FIRST NATIONS
AND INUIT HEALTH

Health Status of First Nations On-Reserve in Atlantic Canada

2016

ATLANTIC FIRST NATIONS
HEALTH PARTNERSHIP
for vibrant communities

Health Canada Santé Canada

Canada

Health Canada is the federal department responsible for helping the people of Canada maintain and improve their health. We assess the safety of drugs and many consumer products, help improve the safety of food, and provide information to Canadians to help them make healthy decisions. We provide health services to First Nations people and to Inuit communities. We work with the provinces to ensure our health care system serves the needs of Canadians.

Également disponible en français sous le titre :
Santé des Premières Nations et des Inuits – État de santé des membres des Premières Nations vivant dans les réserves au Canada atlantique 2016

To obtain additional information, please contact:

Health Canada
Address Locator 0900C2
Ottawa, ON K1A 0K9
Tel.: 613-957-2991
Toll free: 1-866-225-0709
Fax: 613-941-5366
TTY: 1-800-465-7735
E-mail: publications@hc-sc.gc.ca

This publication can be made available in alternative formats upon request.

Publication date: March 2017

PRINT Cat.: H33-1/17E ISSN: 2292-8375 **PDF** Cat.: H33-1/17E-PDF Pub.: 160348 ISSN: 2292-8383

FIRST NATIONS
AND INUIT HEALTH BRANCH

Health Status of First Nations On-Reserve in Atlantic Canada

2016

TABLE OF CONTENTS

FOREWORD

The Atlantic Heath Partnership is pleased to partner with the First Nations and Inuit Health Branch to bring you the 2016 Health Status Report of First Nations On-Reserve in Atlantic Canada. As Co-Chair for the Atlantic Health Partnership, I am happy to say that we are seeing positive developments in some areas related to improving health within our communities, however, there are still areas that need further public health action in the region. I am confident that through the sharing of this information, communities will be in a better position to respond to the needs of their members.

The report includes information about physical and mental wellness, maternal and child health, water and housing quality, and access to services. It also provides an overview of how we collect and use data on First Nations health, as well as some ways that this information has helped communities take action.

I would like to thank the members of the Health Assessment and Surveillance Advisory Group for their time and effort in improving the relevance of this document. The sharing of knowledge, experience and good practices is essential and meaningful, as we work in partnership to improve First Nation's health.

I look forward to future collaborations to help us build healthy communities together.

Sincerely,

Chief Candice Paul

Chief, St. Mary's First Nation
Co-Chair Atlantic Health Partnership

FOREWORD

Welcome to the sixth annual Health Status Report of First Nations On-Reserve in Atlantic Canada! Like previous editions, this report is a snapshot of the current health status of First Nations communities in the Atlantic region. This report presents data on a variety of factors which affect the health and well-being of on-reserve populations. By outlining recent health trends and sharing what we've learned, I believe this document is a valuable resource for Atlantic First Nations communities and their partners who work to promote effective public health action for improved health outcomes.

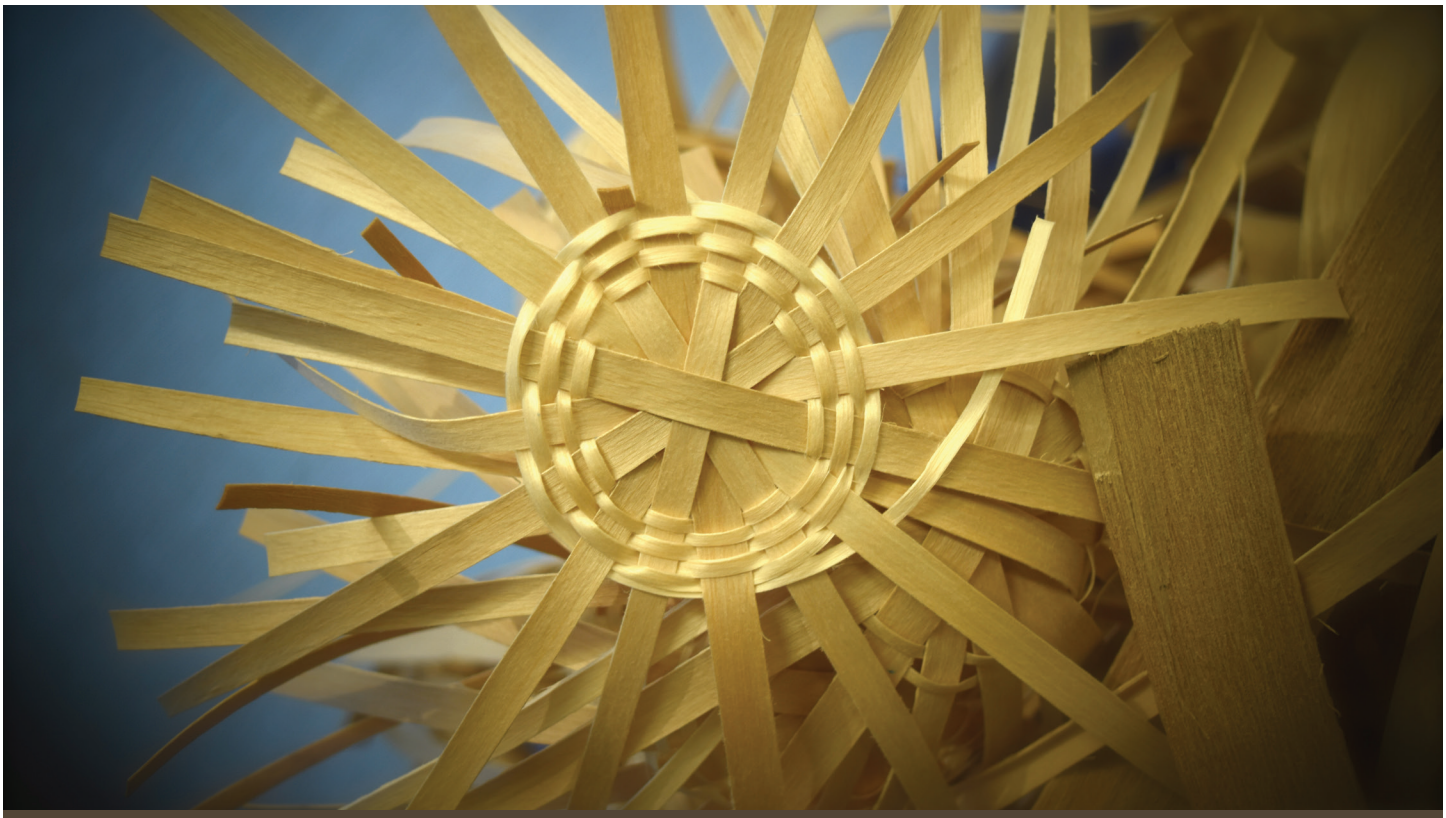
I am pleased to note that this year's Health Status Report is the product of a collaborative effort with the Atlantic First Nations Health Partnership. This is a positive step in the evolution of these reports, as we strive to improve both quality and relevance of information that we are able to access and share.

This publication should be of interest to all communities and health organizations within the Region. I hope you find this report useful.

Sincerely,

Debra J. Keays-White

Regional Executive Officer, FNIHB, Atlantic Region,
Co-Chair Atlantic Health Partnership



SECTION 1: DATA SOURCES

Understanding data quality will lead to more confident interpretation and reporting and will inform more successful actions to improve health.

The information in this report represents the best available data at First Nations and Inuit Health Branch (FNIHB), both regionally and nationally, from 2011 to 2016. These data consist of FNIHB program reports and the Non-Insured Health Benefits (NIHB) Pharmacy Claims database. Data from the First Nations Information Governance Centre (FNIGC), Indigenous and Northern Affairs Canada (INAC), Statistics Canada and the Public Health Agency of Canada (PHAC) are also included.

Descriptions and limitations related to each data source used in this report are provided in this section.

FNIHB Program Data

Community-Based Reporting Template

The Community-Based Reporting Template (CBRT) is a Health Canada requirement for communities to submit data on several different FNIHB funded programs. As of 2015-2016, all 33 communities were required to submit a CBRT. While every community completes the CBRT, not every community reports on each section, depending on their funding agreements.

Data from the CBRT were mainly used in the maternal and child health section of this report. In 2015-2016, all 33 communities reported data in this section. Some of the data were incomplete or inconsistent; see the maternal and child health section for further details.

Electronic Service Delivery Reporting Template – Home and Community Care

It is mandatory for all communities to submit monthly Electronic Service Delivery Reporting Template (eSDRT) reports and most communities do submit all required eSDRT reports.

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. These reports allow communities to look at developing trends and the reasons why home care services are delivered. It is helpful for community health planning purposes to know which populations are being served and which 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.

The primary reasons reported for home care services do not reflect distinct numbers of clients; rather, they reflect the number of services delivered. 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, 5 times each, for a total of 10 contacts. The current eSDRT does not reflect the primary health concern, only the reason that the home care service is provided. For example, the client's primary health issue may be diabetes but the reason for service is wound care because that can be a complication of diabetes.

Environmental Health Information System

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

Data entry into EHIS has become more reliable in the last few years. Since 2011, more inspection data has been entered into the system and better reflects the inspections done each year. As such, lower inspection numbers during this earlier time period (2011) may be due to underreporting of data.

WaterTrax

WaterTrax is used by Community-Based Water Monitors (CBWMs) and EHOs to record water quality data, such as the location, time and type of water sample taken. CBWMs cover all 33 communities.

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. Currently, there are 20 stand-alone dental clinics in 19 communities with a dental therapist. Twenty-seven communities receive funding for a COHI aide (all communities with COHI have a visiting dental professional).

Immunization

There has been a steady increase in the number of communities reporting immunization coverage data. In the last three years, all 33 communities reported immunization coverage. Immunization coverage rates for the Atlantic region are likely to be under-reported, as some children receive their immunizations off-reserve and are not being captured in the immunization report.

Table 1 Number of Atlantic First Nations communities reporting immunization coverage rates (2011-2015)

Reporting year	Number of Communities reporting immunization coverage
2011	30
2012	31
2013	33
2014	33
2015	33

Source: *Atlantic region immunization coverage reports (2011-2016)*

Treatment Centre Data

There are six National Native Alcohol and Drug Abuse Program (NNADAP) treatment centres (one of which is a family treatment centre) in Atlantic Canada. All six submitted annual reports to FNIHB in 2015-2016.

Teleform

Cases of notifiable diseases are reported via a fax-based Teleform system. For the last three years, all communities submitted all 12 monthly notifiable disease reports. Because Community Health Nurses who fill out the reports may not always be aware of all cases of notifiable diseases, rates of notifiable diseases may be lower than the actual rates in the communities.

Non-Insured Health Benefits Pharmacy Claims Database

The Non-Insured Health Benefits (NIHB) Pharmacy Claims 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. Therefore, off-reserve claimants are included in the analysis.
- Prescriptions paid by cash, other drug plans, or through NIHB in another region are not included in this report.
- The numerator (NIHB claimants) and denominator (total First Nations population) are from different data sources (Figure 1).
- 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 by the Atlantic First Nations population.
- Information is not available regarding: the reason for prescribing the medications, whether the medications were used as prescribed, or whether the medications were used by the person to whom they were prescribed.

Figure 1 Calculation for the prevalence of NIHB drug claimants

$$\text{Prevalence of drug claimants (\%)} = \frac{\text{Number of clients with 1+ claim(s) for drug (from NIHB pharmacy claims)}}{\text{Total First Nations population of interest (from INAC Indian Registry System)}} \times 100\ (\%)$$

In 2011, the Qalipu Mi'kmaq First Nations Band was established in Newfoundland and Labrador. By 2015, the Qalipu had 24 243 band members recognized as Registered Indians (persons registered under the Indian Act). For every 100 Atlantic Canadian Registered Indians, 38 are Qalipu band members.
Because this off-reserve group is large, when doing analysis using NIHB data, the Qalipu are excluded from the Newfoundland and Labrador data and analyzed separately.

External Data Sources

Indigenous and Northern Affairs Canada Indian Registry System

The Indian Registry System 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- and off-reserve may not be captured as residence is usually only reported to INAC at the time of birth or death of an individual
- Only registered First Nations are included in the registry so the non-registered population living on-reserve is not counted

With the exception of the NIHB data, INAC's on-reserve population counts are used as the denominator for all rate calculations.

First Nations Regional Early Childhood, Education and Employment Survey

The First Nations Regional Early Childhood, Education and Employment Survey (FNREEES) was administered between 2013 and 2015 in 243 First Nations communities across the country. The survey targets First Nations adults, youth, and children living on-reserve and in northern communities across Canada. The scope of the survey was to get a better understanding of early childhood development, education and employment in these communities[1].

A 2014-2015 sub-Atlantic report was released through the Union of Nova Scotia Indians (to be posted online soon). The FNREEES report combines data from twelve First Nations communities in the Atlantic region (the majority are from Nova Scotia) and provides the most recent survey data relevant to Atlantic region First Nations on-reserve.

Information from this survey has been used in sections of this report to supplement data from other sources or as a stand-alone where it provides the most recent and relevant information. For statistics from other data sources on similar topics, see older editions of the Health Status Report.

More information about the FNREEES can be found on the First Nations Information Governance Centre website (www.fnigc.ca).

First Nations Regional Health Survey

The First Nations Regional Health Survey 2008-2010 (FNRHS) was administered to a sample of 216 First Nations communities across Canada and 5.3% of the population was surveyed. Across the Atlantic region, the FNRHS participants were selected from a total of 22 First Nations communities.

The FNRHS is a First Nations governed survey of the on-reserve population. Data for this report are reflective of First Nations (Mi'kmaq and Maliseet) band members living on-reserve in Atlantic Canada and are prepared by the Union of Nova Scotia Indians (UNSI), the Atlantic regional FNRHS data stewards[2]. Analyses contained within this report from the FNRHS do not necessarily reflect the views of the First Nations Information Governance Centre.

More information about the FNRHS can be found on the FNIGC website (www.fnigc.ca).

Canadian Community Health Survey

The Canadian Community Health Survey (CCHS) is a national survey administered by Statistics Canada. It collects information on a variety of health-related topics, including health status, health care utilization and determinants of health for those aged 12 and older in Canada[3]. It is conducted annually, and information in this report is from the 2014 cycle.

People living on-reserve and other Aboriginal settlements are excluded from this survey. However, because the CCHS is representative of the majority of the Canadian population, it is sometimes used for comparison with Atlantic First Nations people living on-reserve in this report.

More information about the CCHS can be found on the Statistics Canada website (www.statcan.gc.ca).

Maternity Experiences Survey

The Maternity Experiences Survey (MES) is a national survey which was conducted by the Public Health Agency of Canada (PHAC) in 2006. It sampled new mothers who had given birth to one child between November 2005 and May 2006 and who still lived with their child at the time of the interview. The survey excluded mothers living on-reserve, in institutions, under the age of 15 and those who had multiple births (e.g., twins) or experienced infant death[4].

This survey provides province-specific estimates in a variety of relevant subject areas, which are used as general population comparators in the maternal and child health section. More information about the Maternity Experiences Survey can be found on the Statistics Canada website (www.statcan.gc.ca).

Other Considerations about Data Sources and Data

Self-Reported Data

Most surveys (i.e., the FNREEES, FNRHS, CCHS and MES) collect information by having people respond to questions about their own behaviours, attitudes, feelings, health status, etc. Self report methods of data collection provide valuable information however, it is important to note that sometimes people can exaggerate or under-report information. For example, people may report their weight to be lower than it is because of social pressures to fit into the weight category they want. There is no other way to check (e.g., a scale) so this number is used, even though it may not be accurate.

Reporting Time Frames

As some FNIHB programs request data from communities based on fiscal year, there are some sections of this report that are reported by fiscal year (i.e., 2015-2016) and some by calendar year (i.e., 2015). It is important to note the time-frame of what is being reported, especially in reference to comparative information.

Comparator Time Frames

When comparing First Nations data to the general population, the most current and relevant data sources available are used. In some cases, the latest data which capture similar concepts in the general population are a few years older than in the First Nations population. As such, it is important to consider the difference in time that may exist between some sources as there may have been changes over time. However, in most cases the time frame is relatively short and there are unlikely to be major differences.

Rounding of Numbers

In an attempt to make the information in this report easier to read, most numbers are rounded to the nearest whole number. In doing so, some totals no longer add up to 100%. In some cases, one decimal place was included to show further detail in comparisons.

Age Standardization

When two populations are being compared, it is important to remember that differences in their age and sex structure may account for differences in health status. For example, if a population with a high proportion of youth is compared with a population with more older people, the first population will likely have higher rates of illnesses and diseases which are more common in younger age groups (e.g., chlamydia) just based on the age structure. To overcome this, another third neutral population can be used to standardize the rates, so both populations are comparable, regardless of their age structure. Age standardization is used in the sections about diabetes and notifiable diseases.

Changes in Reporting

Each year, the most reliable data sources are used for this report. Changes from prior editions of the report may be due to differences in data reporting, updating of sources or changes in information sources.

SECTION 2: SOCIAL ENVIRONMENT

The social environment influences the ways in which people live. It is recognized that income equality, high educational attainment and employment all have positive impacts on health[5]. In this report, factors such as income, education, employment, language, and social security are described. In reality, there are a wide range of social determinants that influence health. The relationships between these determinants should be considered, and placed within historical and broader context from an Indigenous perspective[6].

Information from the sub-Atlantic regional analysis of the First Nations Regional Early Childhood, Education and Employment Survey (FNREEES)[7] was used extensively in this section, as this survey contains the most recent and available information which is specific to a large portion of the Atlantic region. The complete report is awaiting publication on the UNSI website.

The Atlantic Region

In the Atlantic region, there are 34 First Nations bands; 33 communities and the Qalipu First Nation, which does not have any reserve land. With the exception of the NIHB Pharmacy database, there are no data available for the Qalipu. Therefore, the focus of this report is on the 33 First Nations bands (communities)* in the region.

For a detailed look at First Nations communities in the region, refer to the First Nations Profiles Interactive Map (http://fnpim-cippn.aandc-aadnc.gc.ca/index-eng.html).

* In some cases, bands have multiple community sites. However, in most cases, referring to 'community' indicates the entire band.

Population

Why is knowing about age distribution important?

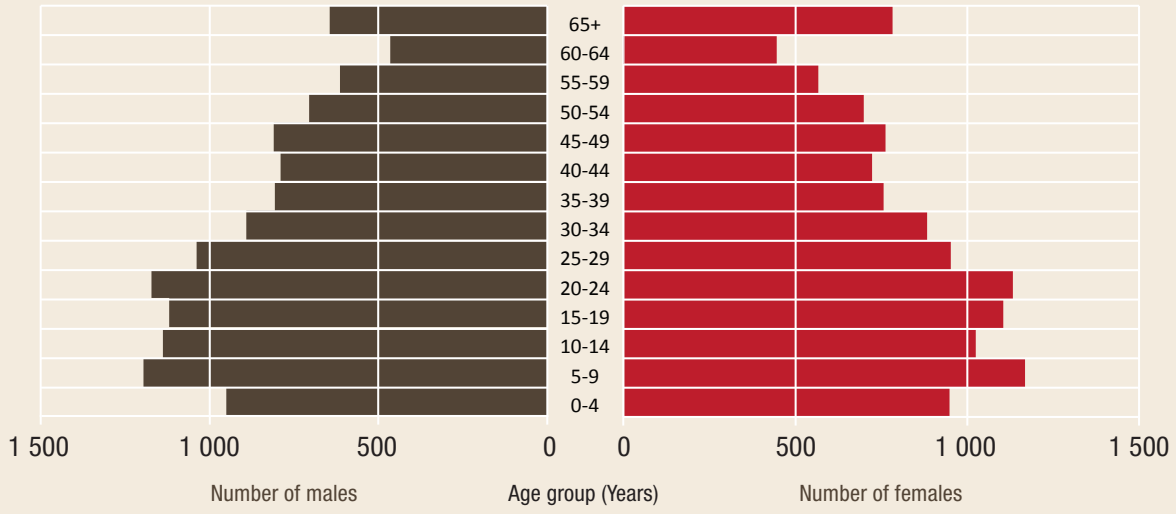
Age and sex are two of the biggest influences on health. As such, they can also influence how accurate it is to compare one population to another. For example, First Nations communities tend to have a greater percentage of their population younger than 25 years of age compared to the general Canadian population. Therefore, you would expect to see higher levels of health issues that affect young people in First Nations communities, just because they have a greater proportion of young people. Knowing how different the age distributions are in comparison populations can help interpret health information.

As well, considering how age distributions change over time can help plan for current and future health needs. For example, in some populations there are more elderly people than there were in the past – this could mean there will be an increase in medical needs associated with this group that were not present before.

In 2015, there were 63 375 people who were registered with First Nations bands in Atlantic Canada. Out of every 100 Atlantic region First Nations people, 38 (38%) lived on-reserve and the remainder lived off-reserve (62%). On-reserve, there were an equal number of males and females.

Compared with the general Atlantic region population, a larger proportion of the on-reserve population was younger. Just under half (47%) of all band members on-reserve were under the age of 25, compared to just one-quarter in the general population (26%). Six out of every 100 (6%) band members living on-reserve were 65 years or older, compared with 19% in the general Atlantic population. See Figure 2 and Figure 3 for a comparison of the two populations.

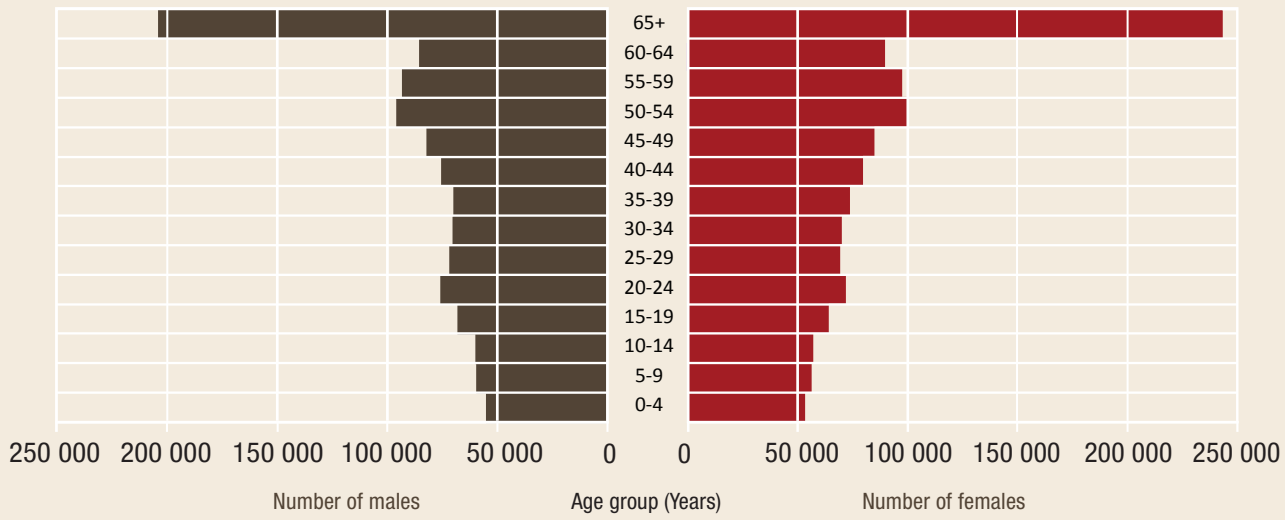
Figure 2 First Nations population registered to bands in Atlantic Canada living on-reserve, by age and sex (2015)



Source: *INAC, Indian Registry System (Dec.31, 2015)*

* In some cases, bands have multiple community sites. However, in most cases, referring to 'community' indicates the entire band.

Figure 3 General Atlantic Canada population, by age and sex (2015)



Source: *Statistics Canada (July 1, 2015)*

What is the population growth?

Population growth is calculated to show how much the population has changed in a given period of time, compared with the original population. For example, if the population grew from 1 000 to 1 200 people in five years, the growth would be 20%. A negative number means there are fewer people now compared with before.

