

HEALTH STATUS AND CHRONIC HEALTH CONDITIONS

Highlights

- The prevalence of most chronic health conditions has remained stable since RHS 2002, with the exception of obesity, which affects a growing proportion of the population.
- The most common chronic health conditions are obesity – which affects about two in five people – and allergies – affecting about one in five people.
- While the majority of children, adolescents and young adults do not have more than one chronic health condition, the majority of adults 35 years and over have multiple conditions at the same time and close to one-half of adults 65 years and over must deal with at least five chronic health conditions daily.
- The prevalence of obesity is higher in Zones 2, 3 and 4 than in Zone 1, whereas the prevalence of allergies and endocrine, metabolic, musculoskeletal and cardiovascular disorders is lower.
- Females have more allergies and endocrine and metabolic disorders than males.



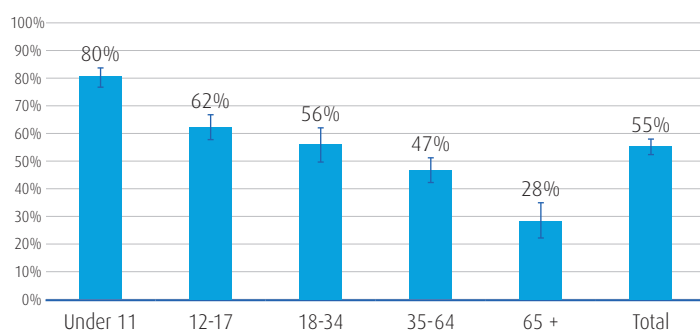
CONTEXT

This booklet provides an overview of the main chronic health conditions observed among First Nations in Quebec, as well as how the prevalence of these problems has evolved since RHS 2002. The analysis also aims to identify differences between the health status of individuals based on age, gender and geographic zone. These results will help identify the current needs of First Nations communities in Quebec, both in terms of prevention and management of chronic health conditions. In this booklet, the term “chronic condition” refers to a condition that tends to persist for a fairly long time (usually six months or more). This includes cancers, diabetes, cardiovascular problems and chronic respiratory diseases – all of which are increasing in prevalence with age. Conditions requiring continuous medical follow-up and treatment over a fairly long period of time are also covered in this booklet. This includes some issues that may be transient, such as learning, language or speech disorders.

HEALTH STATUS AND CHRONIC HEALTH CONDITIONS OF FIRST NATIONS IN QUEBEC

FIGURE 1 shows the self-assessment of general health reported by individuals, by age group. Based on the perceptions collected, it appears that health status tends to deteriorate with age. Indeed, while about four in five children self-assessed themselves as having very good or excellent general health, only roughly one in four elders could say the same.

FIGURE 1
Proportion of individuals who self-assessed themselves as having very good or excellent general health, based on age group



Self-assessment of mental health, on the other hand, does not vary based on age or gender. However, **FIGURE 2** shows that residents of Zones 2, 3, and 4 are significantly less likely to self-assess themselves as having very good or excellent mental health than are residents of Zone 1.

FIGURE 2
Proportion of individuals 12 years and over who have self-assessed themselves as having very good or excellent mental health, based on geographic zone

