to manage their symptoms and prevent complications. Clients who were previously unable to come to the clinic due to foot problems are now able to walk comfortably and no longer require home visiting for wound care. Skipped appointments are very rare, and there is good coordination with specialist testing and hospitals. Partnership on Health Information Management, and a continued focus on diabetes as a health priority, are future commitments in the 2014-2019 Community Health Plan.

Working together, Miawpukek Health staff, partners, and community members, are using data to make a difference in diabetes prevention and management!

If you want to share your data use success story, send an email to Atlantic_epis@hc-sc.gc.ca. We would love to print yours in our next Health Status Report!

Section 3: Population Counts

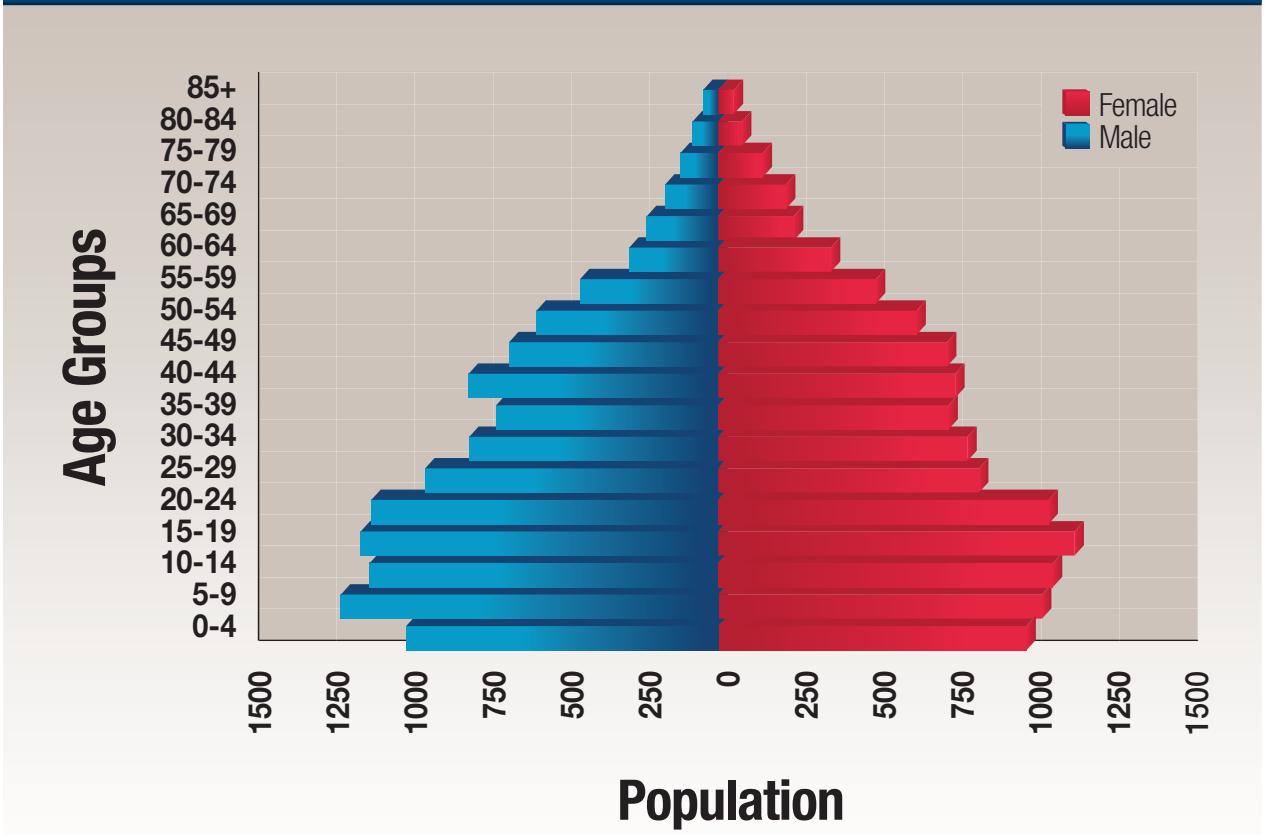
3.1 Population Counts

Age has a huge impact on health and health services. Understanding the age breakdown of a population can help better target both prevention and treatment services.

The age structure of the population of Registered Indians living on-reserve in Atlantic is different compared to that of Atlantic Canada overall. There is a much larger proportion of young people in the Atlantic Registered Indians on-reserve population (Figure 4), with a smaller proportion in the older age groups. While in Atlantic Canada, the population is aging, with fewer young people, and a larger proportion in older age groups (Figure 5).

There was a total of 60,928 Registered Indians living in Atlantic Canada in 2012, both on and off-reserve. Approximately 37% of the Registered Indian population lived on-reserve (22,739); 11,355 males and 11,384 females (Figure 4). Almost half (47.8%) were aged 24 years and younger; 5.1% were aged 65 years and older.

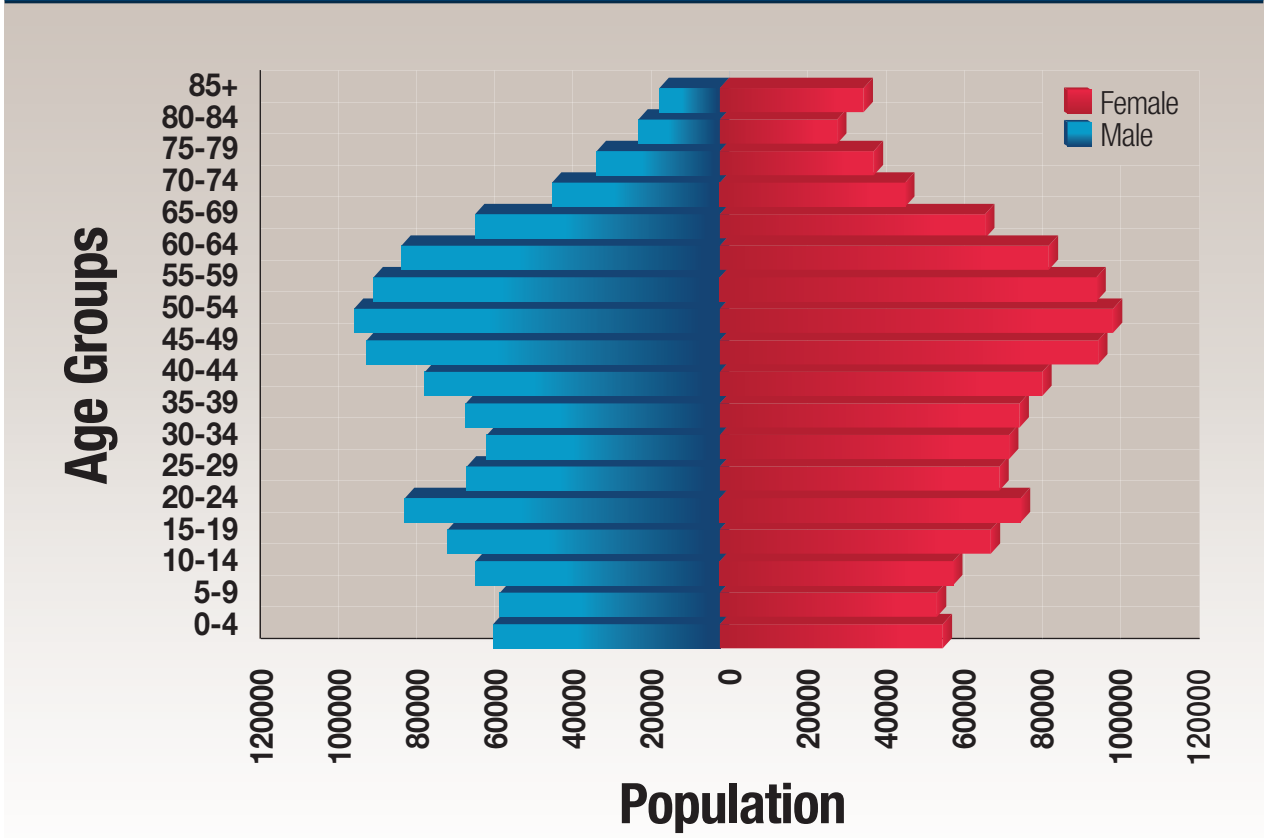
Figure 4. Total Population of Registered Indians Living On-Reserve in Atlantic Canada by Age and Sex (2012)



Source: *Statistics Canada, Census of Population estimates, 2012*

In 2012, the population in Atlantic Canada was 2,363,409; 1,155,209 males and 1,208,200 females (Figure 5). Approximately 27.4% of the population was aged 24 years and younger while those aged 65 and older represented 16.9% of the population.

Figure 5. Total Population in Atlantic Canada by Age and Sex (2012)



Source: *AANDC's Indian Registry System (2012)*

The population growth rate for Atlantic region First Nations on-reserve was 2.3% from 2011 to 2012, approximately 8 times higher than Atlantic Canada overall. Based on population estimates for the general Atlantic region population, the population growth rate was 0.3% from 2011 to 2012.

3.2 Children in Care

As presented in the previous section, First Nations on Reserve have a younger population and higher birth rate. In recognition of implications of this trend, the federal government funds multiple programs via various departments targeting First Nations children and youth.

The number of children in care for First Nations living on-reserve in Atlantic Canada includes children aged 18 years and younger living in foster care, group homes, institutions, Kinship Care, and post-adoption subsidies and supports.

While the percentage of on-reserve First Nations children in care in Atlantic Canada has increased slightly from 2009-2010 (6.4%) to 2011-2012 (8.3%), the average number of care days per child decreased (362 care days per child in 2009-2010 to 306 in 2011-2012) (Table 6). The annual number of care days increased over the same time period.

Table 6. Atlantic Region First Nations On-Reserve Children 18 Years Old and Younger in Care (2009-2012)

Fiscal Year	Percentage of Children in Care	Average Care Days per Child	Annual Care Days
2009 - 2010	6.4	362	197,624
2010 - 2011	7.3	323	196,043
2011 - 2012	8.3	306	205,343

Source: *AANDC Regional data submissions; 2009-2012*

Section 4: Physical Health

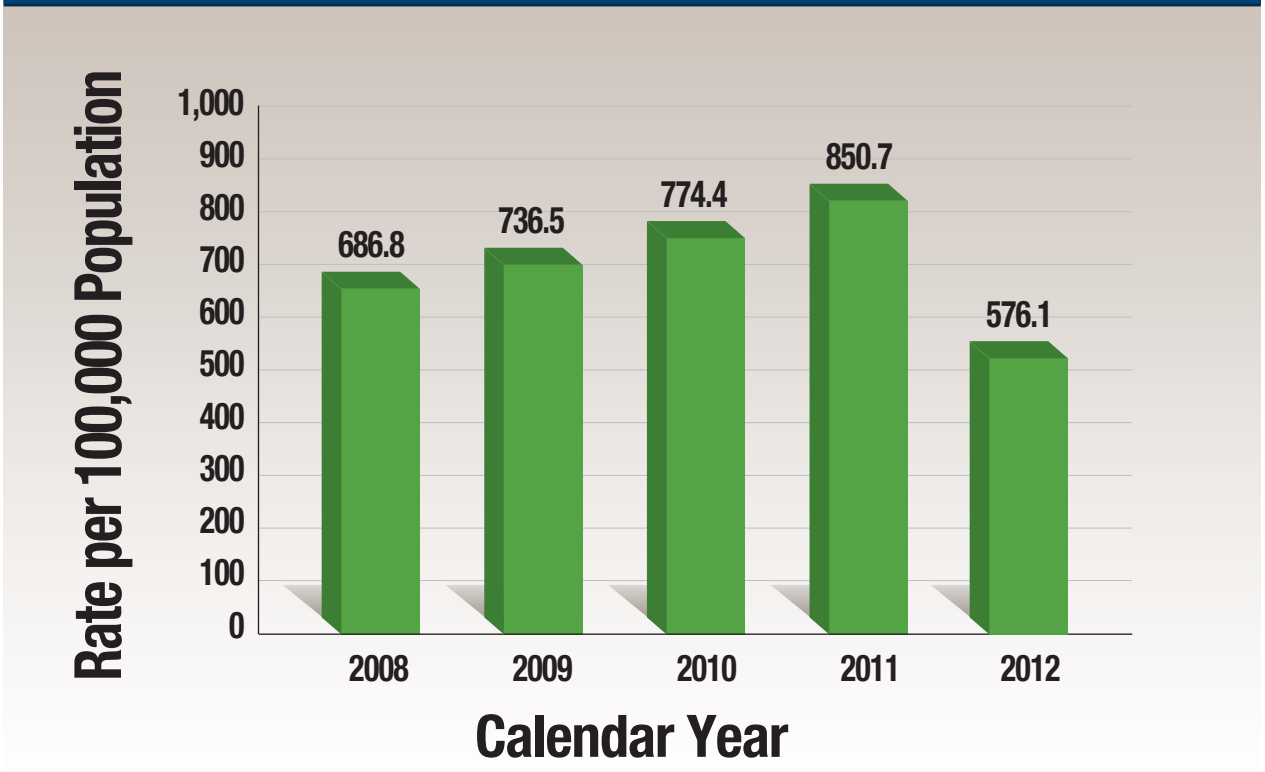
4.1 Notifiable Disease

A notifiable disease is one that is required by provincial and/or territorial legislation to be reported to provincial/territorial public health officials (PHAC, 2009c). Atlantic region First Nations communities report notifiable diseases to FNIHB-AR on a monthly basis via the Teleform reporting system. The most commonly reported notifiable disease between 2008 and 2012 was chlamydia. As of 2011, chlamydia was the most commonly reported sexually transmitted infection in Canada, with a rate of 290.4 cases per 100,000 population (PHAC, 2014).

Untreated chlamydia in women can result in pelvic inflammatory disease, which can lead to chronic pelvic pain, ectopic pregnancy, and infertility (PHAC, 2008b). Pregnant women can transmit chlamydia to their infants during childbirth, resulting in outcomes such as neonatal conjunctivitis or pneumonia (PHAC, 2008b). Having an untreated chlamydia infection may increase the risk of acquiring HIV and transmitting HIV (PHAC, 2008b).

The rates of chlamydia among Atlantic region First Nations on-reserve increased steadily from 686.8 per 100,000 population in 2008 to 850.7 per 100,000 population in 2011 (Figure 6). However, in 2012, the rate of chlamydia decreased to 576.1 per 100,000 population (Figure 6).

Figure 6. Chlamydia Rates (per 100,000 Population) Among Atlantic Region First Nations On-Reserve (2008-2012)

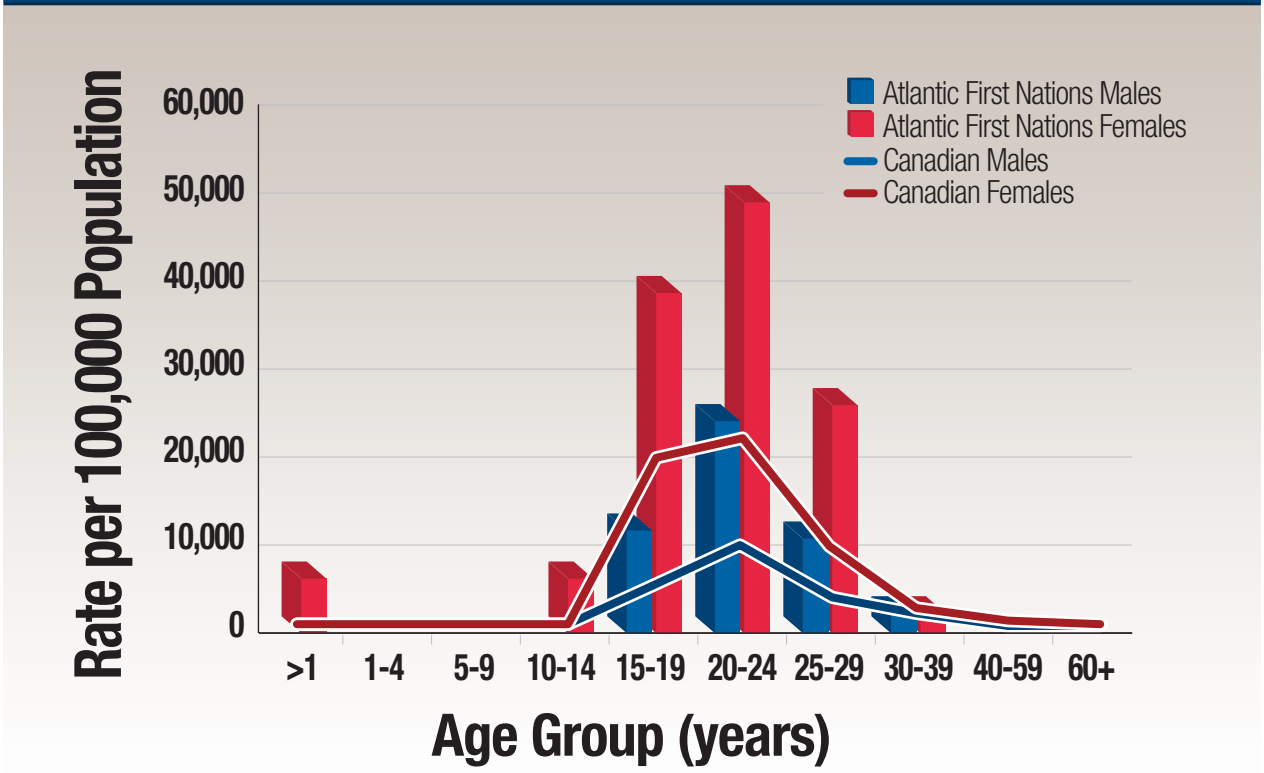


Source: *Atlantic region Teleform community reports (2008-2012); AANDC Indian Registry System (2008-2012)*

While rates over time identifies trends over time, rates of notifiable disease by age and sex can be helpful in targeting prevention programs.

In 2011, similar to the overall Canadian population, the rates of chlamydia among Atlantic region First Nations were highest among young persons aged 15-29. In both populations chlamydia rates were higher among females compared to males. The Atlantic First Nations rates were higher than Canada in most age groups, except among those 30 years and older (Figure 7).

Figure 7. Chlamydia Rates Among Atlantic First Nations Band Members and Canada by Age and Sex (2011)



Source: *Atlantic region Teleform community reports (2011); PHAC Notifiable Diseases Online (2011)*

1 in 5

First Nations age
25 and older report
having diabetes.

Type 2 Diabetes Prevention:

- Smoking cessation
- Increased fruit and vegetable consumption
- Weight loss
- Increased exercise

4.2 Chronic Diseases

Chronic diseases develop and are experienced over time. They include diseases like diabetes and cardiovascular disease. Approximately 63% of Canadian First Nations on-reserve aged 18 years and older self-reported having been diagnosed with at least one chronic health condition (FNIGC, 2012). By age 60, approximately 50% reported having four or more chronic health conditions. The rates of both diabetes and cardiovascular disease are reported to be higher among Aboriginal and First Nations Canadians than among the general Canadian population (Earle, 2011; Health Canada, 2014d).

4.2.1 Diabetes

It is difficult to know the exact numbers of First Nations on-reserve with diabetes as there is no systematic reporting or surveillance of diabetes in First Nations communities in Atlantic Canada. Survey data from the 2008-2010 RHS showed the prevalence of diabetes among First Nations aged 25 years and older was 20.7% (FNIGC, 2012). The prevalence of diabetes among the Canadian population aged 20 years and older was 8.7% (PHAC, 2011b).

In the 2008-2010 RHS 80.8% of those who reported having been diagnosed with diabetes, said they were diagnosed with type 2 diabetes and 9.4% reported having type 1 (FNIGC, 2012). This is similar to the ratio of type 1 and type 2 in the general population: 9 out of 10 people with diabetes have type 2 (Health Canada, 2014a).

Type 1 diabetes is often diagnosed in young people, frequently before the age of 14. Risk factors are believed to involve both genetics and environment. Breastfeeding may reduce the risk for developing type 1diabetes (PHAC, 2011a).

Type 2 diabetes is usually diagnosed in adulthood. Physical activity and healthy eating have been shown to protect against Type 2 diabetes, while obesity and smoking increase the risk. FNIHB's ADI program supports diabetes prevention through the promotion of healthy eating and physical activity.

ADI activities are community-based and vary widely, such as *"walking clubs, healthy lifestyle groups and fitness classes, community kitchens and gardens, and a range of activities for children in schools. Key areas of focus are food security and physical activity. Many communities have developed community based food security projects such as children's feeding programs that promote healthy food choices as well as afterschool physical activity programs that encourage activity and play among children"* (Health Canada, 2014g).

In the absence of a diabetes surveillance system for First Nations in Atlantic Canada, Health Canada's NIHB pharmacy claims database was used to estimate diabetes prevalence. The NIHB system was used to identify First Nations registered to Atlantic region bands (both on- and off-reserve) that had a claim for antidiabetic medications (i.e., pills taken by mouth and injectable insulin) in the Atlantic region for the calendar years 2008 to 2012.

Prevalence

The prevalence provides a picture of how widespread a particular issue (i.e., diabetes) is in the community and includes all people with the issue (new and ongoing cases). The prevalence can be presented for the entire population and/or for subsets of the population (e.g., males, females, age groups) for a specified time period.