The population change for this report is calculated as:

Change in population (Population in 2015 – Population in 2011) / Population in 2011 X 100%

From 2011 to 2015,

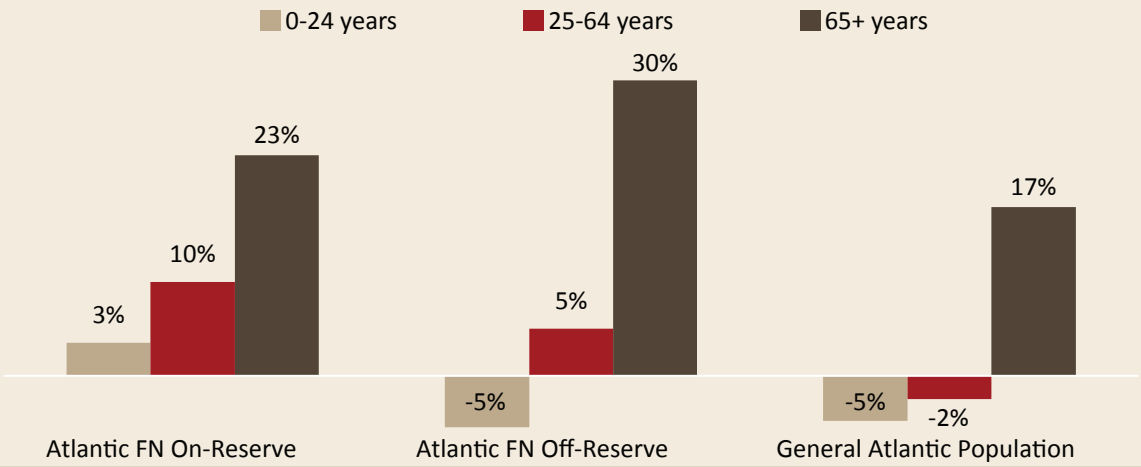
- The on-reserve First Nations population grew by 7%
- The off-reserve First Nations population grew by 4%[†]
- The general Atlantic population remained stable (less than 1% growth)

In terms of age distribution from 2011 to 2015 (Figure 4),

- The Atlantic First Nations population on-reserve grew in all three age groups.
- In 2015, in the Atlantic First Nations population living off-reserve, there were fewer children and youth but more adults and elders.
- In the general Atlantic population, there were fewer people under 65 years and more who were 65 years and older.
- Overall, the First Nations population living on-reserve is growing the fastest among these three groups, and the population is increasing in all three age categories.

[†] Growth in last four years (2012-2015) due to addition of Qalipu band in 2011

Figure 4 Percent changes in number of people in each age group from 2011 to 2015, by population group



Sources: *INAC Indian Registry System (Dec 31, 2011; Dec 31, 2015) Statistics Canada (July 1, 2011; July 1, 2015)*

Language

According to the 2014-2015 sub-Atlantic FNREEES report, 93 out of every 100 (93%) Atlantic region First Nations adults‡ living on-reserve who were surveyed reported having 'at least some knowledge' of a First Nations language. Sixty-one out of every 100 (61%) adults said they could understand a First Nations language at an 'intermediate' or 'fluent level', just over half (54%) could speak the language, and a smaller proportion could read (17%) or write (14%) a First Nations language. These findings were not different by sex or age group (18-44 or 45 years or older)[7].

Thirty-six out of every 100 (36%) adults indicated that they spoke a First Nations language most often in daily life, while the rest (64%) used English most often. The following four groups were most commonly identified as being people who helped respondents learn a First Nations language:

- Parents/guardians
- Community members
- Friends
- Elders

Barriers to learning a First Nations language included lack of access to language classes, being too busy, not being motivated enough and having no one to teach or practice the language with[7].

‡ Adults refers to people 18 years and older, unless otherwise noted.

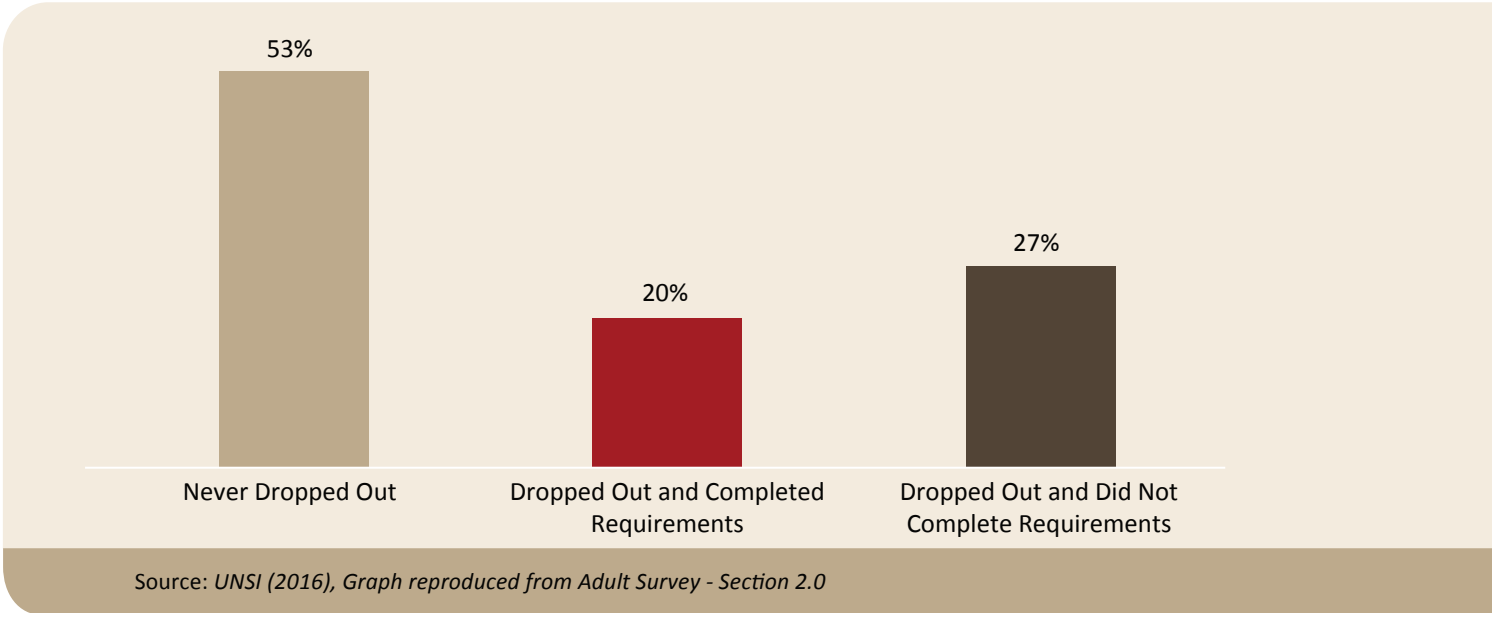
Educational Attainment

In the Atlantic region, there are 16 schools located on-reserve and operated by First Nations. In 2013-2014, the high school graduation rate was 55% in the region, compared with 43% nationally[8].

The recent sub-Atlantic FNREEES report found that 66 out of every 100 adults (66%) who were surveyed had a high school diploma or equivalent. Seventy-two adults aged 18 to 44 years out of 100 (72%) were more likely to have finished high school compared to adults aged 45 years and older.

In this younger adult age group, about one-half (53%) did not drop out of school, one out of five (20%) dropped out of school at least once but completed their credits in high school or an equivalency program, and 27% left high school and did not finish their program (Figure 5)[7].

Figure 5 High school pathways of Atlantic First Nations adults aged 18-44 (2014-2015)



Source: *UNSI (2016), Graph reproduced from Adult Survey - Section 2.0*

Out of every 100 Atlantic region adults who responded to the FNREEES, 26 (26%) had completed a postsecondary education program; 12 (12%) had finished a university degree and 12 had finished a college or trade school program (12%)[7].

Nationally, one-third of First Nations adults had a post-secondary education (33%), 26% had a high school equivalency and 41% had less than high school[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 goals of the program are 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.

In 2015-2016, there were 804 children aged six years and younger enrolled in AHSOR. This represents 25% of all children who are eligible for the program in the Atlantic region. About six in ten (59%) children who were enrolled were aged three to six years. The remainder (41%) were under the age of three years[9].

There were 20 children on the waitlist for the program in the Atlantic region. This is less than one-half of the number of children on the waitlist reported in the previous year.

In 2015-2016, out of every 100 children enrolled in AHSOR:

- 10 were screened or assessed for special needs[§]
- 6 were diagnosed with special needs
- 14 were referred to other resources
- 2 were on a waitlist for diagnostic assessment

Source: *CBRT reports (2015-2016)*

The results listed above are similar to AHSOR program information from 2014-1015.

The 2014-2016 sub-Atlantic FNREEES report found that 55% of children (aged 0-11 years) attended an Aboriginal Head Start program[7]. Reasons for not attending included:

- No program availability
- No care available for other children/family
- Scheduling inconvenience
- Lack of transportation
- Being on the waitlist

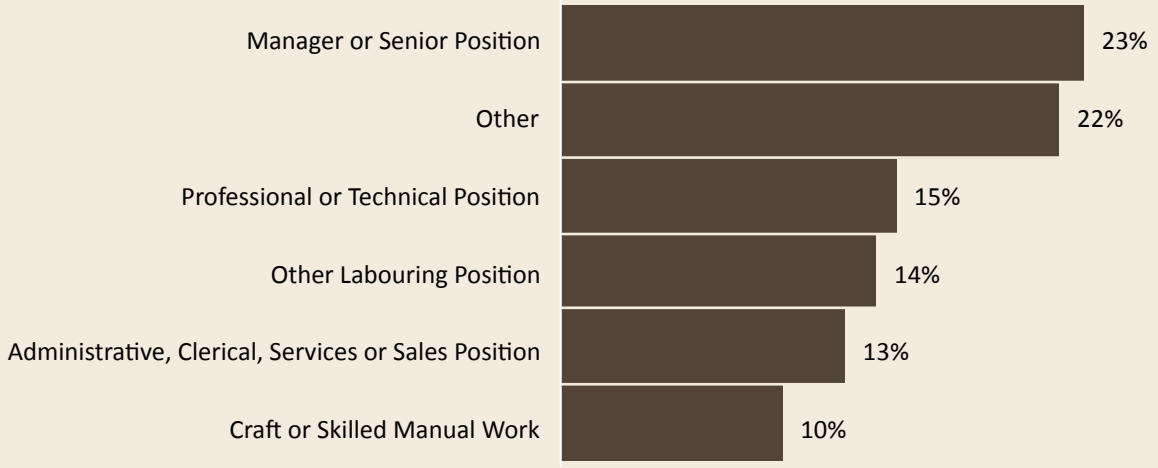
Source: *UNSI, FNREEES: A Sub-Atlantic Report (2014-2015)*

[§]In CBRT, special needs are defined as "children who require ongoing additional support(s) or service(s) for healthy development in order to interact with their peers in day-to-day living. Special needs may include physical, sensory, cognitive and learning challenges, and mental health issues."

Employment

Over one-half (55%) of First Nations adults living on-reserve who were surveyed in the sub-Atlantic FNREEES indicated that they were working for pay at the time of the survey. Of these people, the most common job type was a manager or senior position, and the least common was craft or skilled manual work (Figure 6).

Figure 6 Job categories of employed Atlantic First Nations adults (2014-2015)



Source: *UNSI (2016), Graph reproduced from Adult Survey - Section 4.0*

Nationally, 17% of employed First Nations adults were in more senior staff roles, 19% were in professional or technical roles and 22% were in plant and machine operatives or other labouring roles[1].

Other findings from this survey regarding workplace satisfaction among First Nations adults in parts of the Atlantic region include[7]:

- 91% 'agreed' or 'strongly agreed' that their workplace was supportive of First Nations culture
- 93% were satisfied with their job and home life balance
- 93% were happy at work
- 90% agreed that they felt valued at work
- 69% agreed that their job offered opportunities to learn new job-related skills
- About nine in ten adults said they felt respected by coworkers (92%) and supervisors (87%)

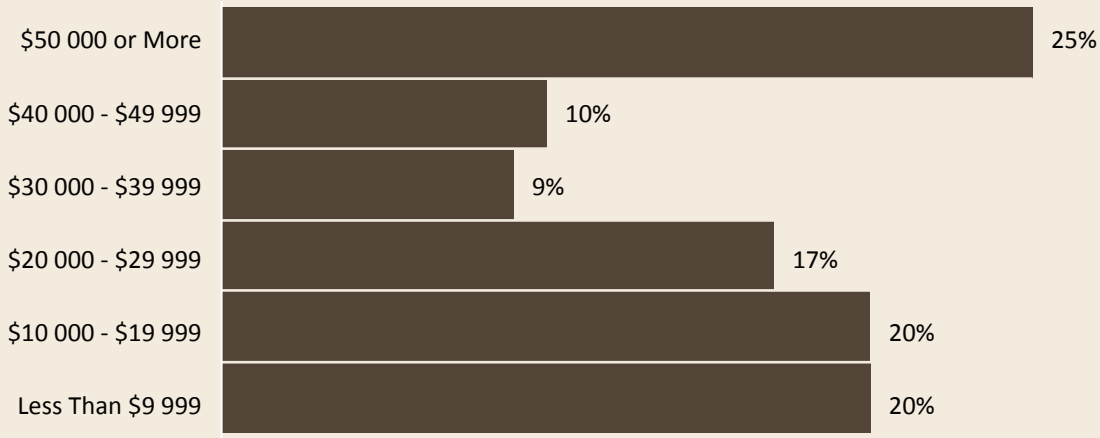
Reasons that individuals were not working include that they were caring for children or family, were retired or were in between casual jobs[7].

In terms of job security, 63% of adults who were employed were in permanent jobs, 17% were in seasonal roles and 14% were in temporary, term or contract positions. The remaining 6% were in casual roles or other roles not defined[7].

Income

Among First Nations adults living on-reserve in parts of Atlantic Canada who were surveyed in the FNREEES, the median** personal income was between $10 000 and $20 000. The median household income was between $20 000 and $29 999[7]. The distribution of household income levels can be found in Figure 7.

Figure 7 Distribution of household income among Atlantic First Nations adults (2014-2015)



Source: *UNSI (2016), Graph reproduced from Adult Survey - Section 5.0*

The median income level for First Nations people on-reserve in parts of the Atlantic region is lower than that of the general Atlantic population. The median household income (before taxes) in the general population of the four Atlantic provinces ranges from $47 495 in Nova Scotia to $55 311 in Prince Edward Island[10].

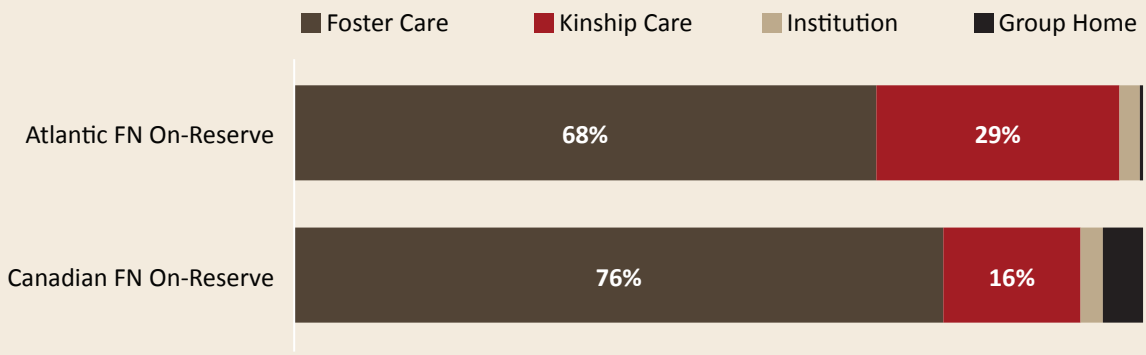
In terms of identifying challenges related to income, 24% (24 out of every 100) of First Nations adults living on-reserve in parts of the Atlantic region said they struggled to pay for one or more basic living needs (including transportation, food, utilities and clothing)[7].

** The median is the middle income amount where exactly half of people have less money and exactly half have more money.

Children in Care

In 2014-2015, 7 out of every 100 children and youth (age 18 years or younger), on-reserve in the Atlantic region, were in care. This is higher than the national figure of 5% and has been this way for the last five years. For every 100 children in care in 2014-15, 68 (68%) were in foster care and 29 (20%) were in kinship care. There was also a smaller number in institutions (3%) and group homes (1%; Figure 8) [11].

Figure 8 Percentage of Atlantic First Nations children and youth (18 years and younger) in care, by type of care and region (2014-2015††)



Source: *INAC, Social Policy and Programs Branch (2016)*

In the Atlantic region, the proportion of children in foster care has decreased in the last five years, while the proportion of children in kinship care has increased. In 2010-2011, 77 out of every 100 (77%) children and youth in care were in foster care, compared with 68% in 2014-2015. In this time, the proportion of children and youth in kinship care increased from 19% to 29%[11].

This shift in models of care is the same at the national level [12], however the Atlantic region has consistently had a higher proportion of children and youth in kinship care over this time.

Among First Nations adults living on-reserve surveyed in parts of the Atlantic region, one in ten (10%) reported having spent time in foster care or other type of temporary care[7].

†† Data for recent years may be incomplete for some regions and thus should be used with caution.

SECTION 3: PHYSICAL ENVIRONMENT

The physical environment is an important determinant of health[5]. Indigenous peoples' relationship with the land has been acknowledged as an important part of culture[13] and the right to maintain and strengthen this spiritual bond with the land and water has been recognized internationally[14].

In the Atlantic region, the Environmental Public Health Program works with Atlantic First Nations and other partners and stakeholders to contribute to activities that prevent or mitigate conditions that negatively affect environmental public health. Environmental Health Officers (EHOs) provide education sessions and training, collect data through water sampling and facility inspections and provide guidance and recommendations for addressing environmental health issues. If environmental public health risks are identified, EHOs recommend control or corrective measures which may be put into place by community leaders and residents[15].

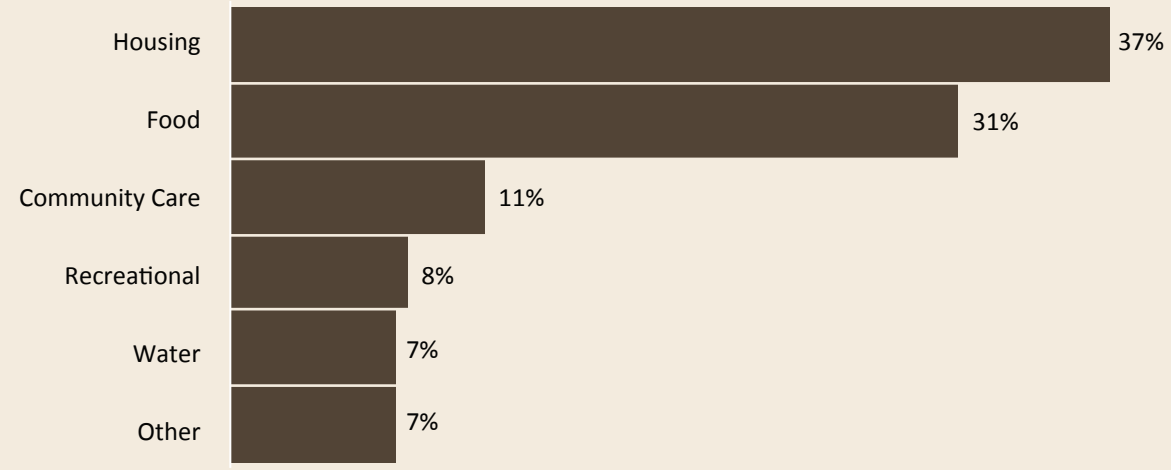
Facility Inspections

Types of Inspections

EHOs conduct environmental inspections of a variety of facilities. Through these inspections, they assess the general structure and sanitation, safety conditions, food handling practices, water quality and waste disposal processes of facilities, as well as other features that may affect health and safety[15].

In 2015, the largest number of inspections was for housing, which contributed to 37% of all inspections done. This was followed by food inspections (31%) and community care facility inspections (11%).

Figure 9 Percentage of all environmental inspections, by type of facility (2015)



Source: *EHIS (2016)*

Housing = Includes all housing types (e.g., apartments, detached homes, etc.)

Food = Permanent (e.g., restaurants, cafeterias, kitchens) and seasonal/temporary sites (e.g., mobile food services, event-specific food preparation)

Community care = Facilities providing care services or activities for communities (e.g., schools, shelters, childcare centres)

Recreational = Facilities providing recreational services (e.g., community halls, playgrounds, gyms, swimming pools)

Water = Public water systems, wastewater treatment plants, wells

Other = Other public facilities (including health centres and offices)

In the last five years, housing and food facilities have been the two most common inspection locations. This is because of the higher number of individual homes and food serving facilities that exist, compared with shared spaces, like community halls or gyms.

Routine and Requested Inspections

Facility inspections are conducted either routinely or upon request. There are various factors that determine how many inspections are conducted in each category annually. For example, a community may request a large number of housing inspections because of an ongoing project or there may be a focus on a few new facilities in the community within the year.

In 2015, just under one-half (47%) of all facility inspections were conducted upon request. Housing inspections, which are always done by request, accounted for 37% of all inspections.

In the last five years, requested inspections accounted for 29% to 77% of all annual facility inspections, reflecting different community priorities year-to-year.

Housing

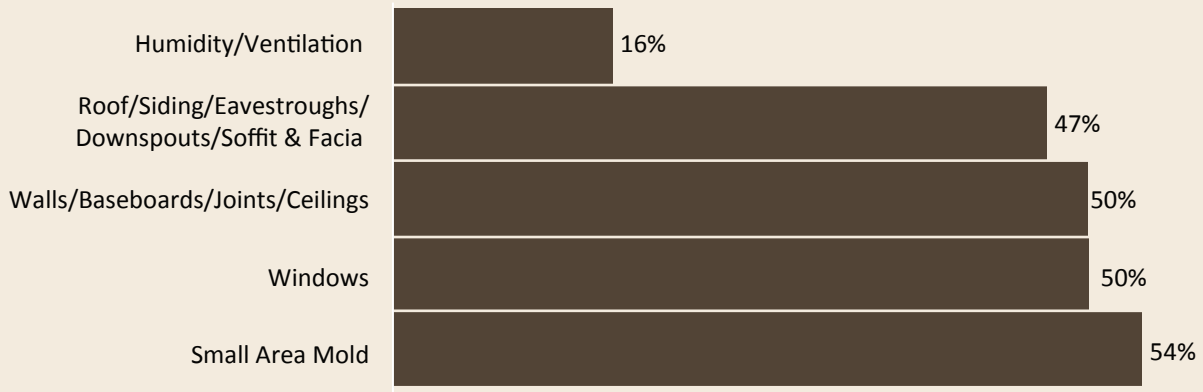
EHOs conduct public health inspections of new and existing housing, on request or complaint. They also support interdisciplinary responses to identified public health risks.

Housing Inspections

In 2015, there were housing inspections conducted in 20 First Nations communities in the Atlantic region.

Figure 10 shows the percentage of satisfactory assessments in the top five housing assessment categories that had the lowest percentage of satisfactory results in 2015. These low numbers of satisfactory results indicate that these are areas that most need to be repaired or decontaminated in households. In many cases, these areas are linked; for example, issues identified with the humidity/ventilation systems are likely to be related to current or future mold problems.

Figure 10 Percentage of satisfactory assessments (2015)



Source: *EHIS (2016)*

A recent survey examined the state of First Nations housing in the Atlantic region[16]. It found:

- Approximately 14% of dwellings surveyed were built over 25 years ago (used as an indicator of units that may not meet current health and safety standards and may not be feasible to repair)
- About 1% of units that were condemned were also occupied
- About 4% of units were not connected to water or wastewater infrastructure

Environmental Health Officers inspect new or re-placement playground equipment to ensure it meets Canadian Standards Association voluntary standards for safety, proper placement and surfacing.