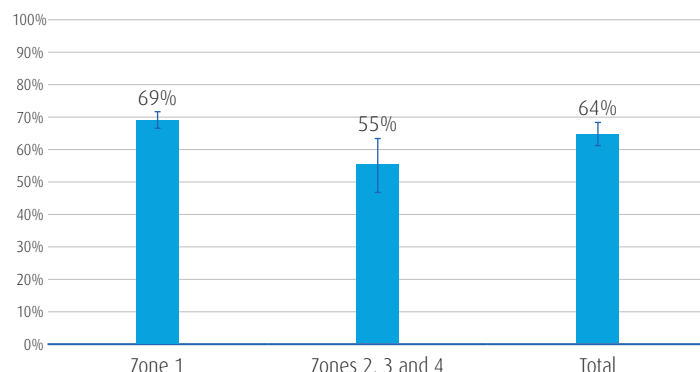
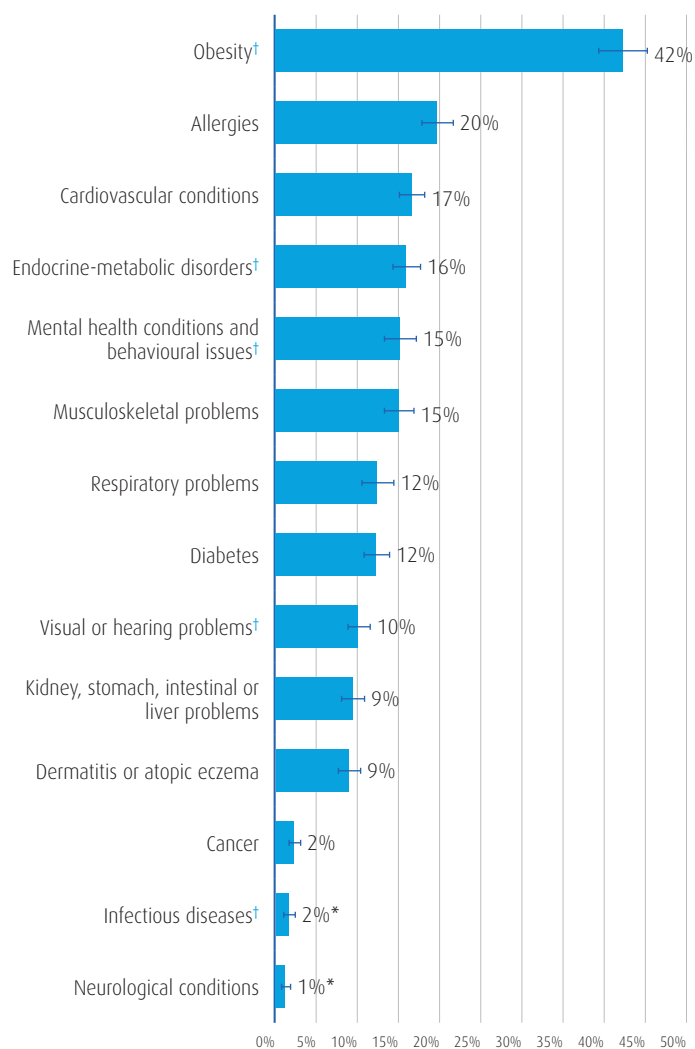


FIGURE 3 presents a portrait of the main chronic health conditions listed at the time of RHS 2015. Obesity is by far the most common problem. Its prevalence is high among the whole population, regardless of age, gender or geographic zone.

