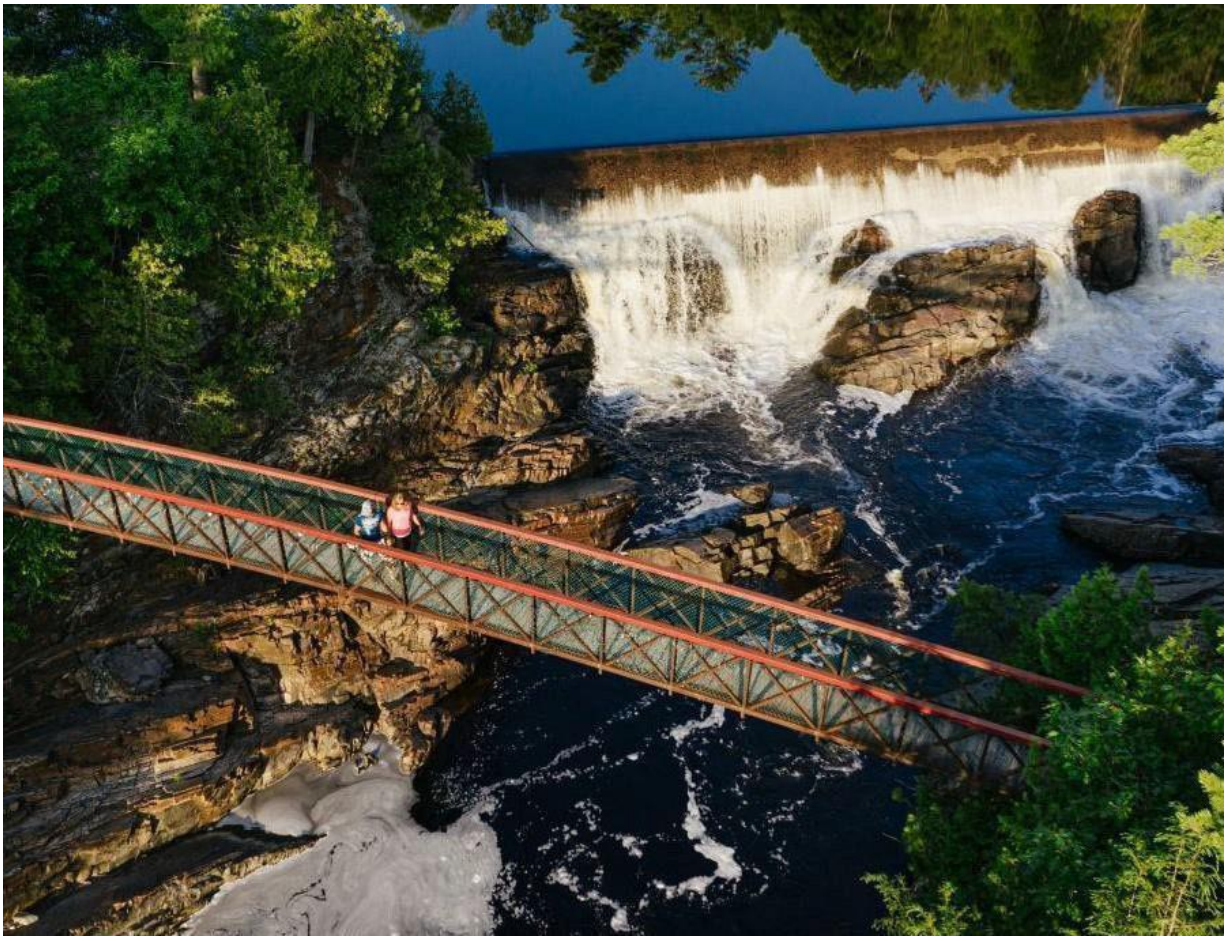
A BRIEF PORTRAIT OF THE POPULATION'S HEALTH

PONTIAC LOCAL SERVICE NETWORK (RLS)

PRE-PANDEMIC PERIOD



Source : Chutes Coulonge Park

Public Health Department

March 2023

Centre intégré de santé et de services sociaux de l'Outaouais

Québec

PUBLICATION

Legal deposit, Bibliothèque et Archives nationales du Québec, 2023.
ISBN 978-2-550-97256-3 (PDF)
In this document, the male or female gender is used without intending to discriminate and solely to simplify the text.

Citation:

PUBLIC HEALTH DEPARTMENT. Brief portrait of population's health. Pontiac local service network (RLS). Pre- pandemic period. Centre intégré de santé et de services sociaux de l'Outaouais. Outaouais, 2023.

The Public health department acknowledges that it is situated on the unceded traditional territory of the Anishinabek Algonquin Nation

ACKNOWLEDGEMENTS

We would like to sincerely thank all the people who contributed to the preparation of this portrait of health. We would also like to acknowledge the collaboration of Ms. Nathalie Gravel, Coordinator and Geomatics Analyst, from the *Institut national de santé publique du Québec*, for her participation in the mapping efforts.

COORDINATION

Jeanne Françoise Kayibanda, Senior Epidemiologist Advisor

DATA VALIDATION AND ANALYSIS

Manon Delisle, Research Assistant, Data Validation,
Jacques Marleau, Planning, Programming and Research Officer

WRITING

Jeanne Françoise Kayibanda, Senior Epidemiologist Advisor
Camille Paquette, Medical Specialist in Public Health and Preventive Medicine

COLLABORATION

Anne-Martine Lafaille, Senior Advisor, specializing in Public Health Programming
Marcella Kafka, Medical Specialist in Public Health and Preventive Medicine

MAPPING

Philippe Garvie, Planning, Programming and Research Officer
Marc-Antoine Tutt-Guérette, Planning, Programming and Research Officer

PROOFREADING

Sylvie Lafontaine, Deputy Director of Public Health
Brigitte Pinard, Medical Specialist in Public Health and Preventive Medicine and
Acting Director of Public Health

INFOGRAPHICS AND EDITING

Suzanne Gagnon, Administrative Assistant
Manon Delisle, Research Assistant
Stéphanie Dicaire, Planning, Programming and Research Officer

LANGUAGE REVIEW AND LAYOUT

Manon Delisle, Research Assistant
Karine Lafrenière, Administrative Technician
Francine Perrault, Administrative Assistant

TABLE OF CONTENTS

1. INTRODUCTION

Public health aims to maintain and improve the health[1] of the population and reduce social inequalities in health. To do this, it is important to develop knowledge about the population and its health needs. Activities for monitoring the population's health status and its determinants provide information that enables communities, partners in the health and social services network, and cross-sectoral partners to better understand the realities in the field and the various needs. This understanding helps foster upstream action to prevent health problems.

The purpose of this portrait of the population is to highlight the key elements regarding the population's health status and its determinants in the local service network (RLS[2]) territory of the Pontiac. It also aims to determine whether this RLS differs from the Outaouais region in certain aspects. It is important to know that the data presented are from the period ranging from 2008 to 2020 and originate from population health surveys and administrative health datasets. The estimation and projection data cover the period from 2019 to 2036. As such, it should be noted that this portrait does not provide information about the Covid-19 pandemic's impacts on the population's health status and its determinants. However, it does shed light on the situation before the health crisis, which began in 2020.

It should also be noted that some indicators are available only at the regional level, i.e., for the Outaouais region as a whole. This is the case for indicators about chronic diseases presented in section 2.3 (Figure 12) and the adolescent population indicators presented in section 3.2 (Figures 20, 21, 22, and 23) of this document. These results will therefore be compared with the Quebec provincial estimates. Another aspect to keep in mind when reading the document is the region's territorial division. Within the health and social services network, the region is divided into five RLS. From a municipal perspective, it is divided into four regional county municipalities (RCMs) and one city. However, these two divisions are not identical. The territorial division concerned by this portrait is the one of the health and social services network.

This document first presents indicators of health status and its determinants for the population as a whole. These indicators are then presented by age group: toddlers and youth, teenagers, adults, and seniors. The mains findings are discussed to help the reader better understand the health needs of the population in the Pontiac RLS. Finally, the data limitations are presented as well as the list of data sources used and the definitions of the indicators presented in this portrait of health.

[1] Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (World Health Organization). Preamble to the World Health Organization Constitution adopted by the international health conference held in New York from 19 June to 22 July 1946, signed on 22 July 1946 by the representative of 61 states (Official Record of the Word Health Organization, n°. 2, p. 100) and entered into force on 7 April 1948

[2] Réseau local de services

Methodological notes

- The percentages given in the "Findings" paragraphs below each figure have been rounded to the nearest whole number to facilitate reading.
- Except for indicators from the census, statistical tests were used to compare the results between geographic areas.
- The use of the term "significantly" or the symbols (+) and (-) indicates a statistically significant difference at the 5% threshold between estimates for the Pontiac RLS and the Outaouais region. For data available only at the regional level, this instead indicates a statistically significant difference between estimates for the Outaouais region and the province of Quebec.

Map 1: Map illustrating the geographic location of the local service networks (RLSs) in the Outaouais health region

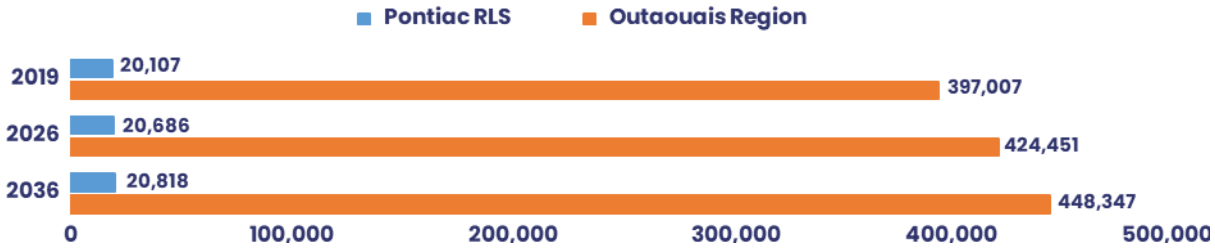
2. HEALTH STATUS AND ITS DETERMINANTS

This section presents results for indicators pertaining to population structure and dynamics for the Pontiac RLS. For example, population estimates and growth, immigration, language spoken at home and income. Also, this section presents the population health indicators such as hospitalization rate, life expectancy and mortality.

