



2021 Chief Public Health Officer's Report

Dear Fellow Islanders

It is with pleasure and gratitude that I share the fourth report of the Chief Public Health Officer, *2021 CPHO Report*. Our office is committed to producing a comprehensive population health status report every five years to provide information to the public and stimulate a range of discussions from the family dinner table to classrooms, community groups, service agencies, and municipal and provincial government policy tables.

Similar to other jurisdictions, the last two years have been challenging for our province and for each one of us as individuals and our families as we continue to manage the global pandemic. We know that COVID-19 has presented unique challenges to certain groups and has highlighted many health inequities that existed prior to the pandemic. While it is important to acknowledge the impact of COVID-19 on the health and well-being of Island residents, families, and communities, this report is about looking at the health of Islanders prior to the pandemic and looking ahead with a focus on what we can do as a province to improve the overall health of our population and reduce health inequities.

This report contains information about areas where PEI is doing better and comparatively, where indicators of health status do not compare well with the rest of the country. On a positive note PEI fares well in terms of rates of communicable diseases, some cancers, and work-related stresses. PEI was similar to Canada in many areas including lung and colorectal cancer and chronic conditions. There are a number of key health determinants where PEI was doing worse than Canada: employment, income, smoking, food security, physical activity, and fruit and vegetable consumption. PEI is not doing well in the area of mental health; treatment for mood and anxiety disorders have been increasing. Unless the current trends in physical inactivity and unhealthy eating are halted, Islanders will continue to have increasing rates of overweight and obesity. The report draws attention to the association of age and sex with disparities in health status in PEI.

While we live in a beautiful province with a strong sense of community cohesiveness, belonging, and social support, this document is a warning signal that as a province we have work to do in order to achieve greater health equity. Investing in policies and services to decrease health disparities requires commitment from all levels of government and society; these investments are essential to support a vibrant, healthy, and productive society.

To all residents of Prince Edward Island, it is my privilege and honour to work for and with you.

Dr. Heather G. Morrison
Chief Public Health Officer, PEI

CONTRIBUTORS (listed alphabetically)

Meghan Adams
Dr. Shamara Baidoobonso
Erin Bentley
Dr. Marguerite Cameron
Katherine Gaudreau
Laura MacDonald
Dr. Carol McClure
Dr. Heather Morrison
Melissa Munro-Bernard
Ryan Neale
Laura Lee Noonan
Dr. Karen Phillips
Ferdinand Pieterse
Dr. David Sabapathy

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The Chief Public Health Office thanks all those working to promote health, prevent disease and protect the health of Islanders.

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EXECUTIVE SUMMARY

Central to a thriving community, a productive society, and flourishing economic and social systems, is a healthy population. While it was once thought that healthy populations were largely determined by a strong healthcare system responding to health needs, we now understand that the health of a population is predominantly driven by various social factors that shape the conditions in which people, families, and communities live, work, learn and play. These factors are collectively called the social determinants of health (SDH). Taking action on these has the greatest potential to improve population health outcomes and to address the root causes of illness and injury before they even occur.^{1,2}

Public health is the organized effort to foster health through a combination of programs, services, and policies that ultimately protect and promote population health. By using a population health approach, the response shifts from individuals to improving health of an entire population and reducing health inequities among groups.^{3,4} Health inequities are differences in the distribution of the SDH which lead to differences in health outcomes that are systemic, unfair, and avoidable.^{5,6} When public health interventions are grounded in a health equity perspective, their impacts can be powerful at the individual level due to the broad changes and powerful ripple effects that occur at the societal level. Addressing structural, cross-cutting, and intermediary determinants of health creates the conditions for good health for everyone.⁴

In order to better understand PEI's population health status, the relationship between social determinants of health, health equity, health behaviours, and population health outcomes were explored in the *2016 Chief Public Health Officer's Report: Health for All Islanders*.⁷ Findings of this report highlighted that health inequity existed amongst Islanders as well as between Islanders and Canadians; that the majority of disease burden was related to chronic diseases which are closely linked to modifiable risk factors (unhealthy diet, physical inactivity, tobacco use, and harmful use of alcohol); and that the SDH have significant influence on the health of Islanders. Similar trends and health inequities were found in the *2017 Children's Report: Investing in Our Future*.⁸ This present report provides an update on findings from the 2016 report and further explores SDH by incorporating measures of material and social deprivation.

Key Findings

Overall, an unequal distribution of the SDH among population groups continued to lead to health inequities, which existed both between Islanders and Canadians as well as within the Island population.

PEI was doing better than, or as well as, Canada on most indicators of health status. PEI's rates for communicable diseases (i.e., hepatitis C, COVID-19, sexually transmitted and blood-borne infections) were much lower than Canada's. When looking at cancers, PEI and Canada's rates for lung and colorectal cancers were similar, but PEI had lower breast and prostate cancer rates than Canada. For chronic conditions, PEI was comparable to Canada overall. While PEI had lower rates of ischemic heart disease and diabetes than Canada, PEI's rate for hypertension was higher than Canada's, and PEI's rate for chronic obstructive pulmonary disease (COPD) was

comparable to Canada's. As with chronic conditions, when indicators of mental health and overall well-being were considered, PEI was similar to Canada overall. While PEI residents were more likely to be treated for mood and anxiety disorders than Canadians, PEI residents were also more likely than Canadians to report having no or low work-related stress. On self-perceived general health, mental health, life stress, and life satisfaction, PEI residents and Canadians were similar.

PEI was doing worse than Canada on many health determinants, and this should be an area of concern. Health determinants are typically precursors to population health status, and as health determinants worsen over time, so will population health status. Hence, it is imperative to address health determinants before they begin to negatively impact the health of PEI residents. Overall, PEI was doing worse than Canada on structural determinants of health (i.e., the mechanisms that create social class divisions, define socioeconomic status, and are the root causes of health inequities). Compared to Canadians, PEI residents were more likely to be unemployed (and looking for work) and have low income after tax; PEI residents also had lower family incomes than Canadians. On intermediary determinants of health, such as personal health practices and coping skills, PEI fared worse than Canada overall—PEI residents were more likely to smoke and less likely to be food secure or meet daily requirements for physical activity and fruit and vegetable consumption. PEI residents were also less likely than Canadians to make changes to improve their health or even have the intent to make such changes. PEI is doing much better than Canada on cross-cutting determinants of health (i.e., sense of community belonging and social support), which may be unique strengths that PEI can leverage to improve structural and intermediary determinants of health.

Some indicators of health status and health determinants warrant focused attention in PEI to halt or change existing trends. Mental health is an area where PEI has not been doing well; self-perceived mental health ratings have been decreasing, and treatment for mood and anxiety disorders has been increasing. Unhealthy eating and physical inactivity continued to be more prevalent in PEI than Canada, and if current trends persist, these gaps will widen, PEI residents will continue to have a higher prevalence of overweight and obesity than Canadians, and PEI residents will start to have a higher prevalence of diabetes than Canadians. The prevalence of smoking in PEI must decrease to slow or halt the increase in conditions that are linked to smoking, like COPD. Decreasing levels of labour force participation and an increasing proportion of PEI residents having low income after tax means that the rate of poverty is likely to increase in PEI. This should be cause for concern and a key area for action due to poverty's association with health inequities and poor health outcomes. Finally, the uptake of Tdap (tetanus, diphtheria, and pertussis) and meningococcal A, C, Y and W-135 conjugate have fallen among Grade 9 students in recent years.

Sex was strongly associated with population health disparities in PEI. Stratified analyses showed that while females were more likely to be treated for mood and anxiety disorders, males fared worse on many other indicators, such as those for

chronic diseases (e.g., ischemic heart disease, hypertension, diabetes), communicable diseases (e.g., hepatitis C, COVID-19), and health determinants (e.g., heavy drinking, daily smoking, post-secondary education). Females were generally healthier than males, and were doing better than males on the determinants of health.

Age was strongly associated with disparities in health status and health determinants. Children and youth (12 to 17 years old) were the healthiest PEI residents, as they compared positively to other age groups on indicators of well-being and communicable diseases. On the health determinants, they compared well to other PEI residents, but they were more likely to be exposed to second-hand smoke and less likely to meet physical activity levels for their age. The youngest adults, those ages 18 to 34 years old, fared worse than other age groups on a wide range of indicators of health status (e.g., mental health rating, life stress, hepatitis C infections, sexually transmitted and blood-borne infections, COVID-19 infections) and health determinants (e.g., sense of community belonging, heavy drinking, exposure to second-hand smoke, cannabis use). To the contrary, this age group had high levels of social support and physical activity. While seniors (65 years and older) had the lowest self-perceived general health rating, they had high levels of mental health and well-being, community belonging, and food security. Seniors also reported low levels of heavy drinking and exposure to second-hand smoke.

The type of population centre where one resided did not affect the distribution of most indicators. Given that about half of PEI's population is rural, and PEI has no isolated communities, disparities based on the type of population centre are uncommon. Geographic location within the province may be more useful in identifying regional disparities than type of population centre.

Level of neighbourhood deprivation showed notable patterns in the distribution of indicators. Although differences observed were not always statistically significant, those living in the most materially and socially deprived neighbourhoods fared better, and those in the least deprived neighbourhoods fared worse, on some indicators of health status (e.g., life stress, work-related stress) and on some health determinants (e.g., physical activity, exposure to second-hand smoke). For some other indicators of health status (e.g., injuries, general health rating), the opposite was true. Of note, those living in neighbourhoods with the middle levels of both material and social deprivation did worse than other groups on a wide range of indicators, and they also had the lowest mental health rating, the second-lowest life satisfaction rating, and the lowest sense of community belonging. These results showed that neighbourhood-level deprivation does not automatically lead to poor health, and that more complex mechanisms are at play.

Key Actions

In response to the findings of the *2021 Chief Public Health Officer's Report*, some key areas for action have emerged that would have significant influence on health status and health behaviour trends in PEI. These key areas for action offer a way forward towards achieving improved population health and health equity:

- Collectively address the structural determinants of health that are impacting PEI residents' well-being. A Health in All Policies approach should be considered to help ensure equity and health lenses are applied to all government decisions, services, programs, and policies.
- Routinely capture disaggregated data on equity-related socio-demographic factors (e.g., language, race, Indigenous identity, immigration experience, 2SLGBTQIA+ identity, etc.) in administrative databases. Due to the sensitivity of this data and the potential to cause harm to communities, there must be an appropriate governance model, which should include representation from affected communities to oversee the use of this data.
- Develop indicators to monitor the built environment, impacts of climate change, and other environmental factors over time.
- Strengthen indicators related to healthy eating and physical activity.
- Routinely use region of the Island as a stratifier when exploring disparities based on geography within PEI.
- Apply a targeted universalism approach with a special focus on those ages 65 years and older, males, and those ages 18 to 34 years old. This will reduce disparities while improving population health.
- Incorporate harm reduction strategies to reduce the health and social harms related to problematic substance use.
- Decisions, policies, and programs in PEI must be informed by evidence and should ensure that basic needs like housing, food security, transportation, education and employment opportunities are met. Systemic discrimination and stigma lead to health inequities and must be addressed.
- Offer the Volunteer Food Safety Course, the Tobacco and Electronic Smoking Device Sales Training, and the Pool Operators Course online.
- Review and amend if needed the Meat and Poultry Inspection Programs (and associated legislation) and the *Tobacco and Electronic Smoking Device Sales and Access Act*.

SUMMARY OF INDICATORS AND RESULTS

Prince Edward Island	Page	vs. Canada	Trend	Sex		Age Group (Years)					Type of Population Centre			Material and Social Deprivation (Quintiles)				
				Male	Female	12-17	18-34	35-49	50-64	65+	Rural	Small	Medium	Q1	Q2	Q3	Q4	Q5
HEALTH STATUS																		
General health rating	14	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Mental health rating	16	◆	↓	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Mood and anxiety disorders ¹	24	◆	↑	◆	◆													
No or low life stress	18	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
No or low stress at work	20	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Satisfaction with life in general	22	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Overweight and obesity	26	◆	↑	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Diabetes ¹	29	◆	↑	◆	◆													
Hypertension ¹	30	◆	↓	◆	◆													
Ischemic heart disease ¹	31	◆	↓	◆	◆													
Chronic obstructive pulmonary disease ¹	32	◆	↑	◆	◆													
Lung cancer	33	◆	↓	◆	◆													
Colorectal cancer	35	◆	↓	◆	◆													
Prostate cancer	36	◆	↓															
Breast cancer	37	◆	–															
Hepatitis C ¹	39	◆	–	◆	◆	◆	◆	◆	◆	◆								
Sexually transmitted and blood-borne diseases	41	◆	↓	◆	◆	◆	◆	◆	◆	◆								
COVID-19 infections	43	◆	–	◆	◆	◆	◆	◆	◆	◆								
Injuries	45	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
HEALTH DETERMINANTS																		
Median annual family income	49	◆	↑															
Low income after tax	50	◆	↑															
Labour force participation	51	◆	↓															
Employment	51	◆	–															
Unemployment	53	◆	↓															
Personal education level	56	◆	↑	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Sense of community belonging	57	◆	↓	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Social support	60	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Food security	62	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Fruit and vegetable consumption ²	65	◆	↓	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Physical activity	66	◆	↓	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Heavy drinking	69	◆	↓	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Daily smoking	71	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Non-medical cannabis use	73	◆	↑															
Opioid overdoses and deaths	75	◆	–															
Made changes to improve health	76	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Intent to make changes to improve health	78	◆		◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Second-hand smoke	80	◆	–	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	
Immunizations by age 2	83		↑															
Immunizations by Grade 1	84		↑															
HPV Immunizations in Grade 6	85		–															
Immunization Uptake by Grade 9	86		↓															
Covid-19 immunizations	87																	

¹ Current Canadian data not available; comparison made using historical data. ² Based on 2015/2016 data.

LEGEND

Results: ◆ No difference ◆ Significantly better ◆ Significantly worse
Trends: – No change ↑ Increasing ↓ Decreasing
Other: □ Not calculated

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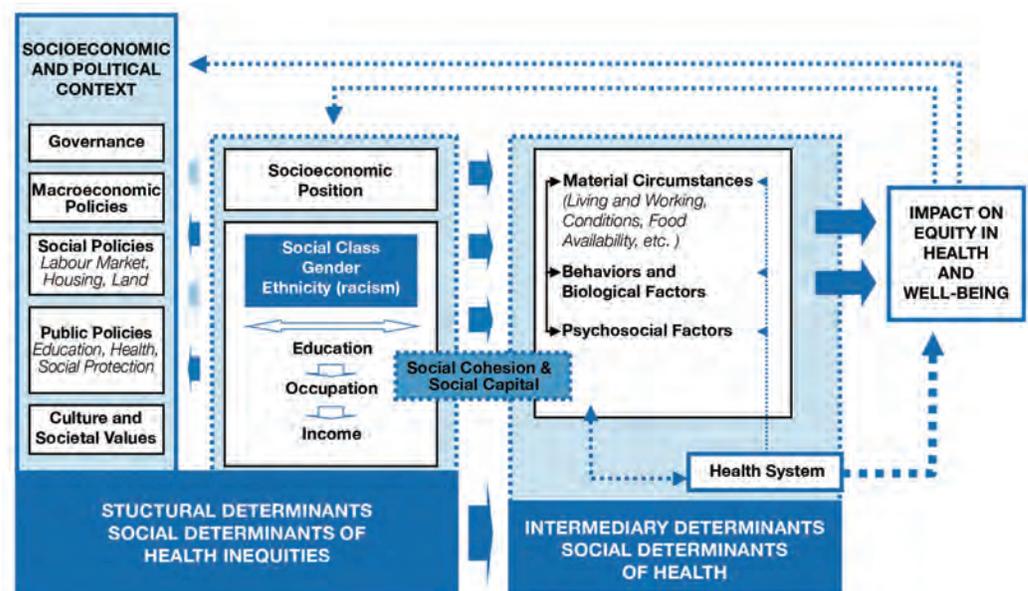
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What Determines Health?

Over time, it has become apparent that health is determined by more than just a strong healthcare system that cares for the sick and relies on hospitals, healthcare providers, and medications. Since the 1970s, the growing consensus has been that the healthcare system plays only a small role in improving the health of a population.¹ A population's health is now understood to be primarily driven by the social determinants of health (SDH)—the social, personal, cultural, environmental, and economic factors that shape the conditions in which people live, learn, work, and play.²

The SDH are societal conditions that influence people's health.⁹ The Public Health Agency of Canada (PHAC) has defined the social determinants of health in Canada to align with the World Health Organization's (WHO) conceptual framework (Figure 1).^{10,11} This international framework maps to the structural, cross-cutting, and intermediary determinants of health recognized in PEI that are listed in Table 1. Public health is uniquely positioned to address the SDH through directing and providing programs, services, and policies that ultimately protect and promote people's and populations' health.

FIGURE 1: WHO COMMISSION ON THE SOCIAL DETERMINANTS OF HEALTH CONCEPTUAL FRAMEWORK, TAKEN DIRECTLY FROM ⁽¹⁰⁾



Evidence shows that these SDH can influence health either positively or negatively. For example, a strong education system and social supports can have a positive impact on health, whereas poor housing and unemployment can have a negative impact on health.¹² Taking action on the SDH has the greatest potential to improve population health outcomes by addressing the root causes of illness and injuries before they occur.^{3,4}

Taking action on the social determinants of health has the greatest potential to improve population health outcomes by addressing the root causes of illness and injuries before they occur.

The SDH impact every aspect of human existence and are at the core of individual health status. The socioeconomic and political context in which people live determines available income and economic possibilities, and limits lifestyle choices. Never has this been clearer than now, since the epidemiological conditions of the coronavirus disease (COVID-19) pandemic have significantly impacted the health status of Canadians and may have changed prevailing socioeconomic conditions.¹³ For many others, the structural determinants of health are fixed and difficult to change, yet disparities in these structural determinants decrease life expectancy and increase risk for infant mortality, early deaths from injury and suicide, mental health problems, and chronic and communicable health conditions, including COVID-19.^{11,13} Many of these structural determinants are correlated, with fixed characteristics such as culture and gender bringing about disadvantages in income and education. Social environments and social support networks offer the opportunity to mitigate some of the impacts of the structural determinants of health through high levels of social cohesion and social capital. Hence strong social environments and social networks are beneficial to PEI in general. The intermediary determinants of health are the result of the differential social, economic, and health consequences of the structural and cross-cutting determinants of health.

TABLE 1: PEI'S SOCIAL DETERMINANTS OF HEALTH

Structural	Cross-Cutting	Intermediary
<ul style="list-style-type: none"> • Income and social status • Education and literacy • Employment and working conditions • Healthy child development • Gender and sexual orientation • Culture, race, and ethnicity 	<ul style="list-style-type: none"> • Social support networks • Social environments 	<ul style="list-style-type: none"> • Physical environments • Personal health practices and coping skills • Biology and genetics • Healthy child development • Health services

Health Equity

The SDH are not equally distributed in a population, and differences in this distribution are usually related to longstanding social norms, policies, and practices resulting in an unjust allocation of societal resources. Differences in the distribution of the SDH often lead to health inequity—differences in health outcomes that are systemic, unfair, and avoidable.^{5,6}

The structural determinants of health listed in the first column of Table 1 are some of the primary drivers of health inequities in PEI. The structural determinants work together in influencing population and individual health status, yet these lie well outside the normal breadth of the healthcare system. Since structural determinants of health tend to cluster together for individuals and within neighbourhoods, the most disadvantageous outcomes also cluster together. Reducing health inequity requires the redistribution of societal resources to improve the SDH, particularly for disadvantaged groups. Such actions enable individuals to increase control over, and to improve, their health.⁴ Since many of the SDH lie outside the health sector, action on the SDH and health equity requires broad collaboration among individuals, communities, partner organizations, and all levels of government.

Action on the social determinants of health and health equity requires broad collaboration among individuals, communities, partner organizations, and all levels of government.

Material and Social Deprivation

One way to examine how the structural determinants produce inequities at neighbourhood levels is through the Material and Social Deprivation Index (MSDI). Deprivation is defined in Pampalon et al. (2009) by Townsend (1987) as “a state of observable and demonstrable disadvantage relative to the local community or the wider society or nation to which an individual, family, or group belongs.” Material deprivation involves the inability to obtain goods and conveniences that are part of modern life (i.e., adequate housing, transportation, entertainment, access to recreational areas). Social deprivation is related to available social capital (i.e., networks of relationships among people) and includes the types, intensity and quality of available social interactions.^{14,15} Indicators selected to create the MSDI are:

- Proportion of individuals with no high school diploma (material)
- Employment to population ratio (material)
- Average income (material)
- Proportion of individuals living alone (social)
- Proportion of individuals who are separated, divorced or widowed (social)
- Proportion of single-parent families (not age-standardized - social)

In the MSDI, neighbourhoods are grouped into quintiles from most privileged (Quintile 1) to most deprived (Quintile 5). This measure of the deprivation quintiles can be used to examine health outcomes by deprivation level, representing the aggregation of material and social deprivation in a specific area of residence. Pampalon et al. (2009) linked increasing quintiles of the MSDI (i.e., increasing deprivation) with increasing premature mortality in Canada.¹⁵ Evidence also shows that material and social deprivation in neighbourhoods decrease life expectancy and increase risk of infant mortality, frequent emergency department visits, and hospitalization for certain conditions, and can reduce access to optimal healthcare.^{11,16–20}

Purpose of this Report

The 2016 *Chief Public Health Officer's Report: Health for all Islanders* explored the relationship between the SDH, health equity, health behaviors, and population health outcomes in PEI. The 2017 *Children's Report* expanded on this work through exploration of the effect of the SDH on the health of children in PEI. The Chief Public Health Office in PEI routinely presents information from these reports to politicians and government officials to promote the reports' findings and inform policy decisions.^{7,8,21}

This present report represents an update on the findings of the 2016 report and considers the SDH in a new way by incorporating the MSDI to help describe the combined influence of the structural determinants of health on the well-being of Islanders. The findings of both reports agree that an unequal distribution of the SDH among population groups is leading to health inequity, which exists both between PEI residents and Canadians as well as within the PEI population.

An unequal distribution of the social determinants of health among population groups is leading to health inequity, which exists both between PEI residents and Canadians as well as within the PEI population.

Given that the SDH demonstrate “how the structure of societies, through myriad social interactions, norms and institutions, are affecting public health...,” and many of the prerequisites for health do not actually involve healthcare at all, population health and health equity are the responsibility of the broader society.¹⁰ Hence, this report highlights the SDH by: 1) organizing health determinants according to the World Health Organization's Conceptual Framework for Action on the Social Determinants of Health,²² 2) stratifying each indicator according to some key social factors in order to identify inequities, and 3) providing recommendations of strategic actions that can be taken to reduce health inequities in PEI.

Like previous reports released by the Chief Public Health Officer, this report provides an overview of the health status of PEI residents and key determinants of health. Of note, most of the data presented in this report was collected prior to the COVID-19 pandemic, because the most recent data available is from 2017/2018. Hence, this report establishes an important baseline for assessing the impacts of the pandemic on health status and the SDH in PEI. Information in this report is presented in an accessible manner to facilitate its use by public health practitioners, health system planners, and community groups in developing programs, services, policies, and other initiatives aimed at improving health in PEI and reducing health inequities. The information will also be available to stakeholders in other formats as part of a comprehensive knowledge translation and mobilization plan.

This report establishes an important baseline for assessing the impacts of the pandemic on health status and the social determinants of health in PEI.

How to Interpret and Use this Report

The information presented in this report is drawn from various data sources from PEI and the Canadian federal government in order to provide a somewhat comprehensive overview of the health of PEI residents. The full results from the analyses are provided in the Technical Appendix, but summaries of key results are provided here, in the main report.

Each indicator is presented with a brief description of its results. For ease of understanding, multiple figures are presented for each indicator. The first figure in each section shows trends over time and allows for comparisons between PEI and Canada. Of note, the trend lines in many of these figures break between 2013/14 and 2015/16, and this break was introduced to indicate that the trend lines cannot be interpreted as continuous. After the 2013/14 cycle, the data collection methods and survey questions for the Canadian Community Health Survey changed, so data from 2015/16 on must be interpreted separately from data collected in previous cycles. Subsequent figures stratify the indicator to enable the examination of disparities and inequities in the distribution of each indicator within the PEI population. The factors used to stratify indicators are: sex (male and female), age groups (12-17, 18-34, 35-49, 50-64, 65+), type of population center in which one resides (rural, small centre with 1,000 to 29,999 residents, and medium centre with 30,000 to 99,000 residents), and material and social deprivation quintile. Most figures contain vertical bars to represent the 85% confidence interval for each percent or score that is presented in the report. Non-overlapping 85% confidence intervals indicate that values are significantly different from a statistical perspective.

SECTION 2

Population Statistics

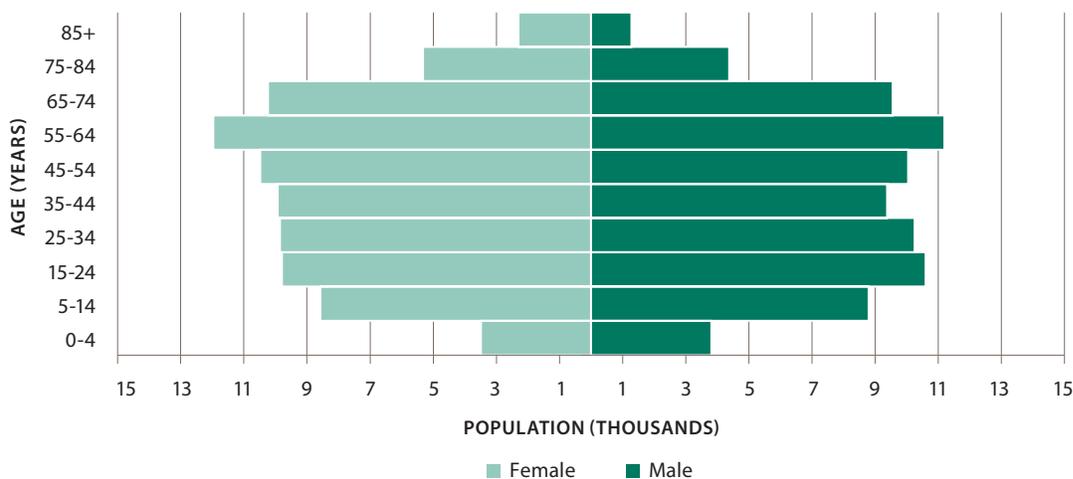
This section of the report provides a brief overview of the composition of the PEI population, and information about deaths and life expectancy.



PEI Population

Figure 2 depicts the population of PEI broken down by age and sex. While males outnumber females in the younger age groups, females outnumber males in older age groups. In 2021, those aged 65 years and older accounted for 20.5% of PEI's population. In 2040, this age group is projected to increase to 22.4% of the population, thus signifying that PEI's population is aging.

FIGURE 2: PEI POPULATION PYRAMID, 2021

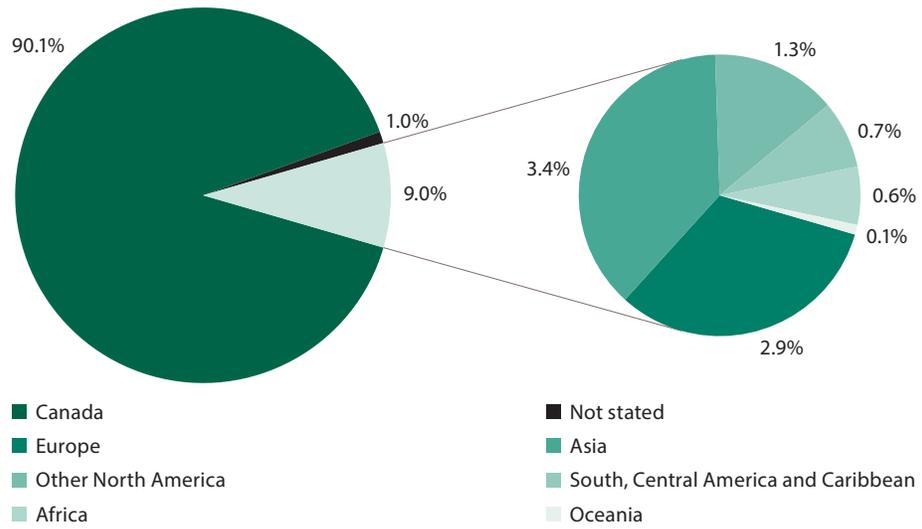


Data source: PEI Statistics Bureau.

PEI's population is aging, and in 2040, those aged 65 years and older are projected to make up 22.4% of the population.

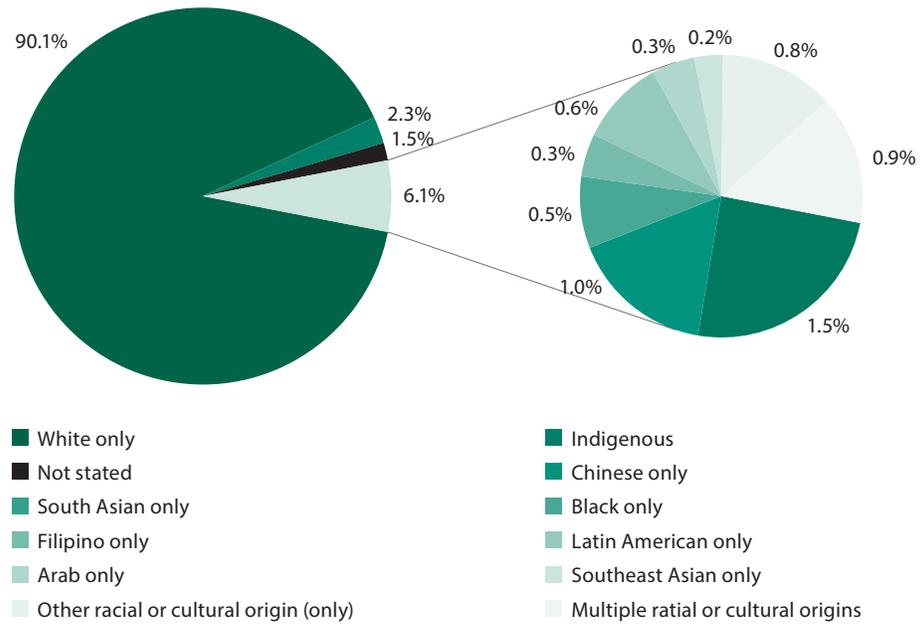
PEI had been one of the fastest-growing provinces in Canada in recent years, and while the population is becoming increasingly diverse in some ways, PEI's population is still less diverse than Canada's. Approximately 25% of people in Canada and 10% of PEI residents were born outside of Canada in 2017/18. Asia (3.4%) and Europe (2.9%) were the most common regions in which immigrants in PEI were born (Figure 3). Most PEI residents (91.5%) spoke English most often at home, about 1.0% spoke French most often, and 3.1% spoke a language other than English or French. Indigenous (First Nations, Métis, Inuk/Inuit) peoples accounted for about 2.3% of PEI's population, and people who identify as White comprised 90.1% of the population. Black and other people of colour comprised 6.1% of the population. About 1.5% of PEI residents preferred not to provide information about their ethno-racial background (Figure 4). Approximately 2.6% of PEI residents aged 15 years or older identified as homosexual (lesbian or gay) or bisexual, and 4.0% of PEI residents preferred not to answer the question (Figure 5); these percentages were similar to those for Canada.

FIGURE 3: SELF-REPORTED COUNTRY OR REGION OF BIRTH, PEI, 2017/18

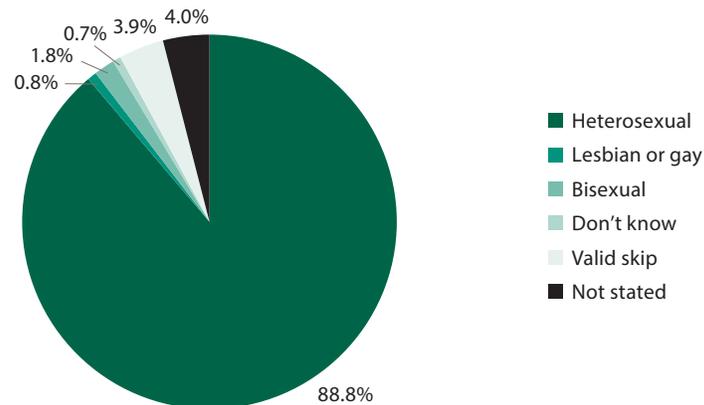


Data source: Statistics Canada, Canadian Community Health Survey 2017/18.