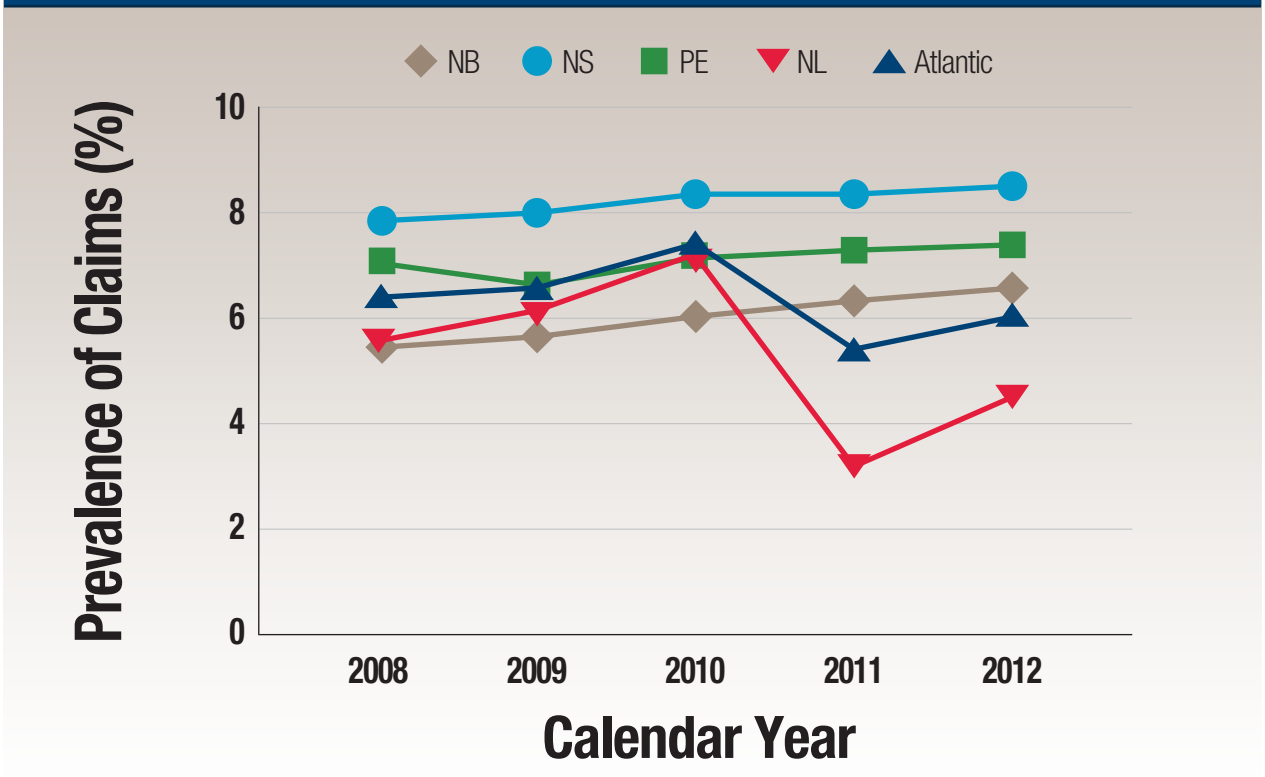
The proportion of Atlantic region band members who had a claim for an antidiabetic medication in a specified year was calculated as:

$$\text{Percentage} = \frac{\text{number of Atlantic region band members who had at least one antidiabetic medication claim in a specified calendar year}}{\text{Total band population in the specified calendar year}}$$

The prevalence of band members who had at least one antidiabetic medication claim was the highest among Nova Scotia band members at approximately 8% for each year (Figure 8). From 2008 to 2012, the prevalence for Prince Edward Island and New Brunswick band members was approximately 7% and 6%, respectively. For Newfoundland and Labrador from 2008 to 2010, the prevalence increase from 6% to 7%. In 2011, it decreased to 3%, and rose to 5% in 2012.

In Newfoundland and Labrador the number of band members who had at least one antidiabetic medication claim increased from 2010 (n=346) to 2011 (n=849), the prevalence decreased from 7% to 3.2%. This was due to the increase in the population eligible to access the NIHB program with the establishment in 2011 of the Qalipu Mi'kmaq First Nation Band. This increase in population is also reflected in the prevalence decrease for the Atlantic region (Figure 8).

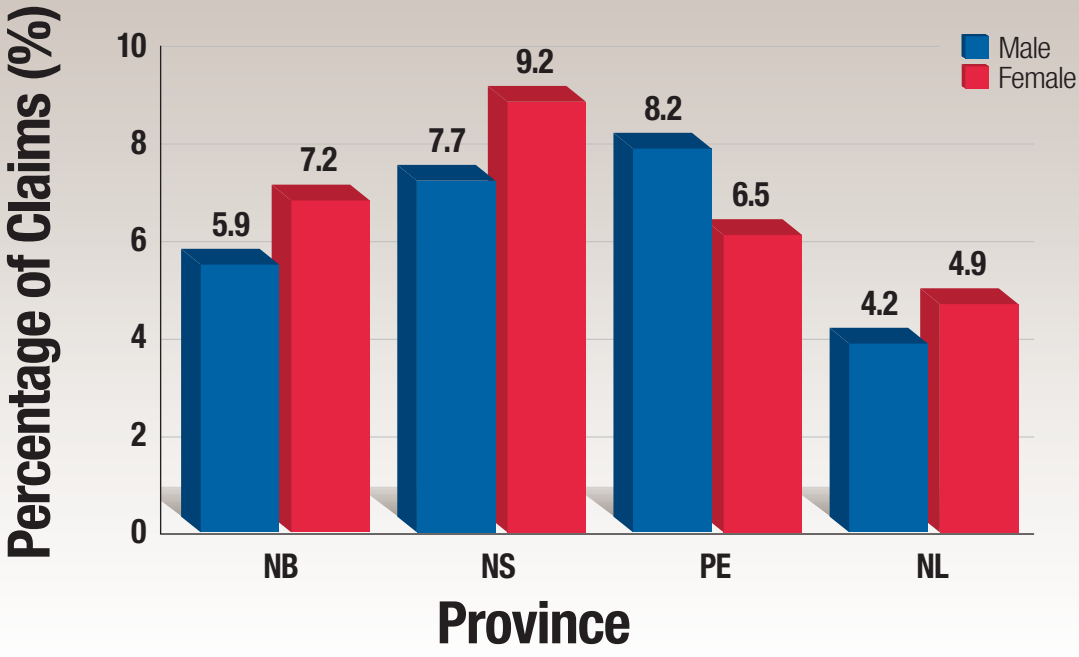
Figure 8. Prevalence of Antidiabetic Medication Claims Among Atlantic Region Band Members Aged 15 Years and Older by Province (2008-2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); AANDC Indian Registry System (2008-2012)*

With the exception of Prince Edward Island, the prevalence was higher among females than among males for the other three provinces across the five years. The differences ranged from approximately 1% to 2%; in Newfoundland and Labrador the differences ranged from 1% to 3%. In Prince Edward Island the prevalence was higher among males than among females in each year. The differences ranged from 2.2% to 3.4%. Prevalence rates by sex for 2012 are illustrated in Figure 9.

Figure 9. Prevalence of Antidiabetic Medication Claims Among Atlantic Region Band Members by Sex and Province (2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

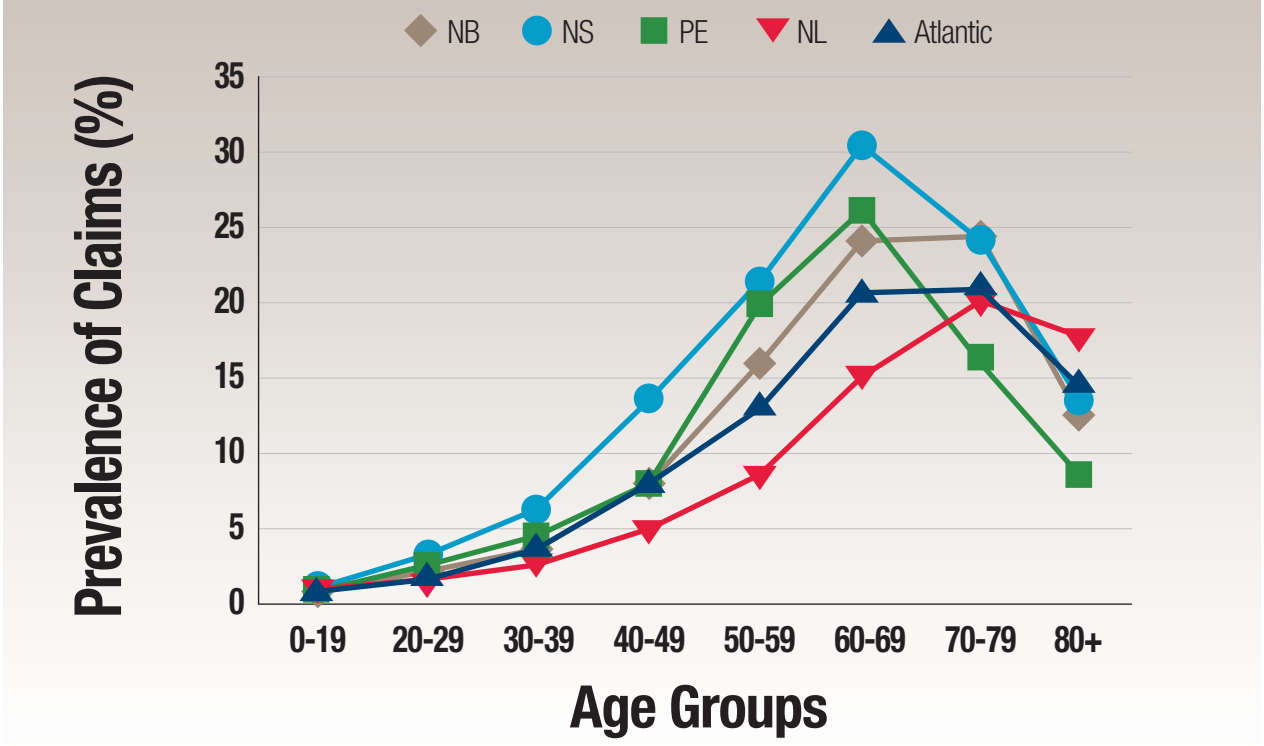
Higher prevalence among First Nations females is consistent with other data found in the literature (FNIGC, 2012). However, among the Canadian population, this trend is reversed. On average in Canada, more males than females have diabetes, at all ages (PHAC, 2011b).

In addition to the increased burden of diabetes overall for First Nations women, there is an increased prevalence of gestational diabetes. Approximately 5.8% of First Nations women self-reported having gestational diabetes (FNIGC, 2012). This is higher than the Canadian average of 4% (Canadian Diabetes Association, 2014). The risks of gestational diabetes include high birthweight and increased risk of developing Type 2 Diabetes for both the mother and the infant (PHAC, 2011a).

Like sex, age is an important predictor of health. In 2012, with the exception of Newfoundland and Labrador, the prevalence of band members who had at least one antidiabetic medication claim increased with age up to the 60 to 69 age group (Figure 10). After age 69, the prevalence either remained the same or decreased. In Newfoundland and Labrador, the prevalence increased to 20% among band members aged 70 to 79 years.

The highest prevalence across all age groups occurred in Nova Scotia, except among band members 80 years of age or older, where the prevalence was highest in Newfoundland and Labrador. In particular, the prevalence among Nova Scotian band members aged 40 to 49 years was higher than same-aged band members in the other provinces and the Atlantic region by differences of 5% to 9%.

Figure 10. Prevalence of Antidiabetic Medication Claims Among Atlantic Region Band Members by Age and Province (2012)



Source: *: Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

The differences by age and sex vary across provinces. In Nova Scotia, the prevalence was higher among females than among males up to age 49, and higher among males than among females aged 50 years and older.

In Prince Edward Island, the prevalence was higher among females than among males in the age groups 0-29 and 40-49. The prevalence was higher among males than among females aged 30-39 and 50 years and older.

In New Brunswick, the prevalence was higher among female band members aged 0-39 years and 80 years and older; the prevalence was higher among males aged 40 to 79 years.

In Newfoundland and Labrador, with the exception of band members aged 60 to 69 years, the prevalence was higher among females than among males. The prevalence was the same for the 40-49 age group.

For the entire Atlantic region, the prevalence was higher among females than among males up to age 49. For band members aged 50 to 79 years, the prevalence was higher among males than among females. After age 80, the prevalence was higher among females.

Incidence

While the prevalence describes how widespread an issue (i.e., diabetes) is and includes all people with diabetes, incidence refers only to new cases of diabetes. As with prevalence, this information can be provided for the entire population of the community and/or for subsets of the populations (e.g., males, females, age groups) for a specific year.

From a planning perspective, it is helpful to know the incidence as this can provide some evidence as to whether or not prevention programming is effective.

The proportion of Atlantic region band members identified as new claimants for antidiabetic medications in a specified calendar year was calculated as:

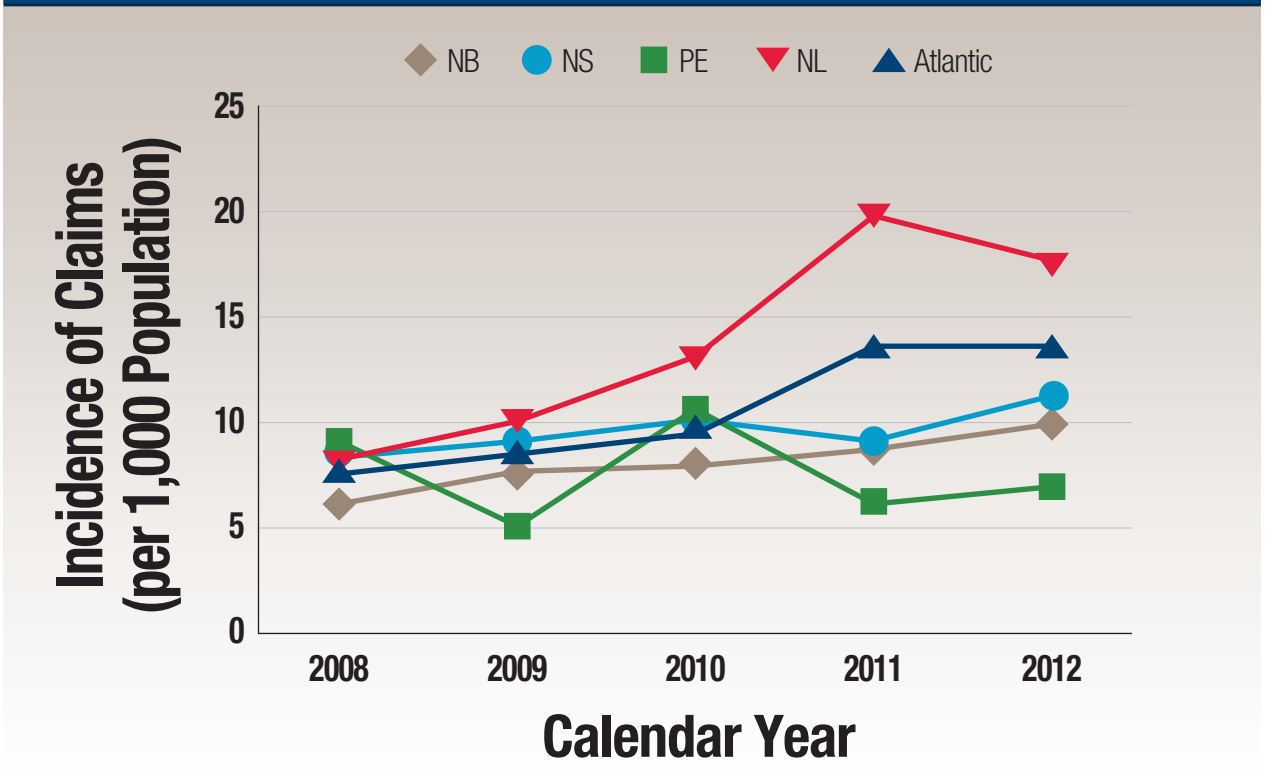
$$\text{Incidence} = \frac{\text{number of band members who had at least one antidiabetic medication claim in a specified calendar year, without any claims for antidiabetic medications in the prior calendar year}}{\text{Total band population in the specified calendar year}}$$

It should be noted that to compare across years and between varying sources of data, the incidence is expressed as per 1,000 population, which is the standard method of reporting incidence.

The incidence rates of antidiabetic medication claims and the trends across years differed among provinces (Figure 11). The incidence of claims among New Brunswick band members increased from 6.3 per 1,000 population in 2008 to 9.8 per 1,000 population in 2012. In Nova Scotia, the incidence rate increased from 8.5 per 1,000 population in 2008 to 11.1 per 1,000 population in 2012.

The incidence rates increased steadily from 2008 to 2011 among Newfoundland and Labrador band members (Figure 11). The sharp increase in incidence rates from 2010 to 2011 are likely due to the establishment of the Qalipu Mi'kmaq First Nation Band in 2011 which increased the population eligible to access the NIHB program. In 2012, the incidence (17.6 per 1,000 population) decreased slightly from the previous year (19.9 per 1,000 population) (Figure 11).

Figure 11. Incidence Rate (Per 1,000 Population) of Antidiabetic Medication Claims Among Atlantic Region Band Members by Province (2008-2012)



Source: *: Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); AANDC Indian Registry System (2008-2012)*

The rates of heart disease are

1.5 times higher

among First Nations people than
among the general Canadian population.

There was no apparent trend in the incidence rates among Prince Edward Island band members (Figure 11). The incidence rates of antidiabetic medication claims decreased from 9.5 per 1,000 population in 2008 to 5.1 per 1,000 population in 2009. The incidence increased to 10.9 per 1,000 population in 2010 and then decreased to 6.6 per 1,000 population in 2011. In 2012, the incidence increased slightly to 7.1 per 1,000 population.

The incidence of diagnosed diabetes among the general Canadian population aged one year and older was 6.3 per 1,000 population in 2008-2009.

4.2.2 Cardiovascular Disease

Cardiovascular disease includes conditions like heart disease and stroke. It is the leading cause of death for Canadians (PHAC, 2009b).

Compared to non-Aboriginal populations, Aboriginal populations are at an increased risk for developing and dying from cardiovascular disease (Health Canada, 2014c; Tjepkema, 2012). The rates of heart disease are 1.5 times higher among First Nations people than among the general Canadian population (Health Canada, 2014d).

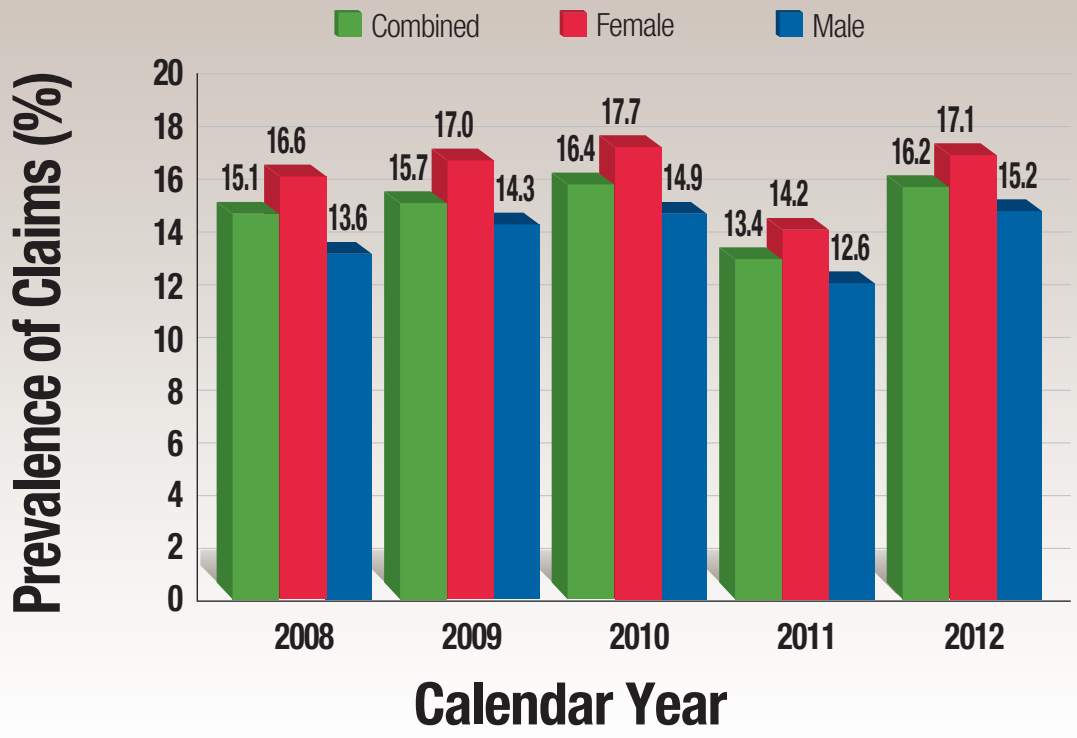
In the 2008-2010 RHS, a higher proportion of Canadian First Nations males (18 years and older) versus females reported having been diagnosed with heart disease (6.7% and 4.2%, respectively) (FNIGC, 2012). Tjepkema et al. estimate that compared to non-Aboriginal people, rates of death from cardiovascular disease were 30% higher for First Nations males and 76% higher for First Nations females (Tjepkema, 2012).