2.1 DEMOGRAPHICS

Figure 1: Population estimates and projections

Source: 2022 Population estimates and projections

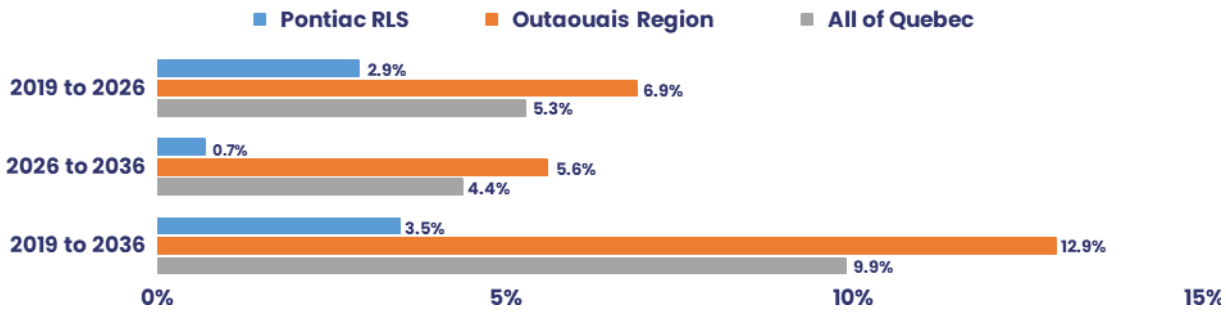


Findings

The population of the Pontiac RLS consisted of approximately 20,100 people in 2019. It accounted for 5% of the population in the Outaouais region. By 2036, the projected population is expected to reach approximately 20,800, an increase of almost 700 people. Pontiac RLS's population will remain stable relative to the region as a whole representing nearly 5% of the Outaouais's population.

Figure 2: Expected population growth 2019-2036

Source: 2022 Population estimates and projections

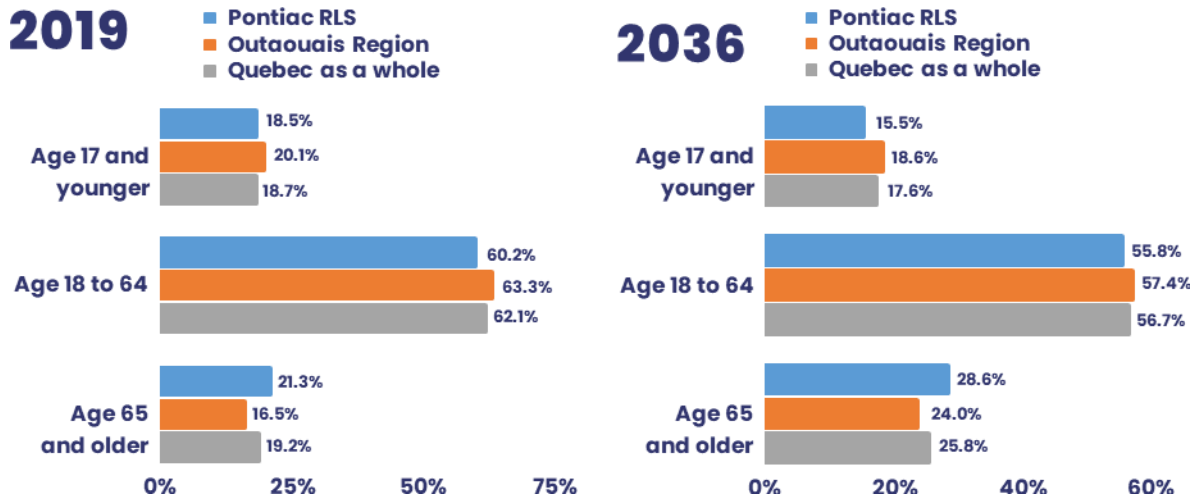


Findings

The data indicate that the population of the Pontiac RLS will increase slightly between 2019 and 2036. This increase is lower than expected for the population of the Outaouais region (13%) and for that of Quebec as a whole (10%).

Figure 3: Population estimates and projections by age group

Source: 2022 Population estimates and projections

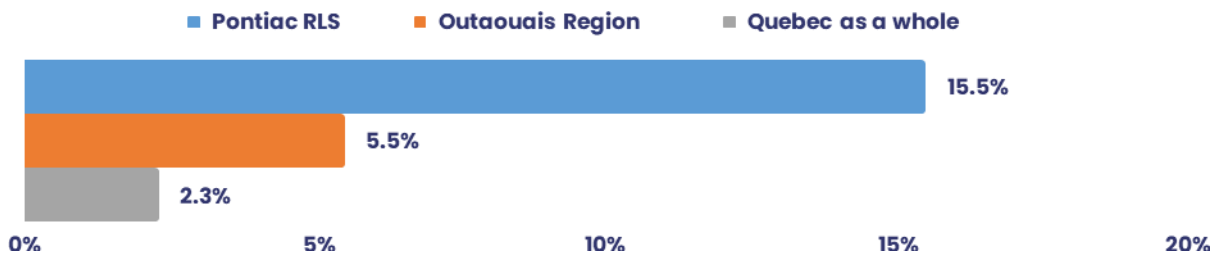


Findings

The proportion of people aged 65 and older in the Pontiac RLS in 2019 (21%) was greater than that in the Outaouais region (17%). By 2036, this will still be the case.

Figure 4: Percentage of the population who identifies with Indigenous peoples of Canada

Source: 2016 Census

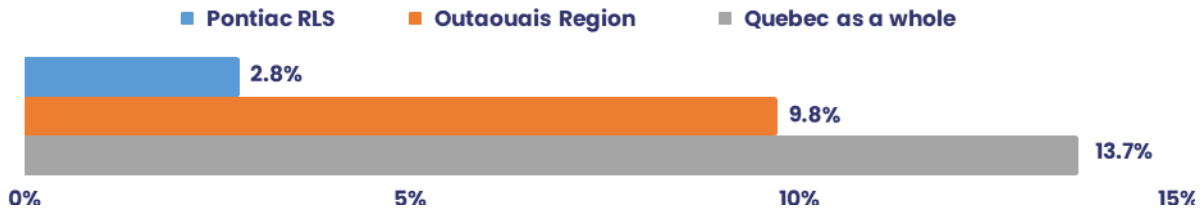


Findings

In the Pontiac RLS, nearly 16% of the population responded that they identify with Indigenous peoples of Canada (First Nations, Métis or Inuit). This percentage was higher as compared to the Outaouais region (6%) and to Quebec as a whole (2%) in 2016.

Figure 5: Percentage of Immigrants *

Source: 2016 Census



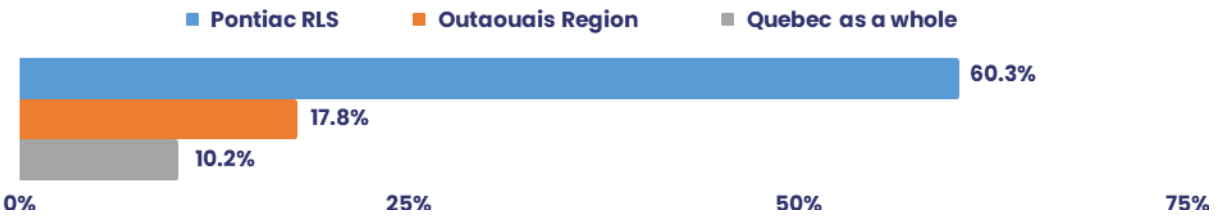
***In the 2016 Census of Population, the immigrant population includes immigrants who arrived in Canada on or before May 10, 2016 (1).**

Findings

In 2016, immigrants represented a lower proportion of the Pontiac RLS population as compared to the Outaouais region. It was about three times lower than that of the Outaouais region and five times lower than that of Quebec as a whole.

Figure 6: Percentage of the population who speak English most often at home

Source: 2016 Census



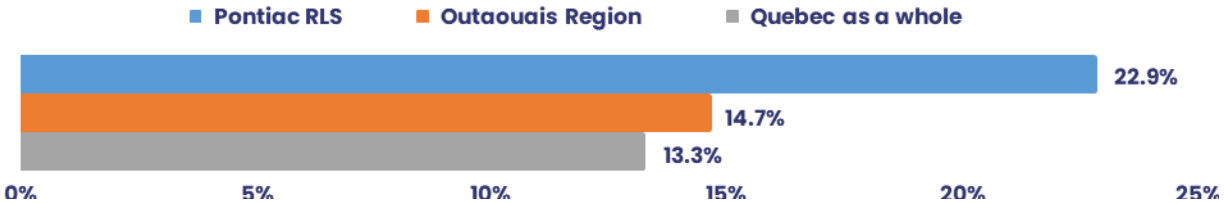
Findings

In 2016, 60% of the Pontiac RLS population reported speaking English most often at home. This percentage was higher as compared to the Outaouais region (18%).

2.2 SOCIO-ECONOMIC INDICATORS

Figure 7: Percentage of the population aged 25 to 64 without a high school diploma

Source: 2016 Census

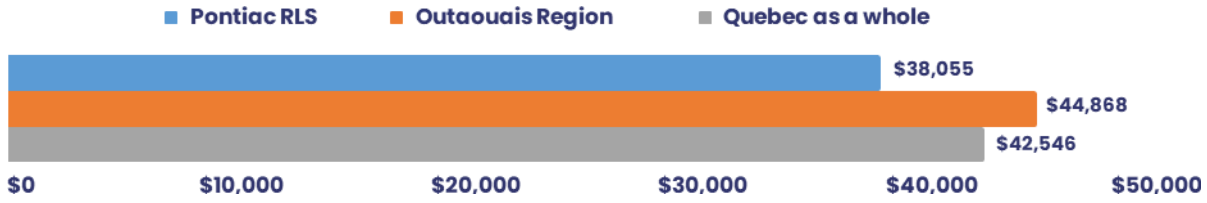


Findings

In 2016, the proportion of the Pontiac RLS population aged 25 to 64 without a high school diploma (23%) was higher than that of the Outaouais region (15%).

Figure 8: Average pre-tax income*

Source: 2016 Census



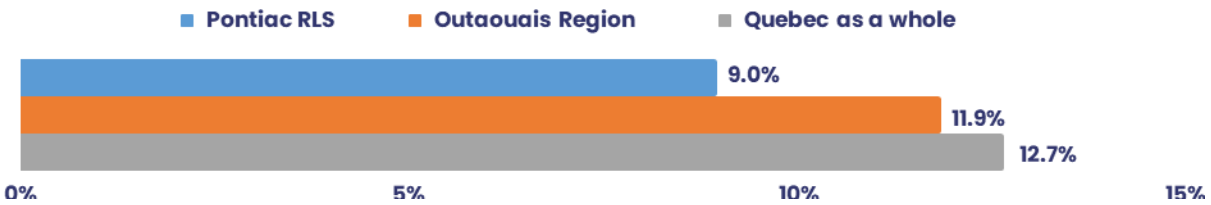
*** Average pre-tax income:** Is the total income (before tax) received by people aged 15 and over from all sources during the calendar year preceding the census divided by the number of all individuals who declared income during the calendar year preceding the census.

Findings

In 2015, the average total income before taxes was lower in the Pontiac RLS compared to the Outaouais region as a whole, with a gap of roughly $6,800.