FIGURE 4: SELF-REPORTED ETHNO-RACIAL BACKGROUND, PEI, 2017/18



Data source: Statistics Canada, Canadian Community Health Survey 2017/18.

FIGURE 5: SELF-REPORTED SEXUAL ORIENTATION IDENTITY, AGE 15+, PEI, 2017/18

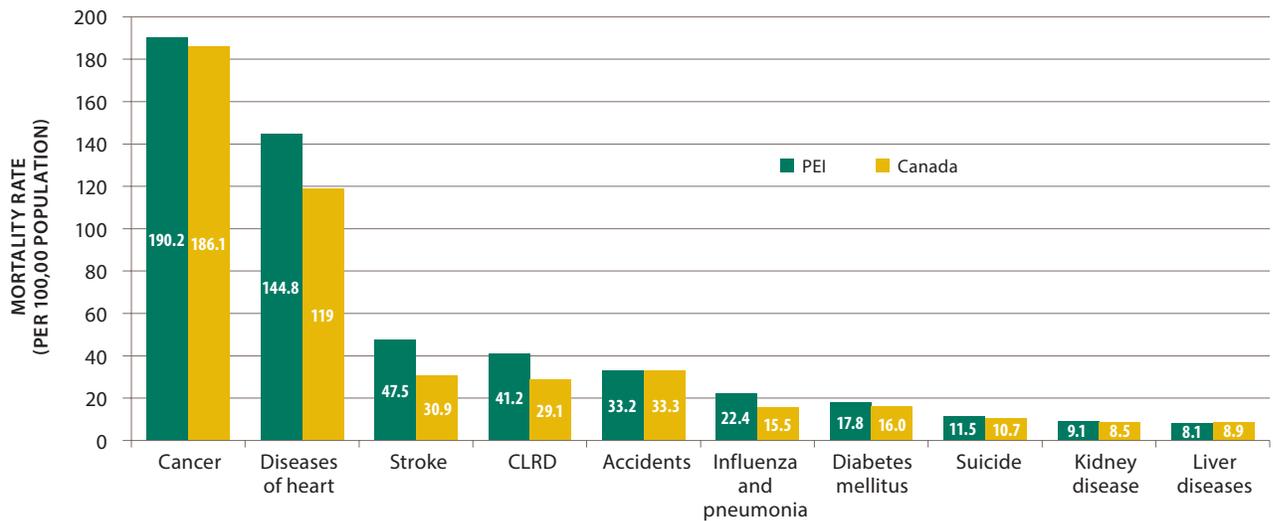
Data source: Statistics Canada, Canadian Community Health Survey 2017/18.

A vast and growing body of evidence shows that race/ ethnicity/ culture, Indigenous identity, language, religion, immigration experience, gender/ sex, gender identity, and sexual orientation impact health at the population and individual levels.^{11,23-29} These aspects of diversity are also associated with health inequities due to their relationships with disparities in health, health determinants, and the distribution of societal resources. Hence, it is important to examine whether these factors are associated with the distribution of population health indicators in PEI. Unfortunately, though, due to PEI's small population and the small size of minority groups within PEI, the sample from the Canadian Community Health Survey was not large enough to conduct meaningful analyses related to these aspects of diversity. A further limitation is that information related to these aspects of diversity is not typically collected in PEI's health administrative databases, and when such information is collected, it is typically of poor quality or missing altogether.

Leading Causes of Death

The leading causes of death in a population are the conditions that lead to the most severe health outcome. Ranking these conditions by mortality rate shows their relative impact on deaths within the population. Chronic diseases, like cancer and heart disease, are the leading causes of death in PEI. The mortality rates for these conditions in PEI are higher than the Canadian rates. For almost all of the 10 leading causes of death, mortality rates for PEI surpass those for Canada, with the exception of accidents and liver diseases (Figure 6).

FIGURE 6: LEADING CAUSES OF DEATH, PEI AND CANADA, 2019



Data source: Statistics Canada. Age-standardized using the 2011 Canadian population. CLRD, Chronic lower respiratory disease.

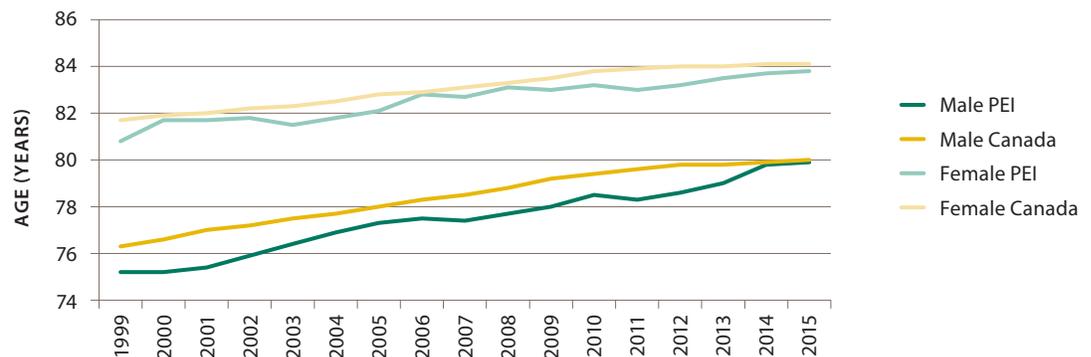
Chronic diseases, like cancer and heart disease, are the leading causes of death in PEI. The mortality rates for these conditions in PEI are higher than the Canadian rates.

Life Expectancy

Life expectancy is an important measure of the population's health. Life expectancy at birth is the average number of years a person would be expected to live if current trends remain. Like the rest of Canada, life expectancy for PEI residents is higher for females than for males. However, life expectancy for both males and females in PEI remain lower than that of their Canadian counterparts. Notably, the gap between PEI and Canada has been closing (Figure 7).

Life expectancy for both males and females in PEI remain lower than that of for their Canadian counterparts, but the gap is closing.

FIGURE 7: LIFE EXPECTANCY AT BIRTH, IN YEARS, PEI AND CANADA

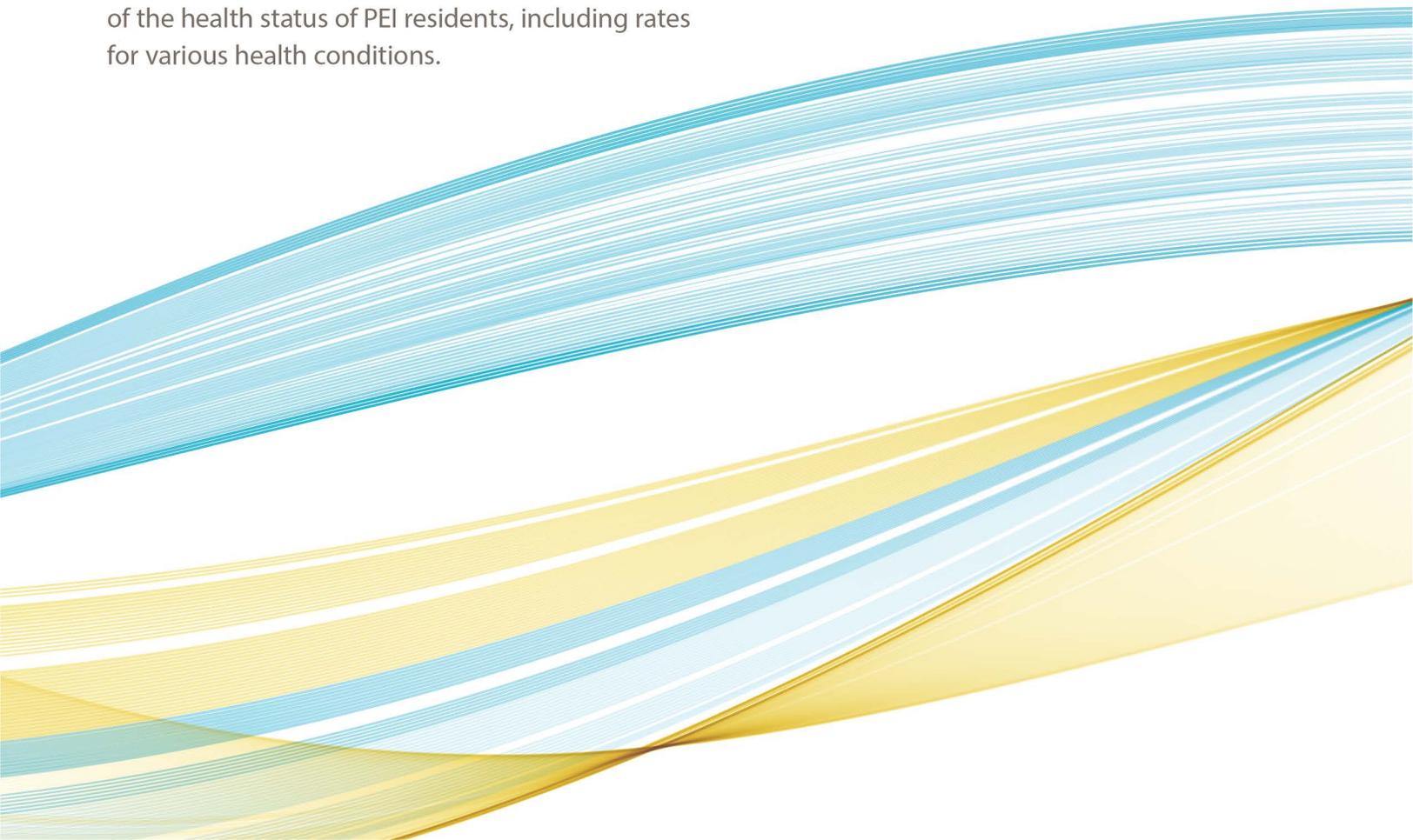


Data source: Statistics Canada. Statistics Canada uses a 3-year rolling average method for calculating life expectancy.

SECTION 3

Health Status

This section of the report provides information about the trends and distribution of key indicators of the health status of PEI residents, including rates for various health conditions.

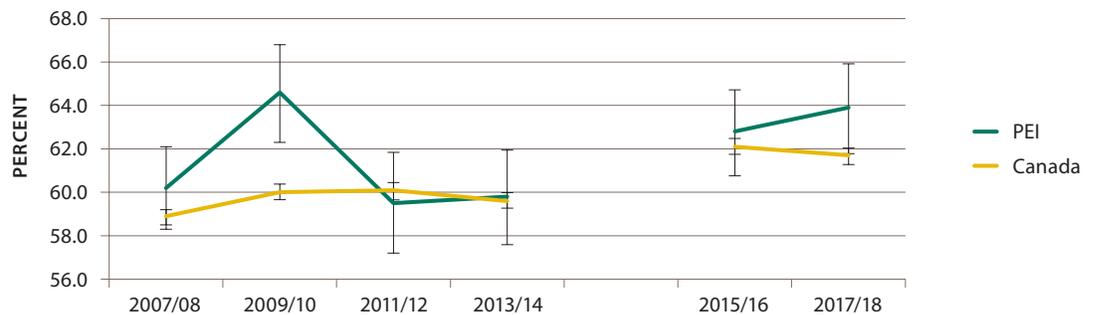


General Health

Self-reported general health is a summary of how healthy a person feels overall. It combines the absence of disease and injury, as well as self-assessment of physical, mental, and social well-being.

There has been no clear pattern in general health rating when comparing PEI to Canada, but it appears that general health rating has been higher in PEI than Canada since 2015. In 2017/18, PEI residents were significantly more likely than Canadians overall to rate their general health as excellent or very good (63.9% versus 61.7%; Figure 8).

FIGURE 8: SELF-REPORTED EXCELLENT OR VERY GOOD HEALTH, PEI AND CANADA, AGED 12+, 2007-2018



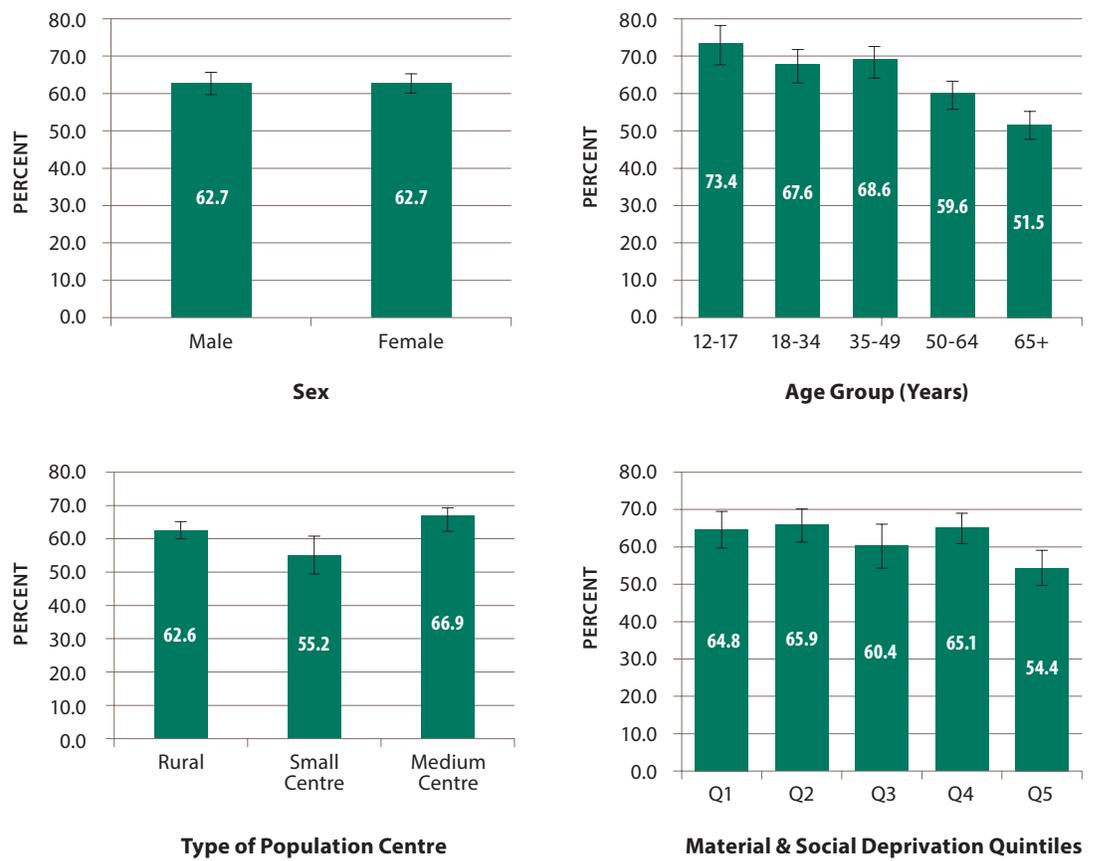
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

In PEI, self-reported general health rating showed some important patterns in 2017/18. As shown in Figure 9, females and males were equally likely to rate their general health as excellent or very good (62.7% for both groups), and as would be expected, the likelihood of rating one's health as excellent or very good declined with age (73.4% among those aged 12 to 17 years old, and 51.5% among those aged 65 years or more). Rating one's general health as excellent or very good was lowest among those living in small population centres (55.2%) but was highest among those living in medium centres (66.9%); those living in rural areas fell in-between (62.6%). There was no clear pattern in the relationship between general health and neighbourhood-level material and social deprivation. It is clear, however, that those who live in the most materially and socially deprived neighbourhoods (Q5) were least likely to rate their general health as excellent or very good (54.4%), and those in the second-least materially and social deprived neighbourhoods were most likely to rate their general health as excellent or very good (65.9%).

When compared to all PEI residents, those ages 65 years and older and those living in the most materially and socially deprived neighbourhoods were less likely to rate their general health as excellent or very good, but those aged 12 to 17 years old were more likely to rate their general health as such.

Those who live in the most materially and socially deprived neighbourhoods were least likely to rate their general health as excellent or very good (54.4%).

FIGURE 9: SELF-REPORTED EXCELLENT OR VERY GOOD HEALTH, PEI, 2017/18



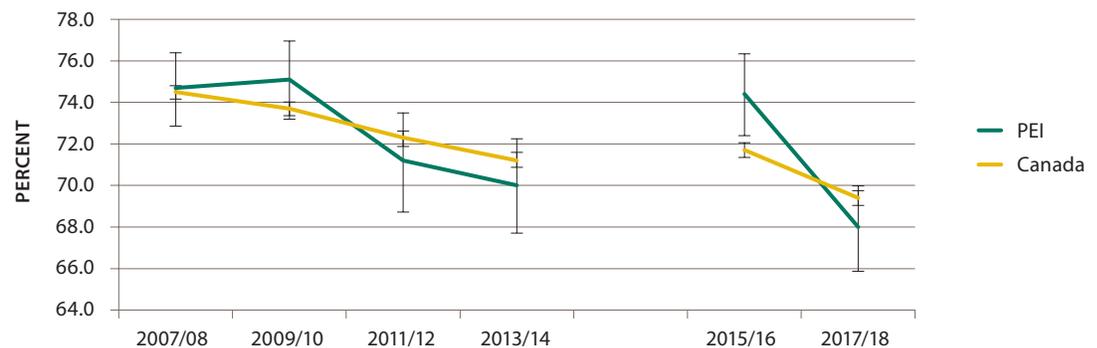
Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Mental Health

Mental health is an important resource in fulfilling one's potential and plays an active part in everyday life. It can be affected by life stress, work-related stress, satisfaction with life, access to social supports, emotional well-being, and coping skills, among other factors. Like physical health, every individual has mental health, the state of which may vary across a continuum (i.e., low to high) and across one's lifespan. In contrast, mental illness is a diagnosed medical condition that affects thoughts, feelings, and behaviours.

Reports of excellent or very good mental health have been declining in PEI and Canada. Ratings of excellent or very good mental health in PEI have been statistically similar to those of Canada since 2007. The only period in which the difference was significant was 2015/16, when 74.4% of PEI residents rated their mental health highly compared to 71.7% of Canadians (Figure 10).

FIGURE 10: SELF-REPORTED EXCELLENT OR VERY GOOD MENTAL HEALTH, PEI AND CANADA, AGED 12+, 2007-2018

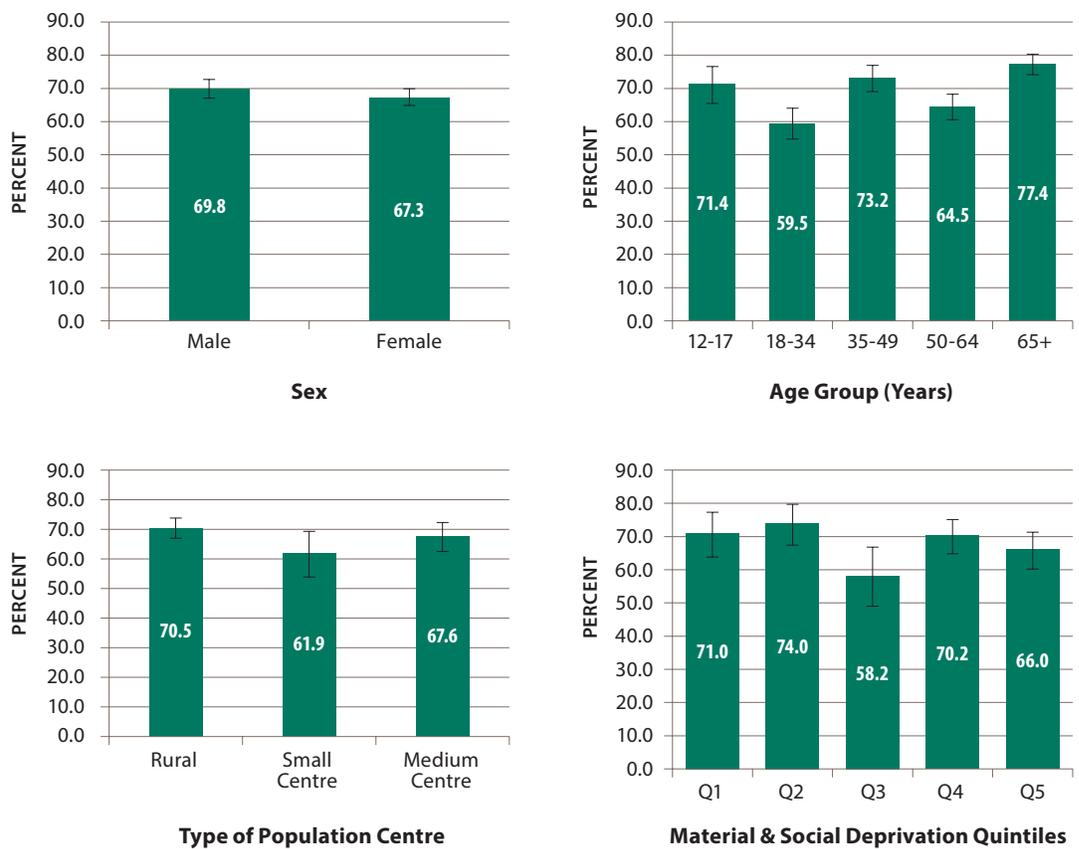


Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Mental health ratings in PEI showed few patterns (Figure 11). "Excellent" and "very good" mental health ratings appeared to be similar among females and males (67.3% and 69.8%, respectively). Those ages 18 to 34 years old seemed to be less likely to rate their mental health as very good or excellent when compared to most other age groups (59.5%), and those aged 65 years old or more seemed more likely to give themselves the highest mental health ratings (77.4%). As with general health rating, those living in small population centres appeared to be least likely to rate their mental health as excellent or very good (61.9%). There were no observable patterns in mental health rating by neighbourhood-level material and social deprivation, but those living in neighbourhoods with average levels of both material and social deprivation (Q3) were least likely to rate their mental health as excellent or very good (58.2%).

Those aged 18 to 34 years old, and those living in neighbourhoods with average levels of material and social deprivation, were less likely to rate their mental health as excellent or very good when compared to PEI residents overall. On the other hand, those aged 65 years and older were more likely to rate their mental health highly than PEI residents overall.

FIGURE 11: SELF-REPORTED EXCELLENT OR VERY GOOD MENTAL HEALTH, PEI, 2017/18



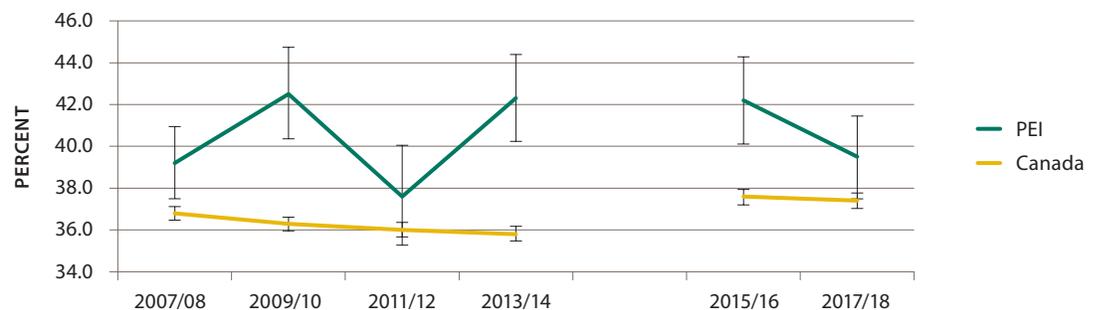
Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Those aged 18 to 34 years old, and those living in neighbourhoods with average levels of material and social deprivation were less likely to rate their mental health as excellent or very good when compared to PEI residents overall.

Life Stress

PEI residents have consistently been more likely to report having no or low life stress when compared to Canadians overall. While the reporting of no or low life stress decreased slightly among Canadians from 2007 to 2014 and held steady from 2015 to 2018, in PEI, a pattern was less apparent. However, from 2015 to 2018, there was a decrease in the percentage of PEI residents reporting no or low life stress (Figure 12).

FIGURE 12: SELF-REPORTED NO OR LOW LIFE STRESS, PEI AND CANADA, AGED 12+, 2007-2018



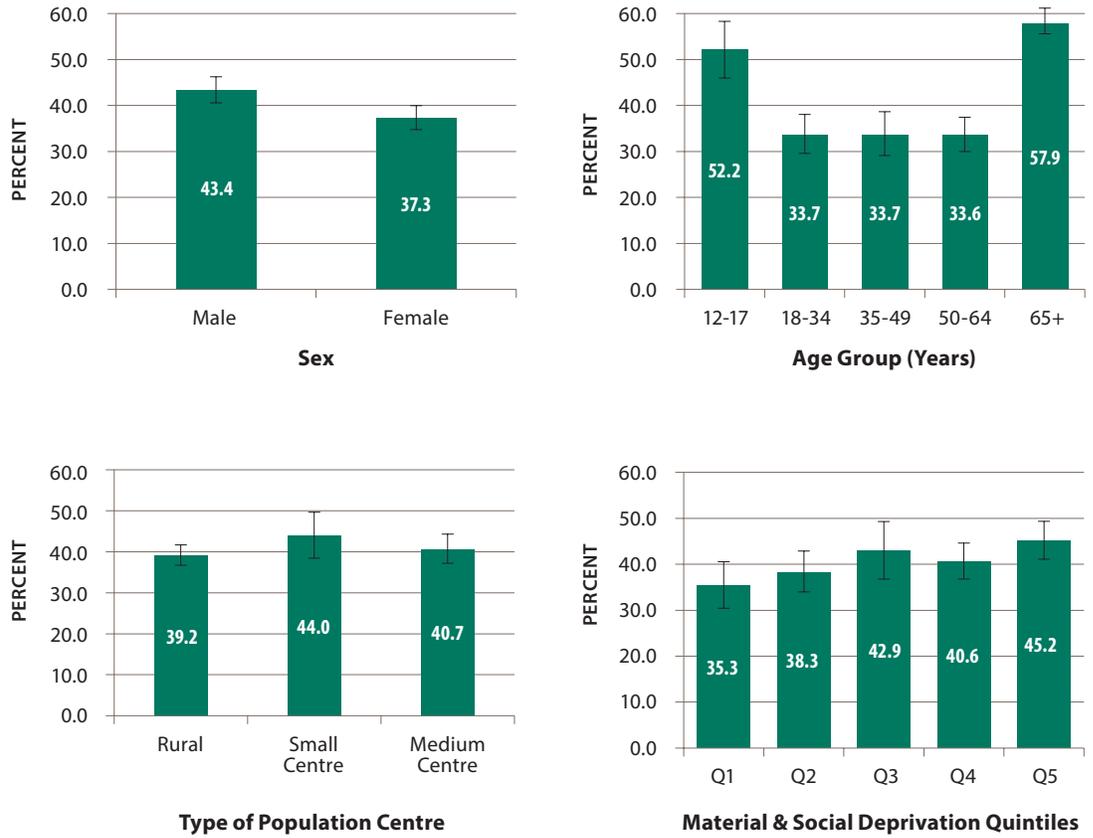
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

PEI residents in the oldest and youngest age groups were significantly more likely to report having no or low stress when compared to PEI residents overall.

Some interesting trends emerge in the ratings of no or low life stress among PEI residents (Figure 13). Males were significantly more likely to report no or low life stress than females (43.4% versus 37.3%). Ratings of no or low life stress were highest among the youngest and oldest age groups (52.2% and 57.9%, respectively). While those living in small population centres seemed most likely to report no or low life stress, the differences observed were not statistically significant. Interestingly, as neighbourhood-level material and social deprivation increased, so did the likelihood of reporting low or no life stress—35.3% of those living in the least deprived (Q1) compared to 45.2% of those living in the most deprived (Q5) neighbourhoods; the only significant difference observed was between those living in the most and least deprived neighbourhoods.

PEI residents in the oldest and youngest age groups were significantly more likely to report having no or low stress when compared to PEI residents overall. Conversely, when doing the same comparison, those in the intervening age groups were significantly less likely to report no or low life stress.

FIGURE 13: SELF-REPORTED NO OR LOW LIFE STRESS, PEI, 2017/18

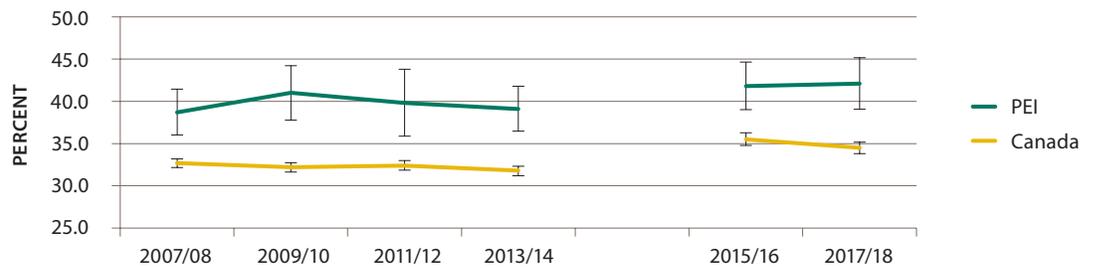


Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Stress at Work

From 2007 to 2018, PEI residents have consistently been more likely to report no or low work-related stress when compared to Canadians overall. Reports of no or low work-related stress in PEI have remained steady over time (Figure 14).

FIGURE 14: SELF-REPORTED NO OR LOW LIFE STRESS AT WORK, PEI AND CANADA, AGED 12+, 2007-2018



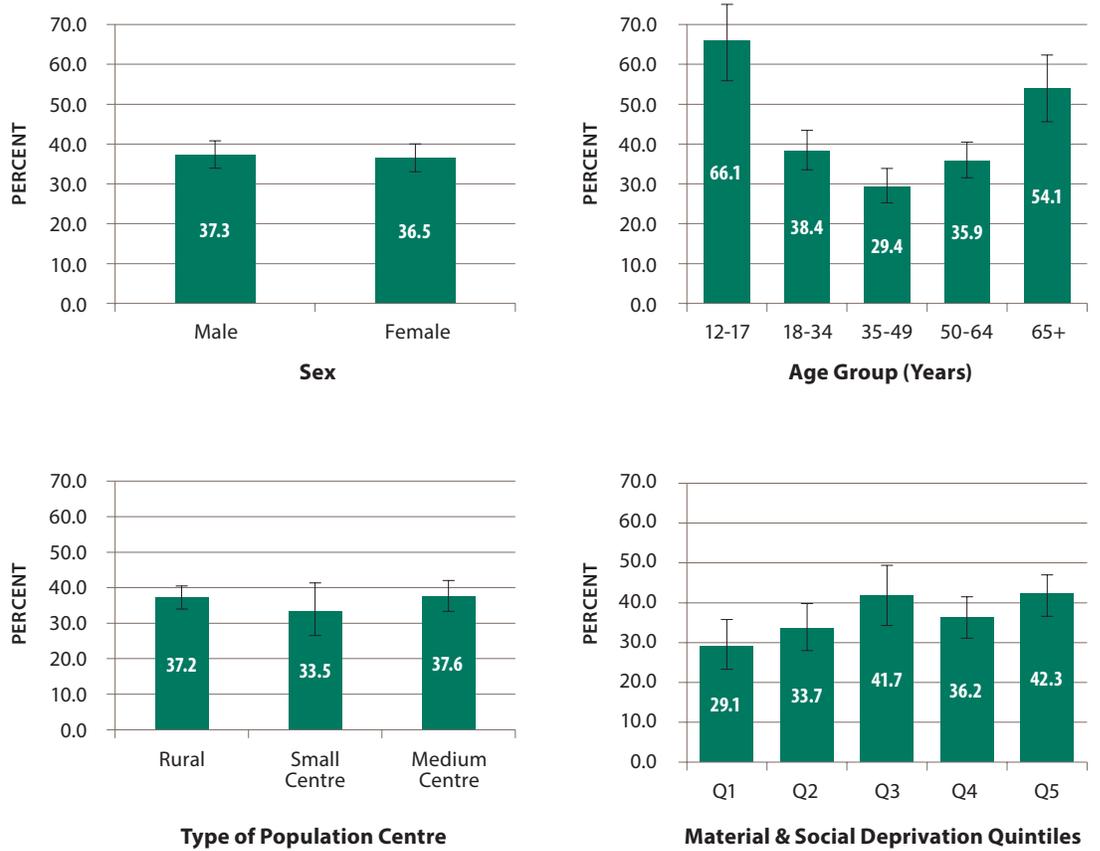
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Females and males in PEI were equally likely to report no or low work-related stress (36.5% and 37.3%, respectively; Figure 15). As would be expected, the age groups most likely to be in the workforce (18 – 64 years old) were least likely to report having no or low stress at work, and the type of population centre in which one resides was not related to work stress. However, there appeared to be a relationship between neighbourhood-level material and social deprivation and work-related stress—those living in the least deprived neighbourhoods (Q1) were least likely to report having no or low stress at work (29.1%), and those living in the most deprived neighbourhoods (Q5) were most likely to report having no or low stress at work (42.3%).

