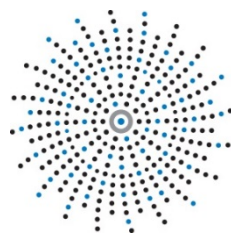




Tobacco Use in Canada: Patterns and Trends 2019 EDITION



PROPEL
CENTRE FOR
POPULATION
HEALTH IMPACT

University of Waterloo | Waterloo, Ontario

www.tobaccoreport.ca

Tobacco Use in Canada: Patterns and Trends 2019 Edition

This report was prepared by Jessica Reid, MSc, and David Hammond, PhD, with assistance from Ornell Douglas, MPH. Data analysis was completed by Ulaina Tariq, MSc, Robin Burkhalter, MMath, and Vicki Rynard, MSc, using datasets made available by Statistics Canada and Health Canada.

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This report is available online at www.uwaterloo.ca/tobacco-use-canada/ or www.tobaccoreport.ca.

We are pleased to share with you this eighth installment of Tobacco Use in Canada: Patterns and Trends, 2019 Edition. This report provides the most current tobacco use data from national surveys conducted by Health Canada and Statistics Canada, as well as historical trend data from 1999 to 2017. By providing this resource, our aim is to support and inform advocates and policy makers in their efforts to prevent smoking and promote cessation.

With a current smoking prevalence of 15% in 2017 (approximately 4.6 million Canadians)ⁱ, tobacco control continues to be a critical priority for both cancer prevention and chronic disease prevention, issues of utmost and enduring concern for the Canadian Cancer Society and the Propel Centre for Population Health Impact. About half of all cancer deaths are preventable, many from reducing population-level exposure to tobacco. Tobacco use is also a modifiable risk factor for other chronic diseases, thereby emphasizing the importance of tobacco control for prevention.

Another issue of growing concern is e-cigarette use. E-cigarettes are especially appealing to youth (aged 15 to 19 years) and young adults (aged 20 to 24), who were found to have the highest prevalence of past 30-day use in Canada. The 2017 data presented in this report represents a snapshot of e-cigarette use prior to the implementation of new federal legislation in May 2018. As the policy environment changes, and as the market for vaping products rapidly evolves, with new products being introduced regularly, we anticipate that use of e-cigarettes by Canadians may also change.

Funded by the Canadian Cancer Society and produced by the Propel Centre for Population Health Impact, this report was made possible with the leadership and contributions of Jessica Reid, MSc, and David Hammond, PhD. We recommend this important tobacco control resource to all those working in tobacco control and public health across Canada and trust it will serve as a valuable reference for your work.



A handwritten signature in black ink that reads "Barbara Riley".

Dr. BARBARA RILEY
Executive Director
Propel Centre for Population
Health Impact



A handwritten signature in black ink that reads "Andrea Seale".

ANDREA SEALE
Interim CEO
Canadian Cancer Society

This report uses data from national surveys conducted by Health Canada and Statistics Canada to summarize the main patterns and trends in tobacco use in Canada, primarily between 1999 and 2017, with a focus on the most recent data available. Highlights of the report are presented below.

SECTION I: TOBACCO USE AMONG CANADIAN ADULTS (15+), 2017

SMOKING PREVALENCE

- 15.1% of Canadians (approximately 4.6 million) were current smokers, significantly greater than the 2015 prevalence estimate of 13.0%.
- The majority of smokers reported smoking daily (10.8% daily/4.3% non-daily prevalence).
- Prevalence was higher among males (16.7%) than females (13.5%).
- Smoking prevalence was highest among adults aged 45-54, at 19.9%. Prevalence was lowest among youth aged 15-19 (7.9%).
- There were significant differences between provinces in smoking prevalence.
- Self-rated health varied by smoking status, with never smokers rating their general health and mental health better than smokers.

CIGARETTE CONSUMPTION

- Daily smokers in Canada smoked an average of 13.7 cigarettes per day.
- Average consumption has declined by more than 3 cigarettes per day since 1999.
- Male daily smokers consumed nearly 3 cigarettes more per day than females (14.9 vs. 12.1).
- Canadians purchased over 27 billion cigarettes.

USE OF OTHER TOBACCO PRODUCTS

- Cigarillos and cigars were the most popular tobacco products other than cigarettes: 1.9% of Canadians reported use in the past 30 days.
- Cigar, cigarillo, and chewing tobacco/snuff use were more prevalent among males.
- Use of other smoked tobacco products was most prevalent among young adults.

EXPOSURE TO SECONDHAND SMOKE (SHS)

- A majority of respondents (63.6%) reported being exposed to SHS in the past month, including 13.3% who reported being exposed either every day or almost every day.
- SHS exposure was more prevalent among males, young people, and current smokers.

SECTION II: QUITTING SMOKING, 2017

- The majority (63.1%) of Canadians who have ever been smokers have now quit.

PLANS TO QUIT

- More than half (57.9%) of smokers were seriously considering quitting in the next 6 months; over one-quarter (26.9%) were considering quitting in the next month.
- Similar proportions of males and females were seriously considering quitting smoking in the next 6 months, and in the next month.
- Quit intentions in the next 6 months did not differ by age. However, the percentage of smokers considering quitting in the next 30 days varied by age group, and was lowest among adults aged 25-34.

QUIT ATTEMPTS AND SUCCESS (ABSTINENCE)

- Almost half of smokers (46.2%) had tried to quit in the past year; nearly one-third (31.3%) tried more than once.
- Similar percentages of males and females had made a quit attempt in the past year.
- Quit attempts did not differ significantly age group.
- Among respondents who had made a quit attempt in the past year, 12.3% were still abstinent from smoking at the time they were surveyed.

CESSATION ASSISTANCE

- Two-thirds of smokers who attempted to quit used some form of cessation assistance.
- The most commonly used forms of cessation assistance were e-cigarettes (32.4%), nicotine replacement therapy (30.8%), and stop-smoking medications (14.7%).
- Over half (55.9%) of smokers who visited a doctor in the past year received advice to quit.

SECTION III: TOBACCO USE AMONG CANADIAN YOUTH

Youth in grades 7-9, in 2016-17:

- 8.6% of students in grades 7-9 had ever tried a cigarette.
- 1.0% of students in grades 7-9 were current smokers overall, varying by grade.
 - Similar proportions were daily (0.4%) and non-daily (0.5%) smokers.
 - Smoking prevalence did not differ significantly between males (1.1%) and females (0.8%).
- One-third of never-smokers in grades 7-9 were classified as susceptible to smoking.
- Daily smokers in grades 7-9 smoked an average of 7.5 cigarettes per day.
- 4.7% of students in grades 7-9 had ever smoked a cigar or cigarillo.
- Most smokers in grades 7-9 usually obtained their cigarettes from social sources.
- Three-quarters of current smokers in grades 7-9 reported ever trying to quit smoking.

Youth aged 15-19, in 2017:

- One in six (16.4%) youth aged 15-19 reported ever having smoked a whole cigarette.
- 7.9% were current smokers overall, with age-specific rates ranging from 4.1% among 15- and 16-year-olds to 14.4% of 19-year-olds.
 - Daily smoking (2.9%) accounted for less than half of youth prevalence (4.9% non-daily).
 - Prevalence was significantly higher among males (9.7%) than females (5.9%).
- Daily smokers aged 15-19 smoked an average of 9.4 cigarettes per day.
- 16% of youth aged 15-19 had ever smoked a cigarillo, 10% had ever smoked a cigar, and 10% had ever used a waterpipe.
 - Sex differences were apparent: 16% of males and 5% of females had smoked a cigar, while 21% of males and 10% of females had smoked a cigarillo.
- 44% of smokers aged 15-18 usually bought their cigarettes from stores, while 37% were given cigarettes by another person, and one in five obtained them through “other” sources.
- Six out of ten smokers aged 15-19 were seriously considering quitting in the next 6 months.
- Half of smokers aged 15-19 had made a quit attempt in the past 12 months.

SECTION IV: E-CIGARETTE USE AMONG CANADIANS (15+), 2017

- A substantial number of Canadians had tried e-cigarettes, but few reported regular use: 15.4% of Canadians (4.6 million) reported having ever tried an e-cigarette; 2.9% had used one in the past 30 days, and 1.0% reported daily use.
- Ever use of e-cigarettes increased significantly between 2015 and 2017, while past 30-day use did not change significantly.
- E-cigarette use was most prevalent among young people: 22.8% of youth aged 15-19, 29.3% of young adults aged 20-24, and 25.6% of adults aged 25-34 reported ever trying.
- Prevalence of e-cigarette use was much greater among smokers: 54.1% of current smokers had ever used e-cigarettes, compared to 6.7% of non-smokers; past 30-day use was 12.2% among current smokers and 2.4% among non-smokers.
- Two-thirds (64.4%) of users reported that the last e-cigarette they used contained nicotine.
- Among all ever users, nearly one-quarter (23.6%) reported using e-cigarettes to help them quit smoking within the past two years.
- In 2016-17, 12.6% of Canadian students in grades 7-9 reported ever trying an e-cigarette, and 5.4% had used one in the past 30 days.

ABOUT THIS REPORT

This report is the eighth edition in a series on tobacco use in Canada, developed by the Propel Centre for Population Health Impact at the University of Waterloo. The report uses data from national surveys conducted by Health Canada and Statistics Canada to summarize the main patterns and trends in tobacco use in Canada, primarily between 1999 and 2017, with a focus on the most recent data available.

The report is intended to serve as a reference on current patterns of tobacco use in Canada, for public health professionals, policy makers, researchers, and members of the tobacco control community. It may also be useful for the media and members of the public with an interest in tobacco control.

The contents of this report are available online at www.uwaterloo.ca/tobacco-use-canada/ or www.tobaccoreport.ca. In addition to the main report content, the website also includes data tables for all the figures contained in this report, in order to enable the extraction of more precise numbers, as well as confidence intervals for all reported estimates. Previous editions of the report may also be accessed through the website.

DATA SOURCES

Canadian Tobacco, Alcohol and Drugs Survey (CTADS); formerly Canadian Tobacco Use Monitoring Survey (CTUMS)

The Canadian Tobacco, Alcohol and Drugs Survey (CTADS) replaced CTUMS beginning in 2013. CTADS/CTUMS is conducted by Statistics Canada with the cooperation and support of Health Canada. CTUMS (1999-2012) was developed to provide Health Canada and its partners with timely, reliable, and continual data on tobacco use and related issues. Beginning in 2013, new content covering alcohol and drug use was added to CTUMS to create CTADS. Data are collected via telephone interviews, conducted from February to December in each survey year (annually for CTUMS; every 2 years for CTADS). The samples for CTADS/CTUMS are selected using a stratified random sampling procedure, and include the population of Canada aged 15 years and over, excluding residents of Yukon, Northwest Territories and Nunavut, as well as full-time residents of institutions and residents without telephones (or with cell phones only, prior to 2015).

See Appendix A for further details.

Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS); formerly Youth Smoking Survey (YSS)

The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS; called the Youth Smoking Survey (YSS) prior to 2014-15) is an important surveillance tool that provides Health Canada, its partners and stakeholders, as well as the Canadian public, with timely and reliable data on tobacco, alcohol and drug use, and related issues among Canadian students. CSTADS/YSS is funded by Health Canada and has been implemented biennially since 2004-05 by the Propel Centre for Population Health Impact at the University of Waterloo, in collaboration with researchers across Canada. The YSS was also implemented for Health Canada by Statistics Canada in 1994 and 2002. In each survey cycle, schools are randomly sampled within each of the 10 provinces, using a stratified single-stage design, to ensure a provincially and nationally generalizable sample. Within each participating school, all students in grade 7-12 classrooms (including grade 6 prior to 2016-17, including grade 5 prior to 2008-09, and excluding grades 10-12 prior to 2006-07) are invited to complete the CSTADS questionnaire. The sample excludes residents of the Yukon, Nunavut and Northwest Territories, residents of institutions, and those attending schools on First Nations reserves, special needs schools (e.g., schools for visually- or hearing-impaired individuals) or schools located on military bases; schools that did not have at least 20 students enrolled in at least one eligible grade were also excluded. The province of New Brunswick did not participate in CSTADS in 2010-11 or in 2016-17. The province of Manitoba did not participate in CSTADS in 2012-13. The 2014-15 CSTADS did not achieve a generalizable sample of students in New Brunswick (NB); therefore, provincial estimates for NB are not reported, although NB is included in the national estimates for that cycle.

See Appendix B for further details.

ANALYSIS

The data presented in this report are weighted estimates, generated using SAS 9.4 unless otherwise noted. Estimates are not reported where specific categories include less than 30 individuals (unweighted), except where noted as not meeting Statistics Canada's quality standards. The CTADS/CTUMS survey weights assigned by Statistics Canada in the annual datasets were used for CTADS/CTUMS analyses, and the CSTADS/YSS survey weights were used for CSTADS/YSS analyses. CTADS/CTUMS and CSTADS/YSS were not analysed together and there was no overlap of the survey weights between the two surveys.

Statistical comparisons between groups/years were tested using weighted regression analyses in SAS 9.4 or Stata 14.2. Bootstrap weights were used to perform significance testing where available. Where statistical testing has been performed, comparisons are marked with a superscript number, which refers to a p-value that can be found in the *Index of Statistical Tests (page 107)*. Throughout the report, the term "significant" has been reserved for instances where statistical testing has been performed, with $p < 0.05$ as the cut-off for significance. See *Appendix C for further details*.

Data analysis was completed by Ulaina Tariq, MSc, Robin Burkhalter, MMath, and Vicki Rynard, MSc, of the Propel Centre for Population Health Impact, using datasets made available by Statistics Canada and Health Canada. Statistical guidance for previous editions was provided by K. Stephen Brown, PhD, of the Department of Statistics & Actuarial Science, University of Waterloo. We are also grateful to Rashid Ahmed, PhD, for statistical contributions to previous editions.

This report and the views expressed herein do not necessarily reflect the views or opinions of Statistics Canada or Health Canada.

Please note that unless otherwise stated, all data reported in Sections I, II and IV are for Canadians age 15 and older, from the Canadian Tobacco, Alcohol and Drugs Survey (CTADS)/Canadian Tobacco Use Monitoring Survey (CTUMS), and data reported in Section III are for Canadian youth in grades 7-9, from the Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS)/Youth Smoking Survey (YSS), and age 15-19 from CTADS/CTUMS (p. 112).

The 2019 Edition

This report updates the previous (2017) edition with current data, including the 2017 wave of the Canadian Tobacco, Alcohol and Drugs Survey (CTADS) and the 2016-17 Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS).

NOTE: Prior cycles of the CSTADS/YSS collected data from grade 6 students. The results in this report reflect a reanalysis of the CSTADS/YSS data to include only students in grades 7 to 9, for accurate comparison to CSTADS 2016-17 data.

We welcome your feedback on this report. Please send any comments to the contact below.

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SECTION I: TOBACCO USE AMONG CANADIAN ADULTS



HIGHLIGHTS

In 2017, among Canadians age 15 and older:

15.1% of Canadians (approximately 4.6 million) were current smokers, a significant increase from the 2015 estimate of 13.0% (page 15)

The majority of smokers reported smoking daily (10.8% daily/4.3% non-daily prevalence). (p. 15)

Smoking prevalence was higher among males (16.7%) than females (13.5%). (p. 16)

Prevalence varied by age group, and was highest among adults aged 45 to 54 (19.9%). Prevalence was lowest among youth aged 15 to 19 (7.9%)—the lowest estimate for this age group since monitoring began. (p. 17)

There were significant differences between provinces in smoking prevalence, ranging from 11.8% in PEI to 20.1% in Newfoundland & Labrador. (p. 22)

Daily smokers in Canada smoked an average of 13.7 cigarettes per day. (p. 18)

Average consumption among daily smokers has declined by more than 3 cigarettes per day since 1999. (p. 18)

Male daily smokers consumed nearly 3 more cigarettes per day than females. (p. 18)

Self-rated health varied by smoking status, with never smokers rating their general and mental health better than current smokers. (p. 20-21)

Cigars and cigarillos were the most popular tobacco products other than cigarettes: 1.9% of Canadians reported use in the past 30 days. (p. 47)

Cigar, cigarillo, and chewing tobacco/snuff use was more prevalent among males. (p. 48)

Use of other smoked tobacco products was most prevalent among young adults. (p. 49)

Among users of any non-cigarette tobacco product, the majority (62.0%) had used a flavoured product in the past 30 days. (p. 50)

Approximately one in ten current smokers (9.3%) had smoked a menthol cigarette in the past 30 days. (p. 51)

Canadians purchased over 27 billion cigarettes, down from over 42 billion in 2001. (p. 44)

The vast majority of smokers usually obtained their cigarettes from stores, most often small grocery or corner stores. While <3% usually obtained cigarettes on reserve, **nearly one in ten smokers had purchased from a First Nations reserve** in the last 6 months. (p. 46)

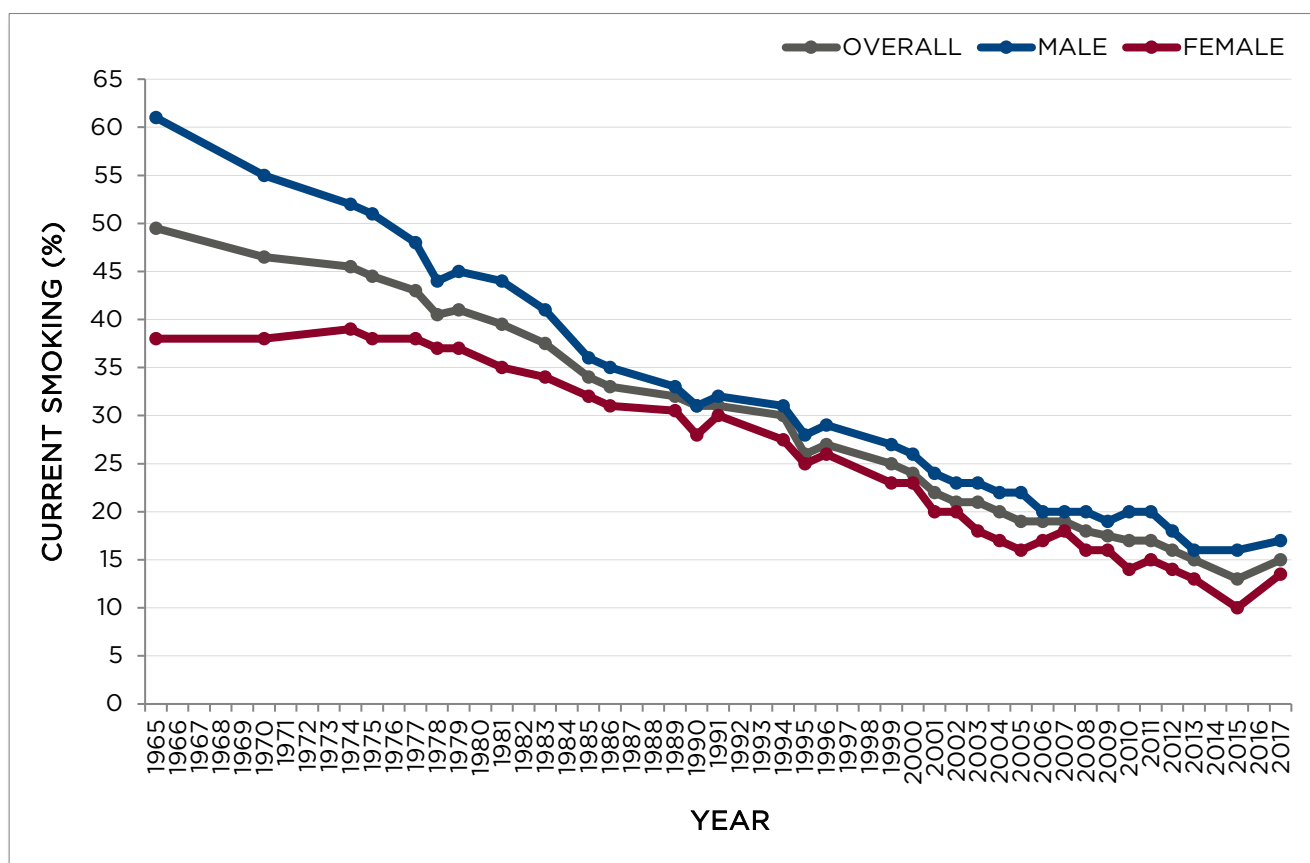
Nearly two-thirds of respondents (63.6%) reported being exposed to secondhand smoke in the past month, including 13.3% who were exposed daily or almost daily. Exposure was most prevalent among males, young people, and current smokers. (p. 52)

1. SMOKING IN CANADA

1.1 HISTORICAL TRENDS IN SMOKING PREVALENCE

Over the past five decades, there has been a remarkable reduction in smoking in Canada: approximately half of Canadians smoked in 1965, compared to just 15.1% in 2017 (Figure 1.1). Overall smoking prevalence has decreased fairly steadily over this time period. Historically large sex differences in smoking prevalence have narrowed over time to within a few percentage points, although smoking has remained more prevalent among males.

FIGURE 1.1: SMOKING PREVALENCE* IN CANADA, ADULTS AGED 15+, 1965-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS

DATA SOURCES: 1965-1986: A CRITICAL REVIEW OF CANADIAN SURVEY DATA ON TOBACCO USE, ATTITUDES AND KNOWLEDGE (HEALTH AND WELFARE CANADA, 1988); 1989-1989: SMOKING BEHAVIOUR OF CANADIANS: A NATIONAL ALCOHOL AND OTHER DRUGS SURVEY REPORT, 1989 (HEALTH AND WELFARE CANADA, 1992); 1990: CANADA'S HEALTH PROMOTION SURVEY 1990: TECHNICAL REPORT (HEALTH AND WELFARE CANADA, 1993); 1991: HEALTH STATUS OF CANADIANS: REPORT OF THE 1991 GENERAL SOCIAL SURVEY (STATISTICS CANADA); 1994: NATIONAL POPULATION HEALTH SURVEY (STATISTICS CANADA); 1995, 1996: GENERAL SOCIAL SURVEY (STATISTICS CANADA) [ALL AS QUOTED IN: PHYSICIANS FOR A SMOKEFREE CANADA, SMOKING IN CANADA, 2008¹]; 1999-2012: CANADIAN TOBACCO USE MONITORING SURVEY (HEALTH CANADA); 2013, 2015, 2017: CANADIAN TOBACCO, ALCOHOL AND DRUGS SURVEY (HEALTH CANADA)

1.2 CURRENT SMOKING PREVALENCE

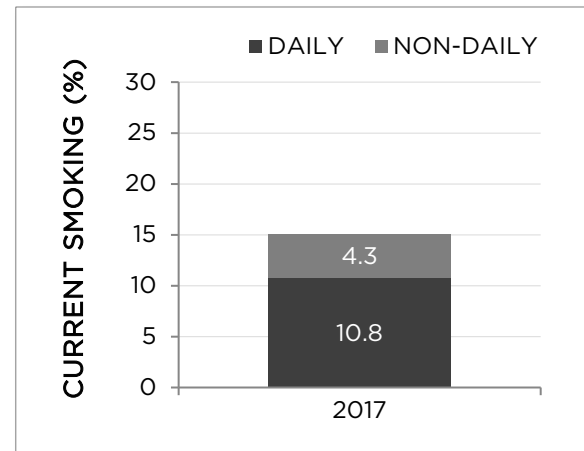
In 2017, the overall prevalence of smoking in Canada was 15.1%, equivalent to approximately 4.6 million Canadians. This represents a significant increase from the 2015 estimate of 13.0%.¹

Approximately 10.8% of Canadians (3.3 million) were daily smokers, while 4.3% (1.3 million) were non-daily smokers (Figure 1.2). Neither daily nor non-daily smoking changed significantly from the 2015 estimates of 9.4% and 3.7%, respectively.^{2,3}

As shown in Figure 1.3, overall smoking prevalence has decreased significantly over time since 1999.⁴ Reduction in daily smoking appears to be responsible for most of the observed decline in smoking rates during this time period, since non-daily smoking has remained relatively constant at around 4%.

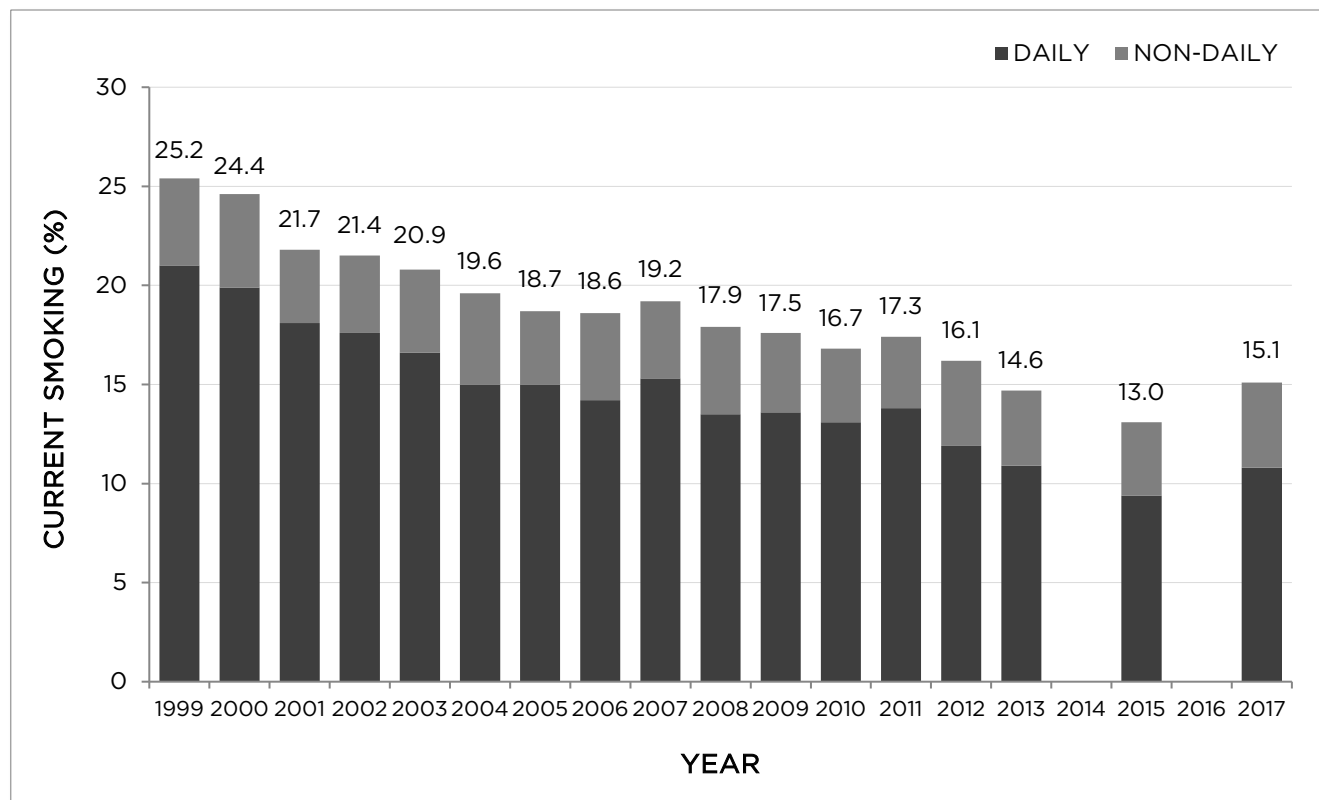
Despite the overall prevalence increase in the most recent survey year, from 1999 to 2017, the overall trend was an average annual decrease in prevalence of 3.2% of the previous year's value.⁵

FIGURE 1.2: CURRENT SMOKING PREVALENCE, ADULTS AGED 15+, 2017



DATA SOURCE: CANADIAN TOBACCO, ALCOHOL AND DRUGS SURVEY (CTADS), 2017

FIGURE 1.3: CURRENT SMOKING PREVALENCE, ADULTS AGED 15+, 1999-2017



DATA SOURCES: CANADIAN TOBACCO USE MONITORING SURVEY (CTUMS), 1999-2012; CTADS, 2013, 2015, 2017

DEMOGRAPHIC PATTERNS IN SMOKING PREVALENCE

Smoking Prevalence by Sex

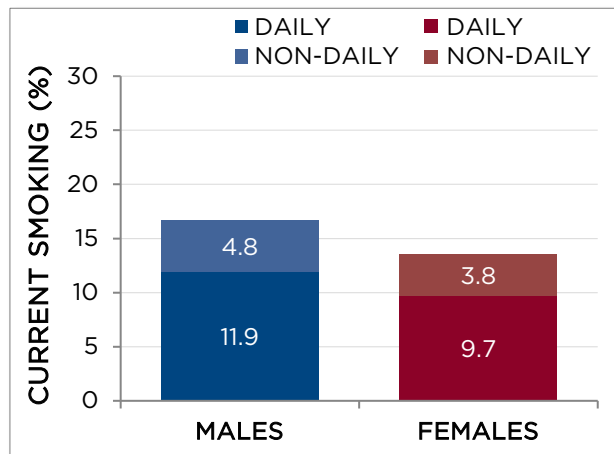
In 2017, 16.7% of males (2.5 million) and 13.5% of females (2.1 million) were current smokers (Figure 1.4).