Figure 9: Percentage of the population living below the low-income cut-off, before-tax*

Source: 2016 Census



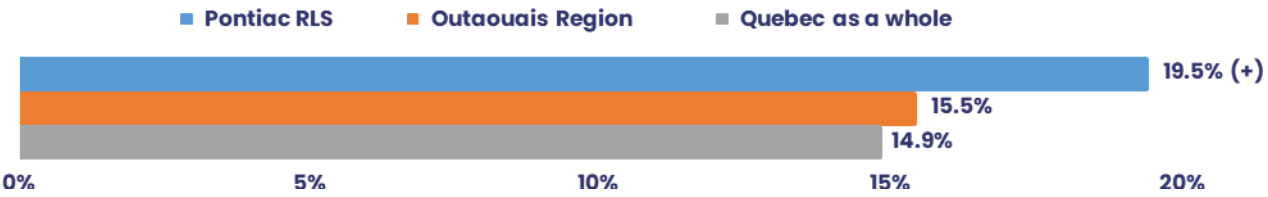
***Low-income cut-offs, before-tax:** Low-income cut-offs before-tax are defined as income levels at which families or persons not in economic families are likely to spend 20% more than the average of their before-tax income on food, shelter and clothing.

Findings

The percentage of the population living below the low-income cut-off (before-tax) in 2015 in the Pontiac RLS (9%) was lower compared to the Outaouais as a whole (12%).

Figure 10: Percentage of the population who perceive themselves as poor or very poor

Source: Québec Population Health Survey (QPHS), 2014-2015

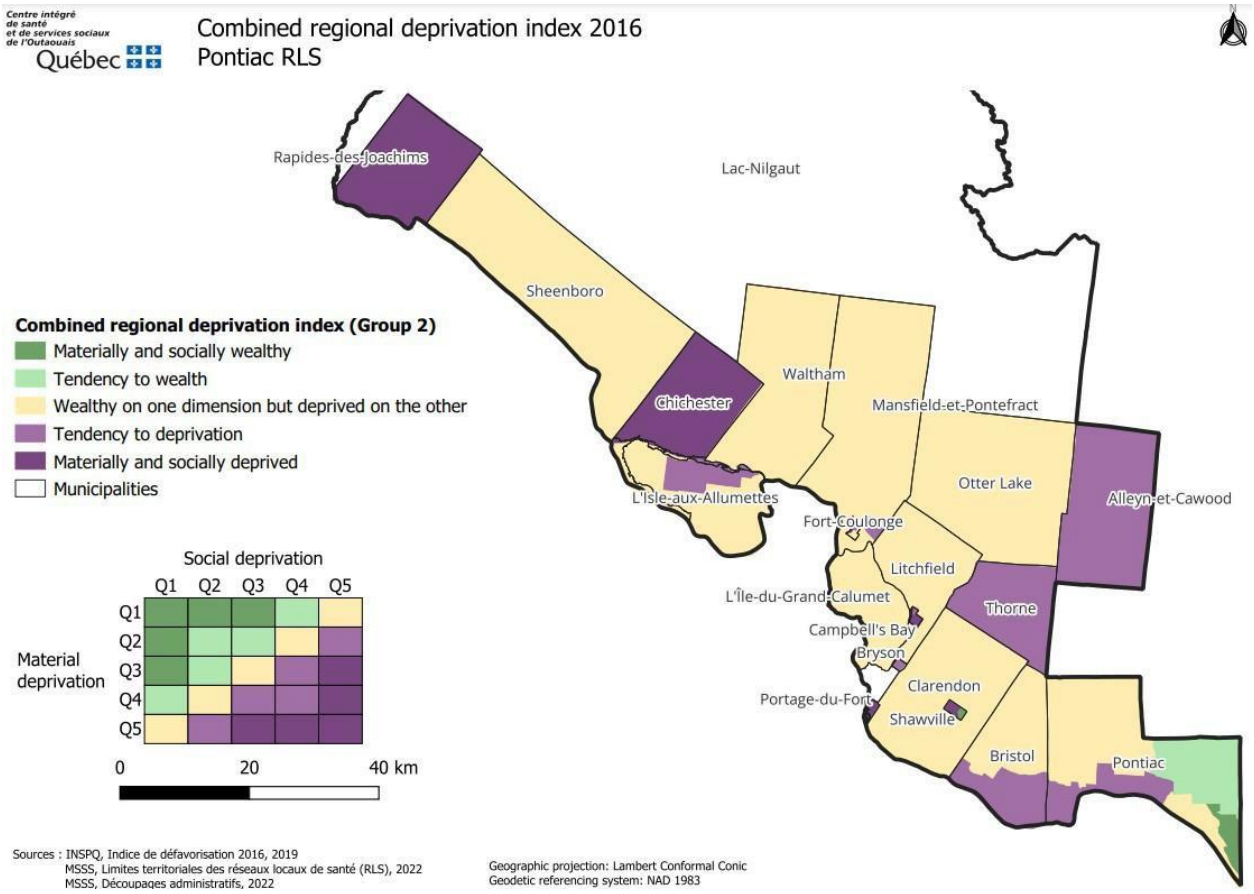


Findings

In 2014-2015, the proportion of the population who perceive themselves as poor or very poor was significantly higher for the Pontiac RLS than for the Outaouais region as a whole.

Map 2: Map showing the change in the combined Material and Social Deprivation Index in 2016

The Material and Social Deprivation Index makes it possible to measure and illustrate the socio-economic situation of a community. Overall, the material dimension reflects deprivation of the goods and conveniences of daily life of the people living in an area due to low income related to the lack of a job or high school diploma. The social dimension refers to the vulnerability of the social network, related to living alone, being separated, divorced, widowed or belonging to a single-parent family.



Findings

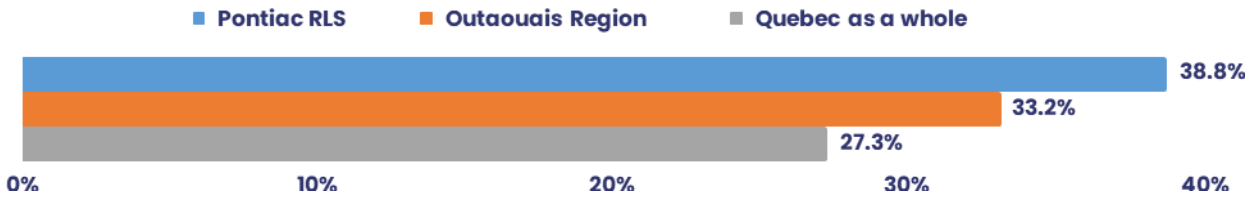
The map shows social and economic disparities between the various sectors of the Pontiac RLS. Three territorial realities are delineated:

- A large part of this RLS is characterized by wealth in one dimension and deprivation in the other dimension;
- One part in the eastern area of the territory tends toward deprivation;
- Finally, we see that there is a small portion to the south of the territory that is favoured in both dimensions.

2.3 STATE OF HEALTH

Figure 11: Percentage of the population with activity limitations *

Source: 2016 Census



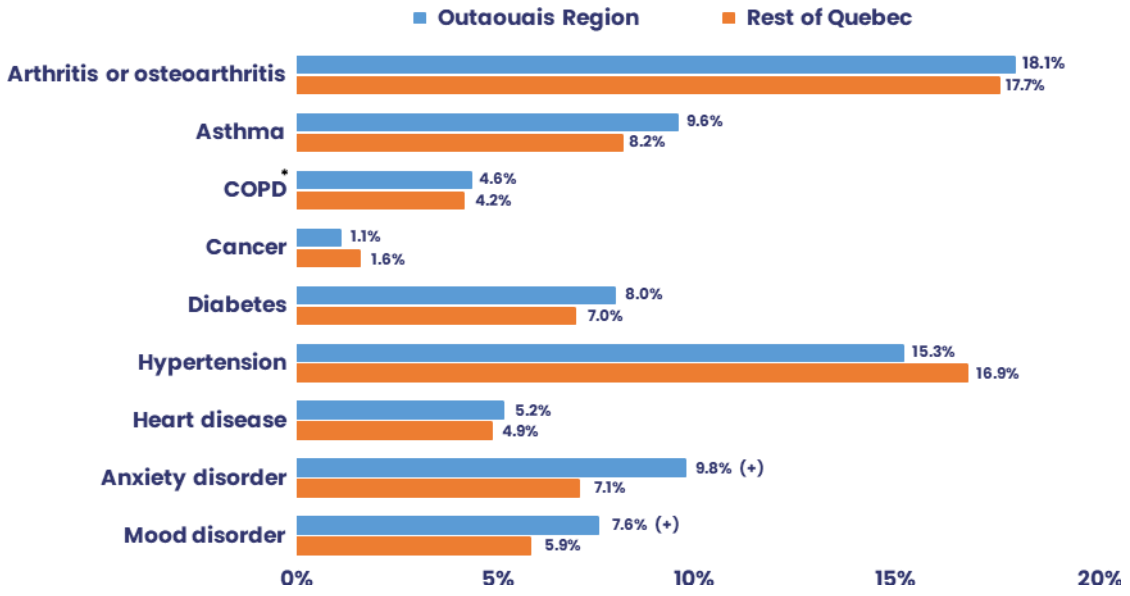
*** Activity limitations are difficulties in doing certain activities because of physical, mental, or other health-related conditions or problems (e.g., vision, hearing, dexterity, etc.) (2).**

Findings

The 2016 census data indicate that nearly 40% of the population living in the Pontiac RLS had an activity limitation. This is higher than that of the Outaouais region as a whole, which is about 33%.

Figure 12: Percentage of the population who reported having a chronic disease diagnosis

Source: Canadian Community Health Survey (CCHS), 2015 to 2018



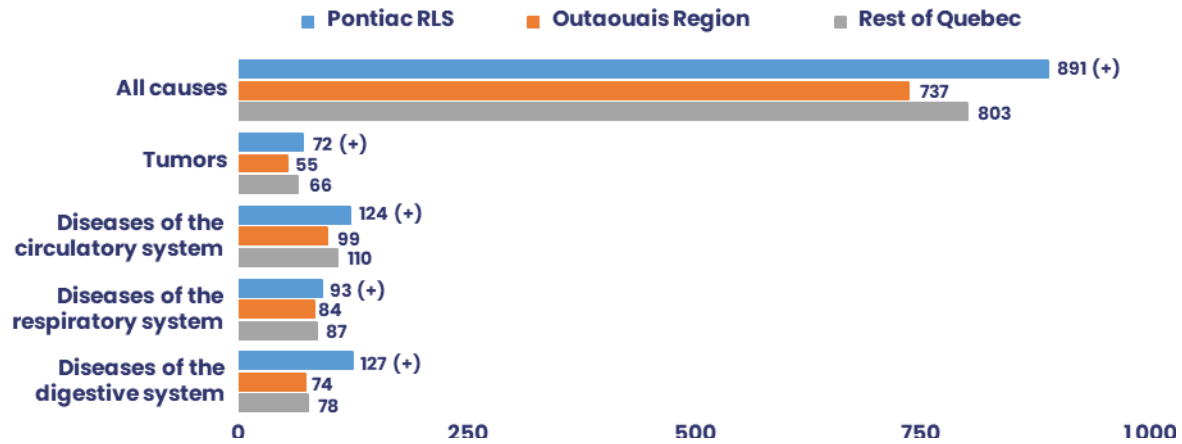
*** Chronic obstructive pulmonary disease (COPD)**

Findings

According to the data from the 2015-2018 CCHS, the percentage of the population reporting an anxiety disorder and the percentage reporting a mood disorder was significantly higher in the Outaouais region than in the rest of Quebec.