FIGURE 3
Prevalence of chronic health conditions among First Nations in Quebec

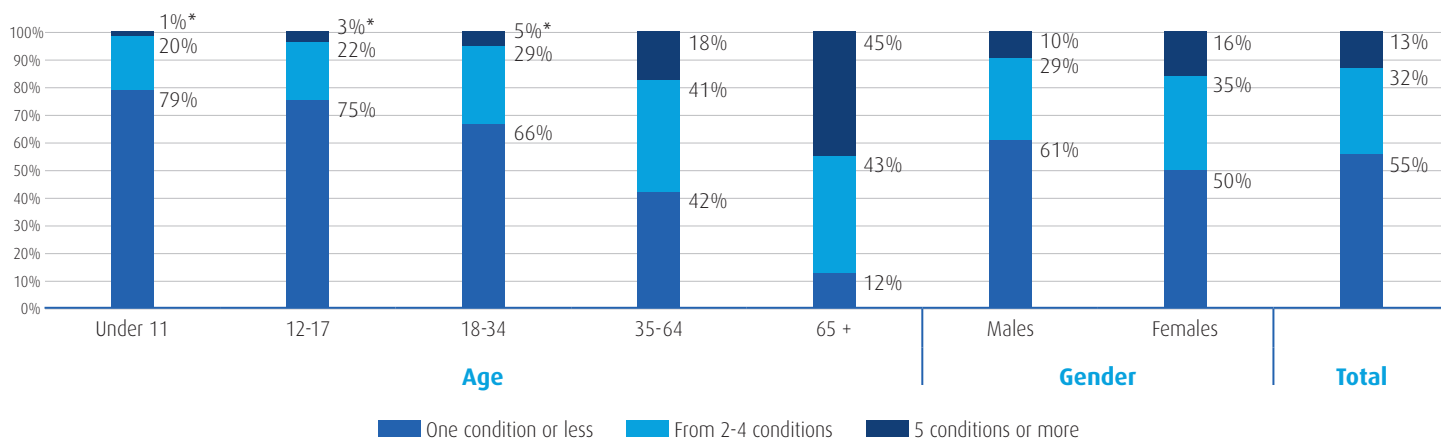


† **Obesity:** BMI ≥ 30 for adults, but the calculation is more complex among children and adolescents (see *Diabetes and Obesity* booklet for details); *endocrine and metabolic disorders:* includes thyroid problems, chronic anemia and high cholesterol, but excludes diabetes and osteoporosis; *mental health conditions and behavioural issues:* includes dementia (including Alzheimer's disease), Autism Spectrum Disorder, mood and anxiety disorders, as well as learning, attention deficit, and speech or language disorders; *visual or hearing problems:* includes blindness or serious vision problems, glaucoma, cataracts and hearing loss; *infectious diseases:* includes HIV/AIDS, hepatitis and tuberculosis.



FIGURE 4 seems to indicate that the number of chronic health conditions simultaneously affecting the same person increases with age. While the majority of people 34 years and younger do not have more than one chronic health condition, the majority of people 35 years and over have to deal with at least two chronic health conditions on a daily basis. Among elders 65 years and over, nearly nine out of ten have at least two chronic health conditions.

FIGURE 4
Number of chronic health conditions, based on age group and gender



Other factors appear to influence the prevalence of health conditions, including gender and geographic zone. FIGURE 4 shows that females tend to be affected by more chronic health conditions than males. As shown in FIGURE 5, females appear to be more frequently affected by allergies and endocrine and metabolic disorders than males. The prevalence of conditions that do not appear in this figure are not significantly different between males and females.

FIGURE 5
Prevalence of allergies and endocrine and metabolic disorders, based on gender

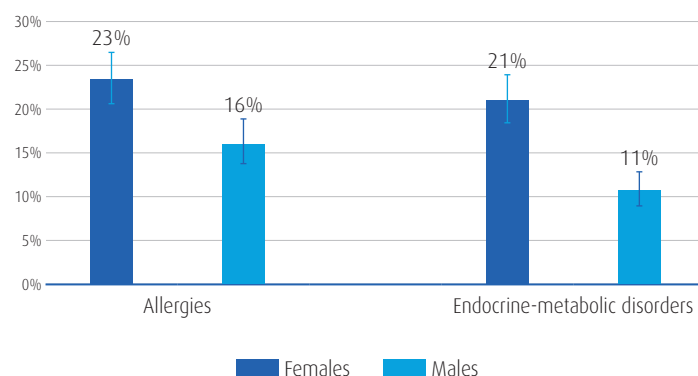
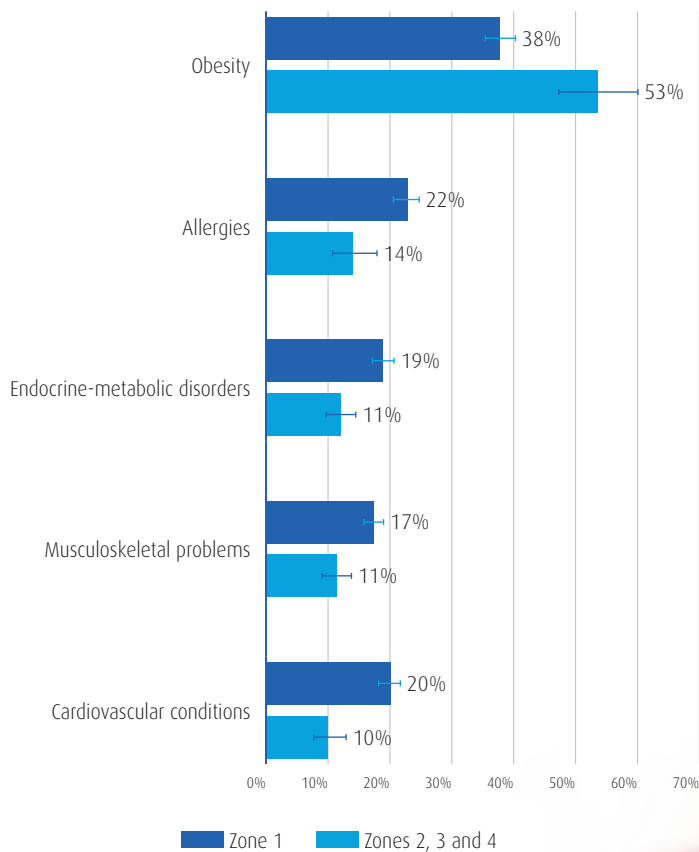


FIGURE 6 shows that the prevalence of several health conditions tends to be lower in Zones 2, 3 and 4 than in Zone 1 (with the exception of obesity, which is more common). The prevalence of problems that do not appear in this figure is not significantly different between Zone 1 and Zones 2, 3 and 4.