Overall prevalence was significantly higher among males than females,⁶ although neither daily or non-daily smoking differed significantly by sex.^{7,8}

Between 2015 and 2017, smoking prevalence among females increased significantly,⁹ from 10.4% to 13.5%; however, among males there was no significant change from the 2015 estimate of 16.0%.¹⁰

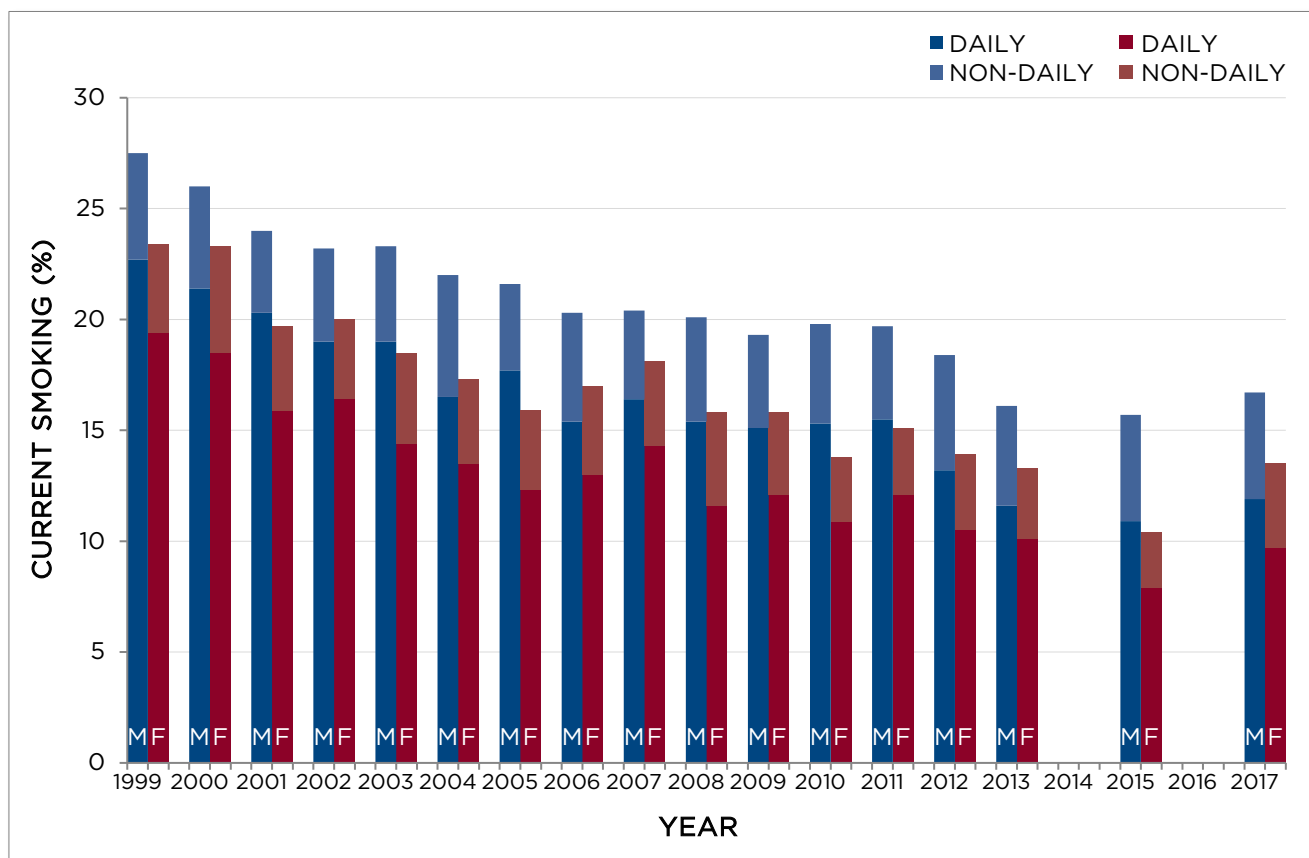
Smoking prevalence estimates were higher among males than females in all survey years from 1999 to 2017, although the magnitude of this difference varied (Figure 1.5).

FIGURE 1.4: CURRENT SMOKING PREVALENCE BY SEX, 2017



DATA SOURCE: CTADS, 2017

FIGURE 1.5: CURRENT SMOKING PREVALENCE BY SEX, 1999-2017



DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Smoking Prevalence by Age

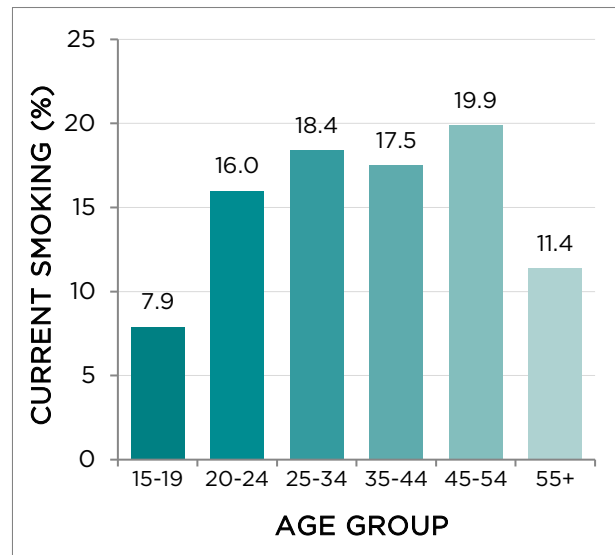
In 2017, smoking varied significantly by age group:¹¹ prevalence was highest among young adults aged 45-54, and lowest among youth aged 15-19 (Figure 1.6).

Between 1999 and 2017, prevalence decreased overall in every age group, though to varying degrees (Figure 1.7). The steepest declines were observed in the youngest groups, ages 15-19 and 20-24; the 2017 estimates for these groups were at their lowest since monitoring began.

Declines were less marked among older age groups, with greater variability from year to year. Among those aged 55 and older, little net change has been observed over the last 15 years.

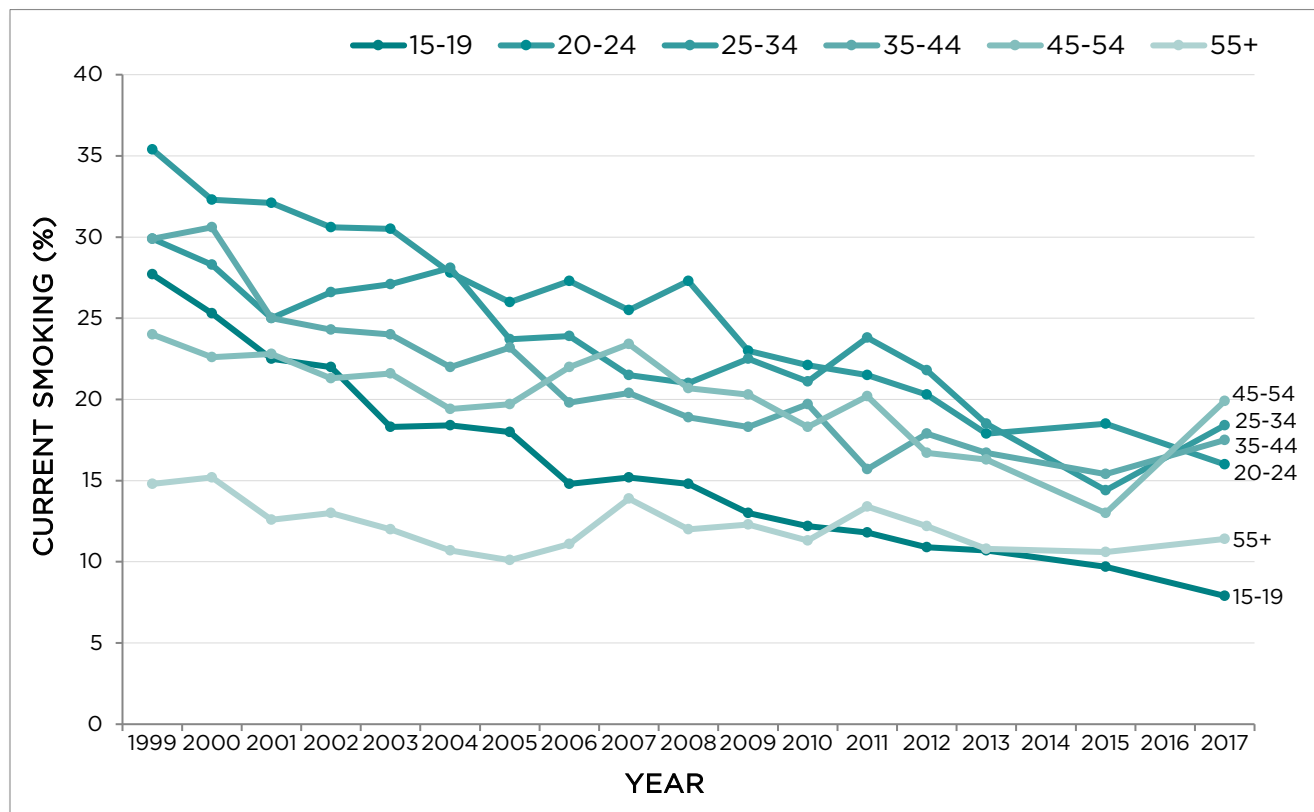
When examining differences between age groups and over time using repeat cross-sectional data such as this, consider that some of the differences between age groups could also be due to cohort effects (as well as age effects), in addition to changes over time.

FIGURE 1.6: CURRENT SMOKING PREVALENCE BY AGE GROUP, 2017



DATA SOURCE: CTADS, 2017

FIGURE 1.7: CURRENT SMOKING PREVALENCE BY AGE GROUP, 1999-2017



DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

1.3 CIGARETTE CONSUMPTION

Average cigarette consumption among daily smokers was 13.7 cigarettes per day (CPD) in 2017, unchanged from the 2015 estimate of 13.8 CPD.¹² From 1999 to 2017, cigarette consumption declined significantly,¹³ by more than 3 cigarettes per day (Figure 1.8). The average rate of decline in cigarette consumption during this time period was 1.2% per year.¹⁴ However, the number of cigarettes per day consumed by daily smokers has remained unchanged since 2013.

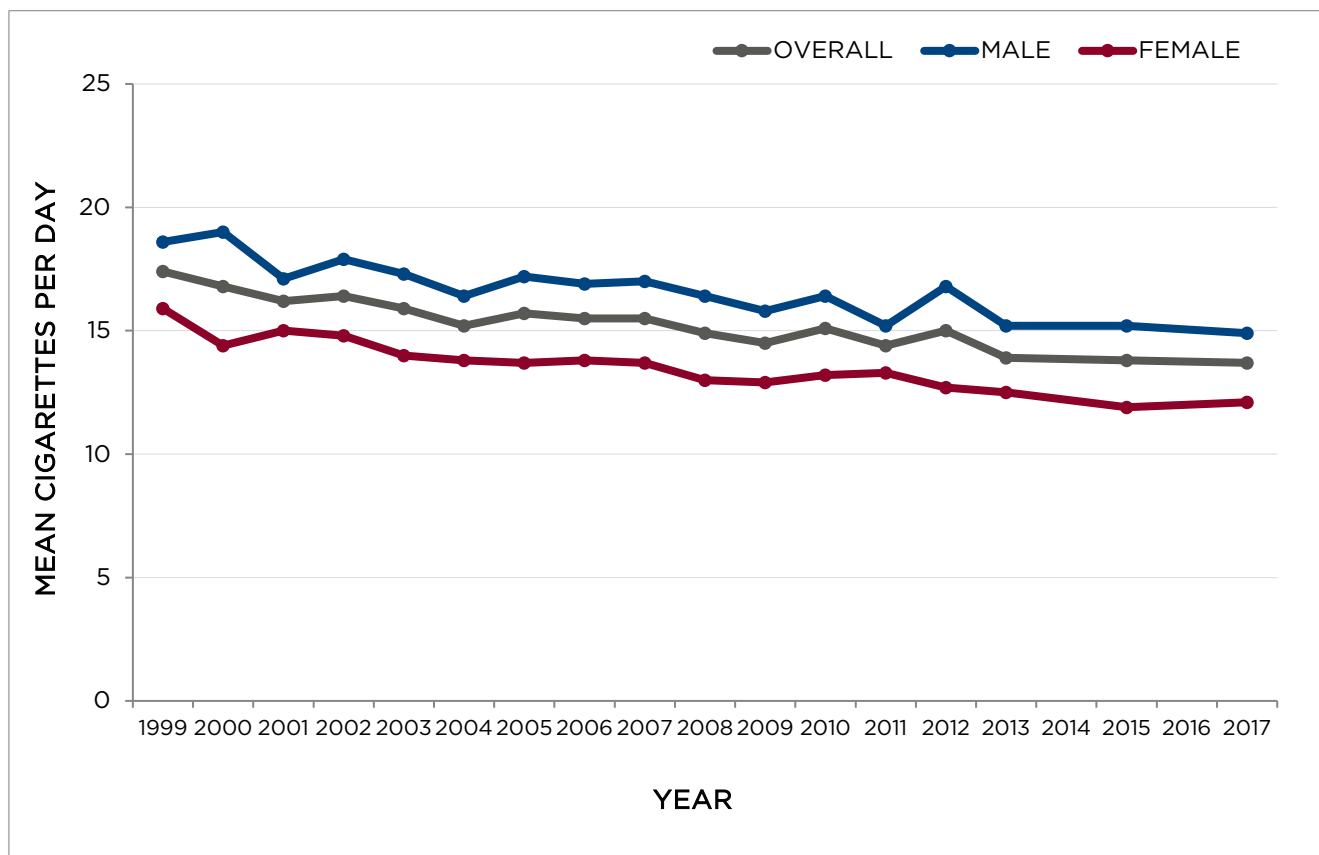
DEMOGRAPHIC PATTERNS IN CIGARETTE CONSUMPTION

Cigarette Consumption by Sex

In 2017, average daily cigarette consumption was significantly higher among male smokers, at 14.9, than among female smokers, at 12.1.¹⁵ Between 2015 and 2017, consumption did not change significantly among either male¹⁶ or female¹⁷ smokers (from 2015 estimates of 15.2 and 11.9, respectively).

During the time period from 1999 to 2017, sex differences appear to have remained relatively stable: males smoked, on average, about 3 cigarettes more per day than females, although this varied somewhat from year to year (Figure 1.8).

FIGURE 1.8: AVERAGE DAILY CIGARETTE CONSUMPTION*, OVERALL AND BY SEX, 1999-2017



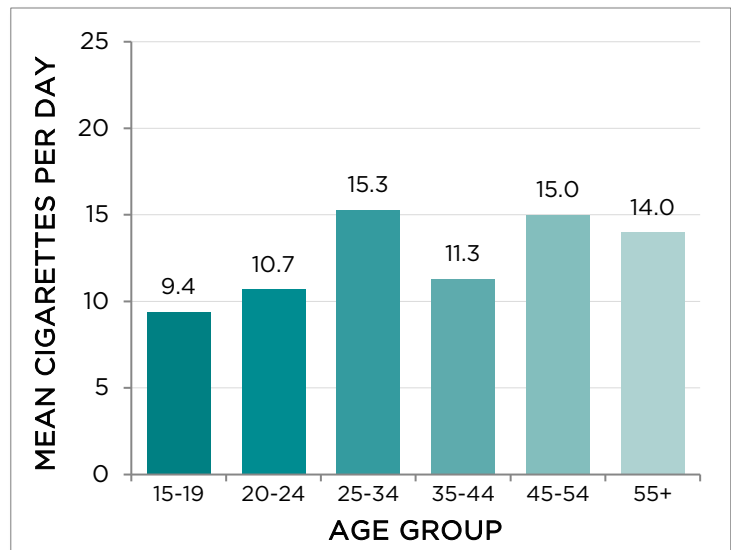
*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Cigarette Consumption by Age

In 2017, average daily cigarette consumption varied significantly between age groups.¹⁸ Consumption was lowest among the youngest smokers, at fewer than 11 cigarettes per day (CPD) for smokers under age 25, and was highest among smokers aged 25-34 and aged 45-54, at around 15 CPD (Figure 1.9).

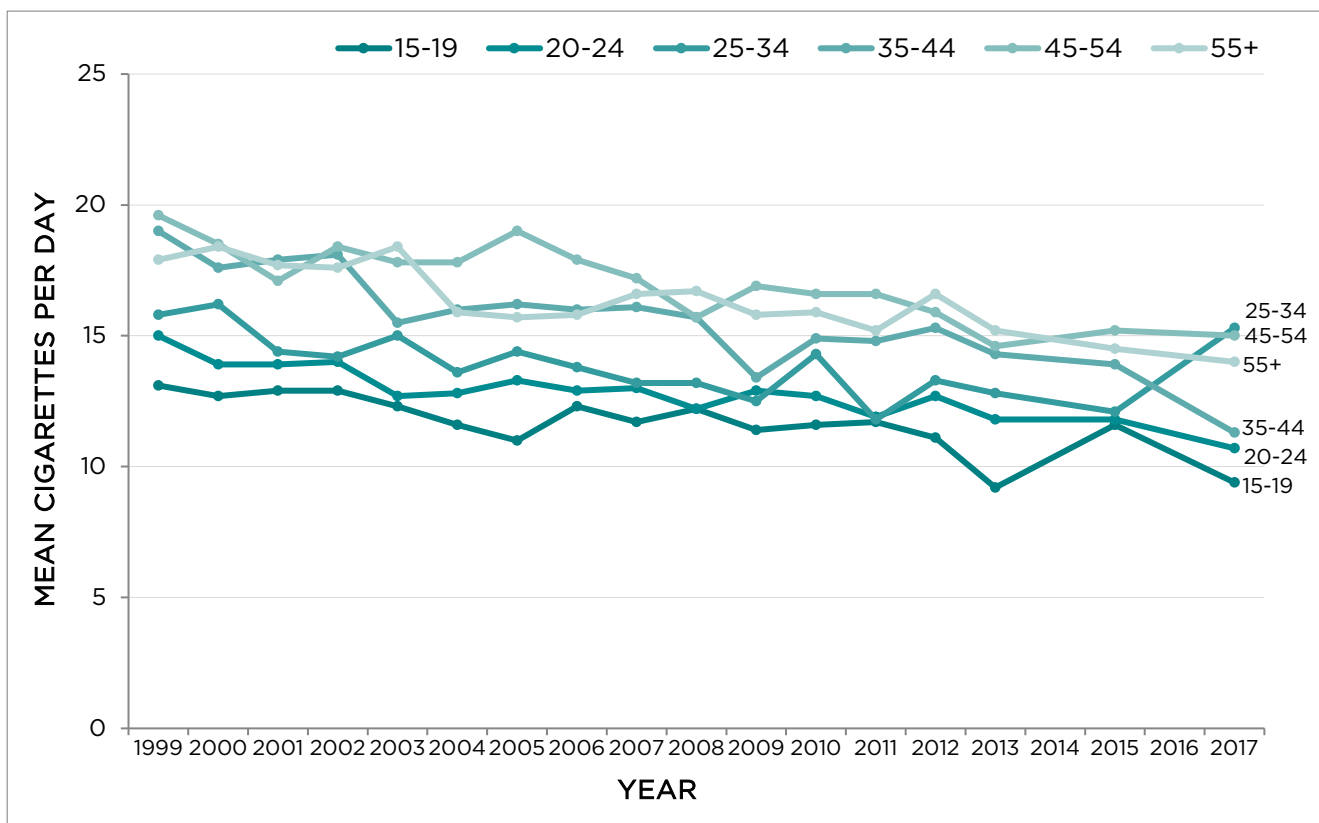
Between 1999 and 2017, average daily cigarette consumption appears to have decreased overall in all age groups, though least among smokers aged 25-34 (Figure 1.10). A general pattern of increasing consumption with age (and often a slight drop after 55) held for most years between 1999 and 2017, although with some variation.

FIGURE 1.9: AVERAGE DAILY CIGARETTE CONSUMPTION* BY AGE GROUP, 2017



*AMONG DAILY SMOKERS
DATA SOURCE: CTADS, 2017

FIGURE 1.10: AVERAGE DAILY CIGARETTE CONSUMPTION* BY AGE GROUP, 1999-2017



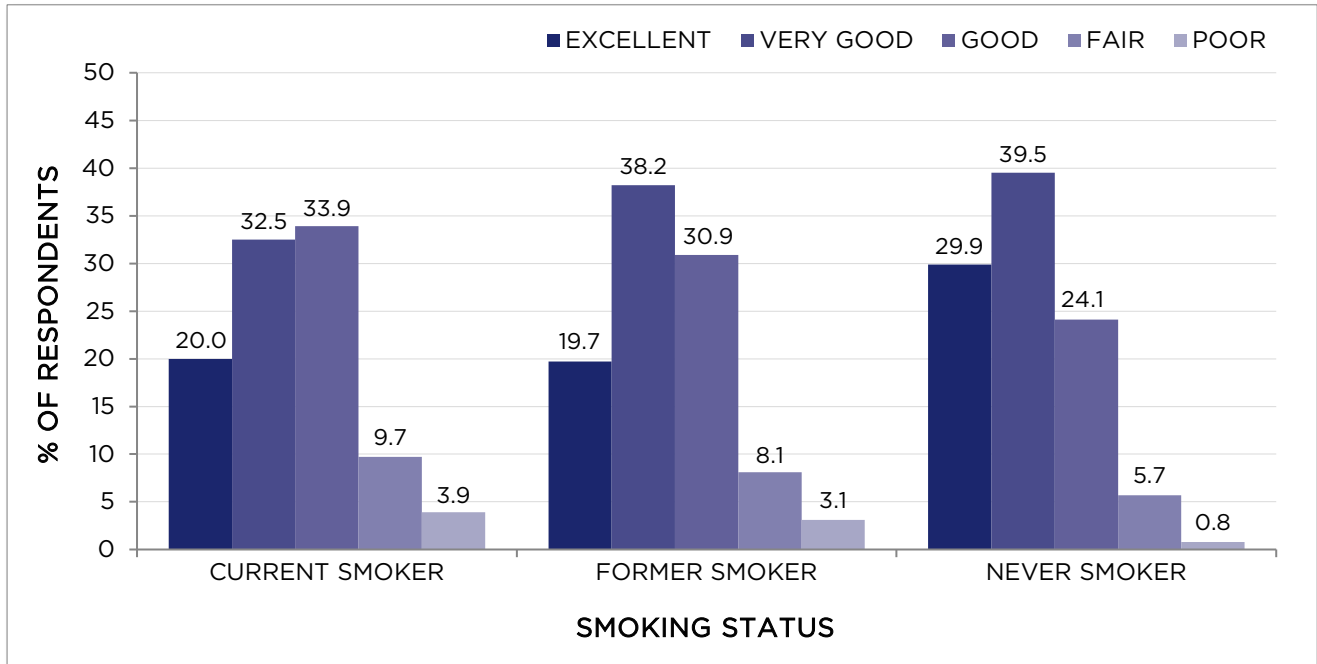
*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

1.4 SMOKING AND SELF-RATED HEALTH

GENERAL HEALTH

CTADS respondents were asked to rate their own health. As shown in Figure 1.11, self-rated health varied significantly by smoking status: around half (52.5%) of current smokers reported “excellent” or “very good” health, compared to 58% of former smokers, and significantly lower than 69% of never smokers.¹⁹

FIGURE 1.11: SELF-RATED GENERAL HEALTH, BY SMOKING STATUS, 2017

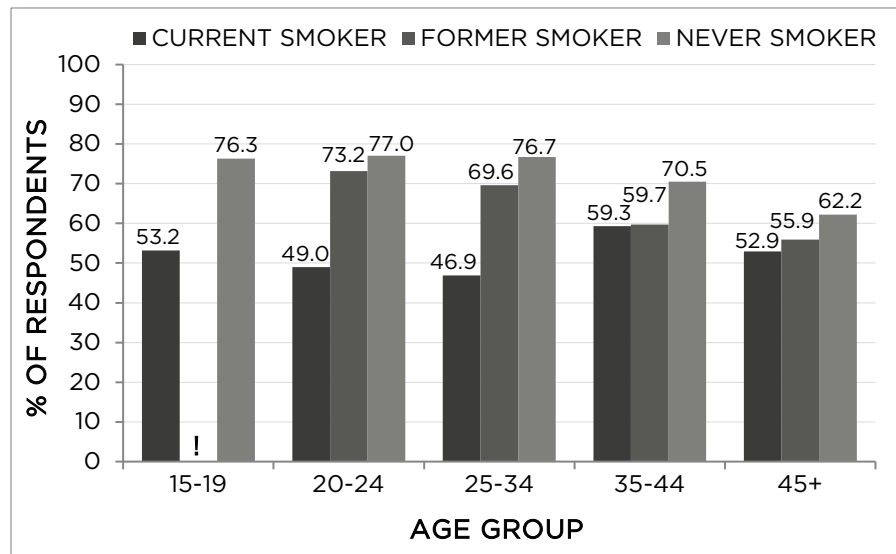


DATA SOURCE: CTADS, 2017

The same pattern was observed among both males and females, with little variation from the overall estimates shown above in Figure 1.11 (*data not shown*).

Self-rated health varied by age; for all age groups except those aged 35-44, a significantly lower proportion of current smokers reported “excellent” or “very good” health, compared to never-smokers²⁰⁻²⁴ (Figure 1.12).

FIGURE 1.12: PERCENTAGE OF RESPONDENTS REPORTING “EXCELLENT” OR “VERY GOOD” HEALTH, BY AGE GROUP AND SMOKING STATUS, 2017

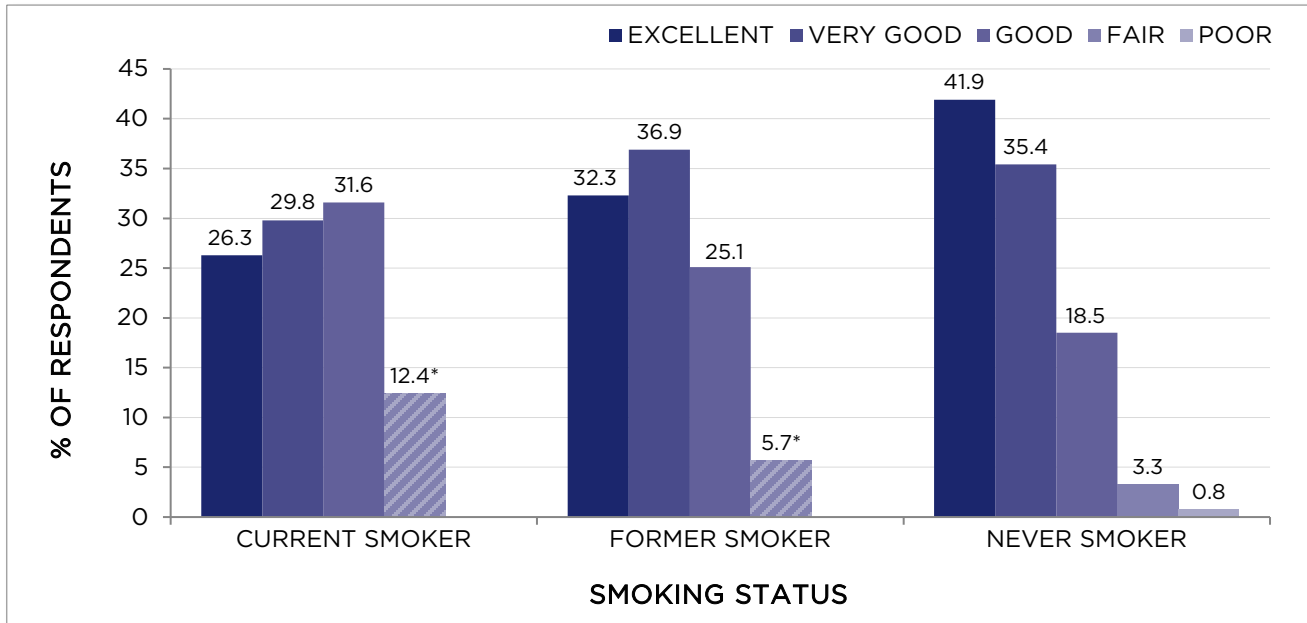


! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

MENTAL HEALTH

Studies in multiple countries have identified an association between smoking and mental health, including a recent Canadian analysis linking smoking with a number of mental health problems, such as anxiety, mood disorders and depression.ⁱⁱⁱ Figure 1.13 (below) shows self-reported ratings of mental health by smoking status. While the proportion of respondents who reported “excellent” or “very good” mental health was high overall, it was significantly lower among current smokers (56%) than former smokers (69%) or never smokers (77%).²⁵

FIGURE 1.13: SELF-RATED MENTAL HEALTH, BY SMOKING STATUS, 2017

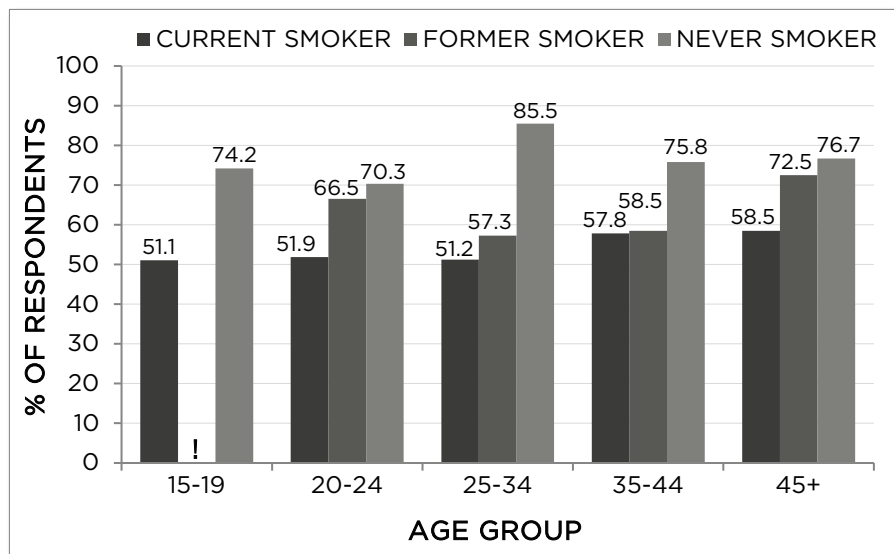


*DATA FOR “FAIR” AND “POOR” COMBINED DUE TO LOW NUMBERS
DATA SOURCE: CTADS, 2017

A similar pattern was observed among both males and females, with little variation from the overall estimates shown above in Figure 1.13 (*data not shown*).