Figure 13: Adjusted hospitalization rates for short-term physical care (rate per 10,000)

Source: Quebec Hospital inpatient and day surgery database (MED-ÉCHO), 2014-2015 to 2018-2019

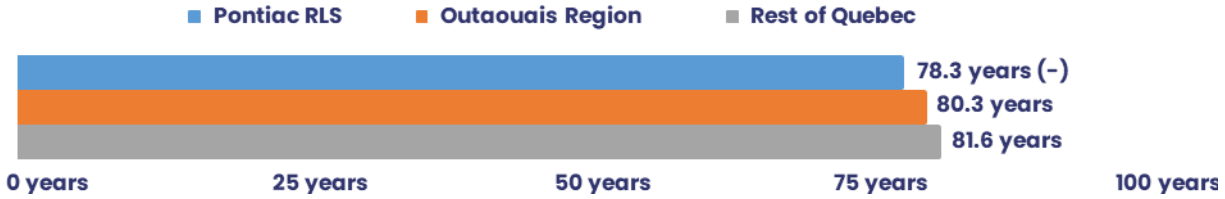


Findings

For the 2014-2019 period, the age-adjusted "all-causes" hospitalization rate was significantly higher in the Pontiac RLS compared with the Outaouais region and the rest of Quebec. The same finding is noted for the following specific causes of hospitalization: tumors, diseases of the circulatory, respiratory, or digestive system.

Figure 14: Life expectancy at birth

Source: Quebec vital events registry, 2008 to 2012

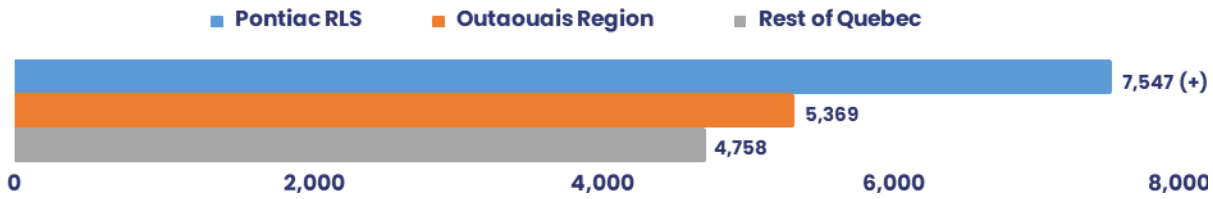


Findings

Life expectancy at birth for the Pontiac RLS population was 78.3 years for the period from 2008 to 2012. It was significantly lower as compared to the Outaouais population as a whole (80.3 years) and to the population in the rest of Quebec (81.6 years).

Figure 15: Adjusted rates for potential years of life lost at age 75 (rate per 100,000)

Source: Quebec vital events registry, 2008 to 2012

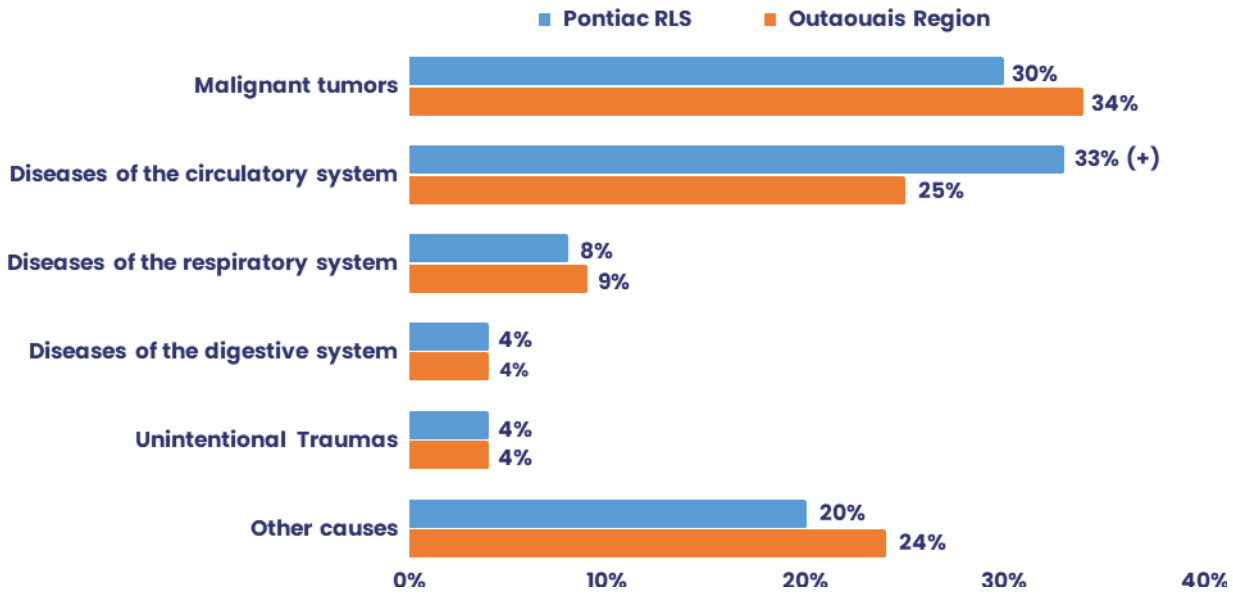


Findings

Compared with the population of the Outaouais region, the number of potential years of life lost for the Pontiac RLS population was significantly higher at roughly 7,500 per 100,000 persons for the period from 2008 to 2012. The estimate was about 5,370 per 100,000 population for the Outaouais region.

Figure 16: Distribution of the percentage of deaths by cause

Source: Quebec vital events registry, 2008 to 2012



Findings

The distribution of causes of death for the period from 2008 to 2012 was relatively similar between the Pontiac RLS to that of the Outaouais region except for the proportion of death attributed to the circulatory diseases, which was significantly higher.

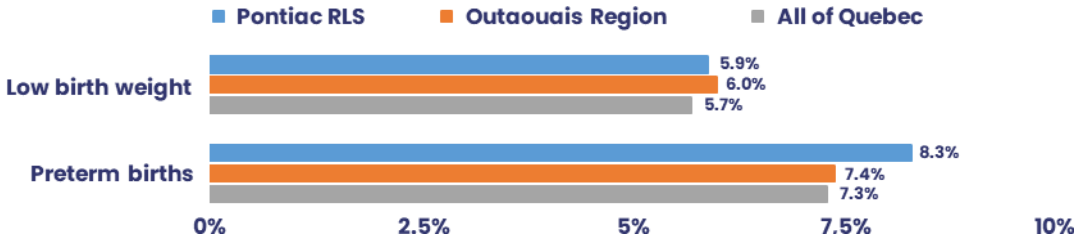
3. HEALTH STATUS AND ITS DETERMINANTS BY AGE GROUP

In this section, the data presented describe various characteristics of the Pontiac RLS population by age group with a focus on specific areas of interest according to life stage. For example, the health indicators for toddlers reflect their overall development; the focus in adolescents is on their progress and well-being; whereas among seniors, the selected indicators are meant to provide insight into some of the health challenges with advancing age.

3.1 TODDLERS

Figure 17: Percentage of low birth weight and preterm births

Source: Quebec vital events registry, 2008 to 2012

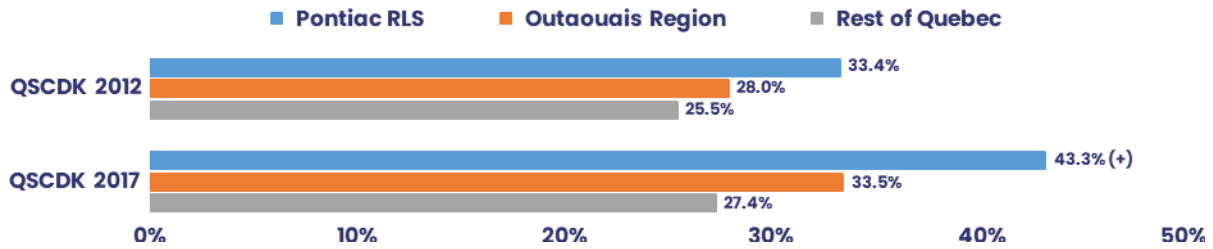


Findings

For the period from 2008 to 2012, among live births, the proportion of low birth weight was essentially similar in the Pontiac RLS, the Outaouais region and Quebec (6%). The proportion of preterm births was slightly higher in the Pontiac RLS (8%) compared with the Outaouais region as a whole (7%).

Figure 18: Percentage of children vulnerable in at least one of the five domains of development*

Source: Québec Survey of Child Development in Kindergarten (QSCDK), 2012 and 2017



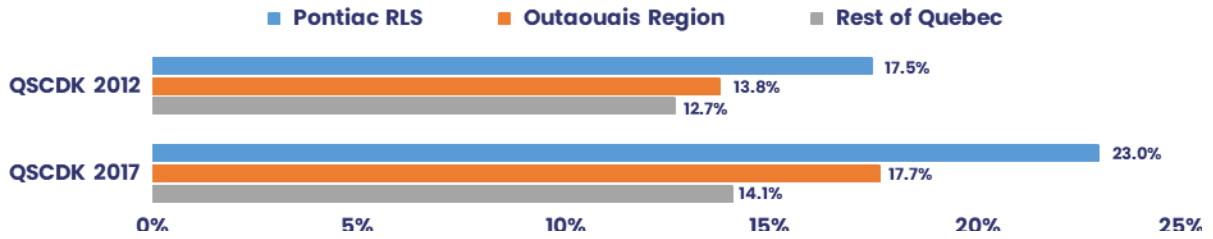
*** The five areas of child development that were measured by the QSCDK are: 1) Physical health and well-being; 2) Social skills; 3) Emotional maturity; 4) Cognitive and language development, and 5) Communication skills and general knowledge.**

Findings

In 2012, the percentage of children vulnerable in at least one of the five domains of development in the Pontiac RLS was 33%. This percentage was 43% in 2017 and it was significantly different from that observed over the region level (34%).