When compared to the proportion for PEI overall, age was the only factor that was associated with perceived work-related stress. Those aged 12 to 17 years old and 65 years and older were more likely to report no or low work-related stress. Those aged 35 to 49 years old were less likely to report this than PEI residents overall.

PEI residents have consistently been more likely to report no or low work-related stress when compared to Canadians overall.

FIGURE 15: SELF-REPORTED NO OR LOW STRESS AT WORK, PEI, 2017/18

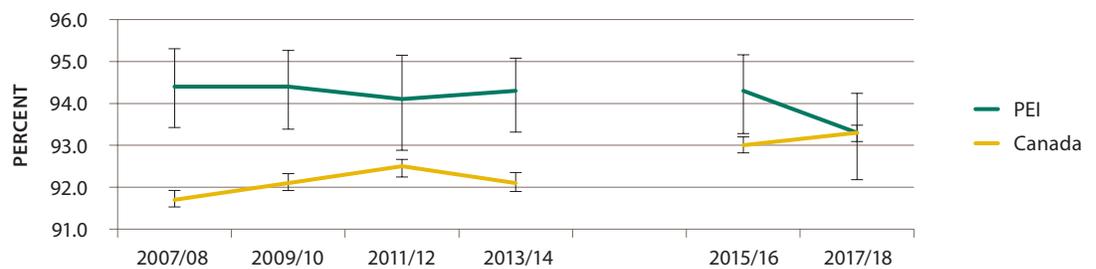


Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Satisfaction with Life in General

From 2007 to 2016, ratings of high life satisfaction were more common among PEI residents than Canadians overall. The proportion of PEI residents who rated their life satisfaction highly decreased from 94.3% in 2015/16 to 93.3% in 2017/18, to equal the proportion of Canadians rating their life satisfaction highly (Figure 16).

FIGURE 16: SELF-REPORTED HIGH LIFE SATISFACTION, PEI AND CANADA, AGED 12+, 2007-2018



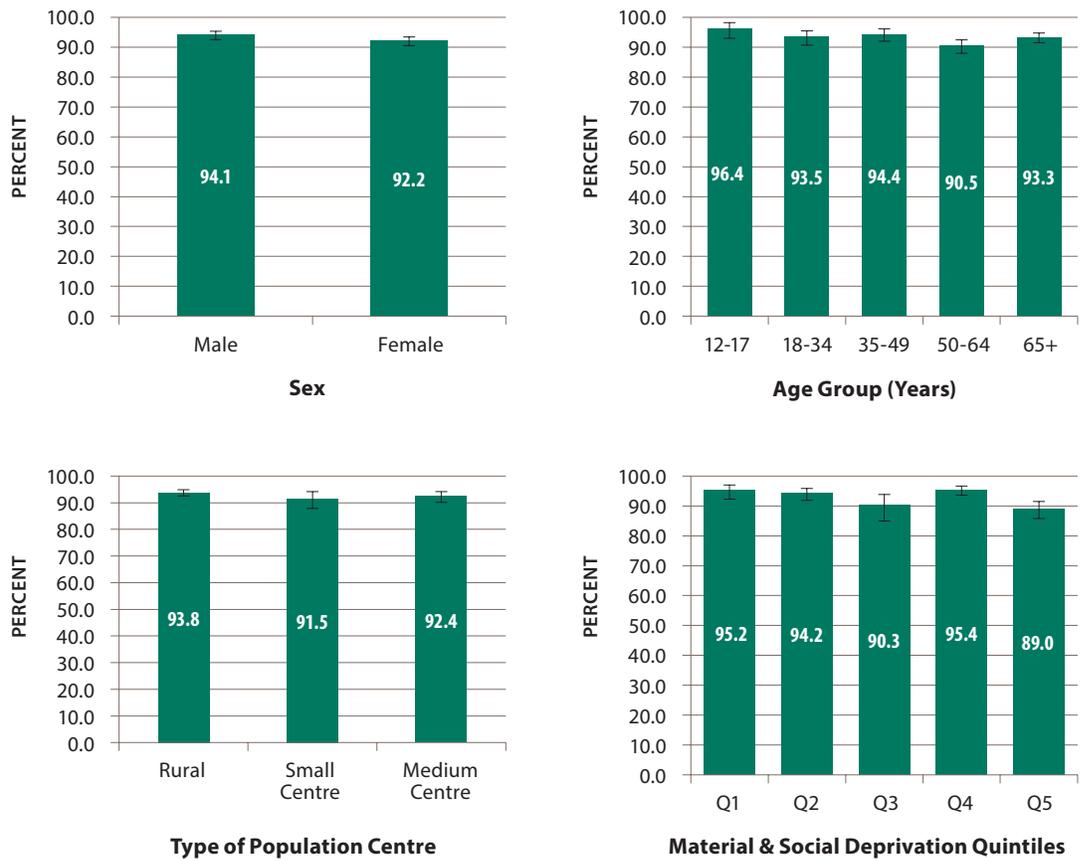
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Life satisfaction was very high in PEI, regardless of sex, age, or the type of population centre in which a person resides (Figure 17). Notably, those aged 17 years and younger were most likely to rate their life satisfaction as high (96.4%) and those aged 50 to 64 years old were least likely to rate their life satisfaction as high (90.5%), and this difference was statistically significant. Those living in the most materially and socially deprived neighbourhoods (Q5) were least likely to rate their life satisfaction as high (89.0%), and those residing in the least deprived neighbourhoods (Q1) were among those most likely to rate their life satisfaction as high (95.2%); the difference between the groups were statistically significant.

Compared to the responses for PEI overall, those living in the most deprived neighbourhoods were significantly less likely to rate their life satisfaction as high. No other statistically significant differences were observed.

Life satisfaction was very high in PEI, regardless of sex, age, or the type of population centre in which a person resides.

FIGURE 17: SELF-REPORTED HIGH LIFE SATISFACTION, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Since 2008, the prevalence of treatment for mood and anxiety disorders has consistently been higher in PEI than in Canada, and the gap has been widening.

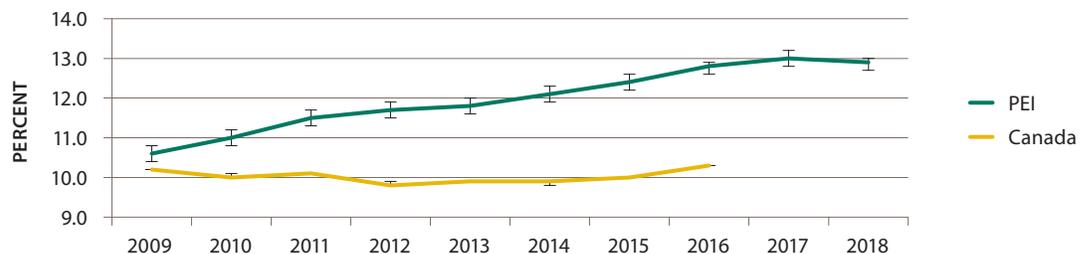
Mood and Anxiety Disorders

Mood and anxiety disorders are among the most commonly diagnosed mental health conditions, or illnesses.³⁰ Although many people with these conditions may not seek treatment, the percentage of people receiving treatment for these conditions is an indicator of how the prevalence of these conditions changes over time.

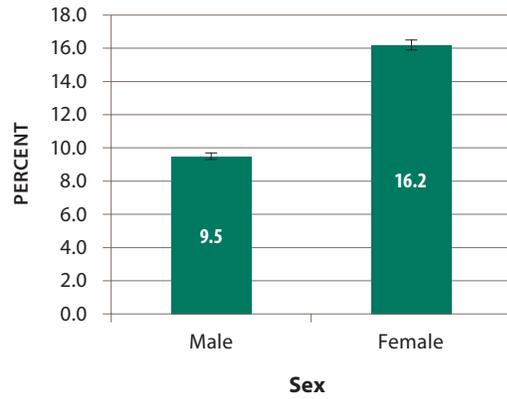
Since 2008, the prevalence of treatment for mood and anxiety disorders has consistently been higher in PEI than in Canada, and the gap has been widening. Also, while the prevalence of treatment for mood and anxiety disorders has remained steady in Canada, it has been increasing in PEI over time. In 2016, the last year for which Canadian data was available, 10.3% of Canadians and 12.8% of PEI residents had been treated for a mood or anxiety disorder; this difference was statistically significant (Figure 18). In 2018, 12.9% of PEI residents had been treated for a mood or anxiety disorder, with more females than males receiving such treatment (16.2% versus 9.5%; Figure 19).

In 2018, females in PEI were significantly more likely to have been treated for a mood or anxiety disorder when compared to the overall prevalence for the province. On the other hand, males were less likely to have received such treatment.

FIGURE 18: ANNUAL PREVALENCE OF TREATED MOOD AND ANXIETY DISORDERS, AGED 1+, PEI AND CANADA, 2009-2018



Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

FIGURE 19: ANNUAL PREVALENCE OF MOOD AND ANXIETY DISORDERS, BY SEX, AGE 1+, PEI, 2018

Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

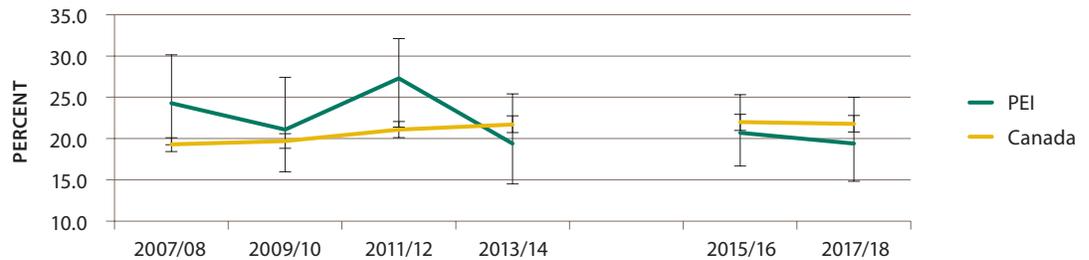
Overweight and Obesity

A person is classified as overweight if they have a Body Mass Index (BMI) of 25 to 29.9. If a person's BMI is 30 or more, then that person is considered obese. Obesity is linked to a variety of diseases, such as heart disease, diabetes, and several types of cancer.³¹

Actual rates of obesity and overweight might be higher than reported here, because people tend to underestimate true body weight, and these values are based on self-reported information in the Canadian Community Health Survey.

There were no statistically significant differences in the rates of overweight and obesity among youth in PEI and Canada from 2007 to 2018, although in recent years, the rates seemed to be lower in PEI. The rate of youth overweight and obesity in PEI seems to be decreasing, as it fell from 20.7% in 2015/16 to 19.4% in 2017/18 (Figure 20), but the difference was not statistically significant.

FIGURE 20: SELF-REPORTED OVERWEIGHT AND OBESITY, PEI AND CANADA, AGED 12-17, 2007-2018

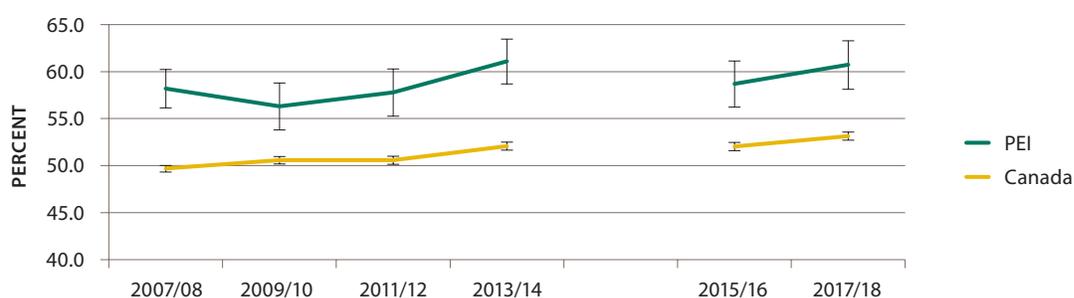


Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Self-reported overweight and obesity have been increasing among adults in PEI and Canada, and rates in PEI have consistently been significantly higher than those for Canada. The proportion of Canadian adults who reported being overweight or obese increased from 52.0% in 2015/16 to 53.1% in 2017/18. For PEI, the increase in this period was from 58.7% to 60.7% (Figure 21).

When compared to PEI residents overall, males, those ages 65 years and older, rural residents, and those living in the second-most deprived neighbourhoods were more likely to be overweight or obese.

FIGURE 21: SELF-REPORTED OVERWEIGHT AND OBESITY, PEI AND CANADA, AGED 18+, 2007-2018

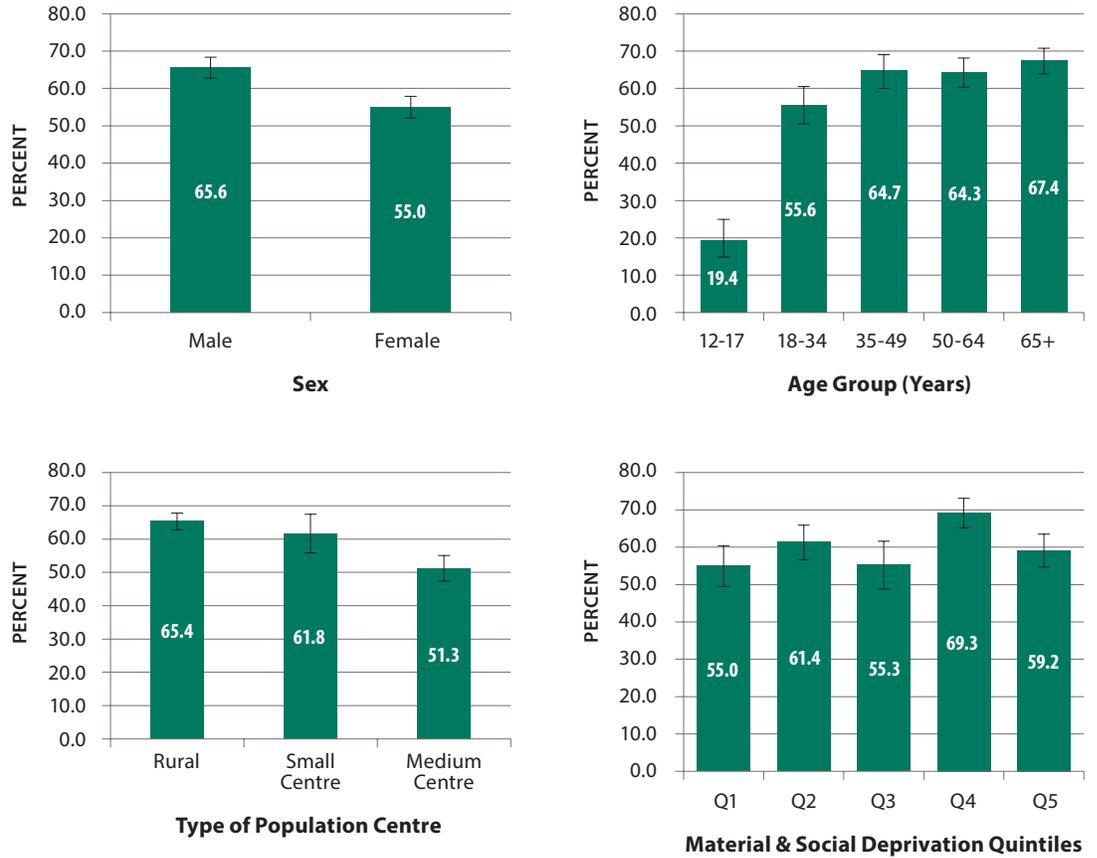


Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

In PEI, there were some notable patterns in the distribution of overweight and obesity (Figure 22). For instance, males were significantly more likely to be overweight or obese than females (65.6% versus 55.0%). Obesity and overweight were far less common among those ages 12 to 17 years old (19.4%) compared to adults (range: 55.6% to 67.4%), and the likelihood of obesity was greatest among those aged 35 years and older. Rural and small population centres had a significantly higher percentage of overweight and obese residents than medium centres (65.4% and 61.8%, respectively, versus 51.3%). There was no clear trend in the prevalence of obesity and overweight by neighbourhood-level material and social deprivation, but notably, residents of the second-most deprived neighbourhoods (Q4) had the highest prevalence of overweight and obesity (69.3%), and this difference was statistically significant in most cases.

When compared to PEI residents overall, males, those ages 65 years and older, rural residents, and those living in the second-most deprived neighbourhoods were more likely to be overweight or obese. Females, those ages 12 to 17 years old, and those living in medium population centres were less likely to be obese.

FIGURE 22: SELF-REPORTED OVERWEIGHT OR OBESITY, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

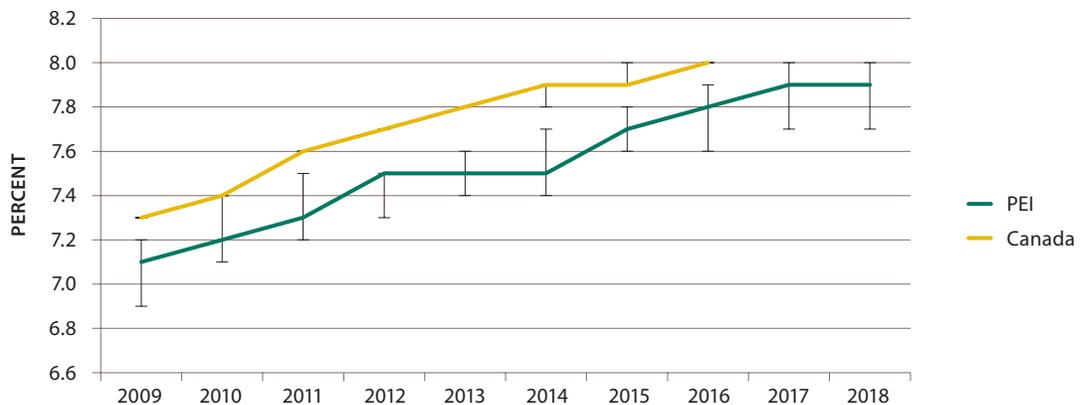
Diabetes

Diabetes is a chronic condition that occurs when the body is unable to produce or properly use insulin, a hormone that controls the level of sugars in the blood.³²

The prevalence of diabetes in PEI and Canada has been increasing over time, but the prevalence in PEI has consistently remained lower than that of Canada. In the last year for which Canadian data was available, 2016, the prevalence of diabetes in Canada was 8.0%, and it was 7.8% in PEI (Figure 23).

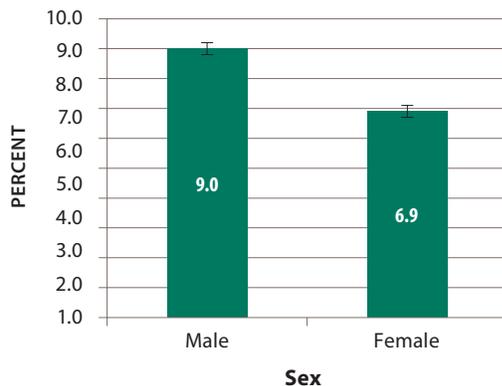
Diabetes is more prevalent in males than females in PEI—in 2018, the prevalence of diabetes among males in PEI was 9.0%, and it was 6.9% among females (Figure 24).

FIGURE 23: PREVALENCE OF DIABETES, PEI AND CANADA, AGED 1+, 2009-2018



Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

FIGURE 24: PREVALENCE OF DIABETES, BY SEX, AGED 1+, PEI, 2018



The prevalence of diabetes in PEI and Canada has been increasing over time, but the prevalence in PEI has consistently remained lower than that of Canada.

Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

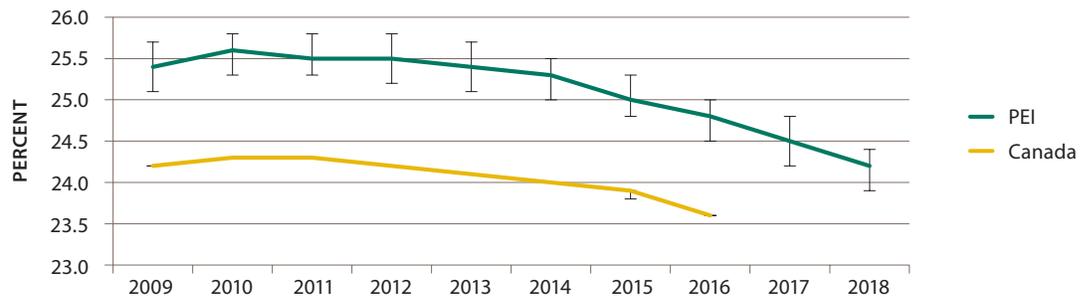
Hypertension

Hypertension, also known as high blood pressure, means there is too much pressure in blood vessels when the heart pumps blood through the body. Although hypertension often has no symptoms, it increases a person's risk of death from stroke, heart attack, kidney and heart failure, and other vascular diseases.^{33,34}

The prevalence of hypertension appears to be declining in PEI and Canada, though the prevalence in PEI has consistently been higher than that of Canada. In 2016, the last year for which Canadian estimates were available, the prevalence of hypertension in Canada was 23.6%, and it was 24.8% in PEI (Figure 25).

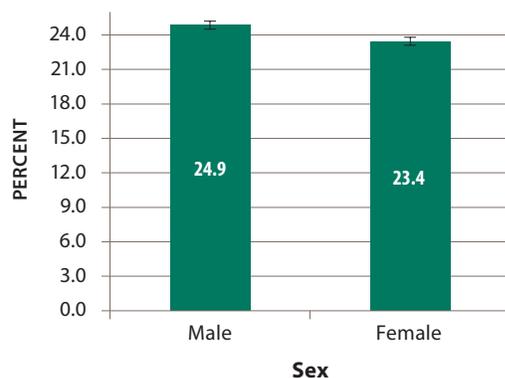
In PEI, hypertension is more common among males than females, and in 2018, the prevalence among males in PEI was 24.9%, and it was 23.4% among females (Figure 26).

FIGURE 25: PREVALENCE OF HYPERTENSION, PEI AND CANADA, AGED 20+, 2009-2018



Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

FIGURE 26: PREVALENCE OF HYPERTENSION, BY SEX, PEI, AGED 20+, 2018



The prevalence of hypertension appears to be declining in PEI and Canada, though the prevalence in PEI has consistently been higher than that of Canada.

Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

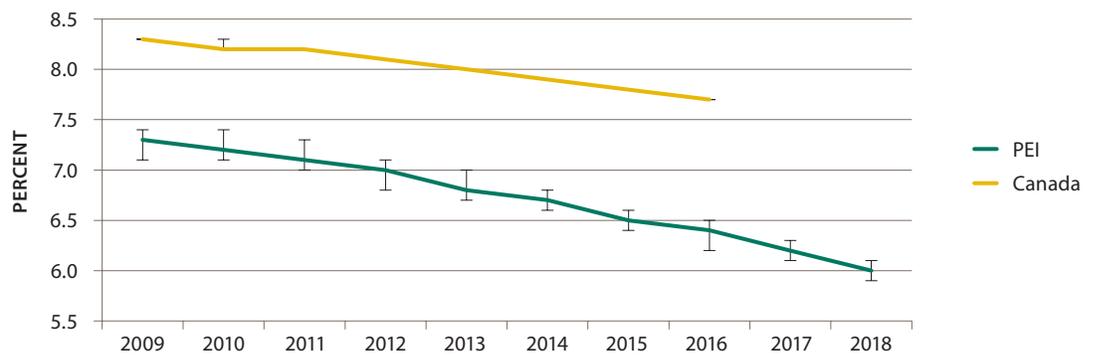
Ischemic Heart Disease

Heart disease describes a range of conditions that affect the heart. Ischemic heart disease is the term given to heart problems that occur due to narrowed heart arteries that block or restrict the flow of blood and oxygen to heart muscles.³⁵

The prevalence of ischemic heart disease has been trending downward in PEI and Canada and has consistently been lower in PEI than Canada in recent years. In 2016, the most recent year for which Canadian data was available, the prevalence of ischemic heart disease was 7.7% in Canada and 6.4% in PEI (Figure 27).

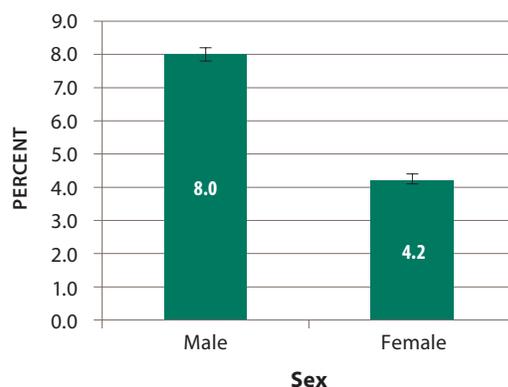
In 2018, the prevalence of ischemic heart disease in PEI was 6.0% overall, but there was a wide disparity by sex— the prevalence was 4.2% among females and 8.0% among males (Figure 28).

FIGURE 27: PREVALENCE OF ISCHEMIC HEART DISEASE, PEI AND CANADA, AGED 20+, 2009-2018



Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

FIGURE 28: PREVALENCE OF ISCHEMIC HEART DISEASE, BY SEX, PEI, AGED 20+, 2018



The prevalence of ischemic heart disease has been trending downward in PEI and Canada and has consistently been lower in PEI than in Canada.

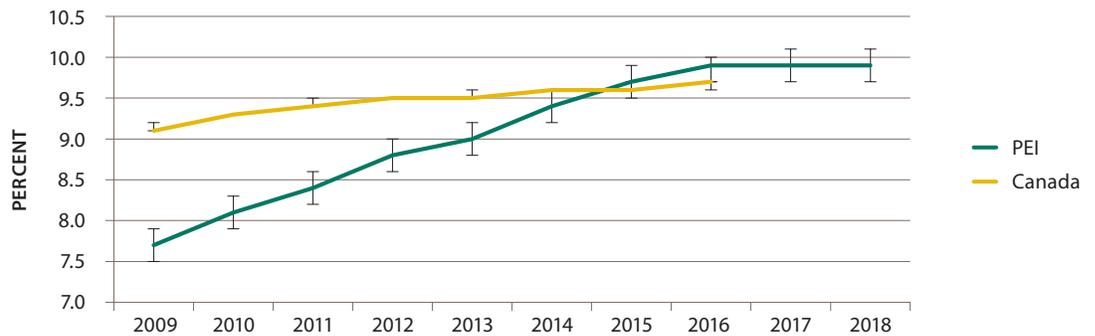
Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

Chronic Obstructive Pulmonary Disease

Chronic obstructive pulmonary disease (COPD) is a disease of the lungs that includes emphysema and chronic bronchitis. People with COPD usually have difficulty breathing because their lungs become blocked. COPD is often caused by smoking and it develops over time.³⁶

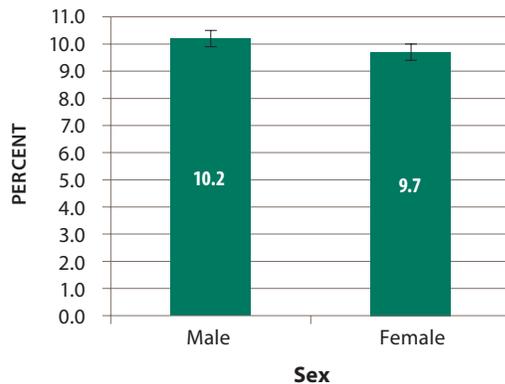
The prevalence of COPD has been increasing in PEI and Canada, but the rate of increase is much higher in PEI. Hence, while the prevalence of COPD was higher in Canada than in PEI in 2009 (9.1% versus 7.7%), by 2015, the prevalence in PEI had surpassed that of Canada. In 2016, the most recent year for which Canadian estimates are available, the prevalence of COPD was 9.7% in Canada and 9.9% in PEI (Figure 29). The rate in PEI has remained steady since then. In 2018 the prevalence of COPD was 9.9%—it was 10.2% among males and 9.7% among females (Figure 30).

FIGURE 29: PREVALENCE OF COPD, PEI AND CANADA, AGED 35+, 2009-2018



Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

FIGURE 30: PREVALENCE OF COPD, BY SEX, PEI, AGED 35+, 2018



The prevalence of COPD has been increasing in PEI and Canada, but the rate of increase is much higher in PEI.

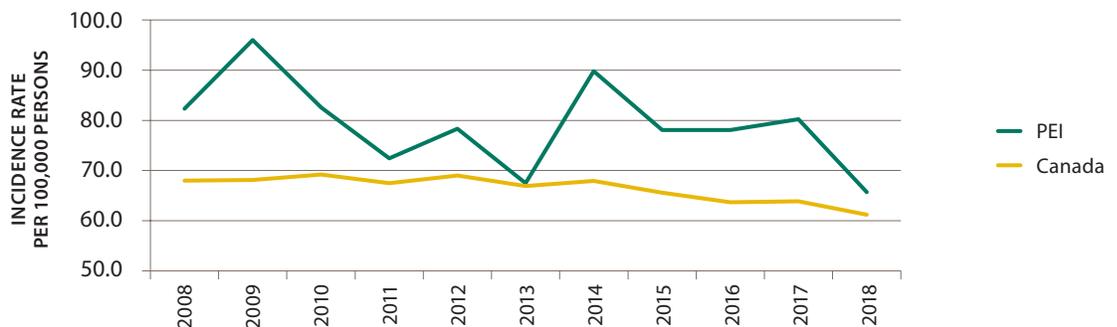
Data source: Canadian Chronic Disease Surveillance System. Age-standardized using the 2011 Canadian population.

Cancer

In the past decade, PEI's incidence rates (rate of new diagnoses) for lung and colorectal cancers have been higher than the Canadian rate (with Quebec excluded), though the incidence rates for both cancers have decreased in both PEI and Canada during this time interval.

PEI's lung cancer incidence rate decreased from 82.3 cases per 100,000 persons in 2008 to 65.7 cases per 100,000 persons in 2018. In Canada, the rate decreased from 68.0 to 61.2 cases per 100,000 persons. The incidence rates for lung cancer in PEI and Canada were statistically equal in 2018 (Figure 31).

FIGURE 31: LUNG CANCER INCIDENCE RATES PER 100,000 PERSONS, PEI AND CANADA (EXCLUDING QUEBEC), 2008-2018

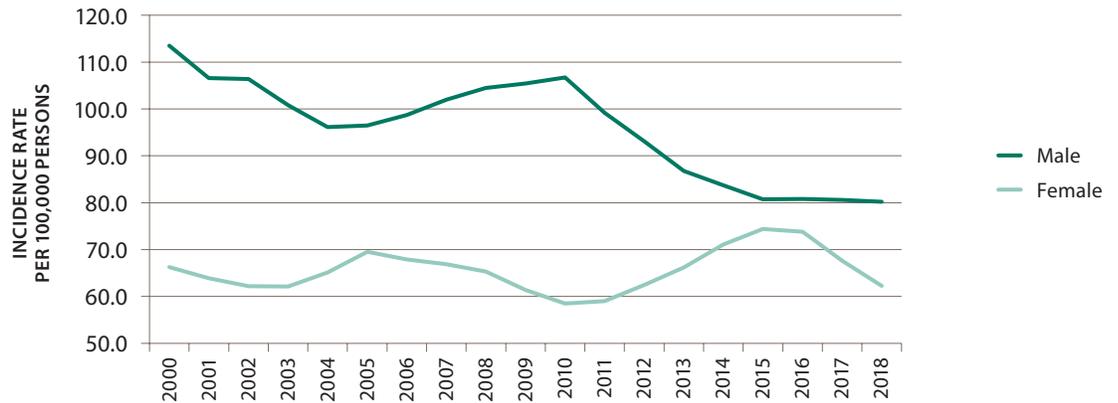


Data source: Statistics Canada, Canadian Cancer Registry. Age-standardized using the 2011 Canadian population.