Within each age group, the proportion of respondents reporting “excellent” or “very good” mental health was significantly lower among current smokers than never-smokers²⁶⁻³⁰ (Figure 1.14).

FIGURE 1.14: PERCENTAGE OF RESPONDENTS REPORTING “EXCELLENT” OR “VERY GOOD” MENTAL HEALTH, BY AGE GROUP AND SMOKING STATUS, 2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

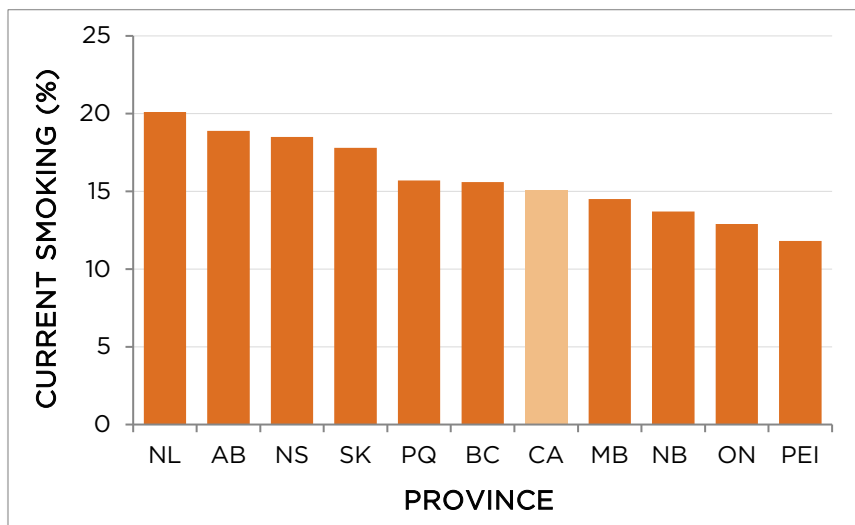
2. SMOKING IN THE PROVINCES

SMOKING PREVALENCE BY PROVINCE

In 2017, there was significant variation in smoking prevalence by province³¹ (Figure 2.1). Current smoking rates ranged from a low of 11.8% in Prince Edward Island to a high of 20.1% in Newfoundland and Labrador.

Between 1999 and 2017, smoking prevalence decreased substantially in all provinces, although not consistently (Table 2.1). There was considerable variation by province in the magnitude of this decline: from nearly 15 percentage points in Quebec, to around 4 in British Columbia (which had the lowest smoking rate throughout most of this time period, until 2017).

FIGURE 2.1: SMOKING PREVALENCE* BY PROVINCE, 2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCE: CTADS, 2017

In many provinces, small increases in smoking prevalence estimates were observed between 2015 and 2017.

TABLE 2.1: SMOKING PREVALENCE* BY PROVINCE, 1999-2017

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
CANADA	25.2	24.4	21.7	21.4	20.9	19.6	18.7	18.6	19.2	17.9	17.5	16.7	17.3	16.1	14.6	13.0	15.1
BRITISH COLUMBIA	20.0	19.6	16.7	16.5	16.4	15.2	14.7	16.4	14.4	14.7	14.9	14.3	14.2	13.2	11.4	10.2	15.6
ALBERTA	26.0	22.6	25.1	22.8	20.0	20.1	20.6	21.3	21.0	20.4	18.0	18.8	17.7	17.4	16.0	15.8	18.9
SASK.	25.9	28.1	25.4	21.2	24.1	21.7	22.0	23.7	24.0	20.4	22.3	21.1	19.2	18.5	17.6	16.9	17.8
MANITOBA	23.3	25.7	25.9	21.1	20.9	20.6	22.3	20.1	19.9	20.8	18.9	20.5	18.7	17.9	17.4	14.8	14.5
ONTARIO	23.2	23.1	19.7	19.7	19.6	18.7	16.4	16.6	18.3	16.8	15.4	15.2	16.3	15.7	12.6	11.3	12.9
QUEBEC	30.3	28.2	24.1	25.8	24.6	22.2	22.2	20.1	21.7	19.1	20.7	17.8	19.8	17.1	17.1	14.2	15.7
NEW BRUNSWICK	26.5	26.6	25.0	21.1	24.3	24.2	21.8	22.6	21.2	19.9	21.3	19.3	18.8	17.3	19.6	14.2	13.7
NOVA SCOTIA	28.9	29.8	24.9	25.3	22.1	20.2	21.0	21.8	20.4	19.7	19.8	20.8	18.1	15.6	19.4	17.8	18.5
PEI	25.6	25.7	25.6	23.1	21.4	21.2	19.9	19.2	18.4	19.2	17.7	16.2	19.1	15.2	17.3	12.9	11.8
NFLD & LABRADOR	28.5	27.7	25.7	24.1	23.0	21.8	20.6	21.7	21.2	20.2	20.7	20.0	19.0	19.7	19.5	18.5	20.1

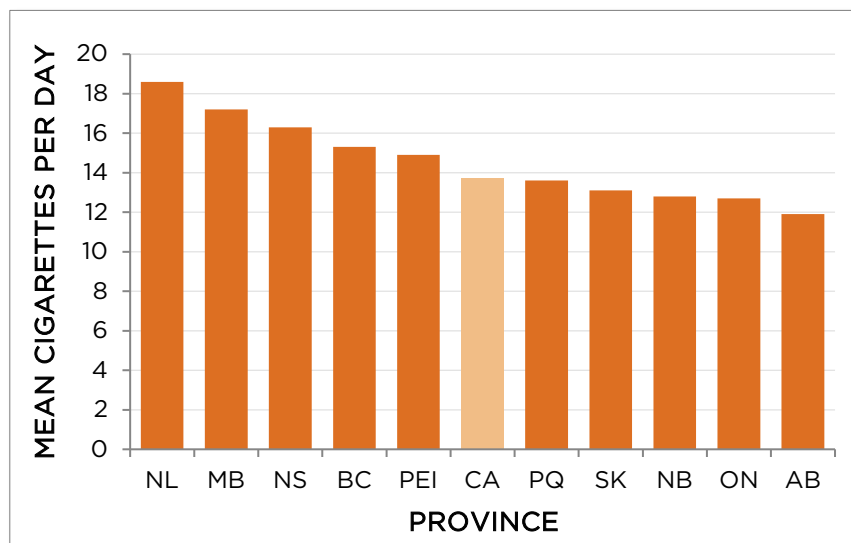
*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION BY PROVINCE

In 2017, average daily cigarette consumption estimates ranged from 11.9 cigarettes per day (CPD) in Alberta to 18.6 CPD in Newfoundland and Labrador (Figure 2.2). However, overall differences in provincial estimates were not statistically significant.³²

Between 1999 and 2017, average daily cigarette consumption appears to have decreased in nearly all provinces, although with little to no progress (and even some increases) in the most recent years in many provinces (Table 2.2). The magnitude of this decline varied by province, with the largest decreases observed in New Brunswick (from 18.3 in 1999 to 12.8 CPD in 2017) and Quebec (from 19.1 in 1999 to 13.6 CPD in 2017).

FIGURE 2.2: AVERAGE DAILY CIGARETTE CONSUMPTION* BY PROVINCE, 2017



*AMONG DAILY SMOKERS
DATA SOURCE: CTADS, 2017

TABLE 2.2: AVERAGE DAILY CIGARETTE CONSUMPTION* BY PROVINCE, 1999-2017

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
CANADA	17.4	16.8	16.2	16.4	15.9	15.2	15.7	15.5	15.5	14.9	14.5	15.1	14.4	15.0	13.9	13.8	13.7
BRITISH COLUMBIA	16.1	14.8	14.6	16.3	15.8	14.5	15.7	15.5	14.5	14.1	13.4	15.0	14.1	12.9	12.9	14.8	15.3
ALBERTA	16.2	16.6	16.3	16.4	14.6	14.4	14.9	15.9	16.1	14.2	13.9	14.9	13.9	13.9	13.4	14.7	11.9
SASK.	16.0	15.3	16.1	16.1	16.0	13.9	14.1	14.6	13.9	14.8	14.4	15.4	14.8	13.8	13.7	13.3	13.1
MANITOBA	15.8	16.7	14.8	15.7	14.7	14.9	14.1	14.0	14.1	13.6	12.9	13.3	14.4	14.1	14.9	10.9	17.2
ONTARIO	16.6	16.9	15.5	15.5	15.5	15.4	15.6	15.4	15.5	15.5	14.2	15.0	13.6	15.8	13.0	13.2	12.7
QUEBEC	19.1	17.6	17.3	17.6	16.8	15.5	16.5	15.6	15.8	14.9	15.4	15.1	15.4	15.7	15.6	14.3	13.6
NEW BRUNSWICK	18.3	19.0	17.6	16.2	16.3	16.7	16.9	15.3	17.3	15.5	16.1	17.4	16.3	15.2	14.3	15.5	12.8
NOVA SCOTIA	18.1	17.7	15.3	17.4	15.1	14.9	15.5	16.4	15.2	15.5	15.1	16.7	15.3	13.8	14.0	12.9	16.3
PEI	17.2	17.7	17.5	16.8	16.4	16.1	16.1	15.3	16.5	14.7	15.2	17.1	15.5	15.6	14.6	14.7	14.9
NFLD & LABRADOR	17.2	15.5	16.7	16.2	16.1	14.6	15.5	16.0	14.1	14.1	15.4	14.5	14.5	15.2	13.1	14.0	18.6

*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.1 BRITISH COLUMBIA

SMOKING PREVALENCE

In 2017, smoking prevalence in British Columbia was 15.6%, slightly above the national average of 15.1%.

Figure 2.3 (below) shows smoking prevalence, overall and by sex, in British Columbia from 1999-2017. Overall, it appears that prevalence slowly declined in this time period, except for an uptick in the most recent year; it is unclear whether this is an anomaly or whether it represents a changing trend. Males had similar or greater prevalence than females in all years observed until 2017.

BRITISH COLUMBIA IN 2017

Smoking prevalence: 15.6% (633 000 smokers)
» compared to 10.2% in 2015

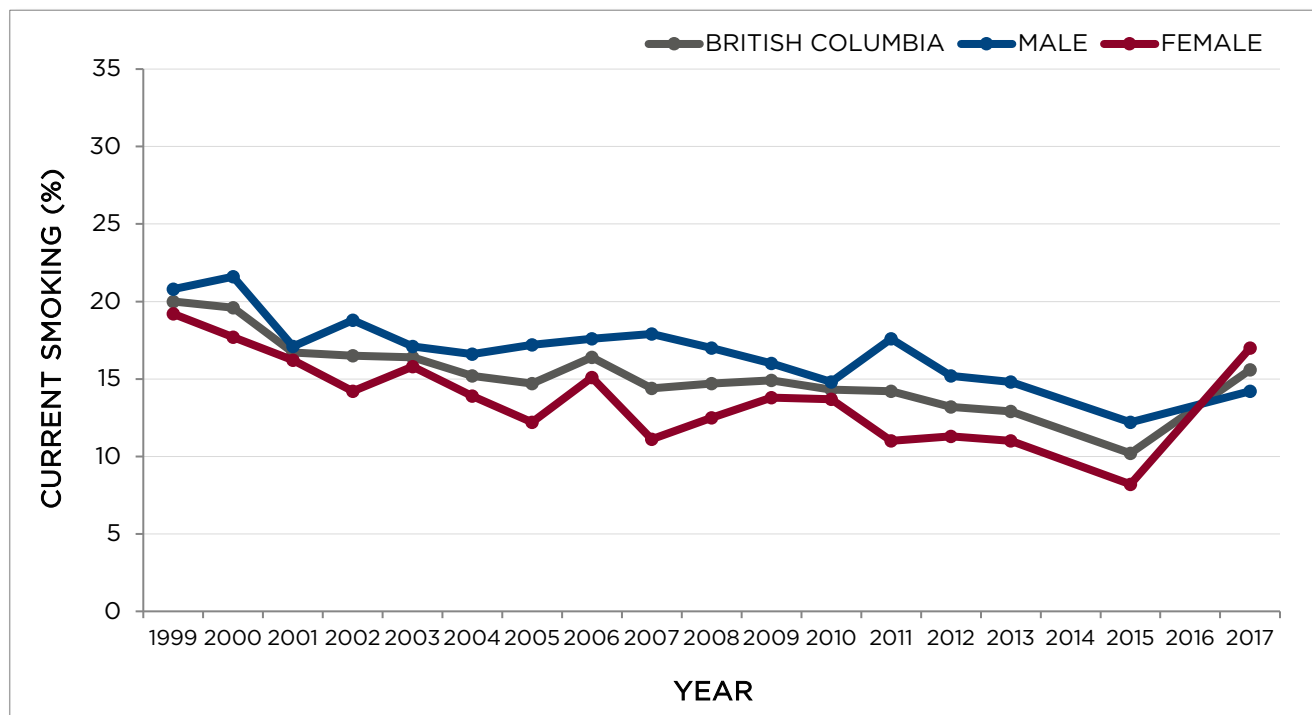
- Males: 14.2% (283 000 smokers)
- Females: 17.0% (350 000 smokers)

Average daily cigarette consumption: 15.3 CPD
» compared to 14.8 CPD in 2015

- Males: 14.4 CPD
- Females: 16.3 CPD

Average price per carton^{iv} (200 cig): \$100.64

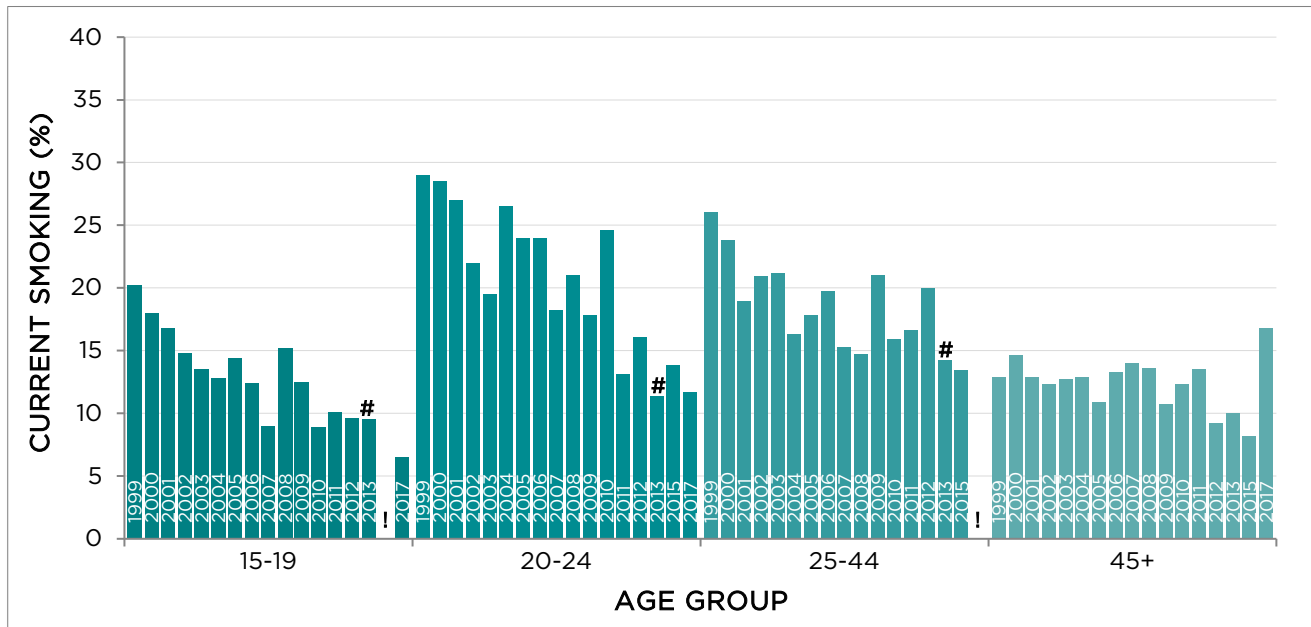
FIGURE 2.3: CURRENT SMOKING PREVALENCE* BY SEX, BRITISH COLUMBIA, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.4 (next page) shows smoking prevalence by age group in British Columbia, from 1999-2017. During this time period, there was a net decrease in smoking prevalence in all age groups except those over 45. In 2017, prevalence appears to have jumped among those over 45, but as with the overall trend noted above, it is unclear whether this represents an anomaly or a changing trend in this age group.

FIGURE 2.4: CURRENT SMOKING PREVALENCE* BY AGE GROUP, BRITISH COLUMBIA, 1999-2017

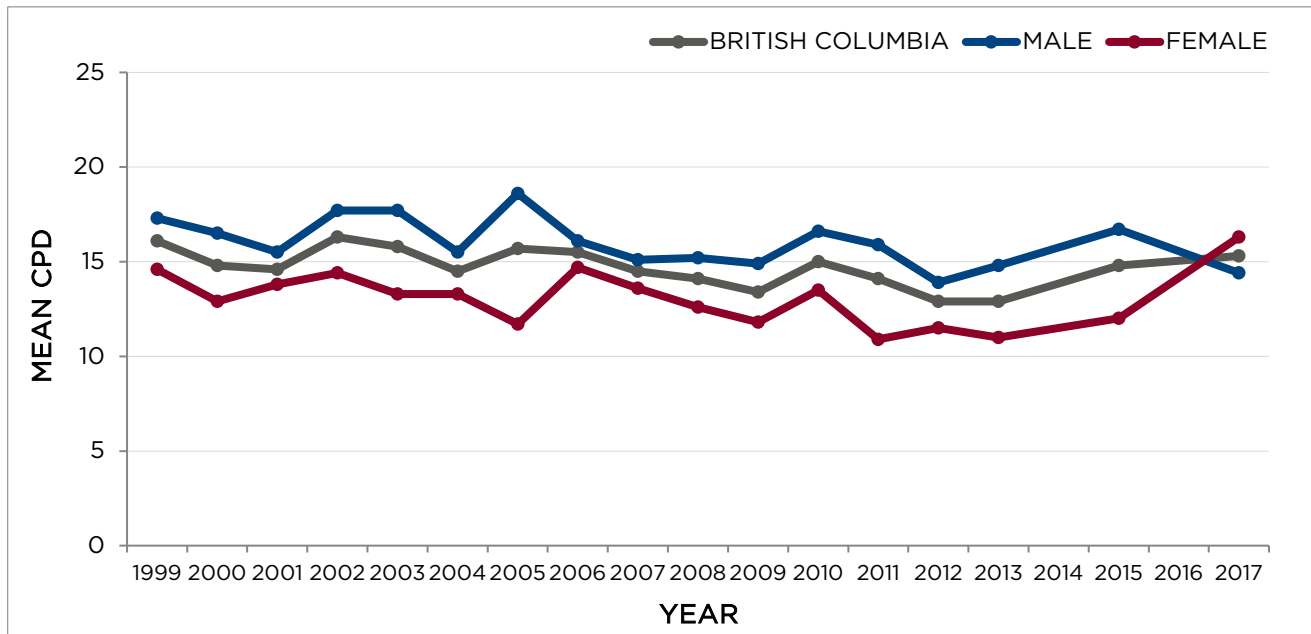


*INCLUDES DAILY AND NON-DAILY SMOKERS
 #CAUTION: THESE ESTIMATES DO NOT MEET STATISTICS CANADA'S QUALITY STANDARDS. CONCLUSIONS BASED ON THESE DATA WILL BE UNRELIABLE, AND MOST LIKELY INVALID.
 ! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
 DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, there has been little net change in average daily cigarette consumption in British Columbia (Figure 2.5). Cigarette consumption estimates were greater among males than females in all years except 2017, though the magnitude of this difference varied from year to year.

FIGURE 2.5: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, BRITISH COLUMBIA, 1999-2017



*AMONG DAILY SMOKERS
 DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.2 ALBERTA

SMOKING PREVALENCE

In 2017, smoking prevalence in Alberta was 18.9%, well above the national average of 15.1%.

Figure 2.6 (below) shows smoking prevalence, overall and by sex, in Alberta from 1999-2017. Prevalence has declined substantially overall, although little progress was made for several years around the mid-2000s or in the most recent survey years. Males had similar or greater prevalence compared to females in most of the years observed.

ALBERTA IN 2017

Smoking prevalence: 18.9% (656 000 smokers)
» compared to 15.8% in 2015

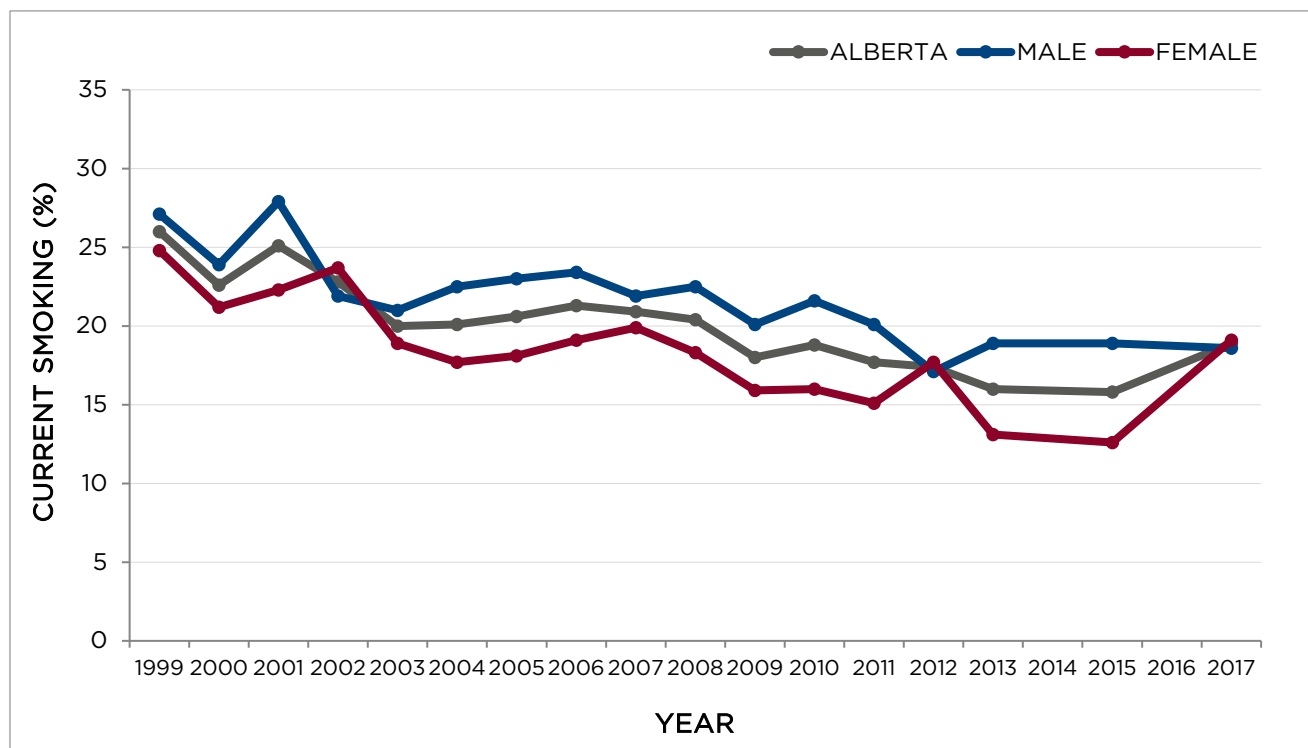
- Males: 18.6% (328 000 smokers)
- Females: 19.1% (328 000 smokers)

Average daily cigarette consumption: 11.9 CPD
» compared to 14.7 CPD in 2015

- Males: 13.8 CPD
- Females: 10.0 CPD

Average price per carton^{iv} (200 cig): \$101.65

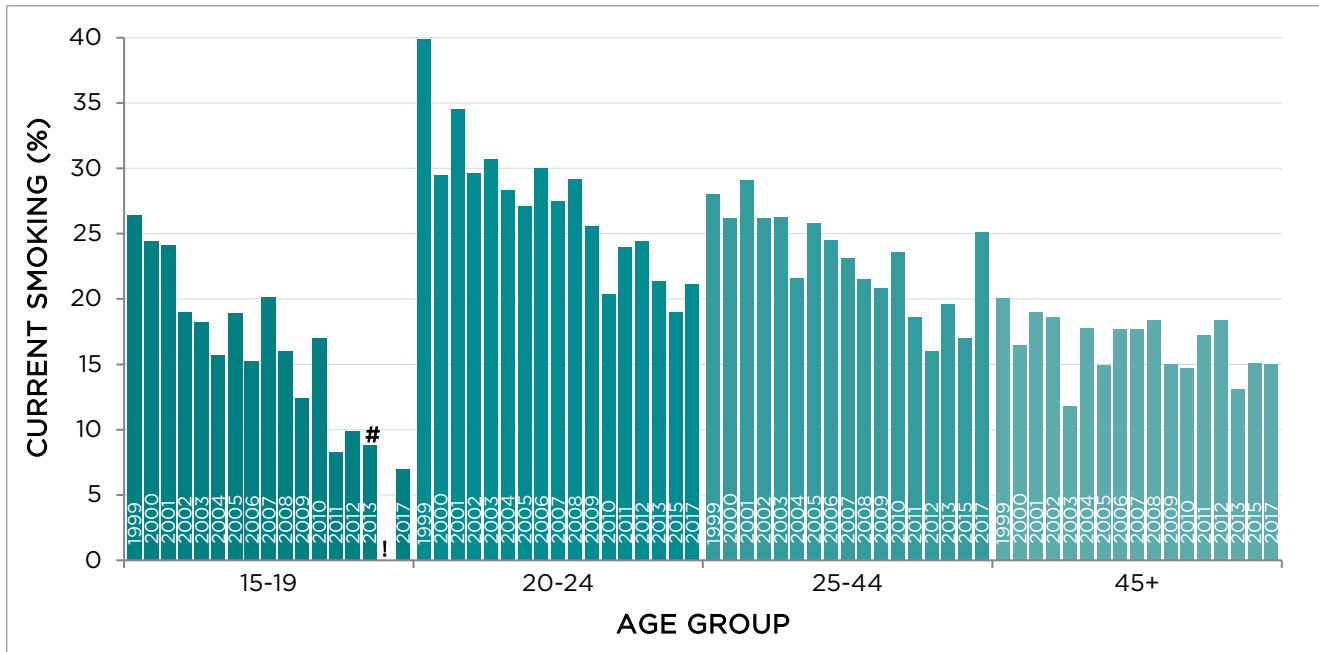
FIGURE 2.6: CURRENT SMOKING PREVALENCE* BY SEX, ALBERTA, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.7 (next page) shows smoking prevalence by age group in Alberta, from 1999-2017. During this time, there was a net decrease in smoking prevalence in all age groups. However, declines in smoking were particularly steep among youth and young adults, with less change among older age groups.