Mold

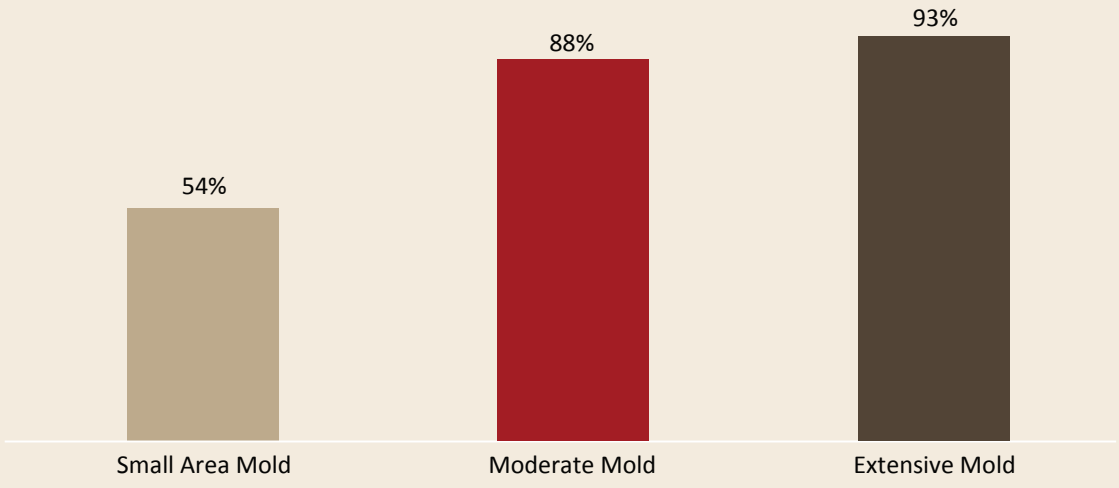
The presence of mold in homes represents a health risk for residents. Exposure to damp conditions and mold has been linked to numerous negative health outcomes, such as asthma, coughing, headaches and allergic reactions[17].

Mold assessment definitions

Small mold areas	<1 m^2
Moderate mold areas	1-3 m^2
Extensive mold areas	> 3 m^2

Mold contamination is one thing that can be assessed during housing inspections. In 2015, just over one half of all assessments for small mold areas were satisfactory (54%). Approximately 90% of both the moderate and extensive mold inspections were satisfactory (Figure 11).

Figure 11 Percentage of satisfactory housing inspections for mold (2015)



Source: *EHSI (2016)*

A recent Atlantic First Nations housing survey also found that the majority of homes affected with mold had a light contamination level (less than 0.3 m^2). They note that the main reasons for the cause of mold are:

- Poor air circulation
- Leaks in roof, foundation, plumbing, windows, etc.
- Overcrowding
- Homeowner neglect [16]

These reasons were informed partially by the inspections conducted by Health Canada, and align with the high need categories identified during housing inspections in 2015 (Figure 10).

Water Quality

Donna Augustine (Thunderbird Turtle Woman) is a Ceremonial Elder from Elsipogtog, N.B. She has been conducting ceremonies for over 40 years. Her experience and expertise are on repatriation. She is an official designate under the Native American Graves Protection Repatriation Act (NAGPRA) Law since 1991. Currently she serves on "The Working Group for International Repatriation." She has served on many boards and is currently on the Indigenous Advisory Council for the new Human Rights Museum in Winnipeg. Her spiritual ceremonial work has brought her to many parts of the world. She is a strong advocate for her ancestors and her people.

This is what she says about water:

Water is very sacred to our people; for without water we would cease to live.

Before we are born into this world; we are surrounded by water. Water eases the passage into this world.

When the elders teach us about plant medicine; they teach us to use clear bubbling spring water; fresh from the earth. Before that; we offer a prayer to the water.

When Europeans first landed on our shores; many of them were dying of scurvy and rickets. The first thing our ancestors offered them was fresh water. Then they gave them plant medicines steeped in water.

Water is poured over hot stones in our sweat lodges which comes up as steam that cleanses us physically, spiritually, mentally and emotionally.

In the summers when people are sick; they are encouraged to swim or to sit in our salt water rivers or the ocean.

It is the women; the life-givers that offer the prayers and speak to the spirit of the water. All tribes across North America do this even today.

Water is the source of life!

Source: *Environmental Public Health Team, Personal Communication (2017)*

EHOs and Community-Based Water Monitors (CBWMs) work to ensure that drinking water in First Nations communities is safe to consume. Water samples that do not meet the Canadian Drinking Water Quality Guidelines are considered to be unsatisfactory. There are several actions that may be taken when this happens, including water system advisories. Water contaminants can be classified as microbiological (bacteriological), chemical, physical or radiological in nature. The aesthetic quality of water (e.g., taste, colour) is also factored into account when assessing water quality[18].

Bacteriological Sampling

Water Systems

In the Atlantic region, the vast majority of water sampling is done in public water systems. In 2015, 97% of all samples taken were in public water systems, with the remainder in semi-public and private systems. The majority of samples were taken in Nova Scotia, followed by New Brunswick.

What does each type of water system mean?

Public: A community water system with 5 or more connections that has a distribution system (piped) and that may also have a truck fill station.

Semi-Public: A well or cistern, that serves a public building(s) or where the public has a r easonable expectation of access and has less than 5 connections.

Private: A well for drinking water that serves a private residence(s) with less than 5 connections.

Bacteriological Results

In 2015, there were 9 060 bacteriological samples taken throughout the year in all types of water systems. The number of bacteriological samples taken has steadily increased in the last five years. From 2011 to 2015, there was a 6% increase in the number of bacteriological tests reported.

Some possible reasons for this increase include:

- Individual water systems being sampled more frequently (as requested)
- Increased awareness and education of the importance of meeting Community-Based Drinking Water sampling goals
- Follow up sampling/monitoring to remove Drinking Water Advisories (DWAs), or as part of upgrades to infrastructure to a public water supply
- Economic/urban development in communities continues to expand increasing the number of water samples requiring sampling/monitoring

All coliforms

A key indicator in bacteriological water monitoring is the total coliforms found in water. This measurement includes a wide variety of bacteria (coliforms) and is used to assess thequality of drinking water at different stages in the water treatment process. Unsatisfactory results indicate that further investigation or action should be taken[19].

E. coli

Escherichia coli *(E. coli)* is a particularly important bacterium to regularly monitor in drinking water.
If *E. coli* is confirmed to be present in a treated water source, remedial strategies, such as Boil Water Advisories, must be put into place due to the potential risk to human health[20].

In 2015, 99.5% of all samples tested satisfactory for all coliforms. For each of the past five years, 99% or more of water samples have been satisfactory.

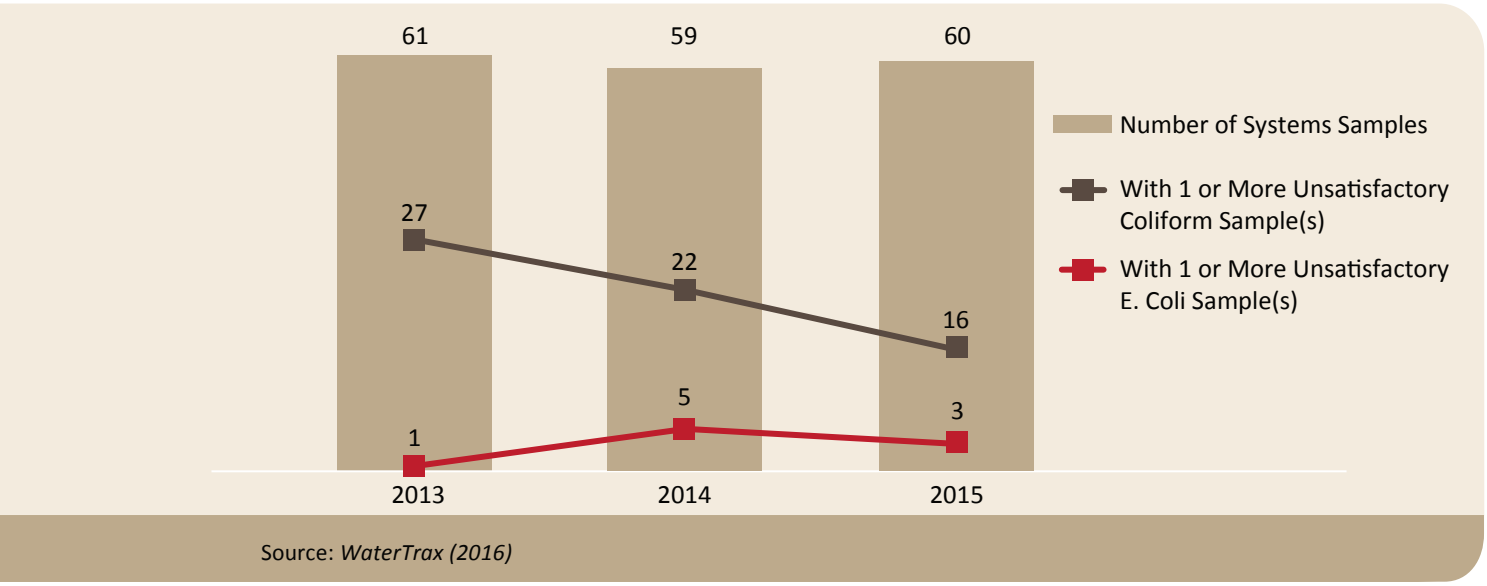
In 2015, there were nine water samples which detected the presence of *E. coli*. Of these nine unsatisfactory samples, five were in public water systems and four were in private systems.

This compares with ten samples in 2014 and six samples in 2013 which detected *E. coli*. Just over one half (56%) of these samples were in private water systems, with the remainder in public or semi-public systems.

In 2015, there were fewer water systems which had one or more unsatisfactory coliform water sample(s) compared with the two previous years (Figure 12 and Figure 13). In public and semi-public water systems in particular, this decrease is not influenced by the number of systems sampled, as this has remained constant during this period.

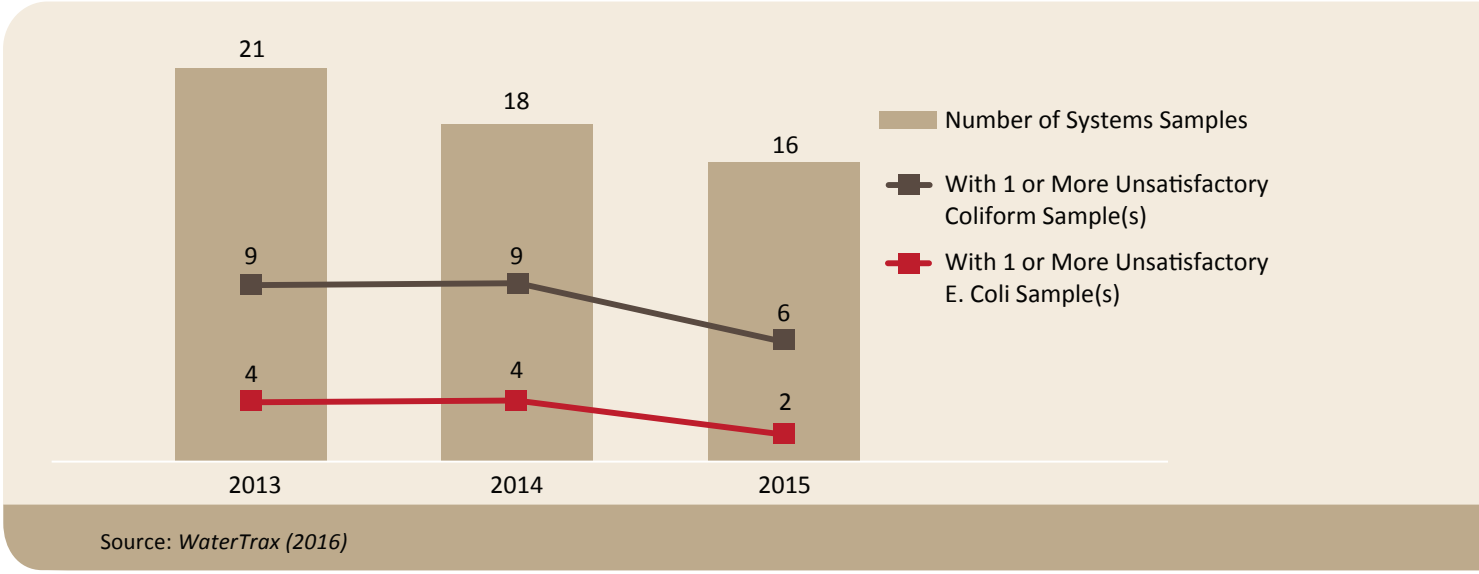
The number of water systems testing unsatisfactory for *E. coli* has fluctuated in the last three years. In 2015, there were more unsatisfactory samples taken from the same water system multiple times, compared with the two years prior (five systems accounted for nine unsatisfactory samples in 2015).

Figure 12 Bacteriological sampling and results in Atlantic First Nations on-reserve public and semi-public water systems (2013-2015)



Source: *WaterTrax (2016)*

Figure 13 Bacteriological sampling and results in Atlantic First Nations on-reserve private water systems (2013- 2015)



Source: *WaterTrax (2016)*

Drinking Water Advisories

Drinking Water Advisories (DWAs) are recommended by EHOs when water sampling results indicate that water is unsafe to drink from the water source. DWAs include both Boil Water and Do Not Consume advisories that get lifted once the water quality is deemed to be satisfactory and the issues with the water system have been resolved. Water advisories in this section are from community water systems.

Types of Drinking Water Advisories[21]

Boil Water	These are issued when particular indicator bacteria (e.g., *E. coli*) are detected in the water or operational issues have interfered with the water quality. It is recommended that all drinking water is brought to a rolling boil for one minute before consumption.
Do Not Consume	These are issued when water contains a contaminant that cannot be taken out through boiling. The water cannot be used for activities where it will be ingested, but is safe to use for other external uses (e.g., showering).
Do Not Use	These are issued when water contains a contaminants that cannot be taken out through boiling and may cause irritation if used in any way. The Atlantic region has not had any of these advisories in the last five years.

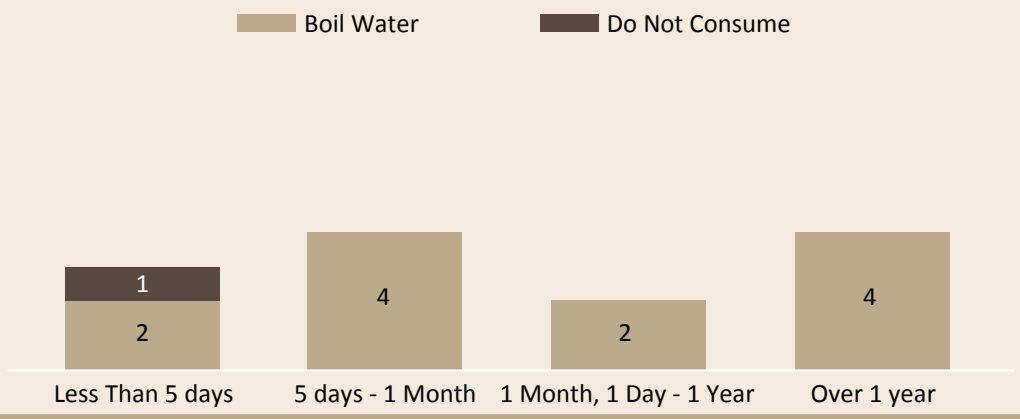
It is important to note that water advisories are put into place at the water systems level. This means that a water advisory in a community does not necessarily affect all the water in the entire community, rather in the particular water system only.

In 2015, there were 13 DWAs in the region. These advisories affected 11 First Nations communities from all four Atlantic provinces. Eleven were Boil Water advisories and one was a Do Not Consume advisory. Just over half of all advisories (54%) ended within one month.

Reasons for long term water advisories over a year vary and are dependent on case specific issues including:

- Infrastructure upgrade requirements to a water treatment plant or distribution system
- Lack of disinfection processes
- Continued unacceptable water quality test results (bacteria and/or chemical)

Figure 14 Number and duration of drinking water advisories (2015)



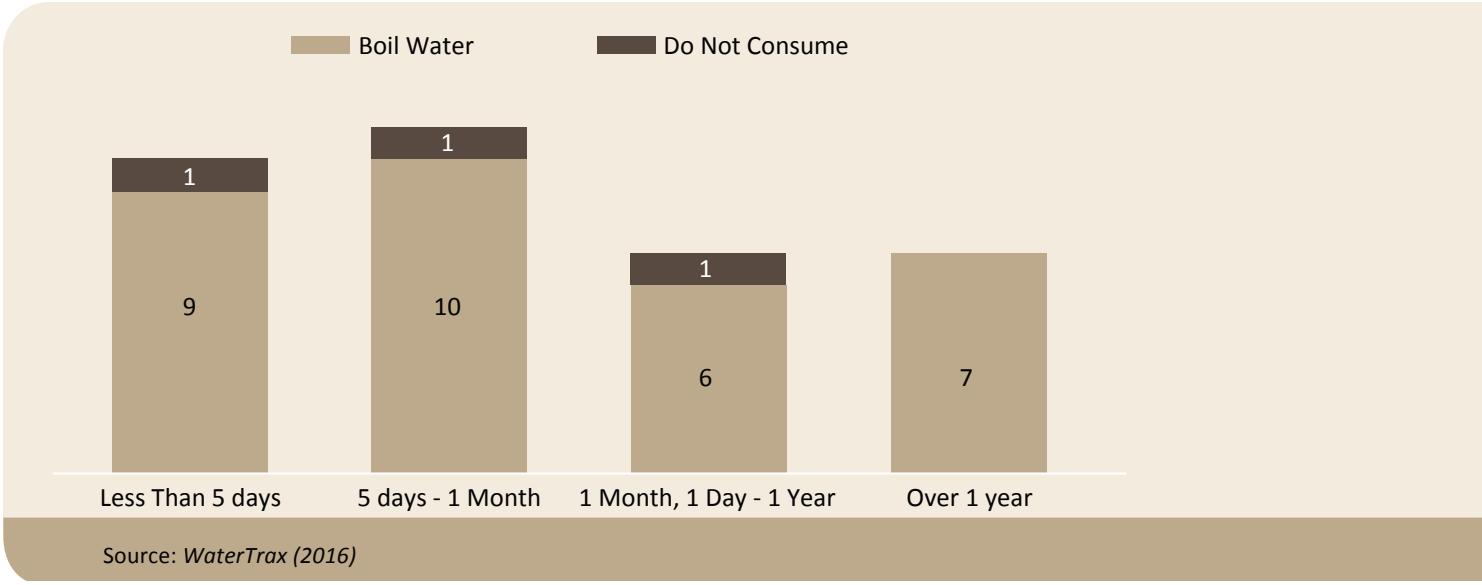
Source: *WaterTrax (2016)*

In 2015, the top reasons for advisories were:

- Inadequate disinfection or disinfectant residuals
- Equipment malfunction during treatment or distribution
- Unacceptable microbiological quality

From 2011 to 2015, there were 35 water advisories in the Atlantic region, affecting 19 communities; 32 Boil Water advisories and 3 Do Not Consume advisories. Three out of five advisories (60%) were resolved in one month or less.

Figure 15 Number and duration of drinking water advisories (2011 - 2015)

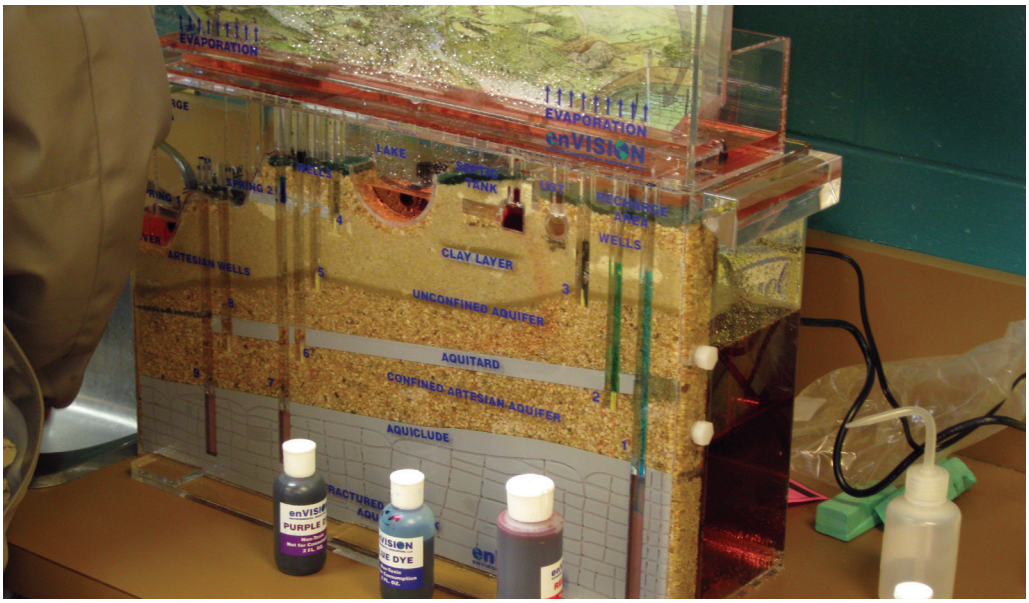


Source: *WaterTrax (2016)*

Chemical Sampling

Drinking water samples are regularly tested and analyzed for levels of a large number of chemicals. If the concentration of a chemical is above the acceptable parameters, it said to be above the exceedance level. Each chemical has a different exceedance level which is determined by the Canadian Drinking Water Guidelines[18].

In this section, five chemicals which are relevant to the Atlantic region are reported on.



Environmental Health Officers use educational water simulators and other teaching tools to provide awareness on safe drinking water.

Why is it important to measure these chemicals?

Chemicals affecting aesthetic quality (iron and manganese)

Iron and manganese found in water do not pose direct health risks but high levels may indicate deterioration of the water supply and aesthetic considerations may reduce water availability in communities. At high concentrations, they can affect the taste, smell or colour of water which can result in negative health impacts (e.g., water shortages, 'water-washed' diseases from inadequate hygiene due to low water availability).

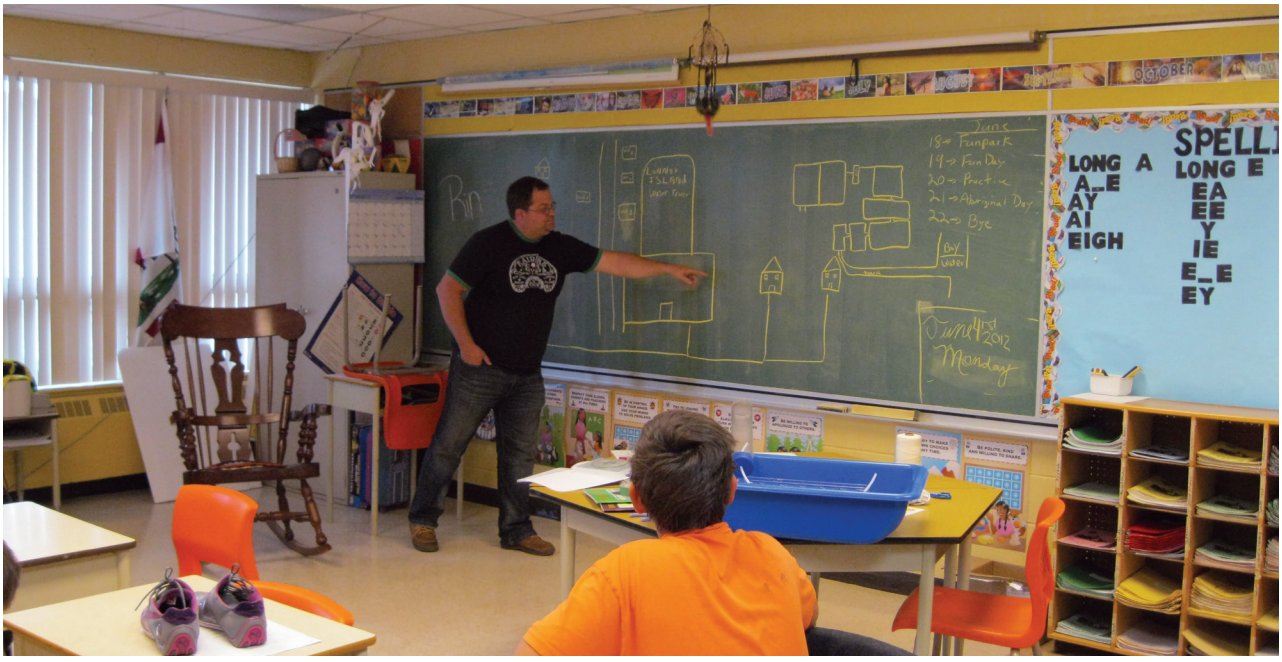
The most common sources of iron and manganese are naturally occurring (and often occurring together) from the weathering of iron and manganese bearing minerals and rocks.