The NIHB pharmacy claims database was used to identify First Nations registered to Atlantic region bands that filled a claim for cardiovascular disease medications in the Atlantic region for the calendar years 2008 to 2012. Diuretics were included with the cardiovascular disease medications as they are therapies used in the treatment of cardiovascular conditions.

The prevalence of cardiovascular disease medication claims among Atlantic region First Nations band members who had at least one claim increased by less than 1% year to year from 2008 (15.1%) to 2010 (16.4%) (Figure 12). In 2011, the prevalence of claims decreased to 13.4%, but increased again in 2012 to 16.2%. The trend was similar among females and males. The prevalence of claims was higher among females than among males for each year with differences of approximately 2%.

It should be noted that while the number of Atlantic region band members who had at least one cardiovascular disease medication claim increased from 2010 to 2011, the prevalence decreased from 15.6% to 12.9%. This is due to the increase in population eligible to access the NIHB program with the establishment in 2011 of the Qalipu Mi'kmaq First Nation Band.

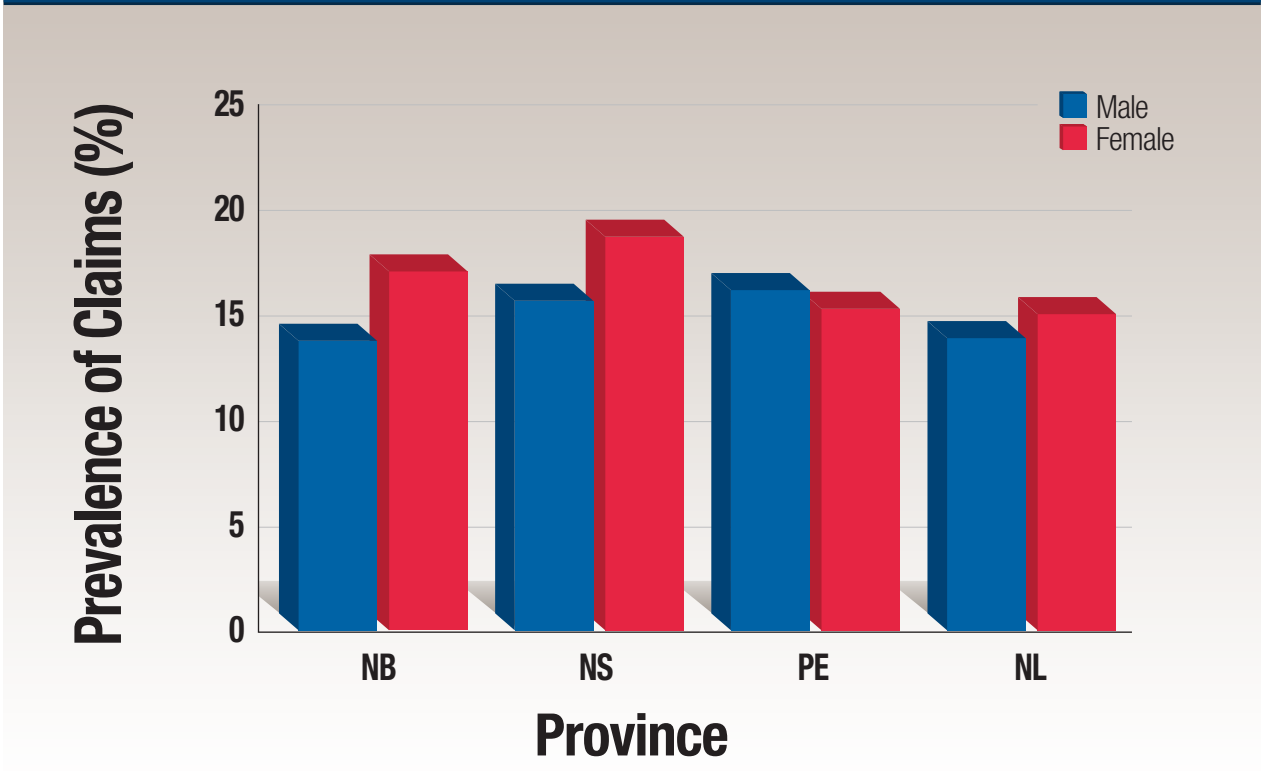
Figure 12. Prevalence of Cardiovascular Disease Medication Claims Among Atlantic Region Band Members by Sex (2008-2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); AANDC Indian Registry System (2008-2012)*

The prevalence of cardiovascular disease medication claims was similar among First Nations band members in the Atlantic Region. With the exception of Prince Edward Island, the rates in 2012 were higher for females than for males (Figure 13).

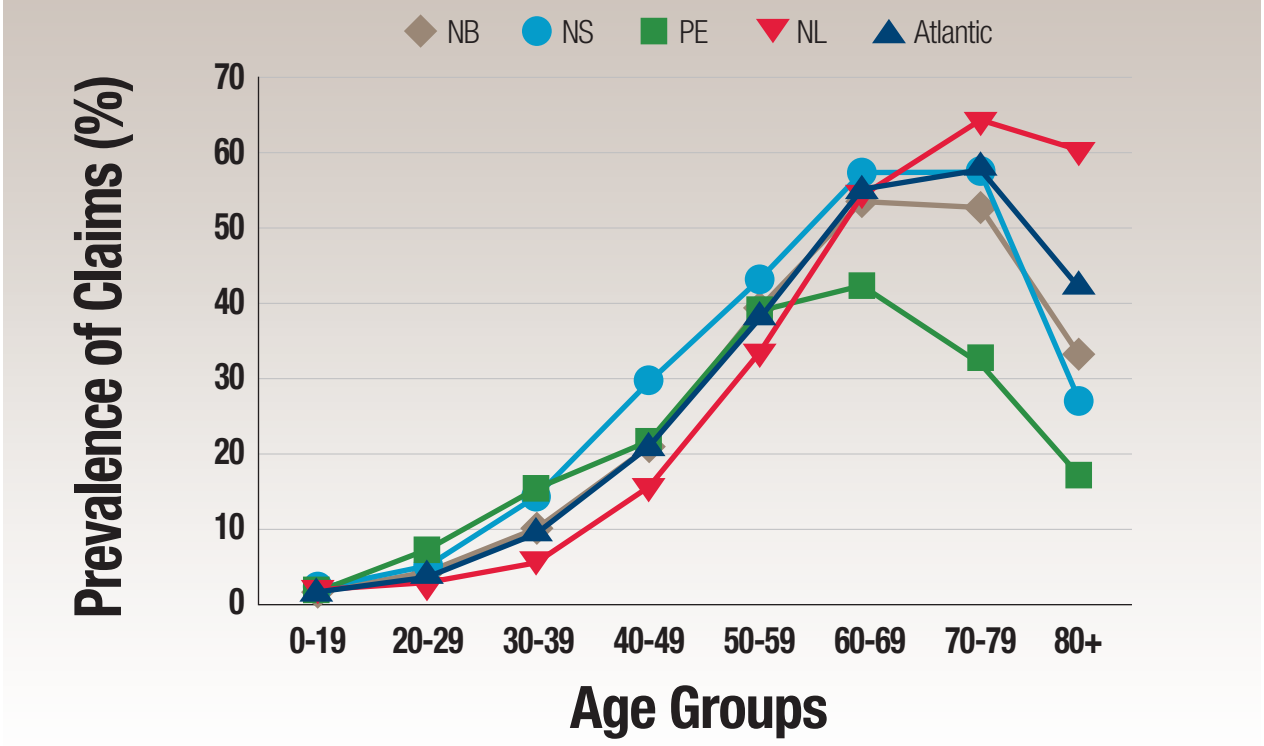
Figure 13. Prevalence of Cardiovascular Disease Medication Claims Among Atlantic Region Band Members by Province and Sex (2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

In 2012 the prevalence of cardiovascular medication claims increased with increasing age up to the 70 to79 age group (Figure 14). The prevalence was lowest among Newfoundland and Labrador band members across age groups up to the 70 to 79 age group. The prevalence decreased in the 80+ age group for all provinces. Newfoundland and Labrador had the highest prevalence compared to the other provinces in the 80+ age group.

Figure 14. Prevalence of Cardiovascular Disease Medication Claims Among Atlantic Region Band Members by Age and Province (2012)

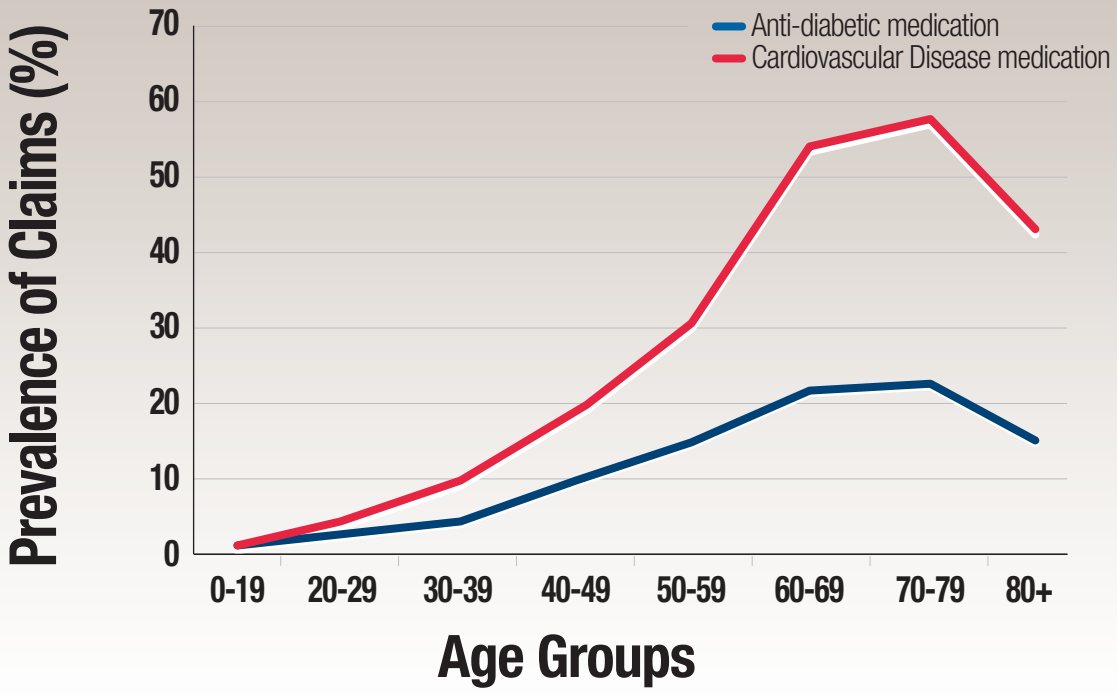


Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

4.2.3 Diabetes and Cardiovascular Diseases

While diabetes and cardiovascular diseases are two different chronic conditions, there are similarities in who gets these conditions. As Figure 15 illustrates, the prevalence of both conditions starts to increase in the 20-29 year age group, and increases in the 60-79 year age group.

Figure 15. Prevalence of Diabetes and Cardiovascular Disease Medication Claims Among Atlantic Region Band Members by Age (2012)



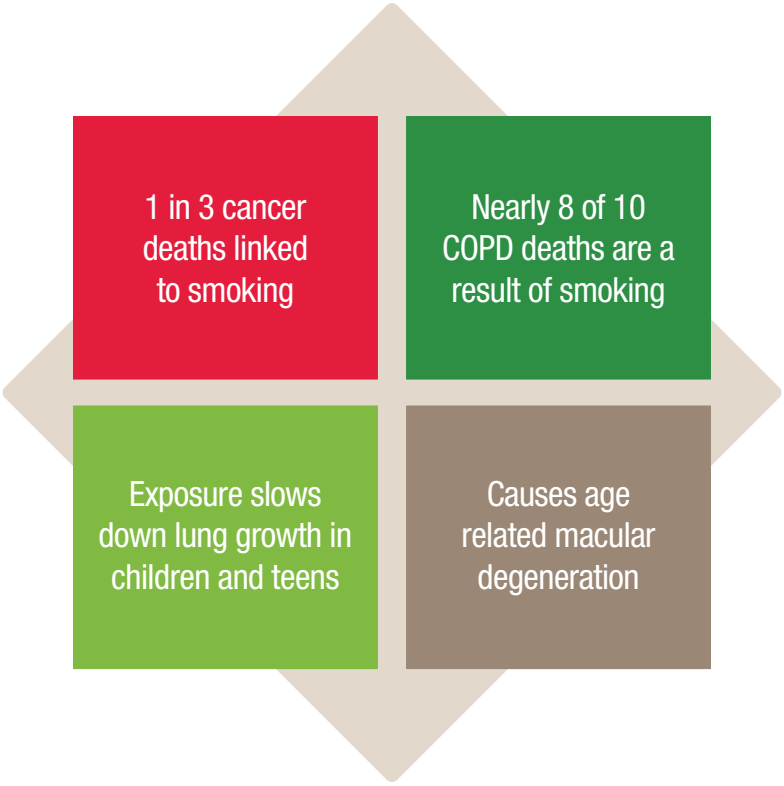
Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

Smoking rates in First Nations are
3 times higher than
the Canadian average.

First Nations 15 to 17 year olds are **8 times** more likely to smoke daily than other Canadians their age.

4.2.4 Smoking

Smoking is a well-documented risk factor for chronic diseases such as cardiovascular diseases, cancer, and diabetes (Health Canada, 2014c). According to the United States Surgeon General (US Department of Health and Human Services, 2014):



Smoking rates are reported to be more than three times higher among First Nations populations than among the general Canadian population (FNIGC, 2012; Health Canada, 2014f). In 2011, 17.3% of the general Canadian population aged 15 years and older were current smokers; 13.7% were daily smokers (Health Canada, 2014f). In the 2008-2010 RHS, approximately 57% of Canadian First Nations on-reserve aged 18 years and older reported they were current smokers. Forty-three percent (43%) indicated they smoked daily and 13.7% indicated they were occasional smokers (FNIGC, 2012).

The prevalence of daily smoking was higher among Canadian First Nations youth aged 15 to 17 years than among Canadian youth aged 15 to 17 years, 29.6% versus 3.9%, respectively (FNIGC, 2012; Health Canada, 2014f). The disparity in smoking rates is especially high for this particular age group.

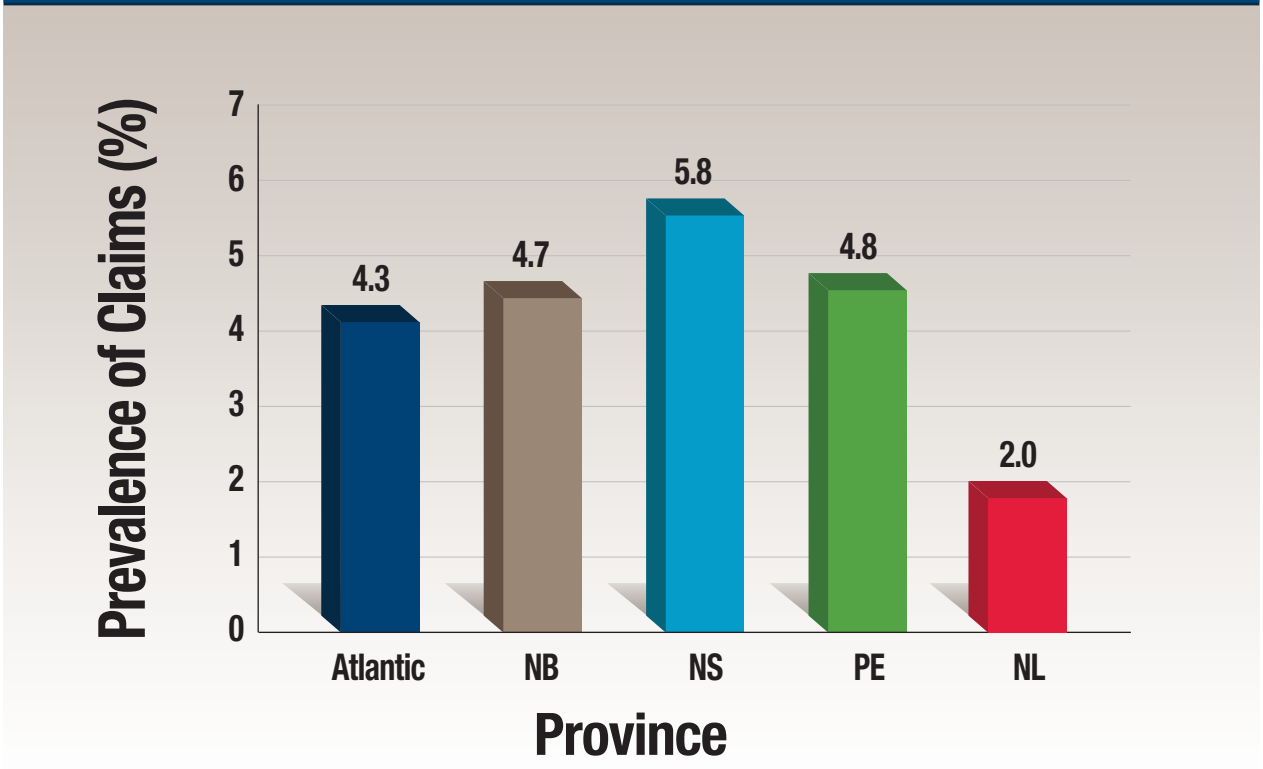
Quitting smoking is associated with improved health outcomes. One year after quitting, the risk of coronary heart disease falls by half (Swartz, 2014). 10 years after quitting smoking, the risk of dying from lung cancer decreases by half (Swartz, 2014).

Approximately 30% of Canadian First Nations on-reserve aged 18 years and older made an attempt to quit smoking in the 12 months prior to the 2008-2010 RHS (FNIGC, 2012). By comparison, 14.4% of Canadians aged 15 years and older made one attempt to quit smoking in 2011 (Health Canada, 2014f).

There are various ways to quit smoking, from "cold turkey" to behavioral and clinical interventions. Nicotine replacement therapies, such as Nicoderm®, Nicorette®, Champix®, and Zyban®, can help people quit smoking and are funded by NIHB.

The prevalence of claims for such smoking cessation products were analyzed for band members aged 15 years and older in each province, between 2009 and 2012 (Figure 16).

Figure 16. Prevalence of Smoking Cessation Claims Among Atlantic Region Band Members by Province (2012)



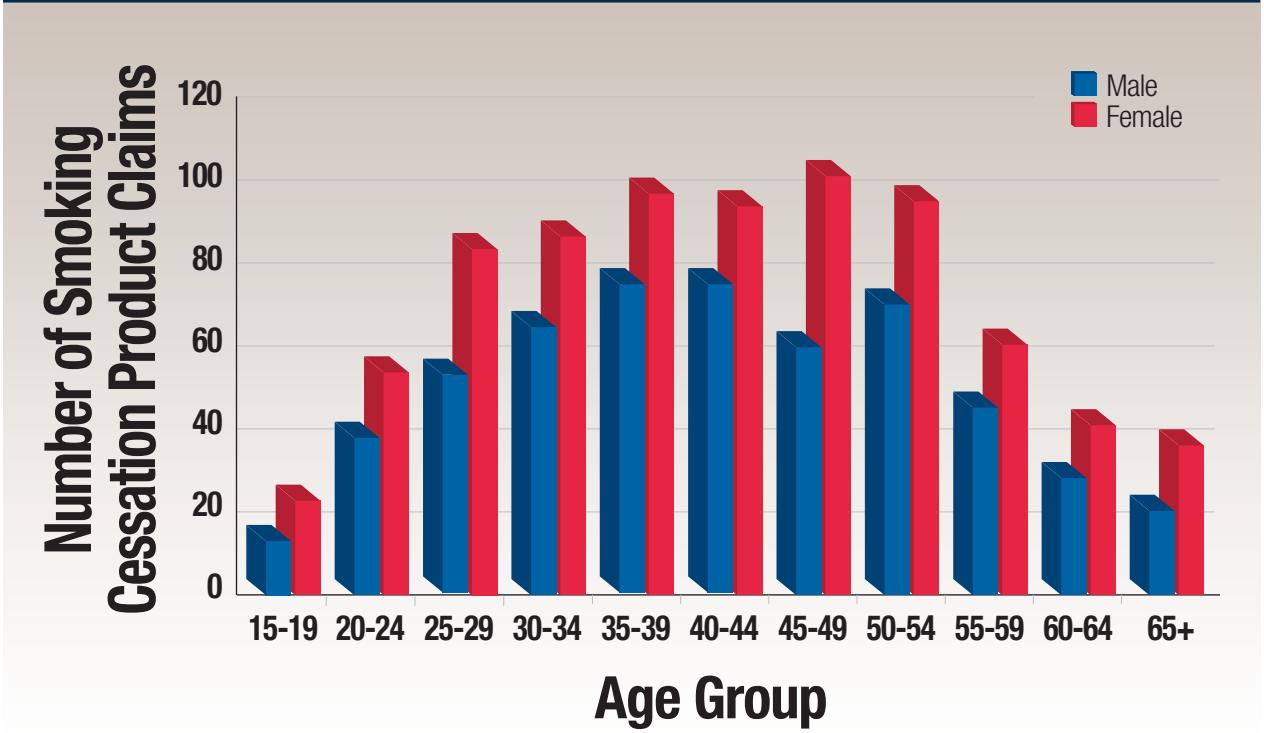
Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

In these years, the prevalence of claims was highest in Nova Scotia (about 6%) and lowest in Newfoundland and Labrador (2%). The prevalence of claims PEI and New Brunswick was similar to the overall average for the Region (between 4 and 5%) (Figure 16).