FIGURE 2.7: CURRENT SMOKING PREVALENCE* BY AGE GROUP, ALBERTA, 1999-2017

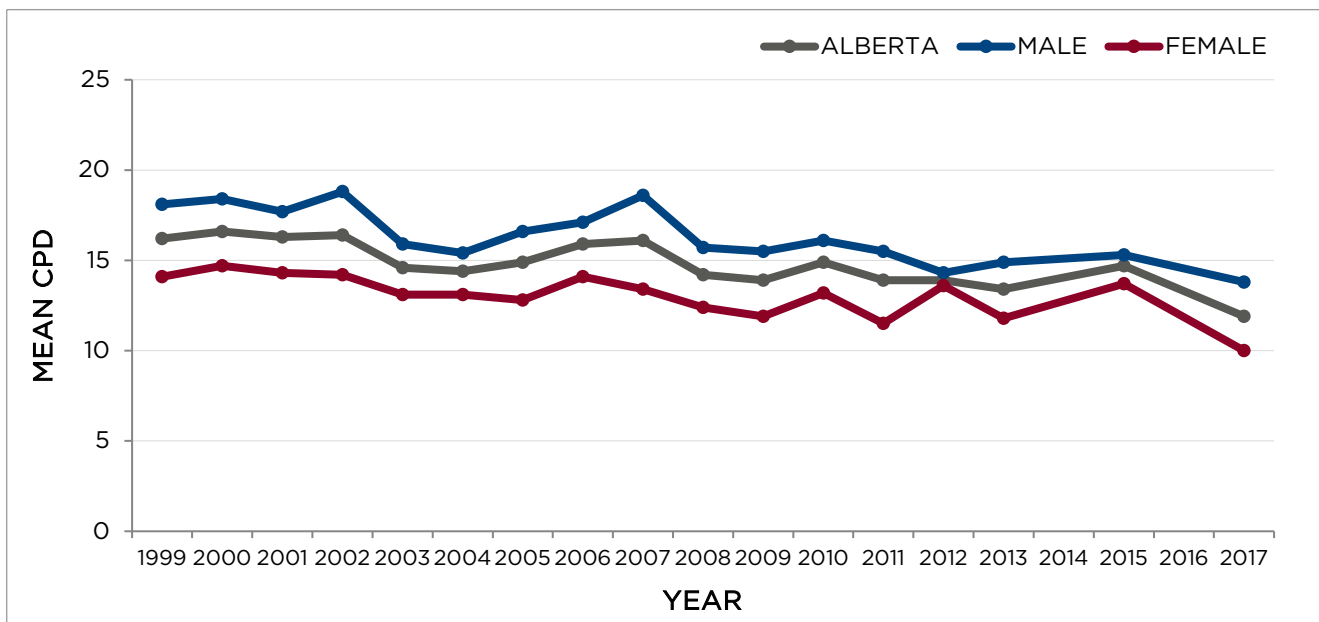


*INCLUDES DAILY AND NON-DAILY SMOKERS
#CAUTION: THESE ESTIMATES DO NOT MEET STATISTICS CANADA'S QUALITY STANDARDS. CONCLUSIONS BASED ON THESE DATA WILL BE UNRELIABLE, AND MOST LIKELY INVALID.
 ! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in Alberta fluctuated around 15 for many years, but appears to have decreased slightly overall (Figure 2.8). Male smokers consumed 3-4 cigarettes more per day than female smokers in most years.

FIGURE 2.8: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, ALBERTA, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.3 SASKATCHEWAN SMOKING PREVALENCE

In 2017, smoking prevalence in Saskatchewan was 17.8%, above the national average of 15.1%.

Figure 2.9 (below) shows smoking prevalence, overall and by sex, in Saskatchewan from 1999-2017. Despite considerable year-to-year variation, there appears to have been a net decrease in overall prevalence during this time, and a downward trend over the last decade. Throughout this time, prevalence was similar or somewhat greater among males in most years, although sex differences varied by year.

SASKATCHEWAN IN 2017

Smoking prevalence: 17.8% (164 000 smokers)
» compared to 16.9% in 2015

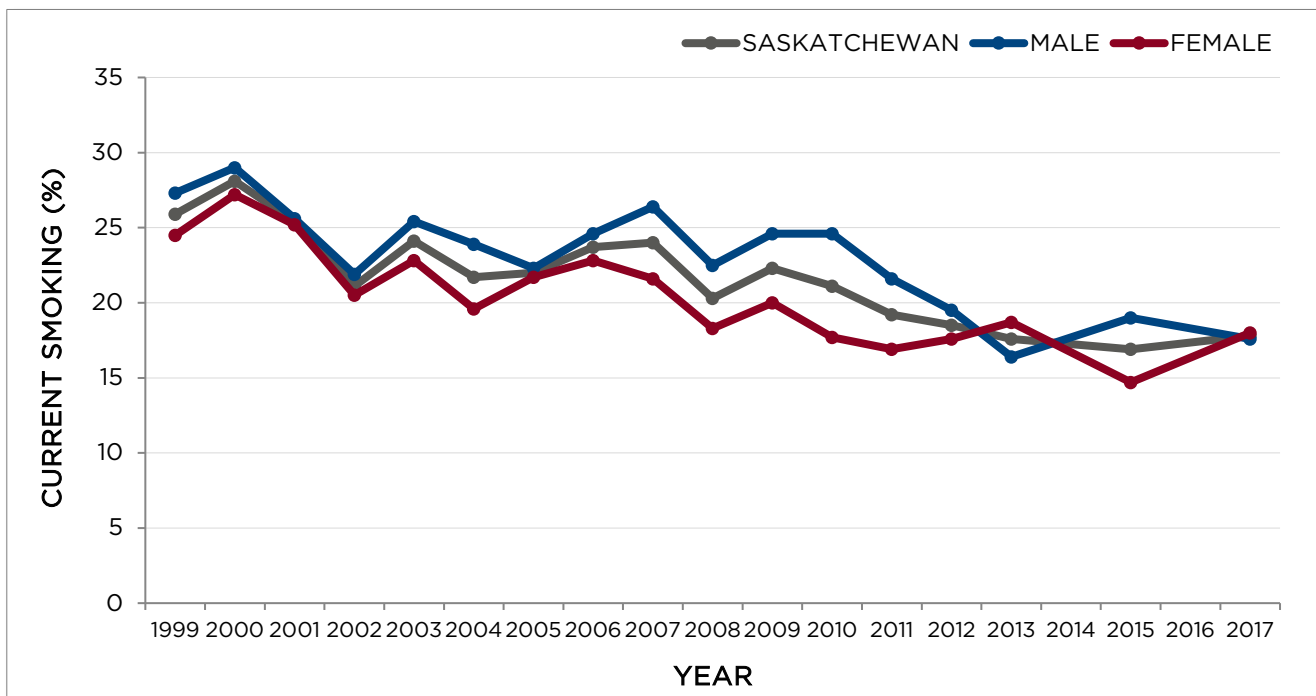
- Males: 17.6% (82 000 smokers)
- Females: 18.0% (82 000 smokers)

Average daily cigarette consumption: 13.1 CPD
» compared to 13.3 CPD in 2015

- Males: 17.0 CPD
- Females: 10.1 CPD

Average price per carton^{iv} (200 cig): \$125.04

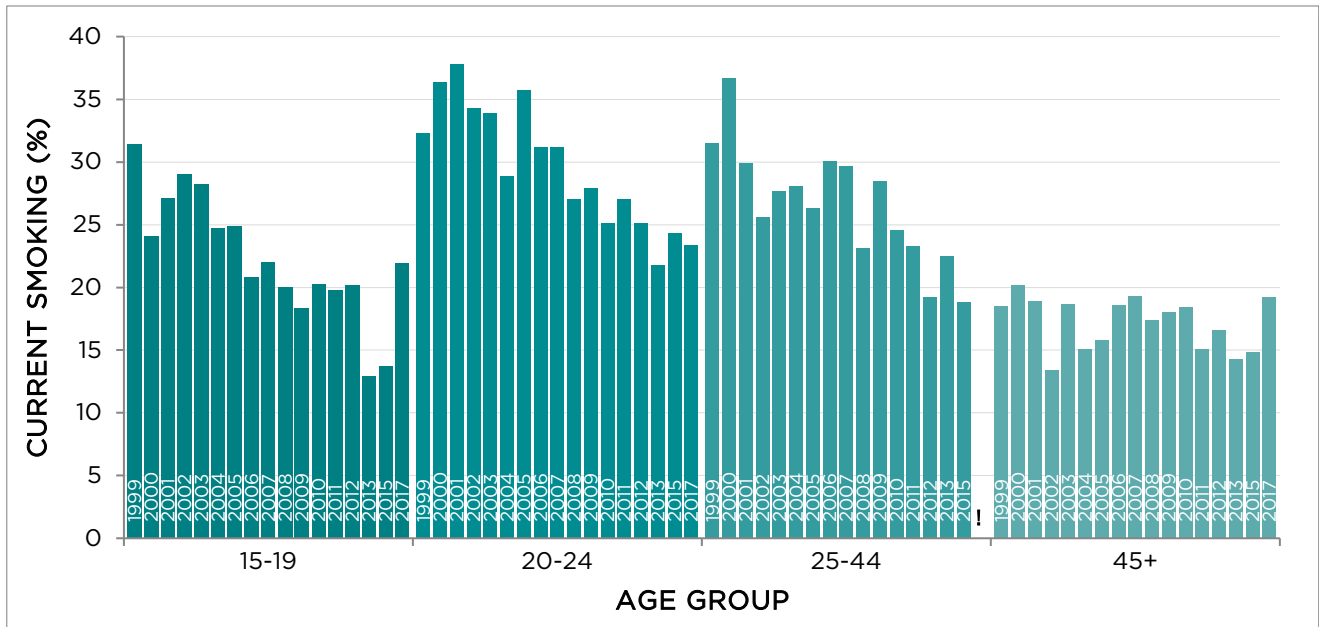
FIGURE 2.9: CURRENT SMOKING PREVALENCE* BY SEX, SASKATCHEWAN, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.10 (next page) shows smoking prevalence by age group in Saskatchewan, from 1999-2017. Although smoking rates fluctuated, there was a net decrease in prevalence within all age groups except those over 45. In the most recent survey year, prevalence appeared to increase in both the youngest and oldest age groups.

FIGURE 2.10: CURRENT SMOKING PREVALENCE* BY AGE GROUP, SASKATCHEWAN, 1999-2017

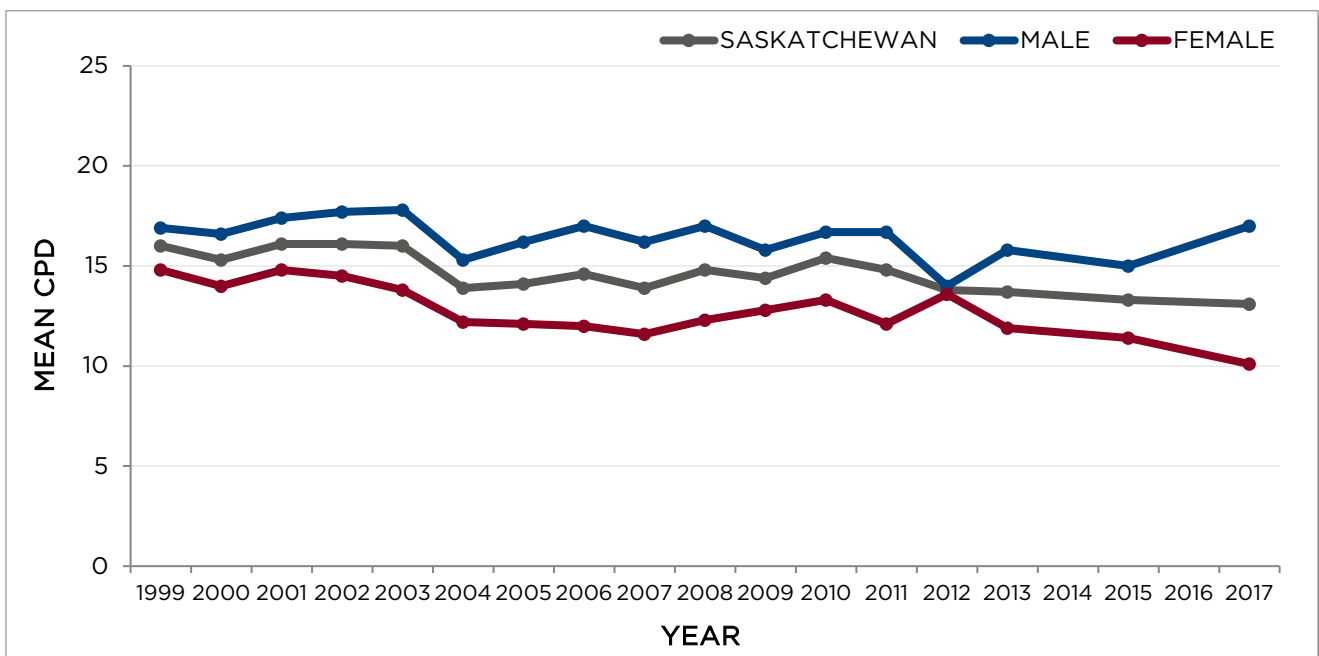


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in Saskatchewan remained near 15 for many years, but appears to have slowly declined over the most recent years (Figure 2.11). Male smokers consumed considerably more cigarettes per day than females in nearly all years.

FIGURE 2.11: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, SASKATCHEWAN, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.4 MANITOBA

SMOKING PREVALENCE

In 2017, smoking prevalence in Manitoba was 14.5%, just below the national average of 15.1%.

Figure 2.12 (below) shows smoking prevalence, overall and by sex, in Manitoba from 1999-2017. While there has been a considerable net decrease during this time, there was little overall change for most of the 2000s; prevalence has declined fairly steadily since 2010. Prevalence was greater among males than females in most years, although similar in a few instances.

MANITOBA IN 2017

Smoking prevalence: 14.5% (154 000 smokers)
» compared to 17.4% in 2015

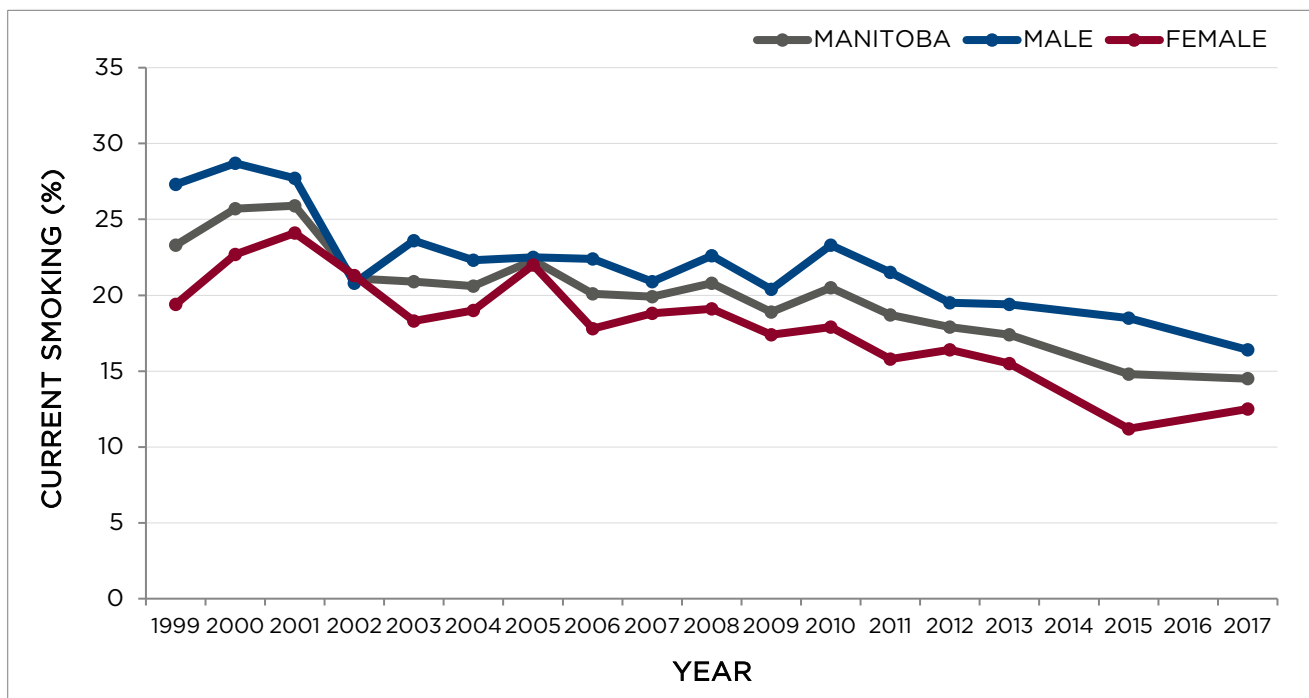
- Males: 16.4% (87 000 smokers)
- Females: 12.5% (67 000 smokers)

Average daily cigarette consumption: 17.2 CPD
» compared to 10.9 CPD in 2015

- Males: 19.0 CPD
- Females: 13.9 CPD

Average price per carton^{iv} (200 cig): \$135.40

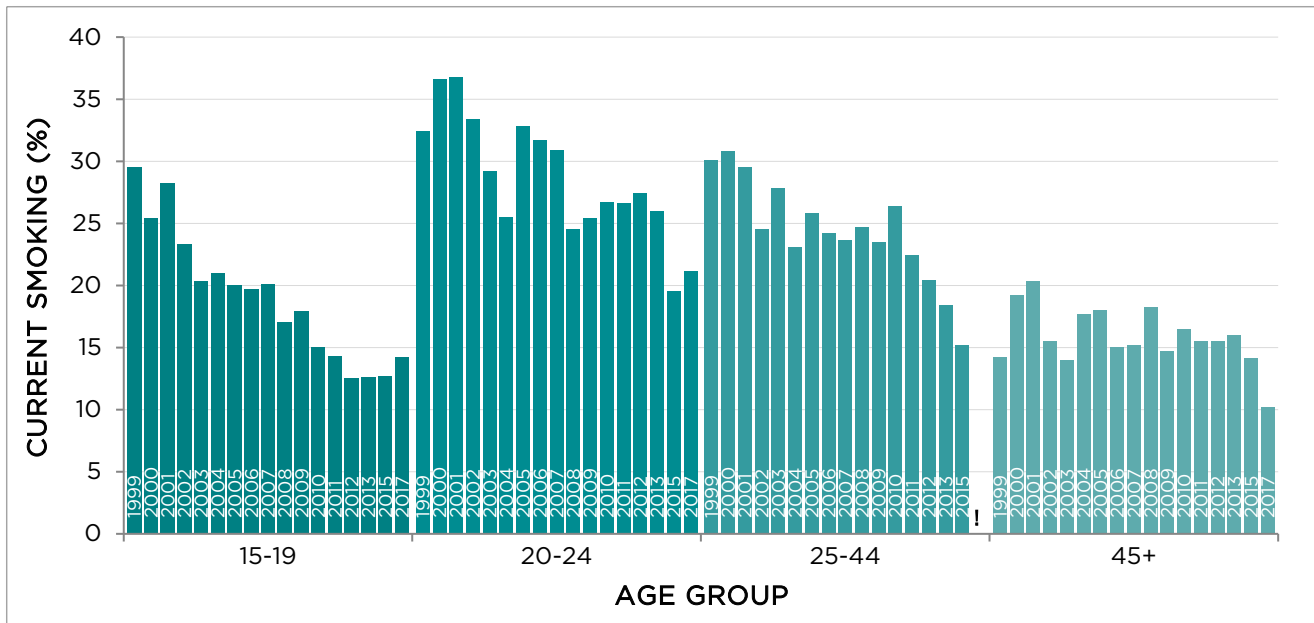
FIGURE 2.12: CURRENT SMOKING PREVALENCE* BY SEX, MANITOBA, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.13 (next page) shows smoking prevalence by age group in Manitoba, from 1999-2017. Over this time, smoking prevalence decreased in all age groups, though very little among those over 45. The largest decrease observed was among those aged 15-19, for whom prevalence approximately halved during this time period. In the most recent years, prevalence appears to have decreased steadily among those aged 25-44.

FIGURE 2.13: CURRENT SMOKING PREVALENCE* BY AGE GROUP, MANITOBA, 1999-2017

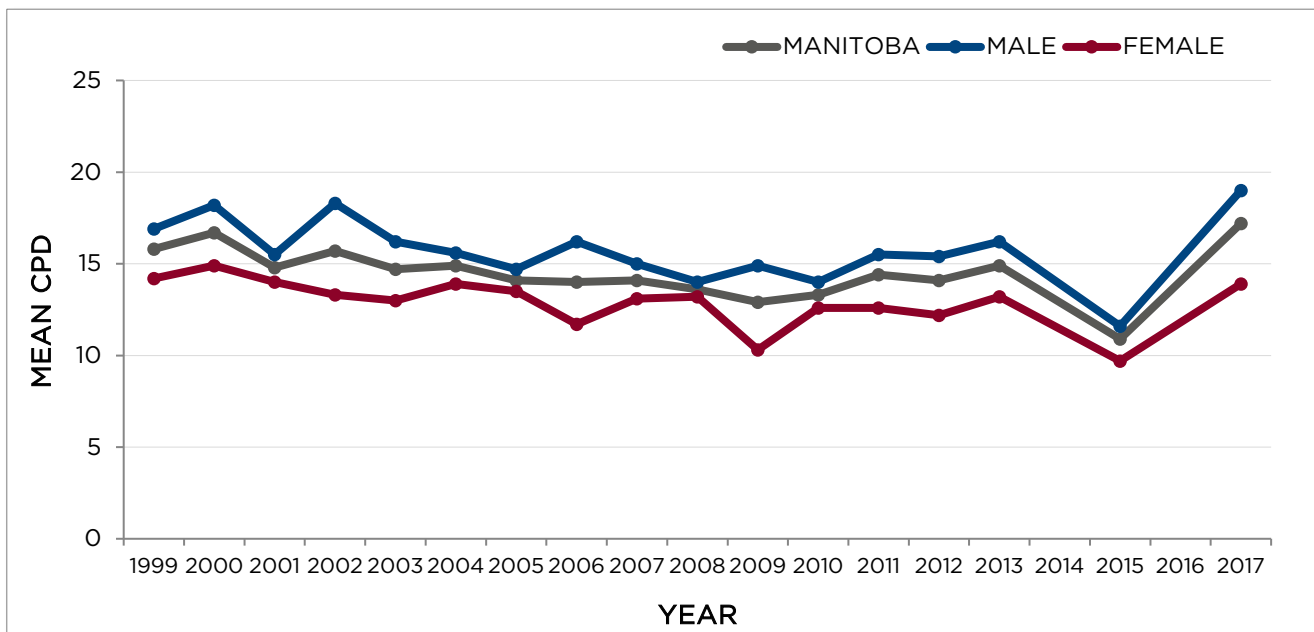


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in Manitoba appeared to decrease slowly for the first decade; however, consumption has since increased somewhat, with the exception of a substantial dip in 2015 (Figure 2.14). Male smokers consumed more cigarettes per day than female smokers in all years, although the magnitude of this difference varied by year and was very small in some cases.

FIGURE 2.14: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, MANITOBA, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.5 ONTARIO

SMOKING PREVALENCE

In 2017, smoking prevalence in Ontario was 12.9%, below the national average of 15.1%.

Figure 2.15 (below) shows smoking prevalence, overall and by sex, in Ontario from 1999-2017. During this time, while overall prevalence decreased substantially, there were several periods of little change. Prevalence estimates were greater among males than females in all years observed; however, the magnitude of this difference varied widely from year to year, from similar rates to a difference of 10 percentage points.

ONTARIO IN 2017

Smoking prevalence: 12.9% (1 516 000 smokers)
» compared to 11.3% in 2015

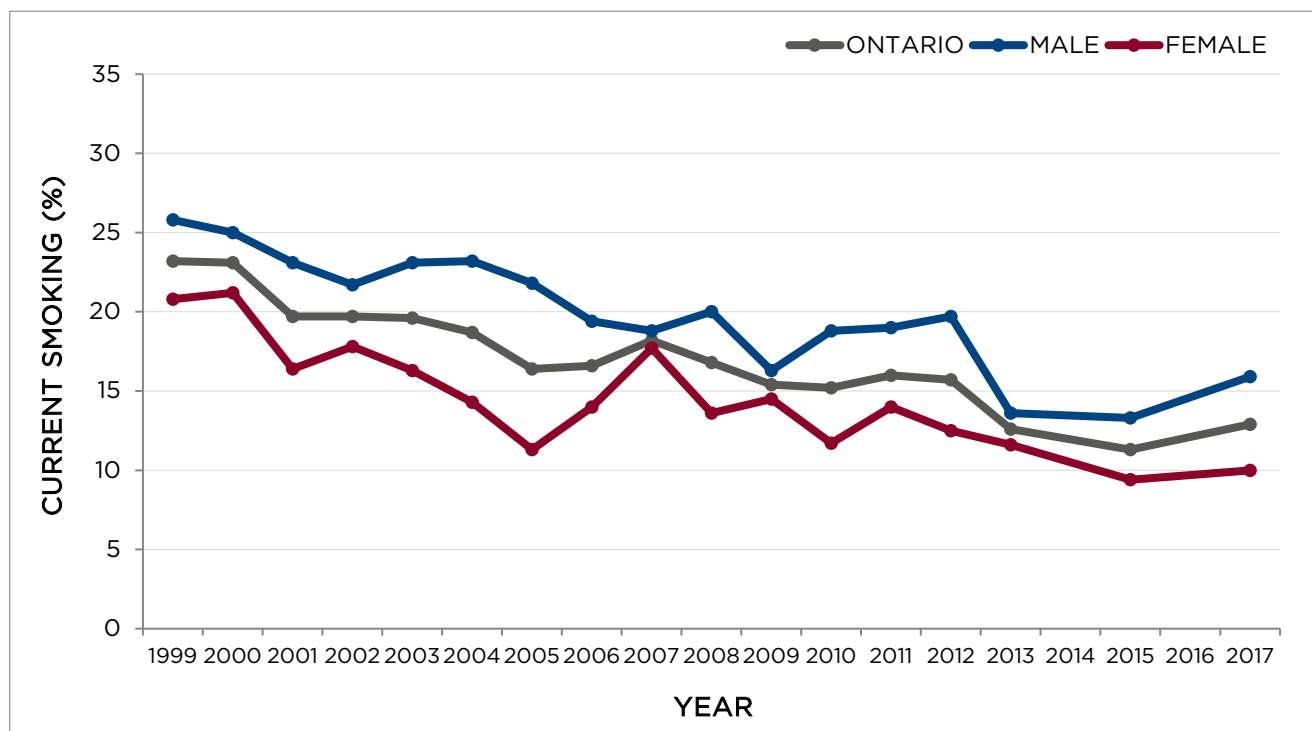
- Males: 15.9% (913 000 smokers)
- Females: 10.0% (604 000 smokers)

Average daily cigarette consumption: 12.7 CPD
» compared to 13.2 CPD in 2015

- Males: 13.7 CPD
- Females: 11.2 CPD

Average price per carton^{iv} (200 cig): \$99.98

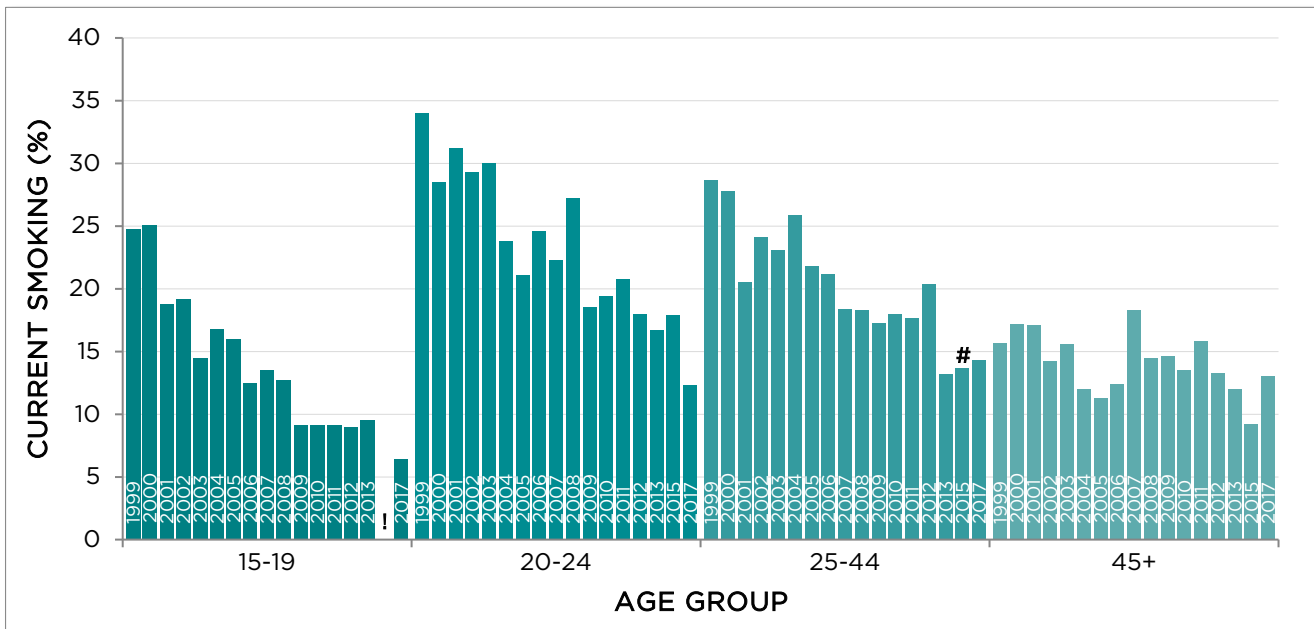
FIGURE 2.15: CURRENT SMOKING PREVALENCE* BY SEX, ONTARIO, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.16 (next page) shows smoking prevalence by age group in Ontario, from 1999-2017. During this time period, prevalence estimates decreased by at least half in all age groups under 45. Declines were particularly large among youth aged 15-19 and young adults aged 20-24. In the most recent survey year, estimates appeared to increase slightly among older age groups, while continuing to decline among youth and young adults.