Chemicals with direct health risks (arsenic, fluoride, lead)

Due to the geological structure of certain locations in the Atlantic Region, certain areas are more susceptible to contaminants such arsenic and fluoride which can cause adverse health effects. Therefore, there is a maximum acceptable concentration for drinking water.

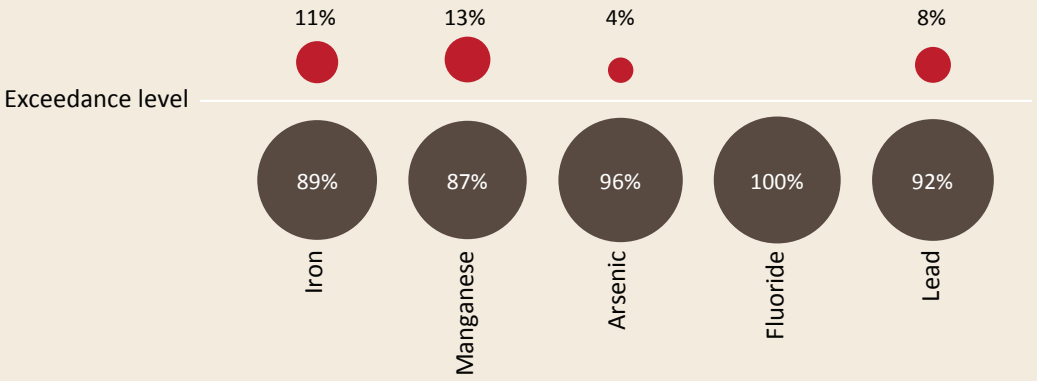
Lead is naturally found in bedrock ore, but rarely found in the source water like arsenic and fluoride. The main source of lead in drinking water is through corrosion of plumbing materials with lead components, such as pipes, solder, faucets, fittings, and older galvanized well liners.

In 2015, all samples tested for fluoride were under the exceedance level (the acceptable concentration level). Ninety-six percent of arsenic samples and 92% of lead samples met the water guidelines. The two chemicals with the lowest percentage of acceptable samples were iron (89%) and manganese (87%).



Community Based Water Monitors are community advocates for safe drinking water.

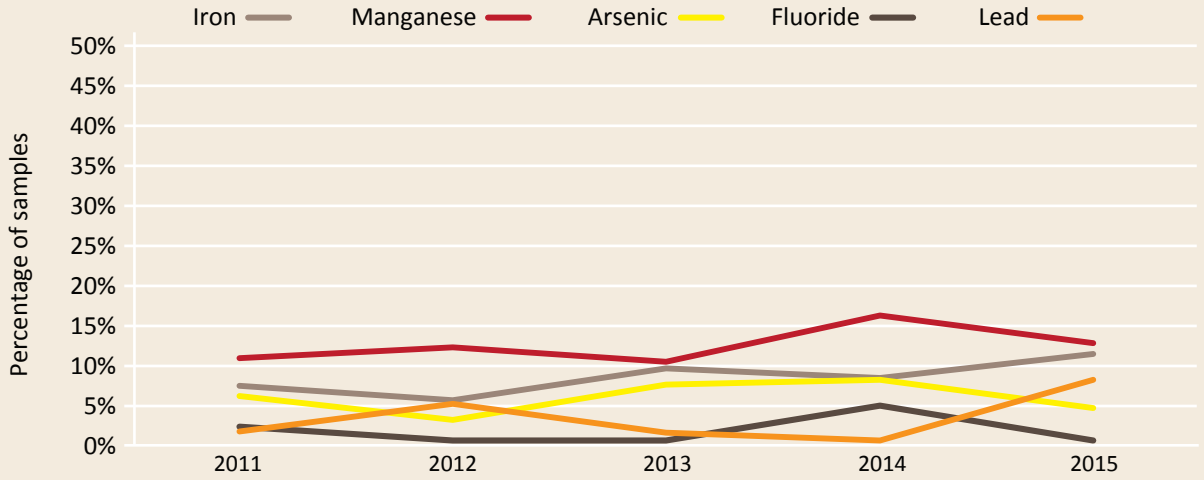
Figure 16 Percentage of chemical samples under and over exceedance values (2015)



Source: *WaterTrax (2016)*

In the last five years, manganese consistently had the highest proportion of samples that measured over defined exceedance levels. There has been a slight increase in iron exceedances during this time, and fluoride exceedances have remained low. The proportion of samples with arsenic and lead exceedances has been relatively unchanged.

Figure 17 Percentage of samples exceeding chemical water standards (2011-2015)



Source: *WaterTrax (2016)*

Where did the exceedances occur?

In the last five years,

- There were no exceedances reported in Prince Edward Island First Nations communities
- Fluoride and arsenic exceedances have been specific to Nova Scotia First Nations communities only
- Iron and manganese exceedances have occurred mostly in Nova Scotia and New Brunswick
- Lead exceedances have been reported in Newfoundland and Labrador and Nova Scotia only

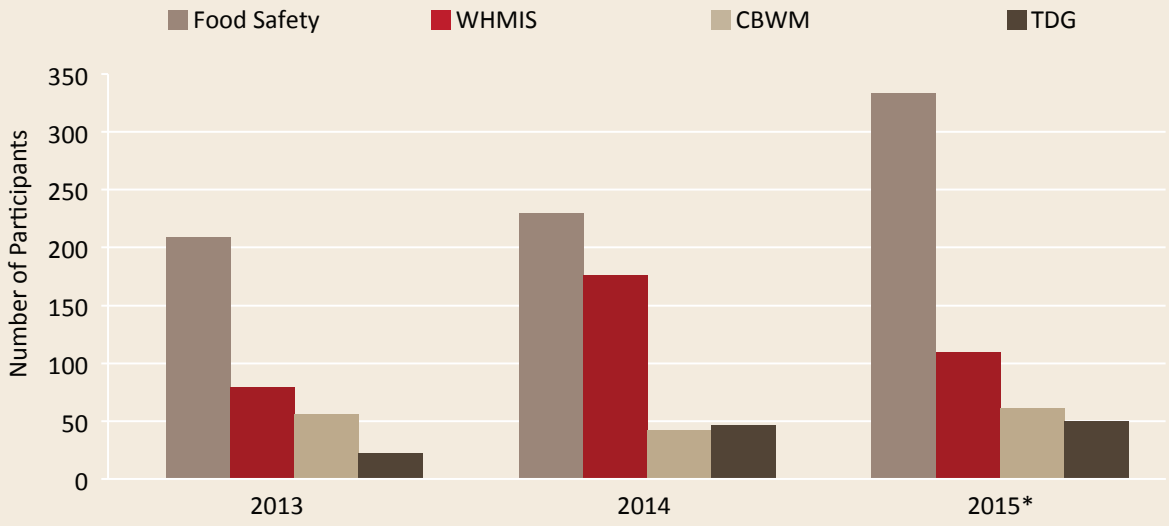
Community Based Water Monitor training event at a local community college involves testing on core competencies in order to receive continuing education units. The training is a joint collaboration between federal government departments, First Nations, a recognized learning institution and other partners.

Environmental Health Training

Each year, EHOs hold training sessions which allow participants to become knowledgeable and certified in a variety of skill sets, including food safety, transportation of dangerous goods and workplace materials safety. This training prepares individuals for employment opportunities and is often a requirement for jobs within the industry.

The top four training sessions with the most participants are shown in Figure 18. In 2015, there were 493 participants who took part in Food Safety, Workplace Hazardous Materials Information System (WHMIS) and/or Transportation of Dangerous Goods (TDG) training. The majority of participants were involved in food safety training.

Figure 18 Number of participants, by training session type and year (2013-2015)



*The 2015 CBWM training is counted as part of this year, but the session was delayed and took place in early 2016.
Source: *EHIS (2016)*

What are the types of training?

Food Safety
Training of staff is a prerequisite for food establishments to ensure proper food safety practices. EHOs provide training to First Nation food handlers using a nationally recognized training program - the National Food Safety Training Certification Group.

Workplace Hazardous Material Information System (WHMIS)
WHMIS is a Canada-wide system designed to give employers and workers information about hazardous materials used in the workplace. EHOs provide WHMIS training for band employed staff to promote and support health and safety in the workplace.

Community-Based Water Monitoring (CBWM)
Monitoring of the water quality is a key element of the multi-barrier approach to ensure safe drinking water. First Nations CBWM training is completed in collaboration between Health Canada, First Nations and a recognized learning institute on an annual basis. Individuals receive Continuing Education Units upon successful completion of a written as well as practical evaluation.

Transport of Dangerous Goods (TDG)
Regulations outline responsibilities of the employer and the employee, who may be shippers, carriers or receivers of dangerous goods. EHOs provide training to First Nations staff on the safe handling, storage, packaging, transport and disposal of biomedical waste.

SECTION 4: PHYSICAL HEALTH

Maternal and Child Health

Risk Factors

Smoking during pregnancy is associated with many negative health outcomes including: stillbirths, low birth weight, risk of Sudden Infant Death Syndrome, and risk of certain birth defects (i.e., cleft lip or cleft palate)[22].

Exposure to alcohol during pregnancy is linked with Fetal Alcohol Spectrum Disorder, which is a range of conditions that includes cognitive, behavioural, neurodevelopmental, physiological, or physical impairments that effect children over their lifespan. 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[23].

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, and higher mortality rates. Teenage mothers are also at risk of having poorer educational outcomes[23].

Infants born to mothers who have gestational (or maternal) diabetes are at risk of having a high birth weight and of becoming obese and developing Type 2 diabetes later in life[24]. Women who have gestational diabetes are also at risk of developing Type 2 diabetes after pregnancy.

In 2015-2016, the most common prenatal risk factor reported for Atlantic region First Nations mothers living on-reserve was smoking, with 39 in every 100 (39%) mothers smoking during their pregnancy. See Figure 19 for the prevalence of other prenatal risk factors. The rates for prenatal risk factors were comparable to the rates for the previous two years.

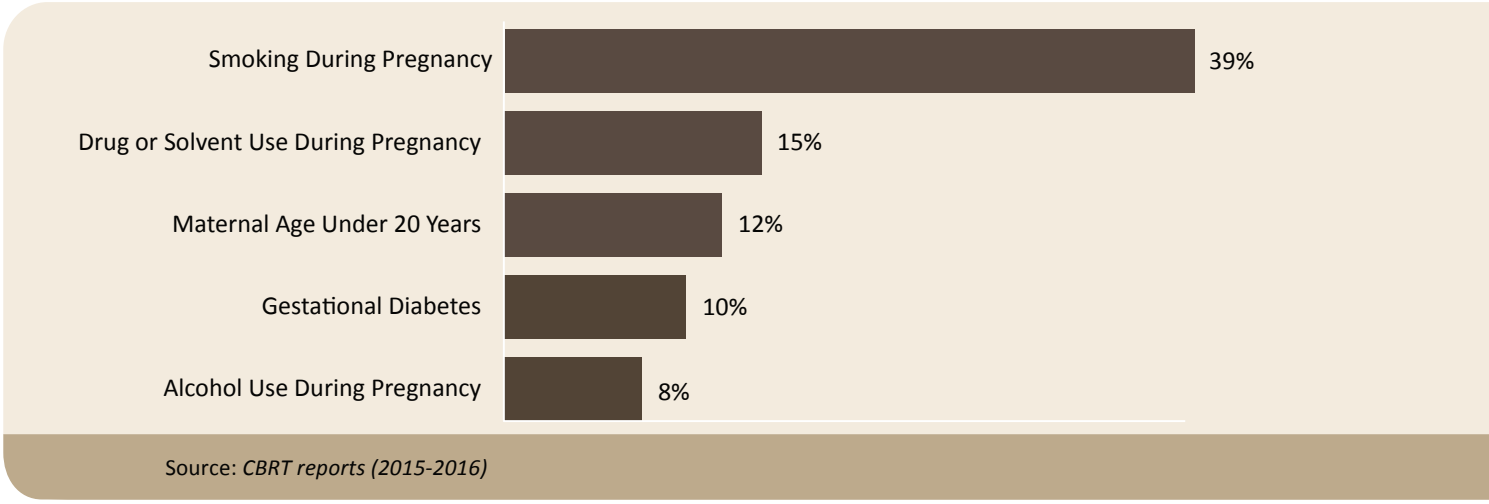
In the last large-scale survey specific to new mothers in Canada,

- The prevalence of smoking during the last three months of pregnancy ranged from 14% in Nova Scotia to 20% in Prince Edward Island
- The proportion of women who reported drinking alcohol during pregnancy ranged from 3% in Prince Edward Island to 5% in Nova Scotia and New Brunswick

- The prevalence of taking street drugs in the three months prior to pregnancy ranged from 5% in Prince Edward Island to 9% in Nova Scotia
- Nationally, about 1% of new mothers reported taking street drugs during pregnancy

Source: *Maternity Experiences Survey – Data Tables (2006-2007)*

Figure 19 Prenatal risk factors among Atlantic First Nations mothers on-reserve (2015-2016)



Source: *CBRT reports (2015-2016)*

The birth rate is calculated by dividing the number of live births by the population size. The birth rate is expressed as the number of births per 1 000 people in the population per year.

Birth Rate

In 2015-2016, the birth rate for Atlantic region First Nations on-reserve was 22 births per 1 000 people[‡‡]. This compares with 20 and 19 births per 1 000 people in the previous two years. This is higher than the birth rate in the general Atlantic population, which ranged from 9 births per 1 000 people in Newfoundland and Labrador to 10 births per 1 000 in Prince Edward Island, and the general Canadian population (11 births per 1 000 people) in 2013[25].

Birth Weight

Low birth weight = Less than 2 500 g (5 lb 9 oz)

Healthy birth weight = 2 500 g to 4 000 g (5 lb 9 oz – 8 lb 11 oz)

High birth weight = Greater than 4 000 g (8 lb 11 oz)

In 2015-2016, out of every 100 babies born on-reserve in the Atlantic region, 78 (78%) had a healthy birth weight, 17 (17%) had a high birth weight and 5 (5%) had a low birth weight.

By comparison, in 2013, among babies born in the general Atlantic population, 81% had a healthy birth weight, 13% had a high birth weight and 6% had a low birth weight[26]. Due to risk factors associated with high birth weight (e.g., diabetes, obesity through childhood to adulthood, and childbirth complications)[27], the higher proportion of Atlantic Region First Nations babies born who weighed over 4000g (8lb 11oz) at birth may be of concern.

‡‡ The data in the CBRT does not separate live births from still births. Thus, if considered a live birth rate, this value may be an overestimate, depending on how the specific question was interpreted in the CBRT process.

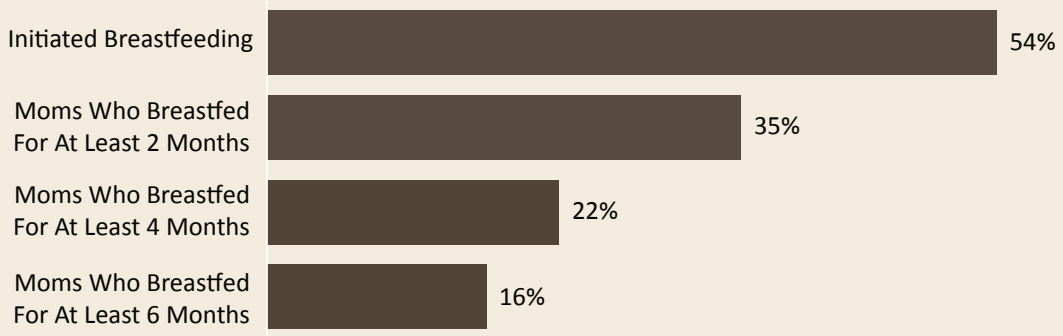
Breastfeeding

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 recognized as the natural and preferred method of feeding infants[28, 29].

In 2015-2016, 32 communities submitted breastfeeding data, however only 11 are included here due to data inconsistencies (Figure 20). Similarly in 2012-2013 and 2013-2014 almost all communities reported data for each year, yet only data for 11 or 12 communities were used. The data inconsistencies were similar for all three reporting periods and were likely due to unclear wording of the question in the CBRT where communities are asked about breastfeeding.

In 2015-2016, among First Nations mothers living on-reserve whose infant had turned six months in the reporting year, just over one-half (54%) initiated breastfeeding. Out of every 100 mothers who initiated breastfeeding, 35 (35%) continued to breastfeed for at least two months, 22 (22%) continued for at least four months and 16 (16%) continued for at least six months (Figure 20).

Figure 20 Proportion of Atlantic First Nations mothers on-reserve, by breastfeeding duration (2015-2016)



Source: *CBRT reports (2015-2016)*

Over the past three years (2013/14-2015/16) the proportion of mothers who:

- Initiated breastfeeding decreased from a high of 63% (2014-2015) to a low of 54%
- Breastfed for at least two months decreased from 44% to 35%
- Breastfed for at least four months decreased from 28% to 22%
- Breastfed for at least six months decreased from 19% to 16%

In comparison, the rate of breastfeeding initiation in the general population in the Atlantic provinces ranged between 57% in Newfoundland and Labrador and 83% in Nova Scotia in 2011-2012[30]. The rate of exclusive breastfeeding[§§] for at least six months among the general population in the Atlantic region was 19% during this time[31].

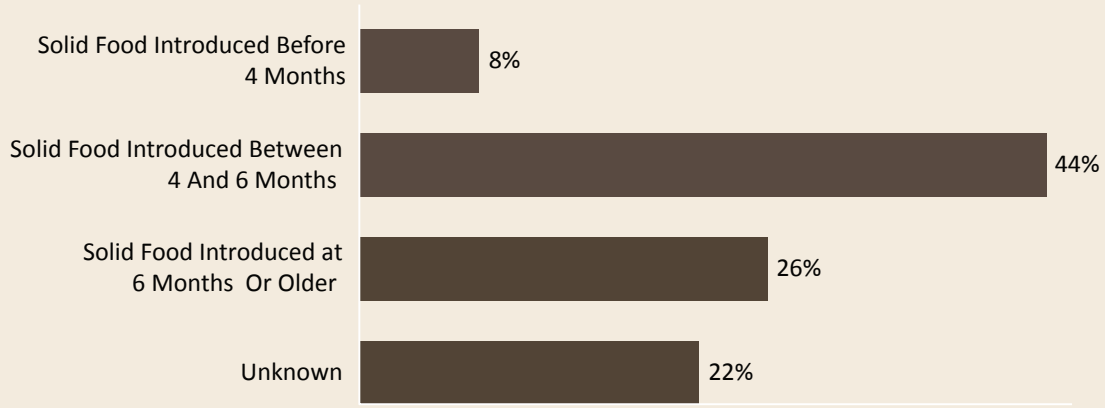
[§§] Exclusive breastfeeding is when a baby is fed breast milk only (no other liquids or solids). The CBRT data for First Nations women living on-reserve does not specify that breastfeeding must be exclusive, so the rates have slightly different meanings.

Introduction to Solid Foods

It is recommended that solid foods are introduced to infants at six months of age with continued breastfeeding for two years and beyond[32].

Twenty-six out of every 100 (26%) infants who turned six months old in 2015-2016 were introduced to solid foods at six months or older (Figure 21).

Figure 21 Percentage of Atlantic First Nations babies on-reserve introduced to solid food, by time of introduction (2015-2016)



Source: *CBRT reports (2015-2016)*

Over the past three years, the percentage of babies introduced to solid food:

- Before four months of age remained consistent (around 8%)
- Between four and six months of age increased by 10% (34% to 44%)
- At six months or older was consistent at approximately 25%
- The proportion of babies with unknown start dates decreased by 14%

Source: *Atlantic region CBRT reports (2013-2014 to 2015-2016)*

In the general Canadian population, 11% of mothers who initiated breastfeeding introduced solid food to their babies at three months or younger, 32% at four to five months and 57% at six months or more[31].

Chronic Disease

Smoking

Tobacco and cigarette smoking are global public health issues. Smoking is a risk factor for cancer, heart disease, lung diseases, chronic obstructive pulmonary disease (COPD) and diabetes. Smoking is also associated with an increased risk of developing eye diseases and tuberculosis. However, among those smokers who are aware of the dangers associated with smoking, most want to quit. Smoking cessation medications and counselling have been shown to more than double the chance of success for a smoker trying to quit.

Sources: *World Health Organization*[33], *Centers for Disease Control and Prevention*[34]

In Canada, cigarette smoking decreased in 2015[35]; 13% of Canadians aged 15 years and older reported being current cigarette smokers compared to almost 15% in 2013. However, two provinces in the Atlantic region have the highest smoking rates in the country. In both Newfoundland and Labrador and Nova Scotia, 18% of people 15 years and older reported they were smokers in 2015. The smoking rates for New Brunswick and Prince Edward Island were about 14% and 12%, respectively[36].

According to the sub-Atlantic FNREEES, 80 out of every 100 (80%) Atlantic region First Nations adults living on-reserve who were surveyed reported living in a smoke-free home; however, 40 out of 100 (40%) reported being daily smokers. This is more than twice as high as the rate observed in the Canadian non-Aboriginal population. Approximately, 14% of First Nations adults reported being occasional smokers and of these, most started smoking before 16 years of age (70%)[7].

People who quit smoking lower their risk for developing diseases and dying early[37]. In 2015, 27% of Canadians self-reported being former smokers[35]. Of these former smokers, only 6% quit less than one year ago. The majority of former smokers (94%) were long-term quitters[35].

Smoking Cessation Products

Smoking cessation products can be effective in helping people quit smoking and maintain a smokefree lifestyle[37]. Products include nicotine replacement therapies such as Nicoderm®, Nicorette®, Champix®, and Zyban®, which are covered by NIHB.

In 2015, 3 out of 100 (3%) Atlantic region band members made one or more claim(s) for smoking cessation products. The highest proportion of claimants was observed among Nova Scotia band members (4 out of 100; 4%), while the lowest was observed among Newfoundland and Labrador band members (excluding the Qalipu) and among the Qalipu, 1 and 2 out of 100, respectfully.

From 2011-2015, the prevalence of claimants for smoking cessation products was:

- Relatively stable among Atlantic region band members (3%) and for each province (2% - 4%)
- Highest among Nova Scotia band members (4%)

In 2015, the prevalence of smoking cessation claimants among Atlantic region band members increased with age. The highest prevalence was observed in the 50-59 age group (5 out of 100; 5%). Until the age of 70, the rates were consistently higher among females than among males. These findings were similar across all four provinces.

Diabetes

Diabetes is one of the most common self-reported health conditions among Atlantic region First Nations people living on-reserve. In 2014-2015, about 16% of adults reported having diabetes[7]. This is comparable to the percentage of Canadian First Nations peoples in 2008-2010 (16%)[38].

FNIHB funds the Aboriginal Diabetes Initiative, which helps improve the health of First Nations people living with Type II Diabetes. For 2015-2016, out of every 100 Atlantic region First Nations living on-reserve:

- 13 (13%) received non-diagnostic diabetes screening(s)
- 22 (22%) received support or education at a diabetes clinic

Source: *Atlantic region CBRT reports (2015-2016)*

Antidiabetic Medication Claims

In 2015, 9 out of 100 (9%) Atlantic region band members made one or more claim(s) for antidiabetic medications. This is a slight decrease from 2011 when 10% (10 out of every 100) of Atlantic region band members made claims. When comparing among provinces, Newfoundland and Labrador (excluding the Qalipu) and Nova Scotia band members had a slighter higher proportion of claimants (10 out of 100) than the other provinces (Table 2).