Figure 19: Percentage of children vulnerable in at least two of the five domains of development

Source: Québec Survey of Child Development in Kindergarten (QSCDK), 2012 and 2017



Findings

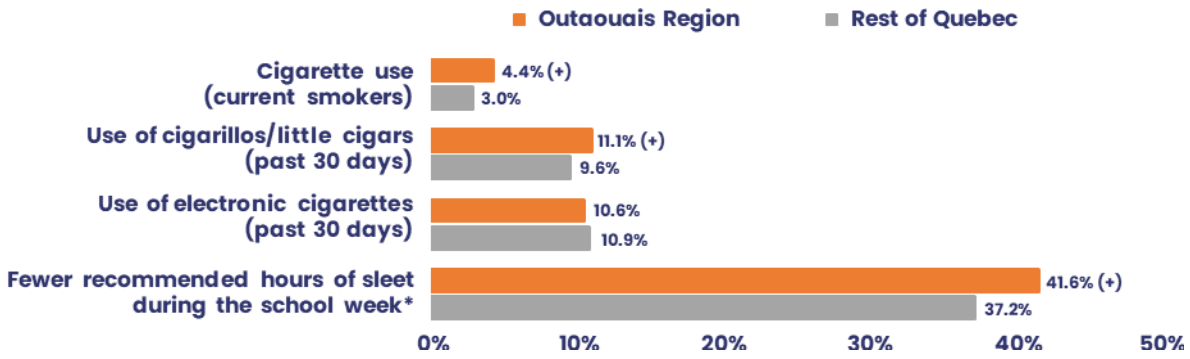
Nearly 18% of children in the Pontiac RLS were identified as vulnerable in at least two domains of development in 2012. This is higher than what was observed in the Outaouais region and the rest of Quebec. In 2017, the percentage observed in this RLS rose to 23%.

3.2 TEENAGERS

This section presents data from the 2016-2017 Québec Health Survey of High School Students, which does not provide data at the RLS level. Therefore, the results presented in figures 20 to 23 apply only to the Outaouais region as a whole and to the rest of Quebec for comparison purposes. Furthermore, since this was a survey conducted among high school students, it is possible that not all respondents were aged 12 to 17 at the time of their participation.

Figure 20: Percentage of high school students adopting certain lifestyle habits

Source: Québec Health Survey of High School Students (QHSHSS), 2016-2017.



***It is recommended that young people aged 6 to 13 sleep between 9 and 11 hours, that teenagers aged 14 to 17 sleep between 8 and 10 hours, and that young adults aged 18 to 25 sleep between 7 and 9 hours (Infocentre de santé publique, 2018).**

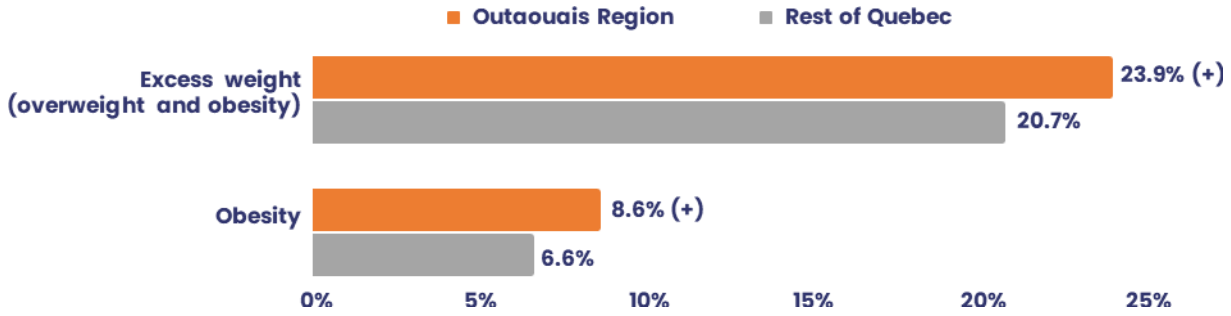
Findings

The results from the 2016-2017 QHSHSS showed that the proportion of high school students who use cigarettes (current smokers) or cigarillos/little cigars (in the last 30 days) was significantly higher in the Outaouais region than in the rest of Quebec. Nearly 11% of high school students in the Outaouais region reported having previously used an electronic cigarette. This is similar to that of the rest of Quebec.

About 42% did not sleep the recommended number of hours compared with 37% for the rest of Quebec. The difference between Outaouais and the rest of Quebec was statistically significant.

Figure 21: Percentage of high school students by weight status

Source: Québec Health Survey of High School Students (QHSHSS), 2016-2017

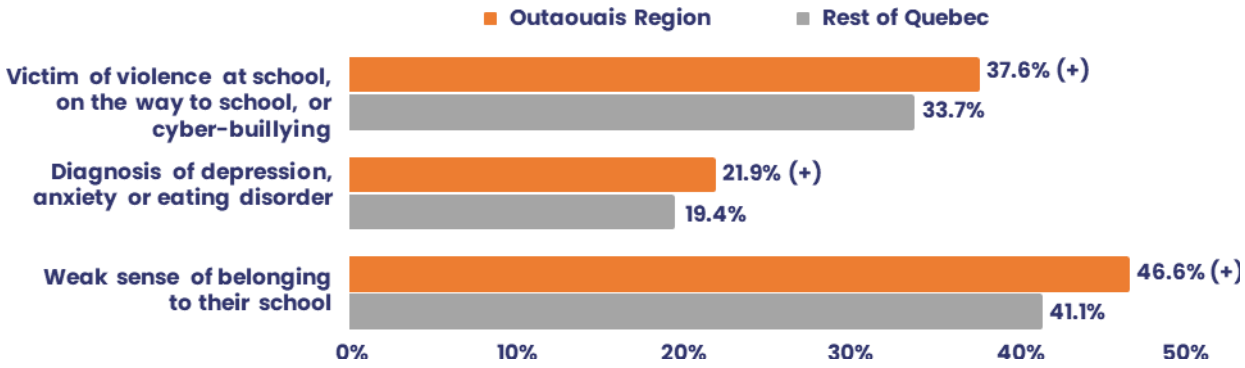


Findings

Nearly 24% of high school students in the Outaouais region had excess weight in 2016-2017. This percentage was significantly higher than that seen in the rest of Quebec (21%). The proportion of high school in the obesity range was also significantly higher in the Outaouais region compared with the rest of the province.

Figure 22: Percentage of high school students by certain psychosocial indicators

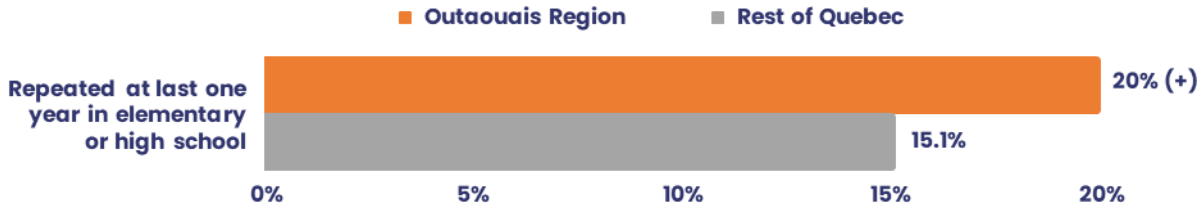
Source: Québec Health Survey of High School Students (QHSHSS), 2016-2017



Findings

According to the results of the 2016-2017 QHSHSS, a significantly higher proportion of high school students in the Outaouais region reported having been a victim of violence at school, on the way to school, or cyber-bullying (38%) compared with high school students in the rest of Quebec (34%). The survey results also reveal that the proportion of high school students who reported having a medical diagnosis of depression, anxiety or an eating disorder was significantly higher in the Outaouais region (22%) than in the rest of Quebec (19%). In addition, more high school students in the Outaouais region reported having a weak sense of belonging to their school and this was significant as compared to rest of Quebec.

Figure 23: Percentage of high school students by academic achievement
Source: Québec Health Survey of High School Students (QHSHSS), 2016-2017

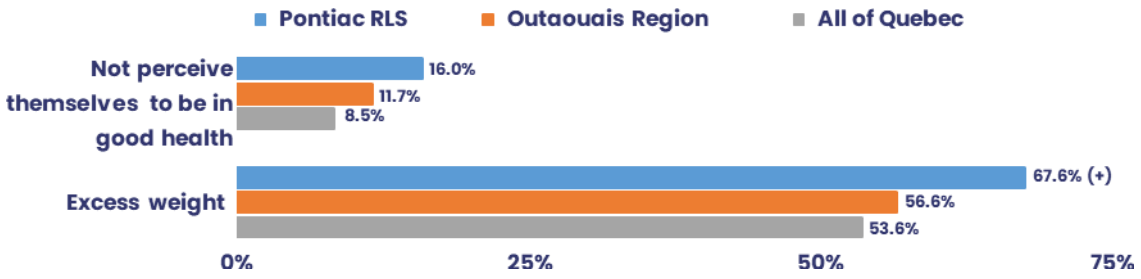


Findings

Compared to the rest of Quebec (15%), the percentage of high school students who reported having repeated at least one year in elementary school or high school was significantly higher in the Outaouais region (20%).

3.3 ADULTS

Figure 24: Percentage of adults aged 18 to 64 by certain health indicators
Source: Québec Population Health Survey (QPHS), 2014-2015

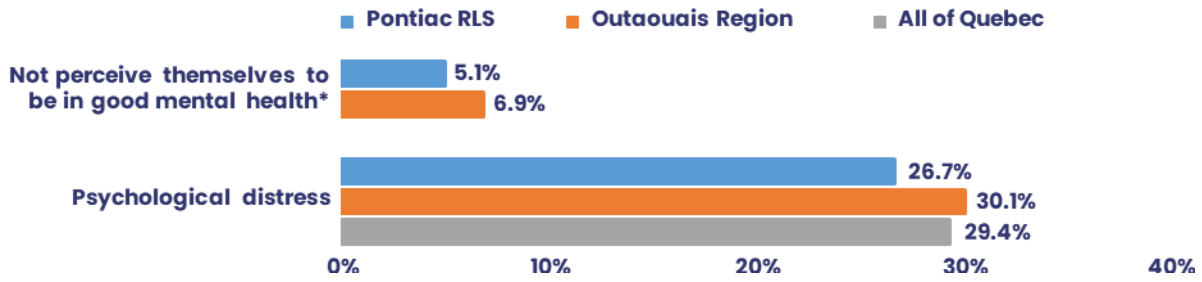


Findings

In 2014-2015, the proportion of adults who perceived themselves as being in lesser health was significantly higher in the Pontiac RLS than in the Outaouais region as a whole. The survey results also reveal that the proportion of Pontiac RLS residents who had excess weight was significantly higher than that seen in the Outaouais region as a whole.