Across Canada, males are more likely than females to smoke. However, among First Nations, the smoking rate is the same for females as for males. For both First Nations and other Canadian populations, more females than males attempted to quit smoking (FNIGC, 2012; Health Canada, 2014f).

Consistent with the trend for First Nations females to be more likely to attempt to quit, about 60% of NIHB clients who claimed smoking cessation produces were females, for all age groups (Figure 17).

Figure 17. Number of Smoking Cessation Claims Among Region Band Members by Age (2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

4.3 Maternal Child Health

4.3.1 Birth Rate

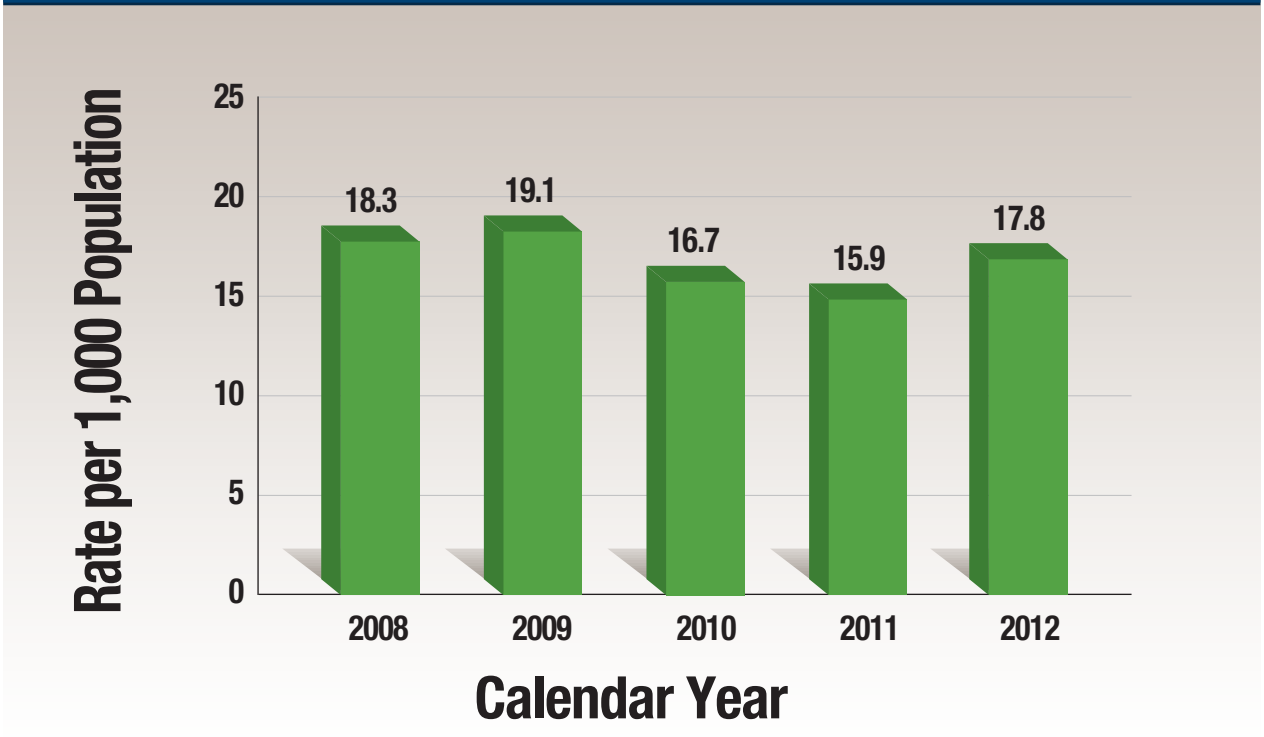
Currently, birth information for First Nations on-reserve is reported by communities to FNIHB Atlantic Region via Teleform and the Community Based Reporting Tool (CBRT). Due to differences in the number of communities reporting, the two reporting methods yield different birth rate information. Birth rates received through Teleform reporting are used here as these numbers include all births. CBRT data is not available for all communities for the 2011-12 fiscal year, as not all communities were using this reporting mechanism.

The **birth rate** is defined as the ratio of total live births to population and is calculated by dividing the number of births (numerator) by the population (denominator). The birth rate is expressed as the number of live births per 1,000 population per year.

As reported through Teleform, the birth rate ranged between a low of 15.9 per 1,000 in 2011 and a high of 19.1 per 1,000 in 2009. The rate was 17.8 per 1,000 population in 2012 (Figure 18).

In comparison, the birth rate for the Atlantic provinces from 2008 to 2011 ranged from 8.7 per 1,000 population in Newfoundland and Labrador to 9.9 per 1,000 population in Prince Edward Island (Statistics Canada, 2014a). The overall Canadian birth rate was 11.0 per 1,000 population for the same time period (Statistics Canada, 2014a). Data for 2012 are not yet available for the Atlantic provinces or for Canada.

Figure 18. Birth Rate for Atlantic Region First Nations On-Reserve (2008-2012)



Source: *Atlantic region Teleform community reports (2008-2012); AANDC Indian Registry System (2008-2012)*

The higher birth rate in First Nations on Reserve compared to Atlantic and Canadian rates is to be expected with its younger population distribution and higher growth rate.

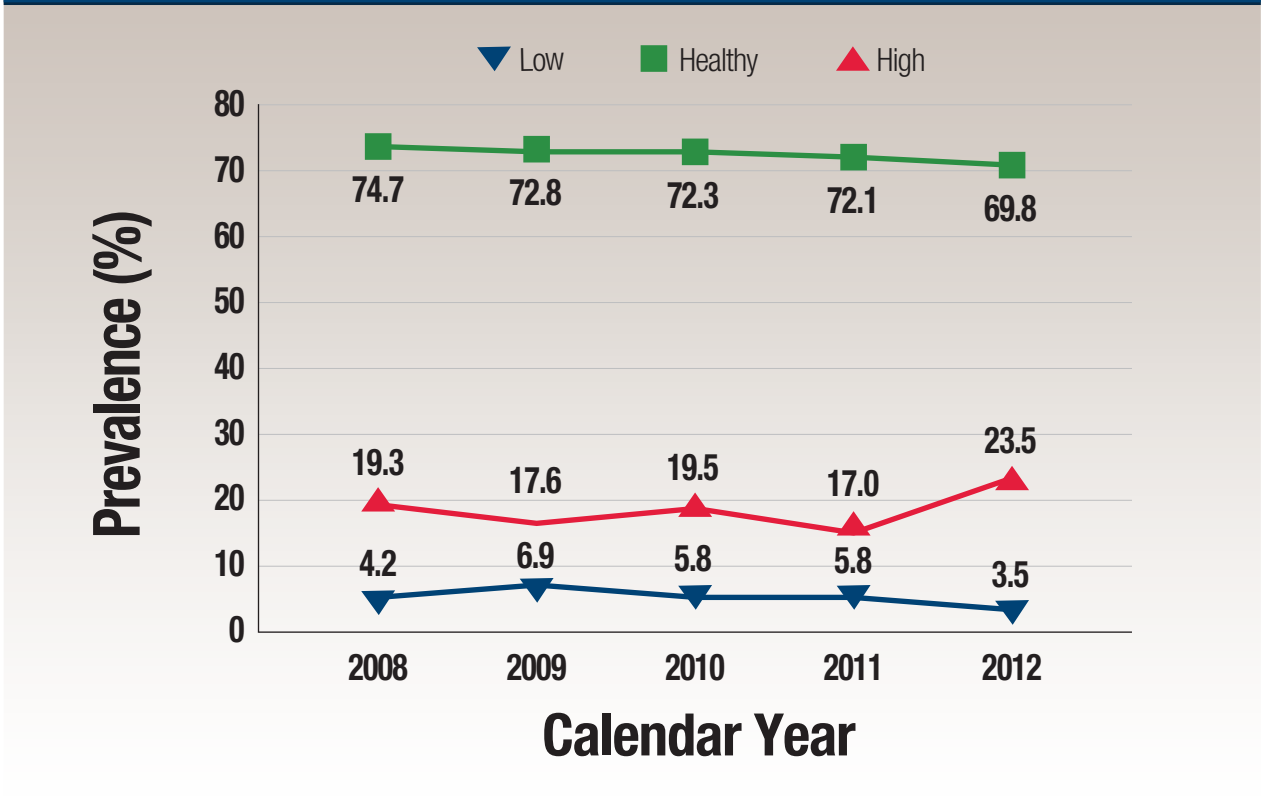
4.3.2 Birth Weight

Based on Atlantic region Teleform community reports, the proportion of babies born in the healthy birth weight range (2500g - 4000g or 5lb 9oz – 8lb 11oz) decreased from 74.7% in 2008 to 69.8% in 2012 (Figure 19). By comparison, the proportion of healthy weight babies born in the Atlantic provinces overall, increased slightly from 79.5% in 2008 to 80.9% in 2011 (Statistics Canada, 2014b). For the same time period, the proportion of Canadian babies born with a healthy weight increased minimally from 82.1% to 82.7% (Statistics Canada, 2014b).

Due to risk factors associated with high birth weights (e.g., diabetes, obesity through childhood to adulthood, and childbirth complications) (Government of Canada, 2011), the proportion of Atlantic region First Nations babies born who weighed over 4000g (8lb 11oz) is of concern. The proportion of babies born between 2008 to 2011 who weighed over 4000g (8lb 11oz), ranged from 17.0% to 19.5%, but increased sharply in 2012 to 23.5%. These rates are higher than the rates for the Atlantic provinces (13.2% in 2011) and Canada (10.8%) (Statistics Canada, 2014b).

The proportion of babies who were in the low birth weight category (less than 2500g or 5lb 9oz) was highest in 2009, but declined to 3.5% in 2012. For both 2010 and 2011, the rate was 5.8%. These findings are comparable to the approximately 6% reported for both the overall Atlantic provincial and Canadian population for 2008 to 2011 (Statistics Canada, 2014b).

Figure 19. Proportion of Live Births for Atlantic Region First Nations On-Reserve by Birth Weight Category (2008-2012)



Source: *Atlantic region Teleform community reports (2008-2012)*

4.3.3 Risk Behaviors

Maternal cigarette smoking during pregnancy is associated with many negative health effects including stillbirths and low birth weight babies, sudden infant death syndrome, attention deficit hyperactivity disorder, some childhood cancers, and increased risk of asthma (PHAC, 2008a).

Exposure to alcohol during pregnancy is linked with fetal alcohol spectrum disorder (FASD) which is a range of conditions that includes cognitive, behavioral, neurodevelopmental, physiological, or physical impairments that affect children over their lifespan (PHAC, 2008a). Currently, there is not enough evidence to determine: (1) how even low levels of alcohol consumption during pregnancy will affect the fetus or (2) a safe cut-off for low level drinking, suggesting that there is no safe amount of alcohol consumption during pregnancy (Carson, 2010). Therefore, the clinical guidelines advise women who are or may become pregnant to not drink at all. Use of illicit drugs during pregnancy can also have a variety of serious health consequences for pregnant women and their babies, which may affect them throughout their lifetime (HealthLink BC, 2012).

It is not known how many Canadians are living with FASD as FASD is difficult to diagnose and is often under reported (Healthy Child Manitoba, 2012). It is estimated that nine out of every 1,000 Canadian babies (Healthy Child Manitoba, 2012), approximately 1% of the population (Carson, 2010), are born with FASD each year.

Teenage pregnancies are associated with health risks to mothers and their babies, including anemia in the mother, poor maternal weight gain, low birth weight, pre-term birth, higher mortality rates (PHAC, 2008a). Teenage mothers are at risk of having poorer educational outcomes (PHAC, 2008a). In Canada in 2011, approximately 3.6% of live births were among females under the age of 20 (Statistics Canada, 2013).

Gestational (or maternal) diabetes occurs during pregnancy. It increases risk the of a mother having a high birth weight baby and the associated health consequences of high birth weight. Having gestational diabetes also increases the risk of the mother developing type 2 diabetes after pregnancy (PHAC, 2008a).

FNIHB Atlantic Region receives information regarding pre-natal risk factors from the Community Based Reporting Template. In previous Health Status Reports, data from the Canadian Prenatal Nutrition Program was used to obtain the same information. However, these reports are no longer in place and communities are required to include the same information in their CBRT reporting.

Smoking during pregnancy was the most commonly reported risk behavior among pregnant women in the Atlantic region in both 2010-2011 (36.1% of women) and 2011-2012 (37.4%) (Table 7). Maternal age less than 20 years was also frequently reported during the same time period (17.6% in 2010-2011; 17.8% in 2011-2012). The rates of drug and/or solvent use during pregnancy remained similar in the two year time period, as did the rate gestational diabetes. The percentage of mothers reporting alcohol use during pregnancy changed from 19.2% in 2010-2011 to 8.7% in 2011-2012. While it is encouraging to observe the rate of alcohol use during pregnancy has decreased, several more years of CBRT data will be required to determine if this is a sustained decrease, or simply a one-time fluctuation.

Table 7. Pre-Natal Risk Factors Among Mothers Reported in CBRT (2010-2012)

Fiscal Year	Number of First Nations Communities Reporting	Smoking (%)	Drugs/ Solvents (%)	Alcohol (%)	Gestational Diabetes (%)	Maternal Age <20 Years (%)
2010 - 2011	16	36.1	13.7	19.2	5.9	17.6
2011 - 2012	21	37.4	12.1	8.7	6.5	17.8

Source: *CBRT (2010-2012)*

Based on findings from the 2011 Canadian Tobacco Use Monitoring Survey (Health Canada, 2014f), 6.9% of Canadian women aged 20 to 44 years who had been pregnant in the previous five years reported smoking during pregnancy. Of the Canadian women who gave birth five years prior to the 2005 Canada Community Health Survey (CCHS), 10.5% reported drinking alcohol during pregnancy; 1.1% reported drinking more than once a week (PHAC, 2008a).

4.3.4 Breastfeeding

Due to the benefits for infants' growth, immunity, and cognitive development, breastfeeding is promoted by Health Canada (in alignment with the World Health Organization guidelines) and is internationally recognized as the natural and preferred method of feeding infants (Health Canada, 2012a; WHO, 2012).

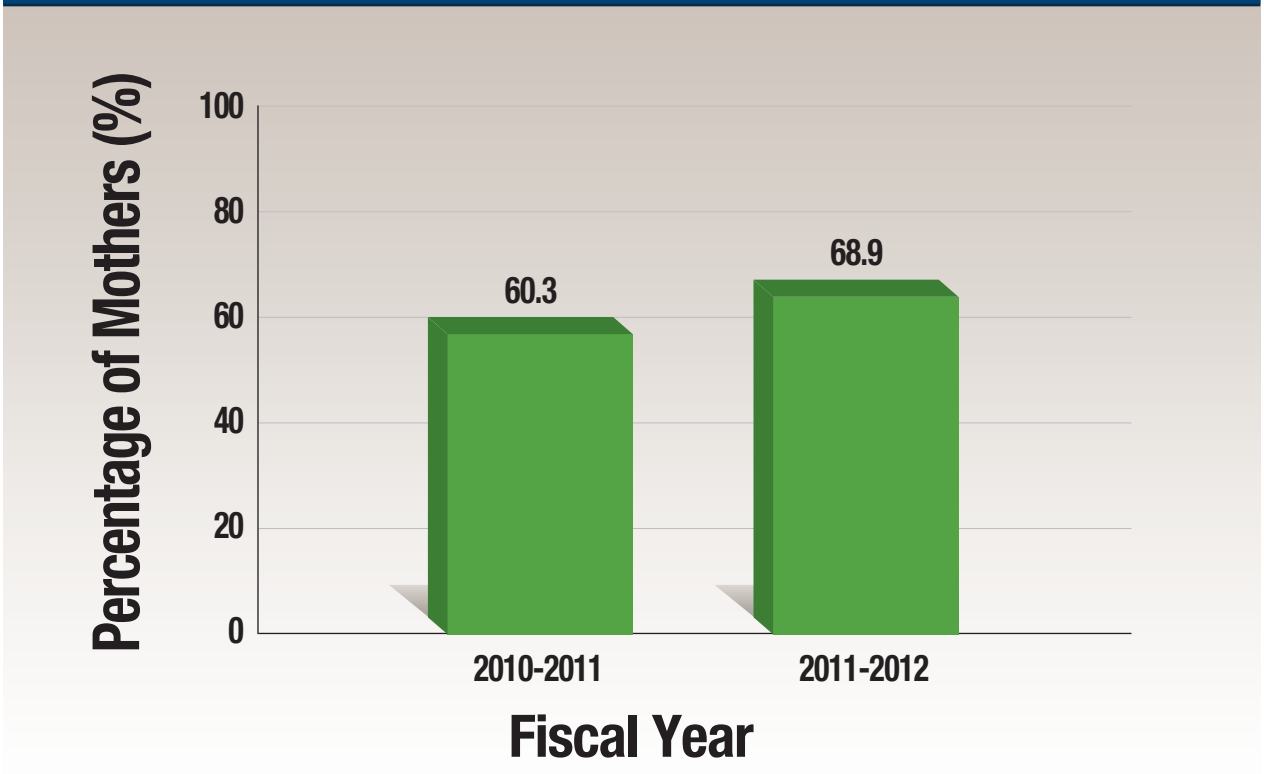
"Exclusive breastfeeding during the first six months is accepted as the nutrition standard for infants" and is considered an international public health recommendation (Health Canada, 2012a; WHO, 2012). Furthermore, it is recommended that breastfeeding continue for two years and beyond even if the child is being fed solid food (WHO, 2012).

Based on CBRT reports submitted by First Nations communities in the Atlantic region, the percentage of First Nations on-reserve mothers who initiated breastfeeding increased from 60.3% in 2010-2011 to 68.9% in 2011-2012 (Figure 20). The percentage of babies who were breastfed at least six months also increased from 13.2% in 2010-2011 to 25.6% in 2011-2012.

Based on CCHS data, in 2009-2010, 87.3% of Canadian women aged 15 to 55 years who gave birth in the previous five years reported initiating breastfeeding and 25.9% breastfed exclusively for six months or more (Health Canada, 2012c). The rate of breastfeeding in Atlantic Canada was below the national average, with 74.8% of women reporting breastfeeding initiation.

Breastfeeding initiation information is also collected in FNIHB-AR Teleform birth reports. These reports support the observation that breastfeeding initiation is increasing in Atlantic Region First Nations. It is encouraging that the breastfeeding initiation and duration rates among First Nations mothers appear to be increasing. There is still need for programs to promote exclusive breastfeeding and support mothers to continue breastfeeding beyond six months.

Figure 20. Percentage of Atlantic Region First Nations On-Reserve Mothers that Initiated Breast Feeding (2010-2012)



Source: *CBRT (2010-2012)*

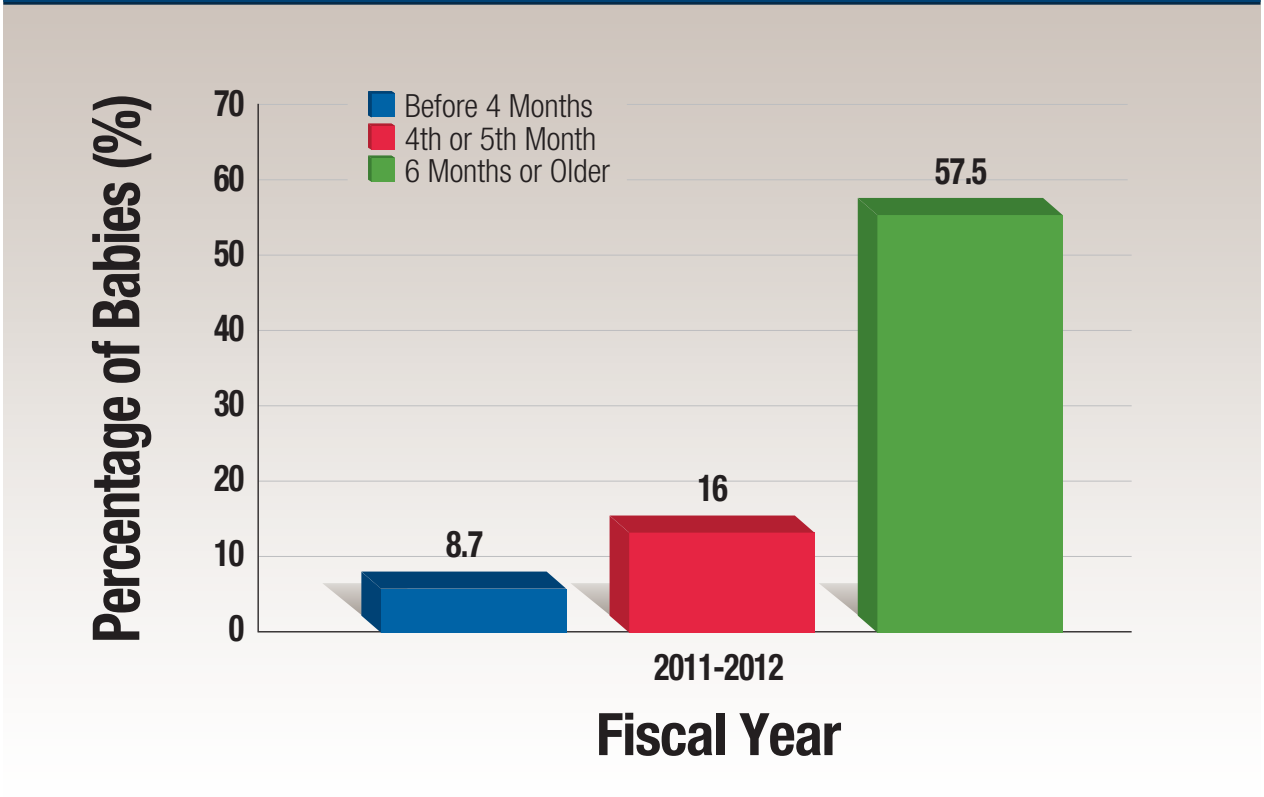
4.3.5 Introduction to Solid Food

It is recommended that solid foods be introduced at six months of age with continued breastfeeding for two years and beyond (Health Canada, 2012a; WHO, 2012). If the child is formula fed rather than breastfed, continue with formula feeding at six months in conjunction with solid foods. Delaying the introduction of solid food was found to reduce the likelihood of being obese or overweight at age 10 (Seach, 2010).