FIGURE 6
Prevalence of certain chronic health conditions,
based on geographic zone



CHRONIC HEALTH CONDITIONS AFFECTING CHILDREN

In recent years, the prevalence of chronic health conditions has remained fairly stable among children. The proportion of obese children, however, has jumped from 34% [30%-39%] to 44% [39%-50%] since RHS 2008. **TABLE 1** provides a detailed portrait of chronic health conditions affecting children living in First Nations communities in Quebec.

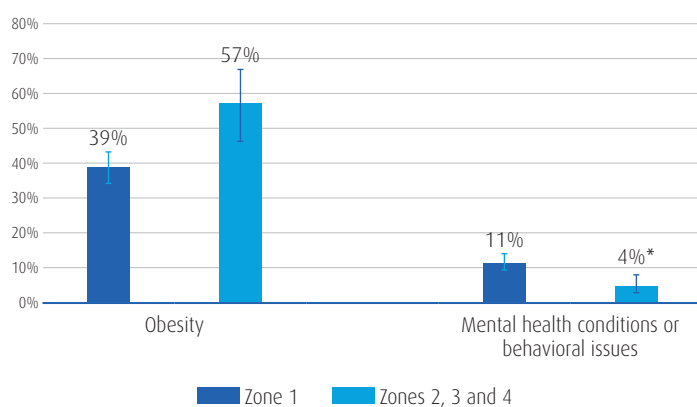
TABLE 1
Main chronic health conditions affecting children[†]

Chronic health conditions	Prevalence (%)	[CI 95%]
Obesity	44%	[39%-50%]
Among children under 6 years old	57%	[50%-65%]
Among children 6-11 years old	37%	[30%-43%]
Mental health conditions and behavioural issues	9%	[7%-11%]
Autism Spectrum Disorder	1%*	[1%-3%]
Mood or anxiety disorders	1%*	[1%-3%]
Learning disorders	3%*	[2%-4%]
Attention deficit disorder and attention deficit hyperactivity disorder	3%*	[2%-5%]
Speech or language disorders	5%	[3%-7%]
Respiratory problems	12%	[9%-15%]
Asthma	10%	[7%-13%]
Emphysema, chronic bronchitis or chronic obstructive pulmonary disease	3%*	[2%-5%]
Visual or hearing problems	3%*	[2%-5%]
Blindness or serious vision problems	1%*	[1%-3%]
Hearing impairment	2%*	[1%-4%]
Kidney, stomach, intestinal or liver problems	2%*	[1%-4%]
Other health conditions		
Dermatitis or atopic eczema	12%	[9%-15%]
Allergies	12%	[9%-15%]
Chronic anemia	2%*	[1%-4%]

[†] For the sake of brevity, only health conditions affecting at least one in every hundred children have been listed.

The prevalence of obesity is high for all children, but more for children under 6 years old. Other common health conditions include dermatitis or atopic eczema, allergies and asthma. The prevalence of certain conditions seems to vary according to gender or geographic zone. In particular, autism spectrum disorder seems to affect almost exclusively boys – a phenomenon already documented in the scientific literature ^[1]. In addition, mental health conditions and behavioural issues – including learning, speech, language and attention deficit disorders – are more common in Zone 1 than in other zones (FIGURE 7).

FIGURE 7
Prevalence of chronic health conditions among children, based on geographic zone



CHRONIC HEALTH CONDITIONS AFFECTING ADOLESCENTS

In recent years, the prevalence of chronic health conditions affecting adolescents has remained fairly stable, despite significant variations in the prevalence of obesity and asthma.

- **Increased prevalence of obesity:** the prevalence increased from 14% [11%-17%] to 28% [24%-32%] since RHS 2008.
- **Decreased prevalence of asthma:** the prevalence decreased from 15% [12%-19%] to 9% [6%-12%] since RHS 2008.

The progression of obesity is troubling since it would seem to indicate a (potential) increase in the risk of developing diabetes among young people over the next few years. The decrease in the prevalence of asthma, on the other hand, is encouraging: it is probably due – at least in part – to a marked decrease in the proportion of smokers in recent years.