PEI's incidence rates for lung and colorectal cancers have been higher than the Canadian rate.

Over half of new cancers and cancer deaths in PEI are from lung, colorectal, prostate, and breast cancers. Over the past two decades, the incidence of lung, colorectal, and prostate cancers have decreased among males in PEI. Among females in PEI, although the incidence rate has fluctuated, the overall rate has changed little from 2000 to 2018. Lung cancer incidence and mortality rates in PEI males have decreased over the past decades and are currently stable. The incidence rate for lung cancer among males in PEI was 113.5 cases per 100,000 persons in 2000, and it fell to 80.2 cases per 100,000 persons in 2018 (Figure 32).

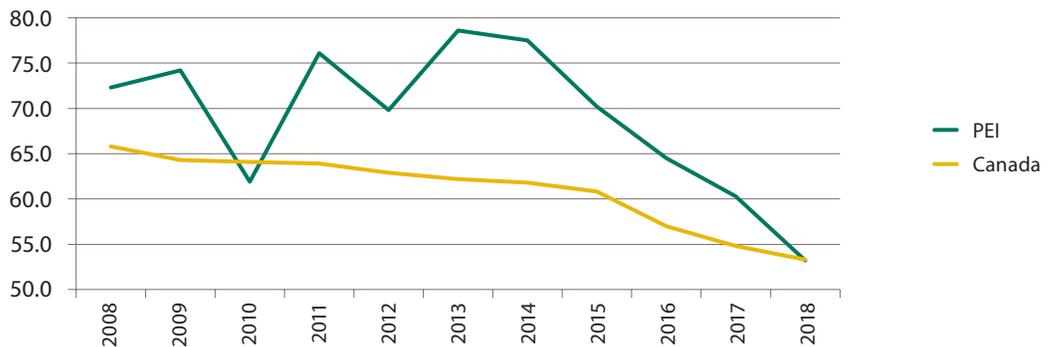
FIGURE 32: LUNG CANCER INCIDENCE RATE PER 100,000 PERSONS, BY SEX, PEI, AGED 20+, 2000-2018



Data source: PEI Cancer Registry. Age-standardized using the 2011 Canadian population. Incidence rates provided are 5-year rolling averages, which are used to smooth the data.

For colorectal cancer, PEI’s rate decreased from 72.3 to 53.2 cases per 100,000 persons from 2008 to 2018, and the decrease for Canada was from 65.8 to 53.3 cases per 100,000 persons during the same time interval (Figure 33). As with lung cancer, PEI and Canada’s incidence rates for colorectal cancer were statistically equal in 2018.

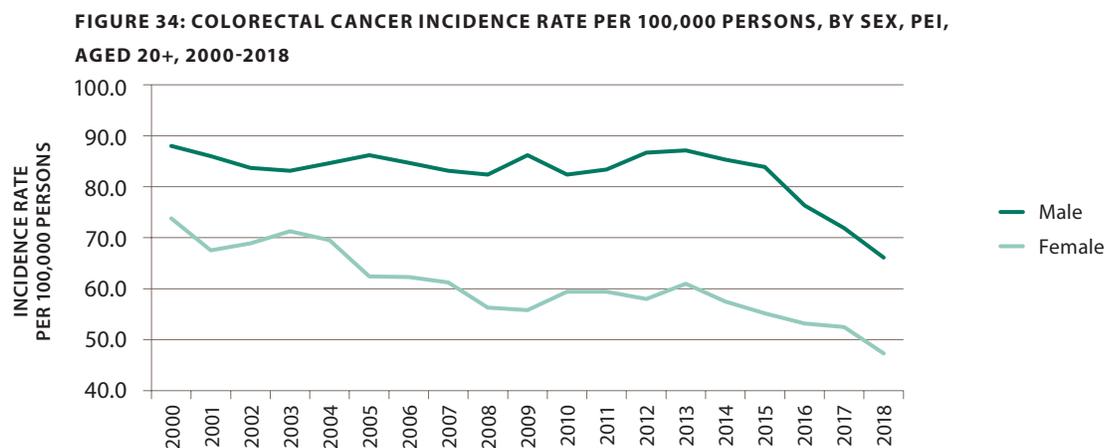
FIGURE 33: COLORECTAL CANCER INCIDENCE RATES PER 100,000 PERSONS, PEI AND CANADA (EXCLUDING QUEBEC), 2008-2018



Data source: Statistics Canada, Canadian Cancer Registry. Age-standardized using the 2011 Canadian population.

Colorectal cancer is the second-most diagnosed cancer in PEI. The incidence rates in PEI have been declining in both females and males since 2000. In 2000, the incidence rate was 73.8 cases per 100,000 persons among females and 88.0 cases per 100,000 persons among males. In 2018, the corresponding rates were 66.1 and 47.3 cases per 100,000 persons among males and females, respectively (Figure 34). As the uptake of colorectal screening increases, the rates of colorectal cancer diagnoses should continue to decrease.

The incidence rate for colorectal cancer has been declining among males and females in PEI since 2000.

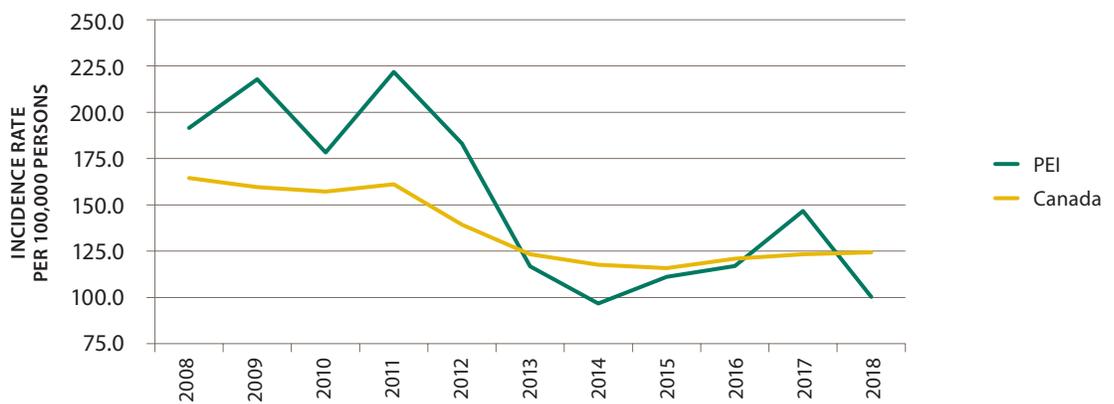


Data source: PEI Cancer Registry. Age-standardized using the 2011 Canadian population. Incidence rates provided are 5-year rolling averages, which are used to smooth the data.

The incidence rate for prostate cancer has decreased in PEI and Canada.

The incidence rate for prostate cancer also decreased in PEI and Canada (excluding Quebec) from 2008 to 2018. In the most recent year, the incidence rate was lower in PEI than in Canada. In 2008, the incidence rate for prostate cancer in PEI and Canada were 191.6 and 164.5 cases per 100,000 persons, respectively. In 2018, the corresponding rates were significantly different at 100.3 and 124.4 cases per person in PEI and Canada, respectively (Figure 35).

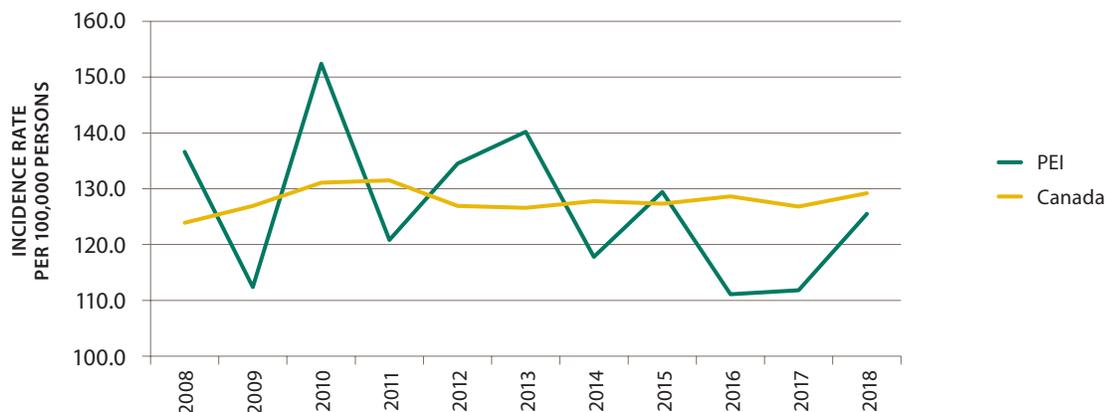
FIGURE 35: PROSTATE CANCER INCIDENCE RATES PER 100,000 PERSONS, PEI AND CANADA (EXCLUDING QUEBEC), 2008-2018



Data source: Statistics Canada, Canadian Cancer Registry. Age-standardized using the 2011 Canadian population.

While the incidence rate for breast cancer seemed to have increased in Canada from 2008 to 2018, there appeared to be a slight decrease in PEI overall. In 2008, the incidence of breast cancer among females in PEI was 136.6 cases per 100,000 persons, and the corresponding value for Canada (excluding Quebec) was 123.9 cases per 100,000 persons. In 2018, the incidence rate in PEI had decreased to 125.5 cases per 100,000 persons, but the incidence rate for Canada increased to 129.2 cases per 100,000 persons. The apparent differences between PEI and Canada were not statistically significant (Figure 36).

FIGURE 36: BREAST CANCER INCIDENCE RATES AMONG FEMALES PER 100,000 PERSONS, PEI AND CANADA (EXCLUDING QUEBEC), 2008-2018



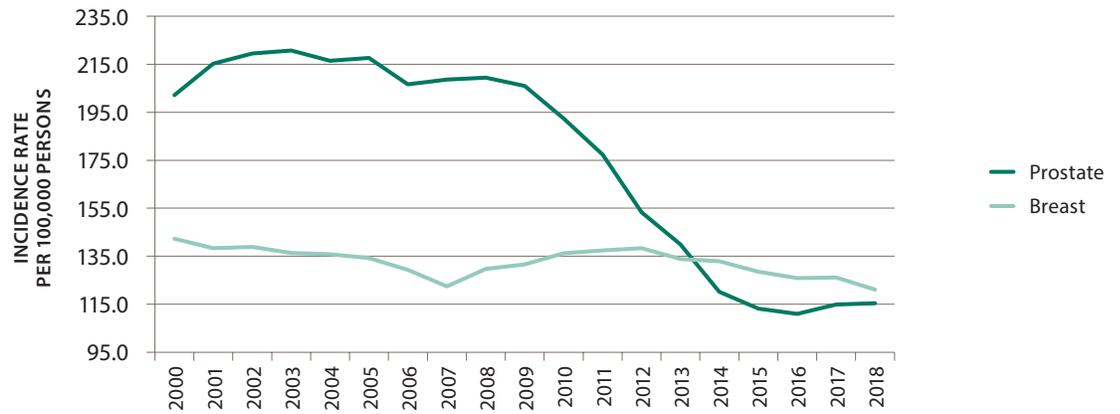
Data source: Statistics Canada, Canadian Cancer Registry. Age-standardized using the 2011 Canadian population.

Prostate cancer is the most diagnosed cancer in PEI males. The incidence rate in PEI has decreased both dramatically and significantly in the last 10 years (209.4 cases per 100,000 persons in 2008 to 115.4 cases per 100,000 persons in 2018; Figure 37). This change has been attributed to the reduction in the use of prostate-specific antigen testing as a screening tool.

Breast cancer accounted for 27% of cancers diagnosed in females, making it the most common cancer in this group. There were approximately 115 cases diagnosed per year over the last decade. The incidence rates were 142.3 cases per 100,000 persons in 2000 and 121.1 cases per 100,000 persons in 2018 (Figure 37). While the incidence rate has not changed significantly since the early 1980s, the mortality rate has decreased significantly since the early 1990s. Improved survival is a result of prevention, early detection, and improved treatment.

While the incidence rate for breast cancer has not changed significantly since the early 1980s, the mortality rate has decreased significantly since the early 1990s.

FIGURE 37: FEMALE BREAST CANCER AND MALE PROSTATE CANCER INCIDENCE RATES PER 100,000 PERSONS, PEI, AGED 20+, 2000-2018



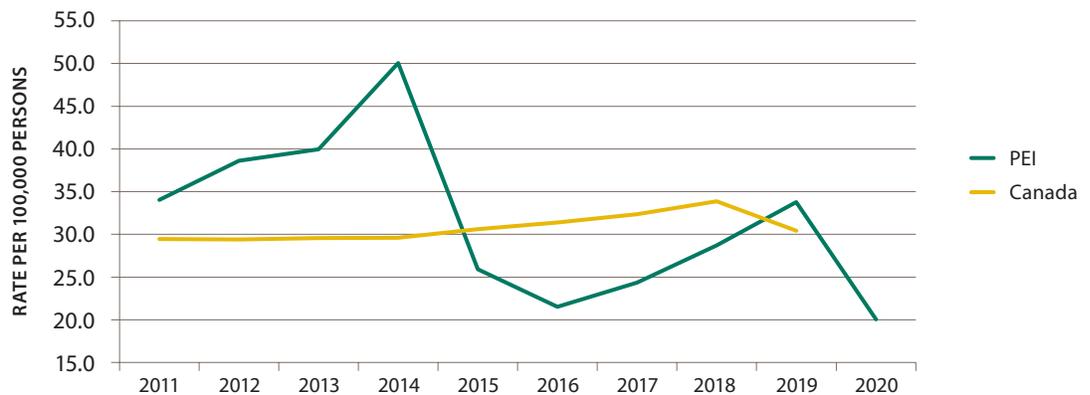
Data source: PEI Cancer Registry. Age-standardized using the 2011 Canadian population. Incidence rates provided are 5-year rolling averages, which are used to smooth the data.

Hepatitis C

Hepatitis C is a liver infection caused by the hepatitis C virus, which is spread through contact with the blood of an infected person. Chronic hepatitis C often has no symptoms but can lead to cirrhosis and liver cancer over time. It is important to get tested for hepatitis C, as there is treatment available that can cure people of the infection.³⁷

The rate of new hepatitis C diagnoses in PEI used to be higher than the rate for Canada but had fallen below the Canadian rate in recent years. In 2019 though, the rate in PEI was slightly higher than that of Canada (33.8 cases per 100,000 versus 30.4 cases per 100,000, respectively). The rate of hepatitis C diagnoses has declined in PEI over time, despite some spikes in 2014 and 2019. In 2011, the rate of new diagnoses was 34.0 cases per 100,000 persons, and the rate fell to 20.0 cases per 100,000 persons in 2020 (Figure 38).

FIGURE 38: RATE OF NEW HEPATITIS C CASES PER 100,000 PERSONS, PEI AND CANADA, 2011-2020



Data sources: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database. Canadian Notifiable Diseases Surveillance System.

From 2011 to 2020, hepatitis C cases in PEI were diagnosed more often among males and young adults (Figure 39). Males accounted for almost two-thirds of new diagnoses (63.7%), and those aged 18 to 34 years old accounted for 60.3% of new diagnoses. The age group with the second-highest proportion of new diagnoses were those ages 18 to 34 years old; they accounted for 35.3% of diagnoses.

Hepatitis C cases in PEI were diagnosed more often among males and young adults.

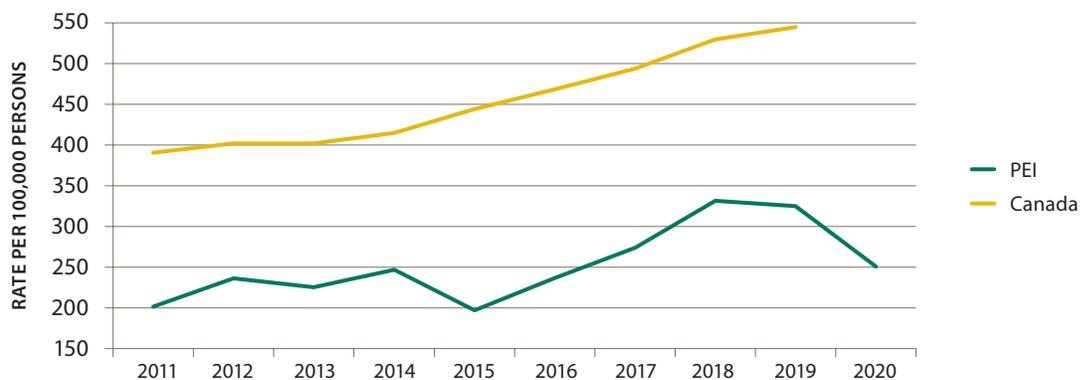
FIGURE 39: NEW HEPATITIS C CASES, PEI, 2011-2020

Data source: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database. Although not shown, people whose age was unknown accounted for 1.1% of new diagnoses.

Sexually Transmitted and Blood-Borne Infections

In these analyses, new diagnoses of chlamydia, gonorrhea, HIV, hepatitis B, hepatitis C, and infectious syphilis were combined to produce a single rate for sexually transmitted and blood-borne infections (STBBIs) as a whole. Across Canada, and in PEI, the rate of new diagnoses of STBBIs has been increasing. In 2011, the rate of new STBBI diagnoses in Canada was 390.6 cases per 100,000 persons, and that rate increased to 544.8 case per 100,000 persons in 2019. The rate in PEI has remained lower than that of Canada, with 201.3 and 325.0 cases per 100,000 persons in 2011 and 2019, respectively. In 2020, the rate of new STBBI diagnoses in PEI fell to 250.6 cases per 100,000 persons, the lowest rate since 2016 (Figure 40). Chlamydia was the most diagnosed STBBI.

FIGURE 40: RATE OF NEW SEXUALLY TRANSMITTED AND BLOOD-BORNE INFECTION CASES, PEI AND CANADA, 2011-2020



Data sources: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database. Canadian Notifiable Diseases Surveillance System.

In 2020 in PEI, new STBBI diagnoses were more likely to occur among females and those aged 18 to 34 years old (Figure 41). Females accounted for 58.8% of new diagnoses, and those ages 18 to 34 years old accounted for 72.0%.

FIGURE 41: NEW SEXUALLY TRANSMITTED AND BLOOD-BORNE PATHOGENS INFECTIONS CASES, PEI, 2020



Data source: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database.

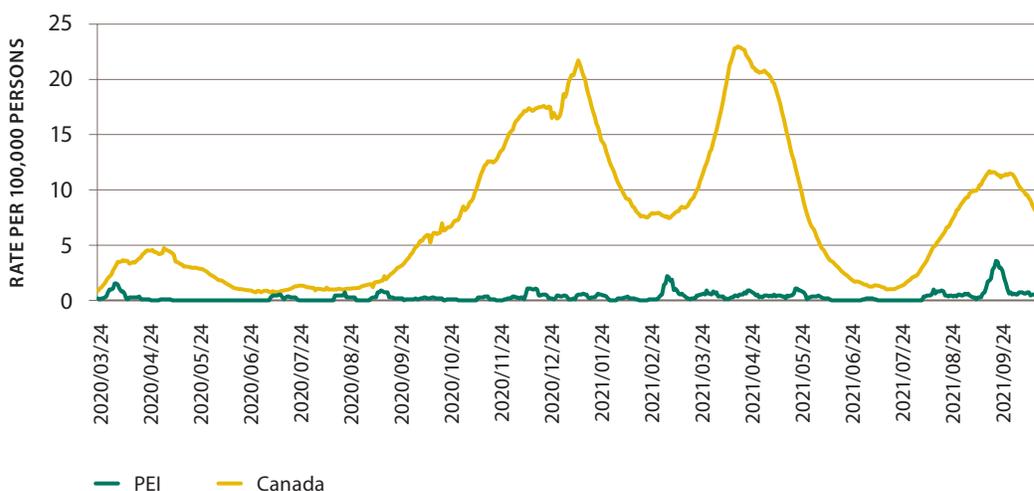
In 2020, new STBBI diagnoses were more likely to occur among females and those aged 18 to 34 years old.

COVID-19 Infections

On January 9, 2020, the World Health Organization announced a cluster of pneumonia-like cases that may have been caused by a new coronavirus. By the end of the month, it became clear that a novel coronavirus was responsible for the illness and could be transmitted from human to human. The virus continued to spread—the case count grew to over 9,800, and the death toll was more than 200—and on January 31st, the World Health Organization declared a global public health emergency. The World Health Organization declared a global coronavirus disease (COVID-19) pandemic on March 11, 2020.³⁸

Since the start of the pandemic in March 2020 to October 19, 2021, a total of 315 confirmed cases of COVID-19 were diagnosed in PEI. The rate of new confirmed COVID-19 cases in PEI has consistently been much lower than that of Canada. At its peak in September 2021, the seven-day moving average for newly confirmed cases in PEI was 3.6 cases per 100,000 persons; the rate in Canada at the time was 11.7 cases per 100,000 persons. Canada's rate peaked at 23.0 cases per 100,000 persons in April 2021 (Figure 42).

FIGURE 42: DAILY NEW CONFIRMED COVID-19 CASES, 7-DAY MOVING AVERAGE, PEI AND CANADA, 2020- OCTOBER 19, 2021



Data sources: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database.

COVID-19 diagnoses were most common among males and those aged 18 to 34 years old (Figure 43). Females accounted for 37.8% of cases, while males accounted for 62.2%. The number of cases was lowest among those under the age of 18 years old (7.3%) and those ages 65 years and older (7.3%), and highest among the youngest adults—those ages 18 to 34 years old, who accounted for more than half of all COVID-19 cases among PEI residents (53.7%).

FIGURE 43: COVID-19 CASES, PEI, 2020-AUGUST 2021



Data source: PEI Department of Health and Wellness, Chief Public Health Office, Communicable Disease database.

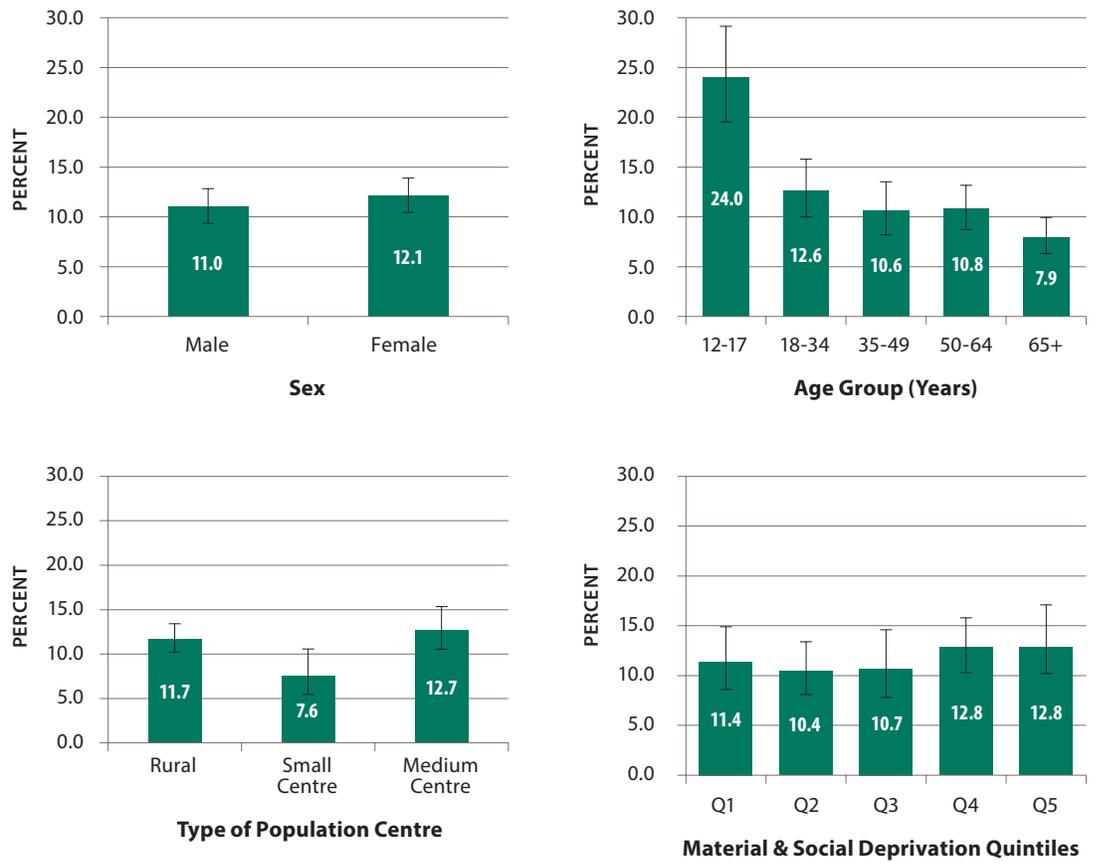
COVID-19 diagnoses were most common among males and those aged 18 to 34 years old.

Injuries

Unintentional injuries (accidents) and intentional self-harm (suicides) were the fifth and eighth leading causes of death in PEI in 2019, respectively (Figure 6). One of the essential roles of public health surveillance is to monitor causes of death, and within that context, injuries are a top public health problem in PEI.

Among those who reported having injuries in PEI in 2017/18, the most common type of injuries was falls (reported by 38.5%). Injuries seemed to be equally common among males and females (Figure 44) but were most likely to occur among those ages 12 to 17 years old (24.0%). Those ages 65 years and older seemed least likely to report injuries (7.9%). While the proportion of injuries was lowest among those in small population centres (7.6%), the differences observed between population centres were not statistically significant. Likewise, there were no significant differences in injury by neighbourhood-level material and social deprivation.

In PEI, residents ages 12 to 17 years old were more likely to report having an injury than PEI residents overall, and PEI residents ages 65 years and older were less likely to report having an injury.

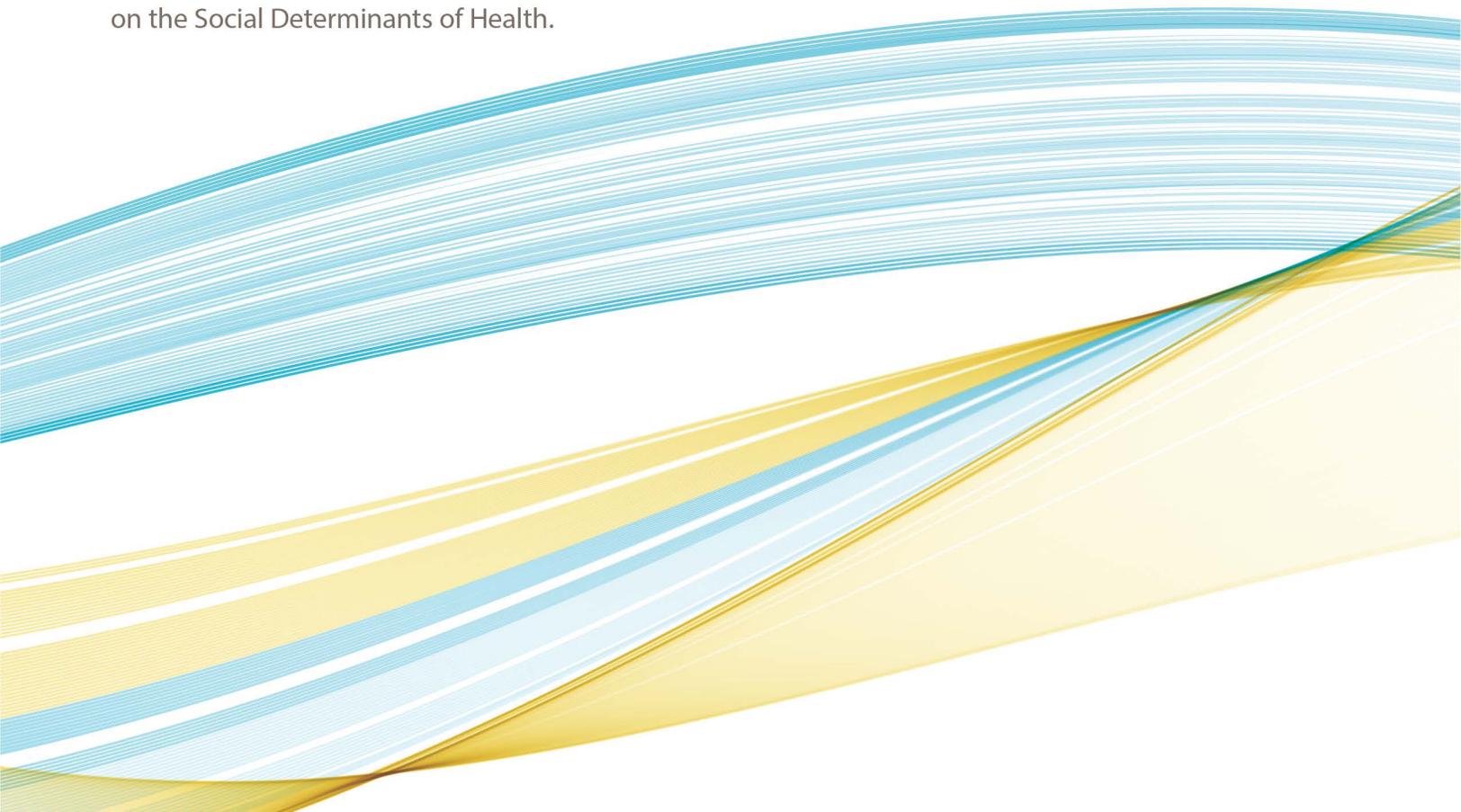
FIGURE 44: ANY SELF-REPORTED INJURIES, PEI, 2017/18

Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

SECTION 4

Health Determinants

This section of the report provides information about the trends and distributions of the determinants of health among PEI residents. It is organized according to the World Health Organization's Conceptual Framework for Action on the Social Determinants of Health.



STRUCTURAL DETERMINANTS

The structural determinants of health generate or reinforce social stratification and individual socioeconomic status, thereby defining social groups based on power, prestige, and access to resources. These in turn influence health opportunities and outcomes.¹⁰

Income

Higher income and social status are associated with greater health. The highest levels of population health are achieved in well-off populations where the distribution of wealth is most equitable. There is also a strong association between control of circumstances through higher income, coping skills in stressful life situations, and better health.²⁴ Income inequality in Canada is increasing, with most Canadian families finding themselves in either the lowest or highest ends of the income distribution, and fewer families finding themselves in the middle income category.²⁵ Financial strain is the psychological impact of economic events and includes feelings of anxiety, distress/stress, and difficulty coping. The COVID-19 pandemic has brought to the forefront the importance of considering the impact of financial strain on the health of individuals in public health research.³⁹

Income is the money received for paid work and from other sources. Health is related to the actual income received and to differences in income among the population or between communities.²³ Children and youth living in low-income households suffer significantly poorer health outcomes than those from higher-income households, specifically in terms of infant mortality and hospitalizations for asthma and substance use.^{11,40,41} Adult health status is also correlated with income level in Canada. Adults in the lowest income group are more likely to report low self-rated mental and physical health than those in the highest income group.^{11,42} Adults in the lowest income group have a higher prevalence of asthma, diabetes, disability, multiple comorbid conditions, and poor dental health than those in higher income groups.^{11,43}

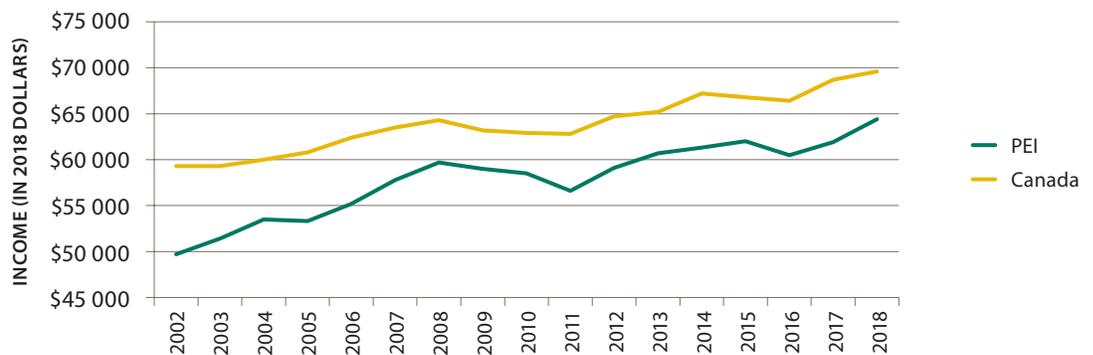
Individuals with low income experience exclusion from social and material goods, whereas those with sufficient incomes experience improved health status.