How solid food introduction is reported by community has changed since the previous version of this report. Therefore, it is not possible to look at trends over time.

According to the 2012 Health Status Report (Health Canada, 2013), the percentage of babies who were introduced to solid food before six months of age increased from 42.4% in 2008-2009 to 52.7% in 2010-2011. Conversely, the percentage of babies who were not introduced to solid food until six months of age or older decreased from 31.6% to 13.9%. The fact that there is an increase in the percentage of infants who are being introduced to solid foods before six months of age, emphasizes the need for continued support for women to continue exclusive breastfeeding and community programs that promote the importance of waiting to introduce solid foods to infants until at least six months of age during the prenatal and postnatal period.

Figure 21. Percentage of Atlantic Region First Nations On-Reserve Babies Introduced to Solid Foods by Age (2011-2012)



Source: *CBRT (2011-2012)*

4.4 Immunizations

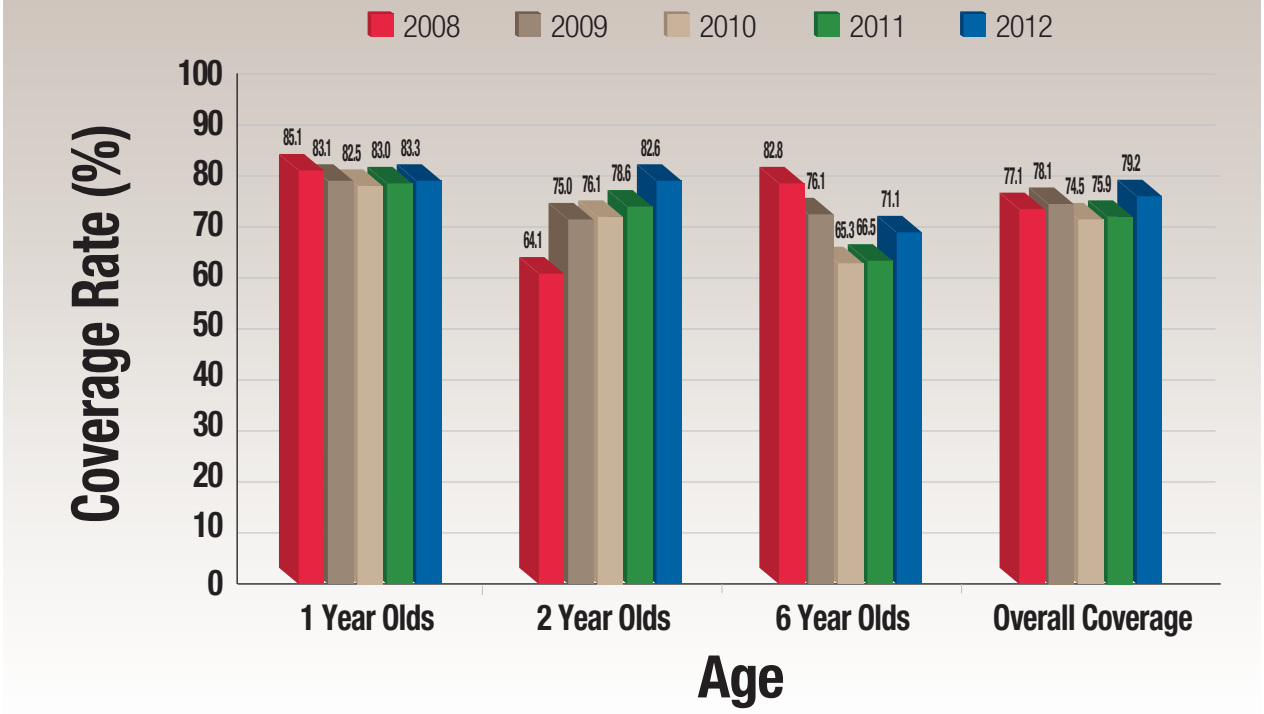
"Immunization has saved the lives of more babies and children than any other medical intervention in the last 50 years" (PHAC, 2009a). Immunizations carried out as recommended in provincial schedules provide protection against 13 vaccine-preventable diseases.

The **immunization coverage rate** is the number of individuals in the community who were immunized divided by the number of individuals who should have been immunized.

Typically, immunization coverage rates are reported by vaccine. However, as there are 4 provinces in the Atlantic region and each province has their own schedule, it is not possible to report the data this way. Instead, the data in reported as overall coverage by age.

The overall coverage rate (one, two, and six years combined) fluctuated between 75% and 79% from 2008 to 2012. The coverage rates for one year olds were consistently higher than any other age group. The coverage rates of 2 year olds consistently increased over the past 5 years. (This might be a result of increased efforts by the region promoting the safety of the MMR vaccine). However, the coverage rates for 6 year olds have been trending downward for most of the past 5 years. Some of this decrease may be due to the difficulty of accessing data on school age immunization (Figure 22).

Figure 22. Immunization Coverage Rates for Atlantic Region First Nations On-Reserve by Age and Year (2008-2012)



Source: *Atlantic region community immunization coverage rate reports (2008-2012)*

Coverage rates may be higher than reported because children who are immunized off-reserve are not well represented in these data. Communities should be encouraged to access immunization from the provider best suited to them whilst endeavoring to improve community reporting of immunization from on and off reserve sources.

Section 5: Health Care Services

5.1 Dental Services

Oral health (health of your teeth and mouth) has an effect on overall health. Poor oral health has been associated with risk of diabetes; heart disease; premature and low birth weight babies; and behavioral and developmental problems in children (Health Canada, 2009a). Early prevention oral health care practices will lead to better overall health through the lifespan. The Canadian Dental Association recommends that infants be assessed by a dentist within 6 months of their first tooth or by one year of age (Canadian Dental Association, 2014).

Oral health activities such as proactive disease prevention, oral health promotion, and dental treatment services are provided by FNIHB to First Nations communities by Dental Therapists and community Children's Oral Health Initiative (COHI) aides through the Children's Oral Health Initiative.

5.1.1 Children's Oral Health Initiative

The Children's Oral Health Initiative (COHI) is a community-based service that provides dental preventive services to on-reserve First Nations children from birth to seven years of age. Currently, COHI is available in 32 First Nations and Inuit communities in the Atlantic region.

The proportion of on-reserve First Nations children from birth to seven years of age who received dental screening through COHI increased from the 2010-2011 (32.1%) school year to the 2011-2012 (39.7%) school year (Table 8). The number of preventive services provided also increased for the same time periods.

Table 8. Proportion of First Nations On-Reserve Children Screened and Number of Preventive Services Provided by COHI (2010-2012)

School Year	Proportion of Children Birth to 7 Years Screened (%)	Number of Preventive Services Provided
2010 - 2011	32.1	3185
2011 - 2012	39.7	4572

Source: *FNIHB Dental Database Service and Productivity Reports (2010-2012); Status Verification System population estimates (2010-2012)*

5.1.2 Dental Therapy Services

Currently, 9 dental therapists provide dental services to 17 First Nations communities in the Atlantic Region. The proportion of Atlantic region First Nations on-reserve who received dental services provided by a dental therapist remained relatively unchanged from fiscal years 2010-2011 to 2011-2012 (Table 9).

For children aged 7 years and younger, the most commonly provided dental services in both 2010-2011 and 2011-2012 were diagnostic services (including dental exams and X-rays) and prevention services (including scaling, polishing, sealants, fluoride, and oral hygiene instruction) (Table 9). For Atlantic region First Nations on-reserve band members aged 8 years and older, the commonly provided dental services in 2010-2011 and 2011-2012 were prevention services (Table 9).

Table 9. Percentage of Atlantic Region First Nations On-Reserve Band Members who Received Dental Services Provided by Dental Therapists (2010-2012)

Dental Services Provided	7 Years of Age and Younger		8 Years of Age and Older	
	2010 - 2011	2011 - 2012	2010 - 2011	2011 - 2012
Diagnostic Dental Exams & Xrays	22.7%	25.7%	16.9%	15.8%
Prevention Scaling, Polishing, Sealants Fuoride, Oral Hygiene Instruction	24.1%	26.2%	24.1%	24.3%
Restoration Fillings	5.1%	6.7%	4.3%	5.4%
Surgical Extractions	4.1%	3.7%	3.4%	3.1%

Source: *FNIHB Dental Database Service and Productivity Reports (2010-2012); Status Verification System population estimates (2010-2012)*

In the 12 months prior to the 2008-2010 RHS, 56.5% of Canadian First Nations adults (18 years and older) and 76% of Canadian First Nations youth (12 to 17 years) reported receiving dental care (FNIGC, 2012). Sixty-nine percent (69%) of parents and caregivers of children (0 to 11 years) reported their children received some dental care (FNIGC, 2012). Some Atlantic region First Nations on-reserve band members may choose to receive dental services from a private provider. As such, the percentages of band members who received dental services through FNIHB-employed dental therapists (Table 9) may be an underestimation of the proportion of the total population that has received dental care from any source.

5.2 National Native Alcohol and Drug Abuse Program

The National Native Alcohol and Drug Abuse Program (NNADAP) encourages and supports First Nations and Inuit people to overcome alcohol and drug abuse through both prevention and treatment services.

Prevention services address community programs (e.g., education, life skills workshops, self-help groups) and direct client services (e.g., crisis intervention, counselling, support and follow-up, referrals to treatment centres).

There are six NNADAP treatment centres in the Atlantic region, including one youth treatment centre. Clients who need direct treatment interventions are taught about the effects of alcohol and alcoholism, self-awareness, life skills, and how to access support systems.

The 2008-2010 RHS reported that approximately 6% of Canadian First Nations youth, 12 to 17 years old, indicated they had sought treatment for alcohol abuse or addiction at some point in their lives (FNIGC, 2012).

The number of individuals by age and sex referred to a NNADAP or youth solvent abuse treatment centre is reported through CBRT. In the 2011-2012 fiscal year, 378 First Nations band members were referred for treatment services, the majority of which were male (Table 10).

Table 10. Number of First Nations On-Reserve Band Members Referred to Treatment Centres by Age and Sex (2011-2012)

	Under 12 Years of Age		12-17 Years of Age		18 Years of Age and Older		
Fiscal Year	Males	Females	Males	Females	Males	Females	Total
2011-2012	10	8	58	43	144	115	378

Source: *Community Based Reporting Template Atlantic regional reports (2011-2012)*

In 2010-2011, five of NNADAP treatment centres submitted annual reports; one centre did not report. Over the past three fiscal years, 2009-2010 to 2011-2012, the number of application received by the treatment centres, the number of individuals admitted to in-patient programs remained relatively stable (Table 11). The percentage of clients who completed treatment increased from 66.3% in 2009-2010 to 76.5% in 2010-2011, but returned to a similar rate in 2011-2012 (66.8) (Table 11). While the majority of clients completed treatment, (it is unknown whether) these clients relapsed after leaving a treatment centre, as this information is currently not being captured.

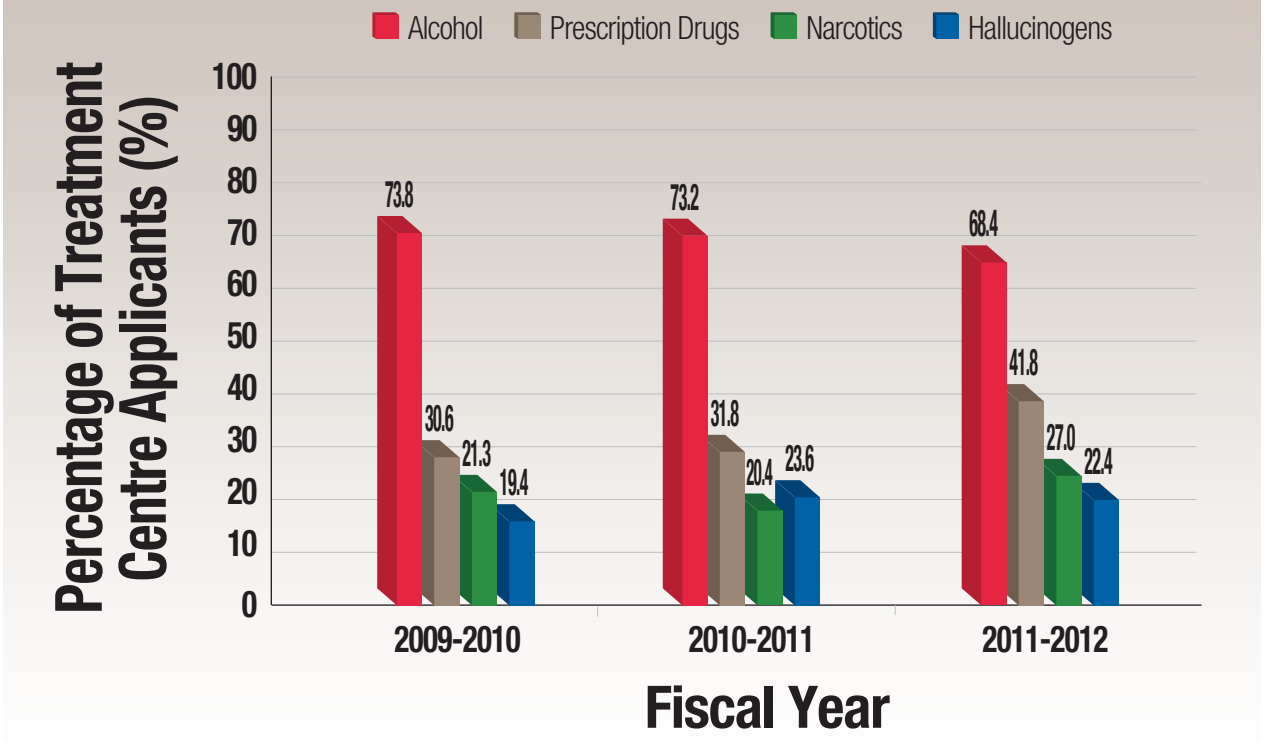
Table 11. Number of Atlantic Region Treatment Centre Clients (2009-2012)

Fiscal Year	Number of Applications	Number Admitted to In-patient Programs	Percentage of Clients Who Completed Treatment
2009-2010	212	168	66.3
2010-2011	210	176	76.5
2011-2012	205	188	66.8

Source: *NNADAP Treatment Centres annual reports (2009-2012)*

Four treatment centres reported information regarding the types of substances clients indicated they abused. For all three fiscal years, alcohol was the most common primary substance abused with prescription drugs (e.g., codeine, oxycodone, Valium®, and Dilaudid®) the second most common. In 2009-2010, 73.8% of treatment centre applicants indicated that they primarily abused alcohol (Figure 23). This dropped to 68.4% in 2012-2013. The proportion of applicants primarily abusing prescription drugs increased from 30.6% in 2009-2010 to 41.8% in 2012-2013. The proportion of applicants primarily abusing hallucinogens (e.g., LSD) or narcotics (e.g., opium, cocaine, and morphine) fluctuated over the three-year period, but increased overall from 2009-2010 to 2011-2012.

Figure 23. Primary Substances Abused Among Atlantic Region Treatment Centre Applicants by Substance (2009-2012)



Source: *NNADAP Treatment Centres annual reports (2009-2012)*

Approximately 35% of Canadian First Nations on-reserve, 18 years and older, reported they did not drink alcohol in the 12 months prior to the 2008-2010 RHS (FNIGC, 2012). Almost two-thirds of those who reported drinking alcohol in the 12 months prior to the 2008-2010 RHS engaged in heavy drinking (i.e., 5 or more drinks in one sitting at least once a month for the past 12 months). More than 10% of Canadian First Nations on-reserve reported using cannabis almost daily or daily and 7.8% reported using cocaine/crack (FNIGC, 2012).

12% decrease in service hours,
while serving more clients.

71% of home care hours
were spent on assisted living.

5.3 Home and Community Care

The Home and Community Care (HCC) program is a mandatory program provided to all 33 Atlantic First Nation communities. The data in this section is from all First Nations in the Atlantic region. As mentioned in Section 1, there has been steady improvement in the completeness of eSDRT reporting. Better reporting may mean that the results are more likely to describe what is really happening in the HCC program, and that they are more likely to show true differences over time and by province.

Since 2008, the proportion of Atlantic region First Nations on-reserve who accessed home and community care has increased annually (from 5.7% in 2008/09 to 7% in 2011/12). Meanwhile, the number of service hours has decreased 12% since 2009/10. Nationally, eSDRT data shows similar trends: an increase in utilization and a decrease in the total hours of service provided. More clients are being served, in less time.

Almost twice as many females as males used home and community care services in each fiscal year. This is a strong split from the national average, in which females used 57% of HCC services (Tissaaratchy, 2014). In all Canadian populations, females have a longer life expectancy and are more likely to seek health care.

Approximately 51% of people accessing home and community care were over the age of 55 years. This also is consistent with other data in the report indicating the burden of chronic disease by age group.

In 2011/12, 71% of Atlantic HCC hours were devoted to assisted living, which provides home making/management services. This proportion is 9% higher than it was in 2008/09, and it is 5% higher than the national average for 2011/12 (Tissaaratchy, 2014). In the Atlantic Region and nationally, assisted living, personal care and respite services are consistently the top three types of service provided. Because the total hours of HCC services decreased, it is likely that the increased proportion of assisted living services reflects a decrease in hours spent on personal care and respite services (see Table 12).

Table 12. Proportion of Atlantic Home and Community Care Hours (2011/12)

Service Type	% Hours in 2011/12	Since 2008/09
Assisted Living	71	↑ 9%
Personal Care	13	↓ 4%
Respite Services	8	↓ 4%
Nursing	5	↓ 1%
Case Management	2	No Change
Professional Therapies	1	No Change

Source: *eSDRT reports (2008-2012)*

Since 2008-2009, Diabetes has been either the most or second most reported primary reason for home care services. Skin and subcutaneous conditions and musculoskeletal conditions are the other top reasons for home care. In 2011/12, 71% of HCC visits were primarily due to these three categories, up 11% since 2008/09. Skin conditions and post-operative care, such as wound care, are often related to diabetes. The reason for 16% of HCC visits was entered as "other."

5.4 Environmental Health Inspections

Environmental health services are provided by Environmental Health Officers (EHOs) under the Environmental Public Health Program. Inspections of facilities are carried out annually, biannually, or by request.

With the exception of 2011/12, housing facilities were the most frequently inspected (Table 13). Housing inspections are by request. Some years, different communities request a special study whereby all houses in the community are inspected. These requests can result in a dramatic increase in the overall number of inspections for the region. Thus, the variability in the number of inspections between years can be explained by whether or not a community / communities have requested a special study.

Table 13. Number of Inspections by Facility Type and Year, Atlantic First Nations Communities (2010-2013)

	Number of Inspections		
Facility Type	**2010 - 2011**	**2011 - 2012**	**2012 - 2013**
Housing	178	64	342
Community Wastewater Systems	0	0	1
On-site Sewage Systems	10	7	19
Community Care Facilities	33	37	37
Solid Waste Disposal Sites	3	0	0
Health Facilities	9	0	1
Recreational Facilities*	0	2	9
Recreational Water Facilities*	5	1	6
General Facilities	8	0	3
Food Facility	73	67	63
Water	0	0	2
Total	**319**	**178**	**483**

Were called "pool" and "playground" in previous reports

Source: *Environmental Health Information System (EHIS) reports (2010-2013)*

Section 6: Physical Environment

6.1 Water Quality

Environmental health officers and community based water monitors regularly test water quality by chemical or bacteriological analysis of water samples. The importance of regular testing cannot be highlighted enough, as the more often that water is tested the more likely a problem can be caught a dealt with in a timely fashion. Community Based Water Monitors test water weekly and Environmental Health Officers test water monthly. This is well within the range of the Canadian Drinking Water Quality Guidelines (Health Canada, 2014b).