The lowest percentage of claimants was observed in Prince Edward Island. When these rates are compared with reported diabetes rates from the general Atlantic population (age 12 years and older), they are higher for all four Atlantic provinces (Table 2)[39].

Currently, there is no formal surveillance system in place to monitor diabetes among First Nations people living on-reserve. Antidiabetic medication claims processed through the NIHB program can be used to estimate the number of people using antidiabetic medications in the Atlantic region.

Table 2 Prevalence of antidiabetic medication claimants among Atlantic First Nations band members and prevalence of self-reported diabetes in general Atlantic population, by province (2015), age-standardized*

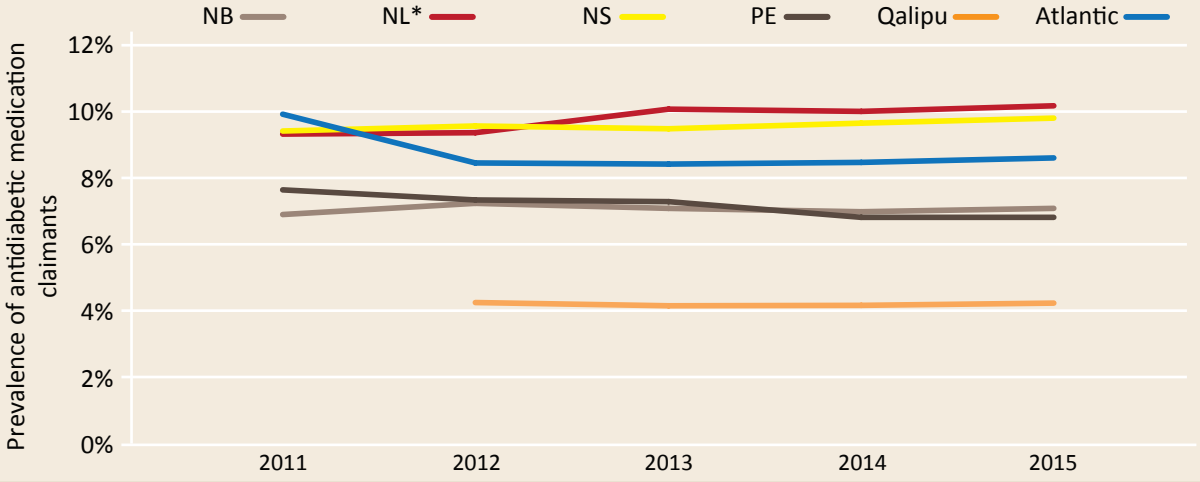
Province	Prevalence of antidiabetic medication claimants among Atlantic First Nations band members**	Prevalence of self-reported diabetes among the general Atlantic population***
NL	10%	7%
PE	7%	6%
NS	10%	6%
NB	7%	6%

*Age standardized to 1991 Census population *** CCHS excludes on-reserve population
Sources: ***NIHB pharmacy claims database (2017); ***CCHS Annual Component (2014)*

From 2011 to 2015,

- Prince Edward Island showed a slight increase in the prevalence of claimants.
- Newfoundland and Labrador had the largest increase in prevalence over the previous five years.
- Nova Scotia and Newfoundland and Labrador (excluding the Qalipu) had the highest prevalence of claims.
- The Qalipu (2012-2015) had the lowest prevalence of claimants, which influenced a downward shift in the Atlantic region prevalence from 2012 onwards.

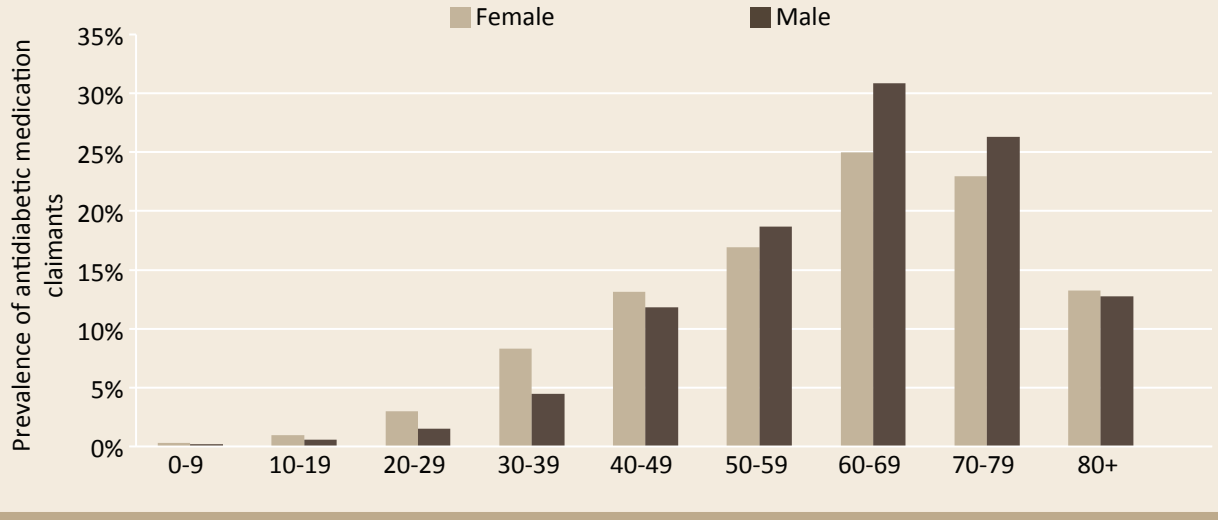
Figure 22 Prevalence of antidiabetic medication claimants among Atlantic First Nations band members, by province (2011-2015), age standardized rates**



* NL excluding Qalipu **Age-standardized to 1991 census population
Source: *NIHB pharmacy claims database (2017)*

In 2015, the prevalence of antidiabetic medication claimants increased with increasing age. The highest proportion of claimants occurred in the 60-69 age group (27%). More females than males submitted claims in each age group up to 49 years and in people aged 80 years and older. Since pregnant women are included in these data, the higher percentage of female claimants in the younger age groups could be indicative of the presence of gestational diabetes.

Figure 23 Prevalence of antidiabetic medication claimants among Atlantic First Nations band members, by age and sex (2015)



Source: *NIHB pharmacy claims database (2017)*

Antidiabetic Claims Incidence

Incidence

The incidence shows the number of new people who made a drug claim in a year. This means that this was their first time ever making a claim for this drug. For example, if someone started using a new medication in 2015 and made a claim, they would be counted in the incidence because they had never made a claim for that drug before (e.g., 2014 and earlier). This is used to understand how many people are starting on new medication.

Prevalence

The prevalence shows the number of people who made claims for the drug in a year. It does not matter if they made claims for the same drug in the past. This is used to understand how many people in total are using a particular drug.

In 2015, the incidence of new antidiabetic medication claimants in the Atlantic region was about 10 per 1 000 First Nations band members compared to 9 per 1 000 in 2014. The highest incidence rate was observed in Newfoundland and Labrador (12 per 1 000 band members) while New Brunswick had the lowest incidence of antidiabetic medication claimants (8 per 1 000 band members).

Each Atlantic province demonstrated an increase in the incidence of new antidiabetic medication claimants between 2014 and 2015. Prince Edward Island increased by 4%, while Newfoundland and Labrador increased by 3%.

Cardiovascular Disease

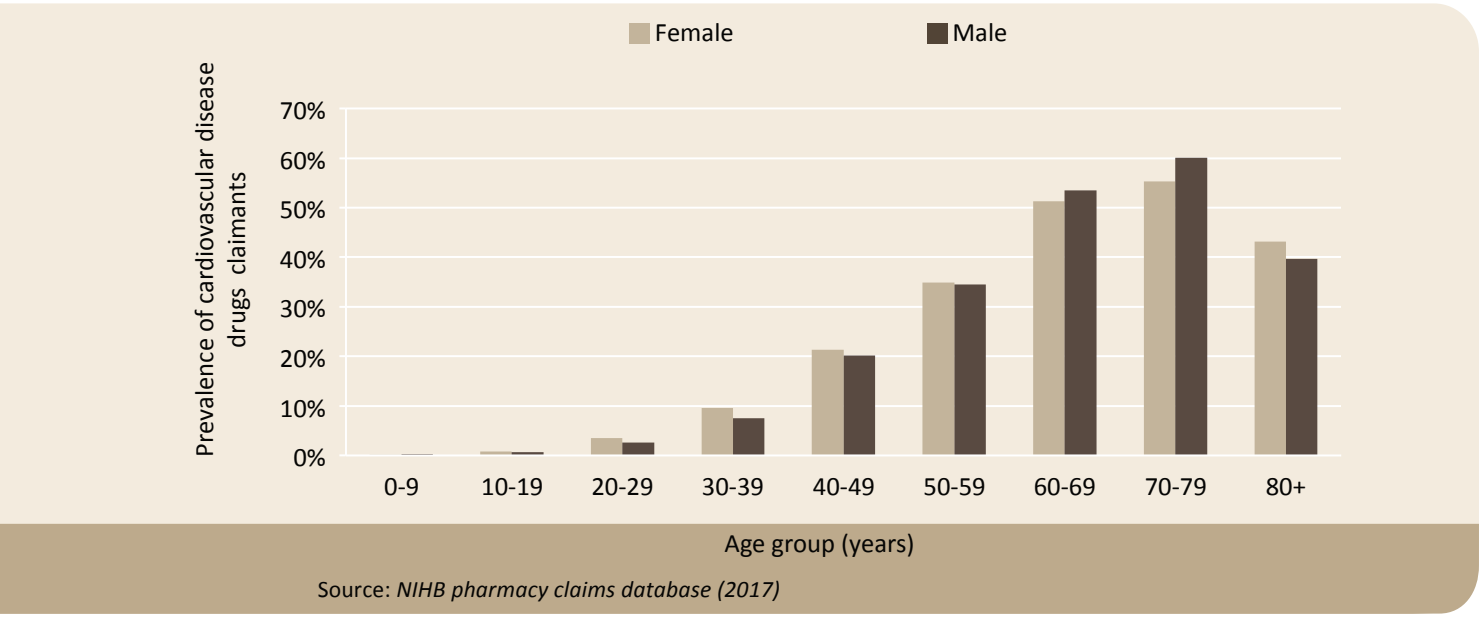
High blood pressure and heart disease were among the most commonly diagnosed long-term health conditions reported among Atlantic region respondents to the FNREEES. In 2014-2015, out of every 100 adult respondents, 24 (24%) reported being diagnosed with high blood pressure and 8 (8%) reported being diagnosed with heart disease[7]. At the national level in 2008-2010, the prevalence of self-reported high blood pressure and heart disease among First Nations people living on-reserve was 22% and 6%, respectively[38].

In 2014, about 18% of Canadians self-reported being diagnosed with high blood pressure. When looking at the prevalence of self-reported high blood pressure by province, Newfoundland and Labrador had the highest (25%), while Nova Scotia had the lowest (20%)[30].

Cardiovascular Drug Claimants

In 2015, 16 out of 100 (16%) Atlantic region First Nations band members made one or more claim(s) for cardiovascular disease (CVD)-related drugs. The percentage of claimants was higher among females (17%) than among males (15%; Figure 24). The prevalence of CVD drug claimants increased with increasing age, with the majority among those aged 60-79 years.

Figure 24 Prevalence of cardiovascular disease drug claimants among Atlantic First Nations band members, by age and sex (2015)

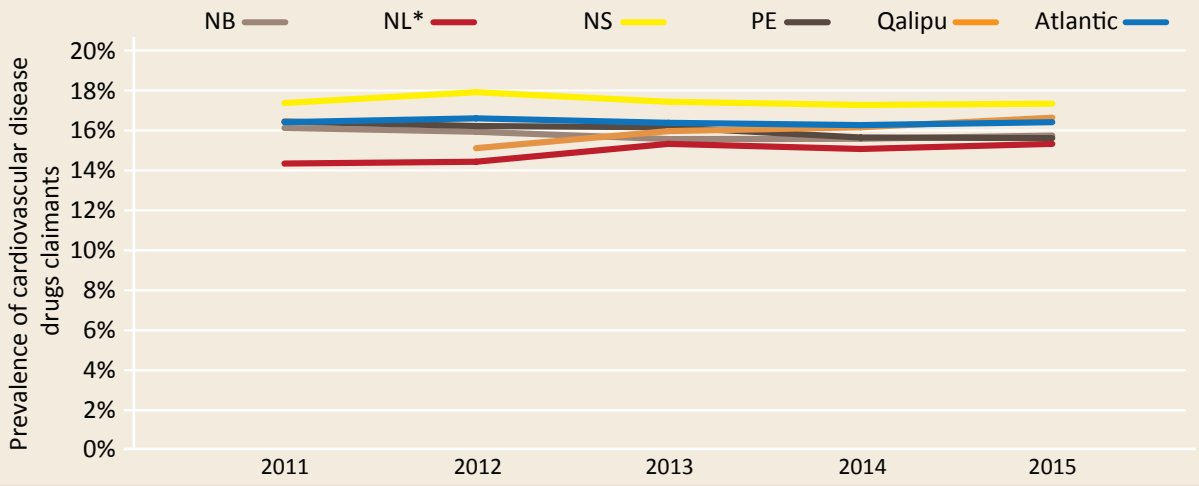


Source: *NIHB pharmacy claims database (2017)*

Over the past five years, the prevalence of cardiovascular disease drug claimants has remained relatively stable in the Atlantic region. Between 2011 and 2015, the prevalence of CVD claimants was:

- Relatively stable among Atlantic region band members and among all four provinces
- Highest among Nova Scotia band members
- Lowest among Newfoundland and Labrador band members

Figure 25 Prevalence of cardiovascular disease drug claimants among Atlantic First Nations band members, by province (2011-2015)



* NL excluding Qalipu
Source: *NIHB pharmacy claims database (2017)*

Pain Management

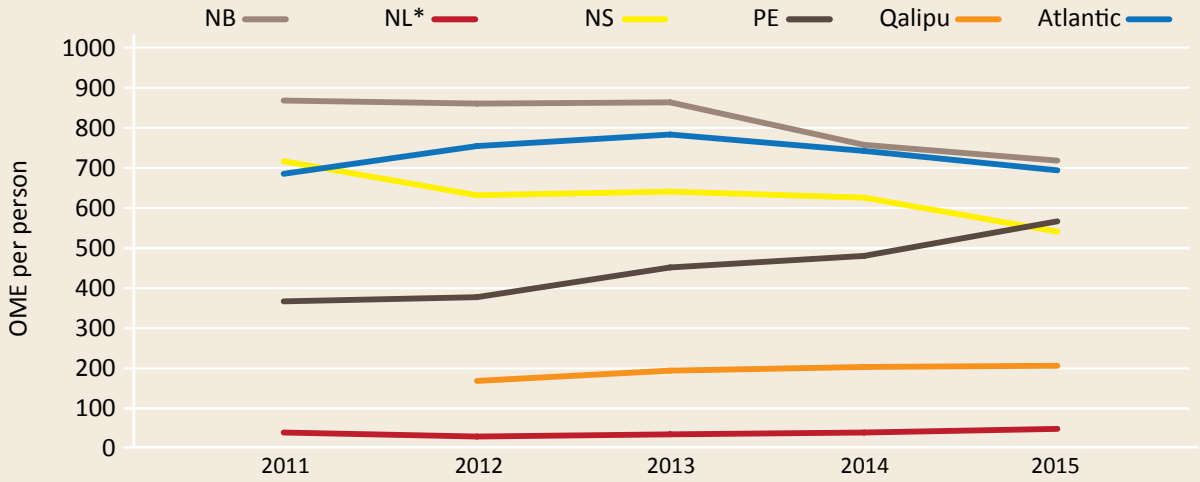
Opioids are medications typically prescribed for pain management. However, they can also be used to control moderate to severe cough, control diarrhea and treat addiction to other opioids. Common types of opioids include oxycodone, morphine, fentanyl, codeine and hydromorphone. While opioids can play an important role in the treatment of certain health conditions, long-term use can lead to misuse and addiction.

Oral Morphine Equivalent, or OME, is a clinical definition used to measure the amount of opioids in a given population. All claimed opioids have been converted to an equal dose of oral morphine so they can be compared over time and between populations

Sources: *Government of Canada[40], National Opioid Use Guideline Group[41]*

Between 2011 and 2015, the overall OME per person among Atlantic region band members aged 15 years and older increased to its highest in 2013, before decreasing over the next two years (Figure 26).Despite having the highest rates provincially, New Brunswick and Nova Scotia First Nations band members showed a decrease in the OME per person between 2011 and 2015. Prince Edward Island First Nations showed an increase in the OME per person, slightly surpassing Nova Scotia in 2015. Newfoundland and Labrador, and the Qalipu, had the lowest rates during the same period.

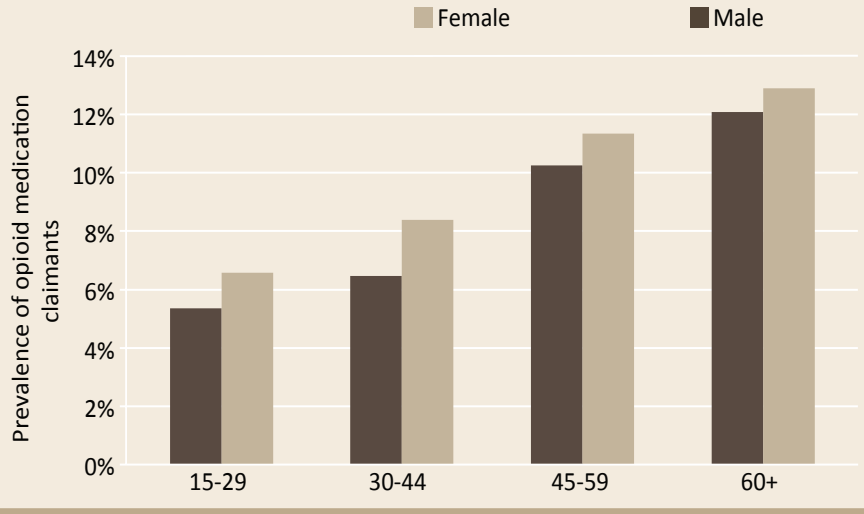
Figure 26 OME per person among Atlantic First Nations band members (15+ years), by province (2011-2015)



* NL excluding Qalipu
Source: *NIHB pharmacy claims database (2017)*

In 2015, the overall claimant prevalence was slightly higher among females (9 out of 100; 9%) compared to males (8 out of 100; 8%).This is also true when compared by age (Figure 27). The prevalence of opioid claimants also increased with increasing age in 2015.

Figure 27 Prevalence of opioid medication claimants among Atlantic First Nations band members (15+ years), by age and sex (2015)



Source: *NIHB pharmacy claims database (2016)*

Notifiable Disease

Notifiable diseases are communicable diseases that have been identified as important priorities for surveillance, and preventive and control efforts[42]. They are required by legislation to be reported to appropriate provincial public health authorities.

In 2015, the top three most commonly reported communicable diseases among First Nations on-reserve in the Atlantic region were: chlamydia, hepatitis C and methicillin-resistant Staphylococcus aureus (MRSA).

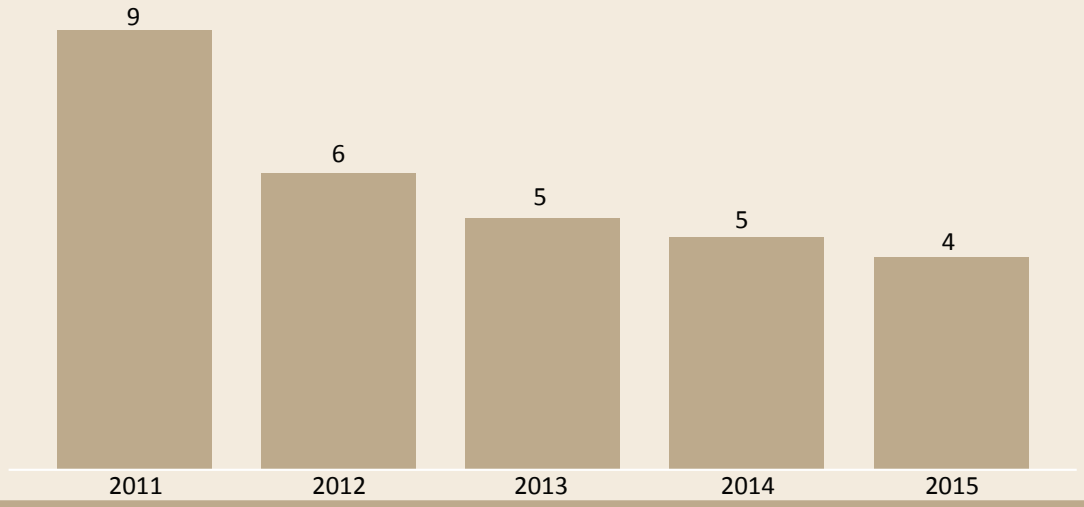
Chlamydia

Chlamydia is a common, but treatable sexually transmitted infection. Often people with chlamydia do not show any signs or symptoms; however, if left untreated it can permanently damage a person's reproductive system. Pregnant women can transmit chlamydia to their babies during childbirth. This increases the risk of the newborn developing eye infections or pneumonia. Women with untreated chlamydia may develop pelvic inflammatory disease, which can lead to infertility or ectopic pregnancy. Furthermore, chlamydia can also increase an individual's risk of transmitting or becoming infected with HIV.

Source: *Centers for Disease Control and Prevention*[43]

Since 2011, the crude chlamydia rates for the Atlantic region on-reserve have been decreasing, from about 9 per 1 000 compared to 4 per 1 000 in 2015 (Figure 28). This change represents a 53% decrease in chlamydia rates. In 2015, the age-standardized chlamydia rate was slightly higher among the Atlantic region First Nations on-reserve population (4 per 1 000 people) than among the general Canadian population (3 per 1 000 people).

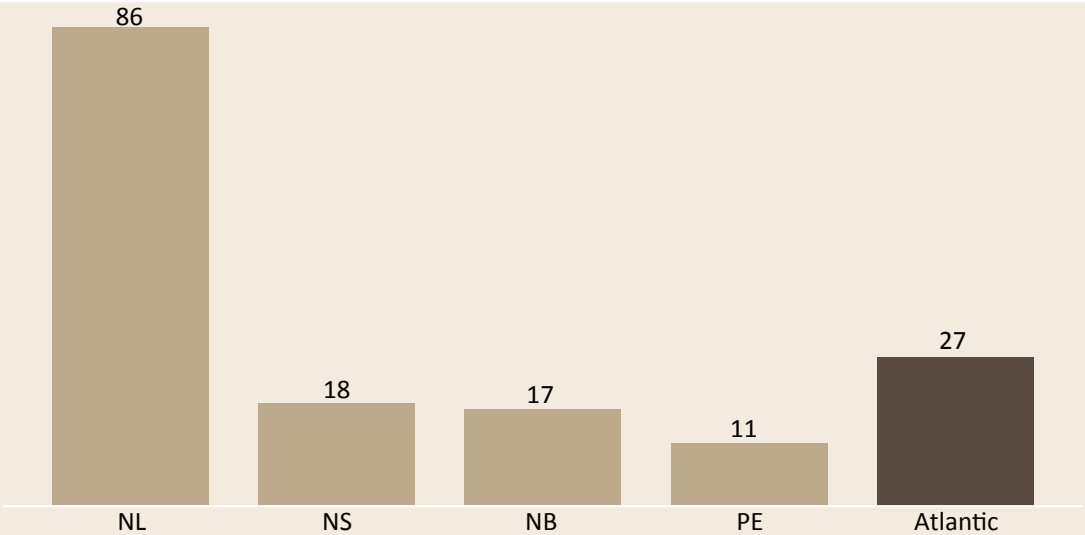
Figure 28 Chlamydia rates (per 1 000 people) among Atlantic First Nations on-reserve, by year (2011-2015)



Sources: *Atlantic region Teleform community reports (2011-2015); INAC Indian Registry System (2015)*

Due to small numbers, rates between the Atlantic region and the four provinces cannot be compared by year. But, when the reported cases are combined for 2011-2015, the rates can be reported as one overall rate for each province. When the rates are reported this way, the chlamydia rate for Newfoundland and Labrador is about 3 times higher than the rate for the Atlantic region, 5 times higher than Nova Scotia and New Brunswick, and about 8 times higher than Prince Edward Island (Figure 29).