Canadians are defined as working poor when they are between 18 and 64 years old, live independently, are not students, and earn at least \$3,000 per year with an after-tax income below the low-income threshold. Circumstances that increase the risk of being working poor in Canada include not completing high school, unemployment, recent immigration to Canada (in the last 10 years), and identifying as Indigenous or as a person of colour.¹¹ Low income makes it hard to afford basic needs like food, clothes and shelter. Low income also makes participating in social activities more difficult and increases the chance of feeling socially excluded. Feeling socially excluded makes a person less likely to feel they are leading a fulfilling life.²³ Individuals with low income experience exclusion from social and material goods, whereas those with sufficient incomes experience improved health status. The ability to earn income is typically a result of privilege (i.e., a lifetime of economic and social advantages) rather than an individual's own actions or merit. For example, income is influenced by the labour market, educational opportunities/path, family history, and systemic discrimination.⁴⁴

Median Annual Family Income

In Canada and PEI, median annual family income increased from 2002 to 2018 after adjusting for inflation. In 2002, the median annual family income for Canada was \$59,300 in 2018 dollars, and the corresponding value for PEI was \$49,700. These values increased to \$69,600 and \$64,400, respectively, in 2018. While median annual family income in Canada remains higher than in PEI, the gap narrowed from \$9,600 in 2002 to \$5,200 in 2018 (Figure 45).

FIGURE 45: MEDIAN ANNUAL FAMILY INCOME (2018 DOLLARS), PEI AND CANADA, 2002-2018



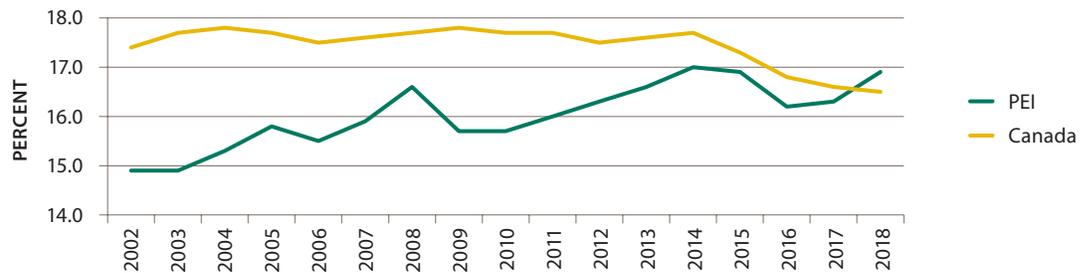
Data source: Statistics Canada.

While median annual family income in Canada remains higher than in PEI, the gap narrowed from \$9,600 in 2002 to \$5,200 in 2018.

Low Income after Tax

The low-income threshold is defined based on the adjusted after-tax income for the household and the household family size. Individuals are defined as having low income if the adjusted after-tax income for their household falls below 50% of the median adjusted after-tax income for the total population. While the percent of Canadians who would be considered to have low income after tax has decreased over time (17.4% in 2002 to 16.5% in 2018), that percentage has increased in PEI (14.9% in 2002 to 16.9% in 2018). In fact, prior to 2018, PEI residents were less likely than Canadians overall to have low income after tax (Figure 46).

FIGURE 46: LOW INCOME AFTER TAX, PEI AND CANADA, 2002-2018



Data source: Statistics Canada.

Employment provides income, identity, and daily structure to life.

Employment

Employment is defined as the job done by a person. Working conditions are the circumstances surrounding the job. Employment provides income, identity, and daily structure to life.²³

In addition to leading to lack of income by removing pay and benefits provided by a job, unemployment is a stressful event that lowers self-esteem, changes routines, and increases the risk of anxiety. It may also increase the use of smoking and heavy drinking to cope.²³ Adults permanently unable to work are 4.1 times more likely to report low self-rated mental health than those who are employed. Adults who are permanently unable to work also have a higher prevalence of arthritis, asthma, diabetes, disability, obesity, and poor dental health than employed adults.¹¹ Individuals with a disability have more difficulty securing work than non-disabled Canadians. They also have adverse SDH outcomes related to the low income provided by disability benefits.^{23,25}

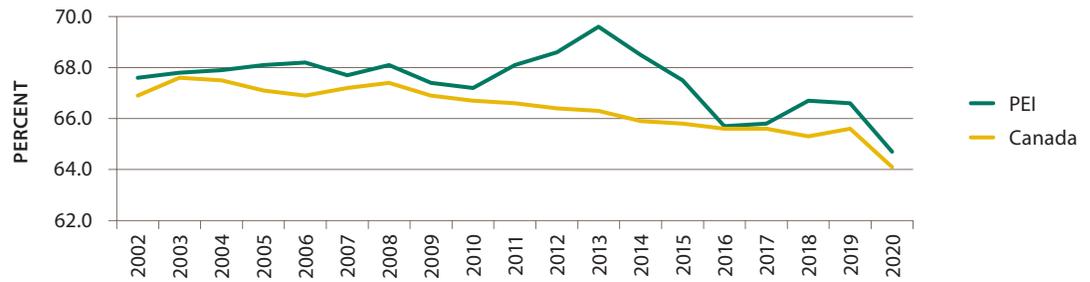
Working conditions include employment security, physical conditions, pace and stress, working hours, and the chance for self-expression and development at work.²³ Several dimensions of the workplace environment are directly related to health, including job strain, effort-reward imbalance, organizational justice, work hours, status inconsistency, and precarious work.²⁵ Recently, more jobs have become temporary and/ or part-time. This leads to a more intense work life (i.e., with non-standard hours, high stress, and high rates of injury), reduced job security, and a larger gap between high- and low-income earners. Long work hours can lead to physical and emotional problems like sleep deprivation, high blood pressure, and heart problems. This can impact relationships, parenting practices, and children's behaviour.^{23,25} Adults working in unskilled occupations are more likely to report low self-rated mental health, arthritis, and poor dental health than those working in professional occupations.¹¹

An important consideration in job satisfaction and its association with health is the hours of unpaid labour occurring at home for housework and child and elder care, particularly for women.²⁴

Labour Force Participation

From 2002 to 2020, labour force participation in PEI had been higher than in Canada, and labour force participation fell in both PEI and Canada in 2020. In 2002, 67.6% of PEI residents participated in the labour force, and that percentage fell to 64.7% in 2020. In Canada, the corresponding percentages for 2002 and 2020 were 66.9% and 64.1%, respectively (Figure 47).

From 2002 to 2020, labour force participation in PEI had been higher than in Canada.

FIGURE 47: LABOUR FORCE PARTICIPATION, PEI AND CANADA, 2002-2020

Data source: Statistics Canada.

Employed

The employment rate for Canada has almost consistently been higher than that of PEI since 2002. In 2002, the employment rate for PEI was 59.6%, and it was 61.7% of Canada. In 2020, the employment rate to 57.9% for PEI and 58.0% for Canada (Figure 48).

In 2017/18, PEI residents were significantly more likely to report no or low work-related stress than Canadians overall (42.1% versus 34.5%; Figure 14). PEI residents were also significantly less likely than Canadians to report that work was quite a bit or extremely stressful (19.6% versus 25.1%).

The employment rate for Canada has almost consistently been higher than that of PEI since 2002.

FIGURE 48: PROPORTION OF LABOUR FORCE AGED 15+ WHO ARE EMPLOYED, PEI AND CANADA, 2002-2020

Data source: Statistics Canada.

Unemployed

The unemployment rate in PEI has consistently been higher than that for Canada. In 2002, PEI's unemployment rate was 11.9%, compared to 7.7% for Canada. Unemployment increased in 2020 for both PEI and Canada but was still lower in PEI than it had been in 2000. In 2020, PEI's unemployment rate was 10.4%, and Canada's was 9.5% (Figure 49).

FIGURE 49: PROPORTION OF LABOUR FORCE AGED 15+ WHO ARE UNEMPLOYED, PEI AND CANADA, 2002-2020



Data source: Statistics Canada.

In 2020, PEI's unemployment rate was 10.4%, and Canada's was 9.5%.

People with more education enjoy better health than those with less education. More education is related to having better outcomes related to structural determinants of health, such as higher income, better job security, and improved working conditions.

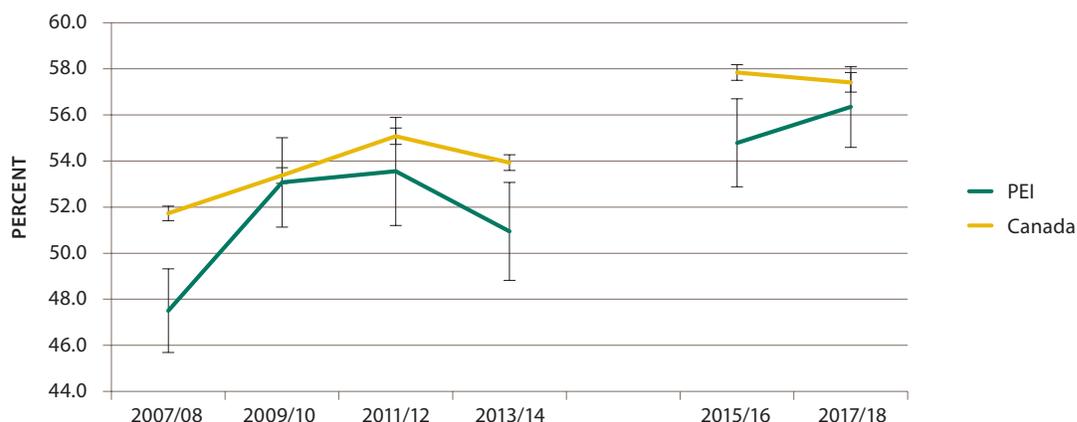
Education

Education and literacy are related but separate concepts. While education is generally defined as the highest level of schooling completed, literacy is the ability to read and understand written materials. People with more education enjoy better health than those with less education. More education is related to having better outcomes related to structural determinants of health, such as higher income, better job security, and improved working conditions. People with more education can access retraining more easily if the job market suddenly changes. Higher education is related to more community and political involvement. Education improves general literacy and understanding of how behaviour changes affect health.^{23,24} Immigrant children and children of immigrants have similar educational attainment to Canadian-born children of Canadian-born parents. Educational attainment among children whose parents do not have post-secondary education is significantly lower than for those whose parents do have post-secondary education.²⁵ This is perhaps due to lack of universal access to affordable and high-quality early learning programs, or due to high tuition fees that make access to post-secondary education more difficult for children from low-income families.^{23,25}

Education level is strongly associated with life expectancy and health status. Canadians with less than a high school education live 11.3 fewer healthy years and are two to three times more likely to report low self-rated mental health than university graduates.^{11,42} Adults who have less than a high school education have a higher prevalence of arthritis, asthma, diabetes, disability, obesity, and poor dental health than university graduates.¹¹ Household education level also impacts children residing in the household, as infant mortality and asthma hospitalizations are higher in households with lower education levels.^{11,40}

Highest Level of Education Attained

The percentage of Canadians who have completed post-secondary education has increased over time but seems to have been constant in recent years. In PEI, the percentage of residents who have completed post-secondary education has often been lower than the Canadian percentage, and the gap seems to have narrowed in 2017/18 (Figure 50).

FIGURE 50: POST-SECONDARY EDUCATION COMPLETION, PEI AND CANADA, AGED 12+, 2007-2018

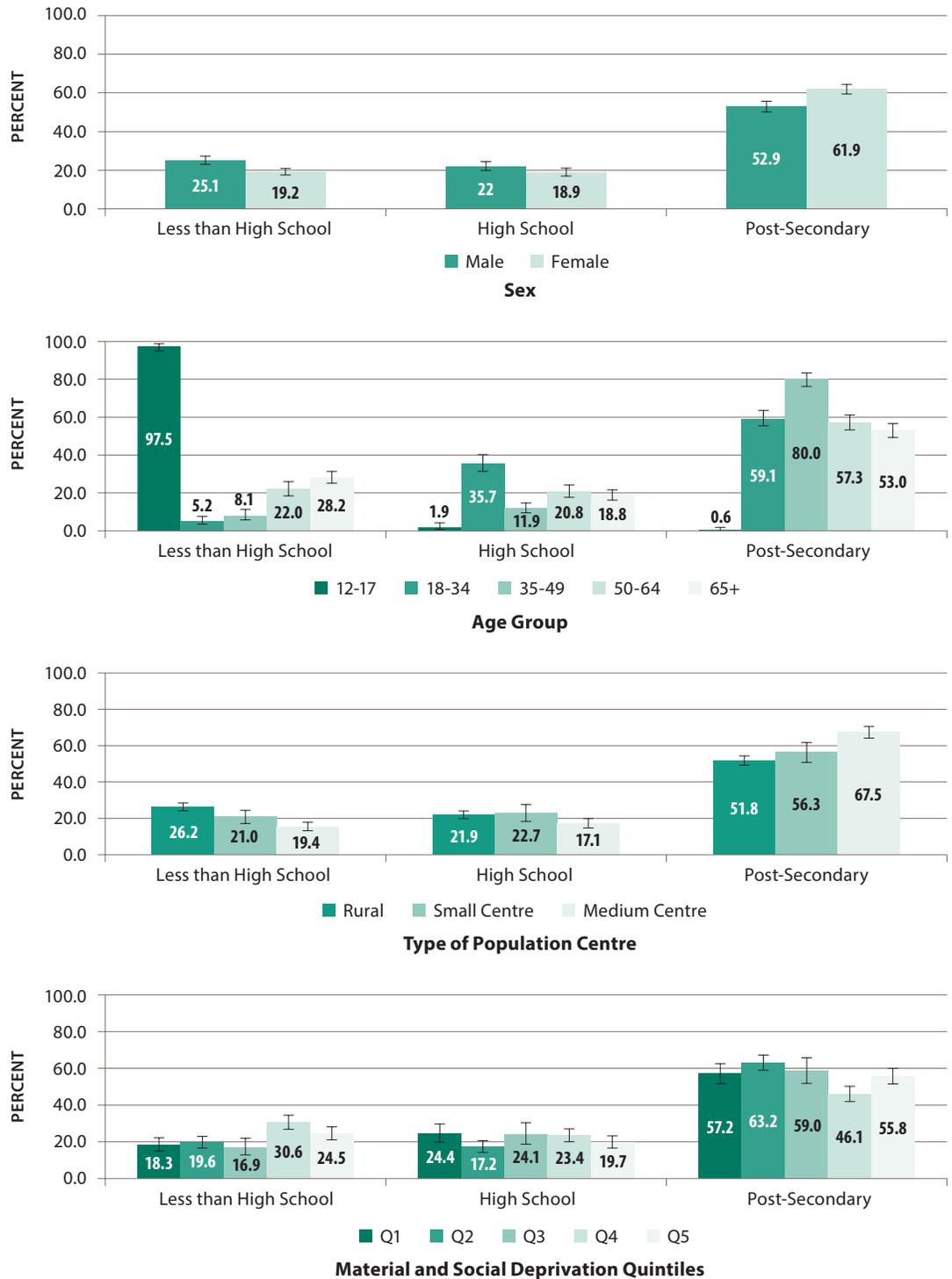
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Males in PEI were more likely than females to have attained less than a high school education (25.1% versus 19.2%), and males were less likely than females to have post-secondary education (52.9% versus 61.9%; Figure 51). As expected, those aged 12 to 17 years old were far more likely than any other age group to have attained less than a high school education (97.5%). Interestingly, among adults, as age increased, so did the likelihood of having attained less than a high school education. Adults aged 35 to 49 years old were significantly more likely to have attained post-secondary education (80.0%) than any other age group. People who resided in rural areas were significantly more likely to have less than a high school education when compared to those who lived in medium population centres (26.2% versus 15.4%), and people in rural areas were significantly less likely to have post-secondary education than those living in medium population centres (51.8% versus 67.5%). Having less than a high school education was most common among those living in the second-most materially and socially deprived neighbourhoods (Q4; 30.6%), and having post-secondary education was least common among this group (46.1%).

When compared to PEI residents overall, males, those living in rural areas, and those living in the second-most deprived neighbourhoods were less likely to have post-secondary education. On the other hand, females, those aged 35 to 49 years old, and those living in medium population centres were more likely to have post-secondary education.

When compared to PEI residents overall, males, those living in rural areas, and those living in the second-most deprived neighbourhoods were less likely to have post-secondary education.

FIGURE 51: SELF-REPORTED PERSONAL EDUCATION LEVEL, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

CROSS-CUTTING DETERMINANTS

The cross-cutting determinants of health connect the structural determinants to the intermediary determinants of health. Available social environments and social support networks offer opportunities to mitigate some of the impacts of the structural determinants of health through high levels of social cohesion and social capital. Unfortunately, disadvantages in the structural determinants of health often make it difficult to achieve high levels of social cohesion and social capital, thereby reducing the quality of social environments and the strength of social support networks.

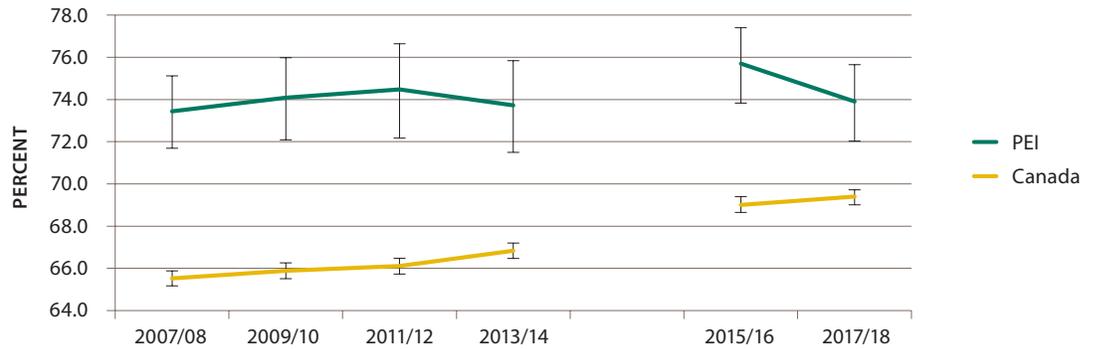
Sense of Community Belonging

Sense of community belonging is a measure that captures social capital and social connectedness. Weaker community belonging is associated with poorer general and mental health ratings.^{45,46} Social environments encompass the physical environment, social relationships, and cultural climate where groups of people function and interact,⁴⁷ and it can be used as a synonym for community. The social environment includes components of the structural determinants discussed previously and the intermediary determinants discussed later in this report, but the definition is broader and more encompassing than just the structural and intermediary determinants of health. The social environment encompasses all parts of a person's lived experience each day, including the historical and political context and power relations, spiritual practices, community supports, artistic experiences, and personal beliefs about place and community.⁴⁷ Social environments vary over time and can be thought of at the household, extended family, neighbourhood, community, and regional levels.⁴⁷ Social environments represent the sum of the structural and intermediary determinants with the addition of many intangible factors that determine individual health and well-being. Strong social environments enable the development of high levels of social cohesion and a strong sense of community.⁴⁸

The social environment encompasses all parts of a person's lived experience each day, including the historical and political context and power relations, spiritual practices, community supports, artistic experiences, and personal beliefs about place and community.

Compared to Canadians overall, there has consistently been a higher percentage of PEI residents who reported having a strong sense of community belonging. While this percentage has been increasing in Canada, it has been declining in PEI. In 2017/18, 73.9% of PEI residents reported a strong sense of community belonging compared to 69.4% of Canadians (Figure 52).

FIGURE 52: SELF-REPORTED VERY OR SOMEWHAT STRONG SENSE OF BELONGING TO LOCAL COMMUNITY, PEI AND CANADA, AGED 12+, 2007-2018



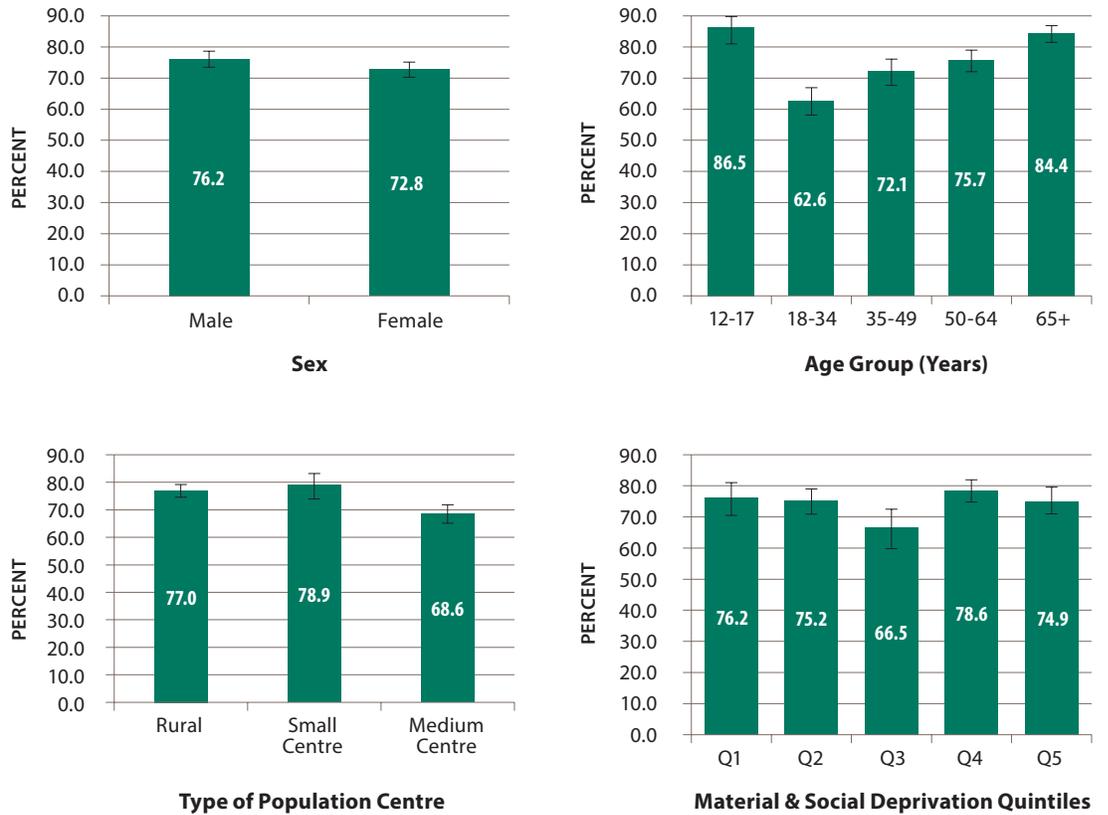
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

In PEI, females and males were equally likely to report having a somewhat or very strong sense of belonging (76.2% versus 72.8%), as any differences observed were not statistically significant (Figure 53). With regards to age, those ages 12 to 17 years old and 65 years and older were significantly more likely to report a very or somewhat strong sense of belonging to their local community (86.5% and 84.4%, respectively) than any other age groups. Interestingly, among adults, as age increased, so did reports of having a very or somewhat strong sense of belonging to one's local community. Those living in medium population centres were least likely to report a very or somewhat strong sense of belonging (68.6% versus 77.0% and 78.9% for residents of rural areas and small population centres, respectively). Neighbourhood-level material and social deprivation did not seem to be related to one's sense of belonging, but notably, those living in neighbourhoods with average material and social deprivation (Q3) were least likely to report having a very or somewhat strong sense of belonging (66.5%).

Compared to PEI residents overall, those ages 12 to 17 years old and those ages 65 years and older were more likely to have a very or somewhat strong sense of belonging; those ages 18 to 34 years old, residents of medium population centres, and residents of neighbourhoods with average levels of material and social deprivation were less likely to have a very or somewhat strong sense of belonging to their local community.

Those ages 18 to 34 years old, residents of medium population centres, and residents of neighbourhoods with average levels of material and social deprivation were less likely to have a very or somewhat strong sense of belonging.

FIGURE 53: SELF-REPORTED VERY OR SOMEWHAT STRONG SENSE OF BELONGING TO LOCAL COMMUNITY, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Social Support

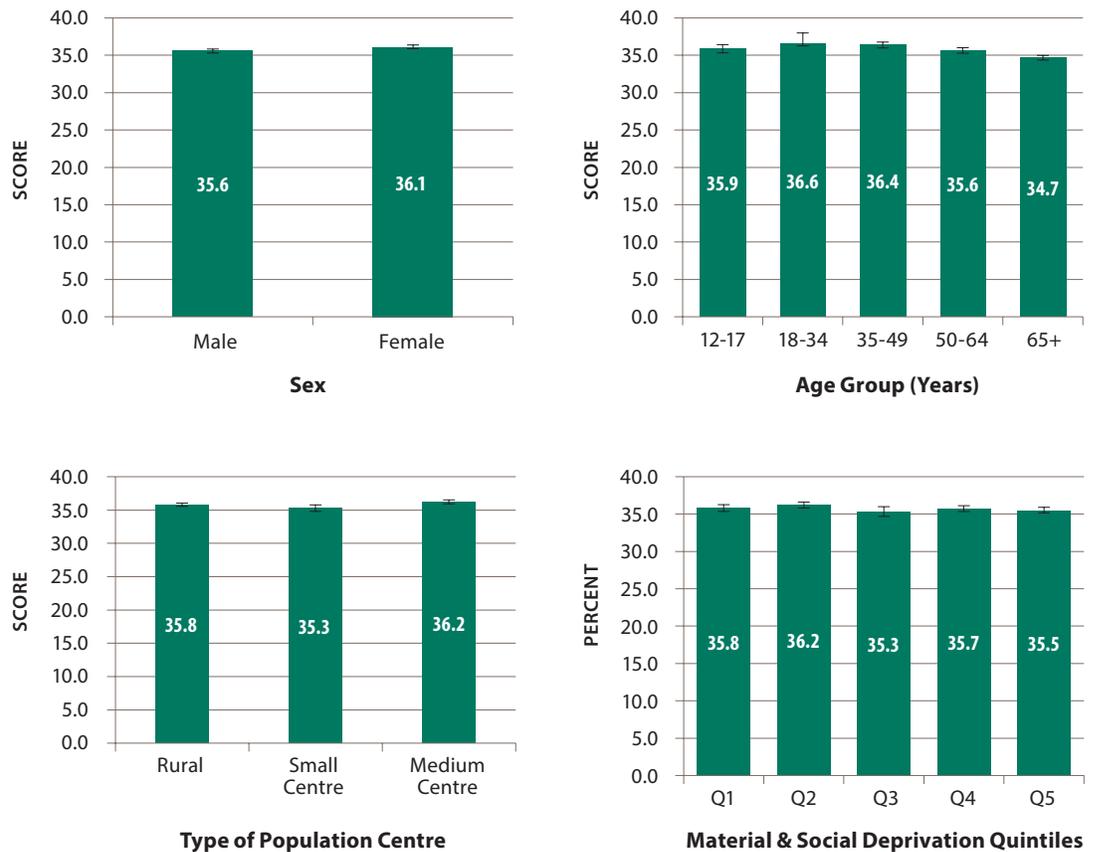
Family and community social support networks characterize an individual's social capital. These social support networks represent additional resources available to an individual when responding to the challenges imposed by the structural and intermediary determinants of health. The resources and attachments shared between community members through informal giving practices, local organizations, and institutions form an important component of an individuals' ability to cope with change and improve health. The values and normative beliefs of a community influence the health of its members. A stable supportive community that fosters safety, diversity, good working relationships, and cohesiveness reduces the risk of poor health.²⁴

Family, friend, and community supports are strongly related to better health. These supports help individuals to solve problems, deal with stressful circumstances, and maintain control and mastery over their lives. The risk of health problems is reduced when individuals have caring and respectful relationships with others.

Family, friend, and community supports are strongly related to better health. These supports help individuals to solve problems, deal with stressful circumstances, and maintain control and mastery over their lives. The risk of health problems is reduced when individuals have caring and respectful relationships with others.²⁴ For example, communities with higher levels of social cohesion have lower prevalence of obesity, even after adjustment for covariates such as education, income, and gender.⁴⁹

Within PEI, females reported higher levels of social support than males (score of 36.1 versus 35.6; Figure 54). With regards to age, those aged 65 years or more had significantly lower levels of social support than all the other age groups (score of 34.7). In fact, compared to the overall score for PEI residents, social support was highest among those ages 18 to 34 years old and lowest among those ages 65 years and older. PEI residents who lived in small population centres had significantly lower levels of social support than those who lived in medium population centres. There did not appear to be a relationship between neighbourhood-level material and social deprivation and level of social support.

Compared to PEI residents overall, those ages 18 to 34 years old had higher levels of social support, and those aged 65 years and older had lower levels.

FIGURE 54: LEVEL OF OVERALL SELF-REPORTED SOCIAL SUPPORT, PEI, 2017/18

Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Compared to PEI residents overall, those ages 18 to 34 years old had higher levels of social support, and those aged 65 years and older had lower levels.

INTERMEDIARY DETERMINANTS

The intermediary determinants of health are, in many cases, the result of the differential social, economic, and health consequences of the structural and cross-cutting determinants of health. The unequal distribution of structural determinants, social cohesion, and social capital results in differences in exposure and vulnerability to health conditions that are mediated by the intermediary determinants of health. Intermediary determinants of health include physical environments, personal health practices and coping skills, biology and genetics, healthy child development, and health services.¹⁰

Personal Health Practices and Coping Skills

Personal health practices and coping skills are the sum of individual behaviours to promote good health. This includes disease prevention, disease management, self-care, coping and problem-solving skills, and self-reliance. Lifestyle choices are the sum of personal, social, economic, and environmental factors in a person's life. Supportive environments create opportunities to make healthy lifestyle choices.²⁴ Behavioural factors include nutrition, physical activity, tobacco and alcohol consumption and their differential distribution among social groups.¹⁰ Coping skills are part of the ability to manage life stress. The presence of high perceived life stress reduces self-rated health.⁴²

Heavy drinking (defined as 5 or more drinks on one occasion at least once a month over the past year) is more prevalent among men, White Canadians, bisexual or lesbian women, those permanently unable to work, and Indigenous adults.¹¹

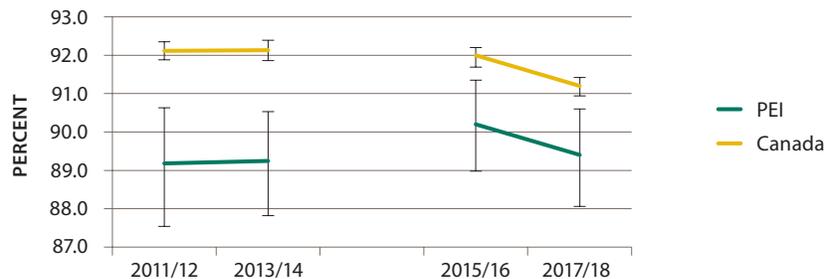
Smoking is more prevalent among those with lower education levels and lower incomes. This higher prevalence of smoking is reflected in increased rates of lung cancer in these groups. Smoking, exposure to second-hand smoke, and lung cancer are more common in the homes of Indigenous people compared to non-Indigenous individuals born in Canada. Non-immigrant adults also have higher rates of smoking, exposure to second-hand smoke, and lung cancer. Exposure to second-hand smoke is more likely in the homes of unskilled workers or those who are permanently unable to work.¹¹

Food Security

Food insecurity is defined as a diet of where there is not enough food or not enough healthy food. There may not be enough access to fruits and vegetables, milk products, and/ or vitamins. Many things can lead to food insecurity, including a change or loss in work or work hours, a change in family makeup, or a change in the health of family members. Food insecurity increases the risk of dietary deficiencies, chronic diseases, stress, and feelings of uncertainty. Children in these households are more likely to have educational, behavioural, and emotional difficulties than children in food-secure households.^{23,25} Households with lower educational attainment and income, and adults who are unable to work or have several functional health impairments have higher rates of food insecurity.¹¹

Since at least 2011, food security has consistently been higher among Canadians overall than among PEI residents. While food security has recently fallen in both Canada and PEI, Canadians were still significantly more likely to report being food secure than PEI residents (91.2% versus 89.4%; Figure 55).