FIGURE 2.16: CURRENT SMOKING PREVALENCE* BY AGE GROUP, ONTARIO, 1999-2017

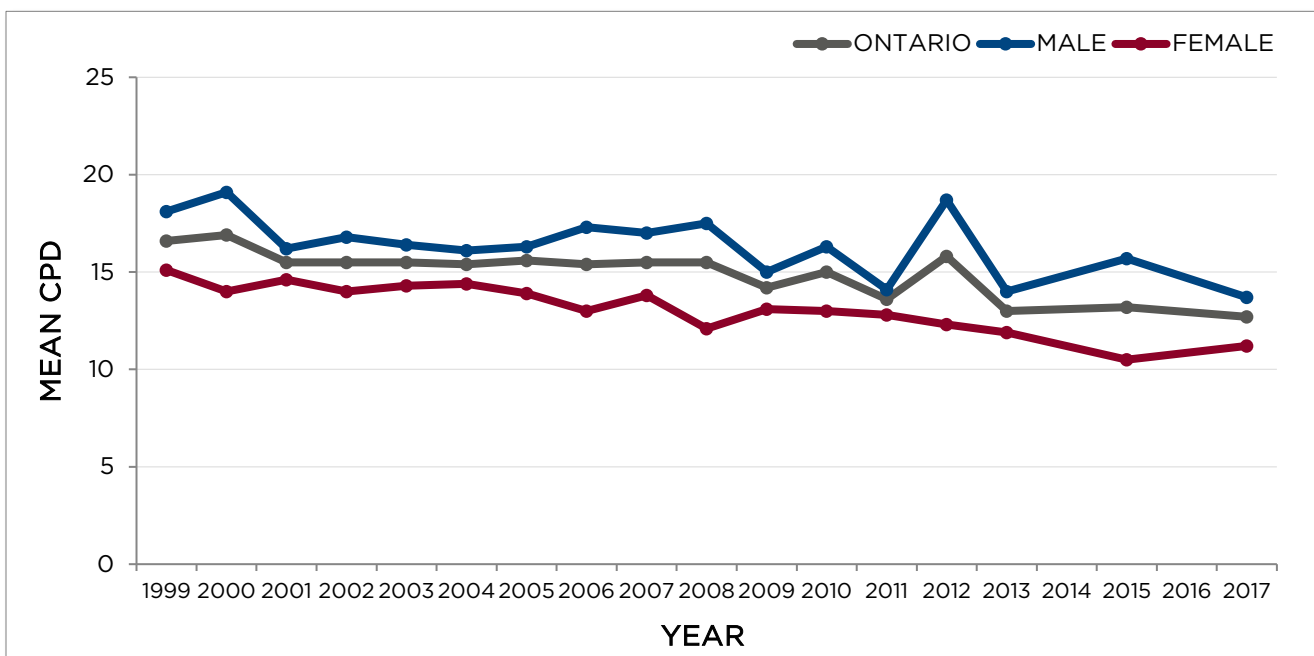


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in Ontario remained fairly stable and even appeared to decline slightly in recent years (Figure 2.17). Cigarette consumption was higher among males in all years, although the magnitude of this difference varied from year to year.

FIGURE 2.17: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, ONTARIO, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.6 QUEBEC

SMOKING PREVALENCE

In 2017, smoking prevalence in Quebec was 15.7%, slightly above the national average of 15.1%.

Figure 2.18 (below) shows smoking prevalence, overall and by sex, in Quebec from 1999-2017. During this time, prevalence appeared to decline fairly steadily, and more steeply than in most other provinces. However, there was little change in the most recent years. Prevalence was similar among males and females in many years, although males had higher smoking rates in some years, particularly recently.

QUEBEC IN 2017

Smoking prevalence: 15.7% (1 100 000 smokers)
» compared to 14.2% in 2015

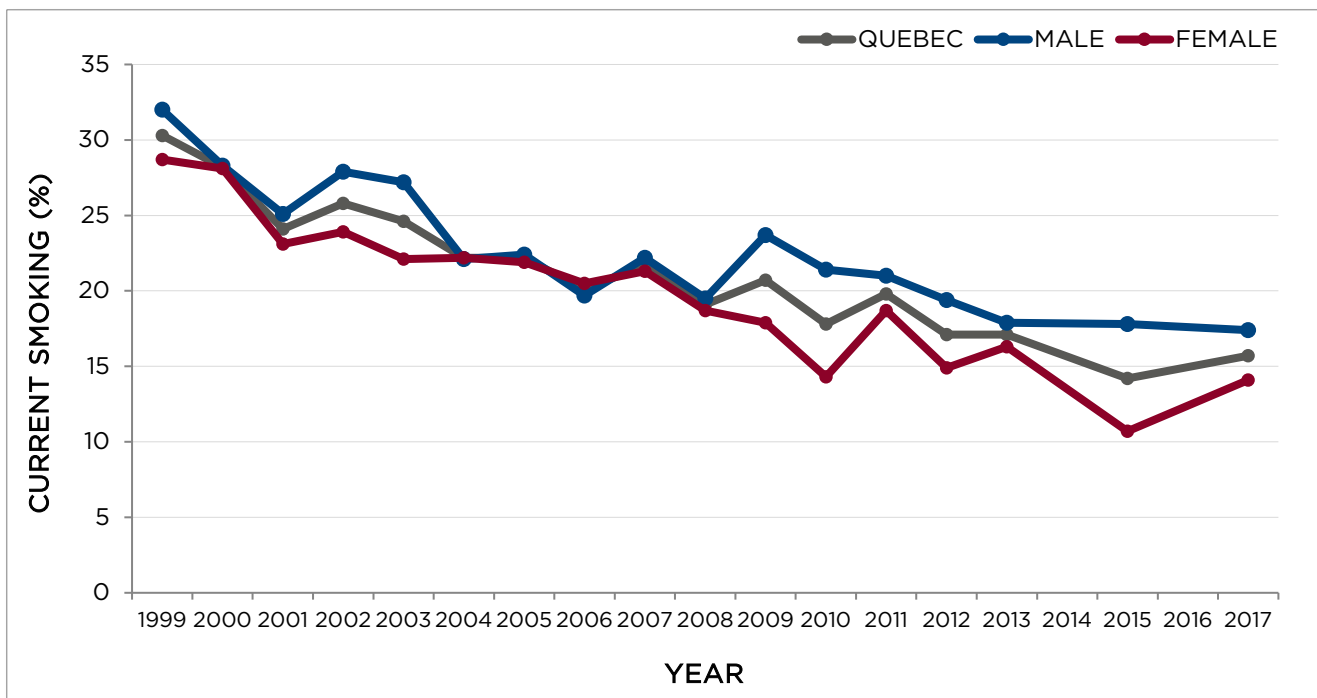
- Males: 17.4% (603 000 smokers)
- Females: 14.1% (497 000 smokers)

Average daily cigarette consumption: 14.3 CPD
» compared to 15.6 CPD in 2015

- Males: 15.3 CPD
- Females: 11.9 CPD

Average price per carton^{iv} (200 cig): \$88.67

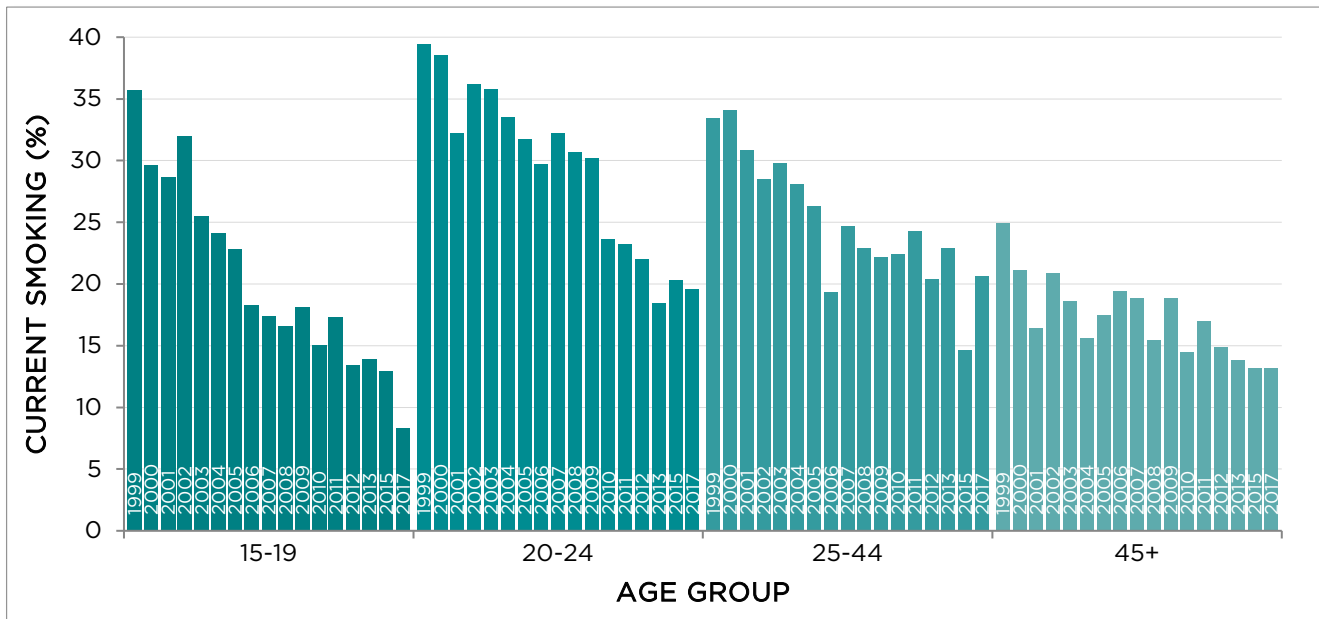
FIGURE 2.18: CURRENT SMOKING PREVALENCE* BY SEX, QUEBEC, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.19 (next page) shows smoking prevalence by age group in Quebec, from 1999-2017. Smoking prevalence decreased substantially among all age groups during this time. Notably, by 2017, prevalence had halved among young adults aged 20-24, and among youth aged 15-19, dropped to less than one-quarter of the 1999 estimate.

FIGURE 2.19: CURRENT SMOKING PREVALENCE* BY AGE GROUP, QUEBEC, 1999-2017

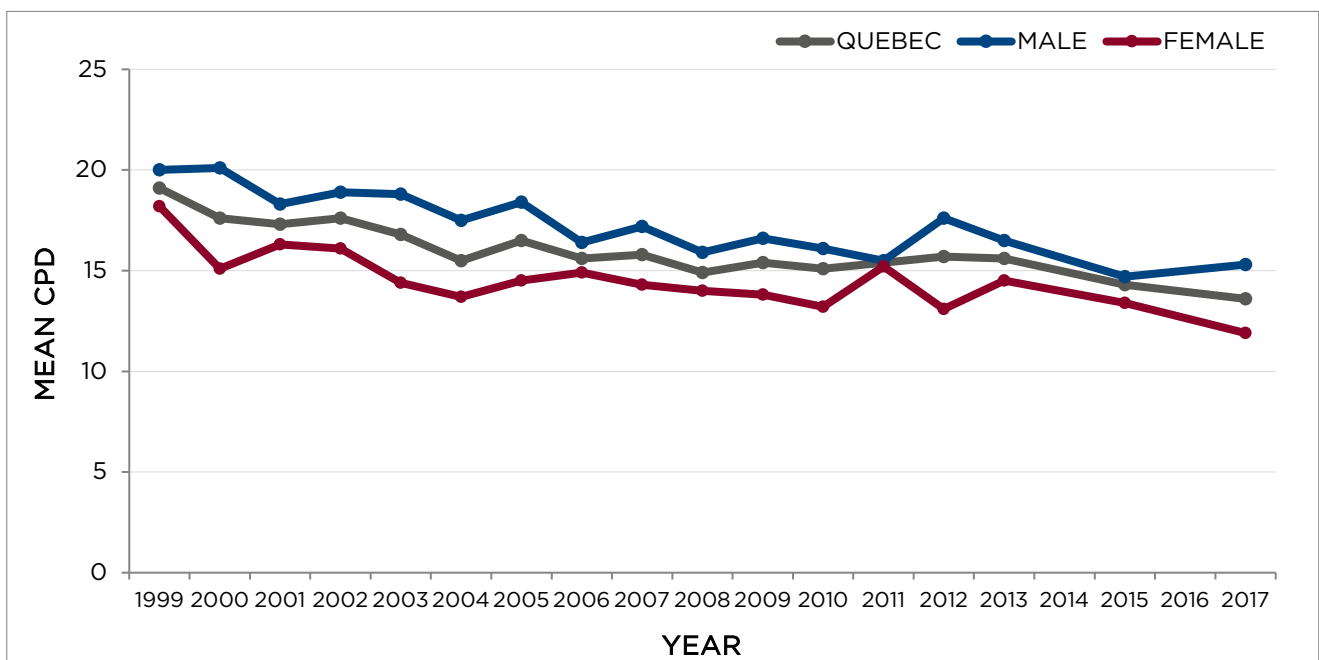


*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in Quebec decreased by more than 5 cigarettes per day, although there was little change for many years until the most recent surveys (Figure 2.20). During this time period, male smokers generally consumed 2-4 cigarettes more per day than female smokers.

FIGURE 2.20: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, QUEBEC, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.7 NEW BRUNSWICK

SMOKING PREVALENCE

In 2017, smoking prevalence in New Brunswick was 13.7%, below the national average of 15.1%.

Figure 2.21 (below) shows smoking prevalence, overall and by sex, in New Brunswick from 1999-2017. During this time, overall prevalence decreased by nearly half, despite some fluctuation. Prevalence was greater among males than females in most years, although similar in a few, including the most recent.

NEW BRUNSWICK IN 2017

Smoking prevalence: 13.7% (87 000 smokers)
» compared to 14.2% in 2015

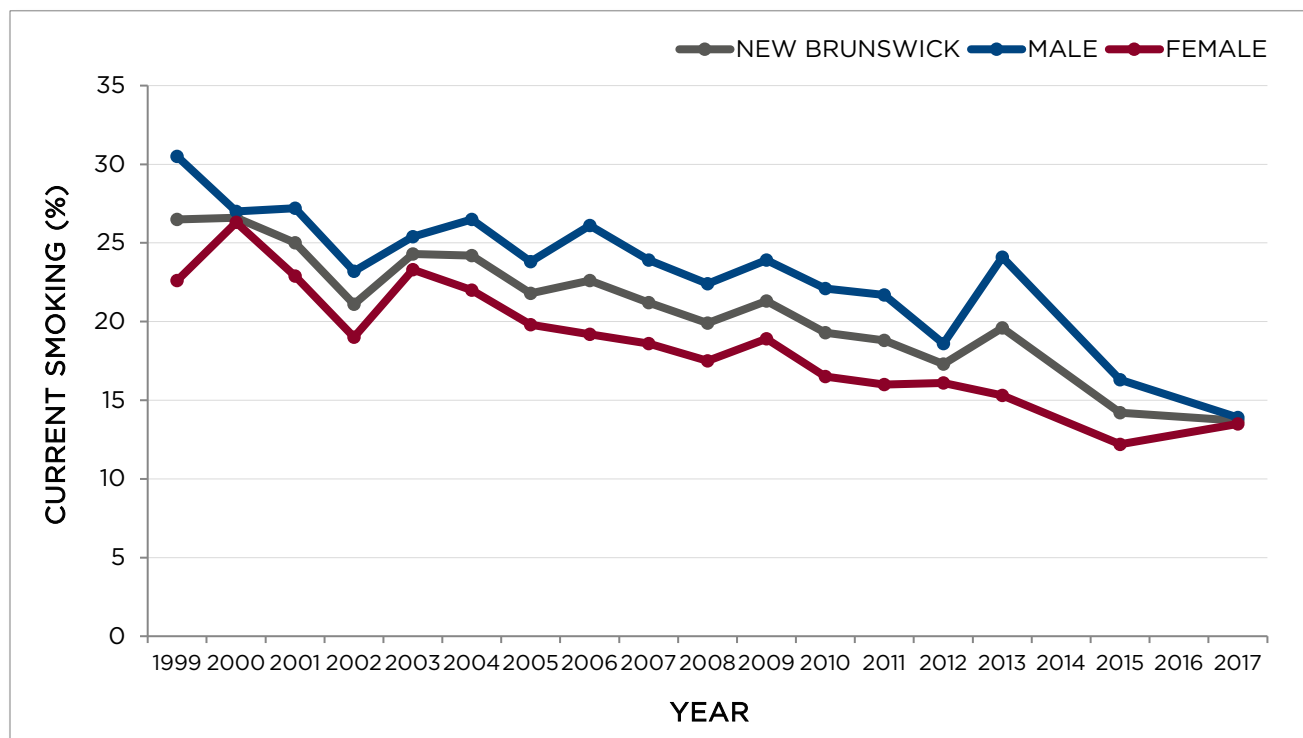
- Males: 13.9% (44 000 smokers)
- Females: 13.5% (44 000 smokers)

Average daily cigarette consumption: 12.8 CPD
» compared to 15.5 CPD in 2015

- Males: 13.8 CPD
- Females: 12.2 CPD

Average price per carton^{iv} (200 cig): \$123.10

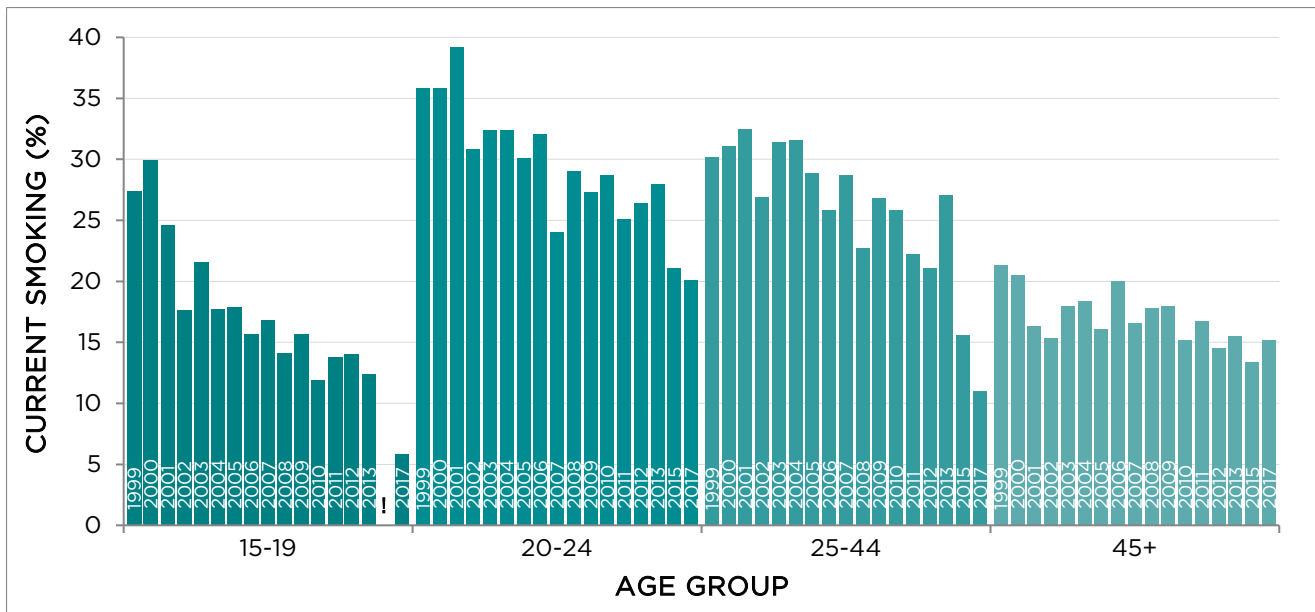
FIGURE 2.21: CURRENT SMOKING PREVALENCE* BY SEX, NEW BRUNSWICK, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.22 (next page) shows smoking prevalence by age group in New Brunswick, from 1999-2017. During this time period, smoking prevalence decreased in all age groups; the largest decrease was among youth aged 15-19, whose 2017 smoking rate was approximately one-fifth of the 1999 estimate.

FIGURE 2.22: CURRENT SMOKING PREVALENCE* BY AGE GROUP, NEW BRUNSWICK, 1999-2017

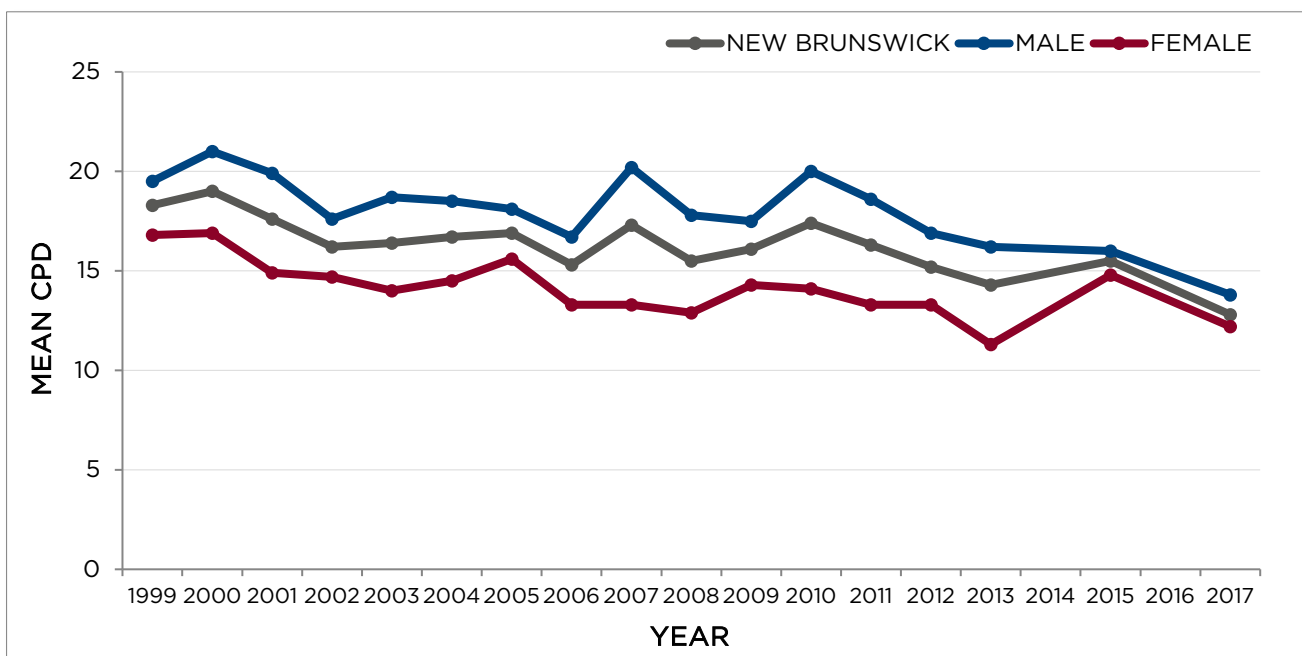


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, average daily cigarette consumption in New Brunswick decreased by more than 5 cigarettes per day, although there were many years with little change during this time period (Figure 2.23). Male smokers consumed considerably more cigarettes per day than female smokers in most years, although consumption was more similar in the most recent survey years.

FIGURE 2.23: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, NEW BRUNSWICK, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.8 NOVA SCOTIA

SMOKING PREVALENCE

In 2017, smoking prevalence in Nova Scotia was 18.5%, well above the national average of 15.1%.

Figure 2.24 (below) shows smoking prevalence, overall and by sex, in Nova Scotia from 1999-2017. Prevalence decreased fairly steeply for the first five years, before reaching a plateau for quite some time, and then becoming more variable in the most recent years. Prevalence estimates were greater among males than females in all years observed, although only slightly in several instances; it appears that sex differences may be increasing in the most recent survey years.