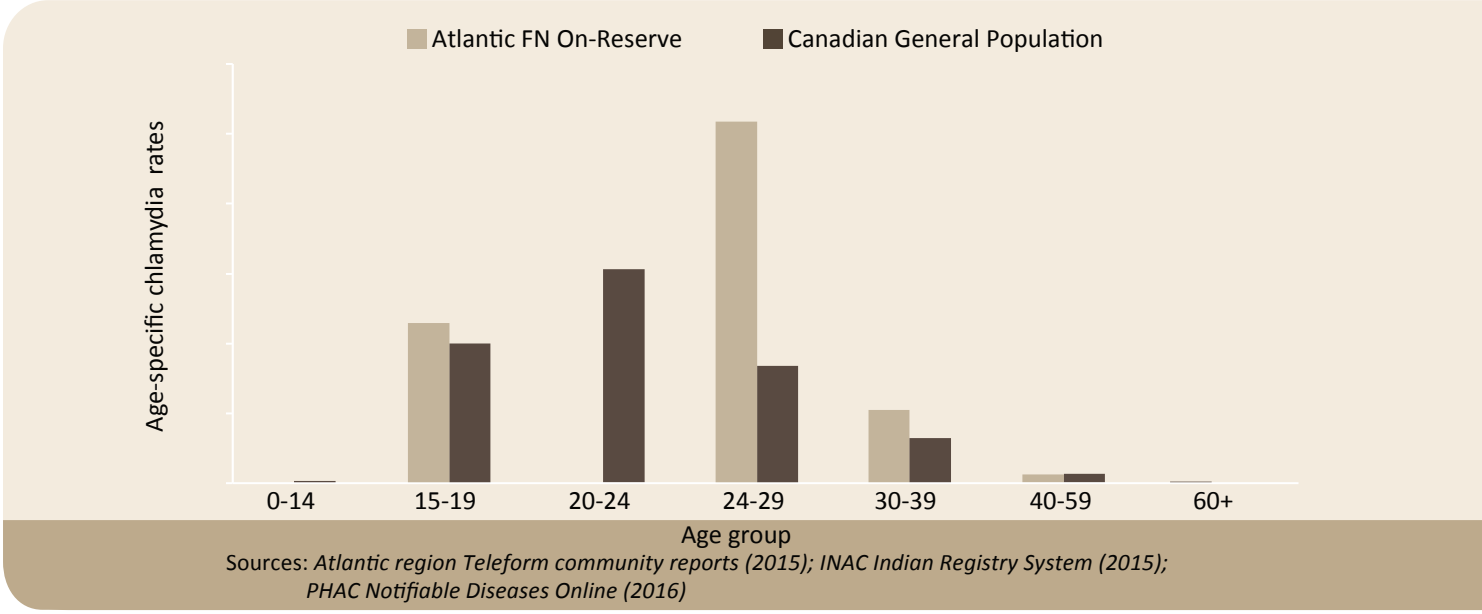
Figure 29 Chlamydia rates (per 1 000 people) among Atlantic First Nations on-reserve, by province, (2011-2015 combined)



Sources: *Atlantic region Teleform community reports (2011-2015); INAC Indian Registry System (2015)*

When comparing by age group, the chlamydia rate is higher among Atlantic region First Nations than among the Canadian population in the 15-19, 25-29, and 30-39 age groups (Figure 30). Chlamydia rates are higher among females than among males in both the Atlantic region First Nations on-reserve population and the general Canadian population (not shown).

Figure 30 Age-specific chlamydia rates (per 1 000) among Atlantic First Nations on-reserve (2015) and general Canadian population (2014)



Sources: *Atlantic region Teleform community reports (2015); INAC Indian Registry System (2015); PHAC Notifiable Diseases Online (2016)*

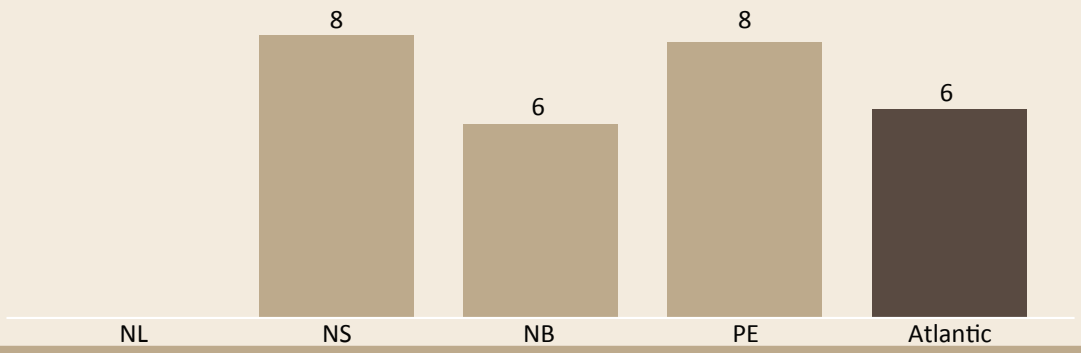
Hepatitis C Virus

Hepatitis C is a liver disease that is caused by the Hepatitis C Virus (HCV). HCV is transmitted when blood infected with HCV gets into the bloodstream of an uninfected person. Like chlamydia, many infected with HCV may not show any signs or symptoms. But for those that do, common symptoms include fever, malaise, joint pain, nausea and vomiting, jaundice, stomach pain, and loss of appetite. As HCV causes inflammation, it can lead to permanent liver damage. The inflammation can lead to scarring, which in turn can lead to cirrhosis. Developing cirrhosis of the liver increases an individual's risk of developing liver cancer. Approximately 60% to 70% of people with HCV do not develop symptoms until liver damage has already occurred.

Source: *Public Health Agency of Canada*[44]

From 2011 to 2015, HCV rates were about 1 case in every 1 000 people for Atlantic region First Nations on-reserve. For the years 2011-2015 combined, the rate of HCV in Nova Scotia was about 8 per 1000 people compared to 6 per 1 000 and 8 per 1 000 for New Brunswick and Prince Edward Island, respectively (Figure 31).

Figure 31 HCV rates (per 1 000 people) among Atlantic First Nations on-reserve, by province (2011-2015 combined)



Sources: *Atlantic region Teleform community reports (2011-2015); INAC Indian Registry System (2015)*

When adjusting for differences in age structure, the HCV rate was higher among the Atlantic First Nations on-reserve population (1.5 per 1 000 people in 2015) than the general Canadian population (0.3 per 1 000 in 2015). This was also true when comparing by age group and sex. Both the age-specific and sex-specific HCV rates (per 1 000) were noticeably higher among Atlantic region First Nations than the Canadian population (not shown).

Methicillin-resistant Staphylococcus aureus (MRSA) is a form of Staphylococcus aureus that is resistant to treatment with the antibiotic methicillin. MRSA can be present on the skin and in the nose of healthy individuals. If MRSA enters the body it can cause infection. MRSA can cause serious infections of the bloodstream and bones and/or lungs. Typically MRSA is spread by direct skin-to-skin contact or indirectly by contact with contaminated items. MRSA most often occurs in hospitals and other healthcare facilities. Individuals with chronic illnesses and immunosuppression are more susceptible to MRSA infections.

Source: *Public Health Agency of Canada*[45]

MRSA

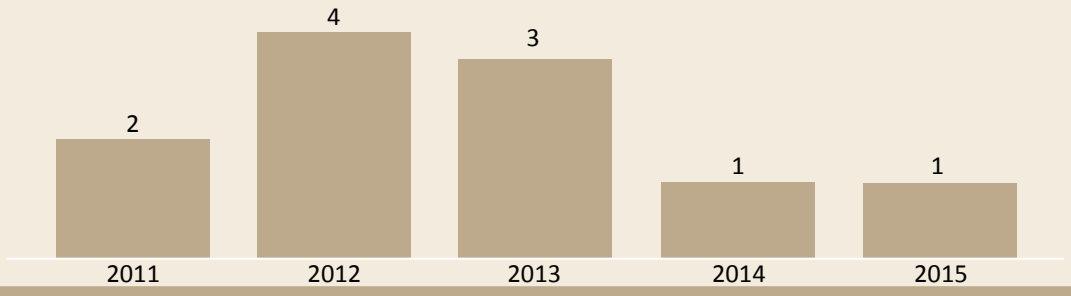
Newfoundland and Labrador experienced a high rate of MRSA between 2011 and 2015. For this five year period, the combined rate of MRSA among First Nations on-reserve was much higher among those living in Newfoundland and Labrador (73 per 1 000) compared to other Atlantic region First Nations (11 per 1 000). This is more than six times higher than the regional rate ***.

This outbreak also influenced the annual rates for the Atlantic region. Between 2011 and 2012, the annual MRSA rate among Atlantic First Nations on-reserve doubled from about 2 per 1 000 to 4 per 1 000 (Figure 32). However, since 2013 the annual rates have been steadily decreasing. In 2015, the MRSA rate among Atlantic First Nations on-reserve was approximately 1 per 1 000. The overall decline in MRSA rates could be due to the intensive public health initiatives carried out during this period, including:

*** This information was provided by the FNIHB CDC Unit and the Health Director of the community in question. Due to the nature of these data trends, written consent was received to include this information in this report.

- Collaboration between community, regional, provincial and federal public health professionals
- Development and distribution of prevention and awareness materials/resources about MRSA and infection control, including targeted education and awareness activities for community members
- Continued monitoring of data by collecting, collating, interpreting and distributing important data MRSA trends to decision makers

Figure 32 MRSA rates (per 1 000 people) among Atlantic First Nations on-reserve, by year (2011-2015)



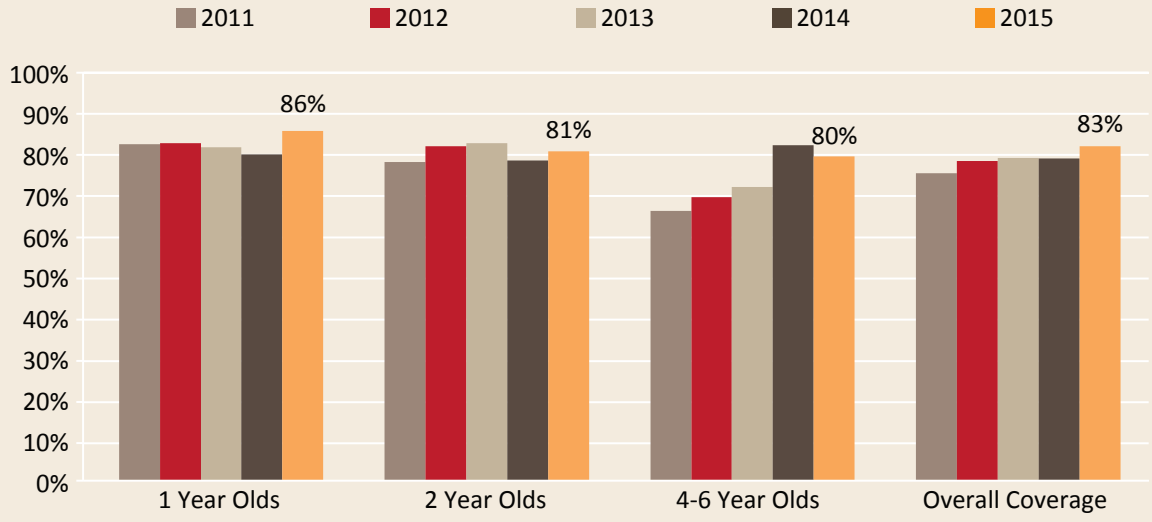
Sources: *Atlantic region Teleform community reports (2011-2015); INAC Indian Registry System (2015)*

Childhood Immunization

The prevention of illness, disability and death from vaccine-preventable diseases can be attributed to immunization[46]. High immunization coverage helps prevent the spread of disease and occurs when individuals are immunized according to schedules recommended by experts[47]. This is particularly important for children as they can be more vulnerable to certain diseases.

In the Atlantic region, immunization coverage rates are high among First Nations children living on-reserve. From 2011-2015, the overall immunization coverage rates for Atlantic region First Nations children living on-reserve increased by about 9% (Figure 33). Among 1-year-olds, there was a 4% increase in immunization coverage and a 3% increase among 2-year- olds over the same period. The largest change was observed among the 4-6 year olds, increasing from 66% in 2011 to 83% in 2014, before dropping to 80% in 2015 (20% change between 2011 and 2015).

Figure 33 Immunization coverage rates for Atlantic First Nations children on-reserve, by age and year (2011-2015)



Source: *Atlantic region Community Immunization Coverage Rate Reports (2011 - 2015)*

A review of community immunization data (2009-2014) conducted in 2015 found that immunization coverage rates for 4-6 year olds in Atlantic First Nations were found to be lower than rates for 1- and 2- year-olds in the same communities[48].

In 2016, a project exploring both challenges and successful strategies that impact immunization rates for 4-6 year olds in Atlantic First Nations communities was conducted. A graduate student, who completed a Master's of Public Health practicum with the FNIHB Atlantic CDC unit, conducted a review of the literature and a survey of Atlantic First Nations band-employed community health nurses (CHNs)[49].

A number of strategies that positively impact childhood immunization rates were identified in the literature review: using parental reminders; tailoring programs to suit special populations; increasing health care provider competence; adequately staffing and resourcing health care settings that provide immunization services; and using electronic records. A parental reminder was the intervention most frequently identified as resulting in an increase in immunization rates (47%). This suggests that parents of under-immunized children may not be aware that their children are behind schedule and that they are not necessarily opposed to immunization. It may be a lack of awareness of scheduling that drives down rates.

There was a 54% response rate for the CHN survey (23/43). The most frequently discussed interventions during the CHN interviews were parental reminders; use of social media; collaboration with community partners; and use of incentive programs with both parents and children.

The most common challenges identified by CHNs in regard to increasing immunization rates were: lack of transportation; lack of child care; and lack of consistency regarding available contact details. These findings were consistent with the literature that shows certain populations have a greater likelihood of decreased immunization rates due to significant associated barriers.

Considerations for future programming strategies include: exploration of social media use for immunization programs in First Nations communities; ongoing support for education and training of CHNs related to immunization orientation, skills and knowledge; providing information on pain management to nurses to assist parents in coping with children who are distressed during appointments; ongoing project funding from FNIHB to support immunization programs; added support from FNIHB for annual proposal completion for project funds; and revision of reporting forms as needed.

SECTION 5: MENTAL WELLNESS

In the First Nations Mental Wellness Continuum Framework, mental wellness is defined as 'a balance of the mental, physical, spiritual, and emotional'[50].The most current and available data are included here to describe mental wellness in Atlantic region First Nations people.

Mental and Emotional Health

Self-Rated Mental Health

Seventy-one out of every 100 adult respondents to the sub-Atlantic FNREEES reported their mental health was 'excellent' (18%) or 'very good' (53%); 24% indicated their mental health was 'good'. Twenty-two out of every 100 adult respondents (22%) reported feeling 'sad', 'blue', or 'depressed' for two weeks or more in the year prior to the survey[7].

Responses were similar for youth[†††]; 80 out of 100 reported their mental health to be 'excellent' (23%) or 'very good' (57%) and 16% indicated their mental health was 'good'. Twenty-two out of every 100 youth respondents (22%) reported feeling 'sad', 'blue', or 'depressed' for two weeks or more in the year prior to the survey[7].

[†††] Youth refers to people 12-17 years of age unless otherwise noted.

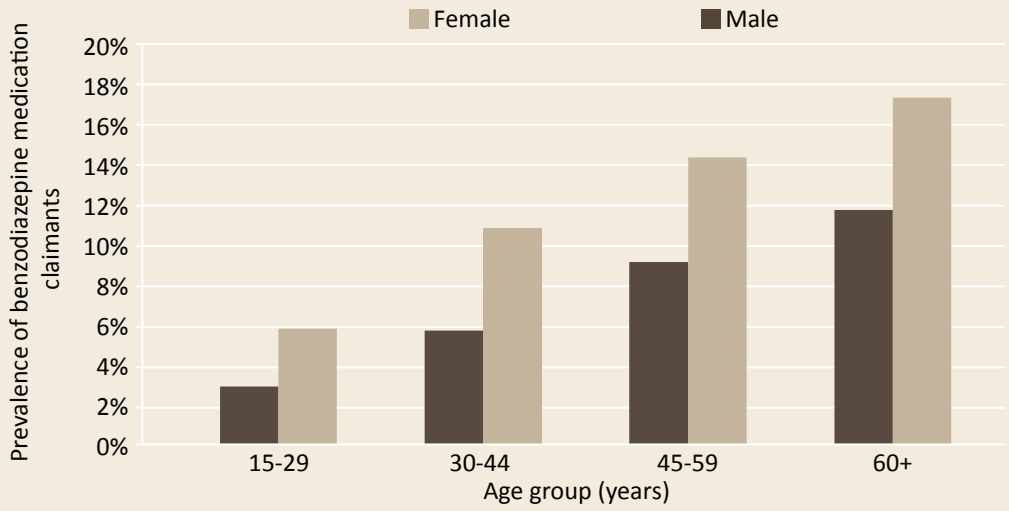
Benzodiazepine Use

Globally, benzodiazepines are the most widely prescribed psychoactive drugs. They are prescribed to help reduce anxiety and make sleeping easier. They have also been used to treat seizures and alcohol withdrawal. Common types include alprazolam (Xanax®), lorazepam (Ativan®), diazepam (Valium®), and oxaepam (Serax®). Side effects from usage include drowsiness, sedation and loss of balance. Sensitivities to these side effects increase with increasing age, increasing the risk for falls and hip fractures. Long-term use of benzodiazepines can lead to drug misuse and addiction.

Source: *Centre for Addiction and Mental Health*[51]

In 2015, the prevalence of benzodiazepine medication claimants increased with increasing age among Atlantic region First Nations aged 15 years or older (Figure 34). In 2015, the prevalence of benzodiazepine medication claimants was higher among females (12%) than among males (7%), 12 versus 7 out of 100, respectively. This was also true when compared by age group.

Figure 34 Prevalence of benzodiazepine medication claimants among Atlantic First Nations band members (15+ years), by age and sex (2015)



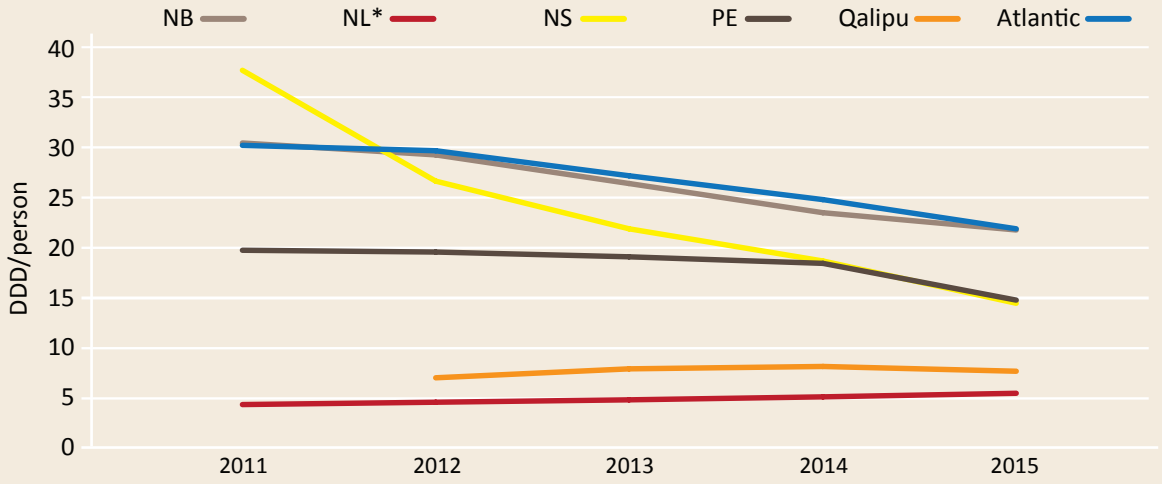
Source: *NIHB pharmacy claims database (2016)*

The Defined Daily Dose (DDD) is a clinical calculation used to measure the quantity of a particular drug in a population. It is a fixed unit of measurement and allows for comparison of use over time and between population groups.

Sources: *World Health Organization*[52, 53]

Figure 35 provides an estimate of benzodiazepine use over time using the standardized Defined Daily Dose (DDD). Since 2011, the DDD/person has decreased in the Atlantic region. The largest decrease was observed in Nova Scotia decreasing from 38 DDD/person in 2011 to 15 DDD/person in 2015. While New Brunswick and Prince Edward Island also showed decreases, there was little change in the DDD/person for Newfoundland and Labrador or the Qalipu during the same period.

Figure 35 DDD per person among Atlantic First Nations band members (15+ years), by province (2011-2015)

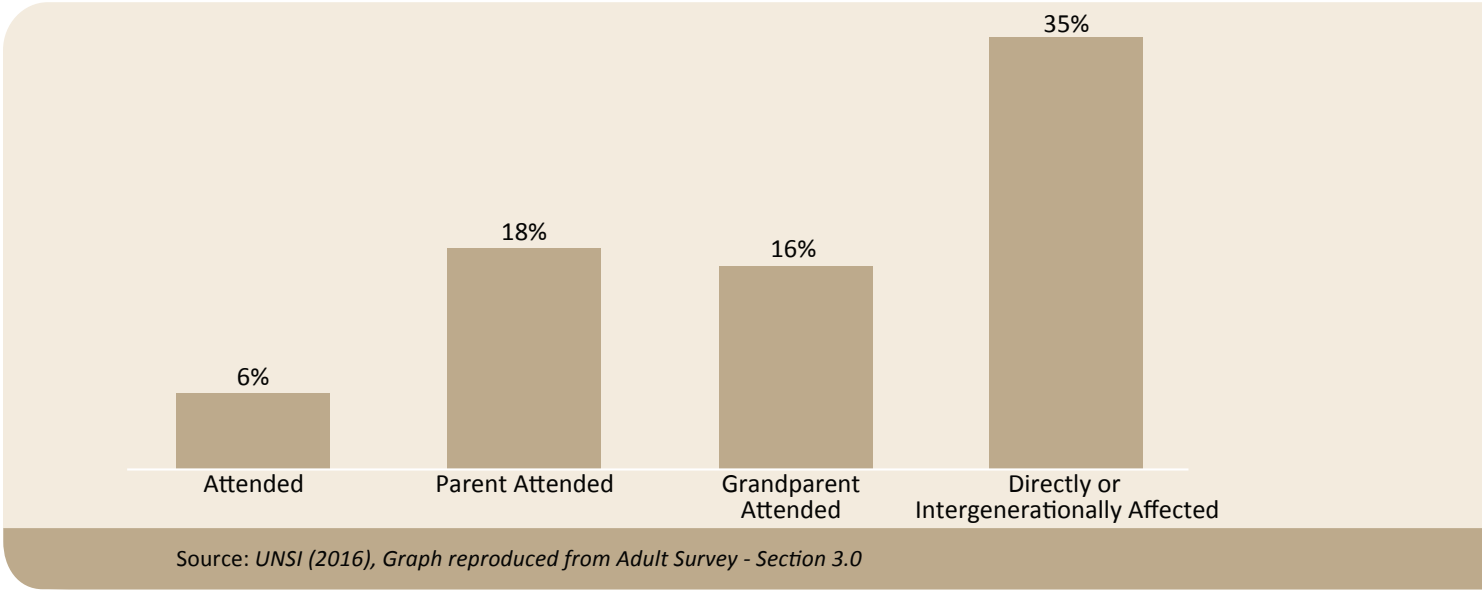


* NL excluding Qalipu
Source: *NIHB pharmacy claims database (2016)*

Indian Residential Schools

In 2014-2015, 35 out of every 100 (35%) First Nations adults living on-reserve in parts of Atlantic Canada reported that they have been directly affected (meaning they attended) or inter-generationally affected (meaning their parents or grandparents attended) by Indian Residential Schools (IRS). About 6% had attended an IRS, 18% had at least one parent who attended and 16% had at least one grandparent who attended (Figure 36)[7].