The percentage of unsatisfactory samples tested decreased for both chemical and bacterial from 2010/11 to 2011/12 (Table 14). For the chemical data, while we can say the proportion of unsatisfactory samples decreased, we cannot comment on the number of samples taken. A sample could be for one element (e.g. arsenic or iron) or for many elements at the same time. As such, it cannot be determined as to whether there was truly an increase or decrease in the number of elements sampled from year to year.

There was little difference in the proportion of bacterial samples found to be unsatisfactory from 2010-2012. An unsatisfactory sample means that the results did not fall within acceptable limits based on the Canadian Drinking Water Quality Guidelines (Health Canada, 2014b).

Table 14. The Number of Water Samples Tested and Percentage of Unsatisfactory Samples by Type (2010-2012)

	Chemical		Bacterial	
Fiscal Year	**Number of Samples**	**Unsatisfactory (%)**	**Number of Samples**	**Unsatisfactory (%)**
2010 - 2011	363	13.2	8661	1.1
2011 - 2012	100	5	8420	0.6

Source: *Atlantic region WaterTrax reports (2010-2012)*

There have been a similar number of advisories in place and lifted in each year from 2010/11 to 2011/12 (Table 15). It should be noted that when a community has a BWA/DNC it does not mean that the entire community was under a BWA/DNC. Rather, it means that at least one community system or public facility water system had an advisory during the time period.

Another indicator of water quality is a Boil Water Advisory (BWA) or Do Not Consume (DNC) advisory. These are recommended by an Environmental Health Officer (EHO) for the following reasons:

- Significant deterioration in source water quality
- Equipment malfunction during treatment or distribution
- Inadequate disinfection or disinfectant residuals
- Unacceptable microbiological quality
- Unacceptable particle counts
- Operation of the system would compromise public health

There have been a similar number of advisories in place and lifted in each year from 2010/11 to 2011/12 (Table 15). It should be noted that when a community has a BWA/DNC it does not mean that the entire community was under a BWA/DNC. Rather, it means that at least one community system or public facility water system had an advisory during the time period.

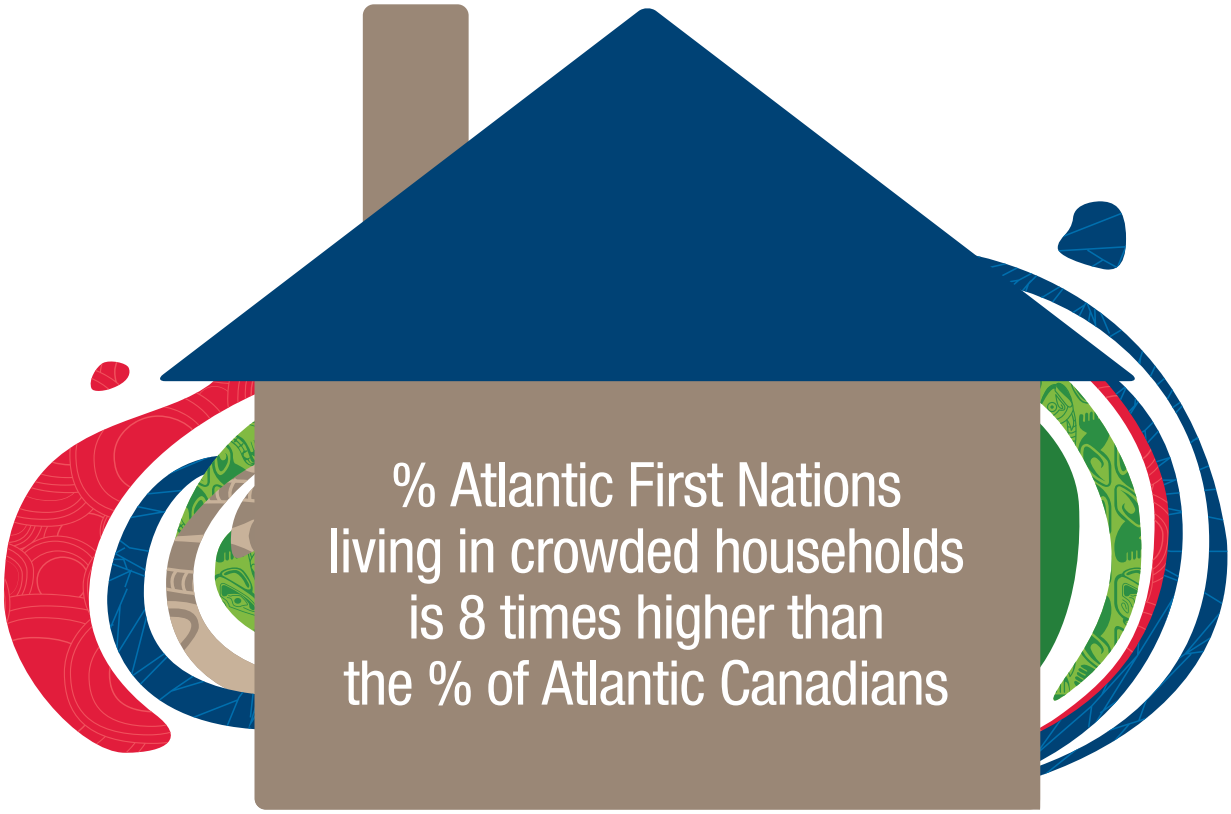
Table 15. Number of Boil Water and Do Not Consume Advisories Set and Lifted in Atlantic Region First Nations Communities (2010-2012)

Fiscal Year	Number of Communities	Number of BWA/DNC Set During the Fiscal Year	Number of BWA/DNC Lifted During the Fiscal Year
2010-2011	10	15	7
2011-2012	10	15	6

Source: *Atlantic region WaterTrax reports (2010-2012)*

6.2 Housing

A household is crowded if there are more people living in a home than there are rooms in the home. In other words, a house with more than one person per room. Bathrooms, halls, and rooms used only for business purposes are not included.



In 2011, the percentage of living in crowded households within Atlantic First Nation communities was approximately 8 times higher than the percentage of Atlantic Canadians (7.9% and 1%). Nationally, the gap is narrower. This is because Atlantic First Nations report slightly more crowding than the National First Nations average (6.9%). In addition, the overall Atlantic Region percentage of people living in crowded homes is a third of the national average (3%). (Statistics Canada, 2011).

Section 7: Lifelong Education

7.1 Aboriginal Head Start on Reserve

The Aboriginal Head Start on Reserve (AHSOR) program funds early intervention strategies to support the developmental needs of First Nations children and their families living on reserve. The primary goal of the program is to provide First Nations preschool children from birth to age six, with a positive sense of themselves, a desire for learning, and opportunities to develop successfully.

AHSOR programming can be centre based, delivered through outreach / home visiting, or a combination of the two. AHSOR is sometimes integrated with the provision of daycare, which is funded through Employment and Social Development Canada. In addition, some AHSOR programs have become licensed and are integrated with some provincial funding to provide additional early childhood programming. The licensing processes and agreements vary by province.

Of the communities reporting via CBRT (80%)

298 Children Participated

76 Children on Waitlist

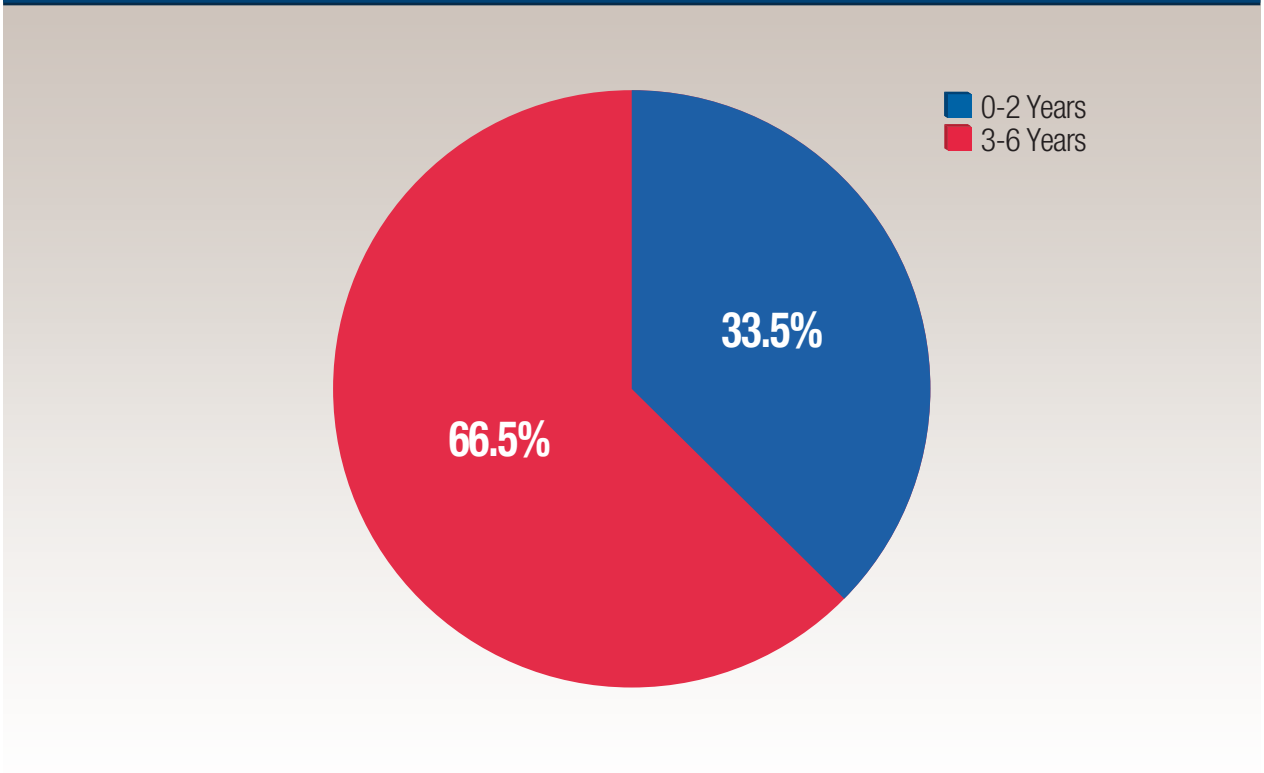
78% of waitlist less than 3 years old

According to the 2008-2010 First Nations Regional Longitudinal Health Survey (RHS), approximately 36.4% of Canadian First Nations children on-reserve attended an Aboriginal Head Start program (FNIGC, 2012). All 32 of Atlantic Region's First Nations were funded for AHSOR programs in 2011/12. In newer funding agreements with First Nations or Tribal Organizations, AHSOR program information is reported through CBRT.

In 2011/12, there were 25 Atlantic AHSOR sites who used the CBRT to report. These 25 sites had 298 a total children participate. There were 76 children on the wait list for 2011/12. Of those, 78% were less than 3 years of age.

Based on the community reports from 2008 to 2012, the majority of participants are age 3-6 (Figure 24). Some programs serve participants under 2 years of age through an outreach program, while the older children attend onsite. Onsite programming for children under 2 puts different demands on the staff and physical space than programming for children who are older and toilet trained.

Figure 24. Cumulative Percentage of AHSOR Participants by Age Group (2008-2012)



Source: *Community Based Reporting Template regional reports (2008-2012)*

The AHSOR program provides information about children in the program who have been identified as having a special need. In the CBRT, special needs are defined as "children who require additional support(s) or service(s) for healthy development in order to interact with their peers in the day-to-day life of the community. Special needs may include physical, sensory, cognitive and learning challenges, mental health issues as well as problems due to societal, cultural, linguistic or family factors."

Of the communities reporting AHSOR information via CBRT in 2011/12:

26% referred for screening

23% screened for special needs

12% on waitlist for diagnostic screening

9% diagnosed with special needs

Source: *Community Based Reporting Template regional reports (2011/12)*

7.2 Schools on Reserve

According to community websites, of the 33 communities in the Atlantic region, 18 have a school in the community (Table 16).

Table 16. Number of Schools in Atlantic First Nations Communities, by School Type, 2012

School Type	Number of Communities
Elementary	9
Up to Grade 8	4
Up to Grade 12	5
Total	18

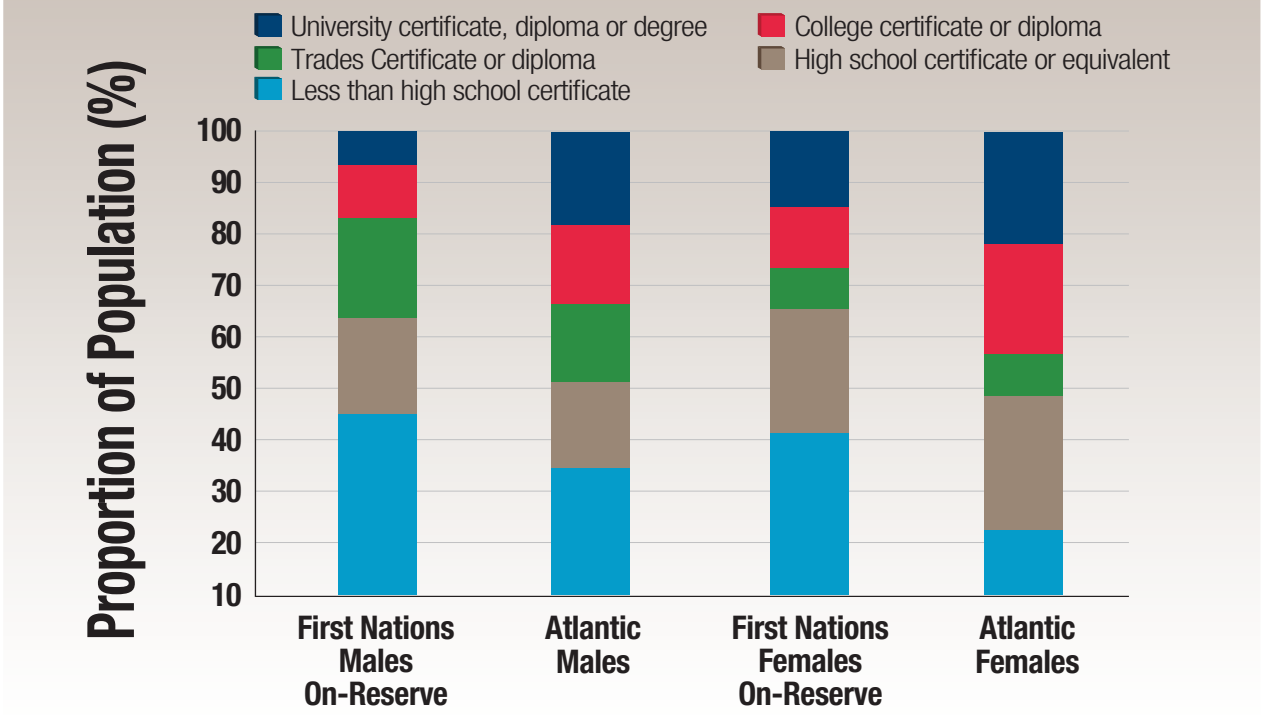
7.3 Education Levels

The impact of education as a key determinant of health is well documented (FNIGC, 2012; PHAC, 2013). Better educated individuals are more likely to have the knowledge and financial resources to access health care and make informed decisions about their health (PHAC, 2013). For example, 19% of respondents with less than a high school education rated their health as “excellent” compared with 30% of university graduates (PHAC, 2013). First Nations adults who graduated high school reported experiencing less psychological distress, compared to those who did not graduate high school (FNIGC, 2012).

In the Atlantic region in 2011, there were more First Nations males and females who did not complete high school compared to males and females in Atlantic provinces overall. (Figure 25; Table 17). 41.9% of First Nations females and 44.8% of First Nations males and females did not complete high school compared to 23.2% of Atlantic females and 25.6% of Atlantic males.

The gap was greater between males who completed a post-secondary (college/university) certificate or diploma than between females. Almost twice as many Atlantic males (34.0%) completed a post-secondary certificate or diploma than First Nations males (17.1%). 26.8% of First Nations females completed a post-secondary certificate or diploma compared to 43.6% of the Atlantic population.

Figure 25. Education Levels Attained by First Nations Living On-Reserve and the Total Atlantic Canada Population 15 Years of Age and Older by Sex (2011)



Source: *Statistics Canada, 2011 National Household Survey*

Table 17. Education Levels Attained by First Nations Living On-Reserve and the Total Atlantic Canada Population 15 Years of Age and Older by Sex (2011)

	First Nations Males On-Reserve (%)	Atlantic Males (%)	First Nations Females On-Reserve (%)	Atlantic Females (%)
University certificate or diploma	6.5	17.6	12.6	21.6
College certificate or diploma	10.6	16.4	14.2	22.0
Trades certificate or diploma	18.9	16.0	7.7	7.8
High school certificate or equivalent	19.3	24.3	23.5	25.4
Less than high school certificate	44.8	25.6	41.9	23.2

Source: *Statistics Canada, 2011 National Household Survey*

Section 8: Economic Opportunity

8.1 Labour Force Activity: Employment Rate

In this section, First Nations refers to anyone who self-identified as North American Indian in the 2011 National Household Survey.

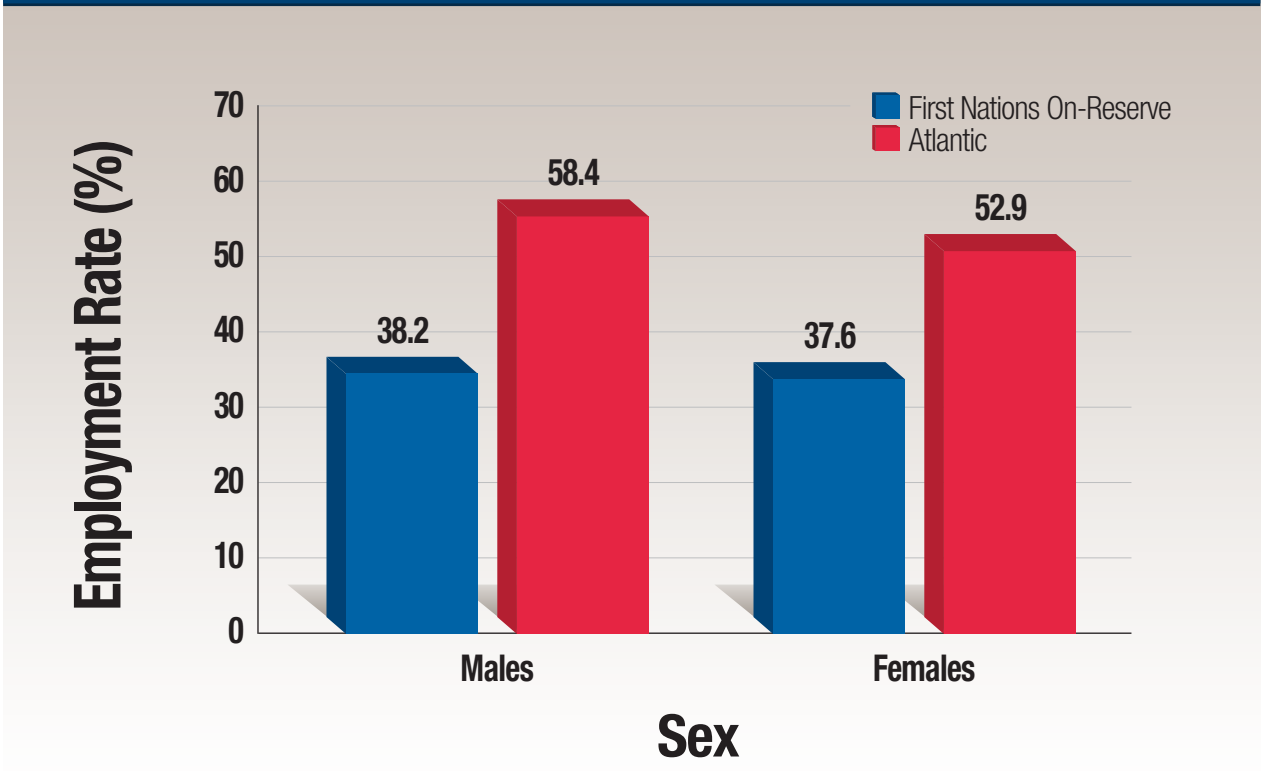
The **employment rate** is defined as the proportion of people (15 years and older) who are currently working as a percentage of the total population.

In 2011, the employment rate for Atlantic region First Nations living on-reserve was similar among males (38.2%) and females (37.6%). The rate of employment of the total Atlantic Canadian population was higher among males (58.4) than among females (52.9%) (Figure 26).

The greatest gaps in employment rates were in the age groups 20-24 through to 30-34. The differences in rates ranged from **32.0% to 37.9%** for males and **29.1% to 37.9%** for females.

In the Atlantic region, a gap exists in the employment rates between the First Nations population and the total population (Figure 26). The employment rate was higher among the total male population than among First Nations males living on-reserve by a difference of 20.2%. Similarly, the employment rate was higher among the total female population than among First Nations females living on-reserve, although the difference was smaller at 15.3%.