Figure 25: Percentage of adults aged 18 to 64 by certain mental health indicators

Sources: 2013 Outaouais Regional Health and Social Survey (ORHSS), and the Québec Population Health Survey (QPHS), 2014-2015



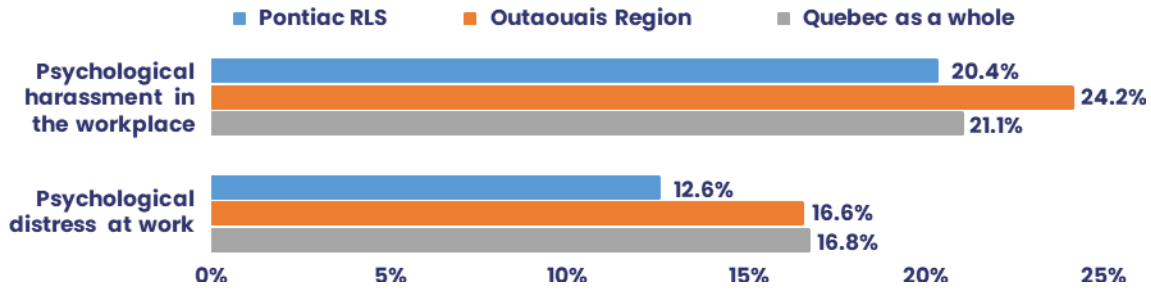
** ORHSS is a regional survey. Therefore, there are a no data available for Quebec.*

Findings

In the Pontiac RLS, 5% of adults did not perceive themselves to be in good mental health and nearly 27% reported being in psychological distress at the time of the surveys. These proportions are lower than those observed in the Outaouais region as a whole.

Figure 26: Percentage of workers experiencing psychological distress and exposed to psychological harassment

Source: Québec Population Health Survey (QPHS), 2014-2015

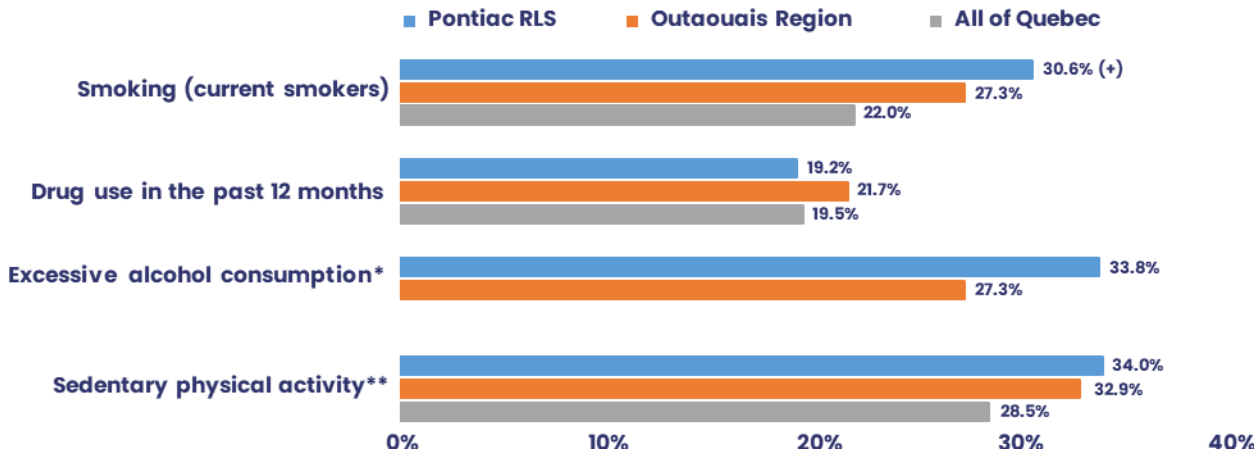


Findings

In 2014-2015, 20% of workers living in the Pontiac RLS reported having been a victim of psychological harassment in their workplace over the past year. For the Outaouais region, the percentage was higher and was about 24%. In addition, about 13% of workers in the Pontiac RLS reported experiencing psychological distress at their workplace. This percentage was lower compared to the Outaouais region as a whole.

Figure 27: Percentage of adults aged 18 to 64 adopting certain lifestyle habits

Sources: Outaouais Regional Health and Social Survey (ORHSS), 2013 and the Québec Population Health Survey (QPHS), 2014-2015



*** ORHSS is a regional survey. Therefore, there is no data available for Quebec.**

**** Sedentary physical activity means engaging in physical activity less than once a week over the last four weeks, namely: no activity or not doing any physical activity every week (3).**

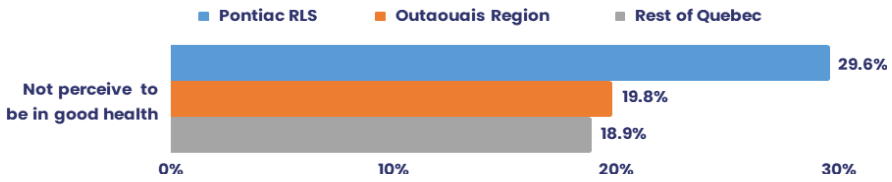
Findings

In 2014-2015, the proportion of smokers in the Pontiac RLS was significantly higher than that observed in the Outaouais region as a whole. The proportion of residents who reported using drugs in the past 12 months was lower than that observed in the Outaouais region as a whole. Also, the proportion of people whose alcohol consumption was excessive was higher than that seen in the Outaouais region in 2013. The proportion of people who reported being sedentary was higher in the Pontiac RLS compared with the Outaouais region as a whole.

3.4 SENIORS

Figure 28: Percentage of seniors (aged 65 years and older) who do not perceive themselves as being in good health

Québec Population Health Survey (QPHS), 2014-2015

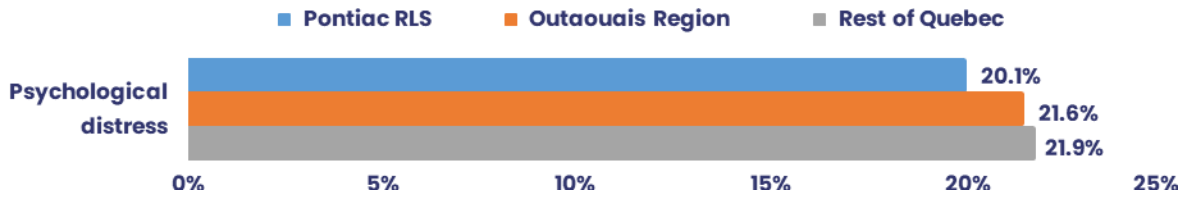


Findings

The proportion of seniors (aged 65 years and older) who reported not perceive to be in good health was higher in the Pontiac RLS in 2014-2015 compared with the Outaouais region as a whole.

Figure 29: Percentage of seniors (aged 65 years and older) experiencing psychological distress

Source: Québec Population Health Survey (QPHS), 2014-2015

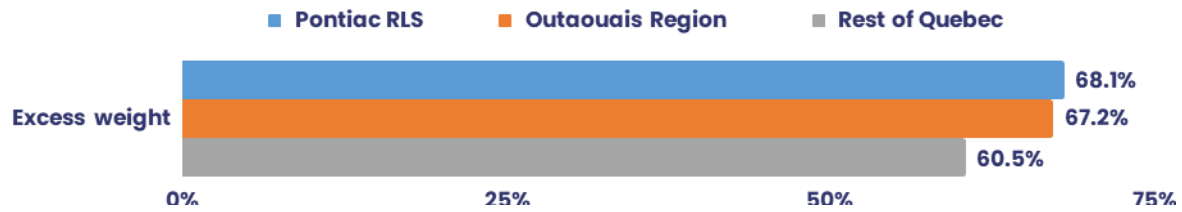


Findings

In 2014-2015, 20% of seniors (aged 65 years and older) in the Pontiac RLS reported experiencing psychological distress. This percentage was slightly lower than that observed at the regional level.

Figure 30: Percentage of seniors (aged 65 years and older) who have excess weight

Source: Québec Population Health Survey (QPHS), 2014-2015

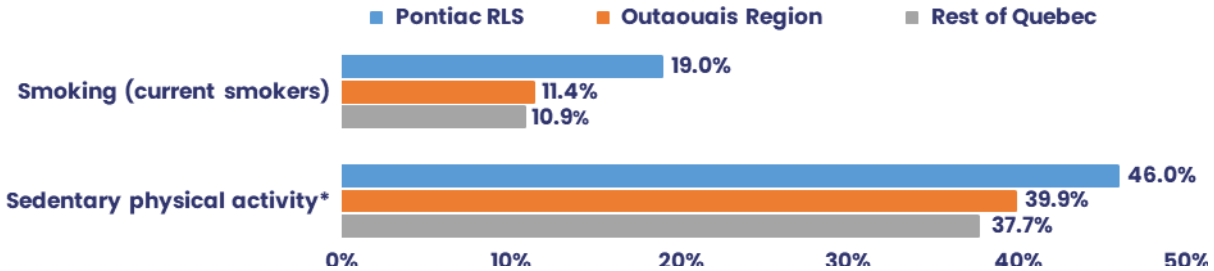


Findings

68% of seniors in the Pontiac RLS reported having excess weight in 2014-2015. This percentage was almost similar to that observed at the regional level.

Figure 31: Percentage of seniors (aged 65 years and older) adopting certain lifestyle habits

Source: Québec Population Health Survey (QPHS), 2014-2015



*** The term sedentary means engaging in physical activity less than once a week over the last four weeks, namely: no activity or not doing any physical activity every week (3).**

Findings

The 2014-2015 data show that the proportion of smokers and that of seniors who reported a level of physical activity defined as sedentary was higher in the Pontiac RLS compared to the Outaouais region as a whole.

4. DISCUSSION AND CONCLUSION

The purpose of this portrait of the population was to outline the health status and its determinants for the population of the Pontiac RLS for the pre-pandemic period. The indicators presented provide an overview of the demographic, socio-economic, and health characteristics of the people in that area. The main takeaway points for the Pontiac RLS are that it has:

- An older population than that of the Outaouais region as a whole, but one that will age at the same rate as the latter;
- A predominantly Anglophone community, which greatly differentiates it from the other RLSs in the Outaouais region;
- An area with a high proportion of adults without a high school diploma and facing particularly difficult economic conditions;
- A mapping depicting some areas that are more disadvantaged relative to others;
- A community experiencing greater premature mortality than the Outaouais region as a whole;
- Children who are more vulnerable in their development, both at birth and in their first years of life;
- Adults who perceive themselves as having better mental health than those of the Outaouais region as a whole, but who face a greater number of activity limitations;
- Lifestyle habits, including smoking, excessive alcohol consumption, and sedentariness, which can be modified in order to improve the health of the adults in the RLS and their perception of their own health.

In addition, for the region as a whole, we can conclude that actions must continue in order to reduce the burden attributable to chronic disease. It is also necessary to better support schools in order to increase the sense of belonging among children and youth and create settings that foster positive mental health.

This portrait, as well as supporting health and social services planning, should help guide cross-sectoral and community actions which aim to have a positive effect on the determinants of health. The priorities for action in the coming years should focus on promoting healthy aging of our seniors, reducing the vulnerability of children, improving food security, increasing access to safe, affordable housing, and adapting to climate change. These actions will have to be carried out in a concerted fashion by various partners from all sectors of society. Such a collaborative approach is necessary for improving living conditions in a lasting way, promoting health, and reducing inequalities in the health of our communities.