FIGURE 55: SELF-REPORTED FOOD-SECURE STATUS, PEI AND CANADA, AGED 12+, 2011-2018

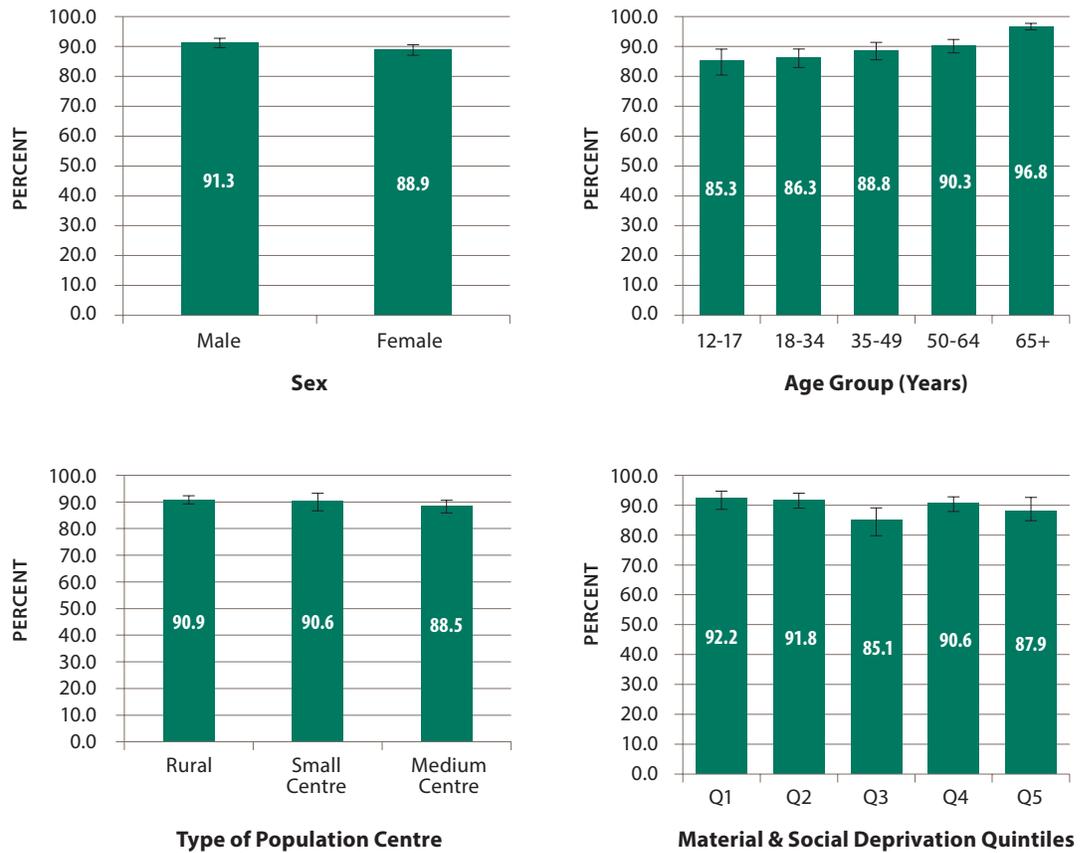


Data source: Statistics Canada, Canadian Community Health Survey 2011/12 to 2017/18.

Since at least 2011, food security has consistently been higher among Canadians overall than among PEI residents.

Food security in PEI showed some notable patterns when examined according to sex, age, type of population centre, and neighbourhood-level material and social deprivation. There was no difference in food-secure status among females and males (Figure 56). However, there seemed to be a trend where the likelihood of being food secure increased with age. In fact, those aged 65 years and older were significantly more likely to be food secure than any other age group (96.8% versus 85.3% to 90.3). There did not appear to be a relationship between food security and the type of population centre in which a person lives. However, the likelihood of being food secure was highest among those living in neighbourhoods with the lowest levels of material and social deprivation (Q1 and Q2), but none of the differences observed were statistically significant.

Adults ages 65 years and older were the only group whose likelihood of being food secure differed from the PEI average, as they were more likely to be food secure than PEI residents overall.

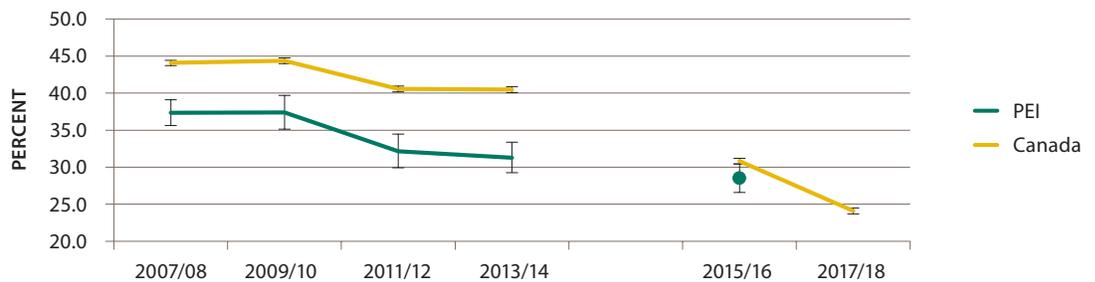
FIGURE 56: SELF-REPORTED FOOD-SECURE STATUS, AGED 12+, PEI, 2017/18

Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Fruit and Vegetable Consumption

Fruit and vegetable consumption has been falling over time in both PEI and Canada and has consistently been higher in Canada than PEI. In 2015/16, the last period during which this data was collected in PEI, 28.5% of PEI residents consumed fruits and vegetables five or more times per day. The corresponding value for Canadians was 30.8%, and the difference observed was statistically significant (Figure 57).

FIGURE 57: SELF-REPORTED CONSUMPTION OF FRUITS AND VEGETABLES 5 OR MORE TIMES PER DAY, PEI AND CANADA, AGED 12+, 2007-2018

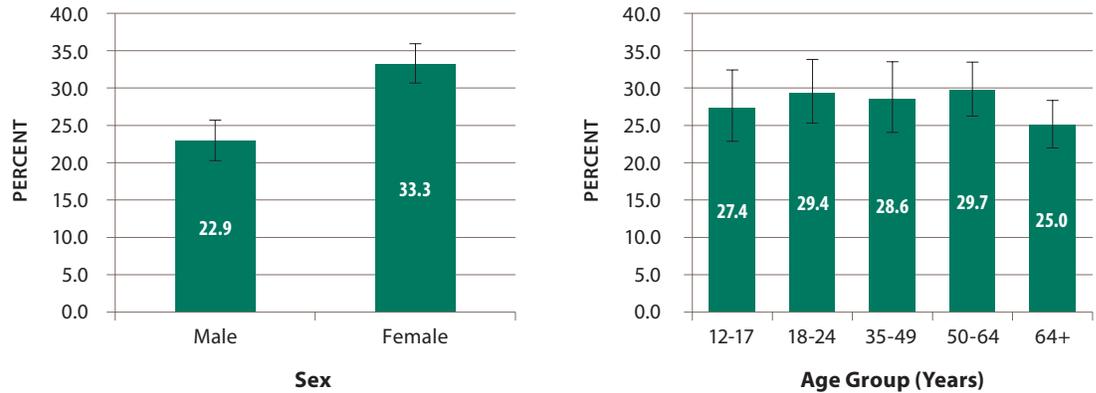


Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Females were also more likely to have consumed fruits and vegetables five times or more per day when compared to PEI residents overall.

Fruit and vegetable consumption patterns in PEI in 2015/16 yielded some important findings when assessed by sex and age. Females were significantly more likely than males to have consumed fruits and vegetables five or more time per day (33.3% versus 22.9%; Figure 58). In fact, females were also more likely to have consumed fruits and vegetables five times or more per day when compared to PEI residents overall. Interestingly, age did not seem to have a relationship with fruit and vegetable consumption.

FIGURE 58: SELF-REPORTED CONSUMPTION OF FRUITS AND VEGETABLES 5 OR MORE TIMES PER DAY, PEI, 2015/16

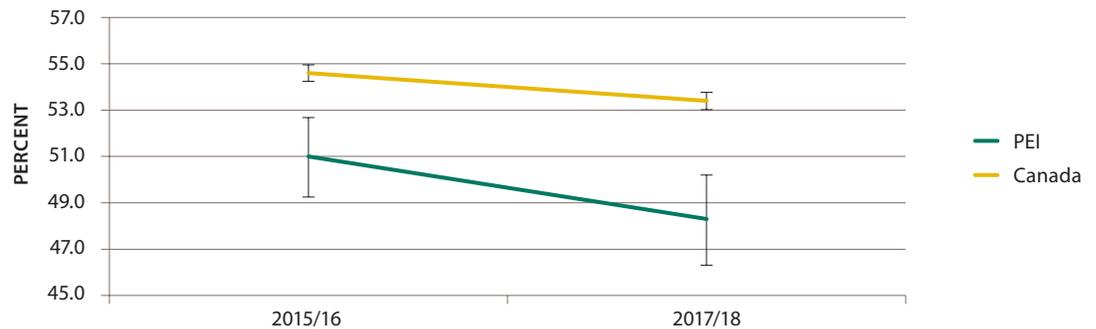


Data sources: Statistics Canada, Canadian Community Health Survey 2015/16.

Physical Activity

Data from recent years showed a decline in physical activity levels in PEI and Canada. In 2015/16, 54.6% of Canadians and 51.0% of PEI residents were physically active based on the Canadian Physical Activity Guidelines (CPAG), but in 2017/18, that percentage decreased to 53.4% for Canada and 48.3% for PEI. The differences observed between PEI and Canada were statistically significant (Figure 59).

FIGURE 59: SELF-REPORTED MEETS PHYSICAL ACTIVITY GUIDELINES, PEI AND CANADA, AGED 12+, 2015-2018

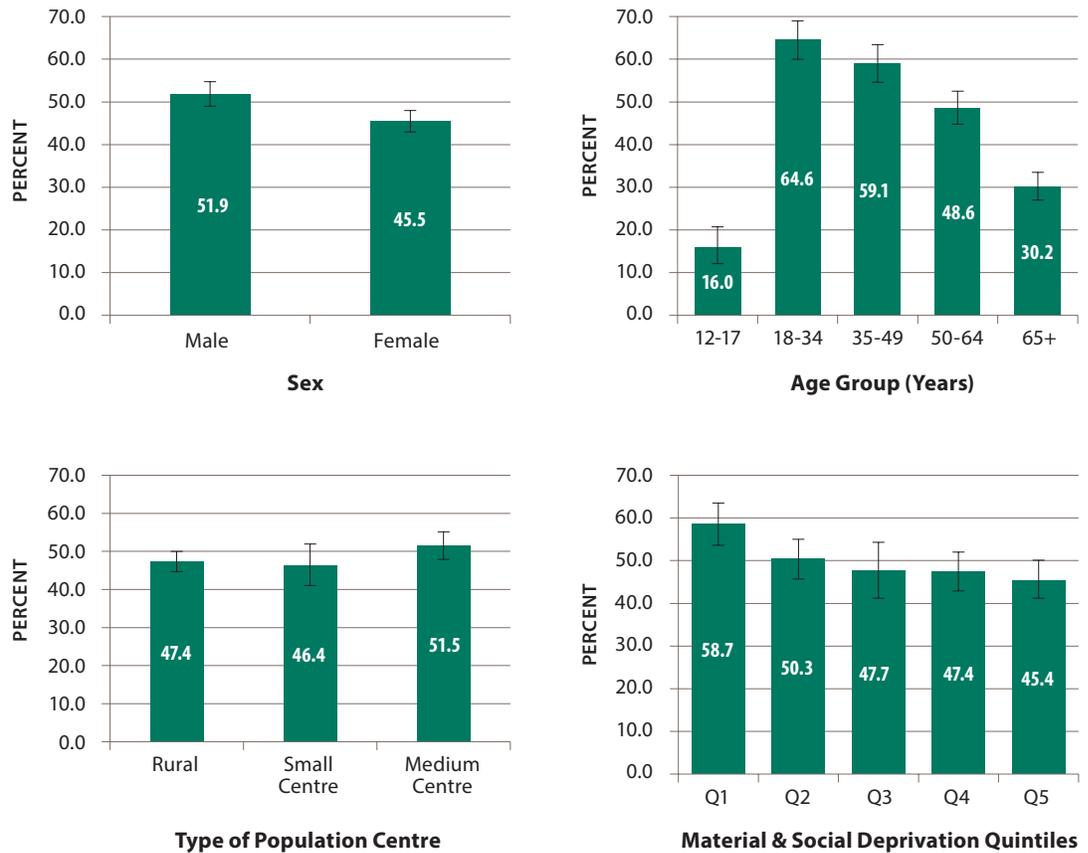


Data source: Statistics Canada, Canadian Community Health Survey 2015/16 to 2017/18.

PEI data for 2017/18 showed some interesting patterns related to physical activity. For one, males were significantly more likely than females to meet recommended levels of physical activity per the CPAG (Figure 60). Those ages 12 to 17 years old were significantly less likely to meet recommended levels of physical activity for their age group, as only 16.0% of this group met the CPAG. Among adults, the likelihood of meeting the CPAG declined with age from 64.6% among those ages 18 to 34 years old, to 30.2% among those ages 65 years and older. No patterns in physical activity level were observed by the type of population centre in which a person lived, but patterns were observed by neighbourhood-level material and social deprivation—those living in the least deprived neighbourhoods (Q1) were most likely to meet recommended levels of physical activity (58.7%), while those living in the most deprived neighbourhoods (Q5) appeared least likely to do so (45.4%).

Compared to PEI residents overall, those ages 12 to 17 and 65 and older were less likely to meet recommended levels of physical activity, but those aged 18 to 49, and those living in the least deprived neighbourhoods were more likely to meet the CPAG.

Compared to PEI residents overall, those ages 12 to 17 and 65 and older were less likely to meet recommended levels of physical activity, but those aged 18 to 49, and those living in the least deprived neighbourhoods were more likely to meet physical activity guidelines.

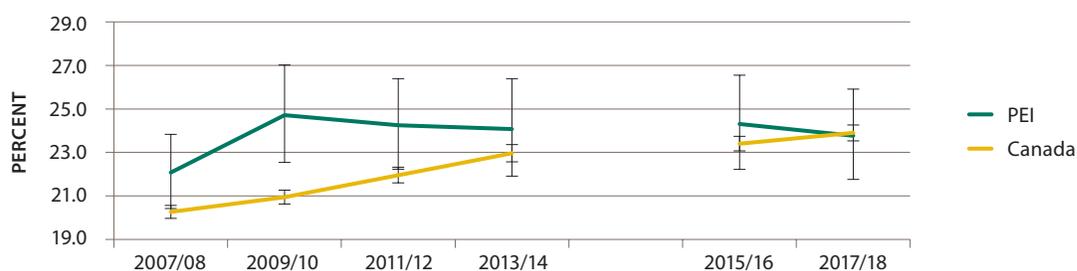
FIGURE 60: SELF-REPORTED MEETS PHYSICAL ACTIVITY GUIDELINES, PEI, 2017/18

Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Heavy Drinking

Heavy drinking (i.e., having five or more drinks per occasion 12 or more times in the past year) has been more common in PEI than Canada. However, while the prevalence of heavy drinking has been decreasing in PEI since 2009/10, it has been increasing in Canada since 2007/08. In 2017/18, the prevalence of heavy drinking in PEI was the same as in Canada (Figure 61).

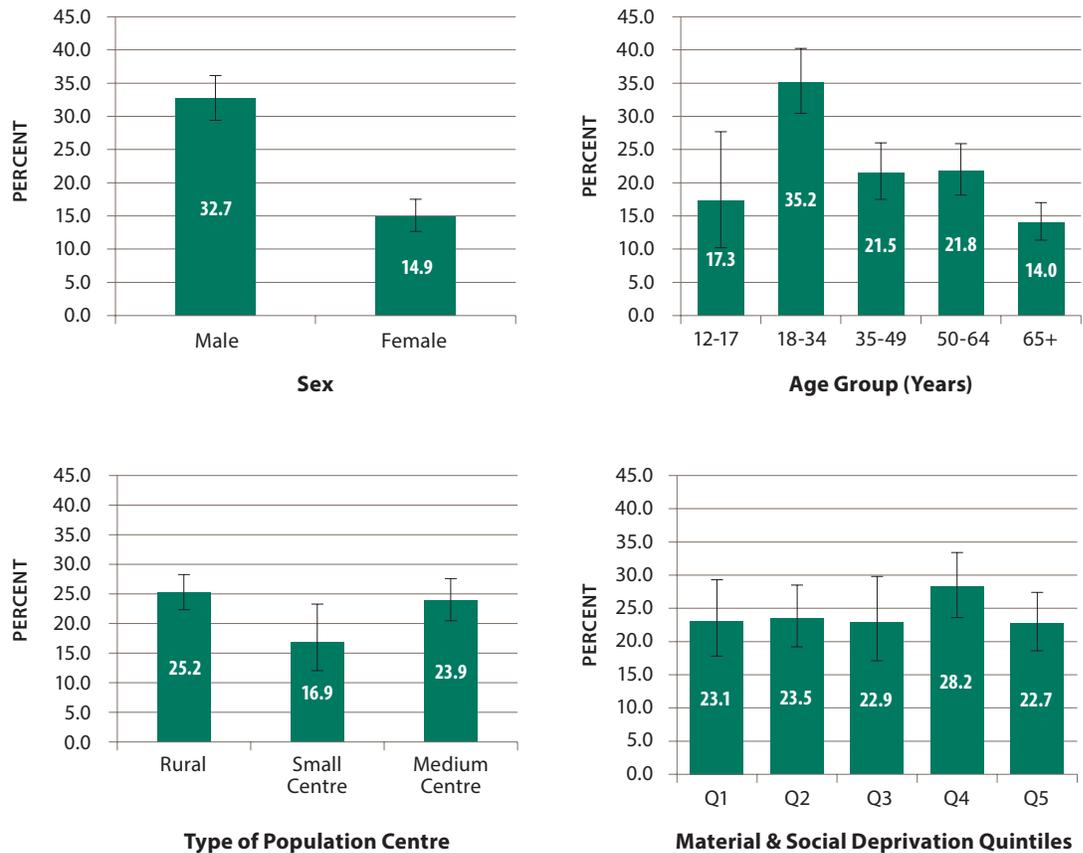
FIGURE 61: SELF-REPORTED HEAVY DRINKING IN PAST 12 MONTHS, PEI AND CANADA, AGED 12+, 2007-2018



Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

The distribution of heavy drinking among PEI residents showed some interesting patterns (Figure 62). Males were more likely to report heavy drinking than females (32.7% versus 14.9%), and those aged 18 to 34 years old were more likely to report heavy drinking than all other age groups (35.2% versus 14.0% to 21.8%). There did not seem to be a relationship between heavy drinking and the type of population centre in which one lived, or the level of material and social deprivation within one's neighbourhood. Although those living in the second-most deprived neighbourhoods (Q4) seemed to be more likely to report heavy drinking than others, this difference was not statistically significant.

When compared to the level of heavy drinking among PEI residents overall, heavy drinking was more likely among males and adults aged 18 to 34 years old and was less likely among females and adults aged 65 years and older.

FIGURE 62: SELF-REPORTED HEAVY DRINKING, PEI, 2017/18

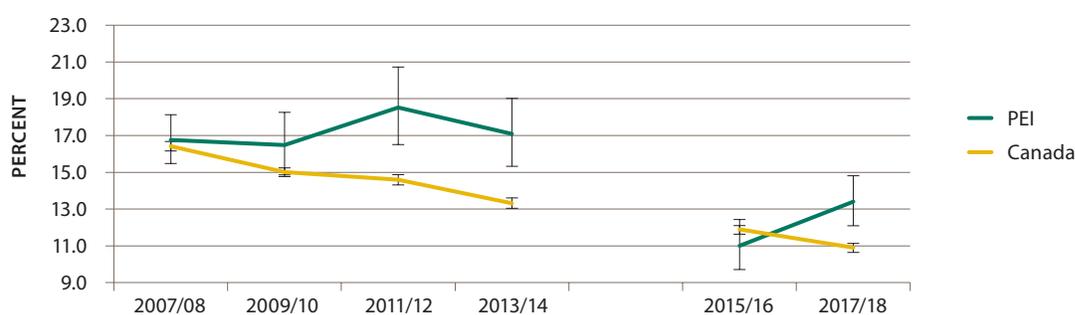
Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

When compared to the level of heavy drinking among PEI residents overall, heavy drinking was more likely among males and adults aged 18 to 34 years old, and was less likely among females and adults aged 65 years and older.

Smoking

While the rate of daily smoking has been decreasing in Canada, it has stayed the same in PEI. The rate of daily smoking in PEI is typically higher than that of Canada, and in 2017/18, 13.4% of PEI residents reported that they smoked daily compared to 10.9% of Canadians; this difference was statistically significant (Figure 63).

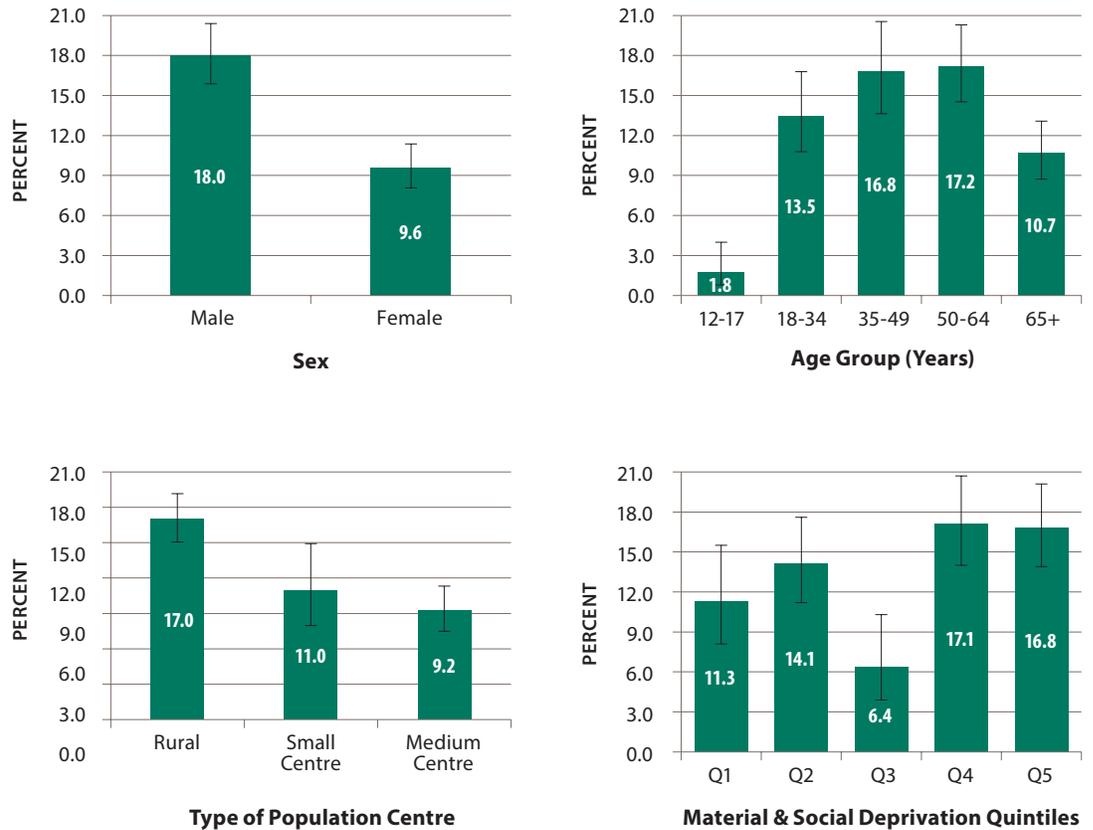
FIGURE 63: SELF-REPORTED DAILY SMOKING, PEI AND CANADA, AGED 12+, 2007-2018



Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Within PEI, self-reported data from 2017/18 showed important patterns regarding the likelihood of smoking daily (Figure 64). Daily smoking was more common among males than females (18.0% versus 9.6%), for example. Daily smoking was least common among those aged 12 to 17 years old (1.8%), and among adults, daily smoking seemed to peak between the ages of 35 and 64 years old. Those living in rural communities were significantly more likely to smoke daily than those living in small or medium centres (17.0% versus 11.0% and 9.2%, respectively). When neighbourhood-level material and social deprivation were considered, daily smoking was least common among those who lived in neighbourhoods with average levels of deprivation (Q3; 6.4%), and this difference was significant when compared to most other groups.

When compared to the level of daily smoking among PEI residents overall, daily smoking was significantly more common among males and those living in more highly deprived neighbourhoods (Q4 and Q5). It was less common among females, those ages 12 to 17 years old, those living in medium population centres, and those living in neighbourhoods with average levels of material and social deprivation (Q3).

FIGURE 64: SELF-REPORTED DAILY SMOKING, PEI, 2017/18

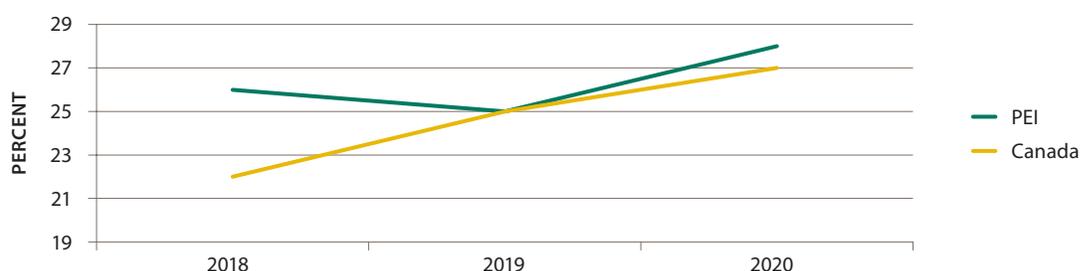
Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

When compared to the level of daily smoking among PEI residents overall, daily smoking was significantly more common among males and those living in the more highly deprived neighbourhoods.

Non-Medical Cannabis Use

Data from the Canadian Cannabis Survey shows that use of non-medical cannabis has increased in both PEI and Canada since legalization in 2018 (Figure 65), with cannabis use being slightly higher among PEI residents than Canadians. Since no statistical testing was performed, it is unclear if the difference observed is statistically significant.

FIGURE 65: NON-MEDICAL CANNABIS USE IN THE PAST 12 MONTHS, PEI AND CANADA, AGED 16+, 2018-2020

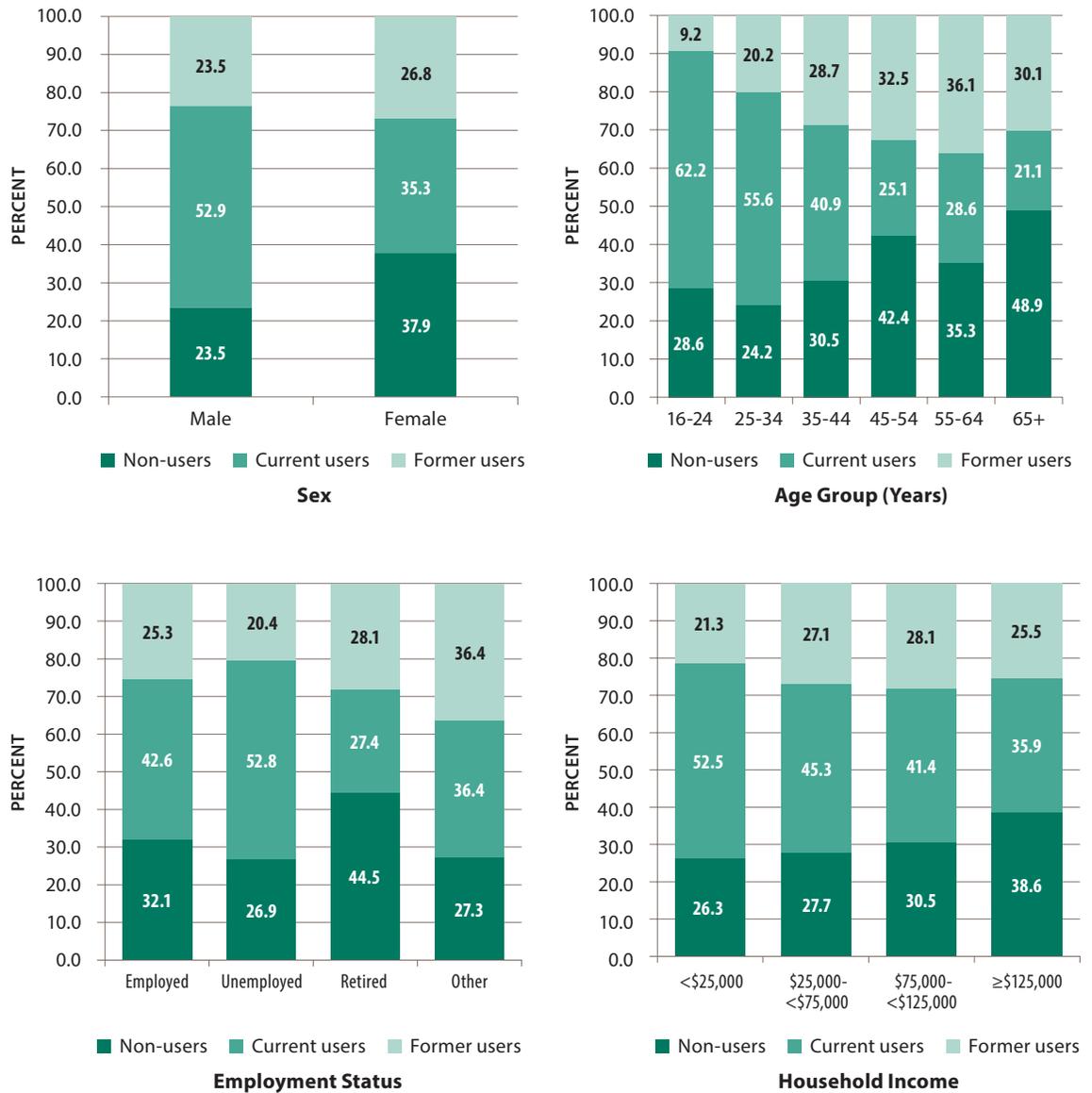


Data source: Statistics Canada, Canadian Cannabis Survey 2018 to 2020.

Based on results from the 2019 PEI Cannabis Survey, current non-medical cannabis users were more likely to be male, younger, and more socioeconomically disadvantaged (Figure 66). While 35.3% of females reported being current cannabis users, 52.9% of males reported the same; 37.9% of females and 23.5% of males reported that they were non-users. The highest proportion of people who reported currently using non-medical cannabis (62.2%) was among the youngest age group (16-24), while the lowest proportion (21.1%) was among those aged 65 years and older. The differences observed between the groups of users based on sex and age were statistically significant, and similar relationships were observed before legalization.

Those who were more socioeconomically disadvantaged were more likely to report being current users of non-medical cannabis. The highest proportion of current users was among the unemployed (52.8%), and the lowest proportion was among retirees (27.4%; Figure 114). The highest proportion of people who currently use cannabis (52.5%) and the lowest proportion of people who never used cannabis (26.3%) were among those with a household income of less than \$25,000. However, the lowest proportion of people who currently use cannabis (35.9%), and the highest proportion of people who never used cannabis (38.6%) were among those with the highest household income. The differences observed with regards to employment status and household income were statistically significant, and similar relationships were also observed prior to legalization. Notably, after adjusting for age, the relationships observed due to employment status and household income disappeared, which indicates that those differences were due to age.

FIGURE 66: SELF-REPORTED CANNABIS USE, PEI, 2019



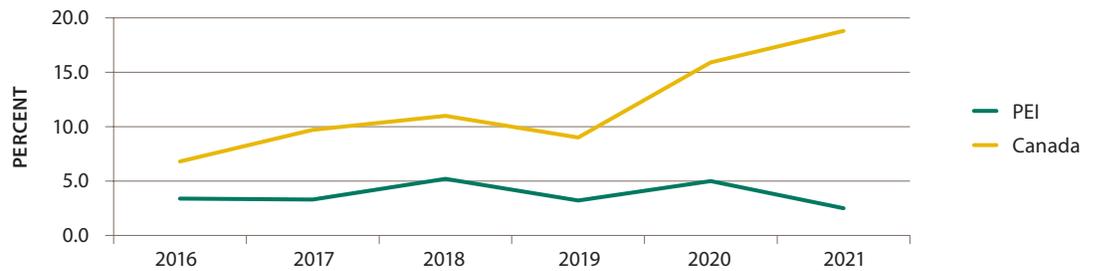
Data source: 2019 PEI Cannabis Survey.