TABLE 2 shows the prevalence of the main chronic health conditions affecting adolescents. Compared with children, they display more mental health conditions and behavioural issues, especially mood and anxiety disorders. The prevalence of allergies is also higher in adolescence [2].

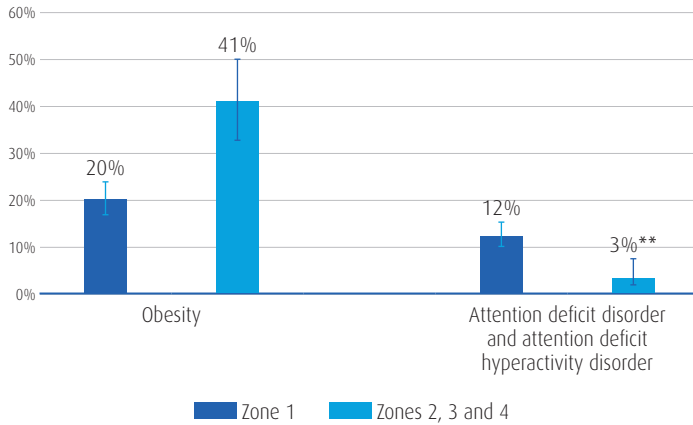
TABLE 2
Main chronic health conditions affecting adolescents[†]

Chronic health conditions	Prevalence (%)	[CI 95%]
Obesity	27%	[23%-31%]
Mental health conditions and behavioural issues	18%	[16%-22%]
Attention deficit disorder and attention deficit hyperactivity disorder	9%	[7%-11%]
Learning disorders	6%	[5%-9%]
Speech or language disorders	3%*	[2%-5%]
Mood or anxiety disorders	9%	[7%-11%]
<i>Mood disorders such as depression, bipolar disorder, mania and dysthymia</i>	5%	[4%-8%]
<i>Anxiety disorders such as phobias, obsessive-compulsive disorder and panic disorder</i>	7%	[5%-10%]
Respiratory problems	9%	[7%-12%]
Asthma	9%	[6%-12%]
Emphysema, chronic bronchitis or chronic obstructive pulmonary disease	1%*	[1%-3%]
Musculoskeletal problems (chronic back pain or juvenile arthritis)	3%*	[2%-6%]
Chronic back pain	3%*	[2%-5%]
Other health conditions		
Allergies	20%	[17%-24%]
Dermatitis or atopic eczema	7%	[5%-10%]
Blindness or serious vision problems	6%	[4%-8%]
Stomach or intestinal problems	3%*	[1%-4%]
Chronic anemia	2%*	[1%-3%]

† For the sake of brevity, only health conditions affecting at least one adolescent in a hundred have been listed.

No significant gender disparity can be observed, but the prevalence of obesity and attention deficit disorder vary by geographic zone (FIGURE 8).