Figure 36 Proportion of Atlantic First Nations adults on-reserve, by IRS attendance characteristics (2014-2015)



Source: *UNSI (2016), Graph reproduced from Adult Survey - Section 3.0*

In terms of knowledge about IRS, the majority of adults living on-reserve in parts of the Atlantic region felt they were knowledgeable about the history of IRS. Seventy out of 100 (70%) adults said they knew 'some' or 'a lot' about the history of IRS. The remainder said they knew 'a little' (25%) or 'nothing' (5%) about the history[7].

Indian Residential Schools Resolution Health Support Program

As part of the IRS Settlement Agreement process, the Indian Residential Schools Resolution Health Support Program (IRS RHSP) was created to provide mental health and emotional support services to those affected by former IRS. This includes former students and their families[54].

The program includes[55]:

- Emotional Supports: Provided by Resolution Health Support Workers who provide support throughout the Settlement Agreement process.
- Cultural Supports: Provided by Elders or traditional healers, who are coordinated by local Indigenous organizations. Services may include traditional ceremonies, teachings and discussion.
- Professional Counselling: Provided by trained counselling professionals (i.e., psychologists and social workers).

Transportation services are also provided for those requiring them.

Common Experience Payments

Applications for Common Experience Payments (CEPs) were due in 2011. In the Atlantic region, there were about 560 applications submitted which were eligible for payment under the IRS Settlement Agreement[56]. This does not include all IRS survivors in the region, as there were other non-recognized schools and recently, a Newfoundland Residential Schools Settlement was reached that is separate from the IRS Settlement Agreement. However, it does give an indication of the number of survivors who are eligible for related services, including the IRS RHSP.

Resolution Health Support Workers

In 2015-2016, Resolution Health Support Workers had just under 7 000 interactions with clients[57]. These interactions were almost equally split between survivors themselves (51%) and family members (49%). Most of the 7,398 interactions in the Cultural Support Programs were for family members (62%), compared with survivors (38%). See Table 3.

Table 3 Number of client interactions with Resolution Health Support Workers and Cultural Support Programs, by type of client (2015-2016)

	Survivors	Family Members	Total
Resolution Health Support Workers	3 529	3 447	6 976
Cultural Support Programs	2 793	4 605	7 398

Source: *IRS program data - quarterly reports (2017)*

Independent Assessment Process

In the Atlantic region, there were 325 claims received through the IRS Adjudication Secretariat[58]. This organization accepts claims which will go through the Independent Assessment Process (IAP). Claims made here are related to sexual or physical abuse experienced by IRS survivors. This represents just over one half of the number of eligible applicants for CEPs, indicating that about 58% of eligible survivors have also gone through or are going through the IAP in the region. The IRS RHSP works with these survivors and their families to provide additional support throughout this process.

National Review of the Indian Residential Schools Resolution Health Support Program

In 2011-2012, a national review of IRS RHSP client files was done (Alberta, Atlantic, Manitoba and Northern Region)[59]. Personal information was not identified and files were chosen at random; 14 out of every 100 (14%) client files were selected.

This project identified that the main mental wellness concerns addressed were:

- Culture loss (39%)
- Trauma-related (37%)
- Grief (34%)
- Other (42%)

The most common services provided through the IRS RHSP were:

- Emotional support (78%)
- IRS information (65%)
- IAP preparation (42%)
- Cultural support (40%)

The most common reasons for first contacting the IRS RHSP were:

- IAP process (52%)
- CEP process (29%)
- Family issues (26%)

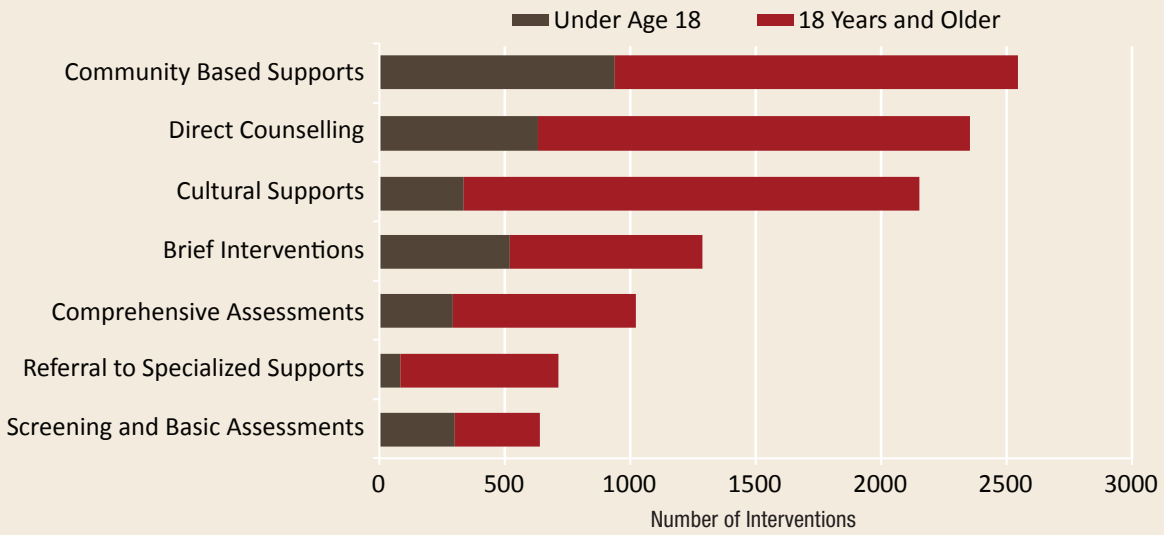
These data are the only available information related to the characteristics of IRS RSHP clients. However, it should be noted that they are representative of four regions in Canada (not specific to Atlantic only) and that clients today may be different from those in 2011-2012. Specifically, there may be an increase in the number of family members seen, as the intergenerational effects of IRS are recognized. Figure 36 shows that the majority of those surveyed in 2014-2015 who were affected by IRS had a parent or grandparents who attended IRS[7] and Table 3 shows that over one-half of client interactions for these two parts of the IRS RHSP were with family members of survivors in 2015-2016.

Substance Use

Interventions

In 2015-2016, 10 682 clients received interventions at the community level for substance abuse, addictions, and mental health; 71% (71 out of every 100 interventions) were for people 18 years of age and older. The most frequently reported types of interventions for people 18 years of age and older were cultural supports, direct counselling and community-based supports. For people under the age of 18, the interventions most frequently received were community-based supports followed by direct counselling and brief interventions (Figure 37).

Figure 37 Number of Atlantic First Nations clients who received interventions for substance abuse, addictions, and mental health, by age (2015-2016)



Source: *Atlantic region CBRT reports (2015 - 2016)*

Referrals to Treatment Centers

In 2015-2016, of the 703 Atlantic First Nations clients referred to treatment centres:

- Over half (57%) were males
- The majority (91%) were 18 years and older
- 9% were 12-17 years of age
- None were younger than 12 years of age

For every 100 clients 18 years and older:

- 72 were referred to NNADAP treatment centres
- 24 were referred to provincial treatment centres
- 4 were referred to other treatment centres (not identified)

For every 100 clients 12 – 17 years of age:

- 62 were referred to NNADAP treatment centres
- 23 were referred to the YSAP treatment centre
- 10 were referred to provincial centres
- 5 were referred to other treatment centres (not identified)

Over the past five years, the proportion of clients referred to treatment centres:

- Increased 32% for clients 18 years of age and older
- Decreased 63% for clients 12 -17 years of age
- Decreased 100% for clients under 12 years of age

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 misuse through community-based programming and addiction treatment centres[60]. The program includes prevention, early identification and intervention, screening, assessment and referral, treatment, and aftercare. Prevention services address community programs (e.g., education, life skills workshops, and 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 family treatment centre. Clients who need direct treatment interventions are taught about the effects of substance use and substance misuse, self-awareness, life skills, and how to access support systems. Most treatment programs use many different approaches that blend culturally specific and mainstream approaches. Understanding that many Aboriginal people identify their trauma and associated substance misuse as being directly related to Indian Residential Schools and the child welfare experience is important to the success of the program.

The NNADAP's many successes are due to First Nations ownership of the services. NNADAP workers are:

- Creative
- Dedicated
- Motivated
- Innovative
- Personally invested
- Accredited and certified

In 2015-2016, 331 people were admitted to NNADAP treatment centre programs located in the Atlantic region. Of these people, almost two in three (63%) completed treatment. The number of people admitted to the treatment centres increased over the past five years.

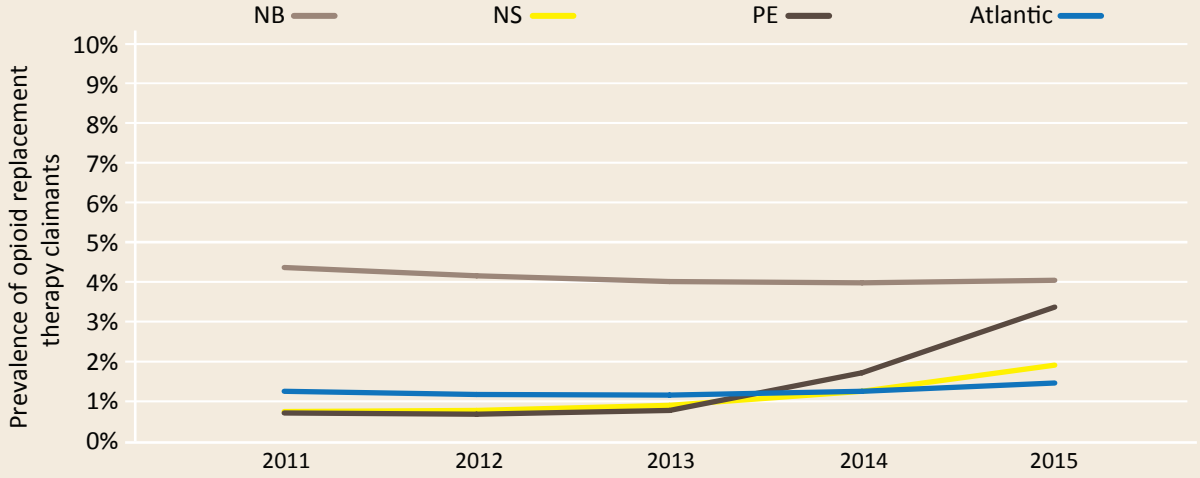
Opioid Replacement Therapy

Opioid replacement therapy (i.e., with methadone, buprenorphine/naloxone (Suboxone) or Kadian) has been shown to be superior for opioid withdrawal management in terms of retention in treatment, continued abstinence from opioid use, reduced risk of blood borne infections (e.g., Hepatitis C Virus, HIV) and death from opioid overdose.

From 2011-2015 (Figure 38):

- 1 out of every 100 (1%) Atlantic region band members (15 years and older) made one or more claim(s) for an opioid replacement therapy drug, in each year.
- The prevalence of claimants was highest among New Brunswick band members across all five years and lowest among Newfoundland and Labrador band members (less than 1%).
- Prince Edward Island had the greatest increase in the prevalence of claimants from 2011 to 2015
- Both Newfoundland and Labrador and the Qalipu had the lowest prevalence of claimants across all five years (not shown)

Figure 38 Prevalence of opioid replacement therapy claimants among Atlantic First Nations band members (15+ years), by province* (2011-2015)



*Cannot report on Newfoundland and Labrador or Qalipu band members due tolow claimant numbers
Source: *NIHB pharmacy claims database (2016)*

SECTION 6: HEALTH CARE SERVICES

Dental Care

Dental services funded by FNIHB or provided by Health Canada for First Nations people living on-reserve in Atlantic Canada include the Children's Oral Health Initiative (COHI) and the dental therapy program.

It is important to note that clients seeing private dentists (i.e., making claims through NIHB) are not captured in these data.

deft/DMFT Indices

The decayed, extracted and filled teeth *(deft)* and Decayed, Missing, Filled Teeth *(DMFT)* indices are two measurements used to describe the oral health of individuals‡‡‡. During oral screenings, dental therapists, hygienists and dentists examine patients' mouths and record the number of teeth which fall into each category. The *deft* index is specific to baby teeth, whereas the DMFT index is used for adult teeth. For example, a child with a *deft* score of four has four baby teeth which are decayed, extracted or filled. This can happen in any combination; for example, they may have four filled baby teeth or two filled and two decayed baby teeth.

The average score can be used to describe the overall dental health within a population. In this report, the *deft* and *DMFT* are combined to provide a summary measure of oral health among different age groups.

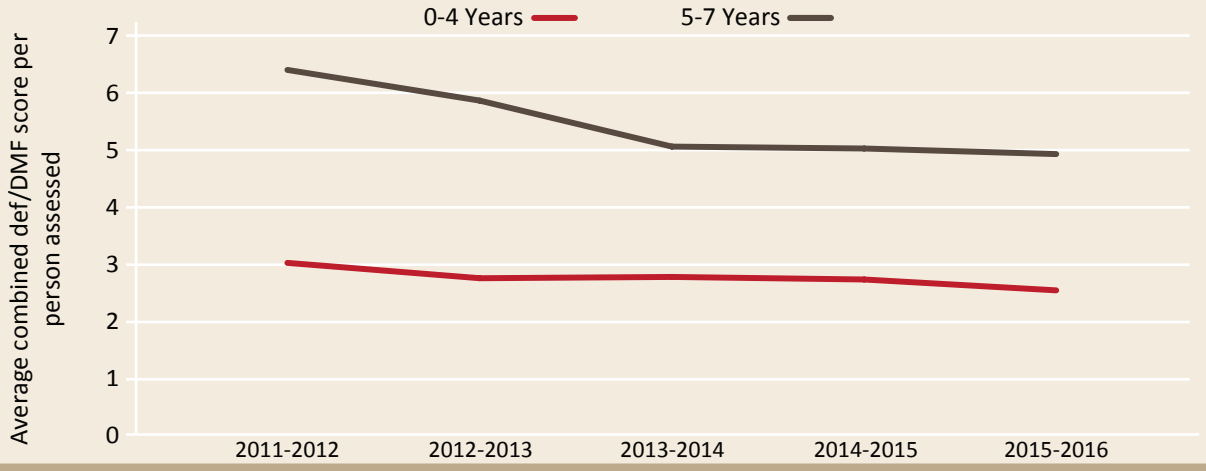
‡‡‡ 'Decayed' means the tooth has a cavity. 'Extracted' means the tooth was pulled out. 'Filled' means a filling was added to the tooth to fix a cavity.

In 2015-2016, the average combined *deft*/*DEFT* score per child assessed was 2.6 among those aged four years and younger and 5.3 among five to seven year olds. These scores are specific to Atlantic First Nations people living on-reserve.

In communities that had screenings done every year from 2011-2012 to 2015-2016,

- Children aged 5-7 years had the highest average combined *deft*/*DMFT* scores per person (children in this age group have had the longest time to accumulate cavities within their baby teeth and are also transitioning to adult teeth)
- The average scores declined among both age groups, most noticeably within those aged 5-7 years (6.4 in 2011-2012 to 4.9 in 2015-2016)

Figure 39 Average combined *deft*/*DMFT* scores in Atlantic region, by age (2011-2012 to 2015-2016)



Source: *Atlantic region dental therepy data (2017)*

Children's Oral Health Initiative

COHI is a national program targeting oral health promotion and disease prevention in First Nations and Inuit communities[61]. It is delivered by COHI aides, who are employed by the community, and dental therapists who are employed through Health Canada. The program is for children aged seven and under, and focuses on screening and prevention services, like fluoride varnishes and sealants.

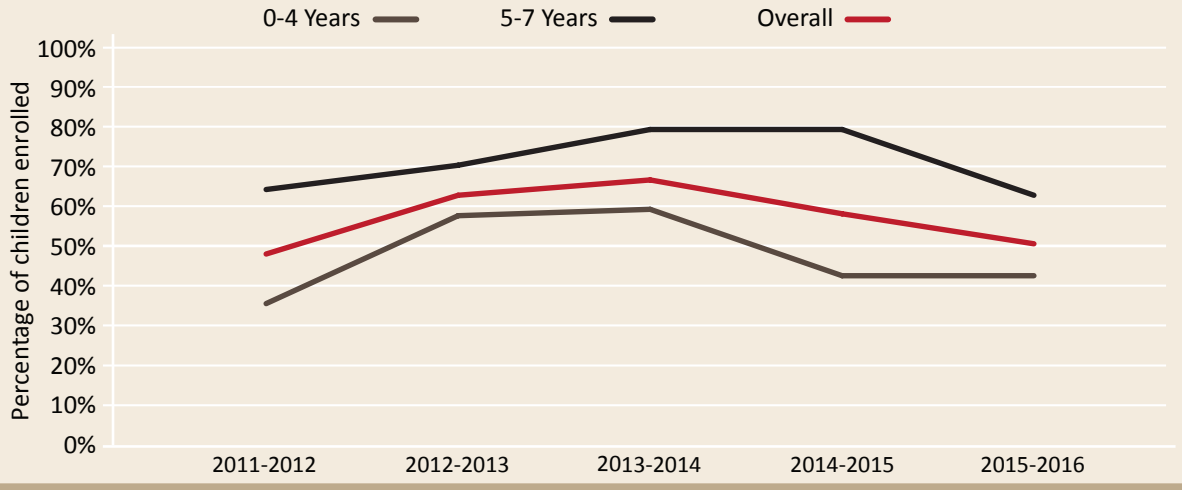
COHI reporting is based on school year, so annual data is gathered from September to August.

In 2015-2016, approximately half (52%) of eligible Atlantic First Nations children aged 7 years and younger living on-reserve were enrolled in COHI; a decrease in enrollment from 2014-2015 (59%).

Over the past five years (2011-2012 to 2015-2016):

- Enrollment for children 0-4 years of age increased from 2011-2012 until 2013-2014 and then decreased over the next two years.
- For children 5-7 years of age, enrollment increased from 2011-2012 until 2013-2014, remained unchanged in 2014-2015 and decreased n 2015-2016
- A larger proportion of children aged 5-7 years (school age) were enrolled in COHI compared with younger children. This is likely due to increased access to COHI when children are enrolled in school

Figure 40 Percentage of eligible children enrolled in COHI program, by age (2011-2012 to 2015-2016)



Source: *COHI program data (2016)*

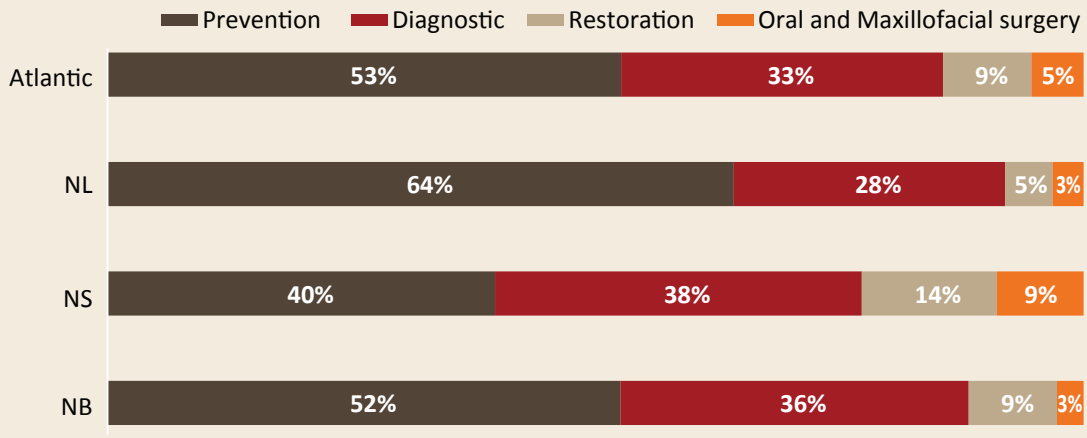
In 2015-2016, there were 1 219 screenings and 3 120 prevention services performed through the COHI program (one child may require more than one service). Compared to 2014-2015, the number of screenings decreased by 9% and the number of prevention services decreased by 30%.

Dental Therapy

Dental therapists are employed by Health Canada and provide preventative, diagnostic and restorative dental work for First Nations people living on-reserve. Dental therapists provide services to children and adults of all ages.

In 2015-2016, of the services provided by dental therapists, prevention services were the most frequently provided (53%), followed by diagnostic (33%), restorative (9%), and oral and maxillofacial related surgery services (5%). This pattern of service provision was similar in all three provinces where services are provided (Figure 41).

Figure 41 Percentage of all dental therapy services, by type of service* and province** (2015-2016)



Source: *Dental service and productivity reports (2016)*

*Endodontic and periodontic related services are also tracked, however they contribute 1% or less of total services, so they were excluded here

**Dental therapy services are not offered on Prince Edward Island

Preventative dental work = Dental work that tries to stop or slow down a dental problem from happening (i.e., fluoride varnish, sealants)

Diagnostic work = Using tools to find out what the dental problem is (i.e., x-rays, examinations)

Restorative dental work = Using fillings to fix cavities

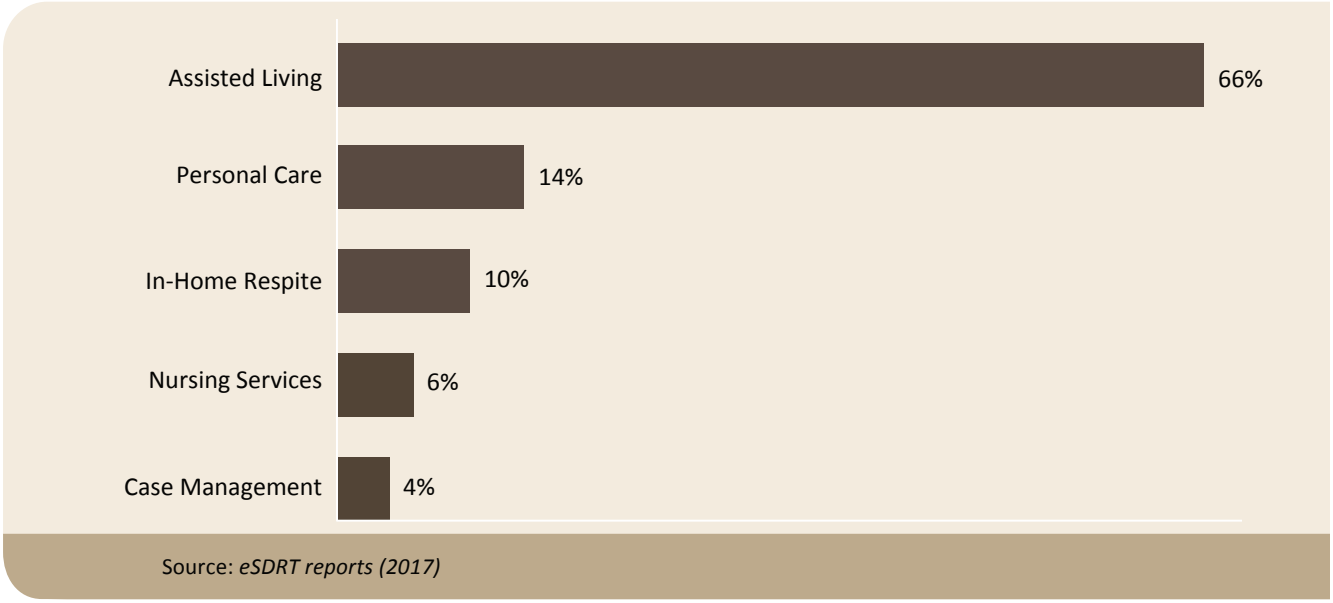
Oral and Maxillofacial related dental services = Dental work that fixes a dental problem (i.e., pulling the tooth, stitches)

Home and Community Care

In 2015-2016, about 7% (7 out of 100) of Atlantic First Nations people living on-reserve accessed home and community care services. The majority of those accessing these services were female (61%). Out of every 100 clients, 59 (59%) were 56 years of age and older, 34 (34 %) were 26-55 years old and 7 (7%) were 25 years old and younger.