NOVA SCOTIA IN 2017

Smoking prevalence: 18.5% (149 000 smokers)
» compared to 17.8% in 2015

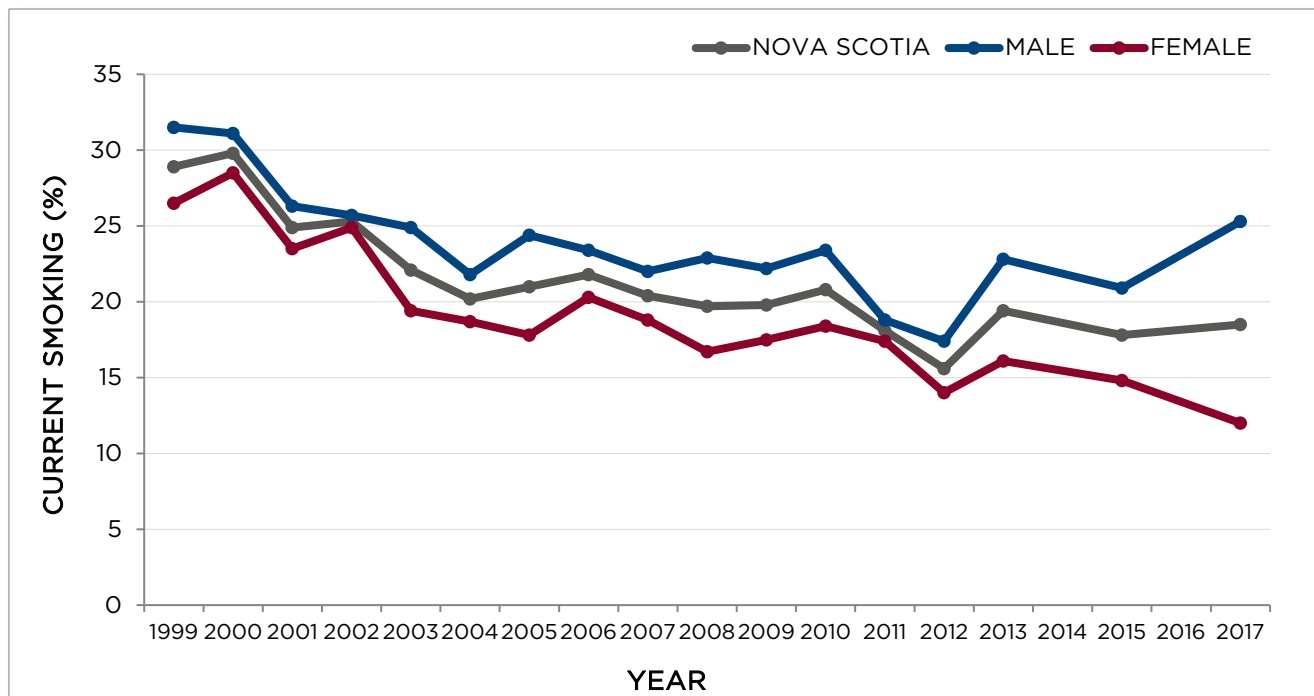
- Males: 25.3% (100 000 smokers)
- Females: 12.0% (50 000 smokers)

Average daily cigarette consumption: 16.3 CPD
» compared to 12.9 CPD in 2015

- Males: 19.3 CPD
- Females: 10.2 CPD

Average price per carton^{iv} (200 cig): \$129.10

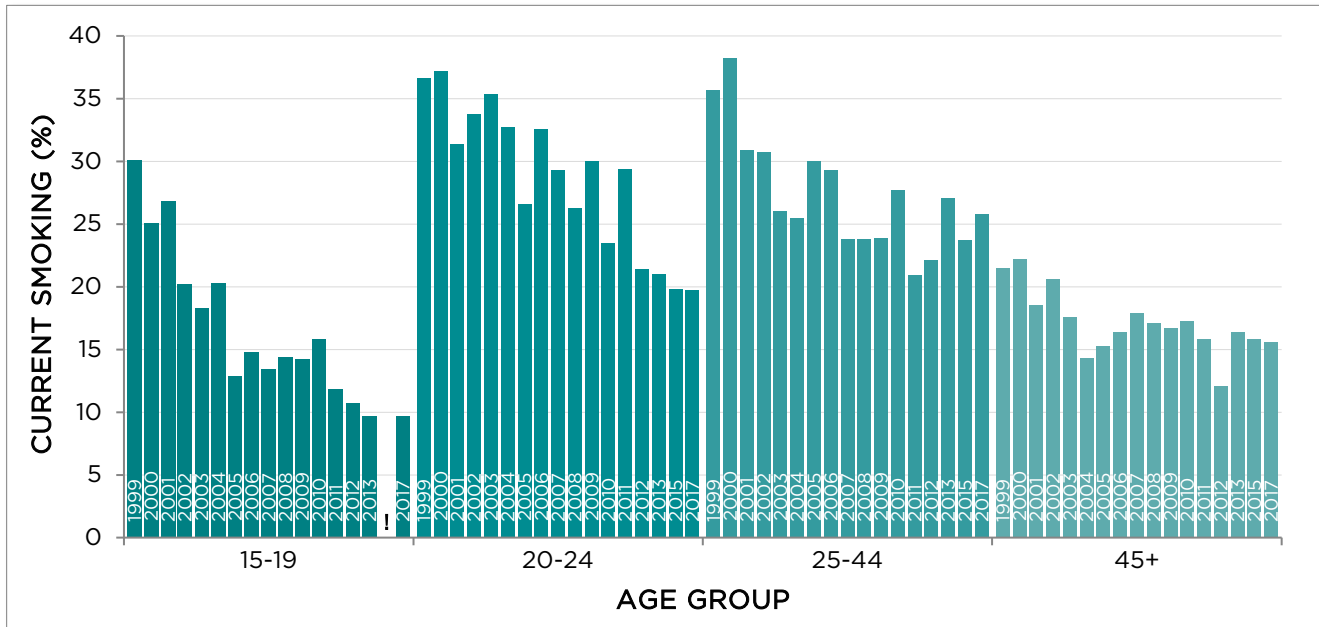
FIGURE 2.24: CURRENT SMOKING PREVALENCE* BY SEX, NOVA SCOTIA, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.25 (next page) shows smoking prevalence by age group in Nova Scotia, from 1999-2017. During this time period, smoking prevalence decreased substantially, although not steadily, in all age groups. The largest decrease observed was among youth aged 15-19, for whom smoking was reduced to one-third of the 1999 estimate. Smaller decreases were observed among older age groups.

FIGURE 2.25: CURRENT SMOKING PREVALENCE* BY AGE GROUP, NOVA SCOTIA, 1999-2017

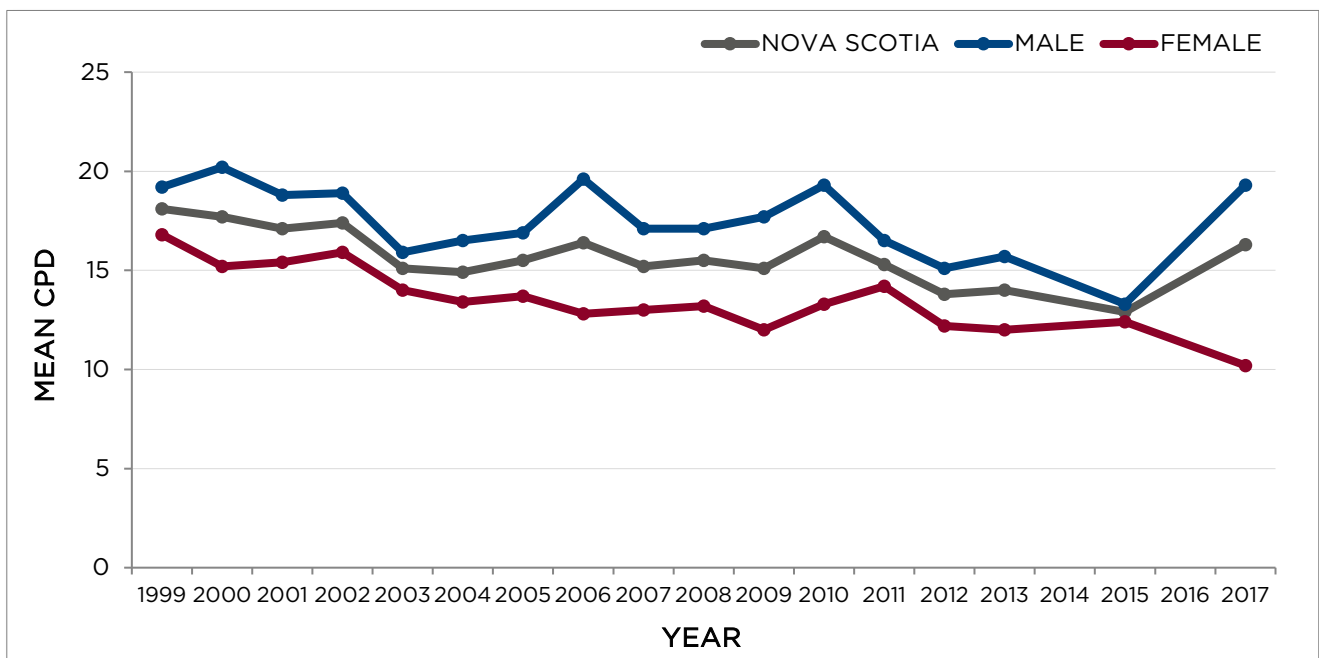


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Between 1999 and 2017, while average daily cigarette consumption in Nova Scotia appears to have decreased overall, there was a substantial uptick in the most recent year (Figure 2.26). Male smokers consumed more cigarettes per day than female smokers in all years, with some variation in magnitude.

FIGURE 2.26: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, NOVA SCOTIA, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.9 PRINCE EDWARD ISLAND

SMOKING PREVALENCE

In 2017, smoking prevalence in Prince Edward Island was 11.8%, below the national average of 15.1%, and the lowest of all the provinces.

Figure 2.27 (below) shows smoking prevalence, overall and by sex, in Prince Edward Island from 1999-2017. Prevalence appeared to decline fairly steadily during this time, decreasing by more than half overall. Throughout this time period, prevalence was consistently higher among males than females.

PRINCE EDWARD ISLAND IN 2017

Smoking prevalence: 11.8% (15 000 smokers)
» compared to 12.9% in 2015

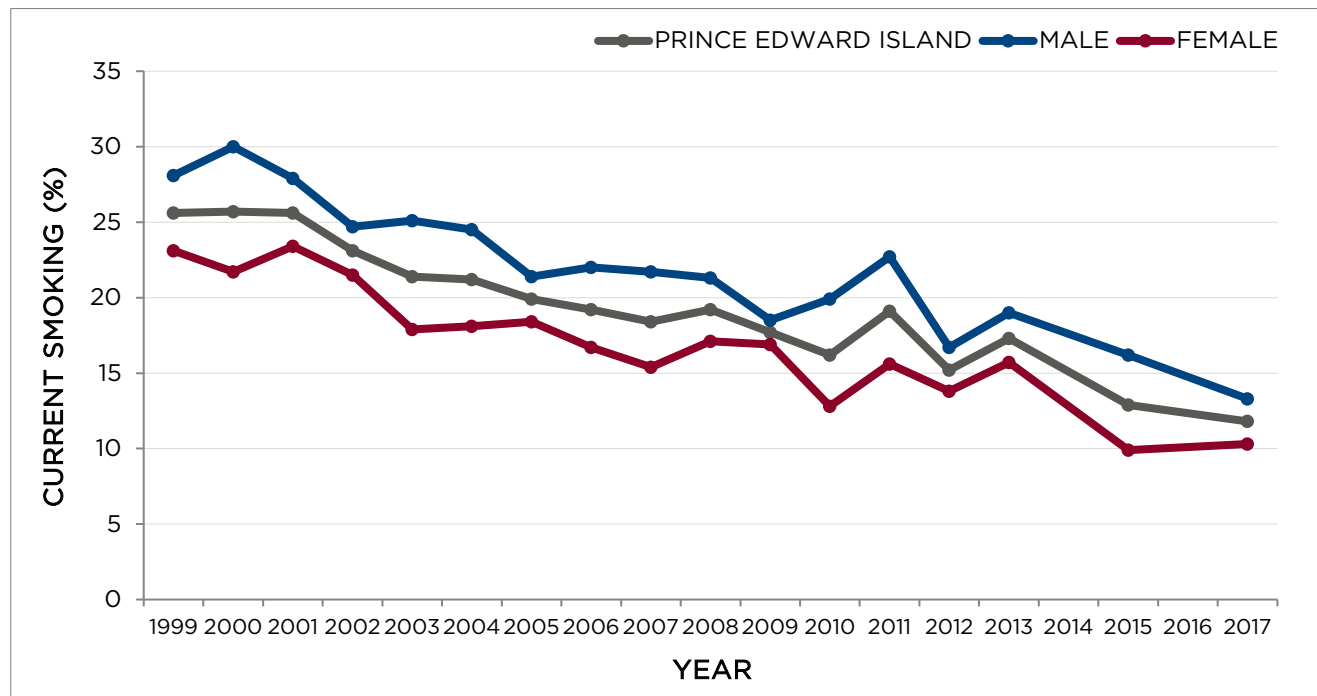
- Males: 13.3% (8 000 smokers)
- Females: 10.3% (7 000 smokers)

Average daily cigarette consumption: 14.9 CPD
» compared to 14.7 CPD in 2015

- Males: 19.1 CPD
- Females: not reportable

Average price per carton^{iv} (200 cig): \$117.56

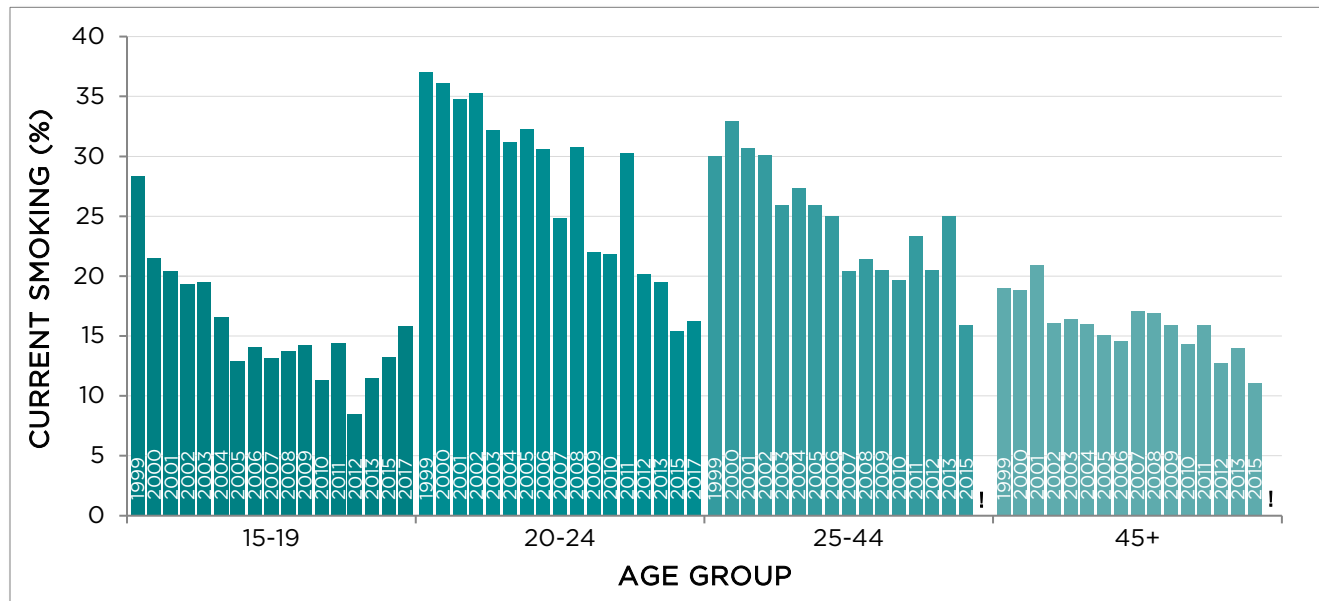
FIGURE 2.27: CURRENT SMOKING PREVALENCE* BY SEX, PRINCE EDWARD ISLAND, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.28 (next page) shows smoking prevalence by age group in Prince Edward Island, from 1999-2017 (note that 2017 estimates are suppressed for adults over age 25). During this time period, there was a net decrease in smoking prevalence in all age groups. The largest decrease observed was among young adults aged 20-24, whose smoking rate dropped to less than half of the 1999 level. Among youth aged 15-19, prevalence decreased by half in the first decade, but appears to have increased since 2012.

FIGURE 2.28: CURRENT SMOKING PREVALENCE* BY AGE GROUP, PRINCE EDWARD ISLAND, 1999-2017

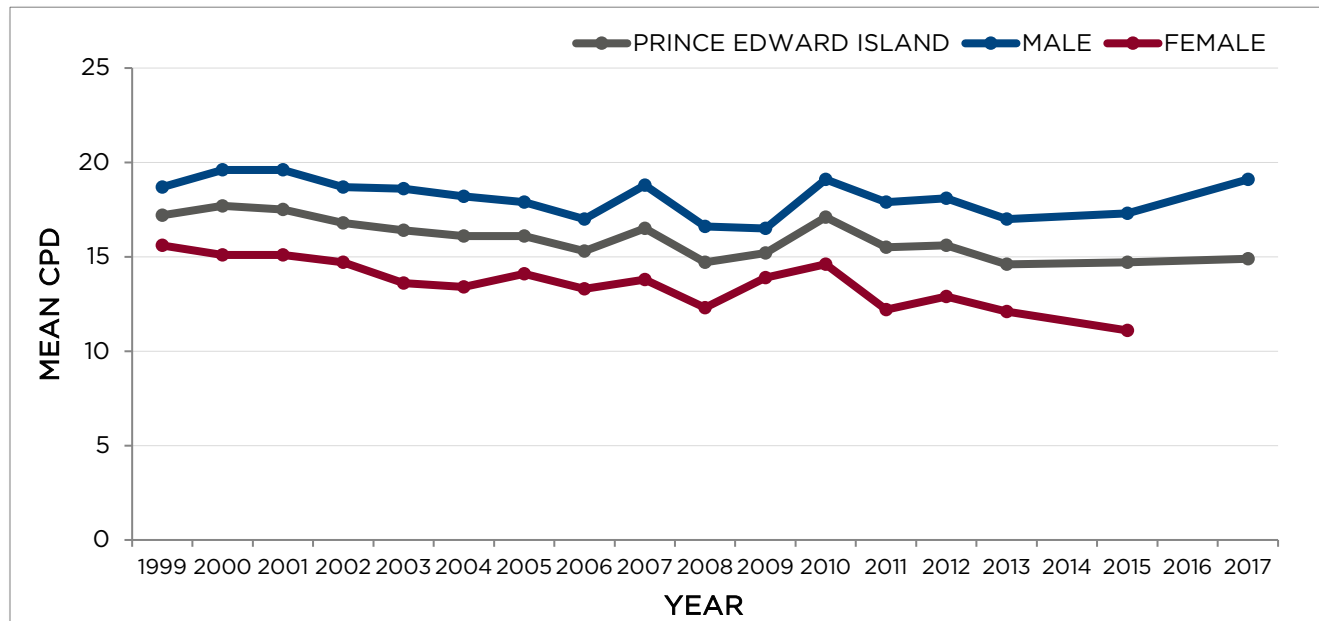


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Average daily cigarette consumption in Prince Edward Island appears to have decreased fairly steadily from 1999 to 2006, and fluctuated around 15 CPD since then (Figure 2.29). Male smokers consistently consumed more cigarettes per day than female smokers.

FIGURE 2.29: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, PRINCE EDWARD ISLAND, 1999-2017



*AMONG DAILY SMOKERS
NOTE: 2017 ESTIMATE FOR FEMALES SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

2.10 NEWFOUNDLAND & LABRADOR

SMOKING PREVALENCE

In 2017, smoking prevalence in Newfoundland and Labrador was 20.1%, well above the national average of 15.1%, and the highest among all provinces.

Figure 2.30 (below) shows smoking prevalence, overall and by sex, in Newfoundland and Labrador from 1999-2017. Overall prevalence decreased steadily until 2005; since then, prevalence has not changed substantially. Prevalence was higher among males than females in most years, although this difference varied from year to year, with similar estimates in several instances.

NEWFOUNDLAND & LABRADOR IN 2017

Smoking prevalence: 20.1% (90 000 smokers)
» compared to 18.5% in 2015

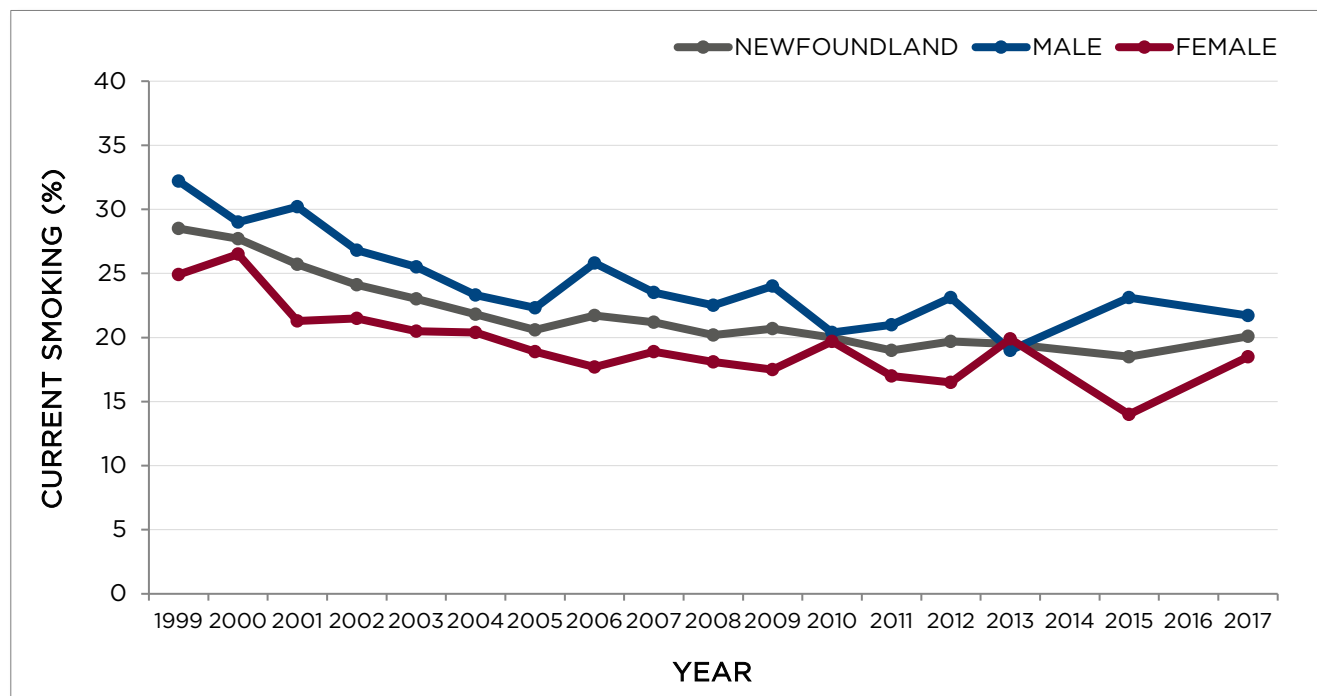
- Males: 21.7% (48 000 smokers)
- Females: 18.5% (42 000 smokers)

Average daily cigarette consumption: 18.6 CPD
» compared to 14.0 CPD in 2015

- Males: 24.2 CPD
- Females: 12.1 CPD

Average price per carton^{iv} (200 cig): \$119.86

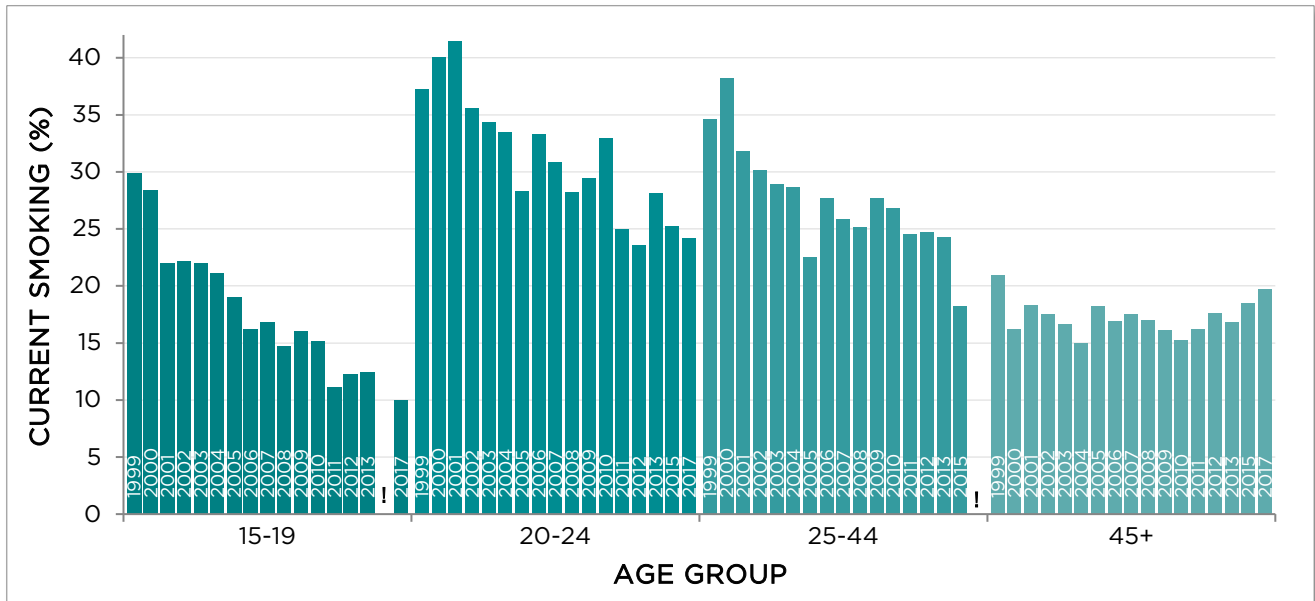
FIGURE 2.30: CURRENT SMOKING PREVALENCE* BY SEX, NEWFOUNDLAND & LABRADOR, 1999-2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Figure 2.31 (next page) shows smoking prevalence by age group in Newfoundland and Labrador, from 1999-2017. During this time period, smoking prevalence decreased substantially in younger age groups, but changed little among those aged 45 and older. The largest decrease observed was among youth aged 15-19, whose smoking rate dropped to approximately one-third of the 1999 estimate.

FIGURE 2.31: CURRENT SMOKING PREVALENCE* BY AGE GROUP, NEWFOUNDLAND & LABRADOR, 1999-2017

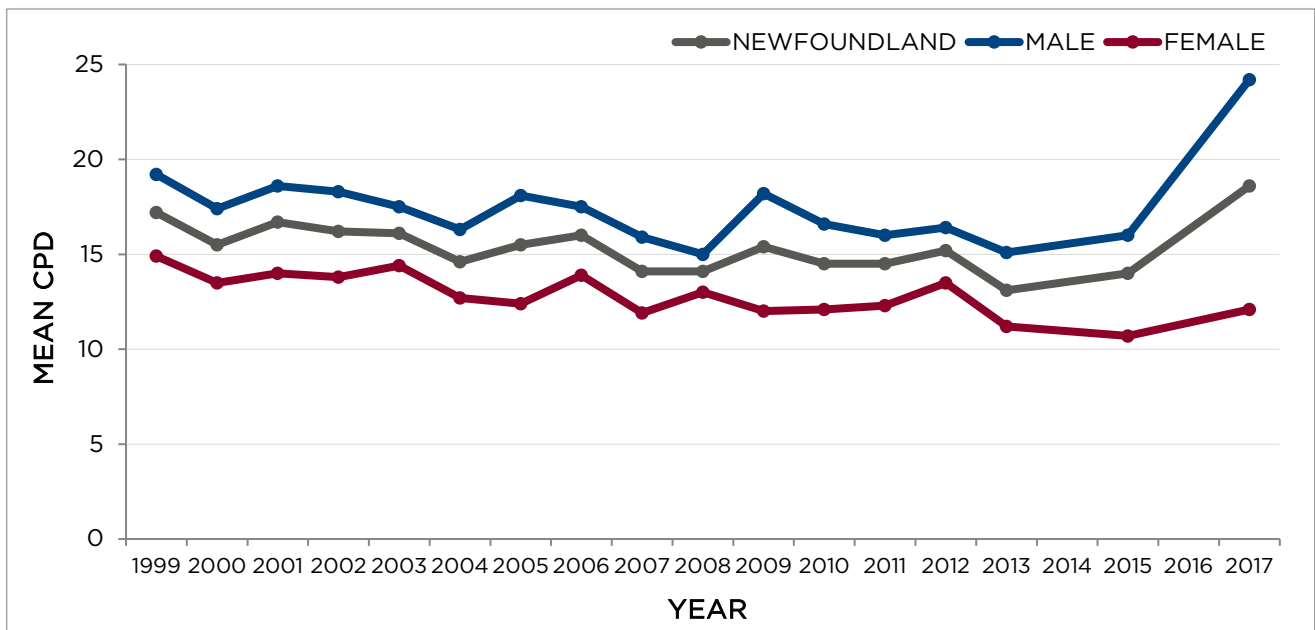


*INCLUDES DAILY AND NON-DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

CIGARETTE CONSUMPTION

Although average daily cigarette consumption in Newfoundland & Labrador appeared to decrease from 1999, a substantial increase was observed in 2017, particularly among males (Figure 2.32). Male smokers consumed considerably more cigarettes per day than female smokers in all years, particularly recently.