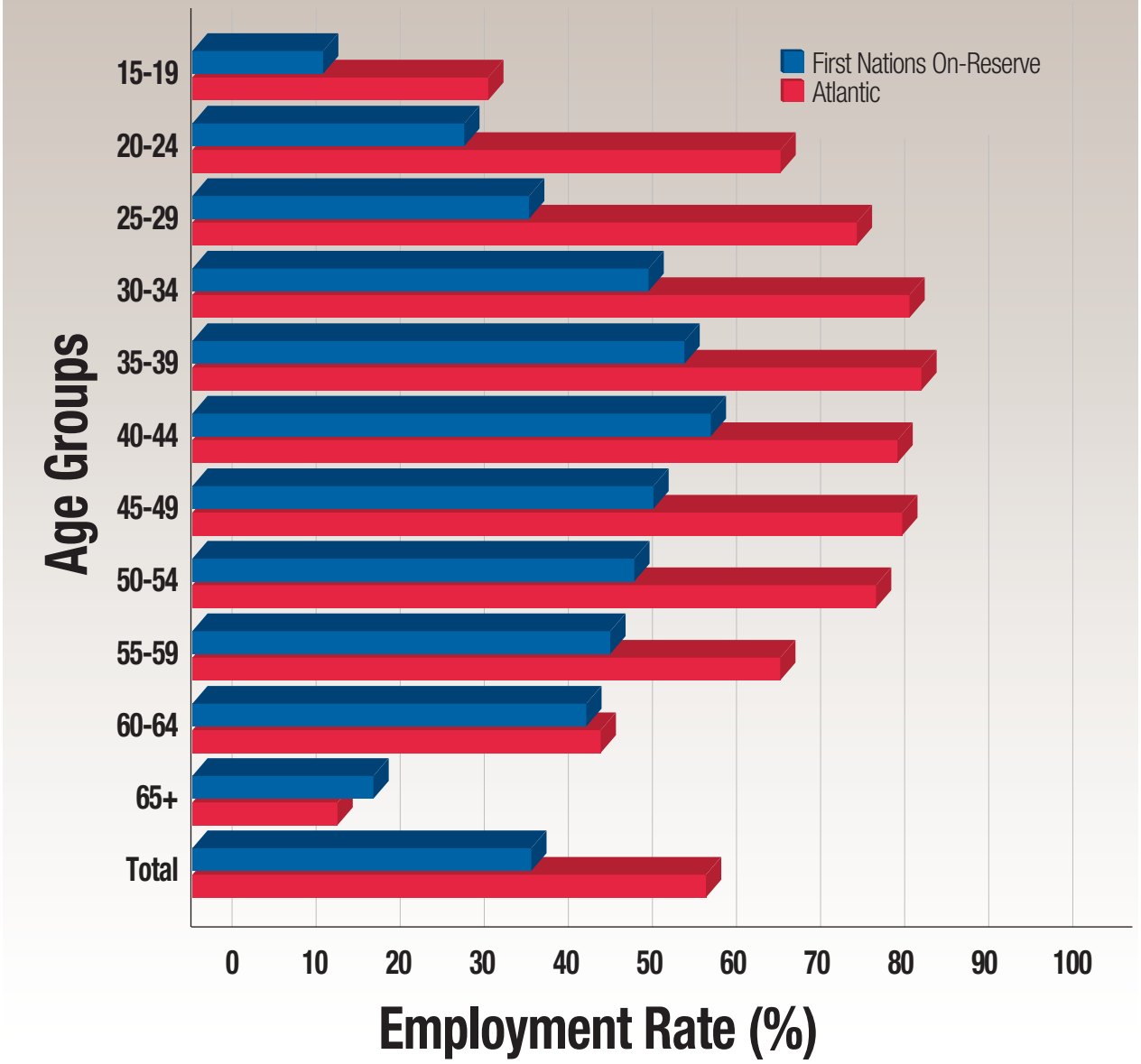
Figure 26. Employment Rates for First Nations Living On-Reserve and the Total Atlantic Canada Population 15 Years of Age and Older by Sex (2011)



Source: *Statistics Canada, 2011 National Household Survey*

The total male population in Atlantic Canada had higher employment rates than First Nations males across all age groups with the exception of males 65 years and older (Figure 27). The greatest gaps in employment rates were in the age groups 20-24 through to 30-34 where the differences in rates ranged from 32.0% to 37.9%.

Figure 27. Employment Rates for First Nations Males Living On-Reserve and the Total Male Population in Atlantic Canada 15 Years of Age and Older by Age Group (2011)

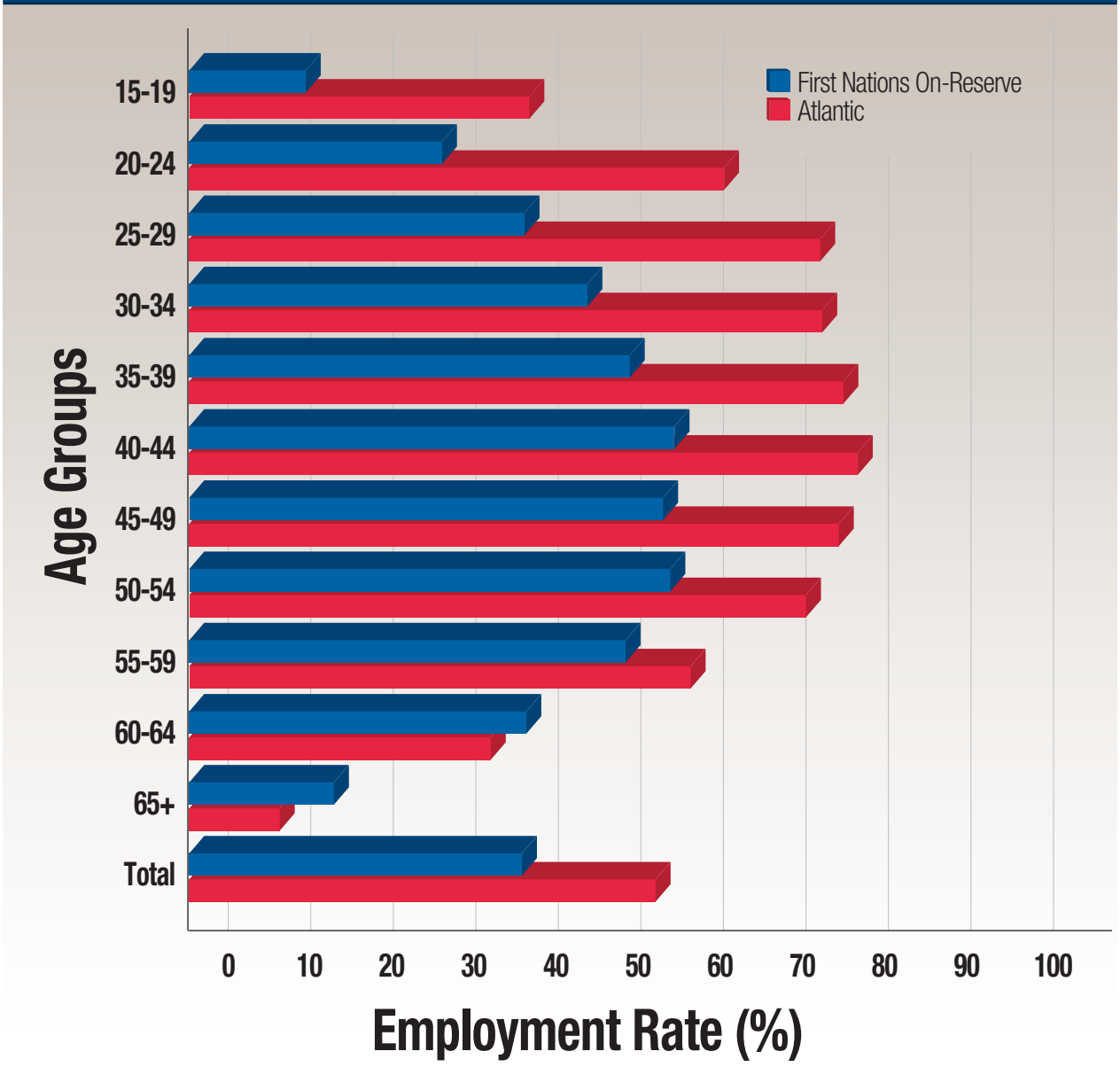


Source: *Statistics Canada, 2011 National Household Survey*

The total female population in Atlantic Canada had higher employment rates than First Nations females, except in the age groups 60-64 years and 65+ years (Figure 28).

Similar to males, the greatest gaps in employment rates were in the age groups 20-24 through 30-34 with differences ranging from 29.1% to 37.9% (Figure 28).

Figure 28. Employment Rates for First Nations Females Living On-Reserve and the Total Female Population in Atlantic Canada 15 Years of Age and Older by Age Group (2011)



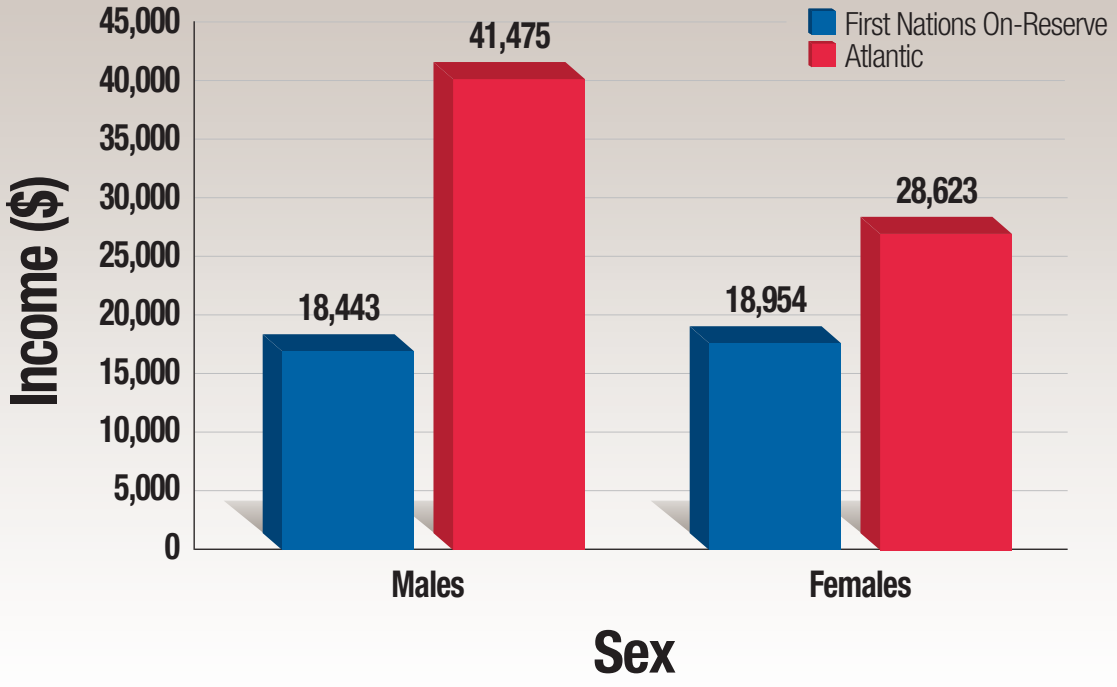
Source: *Statistics Canada, 2011 National Household Survey*

8.2 Average Income

In this section, First Nations refers to anyone who self-identified as North American Indian in the 2011 National Household Survey.

In 2011, there was little difference between the average income among male and female First Nations living on-reserve (Figure 29). There was a gap between the average incomes of Aboriginal males and females and their Atlantic counterparts. A gap of approximately $23,000.00 exists between Aboriginal males and the total Atlantic male population while a smaller gap of approximately $9,700.00 exists between the females.

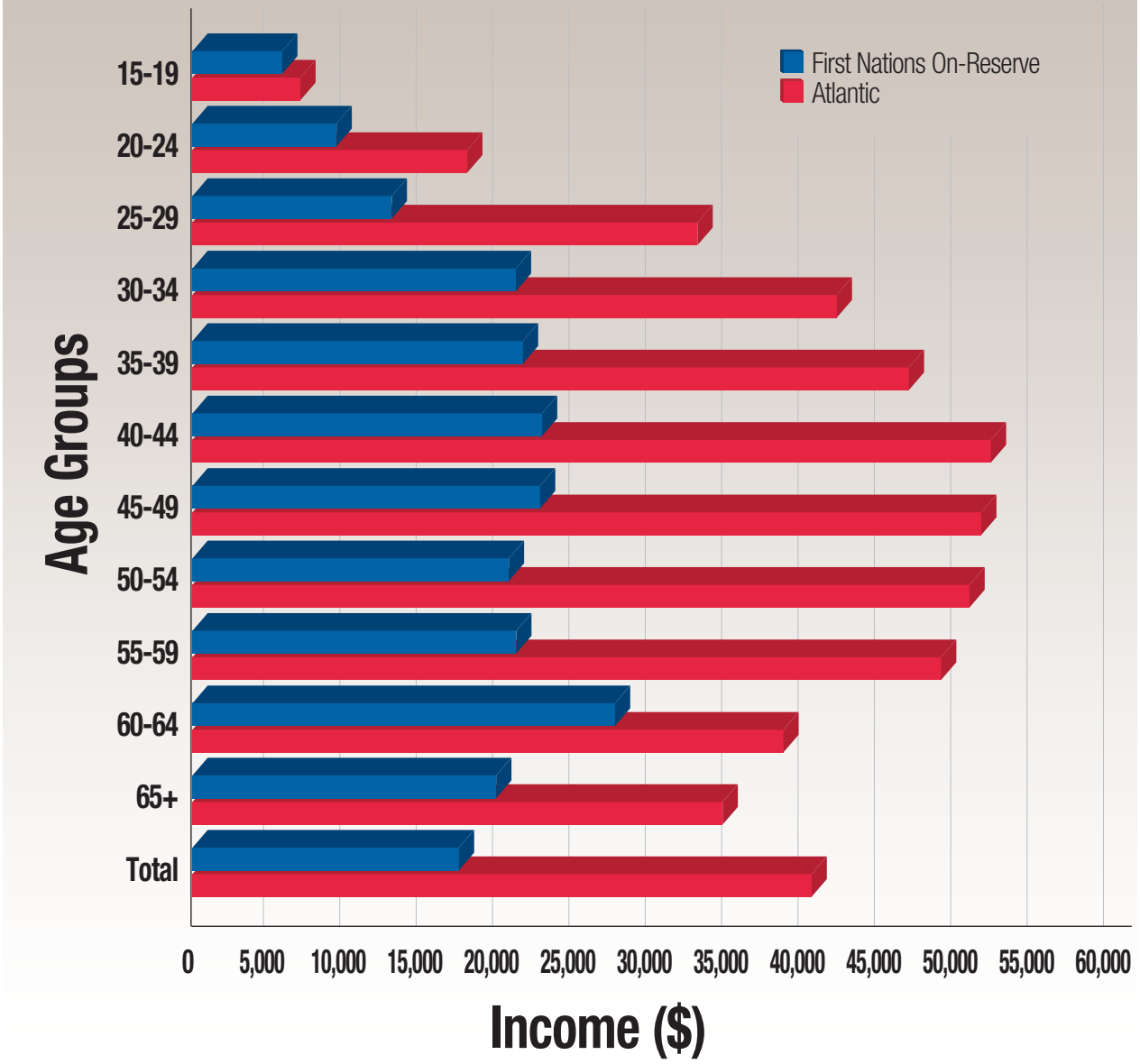
Figure 29. Average Income for First Nations Living On-Reserve and the Total Atlantic Canada Population 15 Years of Age and Older by Sex (2011)



Source: *Statistics Canada, 2011 National Household Survey*

First Nations males earned less than the total Atlantic male population across all age groups (Figure 30). The differences in income were the smallest in the youngest age groups (15-19) and ranged from $1,215.00 to a high of $30,673.00 (50-54 age group).

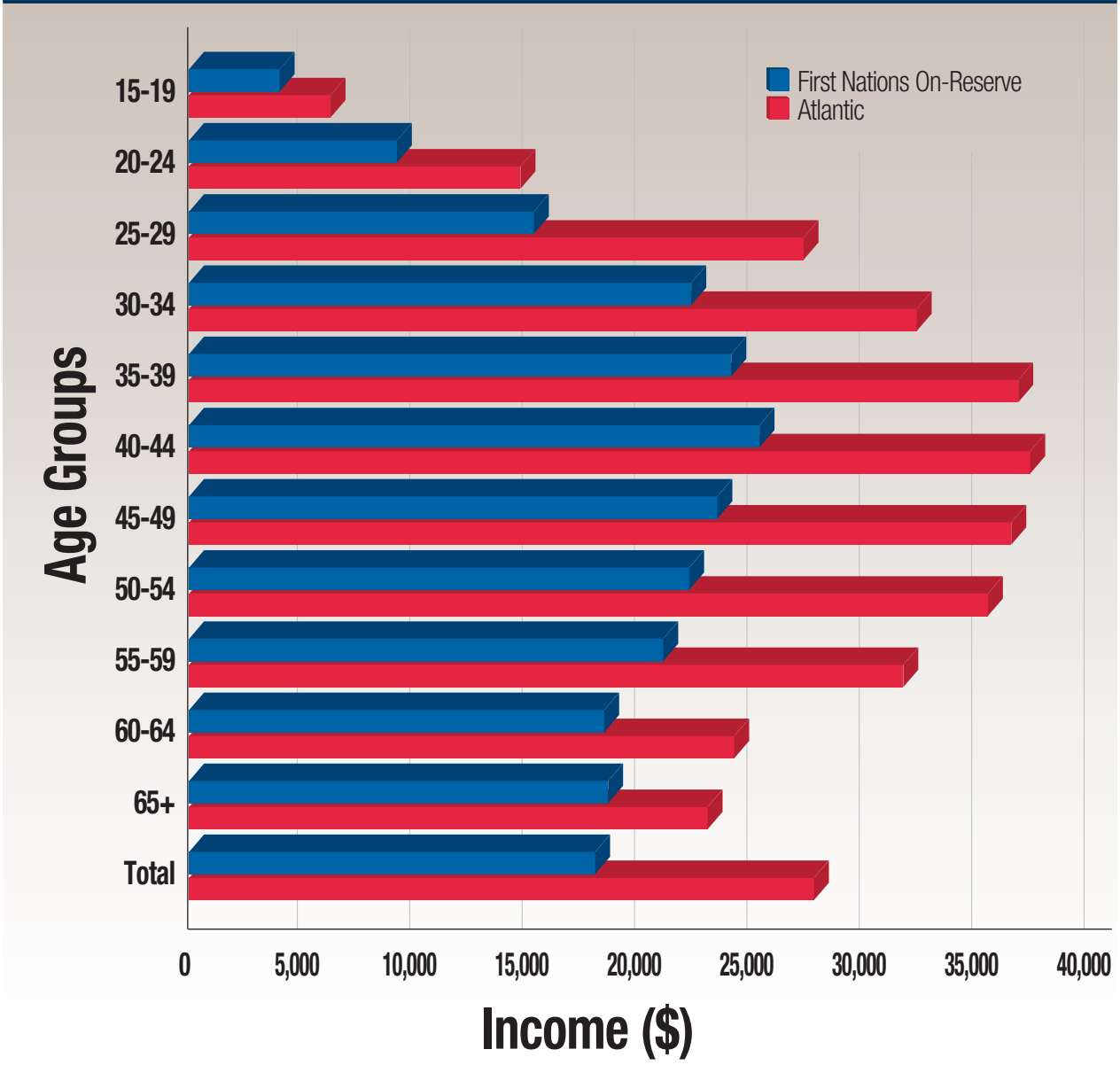
Figure 30. Average Income for First Nations Males Living On-Reserve and the Total Male Population in Atlantic Canada 15 Years of Age and Older (2011)



Source: *Statistics Canada, 2011 National Household Survey*

Aboriginal females earned less than the female Atlantic population across all age groups although the gaps in earnings were not as large as those observed for the males (Figure 31). The differences in income were the smallest in the youngest age group (15-19) and for those aged 60 years and older. Income gaps ranged from $1,176.00 to a high of $12,540.00 (25-29 age group).

Figure 31. Average Income for First Nations Females Living On-Reserve and the Total Female Population in Atlantic Canada 15 Years of Age and Older (2011)



Source: *Statistics Canada, 2011 National Household Survey*

Section 9: Mental and Emotional Health

Key characteristics of mental health include (Canadian Mental Health Association, 2014):

- Ability to enjoy life
- Resilience
- Balance
- Self-actualization, and
- Flexibility

Atlantic Chiefs and First Nations communities identified mental health and addictions as priority health issues. Currently, there is no access to mental health data or any formalized means to collect mental health or addiction data in Atlantic region First Nations communities.

In the absence of addictions data, Health Canada's NIHB pharmacy claims database was used to identify First Nations (on- and off-reserve) who had claims for medications that have the potential for abuse or misuse: benzodiazepines and opioids. Information regarding the percentage of claims for methadone, an opioid that has been used to help treat opioid dependence, was also available from the NIHB database.

9.1 Benzodiazepine, Opioid, and Methadone Claims

Benzodiazepines can be useful for short term treatment of anxiety, short term treatment of insomnia, and as add-on maintenance therapy for managing seizure disorders (Sproule, 2009). Some benzodiazepines used for short term treatment of anxiety are: alprazolam (Xanax®), diazepam (Valium®), lorazepam (Ativan®), oxazepam (Serax®), and bromazepam (Lectopam®) (Sproule, 2009).