Current non-medical cannabis users were more likely to be male, younger, and more socioeconomically disadvantaged.

Opioid-Related Overdoses and Deaths

The rate of opioid-related deaths in PEI has consistently been much lower than that of Canada (Figure 67). While the rate has fluctuated in PEI, there has been no clear increase or decrease. The rate has been increasing in Canada since 2019, however.

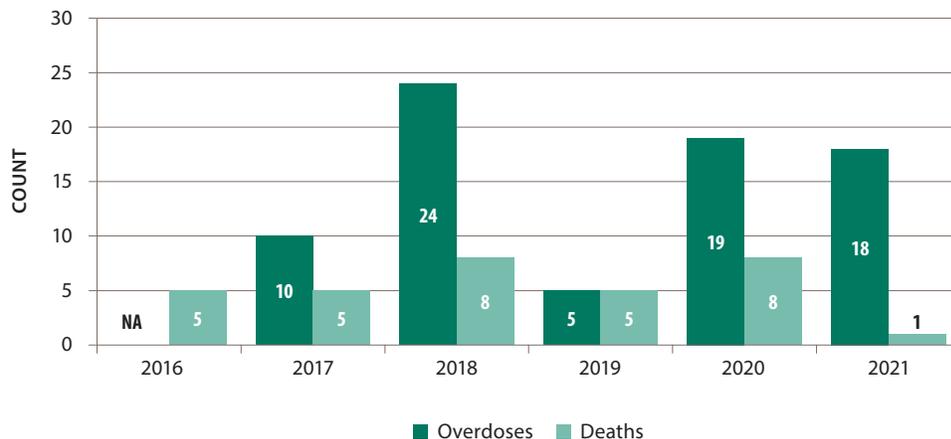
FIGURE 67: RATE OF ACCIDENTAL OPIOID-RELATED DEATHS, PEI AND CANADA, 2016-MARCH 2021



Data source: Public Health Agency of Canada, Special Advisory Committee on the Epidemic of Opioid Overdoses.

The number of accidental overdoses and deaths related to opioids in PEI peaked at 24 overdoses and eight deaths in 2018 and then began to increase again in 2020. Most overdoses (96%) involved mixed toxicology (i.e., one or more opioids combined with one or more non-opioid substances, such as alcohol). Likewise, most deaths (97%) were of mixed toxicology (Figure 68). Death investigations take 12 to 18 months to complete and only closed (certified) cases are reported.

FIGURE 68: NUMBER OF OPIOID-RELATED ACCIDENTAL OVERDOSES AND DEATHS EACH YEAR, PEI, 2016-SEPTEMBER 2021



Data source: PEI Department of Health and Wellness, Chief Public Health Office. Only closed (certified) death cases are reported.

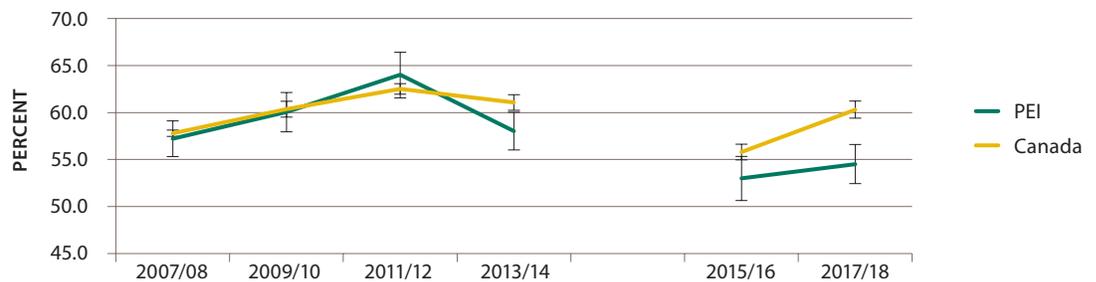
Most overdoses (96%) and most deaths (97%) involved mixed toxicology (i.e., one or more opioids combined with one or more non-opioid substances, such as alcohol).

Naloxone is a medicine that rapidly reverses opioid overdoses, and it can be administered when an opioid overdose is suspected. From June 1, 2017 to September 2, 2021, 1,140 take-home naloxone kits were distributed to PEI's Needle Exchange Program, 783 were distributed to other sites in PEI, and 216 were distributed to community groups/programs. When a naloxone kit is replaced, an anonymous form is completed and returned to the Chief Public Health Office for surveillance purposes. To date, 28 forms have been returned.

Changes Made to Improve Health

PEI residents have been similar to Canadians overall when it comes to making any changes to improve health. Since 2013/14 however, Canadians were more likely than PEI residents to report making any changes to improve health, and the gap has widened. In 2017/18, 60.3% of Canadians and 54.5% of PEI residents reported making changes to improve health, and this difference was statistically significant (Figure 69).

FIGURE 69: SELF-REPORTED ANY CHANGE MADE TO IMPROVE HEALTH IN THE PAST YEAR, PEI AND CANADA, AGED 12+, 2007-2018



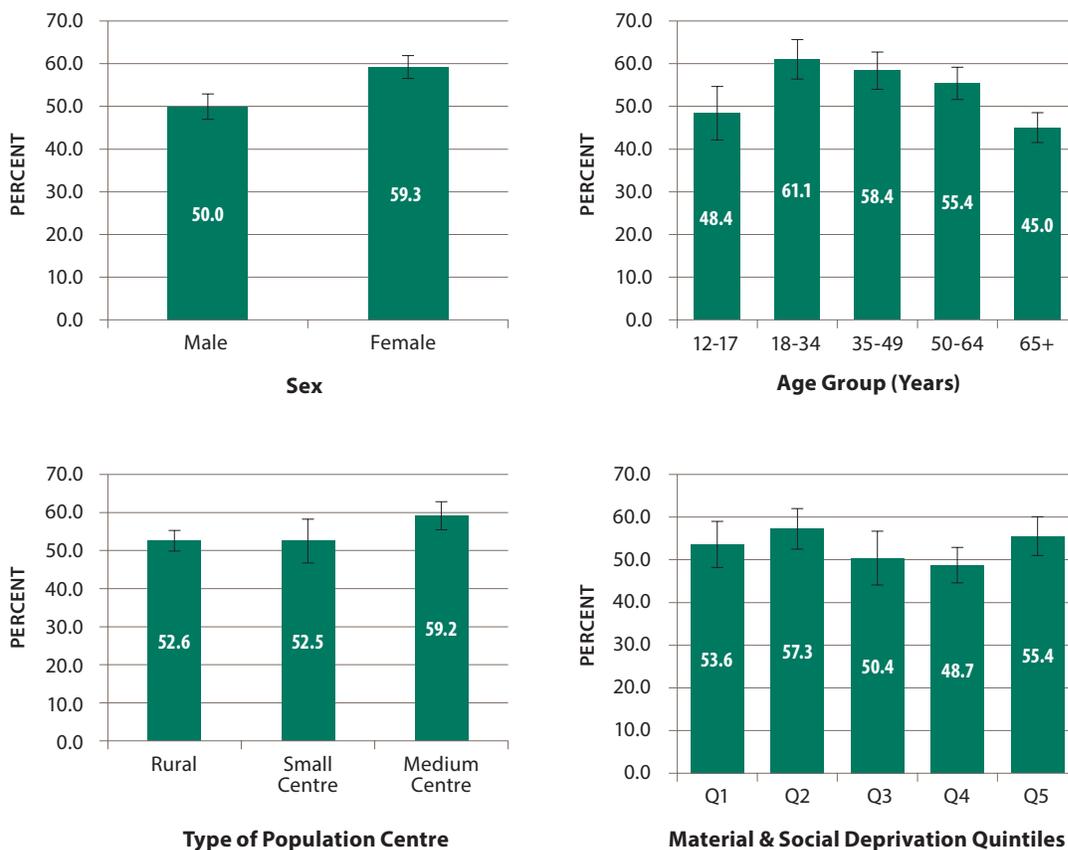
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Since 2013/14, Canadians were more likely than PEI residents to report making any changes to improve health, and the gap has widened.

In PEI, the most common change made to improve health in the past year was increasing exercise (55.8%), followed by improving eating habits (17.7%), and losing weight (10.8%). Some groups in PEI were more likely to have made changes to improve their health than others (Figure 70). Females were significantly more likely than males to have made a change to improve health in the past year (59.3% versus 50.0%). Those aged 65 years and older were least likely among adults to have made a change to improve health (45.0%). PEI residents who lived in rural areas were significantly less likely to have made a change to improve their health than those living in medium population centres (52.6% versus 59.2%). No significant differences were observed with regards to neighbourhood-level material and social deprivation and having made a change to improve health in the past year.

Compared to the overall percentage for PEI, those aged 65 years and older were less likely to have made a change to improve their health in the past year.

FIGURE 70: SELF-REPORTED ANY CHANGE MADE TO IMPROVE HEALTH IN THE PAST YEAR, PEI, 2017/18

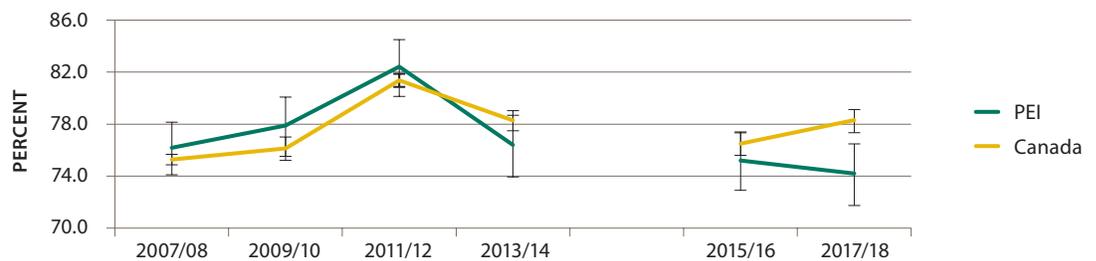


Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Intent to Make Changes to Improve Health

The intention to make changes to improve health among PEI residents followed a similar pattern to what was observed for Canadians overall. Recently, however, while this intent has increased among Canadians, it has decreased among PEI residents. In 2017/18, Canadians were significantly more likely than PEI residents to report an intent to make changes to improve health (78.3% versus 74.2%; Figure 71).

FIGURE 71: SELF-REPORTED INTENTION TO MAKE ANY CHANGES TO IMPROVE HEALTH IN THE NEXT YEAR, PEI AND CANADA, AGED 12+, 2007-2018



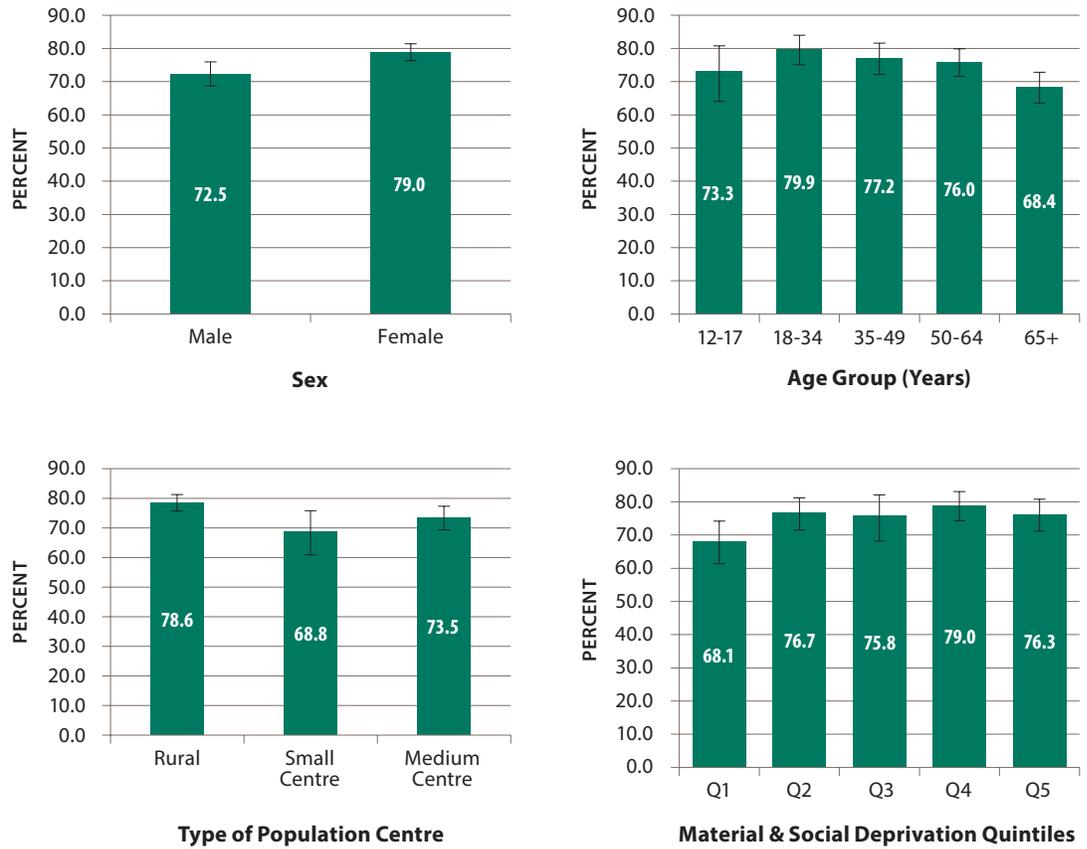
Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

The most common intended changes were to exercise more (71.3%), improve eating habits (28.6%), and lose weight (10.6%).

Across all groups, most PEI residents intended to make a change to improve health in the next year. The most common intended changes were to exercise more (71.3%), improve eating habits (28.6%), and lose weight (10.6%). Compared to males, females were significantly more likely to report an intent to make a change to improve health (72.5% versus 79.0%; Figure 72). With regards to age, the intent to make changes to improve health seemed to decline with age among adults (79.9% for those ages 18 to 34 years old versus 68.4% for those ages 65 years and older), but the differences were not statistically significant. The type of population centre in which one resides did not seem to have a relationship with the intent to make changes to improve health. Interestingly, those living in the least materially and socially deprived neighbourhoods (Q1) were least likely to report an intent to make a change to improve health (68.1%), and those living in the second-most deprived neighbourhoods (Q4) were most likely to report an intent to make changes to improve health (79.0%); the difference between these two groups was statistically significant.

When compared to the percentage for PEI, those aged 65 years and older were less likely to intend to make a change to improve health.

FIGURE 72: SELF-REPORTED INTENTION TO MAKE ANY CHANGES TO IMPROVE HEALTH IN THE NEXT YEAR, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Physical Environments

Physical environments include factors such as housing and neighbourhood quality, the ability to acquire physical goods, and the work environment.¹⁰ Location of residence is important, determining not only the physical environment but also access to healthcare, food, education, employment, and housing.²⁵ In 2018, remote communities in Canada experienced higher infant mortality, unintentional mortality, suicide, and youth hospitalizations for substance use than large Canadian cities (except Vancouver).^{11,41} Our physical and psychological well-being are also influenced by the design and quality of communities and transportation systems.²⁴

Another aspect of the physical environment that determines good health is whether there are acceptable (low) levels of contaminants in air, water, food, and soil. Outdoor air pollution increases the risk of dementia and hospitalization for circulatory and respiratory disease.^{50,51} Exposure to high levels of pollution is more likely with lower socioeconomic status due to the increased affordability of housing near pollution sources. Green spaces are also important factors in reducing the negative effects of both heat extremes and air pollution on health;⁵⁰ and green spaces have been shown to have a positive association with mental health.⁵²

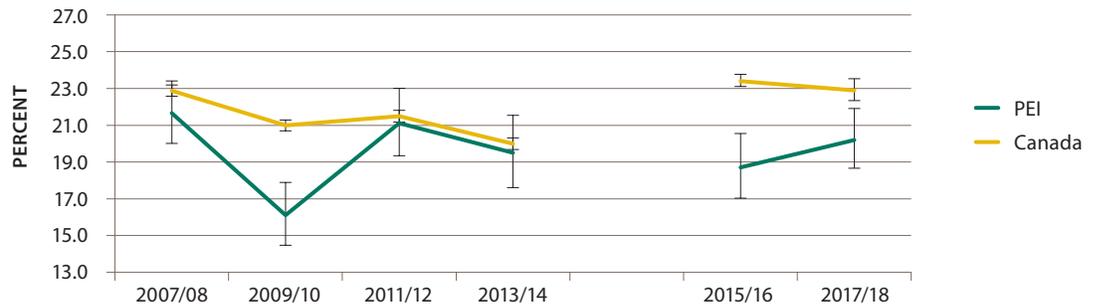
Housing and good indoor air quality are also requirements for living a healthy life. Housing that is not safe, affordable, or secure can increase the risk of many health problems. Housing that is not affordable decreases the amount of money available to a household to meet other social determinants of health.²³⁻²⁵ Housing is defined as inadequate when it is too expensive (greater than 30% of pre-tax income), overcrowded (not enough bedrooms), has inadequate heat, or is in need of major repairs. Low-income groups, recent immigrants, visible minorities, and adults who are unemployed but looking for work are more likely to live in inadequate housing in Canada.¹¹

Exposure to Second-Hand Smoke

Exposure to second-hand smoke among non-smokers has been trending downwards in Canada, but a trend in PEI is less apparent. Overall, the prevalence of exposure to second-hand smoke in PEI tends to be lower than in Canada. In 2017/18, 20.2% of PEI residents and 22.9% of Canadians who were non-smokers reported exposure to second-hand smoke, a statistically significant difference (Figure 132).

Overall, the prevalence of exposure to second-hand smoke in PEI tends to be lower than in Canada.

FIGURE 73: SELF-REPORTED EXPOSURE TO ANY ENVIRONMENTAL TOBACCO SMOKE IN THE PAST MONTH AMONG NON-SMOKERS, AGED 12+, PEI AND CANADA, 2007-2018

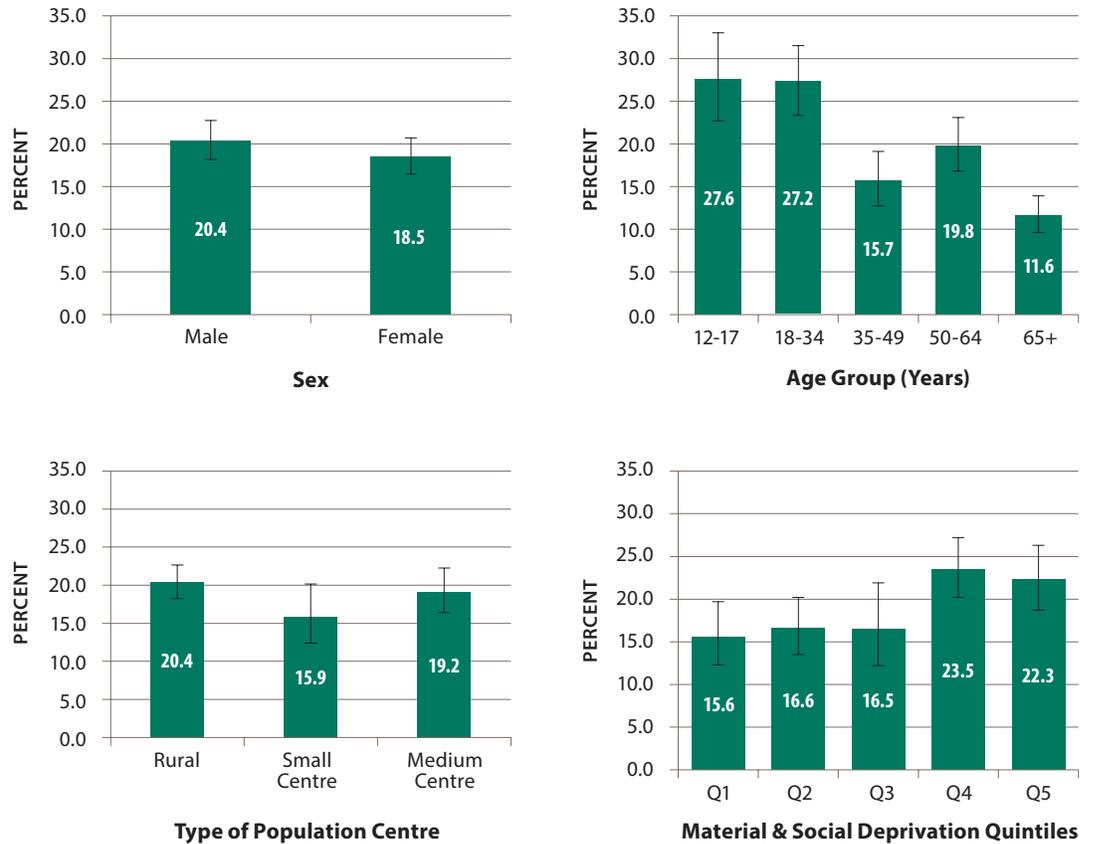


Data source: Statistics Canada, Canadian Community Health Survey 2007/08 to 2017/18.

Within PEI, the most common places in which people were exposed to second-hand smoke in the past month were public places such as bars, restaurants, and shopping malls (9.6%), workplaces or schools (9.4%), in their homes (6.3%), and in cars or other private vehicles (5.6%). Females and males appeared to be equally likely to have been exposed to second-hand smoke (18.5% versus 20.4%; Figure 74). Younger people ages 12 to 17 years old and ages 18 to 34 years old (27.6% and 27.2%, respectively) were more likely to have been exposed to second-hand tobacco smoke than older people. The type of population centre in which a person lived did not seem to have any effect on the likelihood of being exposed to second-hand smoke, but neighbourhood-level material and social deprivation did. Those living in neighbourhoods with more deprivation (Q4 and Q5) were more likely to have been exposed to second-hand smoke.

Compared to PEI residents overall, those ages 12 to 34 years old were more likely to have been exposed to second-hand smoke, and those ages 65 years and older were less likely to be exposed.

FIGURE 74: SELF-REPORTED EXPOSURE TO ANY ENVIRONMENTAL TOBACCO SMOKE IN THE PAST MONTH AMONG NON-SMOKERS, PEI, 2017/18



Data sources: Statistics Canada, Canadian Community Health Survey 2017/18; Canada Post, Postal Code Conversion File Plus; Institut national de santé publique du Québec, Material and Social Deprivation Index.

Health Services

Healthcare services are the collection of services that are meant to protect the health of citizens and provide medical care for those in need. Although Canada has a universal healthcare system, there are well-known gaps in this system that create inequities in health for those with lower incomes. These include a lack of coverage for dental, eye, and drug costs among others.²³⁻²⁵ Inequities in access to health services can also occur through other means, such as locating health services away from impoverished or high-needs areas and cultural and language barriers. In addition, there can be inequities once health services are accessed due to different treatment outcomes that are influenced by the other determinants of health.⁵³ Equitable access to healthcare means greater access to healthcare for those in greater need of care. Equal access for every group does not result in equitable access or care.⁵³

Not only do vaccines prevent the spread of diseases, they also save lives and reduce burden on the health system, thereby making resources available in the system to address other health challenges in the population.

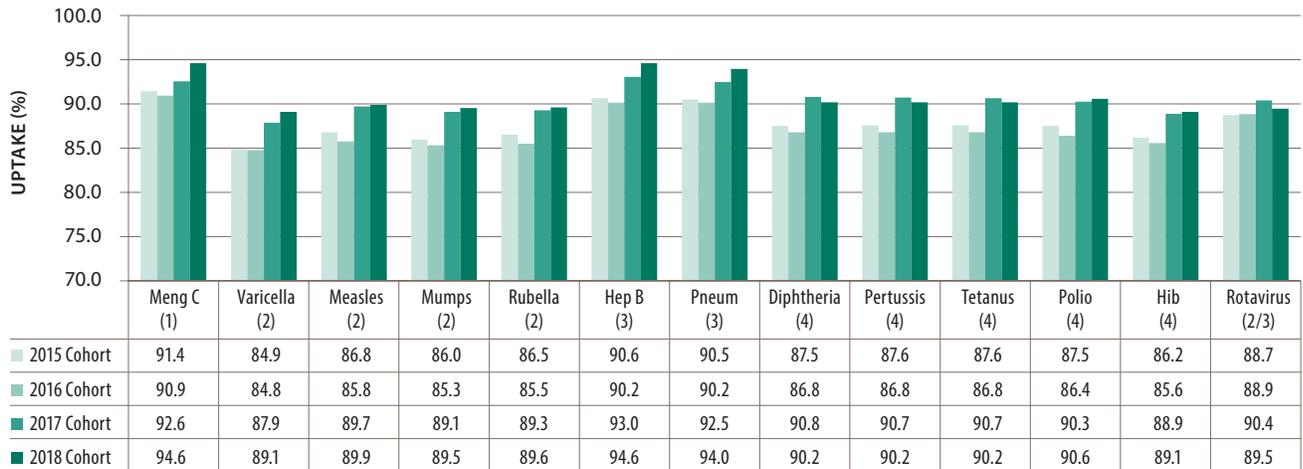
Immunizations are an important tool for health protection in public health, and it requires the involvement of healthcare providers, so it is delivered through the healthcare system. Some see immunization as one of the best measures for protecting population health. Not only do vaccines prevent the spread of diseases and save lives, they reduce burden on the health system thereby making resources available in the system to address other health challenges in the population.⁵⁴ Immunization programs are central to PEI's response to vaccine-preventable diseases. To reduce inequities and barriers to accessing immunizations, PEI provides several universal immunization programs in which most vaccines are publicly funded for children, adolescents, and adults.

Immunization Uptake by Age Two

To provide protection against vaccine-preventable diseases, children in PEI are offered their first vaccines at two months of age. In PEI, it is recommended that children be immunized with the following antigens prior to two years old: diphtheria, tetanus, pertussis, polio, Haemophilus influenzae type b, hepatitis B, measles, mumps, rubella, varicella, pneumococcal, meningococcal C, and rotavirus.

In PEI, vaccine uptake among infants and toddlers has increased over time. For the 2015 cohort (children born in the 2015 calendar year) uptake ranged from 84.9% (two doses of varicella) to 91.4% (one dose of meningococcal C). In the 2018 cohort (children born in 2018), vaccine uptake ranged from 89.1% (two doses of varicella, 4 doses of Haemophilus influenzae type b) to 94.6% (one dose of meningococcal C, three doses of hepatitis B; Figure 75). Of note, immunization uptake may be underestimated when immunization coverage of children who resided out of province is not reported to Health PEI Public Health Nursing. These children may have adequate immunization coverage but will appear to be un- or under-immunized.

FIGURE 75: IMMUNIZATION UPTAKE BY ANTIGEN BY AGE TWO, PEI, 2015-2018 COHORTS



Data source: Health PEI, Public Health Nursing Immunization Assessments; PEI Medicare Eligibility Registry. (#) Denotes the doses needed. Hep B, Hepatitis B; Hib, *Haemophilus influenzae* type b; Meng C, Meningococcal C; Pneum, Pneumococcal.

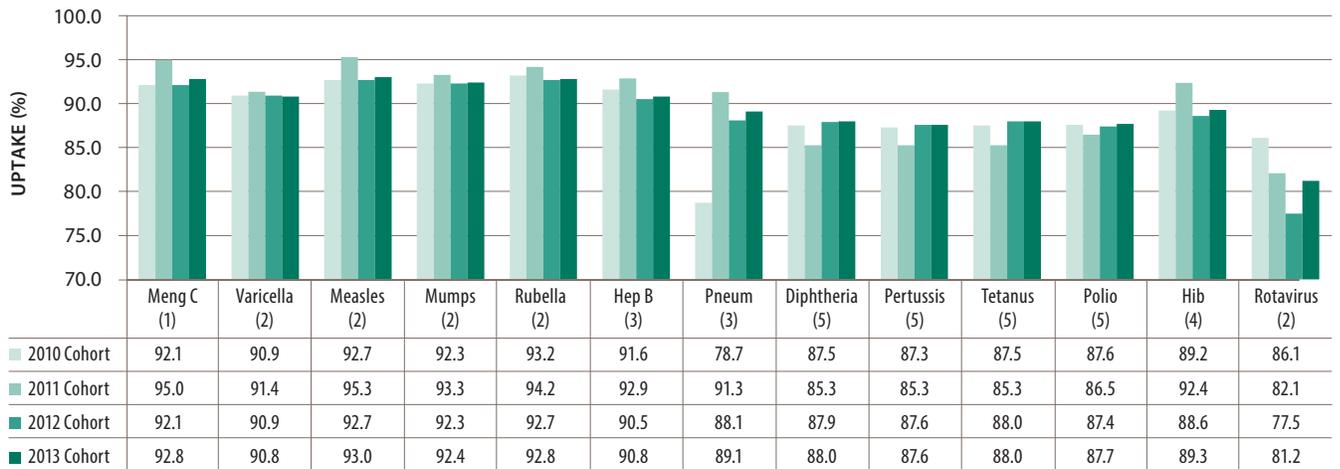
Immunization Uptake by Grade 1 Entry

Booster doses of vaccines are administered to children between the ages of four and five. In PEI, it is recommended that children be immunized with the following antigens prior to starting Grade 1, which may occur at five years old for some children: diphtheria/ tetanus, pertussis, polio, and varicella (if the child had not previously received two doses).

In PEI, there has not been a consistent pattern in vaccine uptake by Grade 1 entry over time, but vaccine uptake seemed to peak for the 2011 cohort (children born in the 2011 calendar year). For the 2011 cohort, vaccine uptake ranged from 82.1% (two doses of rotavirus) to 95.3% (3 doses of measles). In the 2013 cohort (children born in the 2013 calendar year), vaccine uptake ranged from 81.2% (2 doses of rotavirus) to 93.0% (two doses of measles; Figure 76). As with immunization uptake by age two, immunization uptake by Grade 1 entry may be underestimated, because children who resided out of province may have adequate immunization coverage but will appear to be un- or under-immunized if their immunization records are not provided to Public Health Nursing at Health PEI.

Vaccine uptake by Grade 1 entry seemed to peak for the 2011 cohort (children born in the 2011 calendar year).

FIGURE 76: IMMUNIZATION UPTAKE BY ANTIGEN PRIOR TO GRADE 1 ENTRY, PEI, 2010-2013 COHORTS

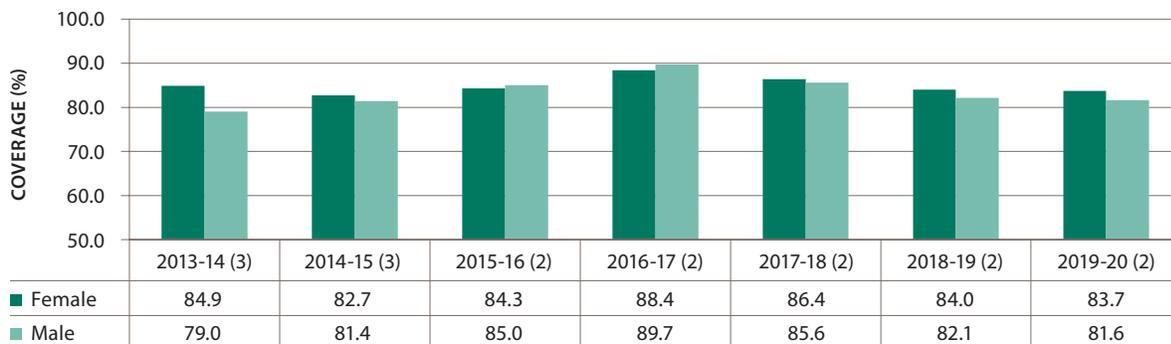


Data source: Health PEI, Public Health Nursing Immunization Assessments; PEI Medicare Eligibility Registry. (#) Denotes the doses needed. Hep B, Hepatitis B; Hib, *Haemophilus influenzae* type b; Meng C, Meningococcal C; Pneum, Pneumococcal.

HPV Coverage in Grade 6

In PEI, two doses of the human papillomavirus (HPV) vaccine are recommended for all students in Grade 6. HPV vaccination coverage among PEI students peaked in the 2016-17 school year. Coverage has fallen steadily since then, and in the 2019-20 school year, 83.7% of female students and 81.6% of male students had received two doses of the HPV vaccine (Figure 77).