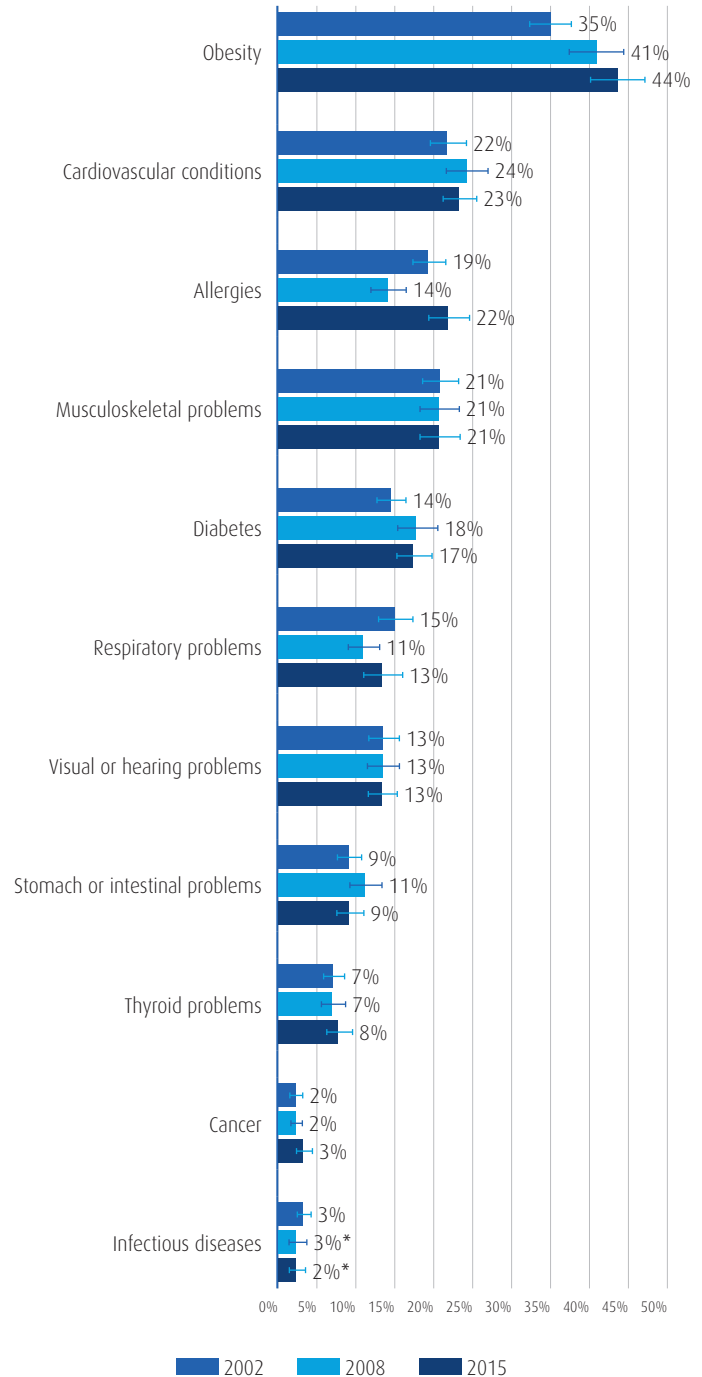
FIGURE 8
Prevalence of chronic health conditions affecting adolescents,
based on geographic zone



CHRONIC HEALTH CONDITIONS AFFECTING ADULTS

FIGURE 9 shows the evolution of the prevalence of chronic health conditions in the adult population since RHS 2002. Despite a significant increase in the proportion of individuals suffering from obesity, the prevalence of most conditions seems stable.

FIGURE 9
Evolution of the prevalence of chronic health conditions affecting
adults since RHS 2002



Although the profile of adult health status varies greatly with age, the prevalence of some problems remains fairly stable across age groups (TABLE 3).

TABLE 3
Chronic health conditions affecting all adult age groups[†]

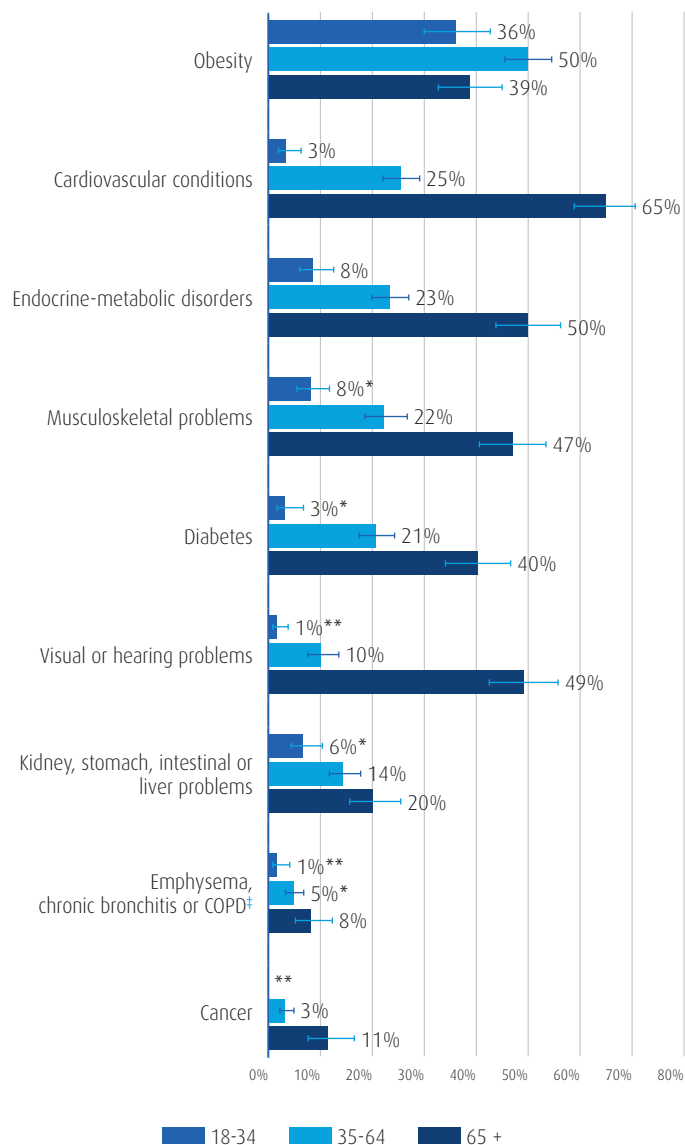
Chronic health conditions	Prevalence (%)	[CI 95%]
Mental health conditions and behavioural issues	16%	[14%-19%]
Mood or anxiety disorders	13%	[11%-16%]
<i>Mood disorders such as depression, bipolar disorder, mania and dysthymia</i>	7%	[6%-10%]
<i>Anxiety disorders such as phobias, obsessive-compulsive disorder and panic disorder</i>	9%	[7%-12%]
Respiratory problems	13%	[11%-16%]
Asthma	11%	[9%-14%]
Other health conditions		
Allergies	22%	[19%-25%]
Dermatitis or atopic eczema	8%	[7%-10%]
Chronic anemia	5%	[4%-7%]
Infectious diseases (hepatitis, HIV/AIDS, tuberculosis)	2%*	[1%-4%]
Neurological conditions (e.g., epilepsy, Parkinson's disease, Huntington's disease, multiple sclerosis)	1%*	[1%-2%]