5. DATA LIMITITATIONS

The analyses conducted as part of this portrait of health did not examine the indicators at a finer territorial scale than the RLS (e.g. census dissemination areas). Therefore, there may be gaps in health status or health determinants between some areas of the RLS that could not be identified. In addition, some analyses were performed only at the regional level when local data were not available.

It should be noted that these analyses are descriptive and do not confirm associations among the indicators examined.

It should also be noted that the data from population-based surveys can underestimate or overestimate the actual frequency of what it aims to measure. In fact, the data are produced from self-reported information from the survey respondents. The scientific literature indicates that responses to questions pertaining to health status, behaviour, or lifestyle habits are influenced by aspects of social desirability (4-6).

It is also important to mention that some data are more than 10 years old due to the incompleteness of some medical administrative registries. This is especially the case for the Quebec vital events registry, which includes births and deaths. The geographic situation of the Outaouais region is such that a number of births and deaths of the region's residents occur in Ontario. In order to present valid and reliable data, it is imperative to use only those data from years when the Quebec registry is complete (i.e. when the Outaouais residents vital events data were completely transferred from the Ontario registry to the Quebec registry). At the time of producing this health portrait, the completed vital events data of the Outaouais residents were available in the Quebec registry for the year 2012.

Moreover, at the time of writing this portrait, the results of the 2021 Census which document the structures of the health and social services network as well as data of the population surveys carried out since the start of the COVID-19 pandemic have yet to be released. Consequently, it was impossible to present data beyond 2020 except for the estimation and projection data which cover the period from 2019 to 2036.

Lastly, population surveys often exclude certain groups of the population, such as people living in institutional settings (e.g., Residential and long-term care centres or people living on an Indigenous community. As for the census, while it generally includes Indigenous communities, in the Outaouais region, only the Kitigan Zibi Anishinabeg community participated in 2016.

6. DATA SOURCES

Several data sources were consulted to produce this health portrait of the population. Data were accessed from the Infocentre de santé publique, the website of the ministère de la santé et des services sociaux (MSSS) du Québec and that of Statistics Canada. The data sources were listed below:

- Estimates and projections of Quebec population produced by the Institut de la statistique du Québec (ISQ) in 2022;
- Canadian Census conducted by Statistics Canada in 2016;
- Quebec population health survey conducted in 2014-2015 by ISQ in collaboration with the MSSS;
- Quebec Hospital inpatient and day surgery database (Data produced by the MSSS in 2014-2015);
- Quebec vital events registry (Data produced by the ISQ in 2008-2012);
- Quebec Survey of Child Development in Kindergarten conducted in 2012 and 2017 by ISQ in collaboration with the MSSS;
- Quebec Health Survey of High School Students conducted in 2016-2017 by ISQ in collaboration with the MSSS;
- Outaouais Regional Health and Social Survey conducted in 2013 by ISQ in collaboration with the Agence de la santé et des services sociaux de l'Outaouais.

7. REFERENCES

1. Statistics Canada (2017). Dictionary, Census of Population, 2016. Immigrant, no. 98-301-X2016001 in the catalogue, https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/98-301-x2016001-eng.pdf.

2. Statistics Canada (2017). Dictionary, Census of Population, 2016. Activities of daily living, no. 98-301-X2016001 in the catalogue, https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/98-301-x2016001-eng.pdf.

3. Camirand, H., Traoré, I. and Baulne, J. (2016). L'Enquête québécoise sur la santé de la population, 2014-2015: pour en savoir plus sur la santé des Québécois [in French only]. Résultats de la deuxième édition, Québec, Institut de la statistique du Québec [in French only], 208 pp.

4. Latkin, C. A., Edwards, C., Davey-Rothwell, M.A. et al. (2017). The relationship between social desirability bias and self-reports of health, substance use, and social network factors among urban substance users in Baltimore, Maryland. Addictive Behaviors, 73, 133–136. doi: 10.1016/j.addbeh.2017.05.005.

5. Phillips, D. L., and Clancy, K. J. (1972). Some effects of "social desirability" in survey studies. American Journal of Sociology, 77 (5), 921-940.

6. Adams, S. A., Matthews, C. E., Ebbeling, C. B. et coll. (2005). The Effect of Social Desirability and social approval on self-reports of physical activity. American Journal of Epidemiology, 161 (4), 389–398.

7. INDICATOR DEFINITIONS

Activity limitations: Difficulties a person may have doing certain activities as a result of physical, mental, or other health-related conditions or problems. Note that only long-term difficulties or conditions that have lasted or are expected to last for six months or more should be considered. https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop147-eng.cfm.

Average pre-tax income: Is the total income (before tax) received by people aged 15 and over from all sources during the calendar year preceding the census divided by the number of all individuals who declared income during the calendar year preceding the census (Source: Infocentre de santé publique – indicator sheet).

Chronic diseases: In the Canadian Community Health Survey, respondents were asked if they had or were suffering from certain chronic diseases (e.g., hypertension, diabetes, arthritis, etc.). Chronic disease means a long-term health problem, namely a state that is expected to last or has lasted for 6 months or more and has been diagnosed by a health care professional (Source: Infocentre de santé publique – indicator sheet).

Cigarette use: The indicator is based on the following question asked in the 2014-2015 Quebec Population Health Survey: Currently, do you smoke cigarettes every day, occasionally, or never? The response categories for this question are: 1) Every day 2) Occasionally 3) Never. The categories “Regular Smokers” and “Occasional Smokers” were combined in order to calculate the proportion of current cigarette smokers. (Source: Infocentre de santé publique – indicator sheet).

Cigarette use: The indicator is based on the following four questions asked in the 2016-2017 Québec Health Survey of High School Students: Have you ever tried smoking cigarettes, even if it was just a few puffs? The response categories for this question are: 1) Yes 2) No. The following question was asked only to the people who answered “Yes” to this question. Have you ever smoked a whole cigarette? The response categories for this question are: 1) Yes 2) No. The following question was asked only to the people who answered “Yes” to the previous question. Have you smoked 100 or more cigarettes in your lifetime? (100 cigarettes equals 4 packs of 25 cigarettes). The response categories for this question are: 1) Yes 2) No. The following question was asked only to the people who answered “Yes” to the previous question. In the past 30 days, have you smoked cigarettes, even if it was just a few puffs? The response categories for this question are: 1) No, I did not smoke in the past 30 days 2) Yes, every day 3) Yes, almost every day 4) Yes, a few days. The categories “Daily Smokers” and “Occasional Smokers” were combined in order to calculate the proportion of current cigarette smokers among high school students. (Source: Infocentre de santé publique – indicator sheet).

Deprivation index: The deprivation index consists of specific socio-economic characteristics of the population living in an area and has often been used as a proxy for information about the socioeconomic status of individuals.

The deprivation index has two dimensions:

- The material dimension reflects the deprivation of the goods and conveniences of daily life of the people living in an area and resulting in a lack of material resources (assessed by education, employment and income);
- The social dimension refers to the fragility of the social network, from the family to the community (assessed by living alone, being a single parent, and being separated, divorced or a widow(er)).

As such, the Material and Social Deprivation Index combines six indicators that were chosen for their relationship with health and either one of the two forms of deprivation. These indicators are: The proportion of people aged 15 and over without a high school certificate or diploma; the proportion of employed people among those aged 15 and over; the average income of people aged 15 and over; the proportion of people aged 15 and over living alone in their dwelling; the proportion of people aged 15 and over who are separated, divorced or a widow(er); and the proportion of single-parent families. Source: Institut national de santé publique du Québec, https://www.inspq.qc.ca/en/deprivation/material-and-social-deprivation-index

Drug use: The indicator is based on the following 10 questions asked in the 2014-2015 Quebec Population Health Survey. In the past 12 months, have you taken or tried marijuana, cannabis, pot or hashish? cocaine or crack cocaine (coke, free base, powder)? Amphetamines (speed)? Ecstasy or other similar substances (MDMA, E, XTC, X, pill, ecstasy, dove, Love drug)? Hallucinogens, PCP, LSD, acid, blotter, or mushrooms? Heroin (smack)? Crystal meth or methamphetamines (ice)? Ketamine (special K)? In the past 12 months, have you taken or tried any drugs that were not prescribed to you in order to have an effect, for example Dilaudid or benzodiazepines like Valium or Ativan, etc. (Librium, Dalman, Halcion, Ritalin, morphine, codeine, etc.)? In the past 12 months, have you sniffed glue, gasoline or other solvents? (Source: Infocentre de santé publique – indicator sheet).

Electronic cigarette use (past 30 days): The indicator is based on the following questions asked in the 2016-2017 Québec Health Survey of High School Students: In the past 30 days, have you used electronic cigarettes, also known as e-cigarettes? The response categories for the question are: 1) Yes 2) No.
(Source: Infocentre de santé publique – indicator sheet).

Excess weight among high school students: Excess weight is one of the categories in the weight status indicator. The indicator is determined by the body mass index (BMI) value. In the 2016-2017 Québec Health Survey of High School Students, BMI was assessed based on the responses to these two questions: 1) How tall are you (without your shoes)? 2) How much do you weigh? BMI is calculated by dividing a person's weight by their height squared (kg/m^2).
Weight status is classified in three categories: underweight, normal weight, overweight and obesity. Excess weight combines the "overweight" and "obesity" categories. For young people aged 17 and under, the classification system factors in growth and sex. (Source: Camirand, Hélène. "Weight status, body image and actions taken to manage weight" in the 2016-2017 Québec Health Survey of High School Students.

Results of the second edition. La santé physique et les habitudes de vie des jeunes, Québec, Institut de la statistique du Québec, Tome 3, pp. 165 to 193) [French only].

Excess weight (overweight and obesity): Body mass index (BMI) is derived from the ratio between a person's weight (in kilograms) and the square of their height (in metres). BMI categorizes weight in intervals associated with the health risk. International and Canadian standards have been established for categorizing BMI in adults. Based on those standards, a person whose BMI is lower than 18.5 kg/m^2 is underweight. A normal BMI is equal to or greater than 18.5 kg/m^2 and less than 25 kg/m^2. A BMI equal to or greater than 25.0 kg/m^2 and less than or equal to 29.9 kg/m^2 indicates overweight, while a BMI equal to or greater than 30 kg/m^2 is considered obesity. Excess weight combines overweight and obesity (BMI equal to or greater than 25 kg/m^2). (Source: Infocentre de santé publique – indicator sheet).

Excessive alcohol consumption: The indicator is based on one question. The following question was asked of respondents who had consumed alcohol in the 12 months preceding the survey: In the past 12 months, how many times did you have 5 or more drinks (men)/ 4 or more drinks (women) on one occasion? The response categories for this question are: 1) Never 2) Less than once a month 3) Once a month 4) 2 to 3 times a month 5) Once a week 6) More than once a week. The categories “Once a month”, “2 to 3 times a month”, “Once a week” and “More than once a week” were combined in order to calculate the proportion of excessive alcohol consumption. (Source: Infocentre de santé publique – indicator sheet).