FIGURE 77: HPV COVERAGE IN GRADE 6 STUDENTS, BY SEX, 2013-14 TO 2019-20

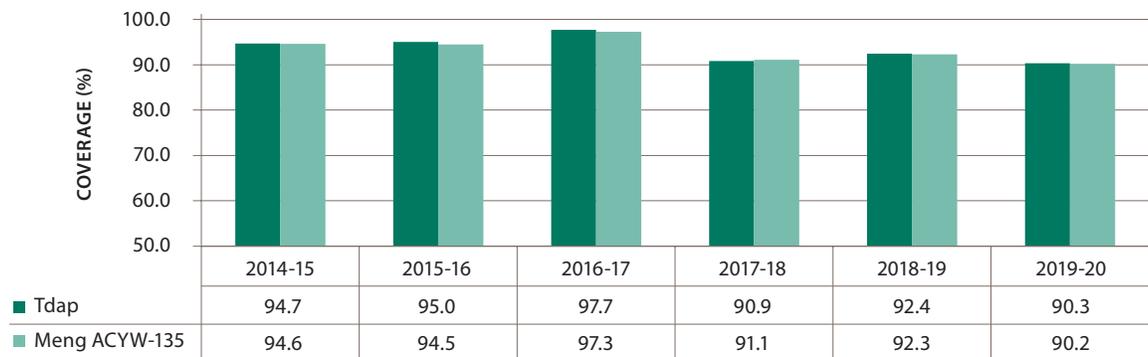


Data source: Health PEI, Public Health Nursing Immunization Assessments; PEI Medicare Eligibility Registry. (#) Denotes the doses needed.

Immunization Uptake by Grade 9

It is recommended that children in Grade 9 in PEI have one dose of Tdap (tetanus, diphtheria, and pertussis) and one dose of meningococcal A, C, Y and W-135 conjugate. Coverage for these two vaccines among Grade 9 students peaked in the 2016-17 school year and seemed to be at their lowest level in the 2019-20 school year (Figure 78).

FIGURE 78: TDAP AND MENINGOCOCCAL ACYW-135 COVERAGE IN GRADE 9 STUDENTS, 2014-15 TO 2019-20



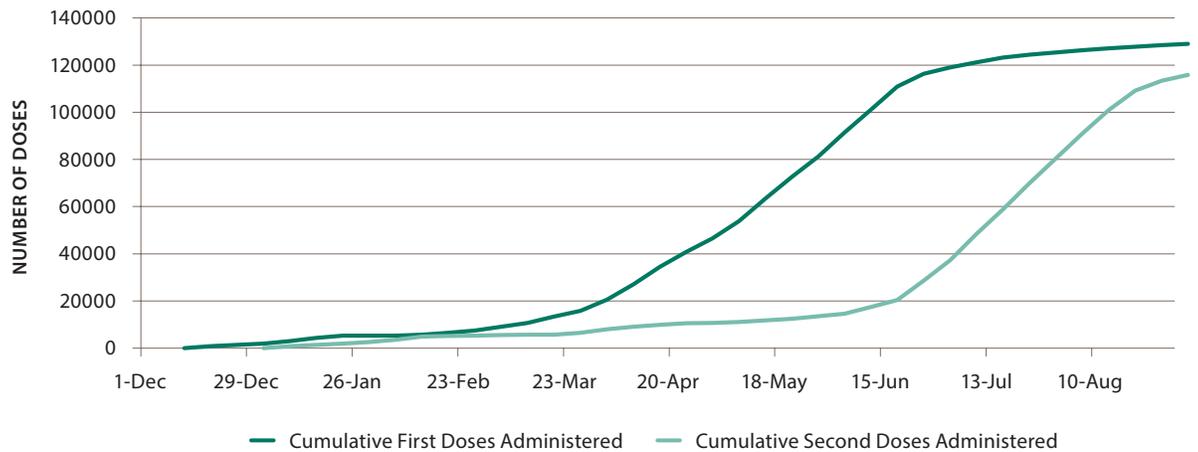
Data source: Health PEI, Public Health Nursing Immunization Assessments; PEI Medicare Eligibility Registry.

Coverage for Tdap and Meng ACYW-135 among Grade 9 students peaked in the 2016-17 school year.

COVID-19 Immunization Coverage

The COVID-19 vaccines provide the best protection against COVID-19 infection and severe illness from COVID-19 infection that may result in hospitalization or death.⁵⁵ As of August 31, 2021, a total of 243,271 doses of COVID-19 vaccines had been administered in PEI—128,667 first doses and 114,604 second doses (Figure 79). On August 31st, 91.5% of eligible PEI residents had received at least one dose of a COVID-19 vaccine, and 81.5% were fully vaccinated.

FIGURE 79: TOTAL CUMULATIVE COVID-19 VACCINE DOSES ADMINISTERED, PEI, DECEMBER 2020 - AUGUST 2021



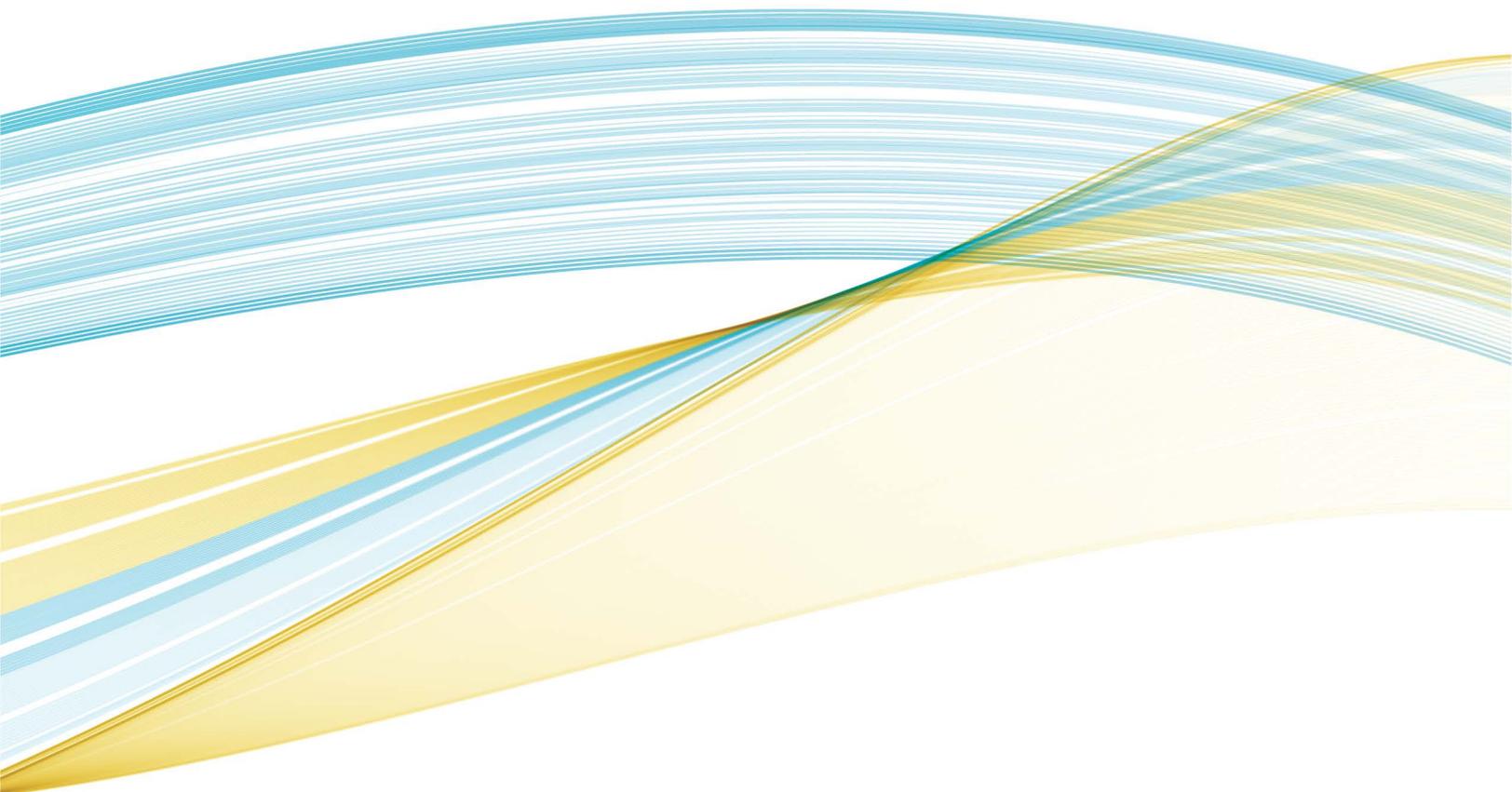
Data source: PEI Department of Health and Wellness, Chief Public Health Office, COVID-19 Immunization Registry.

On August 31st, 91.5% of eligible PEI residents had received at least one dose of a COVID-19 vaccine, and 81.5% were fully vaccinated.

SECTION 5

Chief Public Health Office

This section of the report provides an overview of PEI's Chief Public Health Office and highlights key accomplishments since the *2016 Chief Public Health Officer's Report: Health for all Islanders*.



ABOUT THE CHIEF PUBLIC HEALTH OFFICE

The Chief Public Health Office (CPHO) is a division within the Government of Prince Edward Island's Department of Health and Wellness. The CPHO promotes and protects the health of PEI residents and prevents disease and injury through leadership, partnership, and excellence in public health. The *Public Health Act* and associated regulations of PEI guide the work of the CPHO.

In fulfilling its mandate, the CPHO strives to embody these values:

- **Excellence.** The CPHO contributes to effective and efficient public health services with a commitment to continuous quality improvement.
- **Equity.** The CPHO pursues approaches that enable all PEI residents to be healthy.
- **Evidence-informed.** The CPHO applies evidence to inform public health practice.
- **Collaboration.** The CPHO values partnerships, community engagement, and public trust.
- **Stewardship.** The CPHO makes decisions responsibly, acts with integrity, and is accountable.

The four units that comprise the CPHO are:

- **Health Promotion** is responsible for advancing population health in PEI by focusing on structural, cross-cutting, and intermediary determinants of health. The unit also develops broad population-level social and community interventions that promote healthy behaviours through building healthy public policies, creating supportive environments, and strengthening community action and personal skills.
- **Population Health Assessment and Surveillance** supports the other units in the CPHO by generating, analyzing, and interpreting data that is used for continuous improvement and evidence-informed decision-making. This unit conducts surveillance, produces reports, conducts research, develops data assets, and supports the evaluation of initiatives focused on population health.
- **Communicable Disease Control** provides expertise and direction on preventing and managing communicable diseases through immunization, investigating and following up on notifiable diseases, and infection prevention and control. This unit also directs the publicly funded immunization programs in PEI.
- **Environmental Health** protects the health and safety of PEI residents and non-residents through education, inspections of public and private services and facilities, and consultation regarding environmental health risks. The focus of this unit is the prevention or morbidity and mortality related to food safety, water safety, and enteric disease prevention and control, among others.

HEALTH PROMOTION

Health Promotion represents a comprehensive approach to bringing about social change in order to improve health and well-being. Health Promotion seeks to address the determinants of health and health inequalities by focusing on the modifiable personal, social, and structural factors.

Public Awareness and Education

Raising awareness and engaging public interest can prompt and motivate the population to consider their lifestyle and potentially change their behaviors to reduce the risk of chronic disease and injury. Since alcohol is the third leading preventable risk factor for disease, disability, and death in Canada, following tobacco and high blood pressure, in 2016 to 2019 a *Should I Have Another?* campaign was implemented across PEI to raise awareness about responsible alcohol use and Canada's Low-Risk Alcohol Drinking Guidelines. With the legalization of cannabis in 2018, a *Just the Facts* website and campaign were launched to raise public awareness of the risks and harms associated with cannabis use, and in 2019, through a partnership with the Atlantic Collaborative on Injury Prevention, a *Preventable* injuries campaign occurred across Atlantic Canada. Promotions for the *Smokers Helpline* and various smoking cessation campaigns remained ongoing, encouraging Islanders to quit smoking.

Community Engagement and Partnerships

Health Promotion works through concrete and effective community action in setting priorities, making decisions, and planning and implementing strategies to achieve better health. At the heart of this process is the empowerment of communities—their ownership and control of their own endeavors and destinies. Through engagement with community and organization partners, Health Promotion has developed a wellness brand, *Live Well PEI*, and has designed a website for the creation of an interactive web-platform for Islanders. Four annual Health Promotion provincial conferences occurred between 2016-2019 and staff have engaged with community partners, providing expertise and leadership to various committees focused on: tobacco and vaping prevention, cannabis harm prevention, children's nutrition, school food, and Francophone healthy early years. Health Promotion staff have also supported many community and government initiatives such as the First 100 Days, Bridge the Gapp, Farmers Talk, Charlottetown Food Council, Canada's Food Guide, and the Canadian Alcohol Policy Evaluation (CAPE).

Program Implementation

Health Promotion champions a whole of population approach. In 2019 Health Promotion piloted a universal, population-level Smoking Cessation Program across PEI and a program evaluation is currently underway. Since 2015 the PEI Wellness Grant Program has provided funding to community organizations and groups in PEI. Over \$250,000 has helped to catalyze more than 80 community projects across the province.

POPULATION HEALTH ASSESSMENT AND SURVEILLANCE

Surveillance and monitoring of communicable and non-communicable diseases, health determinants (causes, risk factors, protective factors), and health-related states and events is a cornerstone of public health. Data gathered from surveillance and monitoring systems help to identify health-related trends over time, and this evidence informs public health policies and practices and health system decisions. These can range from creating new immunization programs or modifying existing ones, to revising legislation related to cannabis consumption, to funding medications to help with smoking cessation, to determining groups or areas requiring more focused attention and resources.

Surveillance and Monitoring

Since the last *CPHO Report* that was released in 2016, several changes have been made to enhance the CPHO's ability to conduct surveillance and monitor its initiatives. For one, in response to the opioid crisis and legalization of non-medical cannabis use, the CPHO has developed a framework to guide the surveillance of substance use. This framework, which is still being implemented, integrates: information on substance-related knowledge, attitudes, beliefs, and behaviours; data about substance-related deaths and overdoses; information on vulnerable populations; and an action-oriented framework to guide continuous improvement. In addition, a five-year agreement with the Public Health Agency of Canada has been renewed to continue and expand PEI's participation in the Canadian Chronic Disease Surveillance System (CCDSS). The CCDSS is a federal, provincial, and territorial partnership that ensures the consistency, rigour, and scientific validity of chronic disease surveillance across Canada. In 2021, PEI entered into a three-year agreement to enhance dementia surveillance in PEI. In an effort to continue to monitor and improve its work, the CPHO has begun to track key performance indicators for its Environmental Health and Communicable Diseases programs.

Reports and Publications

- In 2017, the CPHO released PEI's first *Children's Report*, which provides a snapshot of health and well-being among Island residents under the age of 18.
- The CPHO released the *2018 PEI Cannabis Survey Report* in 2019, and the *2019 PEI Cannabis Survey Report* is forthcoming. These reports assess knowledge, attitudes, beliefs, and behaviours related to non-medical cannabis use before and after legalization, respectively. The 2019 survey also assessed the effectiveness and reach of the "Just the Facts" public education campaign.
- Since 2016, the CPHO has also produced several internal reports focused on chronic diseases and related risk behaviours and SDH. These reports help to inform decisions in the CPHO and other parts of PEI's health system.
- In addition, the CPHO produced a manuscript about public awareness in PEI of the Low-Risk Alcohol Use Guidelines.⁵⁶
- Finally, the CPHO has contributed to numerous reports and peer-reviewed manuscripts led by federal, provincial, and territorial partners, thereby contributing PEI data and a PEI lens to national initiatives.

COMMUNICABLE DISEASE CONTROL

Vaccines

Vaccines are a relatively low-cost preventative healthcare intervention which contributes to the sustainability of the healthcare system. A great number of Islanders suffer from chronic diseases, such as diabetes, heart disease, asthma, and COPD. Not only does this increase their likelihood of getting a vaccine-preventable disease (VPD) but the VPD can worsen chronic disease complications.

The CPHO launched an Adult Immunization Strategy in 2016 that included the creation of an immunization schedule, an online immunization self-assessment tool, and a provincial Immunization Registry. In the fall of 2017, the Universal Influenza program was launched, removing cost as a barrier for PEI residents to receive the seasonal influenza vaccine. In the fall of 2018, PEI added a new High-Dose Influenza vaccine for individuals living in long-term care and community care facilities. The eligibility was expanded in 2020 to include all Islanders aged 65 and older in order to better protect those at highest risk of severe outcomes from influenza.

Sexually Transmitted and Bloodborne Infections

Sexually transmitted and bloodborne infections (STBBIs) are rising in Canada. In PEI, rates of chlamydia have been trending upward, HIV cases in the province continue to grow, and hepatitis C (HCV) cases have been increasing since 2017. Rates of gonorrhea, syphilis and Hepatitis B remain steady. In 2019, the HIV Drug Program added free access to Pre-Exposure Prophylaxis as an HIV prevention method for people at risk for acquiring HIV infection. As well, Post-Exposure Prophylaxis availability was expanded to the sexual health clinic as a way to help prevent HIV from being transmitted to an HIV-negative person who may have been exposed to the virus during a sexual encounter. In 2019, when PEI's HCV case rate was slightly higher than the Canadian average, the Hepatitis C Elimination Strategy Advisory Committee was struck to focus on the following four pillars of HCV elimination: surveillance, treatment, testing/diagnosis, and prevention. In 2021, PEI will be incorporating HCV elimination into an overarching STBBI Action Plan with the goal of reducing the incidence of STBBIs in the province.

Opioid-Related Overdoses and Deaths

In 2017, PEI released an action plan to prevent and mitigate opioid-related overdoses and deaths. The action plan commits to enhance monitoring, improving access to the opioid replacement treatment therapy (ORT), initiating naloxone distribution to clients and first responders, and establishing public health surveillance of opioid-related overdoses and deaths. A free Take-Home Naloxone Program piloted in 2017 by Health PEI's Needle Exchange program has been expanded to meet demand for new kits. Of note, even with decreased services during the lockdowns due to COVID, distribution of naloxone kits increased by 33% throughout 2020 compared to the year prior. Although PEI has not experienced the extent of opioid overdoses and deaths as some other parts of Canada, as seen in other provinces, fentanyl and fentanyl analogues are increasingly involved in overdoses and deaths in PEI.

ENVIRONMENTAL HEALTH

Regulating Flavoured Tobacco and Increasing the Legal Age to Purchase Tobacco and Electronic Smoking Devices

On May 1, 2017, a ban on the sale of flavoured tobacco products was implemented in PEI. The amendment to the *Tobacco and Electronic Smoking Device Sales and Access Act*, which received Royal Assent in the PEI Legislature in 2015, stated that no person is permitted to sell or offer to sell tobacco that contains a prescribed flavouring agent. A survey of island students conducted at the time indicated that of PEI school-aged youth who smoke, 43% reported using flavoured products. In August/ September 2017, a full round of routine tobacco retailer inspections was completed to gauge compliance with the flavoured tobacco prohibition. Over 95% of tobacco retailers were found to be in compliance with the flavoured tobacco prohibition.

In response to the increase in youth smoking/ vaping rates, additional amendments to the *Tobacco and Electronic Smoking Device Sales and Access Act* and regulations came into force March 1, 2020. The minimum age to purchase tobacco and electronic smoking devices increased from 19 to 21 years of age. Furthermore, the sale of electronic smoking devices is now restricted to tobacconist shops, which are age-restricted retail locations whose primary business is the sale of tobacco and/ or electronic smoking devices.

Finished Dairy Product Testing Project

The Finished Dairy Product Sampling Project was developed to assist Environmental Health in reviewing the finished product testing requirements in PEI by gathering data that could support the possibility of decreasing sampling frequency, requiring pathogen testing, and basing testing requirements on risk.

Based on the outcome of the project, the finished dairy product sampling requirements in PEI were adjusted to focus on potential public health risk instead of an every-batch approach. Additional testing of appropriate pathogens is now required in addition to the Schedule III Standards for dairy products; however, the sampling frequency was reduced relative to plant risk. Since every batch no longer requires testing, the financial burden of testing for processors was reduced.

Inspection Activity

ALL PROGRAMS

	2016	2017	2018	2019	2020
Routine Inspections	1895	2224	2334	2601	1693
Follow-Up Inspections	165 (9%)	234 (11%)	214 (9%)	321 (12%)	207 (12%)
Warning Letters Issued	52 (3%)	97 (4%)	73 (3%)	93 (4%)	77 (5%)
TOTAL	2060	458	2548	2922	1900

Data sources: PEI Department of Health and Wellness, Chief Public Health Office, Environmental Health Office.

TOBACCO COMPLIANCE

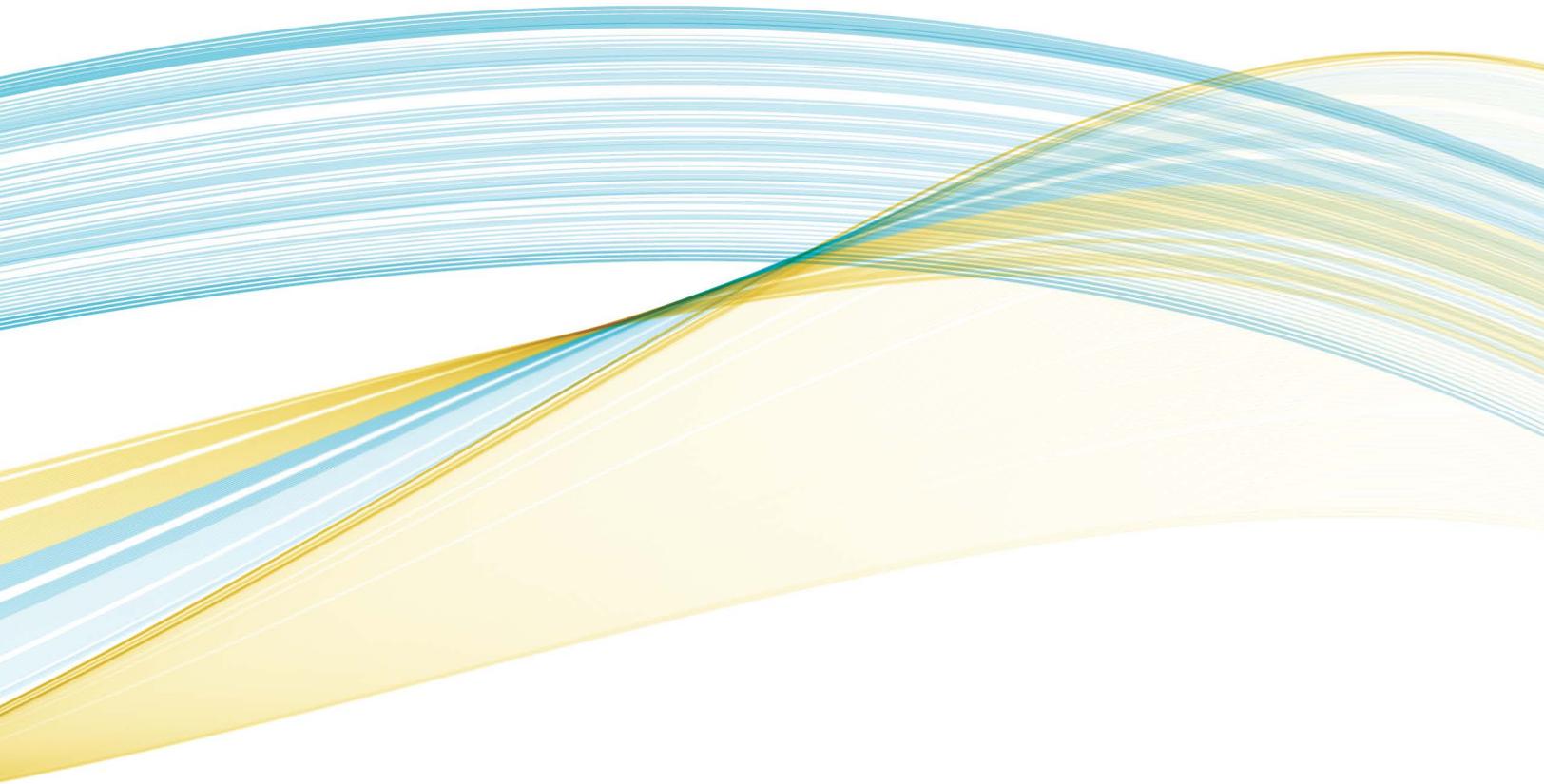
	2016	2017	2018	2019	2020
Routine Inspections	27	129	125	41	274
Follow-Up Inspections	5 (19%)	19 (15%)	5 (4%)	5 (12%)	16 (6%)
Enforcement Checks	2	118	58	0	42
Compliance Rate*	100%	97%	76%	N/A	62%
TOTAL	34	266	188	4461	332

Data sources: PEI Department of Health and Wellness, Chief Public Health Office, Environmental Health Office.

* Compliance rate is based on enforcement checks.

SECTION 6

Conclusions and Actions



The *2021 Chief Public Health Officer's Report* builds on previous report findings to further explore the relationships between the SDH and the health status and health behaviours of Island residents. This report provides updates to key indicators, explores the SDH in a new way through the Material and Social Deprivation Index (MSDI), and uses the MSDI to describe the combined influence of structural determinants of health on Islanders' well-being. In addition, this report explores the relationship between the types of population centres in which PEI residents live, health status, and health behaviours. Whenever possible, this report compares indicators among PEI residents to Canadians overall and examines trends over time.

The report's findings indicate that there is an unequal distribution of the SDH among PEI residents, which significantly influences the health of Islanders overall. In other words, we found that there are health inequities within PEI—differences in health outcomes that are systemic, unfair, and avoidable. The evidence suggests that an increased focus on healthy behaviours (physical activity, healthy eating), population mental health, social connection, and problematic substance use is needed.

It is important to note that the data in this report reflects the status of the PEI population's health prior to the onset of the COVID-19 pandemic. PEI residents previously reported feeling increasingly stressed and disconnected. We are now faced with the added burden of physical and mental health impacts from the pandemic. Some of these impacts are already being felt, while it is expected that many will not be seen for years to come. The evidence suggests that mental health was a concern prior to the pandemic, and this report serves as another important baseline for assessing the impacts of the pandemic on PEI residents going forward.

As mental health ratings have declined, the prevalence of mood and anxiety disorders, diabetes, overweight and obesity, chronic obstructive pulmonary disease, opioid-related overdoses and deaths have increased. At the same time, sense of community belonging, fruit and vegetable consumption, and physical activity all decreased. There has been some positive gains, however, that contribute to improved health for PEI residents, such as decreasing rates of hypertension, ischemic heart disease, cancer (lung, colorectal, prostate), hepatitis C, and sexually transmitted and blood-borne infections. Some SDH are also trending in a positive direction, such as personal education level, heavy drinking, and some childhood immunization rates.

KEY ACTIONS

In response to the findings of the *2021 Chief Public Health Officer's Report*, some key areas for action have emerged that would have significant influence on health status and health behaviour trends in PEI. These key areas for action offer a collective way forward towards achieving health equity.

Health in All Policies

The data presented in this report suggests that future action requires a collective response to address the structural determinants of health that are impacting PEI residents' well-being. The health of a population requires action that moves beyond responding to health needs within the context of the healthcare system alone. Since health is influenced by contextual factors outside of the health domain, collective action to improve determinants of health requires collaboration across sectors, good governance, and engagement from all levels of government and community. A Health in All Policies approach should be considered to ensure equity and health lenses are applied to all government decisions, services, programs, and policies.

Data

Imperative to evidence-informed action to address inequities is access to data about the SDH, including robust, good quality socio-demographic data that can be used to monitor (in)equity within the population. Equity-related analyses must be a routine part of assessing population health and evaluating health, social, and economic systems.

Survey-based information about language, race, Indigenous identity, immigration experience, and 2SLGBTQIA+ identity could not be used in the analysis due to the very small number of respondents who selected each minority category. Hence, to have large enough numbers to facilitate meaningful analyses, disaggregated data on equity-related socio-demographic factors need to be routinely captured in administrative databases, and an appropriate governance model that includes representation from affected population must be established to ensure ethical collection and practices.

Indicators that monitor the built environment, impacts of climate change, and other environmental factors over time are lacking and must be developed to foster routine public health surveillance in these areas.

Indicators that pertain to some intermediary determinants of health, like healthy eating and physical activity, must be strengthened. Fruit and vegetable consumption may be insufficient to measure diet quality, so a more meaningful indicator is needed. The way in which physical activity is measured has changed recently, so additional years of data are needed to see trends.

Type of population centre is not an ideal indicator when exploring disparities in geographic location within PEI. Regions of the Island may be a more stratifier appropriate for this purpose.

Targeted Universalism

Targeted universalism is an approach that is used to address population health disparities by setting universal goals and achieving these goals through targeted approaches.⁵⁷ The analyses presented in this report indicate that PEI can improve population health and reduce disparities by applying a targeted universalism approach to the following:

- Mood and anxiety disorders, especially among females;
- Obesity and overweight, especially among those 65 years and older;
- Fruit and vegetable consumption, especially among males;
- Physical inactivity, especially among children and seniors;
- Overall mental health, especially among those younger than 65 years of age;
- Chronic obstructive pulmonary disease;
- Level of community belonging, especially among those ages 18 to 34 years old;
- Diabetes, especially among males;
- Opioid-related overdoses and deaths; and
- Non-medical cannabis use, especially among those younger than 34 years old.

The evidence presented in this report demonstrates that those ages 18 to 34 years old need special public health focus. This age group has higher rates of communicable diseases and fare worse than others on some intermediary determinants of health. It is well known that health practices established in youth carry through to older adulthood,⁵⁸ so early intervention among this group can lead to long-term, sustained population health improvements.

Harm Reduction

Harm reduction is a public health approach that aims to reduce the harms associated with certain behaviours among individuals and groups. Contrary to an abstinence-only approach, a harm reduction approach focuses on health, social, and economic outcomes instead of just risk behaviours. Harm reduction has been successfully applied to sexually transmitted diseases and substance use.^{59,60} Within PEI's context, this important public health approach should be incorporated into interventions to reduce health and social harms related to problematic substance use. Harm reduction is also important for addressing stigma, which is a barrier to accessing care for substance use and sexually transmitted and blood-borne infections.

Upstream Investments in Primary Prevention

In addition to the strong existing evidence linking SDH to population health outcomes, the local trends reported here reaffirm the need to redistribute societal resources to create the conditions for good health for everyone. Decisions, policies, and programs in PEI must be informed by evidence and should ensure that basic needs like housing, food security, transportation, education, and employment opportunities are met. Further, health equity cannot be achieved until all PEI residents feel safe, respected, and included in their communities. Fostering feelings of safety and inclusion means addressing discrimination in all forms and ensuring that our systems are not built in ways that perpetuate and reinforce systemic conscious and unconscious bias. Discrimination and stigma lead to inequities and are significant public health issues.⁶¹

Education and Legislation

Educational initiatives and legislation are cornerstone public health interventions, and these are especially important for health protection efforts. Online delivery improves the accessibility of educational initiatives that help to reduce infractions that are identified during inspection activities that are conducted by Environmental Health within the Chief Public Health Office. As such, there should be online offerings of the Volunteer Food Safety Course and the Tobacco and Electronic Smoking Device Sales Training. There are also plans to develop an online pool operators course. In addition, to address structural barriers to health protection, the Meat and Poultry Inspection Programs (and associated legislation) and the Tobacco and Electronic Smoking Device Sales and Access Act must be reviewed, and if needed, these must be amended to strengthen health protection efforts.

CONCLUDING THOUGHTS

PEI residents are fortunate to have access to a wide variety of programs and services, however, these are insufficient. On their own programs and services alone cannot influence well-being if the conditions in which Islanders live, work, learn, and play are unhealthy. To see improvements in key health indicators and SDH, we must invest in our social and physical environments.

PEI's healthcare system is burdened by increasing demands for acute services, creating undue pressure on current resources and the population. Redirecting resources to other sectors of society that focus on upstream, preventative responses is needed to address the root causes of injury and illness, while improving health outcomes in PEI by preventing disease, and promoting and protecting health.

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