[†] For the sake of brevity, only the health conditions affecting at least one adult in a hundred have been listed.



FIGURE 10 shows the health conditions where the prevalence differs significantly from one age group to another. Cardiovascular, endocrine-metabolic, musculoskeletal and visual or hearing conditions seem both very rare among young adults and very present (even common) among elders.

FIGURE 10
Chronic health conditions affecting adults, based on age group†

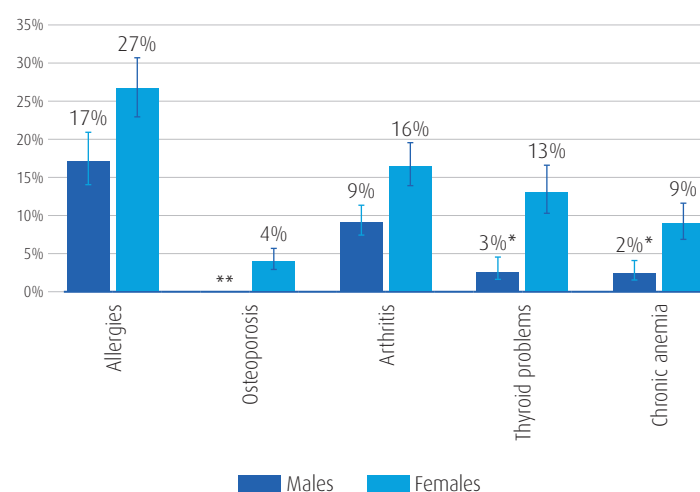


† For the sake of brevity, only health conditions affecting at least one in every hundred adults have been listed.

‡ COPD = Chronic Obstructive Pulmonary Disease.

FIGURE 11 presents the conditions where the prevalence varies according to gender. Some of these problems – including osteoporosis and arthritis – especially affect postmenopausal women. We must therefore consider that their prevalence varies both based on age and gender.

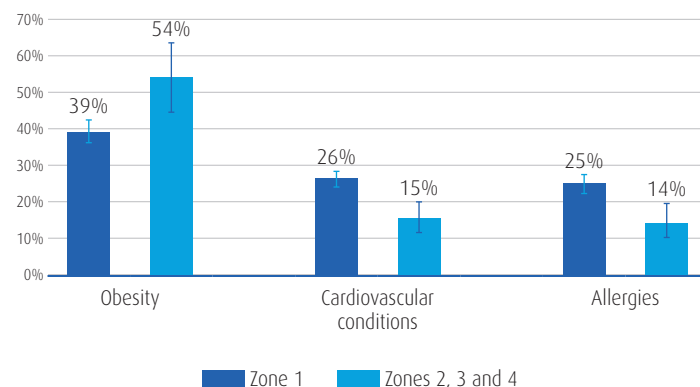
FIGURE 11
Chronic health conditions affecting adults, based on gender



- **Prevalence of osteoporosis:** 2%* [1%-3%] among females under 65 years old, compared to 16%* [10%-24%] among females 65 years and over.
- **Prevalence of high cholesterol, chronic anemia or thyroid problems:** 24% [20%-28%] among females under 65 years old, compared to 56% [47%-65%] among females 65 years and over.
- **Prevalence of arthritis:** 11% [9%-15%] among females under 65 years old, compared to 44% [35%-53%] among females 65 years and over.