FIGURE 2.32: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, NEWFOUNDLAND & LABRADOR, 1999-2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

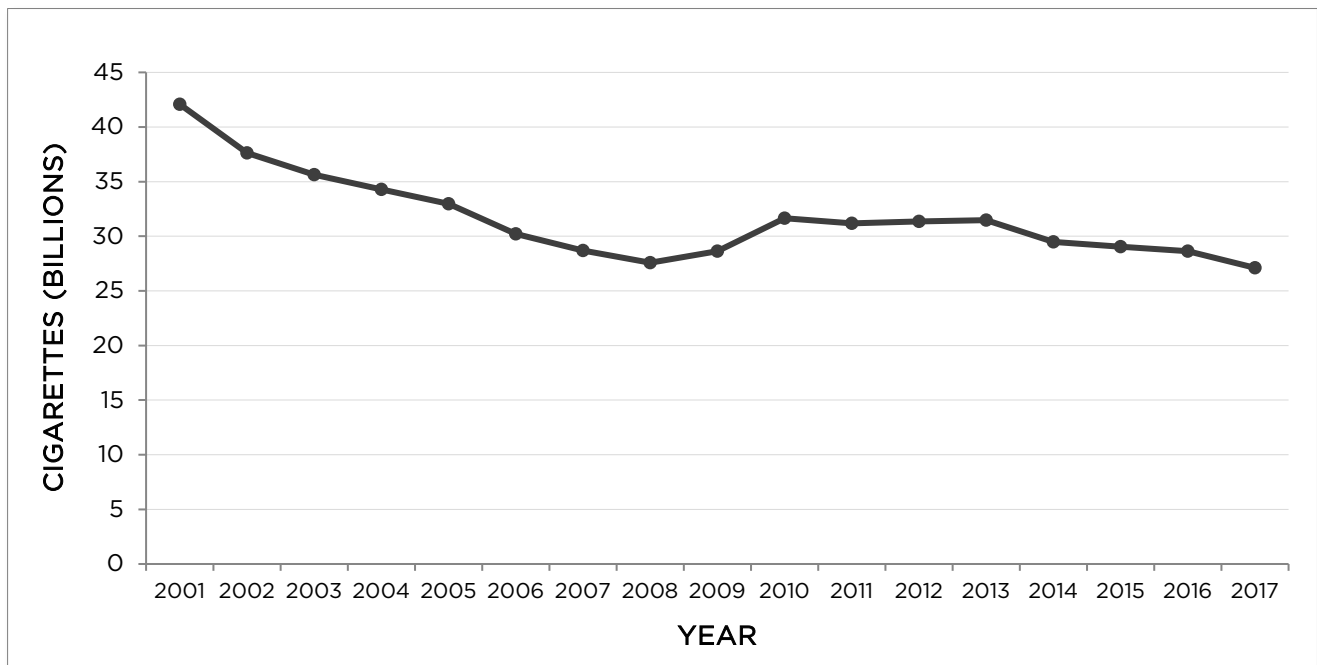
3. CIGARETTE SALES AND SOURCES

CIGARETTE SALES

Since 2001, tobacco companies have been required by the *Tobacco Reporting Regulations* to provide Health Canada with reports on sales of tobacco products. Health Canada has released this sales data, which represent “shipments from tobacco companies in a province or territory, but do not include estimates of illicit tobacco sales.” These data are outlined below, and available in full at: <https://www.canada.ca/en/health-canada/services/publications/healthy-living/federal-provincial-territorial-tobacco-sales-data/page-2.html>

In 2017, cigarette sales in Canada totaled over 27 billion sticks (27,110,716,886), down from over 42 billion in 2001. Figure 3.1 shows total cigarette sales for Canada, from 2001-2017. Total sales generally declined until 2008, when sales increased for a couple of years before leveling off, and then again declining in recent years. These overall sales figures do not take into account population size; on a per capita basis, sales have continued to decline over this time, as population grew from approximately 31 million in 2001^v to over 36.5 million in 2017.^{vi}

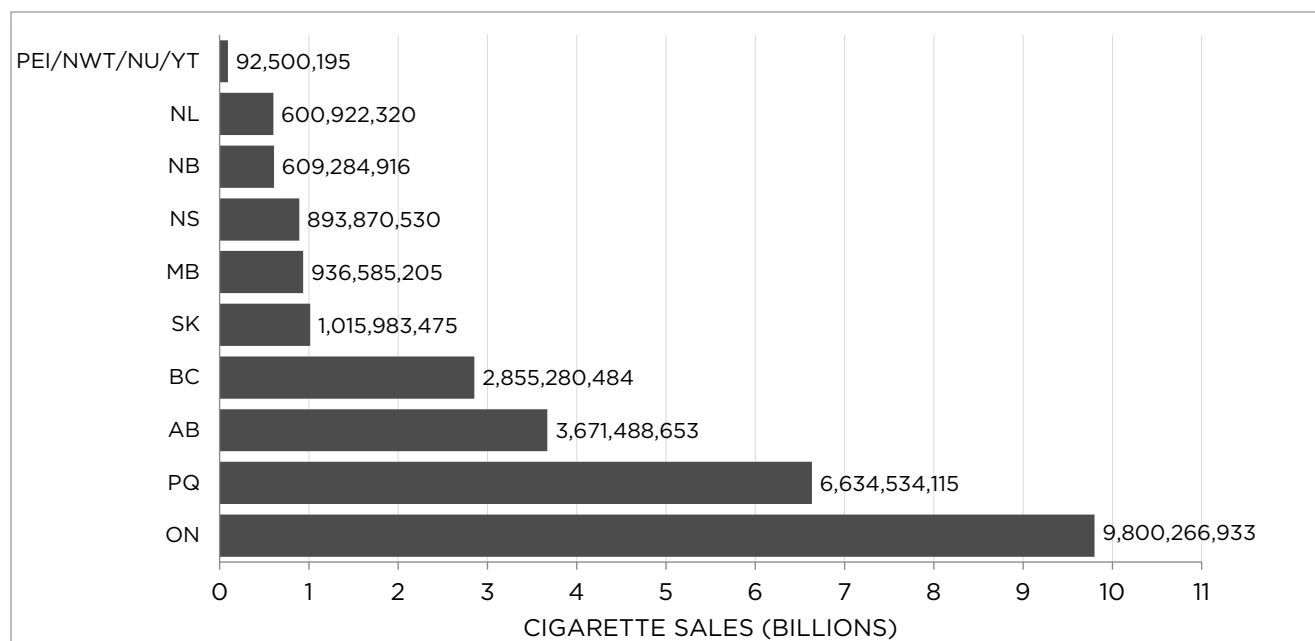
FIGURE 3.1: CIGARETTE SALES, CANADA, 2001-2017



DATA SOURCE: HEALTH CANADA, 2017 (AS REPORTED BY TOBACCO COMPANIES UNDER TOBACCO REPORTING REGULATIONS)
NOTES: TOTAL SALES NOT ADJUSTED FOR POPULATION SIZE (I.E., NOT “PER CAPITA”)
 THESE DATA ARE SUBJECT TO ONGOING REVISION DUE TO RE-SUBMISSIONS BY TOBACCO COMPANIES AND/OR AUDITS BY HEALTH CANADA.

Figure 3.2 (next page) shows sales data for 2017 by province/territory. Again, this does not adjust for population size, but represents the size of the cigarette market in each province/territory. Ontario has the highest cigarette sales, at over 9.8 billion cigarettes, followed by Quebec with over 6.6 billion, and Alberta with nearly 3.7 billion.

FIGURE 3.2: CIGARETTE SALES, BY PROVINCE/TERRITORY, 2017



DATA SOURCE: HEALTH CANADA, 2017 (AS REPORTED BY TOBACCO COMPANIES UNDER TOBACCO REPORTING REGULATIONS)

NOTES: TOTAL SALES NOT ADJUSTED FOR POPULATION SIZE (I.E., NOT "PER CAPITA")

HEALTH CANADA ADVISES THAT THERE ARE THREE IMPORTANT FACTORS TO CONSIDER WHEN USING THESE DATA:

1. THE DATA ARE SUBJECT TO ONGOING REVISION DUE TO RE-SUBMISSIONS BY TOBACCO COMPANIES AND/OR AUDITS BY HEALTH CANADA.
2. SALES REPRESENT SHIPMENTS TO WHOLESALERS OR RETAILERS IN A PROVINCE/TERRITORY. SALES TOTALS MAY NOT BE REPRESENTATIVE OF TOBACCO CONSUMPTION FOR THAT PROVINCE/TERRITORY.
3. IN CERTAIN CASES, PROVINCIAL/TERRITORIAL SALES WERE NOT REPORTABLE DUE TO A LIMITED NUMBER OF COMPANIES ACTIVE IN THAT MARKET. IN THESE CASES, THE DATA WERE MERGED INTO A LARGER GEOGRAPHICAL GROUPING.

Table 3.1 shows yearly cigarette sales by province/territory from 2001 to 2017. Overall, sales have decreased during this time in all provinces/territories except Newfoundland and Labrador.

TABLE 3.1: CIGARETTE SALES (IN THOUSANDS*), BY PROVINCE/TERRITORY, 2001-2017

	British Columbia	Alberta	Sask. Manitoba	Ontario	Quebec	New Brunswick	Nova Scotia	Nfld. & Labrador	PEI, NWT, NU, YT*	
2001	4,057,170	4,745,250	1,190,410	1,301,011	17,598,139	10,180,595	1,017,629	1,346,776	427,879	222,469
2002	3,795,268	4,044,044	1,042,594	1,146,699	16,372,785	8,565,927	884,047	1,191,665	384,712	199,750
2003	3,522,864	3,847,954	1,036,957	1,084,611	15,795,141	8,249,669	715,066	1,038,097	354,939	172,634
2004	3,562,729	4,062,084	1,030,252	1,062,012	14,508,332	7,969,737	748,695	1,044,086	407,128	183,793
2005	3,567,616	4,311,643	997,806	1,116,191	13,286,772	7,354,136	711,015	1,014,867	449,804	160,772
2006	3,538,955	4,546,343	1,023,064	1,098,602	11,387,545	6,435,127	671,296	946,005	468,729	101,729
2007	3,537,912	4,532,738	1,083,647	1,107,092	10,257,094	6,013,405	659,033	894,816	496,381	122,597
2008	3,468,953	4,372,352	1,132,170	1,114,324	9,346,912	5,869,091	679,915	902,373	537,011	136,282
2009	3,362,479	4,162,222	1,151,533	1,164,247	9,740,694	6,504,503	825,729	968,276	613,037	134,789
2010	3,396,768	4,314,295	1,161,728	1,203,314	11,214,816	7,620,380	938,298	988,014	659,717	156,286
2011	3,242,047	4,301,236	1,129,774	1,179,195	10,939,627	7,719,872	862,581	988,047	675,907	139,727
2012	3,156,286	4,303,815	1,138,477	1,149,939	11,143,879	7,870,831	821,481	992,170	692,618	129,648
2013	3,149,434	4,528,238	1,116,975	1,091,066	11,290,403	7,667,500	807,412	993,265	691,037	127,225
2014	2,985,439	4,471,426	1,079,758	1,016,992	10,361,513	7,084,335	749,719	954,240	659,079	115,734
2015	2,969,213	4,208,827	1,090,163	984,514	10,380,708	6,942,225	753,723	945,317	658,686	99,192
2016	3,027,433	3,944,870	1,103,045	968,172	10,307,189	6,897,152	704,803	948,679	644,155	96,885
2017	2,855,280	3,671,489	1,015,983	936,585	9,800,267	6,634,534	609,285	893,871	600,922	92,500

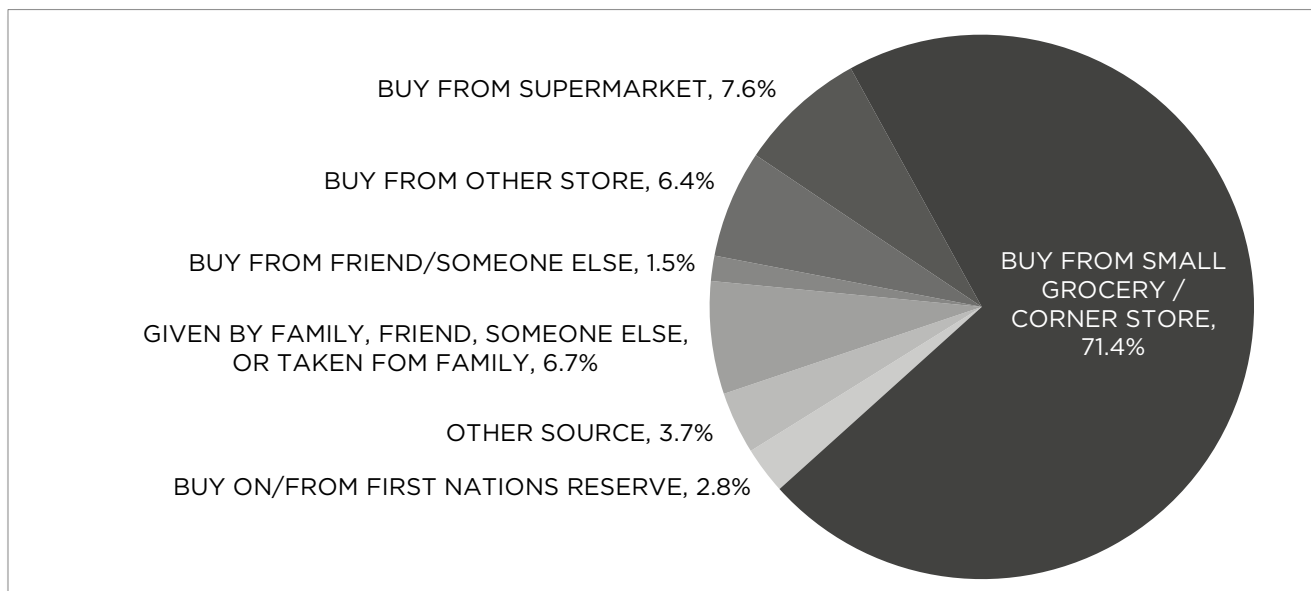
DATA SOURCE: HEALTH CANADA, 2017 (AS REPORTED BY TOBACCO COMPANIES UNDER TOBACCO REPORTING REGULATIONS); SEE NOTES ABOVE

*ROUNDED TO NEAREST THOUSAND. EXACT FIGURES MAY BE FOUND IN ORIGINAL SOURCE

USUAL SOURCES OF CIGARETTES

When smokers were asked where they usually got their cigarettes, 85% purchased them for themselves from a retail source, most often from a small grocery or corner store (Figure 3.3); 8.2% usually got cigarettes through social sources, most being given them a family member, friend, or someone else. Few (2.8%) usually got cigarettes from First Nations reserves. The remaining 3.7% cited “other” sources.

FIGURE 3.3: PERCENTAGE OF SMOKERS WHO USUALLY GOT CIGARETTES FROM VARIOUS SOURCES, 2017



DATA SOURCE: CTADS, 2017

CHEAPER CIGARETTES AND CONTRABAND

Smokers are price-sensitive, and may seek ways to purchase cheaper cigarettes, particularly as tobacco taxes increase the overall price of cigarettes. One such source is purchasing contraband cigarettes. Contraband is “any tobacco product that does not comply with the provisions of all applicable federal and provincial statutes. This includes importation, stamping, marking, manufacturing, distributing and payment of duties and taxes.”^{vii, p.12} The RCMP has identified the trade in contraband as a “serious threat to public safety and health.”^{vii, p. 15} To help identify duty-paid and legally-manufactured cigarettes, a federal excise stamp is required on “all cigarettes, tobacco sticks and fine-cut tobacco products for sale in the Canadian duty-paid market” as of July 1, 2012.^{viii} The federal government has introduced other measures and funded initiatives to reduce contraband tobacco.^{ix} Bill C-10, the *Tackling Contraband Tobacco Act*, which came into force on April 10, 2015, amends the Criminal Code to add the offence of trafficking contraband tobacco.^x

Purchasing Cheaper Cigarettes

Smokers were asked about various sources of cigarettes, some of which may have included contraband, where appropriate taxation has been evaded.

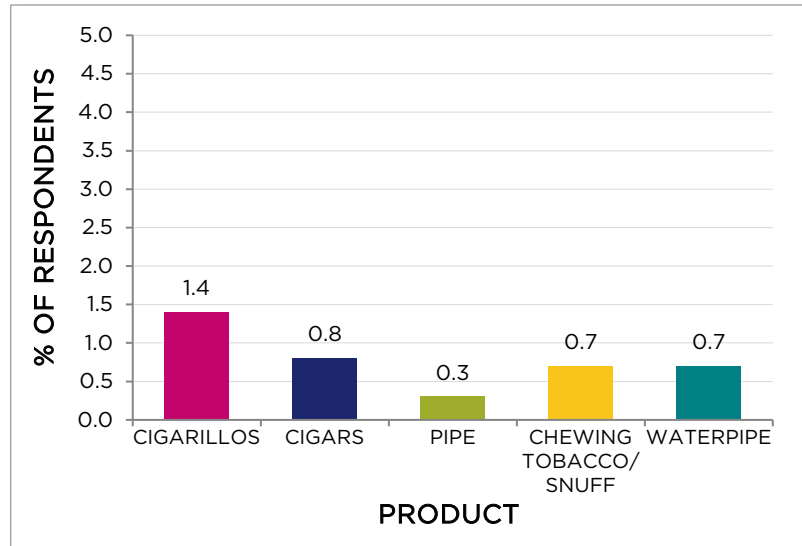
Overall, 8.8% of smokers reported having purchased cigarettes on a First Nations Reserve in the past 6 months, defined for respondents as “a tract of land that has been set apart for the use and benefit of a First Nations band”. Smokers were also asked about purchasing cigarettes that they believed may have been smuggled, defined as “cigarettes that were not manufactured on a First Nations Reserve, were not manufactured in Canada, do not contain a government of Canada Health Warning message and do not carry a tax stamp. Legally imported cigarettes are not smuggled cigarettes”. However, it is not possible to reliably report the estimate, as too few survey respondents reported purchasing smuggled cigarettes.

4. USE OF OTHER TOBACCO PRODUCTS IN CANADA

Cigarillos (little cigars) were the most popular tobacco product other than cigarettes, with 1.4% of Canadians reporting use in the past 30 days (Figure 4.1). Cigar use was reported by 0.8% of respondents. Waterpipe (also called hookah or shisha) use and chewing tobacco/snuff were each reported by 0.7%. Pipe use was less common, reported by 0.3% of respondents (Figure 4.1).

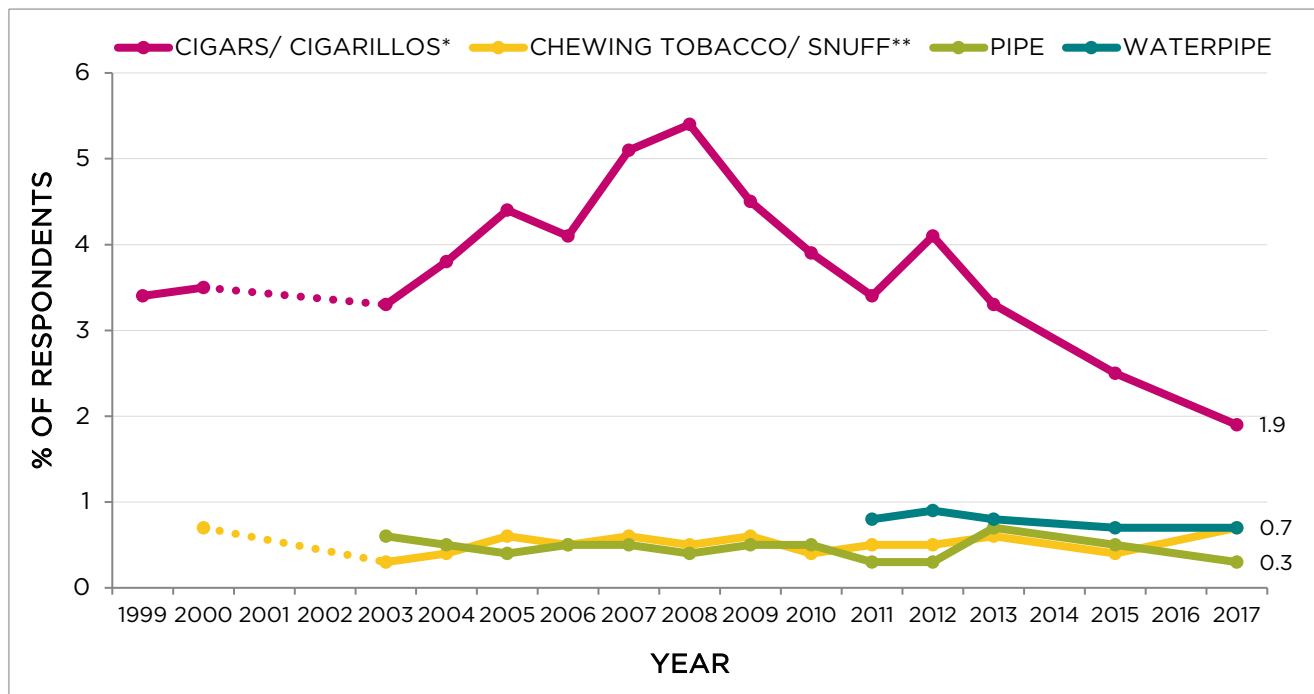
Use of cigars/cigarillos appears to have increased through the 2000s until a peak around 2008, after which prevalence generally declined. Use of chewing tobacco/snuff and pipe smoking have both remained fairly low and stable over time; waterpipe use was also fairly low and stable, although measured only recently (Figure 4.2).

FIGURE 4.1: PREVALENCE OF USE IN THE PAST 30 DAYS FOR VARIOUS TOBACCO PRODUCTS, 2017



DATA SOURCE: CTADS, 2017

FIGURE 4.2: PREVALENCE OF USE IN THE PAST 30 DAYS FOR VARIOUS TOBACCO PRODUCTS, 1999-2017



*PRIOR TO 2007, CIGARS AND CIGARILLOS WERE GROUPED TOGETHER IN A SINGLE QUESTIONNAIRE ITEM; FROM 2007-2017 THEY WERE ASKED AS TWO SEPARATE ITEMS AND COMBINED IN THE ANALYSIS

**IN 2000, CHEWING TOBACCO AND PINCH/SNUFF WERE ASKED AS SEPARATE QUESTIONNAIRE ITEMS AND COMBINED IN THE ANALYSIS; IN 2003-2017 THEY WERE GROUPED TOGETHER IN A SINGLE ITEM

DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

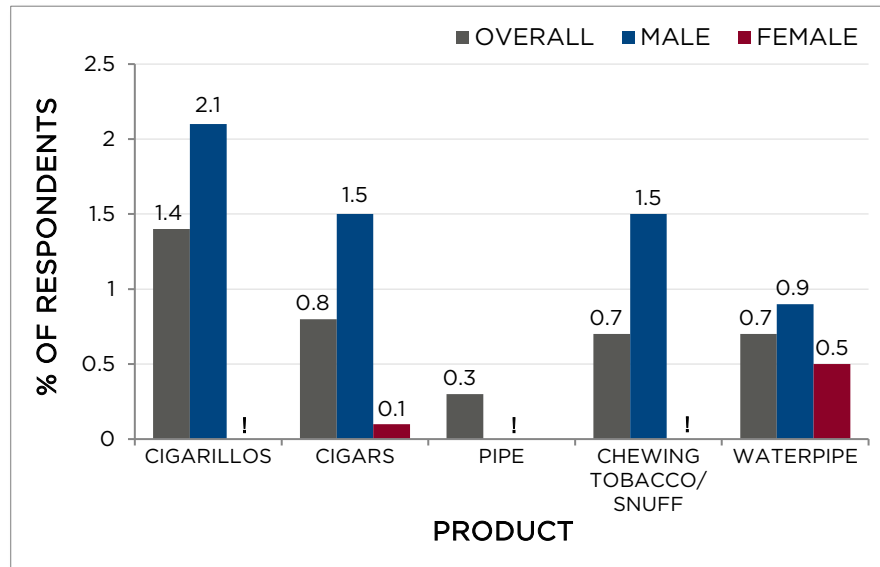
DEMOGRAPHIC PATTERNS IN OTHER TOBACCO USE

Other Tobacco Use by Sex

Males had significantly higher prevalence of use than females for cigarillos, cigars, and chewing tobacco/snuff³³⁻³⁵ (Figure 4.3). Neither pipe nor waterpipe use differed significantly by sex.^{36,37}

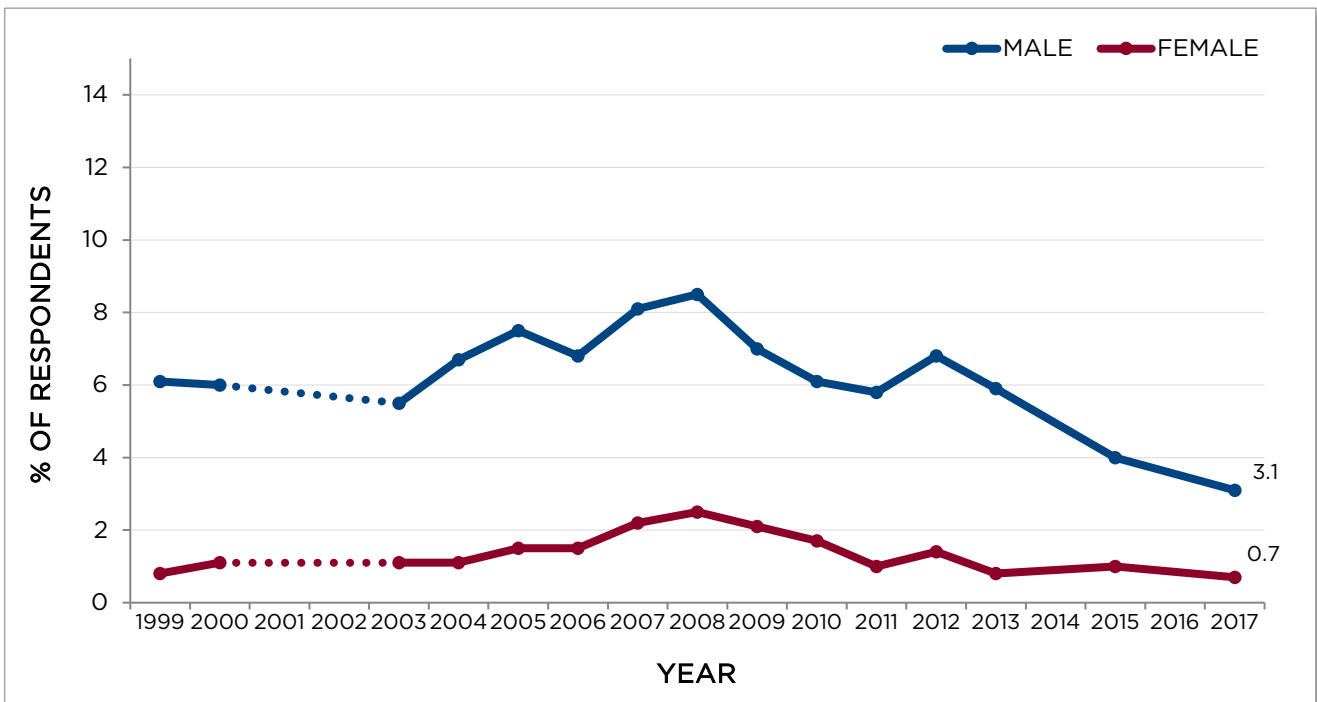
Over time, the use of cigars/cigarillos has changed in parallel for both males and females; sex differences have persisted over time (Figure 4.4).

FIGURE 4.3: PREVALENCE OF USE IN THE PAST 30 DAYS FOR VARIOUS TOBACCO PRODUCTS, BY SEX, 2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
 DATA SOURCE: CTADS, 2017

FIGURE 4.4: PREVALENCE OF USE IN THE PAST 30 DAYS FOR CIGARS/CIGARILLOS*, BY SEX, 1999-2017



*PRIOR TO 2007, CIGARS AND CIGARILLOS WERE GROUPED TOGETHER IN A SINGLE QUESTIONNAIRE ITEM; FROM 2007-2013 THEY WERE ASKED AS TWO SEPARATE ITEMS AND COMBINED IN THE ANALYSIS
 DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

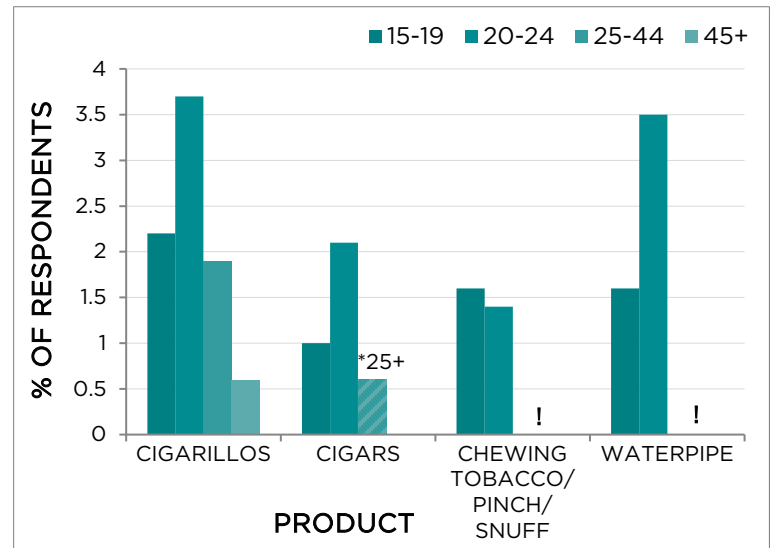
Other Tobacco Use by Age

In 2017, use of cigarillos, cigars, and waterpipe varied significantly by age group³⁸⁻⁴⁰; smokeless tobacco did not.⁴¹

Young adults aged 20-24 reported the highest prevalence of use of other tobacco products, followed by youth aged 15-19. After young adulthood, prevalence of use appears to decrease for all products (Figure 4.5).