Hospitalizations for short-term physical care: The primary diagnosis is the one used for counting hospitalizations. It corresponds to the most significant condition presented by the patient during their hospitalization. In general, that diagnosis is closely related to the reason for the hospitalization. Excludes: hospitalizations for mental disorders, day nursing care (day surgery since 1995), long-term care, hospitalizations of the hospital-in-the-home type, those of non-Quebec residents, and long-term ones in short-term care units. (Source: Infocentre de santé publique – indicator sheet).

Immigrant: An immigrant is a person who is, or who has ever been, a landed immigrant or permanent resident. Such a person has been granted the right to live in Canada permanently by the immigration authorities. Immigrants who have obtained Canadian citizenship by naturalization are included in this group.
https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop221-eng.cfm

Language spoken most often at home: The language spoken most often at home refers to the language the person speaks most often at home at the time of data collection. A person can report more than one language as "spoken most often at home" if the languages are spoken equally often.
https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop186-eng.cfm

Life expectancy at birth: Life expectancy is an indicator of a population's health and is widely used. It is a measure of quantity rather than quality of life. In calculating life expectancy at birth, a fictitious cohort of newborns are passed through all ages of life by subjecting it, at those various ages, to the probabilities of dying that were observed during a given period of time. (Source: Infocentre de santé publique – indicator sheet).

Low birth weight: Newborns weighing less than 2,500 grams are considered low weight, and those weighing less than 1,500 grams are considered very low weight. (Source: Infocentre de santé publique – indicator sheet).

Low-income cut-offs, before-tax: Low-income cut-offs before-tax are defined as income levels at which families or persons not in economic families are likely to spend 20% more than the average of their before-tax income on food, shelter and clothing (Statistics Canada, 2017). (Source: Infocentre de santé publique – indicator sheet).

Medical diagnosis of anxiety, depression and eating disorder: This indicator is based on the following three questions asked in the 2016-2017 Québec Health Survey of High School Students: Do you have any of the following medical problems confirmed by a doctor or health specialist?
1) Anxiety, 2) Depression, 3) Eating disorder (anorexia, bulimia). The response categories for these questions are: 1) Yes 2) No. The indicator refers to high school students who answered "Yes" to having at least one of these three health problems confirmed by a physician or health specialist. (Source: Infocentre de santé publique – indicator sheet).

Perception of being poor or very poor: Information obtained using the following question asked in the 2014-2015 Quebec Population Health Survey: How do you perceive your financial situation compared with people of your age? The response categories for this question are: 1) You consider yourself financially well off 2) You feel that your income is sufficient for meeting your basic needs or those of your family 3) You consider yourself poor 4) You consider yourself very poor. (Source: Infocentre de santé publique – indicator sheet).

Perception of health status:
The indicator is based on one question asked in the 2014-2015 Quebec Population Health Survey: In general, what would you say your health is? The response categories for this question are: 1) Excellent 2) Very good 3) Good 4) Fair 5) Poor. The "Fair" and "Poor" categories were combined in order to calculate the proportion of the population not perceiving themselves as being in good health. (Source: Infocentre de santé publique – indicator sheet).

Perception of mental health: The indicator is based on one question: In general, what would you say your health is? The response categories for this question are: 1) Excellent 2) Very good 3) Good 4) Fair 5) Poor. The "Fair" and "Poor" categories were combined in order to calculate the proportion of the population not perceiving themselves as being in good mental health. (Source: Infocentre de santé publique – indicator sheet).

Person without a high school diploma: Refers to a person without a secondary (high) school diploma or equivalency certificate. Secondary school (high school) diploma or graduation certificate includes academic or vocational high school diplomas or certificates as may be obtained by graduating from a secondary school. https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop121-eng.cfm?wbdisable=true

Population estimates: According to the Institut de la Statistique du Québec, population estimates are made to 1) correct census results to take into account net undercoverage and incompletely enumerated reserves and to provide annual population data between two quinquennial censuses.
https://statistique.quebec.ca/fr/produit/publication/le-compte-de-la-population-explication-des-chiffres-disponibles

Population projections: According to the Institut de la Statistique du Québec, population projections are simulations of the future. They are based on an in-depth examination of past and recent trends and on a set of assumptions regarding the evolution of demographic component: fertility, mortality, external migration and internal migration. These projections do not constitute a prediction of the future, but rather aim to present a possible future it the trends are maintained.
https://statistique.quebec.ca/fr/produit/publication/le-compte-de-la-population-explication-des-chiffres-disponibles

Population who identifies with the Aboriginal peoples of Canada: Refers to people who identify with the Indigenous peoples of Canada. This includes people who are First Nations (North American Indian), Métis or Inuk (Inuit) and/or people who are Registered or Treaty Indians (that is, registered under the *Indian Act* of Canada), and/or those who have membership in a First Nation or Indian band. Section 35(2) of the *Constitution Act*, 1982 specifies that the Aboriginal peoples of Canada include the Indian, Inuit and Métis peoples of Canada.
https://www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop001-eng.cfm

Potential years of life lost: The potential years of life lost (PYLL) rate is a measure of the significance (burden) of a disease as a result of premature mortality. This indicator is relevant for illnesses or injuries that result in deaths, which occur earlier than a set age threshold. The age-75 limit has been set for calculating PYLL. (Source: Infocentre de santé publique – indicator sheet).

Preterm births: Gestation length is the time between the start of the last menstrual period and birth. Births, less than 37 full weeks of gestation are considered preterm. (Source: Infocentre de santé publique – indicator sheet).

Psychological distress: The questions used to measure psychological distress are based on the work of Kessler et al. (2002). The six-question version was used in the 2014-2015 Quebec Population Health Survey to measure psychological distress. The categories for level of psychological distress are: 1) Low (overall score less than or equal to 1) 2) Medium (overall score greater than one and less than 7) 3) High (overall score greater than or equal to 7). That last category was used to determine the prevalence of distress. (Source: Infocentre de santé publique – indicator sheet).

Psychological harassment: The indicator is based on the following questions asked in the 2014-2015 Quebec Population Health Survey: In the past 12 months, at your current (primary) job, have you experienced psychological harassment, i.e., repeated words or actions that have affected your dignity or integrity? The response categories for this question are: 1) Never 2) Once 3) Occasionally 4) Often 5) Very often. The categories “Once”, “Occasionally”, “Often” and “Very often” were combined in order to calculate the proportion of workers who have experienced psychological harassment at work. (Source: Infocentre de santé publique – indicator sheet).

Recommended number of hours of sleep during the school week: The indicator is based on two questions asked in the 2016-2017 Québec Health Survey of High School Students: Around what time do you usually turn off the light to go to sleep during the school week (Sunday to Thursday)? (Round to the nearest 15 minutes). What time do you usually wake up in the morning during the school week (Monday to Friday)? (Round to the nearest 15 minutes). To obtain the number of daily hours of sleep during the school week, the difference between the wake-up time and the time of turning off the light was calculated. Respondents aged 13 and under who usually slept between 9 and 11 hours at night, respondents aged 14 to 17 who usually slept between 8 and 10 hours at night, and respondents aged 18 and over who usually slept between 7 and 9 hours at night were counted among the population of high school students getting the recommended number of hours of sleep during the school week. (Source: Infocentre de santé publique – indicator sheet).

Repeating a school year: The indicator is based on the following question asked in the 2016-2017 Québec Health Survey of High School Students: Have you ever repeated a year, either in elementary or high school? The response categories for this question are: 1) No 2) Yes, one year 3) Yes, two years 4) Yes, three years or more. The indicator refers to students who have previously repeated a year in elementary or high school. (Source: Infocentre de santé publique – indicator sheet).

Sedentary physical activity: Sedentary physical activity means engaging in physical activity less than once a week over the last four weeks, namely: no activity or not doing any physical activity each week. (Source: Camirand, Hélène, Issouf Traoré and Jimmy Baulne (2016). L'Enquête québécoise sur la santé de la population, 2014-2015 : pour en savoir plus sur la santé des Québécois [in French only]. Résultats de la deuxième édition, Québec, Institut de la statistique du Québec, [in French only] 208 pp.)

Smoked cigarillos or little cigars (past 30 days): The indicator is based on the following question asked in the 2016-2017 Québec Health Survey of High School Students: In the past 30 days, have you smoked cigarillos or little cigars, even if it was just a few puffs? The response categories for this question are: 1) No, I did not smoke cigarillos or little cigars in the past 30 days 2) Yes, every day 3) Yes, almost every day 4) Yes, a few days 5) Yes, one or two days. Students who smoked cigarillos or little cigars in the past 30 days are those who answered "Yes, every day", "Yes, almost every day", "Yes, a few days", or "Yes, one or two days". (Source: Infocentre de santé publique – indicator sheet).

Vulnerable in at least one area of development: The Early Development Instrument (EDI) was used in the Québec Survey of Child Development in Kindergarten to identify groups of vulnerable children in the following five areas of development: physical health and well-being; social competence; emotional maturity; language development and cognition; communication skills and general knowledge. For each area, the EDI's vulnerability threshold is determined based on the distribution of the scores of all Quebec children assessed in the survey. Children whose score is at or below the 10th percentile are said to be vulnerable in that development area. (Source: Infocentre de santé publique – indicator sheet).

Victim of violence at or on the way to school or cyber-bullying during the school year: This indicator is based on eight questions asked in the 2016-2017 Québec Health Survey of High School Students. Six of the

eight questions are about violence at or on the way to school from the 1999 Enquête sociale et de santé auprès des enfants et des adolescents québécois [French only]. These questions were also used in the 2003 Enquête sur la santé et le bien-être des jeunes du secondaire en Mauricie and in the survey Expériences de vie des élèves de niveau secondaire de la Montérégie, 1998. One question about threats from members of a gang, which is from the 2003 Enquête sur le bien-être des jeunes Montréalais and another original question on cyber-bullying from the QHSHSS were added. The indicator refers to high school students who answered "Yes" to at least one of the eight questions about situations where they experienced some form of violence. (Source: Infocentre de santé publique – indicator sheet).

Weak sense of belonging to their school: The indicator is based on five questions asked in the 2016-2017 Québec Health Survey of High School Students: How much do you agree or disagree with the following statements about your school? 1) I feel close to the people at this school. 2) I am happy attending this school. 3) I feel like I'm part of this school. 4) The teachers at this school treat the students fairly. 5) I feel safe at my school. The response categories for these questions are: 1) Strongly disagree 2) Disagree 3) Neither agree nor disagree 4) Agree 5) Strongly agree. The categories for the level of belonging to one's school are: 1) Low (overall score less than 2.5) 2) Medium (overall score equal to or greater than 2.5 and less than or equal to 3.75, 3) High (overall score greater than 3.75). The indicator chosen refers to high school students who have a low sense of belonging to their school. (Source: Infocentre de santé publique – indicator sheet).