FIGURE 12 shows the chronic health conditions where the prevalence varies significantly based on geographic zone. In Zones 2, 3 and 4, despite a higher prevalence of obesity than in Zone 1, there is a lower prevalence of cardiovascular problems. This result is surprising, since obesity represents an established risk factor for cardiovascular problems. Since access to care and health services tends to be more difficult in these areas, it is possible that cardiovascular problems are underdiagnosed (for more information on this topic, see the *Accessibility and Use of Health Services* booklet).

FIGURE 12
Chronic health conditions affecting adults,
based on geographic zone



CONCLUSION

Obesity is the most common chronic health condition affecting the entire population, regardless of gender, age or geographic zone. Allergies, which affect all subgroups of the population, rank second. The prevalence of many chronic health conditions (diabetes; cardiovascular, musculoskeletal, endocrine-metabolic and visual or hearing conditions) increases significantly with age. The majority of adults 35 years and over have multiple conditions and nearly half of adults 65 years and over have to deal with at least five chronic health conditions on a daily basis. While the increase in chronic health conditions with age is a known phenomenon, the very high prevalence of certain conditions should be taken into account in the planning of health services for elders living in First Nations communities.

The prevalence of certain health conditions is lower in Zones 2, 3 and 4. As noted in the *Accessibility and Use of Health Services* booklet, geographic remoteness can influence access to quality care and services and, as a result, affect the health of these populations. It is therefore likely that some conditions are under-diagnosed in Zones 2, 3 or 4. Indeed, in Zones 2, 3 and 4, the proportion of individuals judging that their mental health is very good or excellent is lower than in Zone 1. However, some diagnoses of mental health conditions or behaviour issues are less frequent. Similarly, the proportion of obese individuals is higher in Zones 2, 3 and 4. However, the prevalence of problems usually associated with obesity (such as cardiovascular conditions) is lower than in Zone 1. While it is possible that certain conditions are underdiagnosed outside of Zone 1, it is also possible that residents of Zones 2, 3 and 4 are exposed to certain protective factors less present in Zone 1 (for example, factors related to lifestyle). In sum, the differences between the prevalence of certain health conditions in different zones must be interpreted with caution. They may reflect a multitude of factors that have not been addressed in this booklet.

Females tend to have more health conditions than males, especially allergies and endocrine and metabolic disorders. Among older females, this gap is increasing, particularly because of the increased prevalence of osteoporosis and arthritis during and after menopause.

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METHODOLOGY IN BRIEF

The third phase of the First Nations Regional Health Survey (RHS) aims to describe the health status of the population in First Nations communities in Quebec. It was conducted from February 2015 to May 2016 in 21 communities from eight nations and reached 3,261 people (825 children aged 0 to 11 years, 769 adolescents aged 12 to 17 years and 1,667 adults aged 18 years and over) who responded to an electronic questionnaire submitted by field agents.

Data followed by the “*” sign have a coefficient of variation of 16.6% to 33.3% and should be interpreted with caution. The sign “***” indicates a coefficient of variation greater than 33.3%. This data is not published, except for estimates below 5%, which must be interpreted with caution. The lines presented in the bar or line charts are the confidence intervals calculated using a 95% confidence level.

In certain cases, the data are presented according to the geographic zone of the community of the respondents. These zones are defined as follows:¹

- Zone 1 (urban): less than 50 km from a service centre with road access;
- Zone 2 (rural): between 50 and 350 km from a service centre with road access;
- Zone 3 (isolated): more than 350 km from a service centre with road access;
- Zone 4 (difficult to access): no road.

Service centre: The nearest access to suppliers, banks and government services.

In the context of the RHS, the term “community” is used to represent “Indian reserves.”

For more details, please refer to the *Methodology* booklet of the RHS.

The RHS report consists of 20 thematic booklets. All the booklets can be consulted at the FNQLHSSC documentation center: <https://centredoc.cssspnql.com>.

¹ INAC, <http://fnppn.aandc-aadnc.gc.ca/fnp/main/Definitions.aspx?lang=eng> [accessed 2018-01-03].

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