In terms of the number of hours taken to do each type of service, two-thirds (66%) of all hours were spent performing assisted living tasks. This was followed by personal care (14%) and in-home respite (10%). This distribution of total service hours has remained consistent in the last five years.

Figure 42 Percentage of all home and community care service hours, by type of service (2015-2016)



Source: *eSDRT reports (2017)*

Some examples of services provided in each category include:

Assisted living = Home management, meal services, transportation assistance, home repairs and maintenance

Personal care = Personal hygiene assistance, foot and nail care, mobilization, rehabilitation exercises

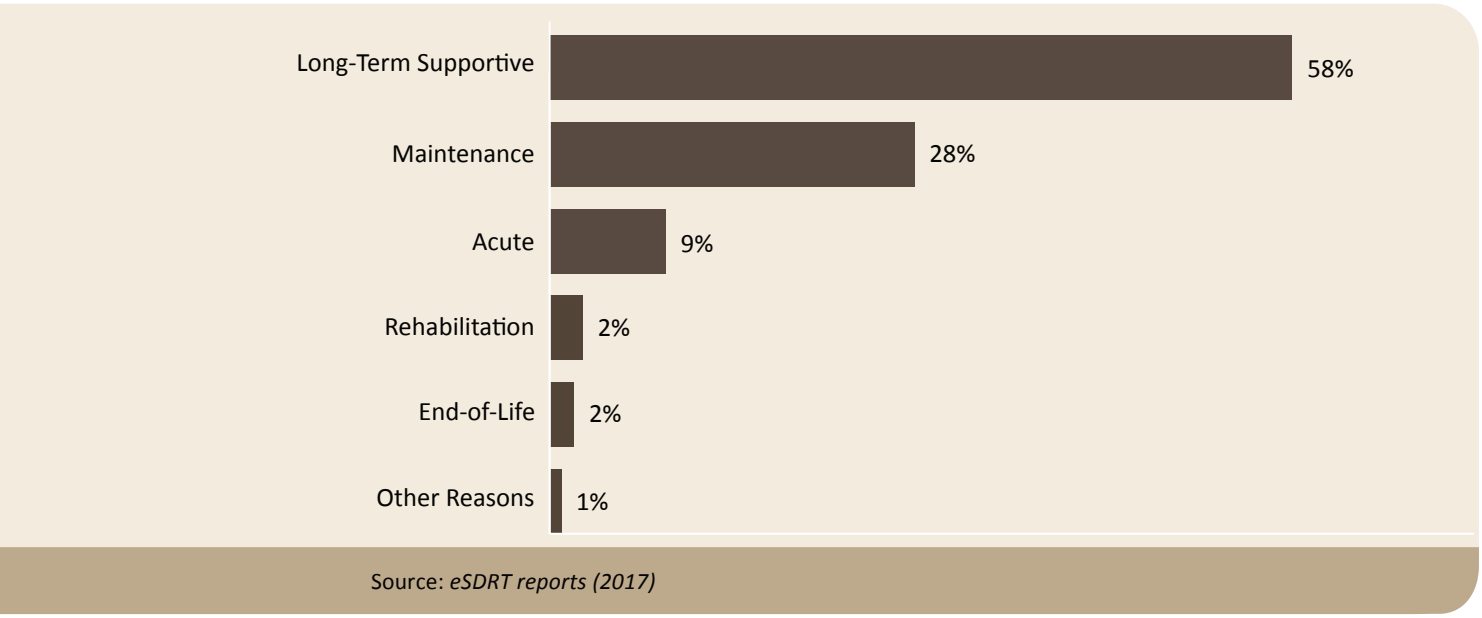
In-home respite = Client care provided to relieve the usual caregiver in the client's home (usually a few hours at a time)

Nursing services = Monitoring for therapeutic intervention, wound management, medication administration and management, advanced foot care

Case management = Charting, assessments, physician consultation, establishing linkages or liaison functions, consultation with family member

For every 100 service hours, 58 (58%) were for clients who required long-term supportive care, 28 (28%) for clients requiring maintenance and 9 (9%) for acute care.

Figure 43 Percentage of total service hours, by client type (2015-2016)



Source: *eSDRT reports (2017)*

The top five primary reasons for home care visits in 2015-2016 were:

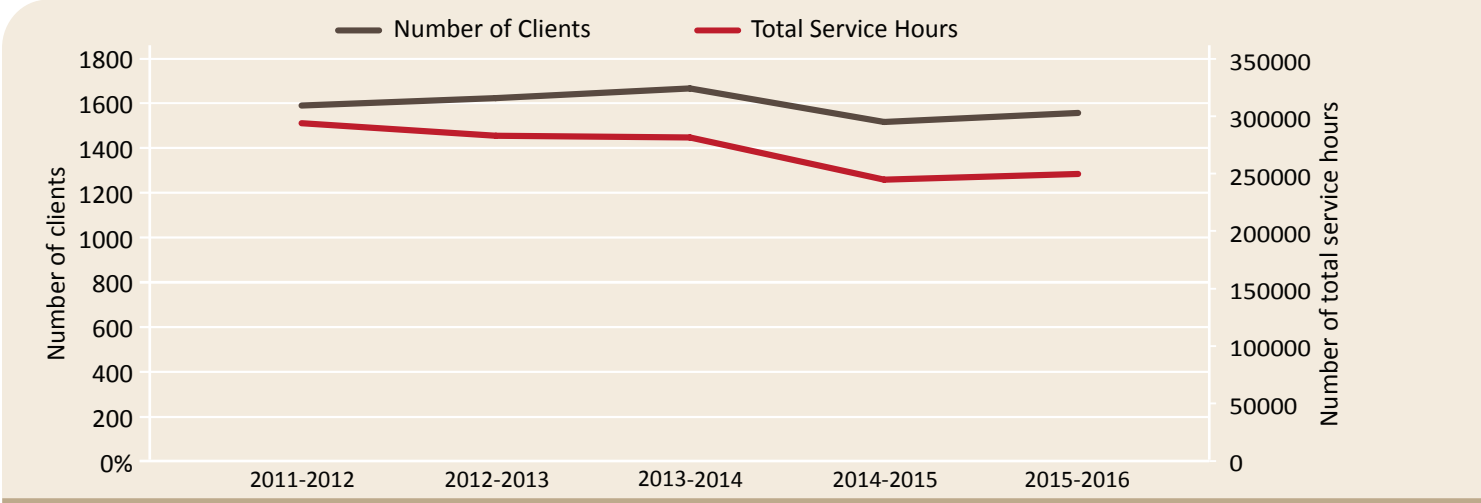
- Diabetes (25%)
- Other (a reason other than those listed in the eSDRT system) (22%)
- Acute and chronic wound care (12%)
- Cardiovascular disease (10%)
- Musculoskeletal conditions (10%)

The three reasons identified for not providing services in 2015-2016 were:

- Client not at home (57%)
- Understaffing (32%)
- Other (6%)

In the last five years, the total number of service hours has remained relatively consistent. Annually, the number of hours has fluctuated with the number of clients.

Figure 44 Number of clients and number of service hours (2011-2012 to 2015-2016)



Source: *eSDRT Reports (2017)*

eHealth

eHealth is defined as the use of information and telecommunication technology (ICT), such as computers, for health. The eHealth program at FNIHB works towards the modernization, transformation and sustainment of health care services in First Nations and Inuit communities by supporting the development and adoption of ICTs. eHealth supports the combination of information, electronic health applications, technology and people. The intention is to provide optimal health services delivery and health surveillance, effective health reporting, planning and decision making and provide integration/compatibility with other health services delivery systems[62].

The components of the eHealth program include:

Information Technology Support

The Information Technology (IT) Help Desk provides essential support, information, trouble-shooting and guidance to the end-user, for computer-related and technical issues

Telehealth

Telehealth is a form of ehealth that uses ICTs to provide healthcare services (e.g., diagnosis, consultation, treatment, public health, consumer health information, health professional education remotely). In 2015-2016, 22 health centres and four treatment centres had videoconferencing equipment.

FNIHB Atlantic supports professional development for health centre staff and administrative uses of videoconferencing by hosting bi-weekly videoconferencing education sessions for all interested First Nations staff. In 2015-2016, health centres and treatment centres with videoconferencing equipment connected to education sessions a total of 161 times.

Some communities are also accessing clinical services via telehealth. In 2015-2016, six First Nations communities engaged in clinical telehealth sessions with 91 sessions completed. Eleven communities used videoconferencing for administrative purposes for a total of 28 administrative sessions in 2015-2016.

Electronic Health Records and Electronic Medical Records

Electronic Health Records are the full health record of an individual that is accessible online from many separate, interoperable automated systems within an electronic network. Electronic Medical Records are partial health records under the custodianship of a health care provider(s) that holds a portion of the relevant health information about a person over their lifetime. Currently, 11 First Nations communities are using an electronic medical record in their health centre and four have access to the provincial electronic health record.

Public Health Information Systems

Public Health Information Systems are systems that capture, store, manage or transmit information related to the public health of individuals or the activities of organisations that work within the public health sector. To date, three First Nations communities have access to the Public Health Information System in their province.

Connectivity

Connectivity refers to connecting on-reserve health facilities to either broadband or high-speed internet services. Currently, all health centres have some level of broadband connectivity; 21 communities have fibre connectivity for videoconferencing.

mHealth

mHealth is a medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs) and other wireless devices.

Increasing clinical use of telehealth, supporting access to provincial Public Health Information Systems and continuing to implement fibre connectivity in First Nations Health centres in the Atlantic region will continue to be focus areas for the eHealth program.

List of Figures

List of Tables

Acronyms

AHSOR = Aboriginal Head Start On Reserve

CBRT = Community Based Reporting Template

CBWM = Community-Based Water Monitor

CCHS = Canadian Community Health Survey

CEP = Common Experience Payment

COHI = Children's Oral Health Initiative

CVD = Cardiovascular Disease

DDD = Defined Daily Dose

deft = Decayed, Extracted and Filled Teeth

DMFT = Decayed, Missing and Filled Teeth

DWA = Drinking Water Advisory

EHIS = Environmental Health Information System

EHO = Environmental Health Officer

eSDRT = Electronic Service Delivery Reporting Template

FNIGC = First Nations Information Governance Centre

FNIHB = First Nations and Inuit Health Branch

HCV = Hepatitis C Virus

IAP = Independent Adjudication Process

ICT = Information and Telecommunications Technology

INAC = Indigenous and Northern Affairs Canada (formerly AANDC – Aboriginal Affairs and Northern Development Canada)

IRS = Indian Residential Schools

IRS RHSP = Indian Residential Schools Resolution Health Support Program

IRSSA = Indian Residential Schools Settlement Agreement

IT = Information Technology

NIHB = Non-Insured Health Benefits

MES = Maternity Experiences Survey

NNADAP = National Native Alcohol and Drug Abuse Program

OME = Oral Morphine Equivalent

PHAC = Public Health Agency of Canada

FNREEES = First Nations Regional Early Childhood, Education and Employment Survey

FNRHS = First Nations Regional Health Survey

TDG = Transportation of Dangerous Goods

UNSI = Union of Nova Scotia Indians

WHMIS = Workplace Hazardous Materials Information System

References

(1) First Nations Information Governance Centre. (2016). *Our Data, Our Stories, Our Future: The National Report of the First Nations Regional Early Childhood, Education and Employment Survey.* Ottawa.

(2) Union of Nova Scotia Indians. (2016). *Atlantic roll-up of Regional Health Survey data*.

(3) Statistics Canada (2016). *Canadian Community Health Survey - Annual component (CCHS)*. *Retrieved from http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3226*

(4) Public Health Agency of Canada (2009). *What mothers say: The Canadian maternity experience survey*. No. Cat. No.: HP5-74/2-2009E-PDF. Ottawa.

(5) Public Health Agency of Canada (2013). *What makes Canadians healthy or unhealthy?* Retrieved from http://www.phac-aspc.gc.ca/ph-sp/determinants/determinants-eng.php#defining

(6) Reading, C., & Wien, F. (2009). *Health Inequalities and Social Determinants of Aboriginal People's Health.* Prince George, BC: National Collaborating Centre for Aboriginal Health.

(7) Union of Nova Scotia Indians. (2016). *First Nations Regional Early Childhood, Education and Employment Survey (FNREEES): A Sub-Atlantic Report 2014-15*.

(8) Indigenous and Northern Affairs Canada. (2016). *Education data request.*

(9) *Community based reporting template (CBRT) 2015-2016* (2016).

(10) Statistics Canada (2016). *Median total income, by family type, by province and territory (all census families).* Retrieved from http://www.statcan.gc.ca/tables-tableaux/sumsom/l01/cst01/famil108a-eng.htm

(11) Indigenous and Northern Affairs Canada - Social Programs and Policy Branch. (2016). *Children in Care data request.*

(12) Indigenous and Northern Affairs Canada. (2016). *First nations child and family services.* Retrieved from https://www.aadnc-aandc.gc.ca/eng/1100100035204/1100100035205

(13) Greenwood, M., & de Leeuw, S. (2007). Teachings from the land: Indigenous people, our health, our land and our children. Canadian Journal of Native Education, 30(1), 48-53.

(14) United Nations. (2007). *United Nations Declaration on the Rights of Indigenous People* [Resolu tion adopted by the General Assembly 13 September 2007].

(15) Health Canada (2008). *First nations environmental public health program.* Cat. No.: H34-168-2008E-PDF. Her Majesty the Queen in Right of Canada. Retrieved from http://www.hcsc.gc.ca/fniah-spnia/alt_formats/fnihb-dgspni/pdf/pubs/promotion/2009_env_prog-eng.pdf

(16) MacKinnon, J., DiCicco, J., & Asyyed, Z. (2016). *Atlantic First Nations Housing Needs Assess ment Analysis of findings.* Dartmouth, Nova Scotia: Atlantic Policy Congress of First Nations Chiefs Secretariat.

(17) Shaw, M. (2004). Housing and Public Health. *Annual Reviews of Public Health,* 25, 397-418.

(18) Health Canada (2014). *Guidelines for Canadian Drinking Water Quality - Summary table.* Ottawa, Ontario: Water and Air Quality Bureau, Healthy Environments and Consumer Safety Branch, Health Canada.

(19) Health Canada (2012). *Guidelines for Canadian Drinking Water Quality: Guideline technical Doc ument - Total coliforms.* Cat. No.: H144-8/2013E-PDF. Ottawa, Ontario: Water, Air and Climate Change Bureau, Healthy Environments and Consumer Safety Branch, Health Canada.

(20) Health Canada (2012). *Guidelines for Canadian Drinking Water Quality: Guideline Technical Doc ument - Escherichia coli.* Cat. No.: H144-7/2013E-PDF. Ottawa, Ontario: Water, Air and Climate Change Bureau, Health Environments and Consumer Safety Branch, Health Canada.

(21) Health Canada (2007). *Procedure for Addressing Drinking Water Advisories in First Nations Com munities South of 60°.* Cat. No.: H34-167/2007. Ottawa, Ontario: Health Canada.

(22) Centers for Disease Control and Prevention. (2016). *Tobacco Use and Pregnancy.* Retrieved from https://www.cdc.gov/reproductivehealth/maternalinfanthealth/tobaccousepregnancy/

(23) Public Health Agency of Canada (2008). *Canadian Perinatal Health Report.* Cat. No.: HP10-12/2008E. Ottawa.

(24) Dabelea, D. (2007). The predisposition to obesity and diabetes in offspring of diabetic mothers. *Diabetes Care,* 30, S169-S174.

(25) Statistics Canada (2016). CANSIM table 102-4505 - *Crude birth rate, age-specific and total fer tility rates (live births), canada, provinces and territories.* Retrieved from http://www5.statcan.gc. ca/cansim/a26?lang=eng&id=1024505

(26) Statistics Canada (2016). CANSIM table 102-4509 - *Live births, by birth weight and sex, canada, provinces and territories.* Retrieved from http://www5.statcan.gc.ca/cansima26?lang=eng&id=10 24509

(27) Government of Canada. (2012). *The Well-Being of Canada's Young Children.* Cat. No.: HS1-7/2012E. Retrieved from http://www.dpe-agje-ecd-elcc.ca/eng/ecd/well-being/page00.shtml

(28) Health Canada (2015). *Nutrition for Healthy Term Infants: Recommendations from birth to six months.* Retrieved from http://www.hc-sc.gc.ca/fn-an/nutrition/infant-nourisson/recom/indexeng. php

(29) World Health Organization. (2017). *Exclusive breastfeeding.* Retrieved from http://www.who.int/ nutrition/topics/exclusive_breastfeeding/en/

(30) Statistics Canada (2016). *CANSIM table 105-0501 - health indicator profile, annual estimates, by age group and sex, canada, provinces, territories, health regions (2013 boundaries) and peer groups,occasional.* Retrieved from http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1050501

(31) Gionet, L. (2013). *Health at a glance: Breastfeeding trends in Canada.* Cat. No.: 82-624-X. Sta tistics Canada.

(32) Health Canada (2015). *Nutrition for healthy term infants: Recommendations from six to 24 months.* Retrieved from http://www.hc-sc.gc.ca/fn-an/nutrition/infant-nourisson/recom/recom-6-24-months-6-24-mois-eng.php

(33) World Health Organization. (2016). *Tobacco fact sheet.* Retrieved from http://www.who.int/mediacentre/factsheets/fs339/en/

(34) Centers for Disease Control and Prevention. (2016). *Smoking & tobacco use - Fast facts.* Retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/fast_facts/index.htm

(35) Health Canada. (2015). *The Canadian Tobacco, Alcohol and Drugs Survey (CTADS).* Retrieved from https://www.canada.ca/en/health-canada/services/canadian-tobacco-alcohol-drugssurvey.html

(36) Health Canada. (2015). *The Candian Tobacco, Alcohol and Drugs Survey, Supplementary tables.*

(37) Centers for Disease Control and Prevention. (2016). *Smoking & Tobacco use.* Retrieved from https://www.cdc.gov/tobacco/data_statistics/fact_sheets/cessation/quitting/

(38) First Nations Information Governance Centre. (2012). *First Nations Regional Health Survey (RHS) 2008/10 - National Report on Adults living in First Nations Communities.* Ottawa.

(39) Statistics Canada. (2015). *CANSIM Table 105-0503: Health indicator profile, age-standardized rate, annual estimates, by sex, Canada, provinces and territories, occasional.* Retrieved from http://www5.statcan.gc.ca/cansim/a26?lang=eng&id=1050503

(40) Government of Canada. (2016). *Opioids.* Retrieved from https://www.canada.ca/en/healthcanada/services/substance-abuse/prescription-drug-abuse/opioids.html

(41) National Opioid Use Guideline Group. (2010). *Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain. Canada.* Retrieved from http://nationalpaincentre.mcmaster.ca/opioid/

(42) Public Health Agency of Canada (2016). *Notifiable disease on-line.* Retrieved from http://diseases.canada.ca/notifiable/

(43) Centers for Disease Control and Prevention. (2016). *Chlamydia - CDC fact sheet.* Retrieved from https://www.cdc.gov/std/Chlamydia/STDFact-Chlamydia.htm

(44) Public Health Agency of Canada (2016). *Hepatitis C.* Retrieved from http://healthycanadians.gc.ca/diseases-conditions-maladies-affections/diseasemaladie/ hepatitis-c-hepatite/index-eng.php

(45) Public Health Agency of Canada (2008). *Fact sheet - Methicillin-Resistant Staphylococcus aureus.* Retrieved from http://www.phac-aspc.gc.ca/id-mi/mrsa-eng.php

(46) World Health Organization. (2016). *Immunization coverage factsheet.* Retrieved from http://www.who.int/mediacentre/factsheets/fs378/en/

(47) Government of Canada. (2016). *Immunization and vaccines: Coverage and registries.* Retrieved from https://www.canada.ca/en/public-health/services/immunization-coverage-registries.html

(48) Twohig, K. (2015). *Notifiable disease and immunization reports 2009-2014, PowerPoint slides, internal document.*

(49) Langlois, C. (2016). *Immunization of 4-6 year olds in atlantic canada first nations: A qualitative approach report, internal document.*

(50) Assembly of First Nations & Health Canada. (2015). *First Nations Mental Wellness Continuum Framework.* Cat. No.: H34-278/1-2014E-PDF

(51) Centre for Addiction and Mental Health. (2009). *Benzodiazepines: Psychiatric medication.* Retrieved from http://www.camh.ca/en/hospital/health_information/a_z_mental_health_and_addiction_information/Benzodiazepines/Pages/default.aspx

(52) WHO Collaborating Centre for Drug Statistics Methodology. (2016). *DDD: Definition and General Considerations.* Retrieved from https://www.whocc.no/ddd/definition_and_general_considera/

(53) World Health Organization. (2003). *Introduction to drug utilization research. chapter 6: Drug ut lilization metrics and their applications. section 6.1: The concept of the defined daily dose (DDD).* Retrieved from http://apps.who.int/medicinedocs/en/d/Js4876e/7.html#Js4876e.7.1

(54) Health Canada. (2016). *Indian Residential Schools Health Supports.* Retrieved from http://www.hc-sc.gc.ca/fniah-spnia/services/indiresident/index-eng.php

(55) Health Canada. (2016). *Indian Residential Schools Resolution Health Support Program.* Retrieved from http://www.hc-sc.gc.ca/fniah-spnia/services/indiresident/irs-pi-eng.php

(56) Indian Residential Schools RSHP. (2011). *CEP Processed Applications by Province and Territory.*

(57) Indian Residential Schools Program. (2016). *Program data - quarterly RHSW and CSP reports*

(58) Indian Residential Schools Adjudication Secretariat. (2016). *Adjudication Secretariat Statistics.* Retrieved from http://www.iap-pei.ca/information/stats-eng.php

(59) Health Canada – Mental Wellness Division. (2013). *Indian residential schools resolution health support program client file review project: Final report.*

(60) Government of Canada. (2015) *Definitions and terminology for substance abuse.* Retrieved from https://www.canada.ca/en/health-canada/services/substance-abuse/get-help/definitionsterminology-substance-abuse.html#a1

(61) Health Canada (2016). *About Health Canada: Strategies & Initiatives.* Retrieved from http://hcsc.gc.ca/ahc-asc/activit/strateg/fnih-spni-eng.php

(62) Health Canada (2011). *Guidelines for the FNIHB eHealth Infostructure Program (eHIP)* No. Cat. No.: H34-242/2011E-PDF). Ottawa.

The 8 POINTED STAR

The Eight Pointed Star is an adaptation of the original Seven Pointed Star which was the emblem historically used to symbolize the Seven Districts of the Mi'kmaq nation.

The eighth point was added to represent the Crown after the signing of treaties with Britain.

The four colours used their arrangement have several meanings:
White represents the North, land of ice and snow, where even the animals are white.
Yellow represents the East, the land of the rising sun, we Mi'kmaq are the People of the Dawn.
Red represents the South, the farther South you travel in Turtle Island, the hotter it gets.
Black represents the West, which is where the sun must travel to give us night.

The colours also represent the Four colours of Man; Whites, Natives; Asians and Blacks.

Also, they represent the four stages of development; Birth, Youth, Adulthood, and finally our Senior years.

Health Canada
1505 Barrington Street, Suite 1525
Halifax, Nova Scotia
B3J 3Y6
Email: hc.fnihb_at_epis_dgspni_at.sc@canada.ca

Designed by:

Eastern Woodland
PRINT COMMUNICATIONS

Truro, Nova Scotia 902.895.2038 1.877.895.2038
manager@easternwoodland.ca