Opioid analgesics can be important therapeutic options for treating pain (WHO, 2010). Some opioids used to treat certain forms of moderate to severe pain are: Percocet®/ Endocet®, oxycodone, and Dilaudid® (hydromorphone). Tylenol 1, 2 and 3 are used to treat certain forms of mild to moderate pain. While there is a clinical role for benzodiazepines and opioids in certain health conditions, there is a potential for abuse and misuse of these medications, with the resulting risk of addiction.

Misuse/abuse of benzodiazepines and or opioids occurs when these drugs are regularly taken to alter the mood, emotion or state of consciousness and not for their intended medical purposes (Hernandez, 2010; Centre for Addiction and Mental Health, 2014). Addiction can result from benzodiazepine and /or opioid abuse/misuse and is characterized by the presence of the 4 Cs: craving, loss of control over use, compulsion to use and use despite consequences (Aparasu, 2003).

Health Canada's Non-Insured Health Benefits (NIHB) pharmacy claims database was used to identify First Nations registered to Atlantic region bands that had benzodiazepine and opioid claims in the Atlantic region for the calendar years 2008 to 2012.

It should be noted that this section does not report on "abuse" or "misuse of" or "addiction to" benzodiazepine or opioid medications. It only reports on the proportion of people who filled at least one claim. There is no way to determine: (1) the reason for prescribing the medications, (2) if the medications were used as prescribed, or (3) if the medications were used by the person they were prescribed to.

The proportion of Atlantic region band members who had a benzodiazepine, opioid, or methadone claim in a specified year was calculated as:

$$\text{Prevalence} = \frac{\text{number of Atlantic region band members who had at least one claim for a medication of interest in a specified calendar year}}{\text{Total band population in the specified calendar year}}$$

9.1.1 Benzodiazepine Medication Claims

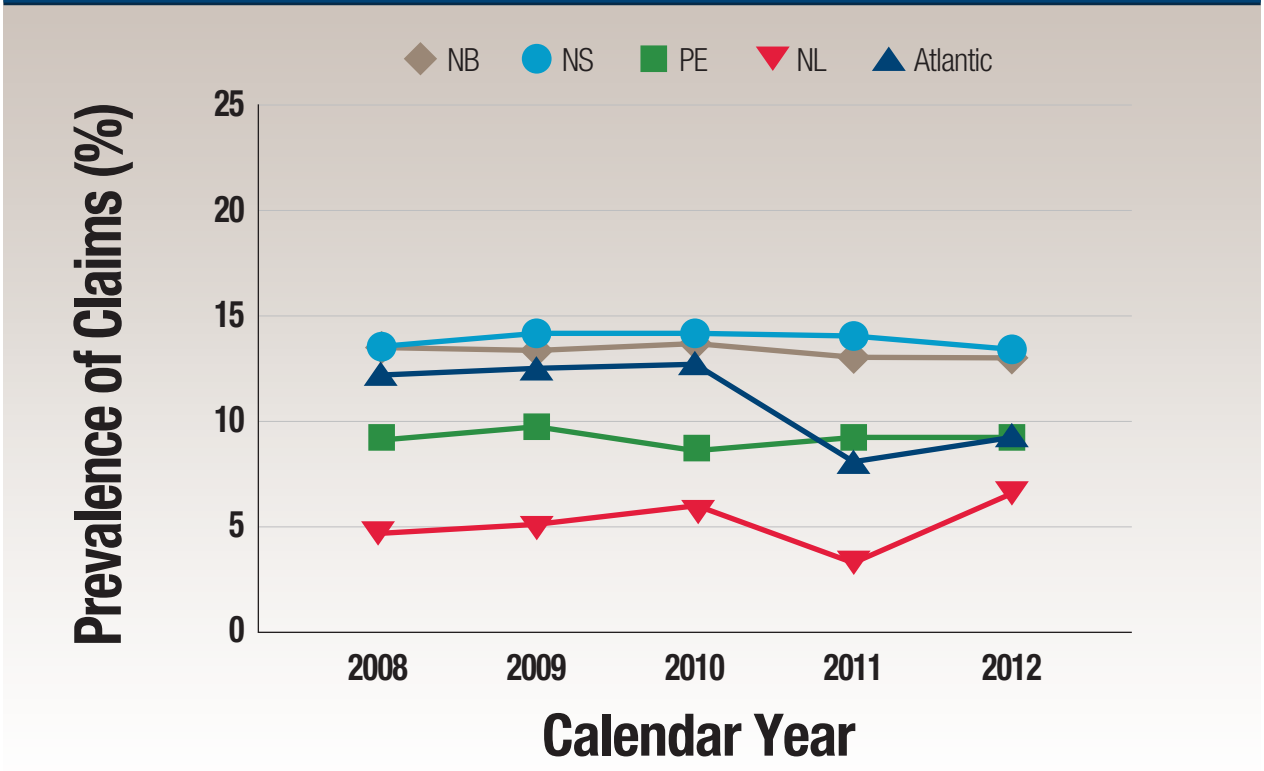
The prevalence of benzodiazepine claims among First Nations band members aged 15 years and older who had at least one benzodiazepine claim was relatively stable across the five years for New Brunswick, Nova Scotia, and Prince Edward Island (Figure 32).

The prevalence of claims was the lowest among Newfoundland and Labrador band members and highest among Nova Scotia and New Brunswick band members. The prevalence was higher among females than among males for all four provinces and for each year, ranging from 2% to 4% in the difference.

It should be noted that while the number of band members in Newfoundland and Labrador who had at least one benzodiazepine claim increased in 2011, the prevalence decreased. The same trend was noted for the Atlantic region overall. This is due to the increase in population eligible to access the NIHB program with the establishment in 2011 of the Qalipu Mi'kmaq First Nation Band.

This finding is consistent with previous research that shows benzodiazepine use is typically higher among females than males (Bogunovic, 2004; Centre for Addiction and Mental Health, 2012). The reasons given for higher benzodiazepine use in females include more anxiety, physicians more likely to prescribe benzodiazepines to females, and a preference for benzodiazepine use over alcohol among females (Bogunovic, 2004; Centre for Addiction and Mental Health, 2012).

Figure 32. Prevalence of Benzodiazepine Claims Among Atlantic Region Band Members Aged 15 Years and Older by Province (2008-2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); INAC Indian Registry System (2008-2012)*

In 2012, the prevalence of benzodiazepine claims was highest among band members aged 50 to 64 years in New Brunswick, Nova Scotia, and Prince Edward Island (Figure 33). In Newfoundland and Labrador and in the Atlantic region overall, the prevalence was highest among band members aged 65 years and older. The prevalence of claims among those aged 65 years and older in the four provinces ranged from approximately 13% to 18%.

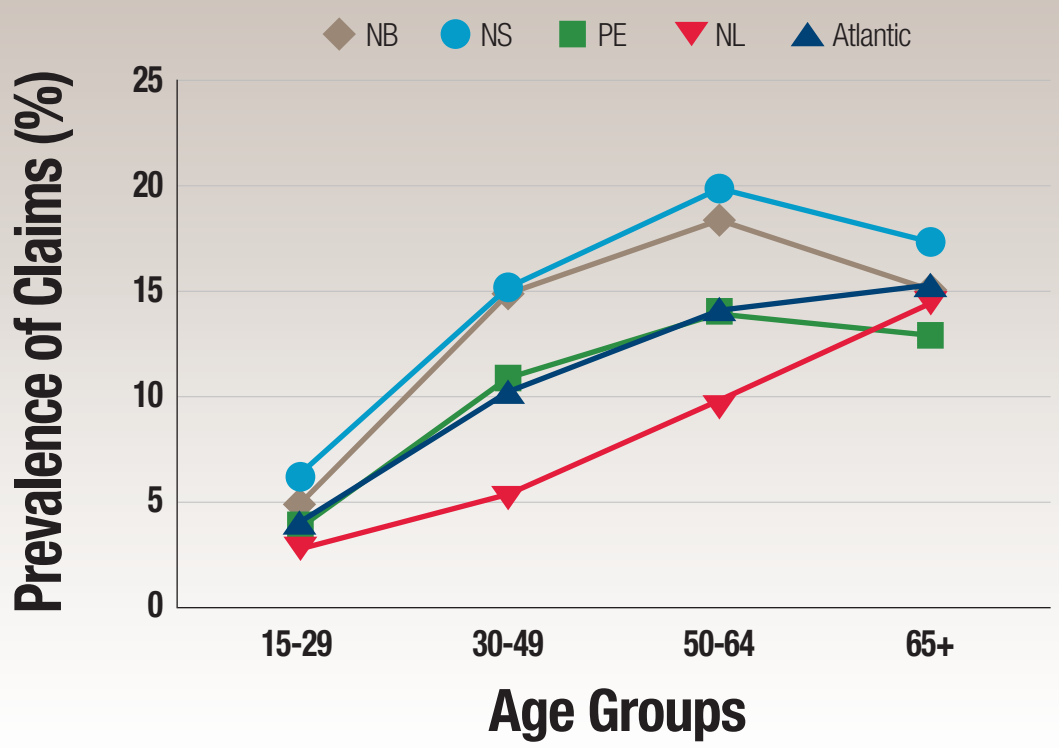
Key characteristics of mental health include (Canadian Mental Health Association, 2014):

- Ability to enjoy life
- Resilience
- Balance
- Self-actualization, and
- Flexibility

The prevalence of benzodiazepine claims was higher among females than among males across most age groups in the provinces in 2012. The differences ranged from approximately 0.5% to 7.5%. For males aged 65 and older in Nova Scotia and Prince Edward Island, the prevalence was higher compared to females.

Benzodiazepines should be prescribed cautiously in those aged 65 years and older (Centre for Addictions and Mental Health, 2012). This is because negative effects (increased fall risk, slow reaction time, confusion, sleepiness, forgetfulness) to these medications are more common among elderly patients and occur more frequently with advancing age. There is also a risk of abuse and dependence in this population; chronic pain, depression, and isolation are common problems among elderly persons and can predispose them to benzodiazepine use and dependence (Centre for Addictions and Mental Health, 2012).

Figure 33. Prevalence of Benzodiazepine Claims Among Atlantic Region Band Members by Province by Age (2012)



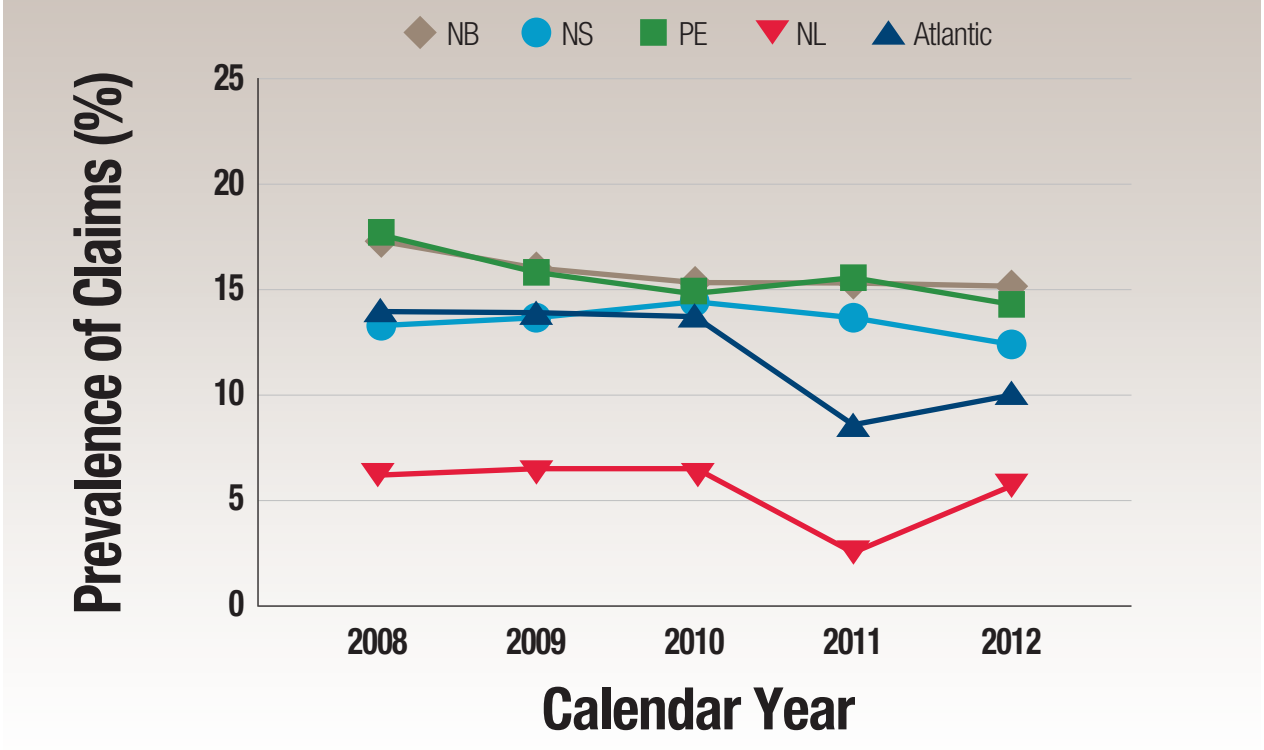
Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); INAC Indian Registry System (2012)*

9.1.2 Opioid Medication Claims

The prevalence of opioid claims was relatively stable in Newfoundland and Labrador and the Atlantic region overall from 2008 to 2010 (Figure 34). The prevalence decreased for both groups in 2011 due to the increase in population eligible to access the NIHB program with the establishment in 2011 of the Qalipu Mi'kmaq First Nation Band. In 2012, in Newfoundland and Labrador, the prevalence returned to a similar level as in 2008-2010. In Atlantic in 2012, the prevalence increased slightly, but to a lower level than was reported from 2008-2010.

From 2008 to 2012, the prevalence was highest among Prince Edward Island and New Brunswick band members and lowest among Newfoundland and Labrador band members across all years. For Nova Scotia band members, the prevalence of opioid claims was stable across all five years. The prevalence of opioid claims was higher among females than among males in the four provinces and in the Atlantic region overall across all five years, except in Prince Edward Island for 2011 and 2012.

Figure 34. Prevalence of Opioid Claims Among Atlantic Region Band Members Aged 15 Years and Older by Province (2008-2012)



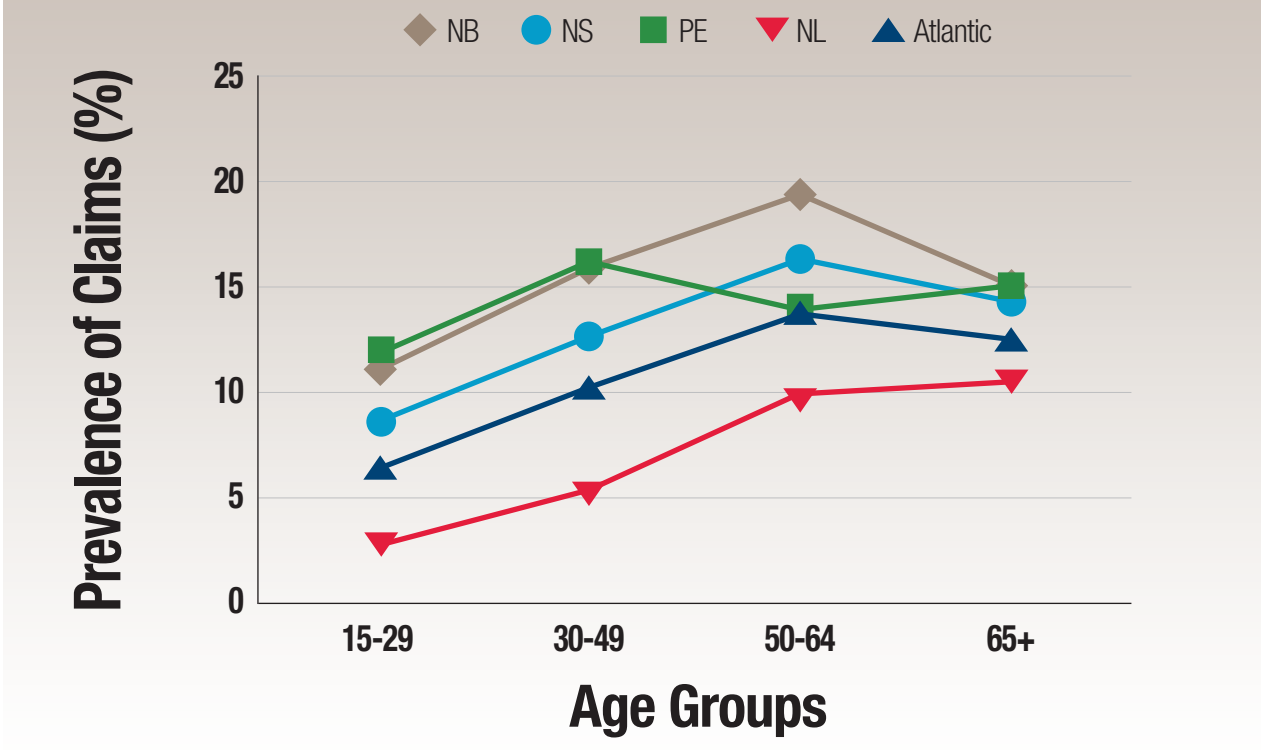
Source: *Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); INAC Indian Registry System (2008-2012)*

In 2012, the prevalence of opioid claims was the highest among band members aged 50 to 64 years for Nova Scotia (16.4%), New Brunswick (19.6%) and for the Atlantic region overall (13.5%) (Figure 35). In Newfoundland and Labrador prevalence of opioid claims was highest among band members aged 65 years and older (10.4%), and in Prince Edward Island was highest among adults age 30-49 (16.1%).

It is noteworthy that the prevalence of opioid claims among the youngest age group (15 – 29) was above 10% in both Prince Edward Island (12.1%) and New Brunswick (10.8%).

For band members 65 years and older, the prevalence of opioid claims was higher among males than among females for all provinces and for the Atlantic region overall. This difference ranged from 1.5% in Newfoundland and Labrador to 11.5% in Prince Edward Island.

Figure 35. Prevalence of Opioid Claims Among Atlantic Region Band Members by Province by Age (2012)



Source: *Non-Insured Health Benefits Pharmacy Claims Database (2012); AANDC Indian Registry System (2012)*

9.1.3 Methadone Claims

Methadone is an opioid that is used to help treat dependence on other opioids such as heroin, codeine, and morphine (Centre for Addictions and Mental Health, 2012). Methadone maintenance treatment prevents withdrawal and relieves the cravings that can drive an addicted individual to seek their next dose of opioids. Methadone does not, however, cause the euphoria that is typical of other opioids. When methadone is prescribed by a physician, and taken in an appropriately controlled and supported environment, the opportunity becomes available for the individual to learn to avoid the drug-seeking lifestyle. Methadone is medically safe, and is one of the most effective treatments currently available for opioid addiction (Centre for Addictions and Mental Health, 2012).

There was a higher prevalence of methadone claims for opioid dependence among New Brunswick band members (2.7 - 4.3%) than in the other Atlantic provinces every year since 2008 (Table 18).

It is unclear whether this higher prevalence of methadone claims is a reflection of a higher underlying rate of opioid dependence in New Brunswick than in the other Atlantic provinces, or easier access to methadone treatment in New Brunswick than in the other provinces.

Table 18. Prevalence of Methadone Claims Among Atlantic Region Band Members Aged 15 Years and Older by Province (2008-2012)

Calendar Year	New Brunswick (%)	Nova Scotia (%)	Prince Edward Island (%)	Newfoundland and Labrador (%)	Atlantic (%)
2008	2.7	0.5	*	*	1.3
2009	3.8	0.5	*	*	1.8
2010	4.3	0.7	0.5	*	2.1
2011	4.0	0.8	0.6	0.1	1.2
2012	3.8	0.8	0.7	0.1	1.1

Number of claims is too small to report

Source: *Non-Insured Health Benefits Pharmacy Claims Database (2008-2012); AANDC Indian Registry System (2008-2012)*

There was a **steady increase** in the number of counselling sessions for Indian Residential Schools Resolution Health Support Program from 2008 to 2012.

Section 10: Spiritual Health

10.1 Indian Residential Schools Resolution Health Support Program

The Indian Residential School (IRS) Resolution Health Support Program provides emotional health and wellness support to former IRS students and their families. First Nations are eligible regardless of status and place of residence, providing they are:

- eligible for the Common Experience Payment or the Independent Assessment Process, or
- resolving claims through the Alternative Dispute Resolution, court processes, or participating at Truth and Reconciliation Commission events.

There was a steady increase in the number of counselling sessions from 2008 to 2012 (Table 19). The number of individuals who accessed counselling services increased until 2011, and then decreased in 2012.

Table 19. The Number of Indian Residential School Students and Family Members who Accessed Counselling Services and Number of Sessions

Fiscal Year	Number of Individuals Accessing Counselling Services	Number of Counselling Sessions
2008 - 2009	26	477
2009 - 2010	47	1084
2010 - 2011	72	1893
2011 - 2012	66	2223

Source: *IRS Atlantic internal reports, 2008-2012*

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