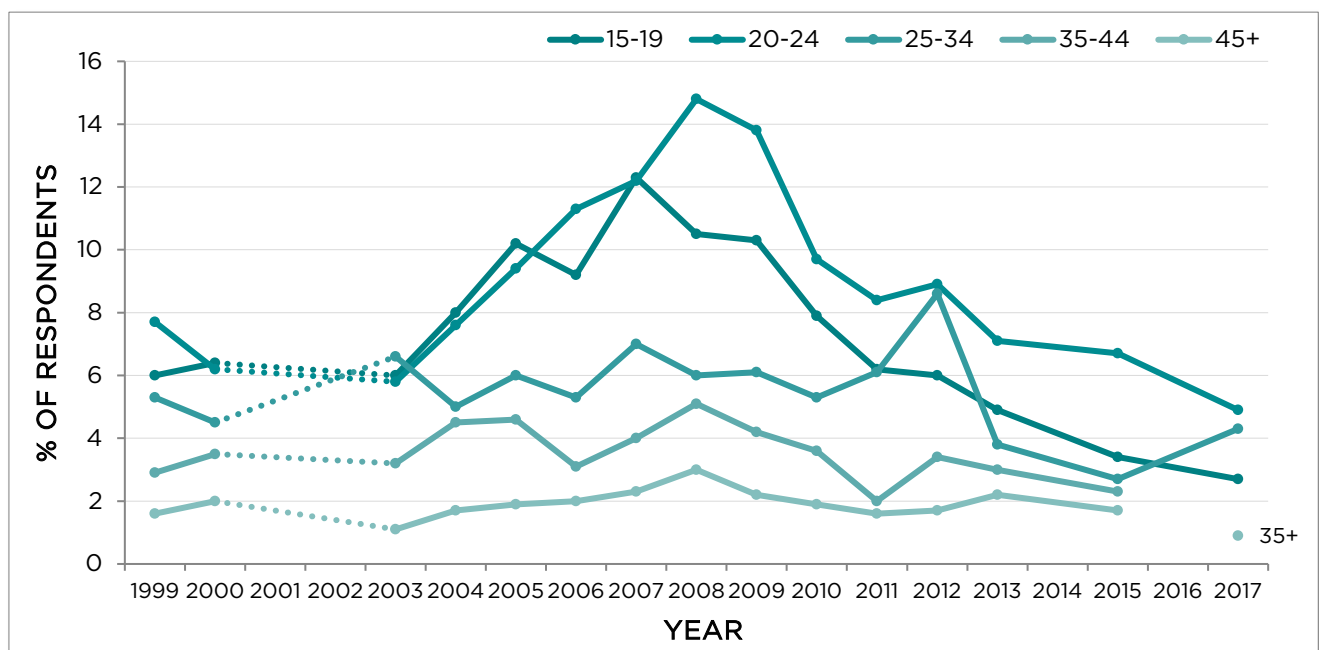
Between 1999 and 2017, this pattern of high use among the younger age groups (especially ages 20-24), declining with increasing age, applied to cigar/cigarillo use in almost all years with available data (Figure 4.6). Use of cigars/cigarillos appears to have increased over time in all age groups until around 2008, after which use generally decreased. This pattern was particularly pronounced among young people: cigar/cigarillo use among youth aged 15-19 has declined steeply and steadily; among young adults aged 20-24, after a large initial drop, progress has been slower.

FIGURE 4.5: PREVALENCE OF USE IN THE PAST 30 DAYS FOR VARIOUS TOBACCO PRODUCTS, BY AGE GROUP, 2017



*AGE GROUPS OVER 25 COMBINED DUE TO LOW NUMBERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
NOTE: ESTIMATES FOR PIPE USE WERE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

FIGURE 4.6: PREVALENCE OF USE IN THE PAST 30 DAYS FOR CIGARS/CIGARILLOS*, BY AGE GROUP, 1999-2017



*PRIOR TO 2007, CIGARS AND CIGARILLOS WERE GROUPED TOGETHER IN A SINGLE QUESTIONNAIRE ITEM; FROM 2007-2017, THEY WERE ASKED AS TWO SEPARATE ITEMS AND COMBINED IN THE ANALYSIS
**AGE GROUPS OVER 35 COMBINED DUE TO LOW NUMBERS
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Other Tobacco Use by Province

Prevalence of cigar/cigarillo use did not differ significantly between provinces in 2017⁴² (Table 4.1). While estimates varied over time and by province, prevalence of cigar/cigarillo use generally increased for a number of years until around 2008, after which it declined; by 2015, in most provinces, prevalence had returned to 1999 levels, and decreased even further.

TABLE 4.1: PREVALENCE OF USE IN PAST 30 DAYS FOR CIGARS/CIGARILLOS*, BY PROVINCE, 1999-2017

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
CANADA	3.4%	3.5%	--	--	3.3%	3.9%	4.4%	4.1%	5.1%	5.4%	4.5%	3.9%	3.4%	4.1%	3.3%	2.5%	1.9%
BC	2.9	2.5	--	--	3.4	3.9	3.6	5.4	5.4	4.9	5.6	4.5	3.2	3.8	3.3	3.1	3.3
AB	4.1	3.1	--	--	4.0	4.8	5.9	5.5	6.9	5.7	5.6	4.5	4.2	4.5	4.6	2.6	2.0
SK	3.2	3.0	--	--	4.1	4.1	4.5	4.6	5.6	6.1	6.2	4.7	3.8	5.2	2.9	4.2	2.2
MB	4.8	3.3	--	--	3.5	4.3	4.8	3.3	4.2	4.2	5.2	4.7	4.0	2.8	3.6	3.7	!
ON	3.4	3.8	--	--	2.4	3.8	3.9	3.0	3.5	4.8	3.1	2.6	2.5	4.5	2.9	2.1	1.6
PQ	3.5	3.8	--	--	4.2	3.4	5.2	4.6	6.5	6.5	5.3	5.0	4.3	3.5	3.8	2.5	1.4
NB	3.2	3.3	--	--	3.8	4.1	5.1	4.9	6.8	7.7	4.7	5.0	4.2	3.9	2.7	2.4	!
NS	3.5	3.0	--	--	4.2	3.9	4.5	4.7	5.8	5.9	5.3	4.9	3.2	3.6	2.3	2.4	1.9
PEI	2.4	3.1	--	--	3.0	2.4	3.8	4.1	3.9	4.5	3.8	3.5	2.2	2.5	2.3	2.1	!
NL	2.8	1.3	--	--	2.0	3.4	3.0	3.9	4.6	5.4	4.2	3.2	2.8	2.9	1.4	2.1	!

*PRIOR TO 2007, CIGARS AND CIGARILLOS WERE GROUPED TOGETHER IN A SINGLE QUESTIONNAIRE ITEM; FROM 2007-2015 THEY WERE ASKED AS TWO SEPARATE ITEMS AND COMBINED IN THE ANALYSIS

! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY

DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

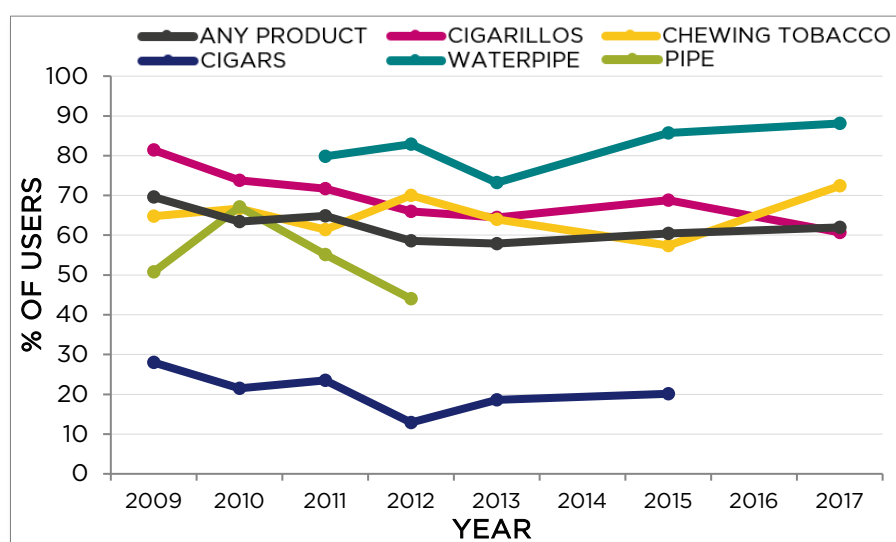
FLAVOURED TOBACCO PRODUCTS

In 2010, federal legislation banned flavours (except menthol) in cigarettes, little cigars/cigarillos ($\leq 1.4g$), and blunt wraps;^x further amendments implemented in December 2015 extended this to other types of cigars ($>1.4g$ to $\leq 6g$, with tipping paper, or without spiral wrapper), with an exception for “traditional alcohol flavours” (port, wine, rum and whisky).^{xi} The exception for menthol in these products was removed, effective October 2, 2017.^{xii} Further amendments to the *Tobacco and Vaping Products Act* prohibited menthol and clove additives in all tobacco products, effective November 19, 2018.^{xiii} Prior to federal bans, seven provinces had adopted legislation to ban flavours in most tobacco products^{xiv} (see the *Policy Supplement* for details). Despite these restrictions, some flavoured tobacco products (e.g., smokeless tobacco, shisha, alcohol-flavoured cigarillos) remain on the market in some/all provinces.

Users of non-cigarette tobacco products were asked if the products they had used in the last 30 days were flavoured. In 2017, 62.0% of those who had used any non-cigarette tobacco product(s) in the last 30 days had used a flavoured product. This proportion varied by product: flavoured cigarillos were used by 60.7% of cigarillo users, flavoured chewing tobacco/pinch/snuff by 72.4% of users, and flavoured waterpipe tobacco by 88.1% of users; flavoured cigar use was not reportable in 2017.

Figure 4.7 shows use of flavoured tobacco over time since 2009.

FIGURE 4.7: PREVALENCE OF FLAVOURED TOBACCO USE IN THE PAST 30 DAYS FOR VARIOUS TOBACCO PRODUCTS, 2009-2017



DATA SOURCES: CTUMS, 2009-2012; CTADS, 2013, 2015, 2017

MENTHOL CIGARETTES

The federal government prohibited menthol additives in cigarettes as of October 2, 2017.^{xiii} Prior to federal legislation, seven provinces had already adopted bans on flavoured tobacco including menthol: Nova Scotia (May 31, 2015), Alberta (Sept. 20, 2015), New Brunswick (Jan. 1, 2016), Quebec (Aug. 26, 2016), Ontario (Jan. 1, 2017), PEI (May 1, 2017), and Newfoundland and Labrador (July 1, 2017).^{xiv}

Among Canadians age 15 and older, more than one-third (34.3%) of all respondents said they had ever smoked a menthol cigarette; however, only 1.4% of all respondents had smoked one in the past 30 days. This represents no significant change from the 2015 values of 32.9% and 1.6%, respectively.^{43,44}

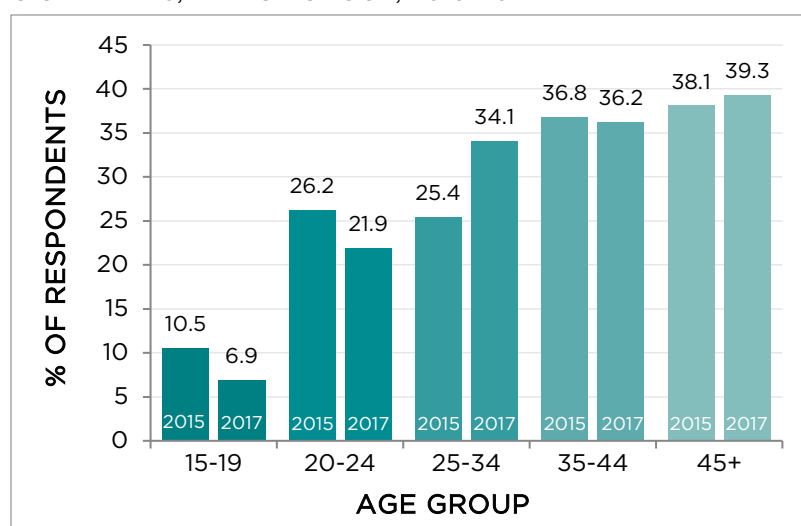
Among all those who had smoked in the past 30 days, 9.3% had smoked a menthol cigarette in that time; this represents no significant change from the 2015 prevalence estimate of 12.0%.⁴⁵

Ever Use by Age

The prevalence of ever smoking a menthol cigarette varied significantly by age group in 2017,⁴⁶ with lower prevalence among age groups under 25 (Figure 4.8).

Between 2015 and 2017, prevalence of ever smoking menthol cigarettes (among all respondents) decreased for age groups under 25, but increased among those aged 25-34, and there was no significant difference for older age groups.⁴⁷⁻⁵¹

FIGURE 4.8: PREVALENCE OF EVER SMOKING MENTHOL CIGARETTES, BY AGE GROUP, 2015-2017



DATA SOURCE: CTADS, 2015, 2017

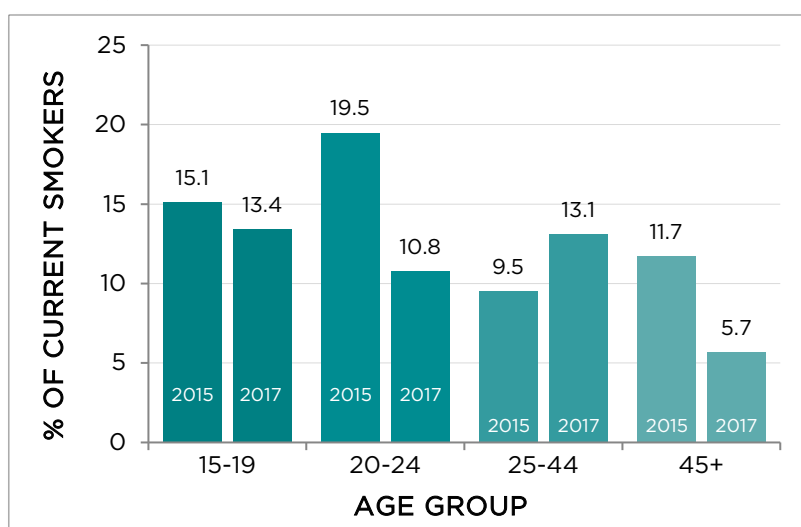
Past 30-Day Use by Age

Among past 30-day smokers, the prevalence of smoking a menthol cigarette in the past 30 days was not significantly different between age groups⁵² in 2017 (Figure 4.9).

Between 2015 and 2017, prevalence of past 30-day use of menthol cigarettes among smokers did not change significantly within any age group except those aged 20-24, for whom a significant decrease was observed.⁵³⁻⁵⁶

Note that most 2017 CTADS data collection would have been completed prior to the federal ban on menthol in cigarettes, but after some provincial bans had been implemented.

FIGURE 4.9: PREVALENCE OF MENTHOL CIGARETTE USE IN THE PAST 30 DAYS, AMONG PAST 30-DAY SMOKERS, BY AGE GROUP, 2015-2017



DATA SOURCE: CTADS, 2015, 2017

5. SECONDHAND SMOKE EXPOSURE

SMOKING IN THE HOME

One in five respondents (20.6%) reported that at least one person in their household was a cigarette smoker. However, the vast majority of respondents (94.7%) reported that no one smoked inside their home on a daily or almost daily basis; 5.3% reported that someone smoked inside their home every day or almost every day (3.3% reported one person; 2.0% reported two or more people).

Household smoking restrictions

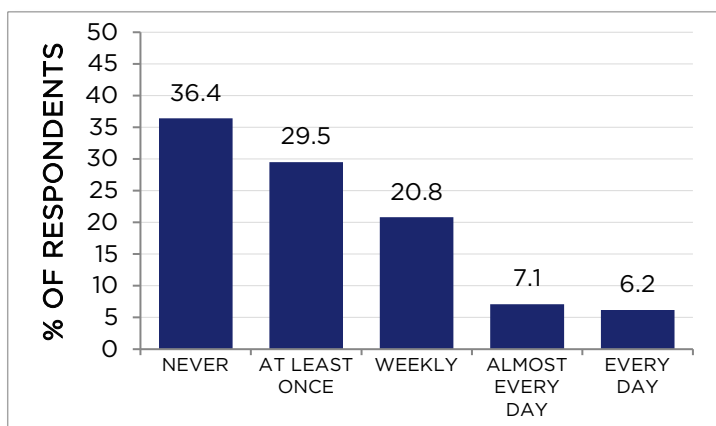
In homes where no one smoked daily, 3.8% of respondents said that smoking was allowed inside their home. Respondents who reported smoking in the home (i.e., someone smoked daily inside their home or smoking was allowed in their home) were asked whether smoking was restricted in any way; 42.7% said that there was some restriction on smoking inside their home.

EXPOSURE TO SECONDHAND SMOKE

Not including their own smoking, nearly two-thirds of respondents (63.6%) reported being exposed to secondhand smoke (SHS) sometime in the past month, including 13.3% who reported being exposed either every day or almost every day (Figure 5.1).

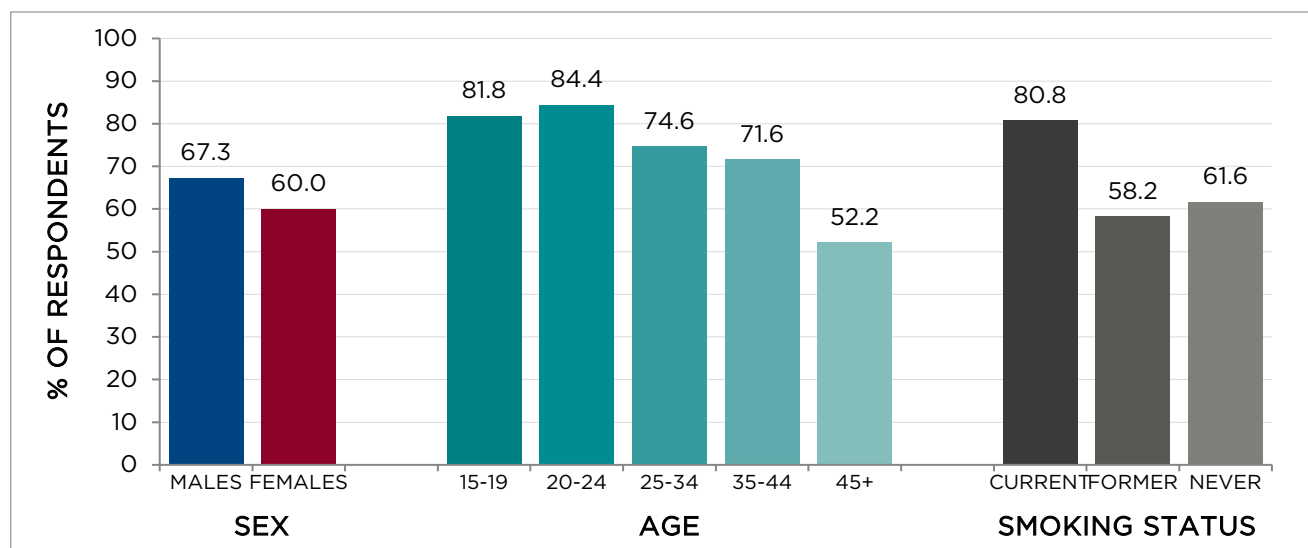
Reporting any SHS exposure in the past month varied significantly by age, sex, and smoking status.⁵⁷⁻⁵⁹ As shown in Figure 5.2, SHS exposure was more prevalent among males (compared to females), youth and young adults (compared to older age groups), and current smokers (compared to former and never smokers).

FIGURE 5.1: FREQUENCY OF EXPOSURE TO SECONDHAND SMOKE IN THE PAST MONTH, 2017



DATA SOURCE: CTADS, 2017

FIGURE 5.2: ANY EXPOSURE TO SECONDHAND SMOKE IN THE PAST MONTH, 2017



DATA SOURCE: CTADS, 2017

SECTION II: QUITTING SMOKING



HIGHLIGHTS

The majority (63.1%) of Canadians who have ever been smokers have now quit. (page 54)

More than half (57.9%) of current smokers were seriously considering quitting in the next 6 months; over one-quarter (26.9%) were considering quitting in the next month. (p. 57)

- The percentages of males and females who were seriously considering quitting smoking were not significantly different, for quitting in the next 6 months or in the next 30 days. (p. 58)
- Intentions to quit in the next 6 months did not differ significantly by age group. However, the percentage of smokers considering quitting smoking in the next 30 days did vary by age group, and was lowest among adults aged 25 to 34. (p. 59)

Almost half (46.2%) of smokers had tried to quit in the past year. Nearly one-third (31.3%) had tried more than once. (p. 60)

- Similar proportions of males and females had made a quit attempt in the past year. (p. 61)
- Quit attempts did not differ significantly by age group. (p. 62)

Among respondents who had made a quit attempt in the past year, 12.3% were still abstinent from smoking at the time they were surveyed. (p. 63)

Two-thirds of smokers who attempted to quit in the past two years used some form of cessation assistance. (p. 66)

- 30.8% used nicotine replacement therapy.
- 14.7% used stop-smoking medications such as Zyban, Wellbutrin, or Champix.
- One-third (32.4%) used e-cigarettes.
- Nearly one-quarter (23.2%) “made a deal with friends or family to quit smoking together.”
- Approximately 7% used a telephone quitline.

Over half (55.9%) of smokers who visited a doctor in the past year received advice to quit. (p. 68)

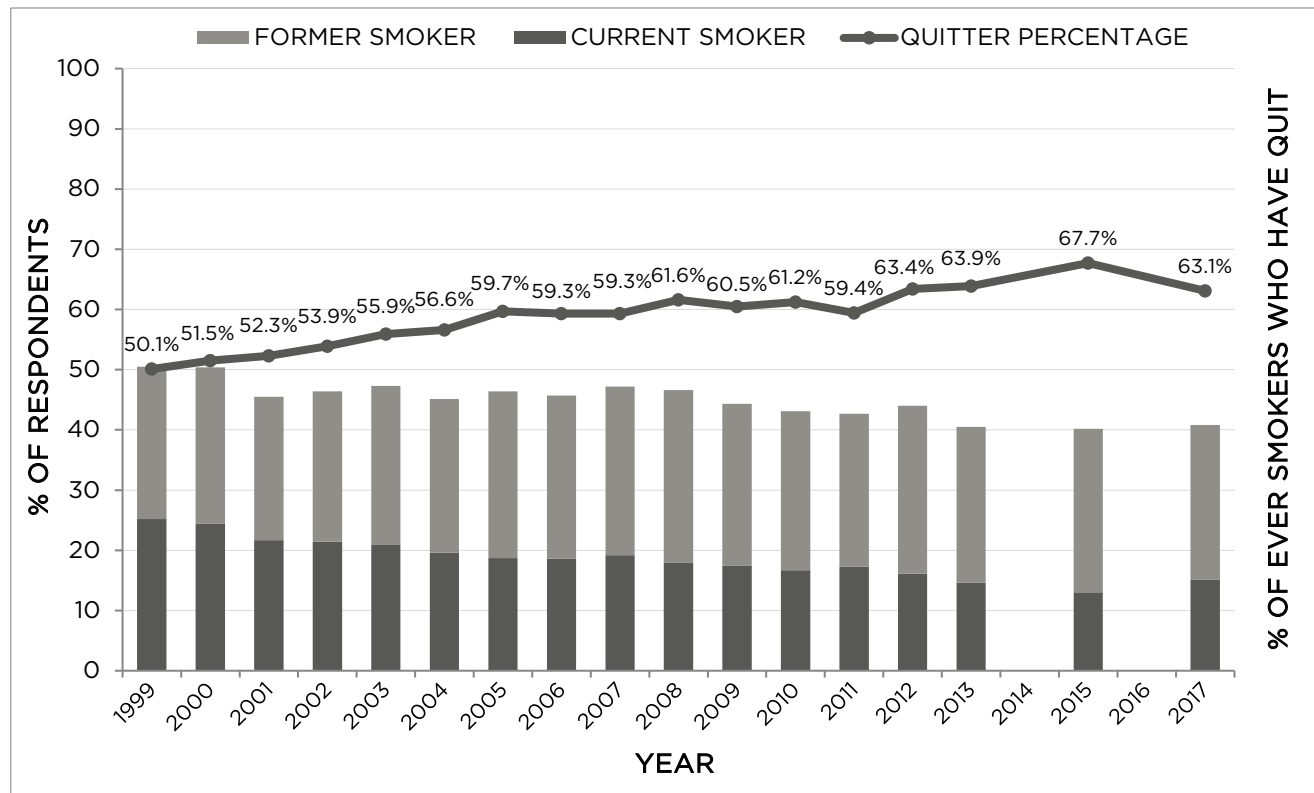
Two-thirds of recent quitters cited health as their main reason for quitting smoking. (p. 69)

6. QUITTING BEHAVIOURS AND OUTCOMES

6.1 QUITTER PERCENTAGE

The majority (63.1%) of Canadians who have ever been smokers have now quit. Figure 6.1 (below) shows the percentage of respondents who have ever smoked, including both current and former smokers, as well as quitter percentage (the percentage of ever smokers who were former smokers at the time of survey) over time. Quitter percentage slowly increased between 1999 and 2005, and then remained around 60% for a number of years, before appearing to increase again in the most recent years.

FIGURE 6.1: PERCENTAGE OF RESPONDENTS WHO HAVE EVER SMOKED (CURRENT AND FORMER SMOKERS), AND QUITTER PERCENTAGE*, 1999-2017



*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Nearly 8 million Canadians are former smokers.

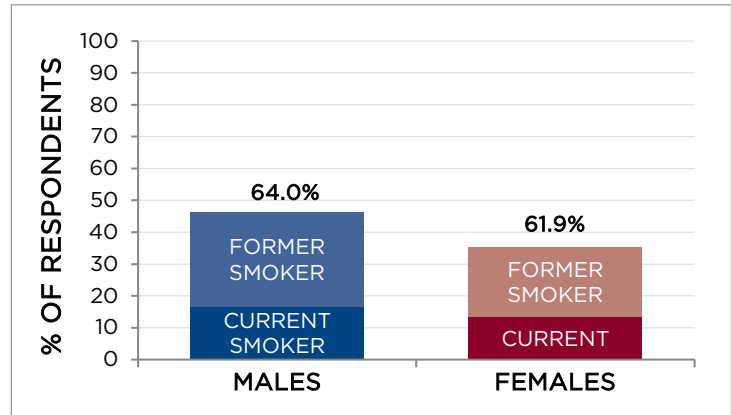
Quitter Percentage by Sex

In 2017, quitter percentages among males (64.0%) and females (61.9%) did not differ significantly.⁶⁰ However, a greater percentage of males had ever smoked,⁶¹ and were current smokers⁶² (Figure 6.2).

Since 1999, similar patterns have been observed; while male smoking rates (both current and ever) were higher, similar percentages of both male and female ever-smokers had quit (Figure 6.3; Figure 6.4).

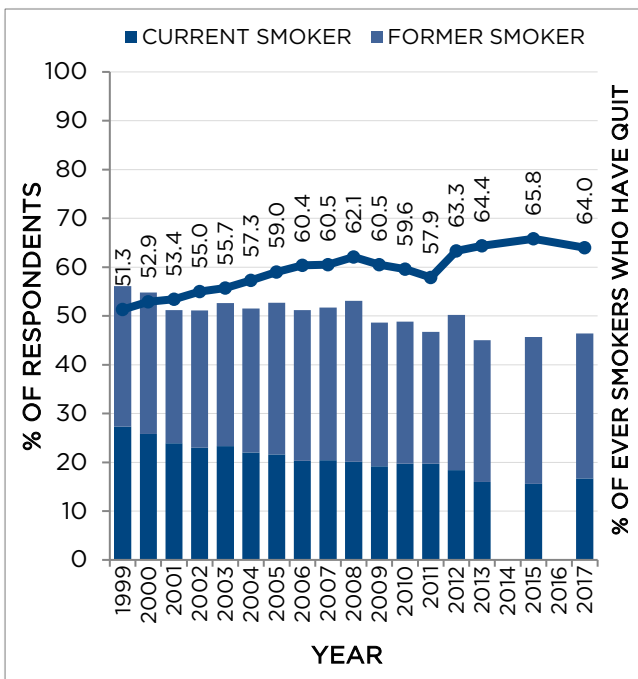
Among males, quitter percentage appears to have risen steadily until 2008, after which there was a slight downturn for a few years before once again increasing (Figure 6.3). Quitter percentage among females appears to have risen fairly steadily since 1999, though the most recent survey years were more variable (Figure 6.4).

FIGURE 6.2: PERCENTAGE OF RESPONDENTS WHO HAVE EVER SMOKED (CURRENT AND FORMER SMOKERS), AND QUITTER PERCENTAGE*, BY SEX, 2017



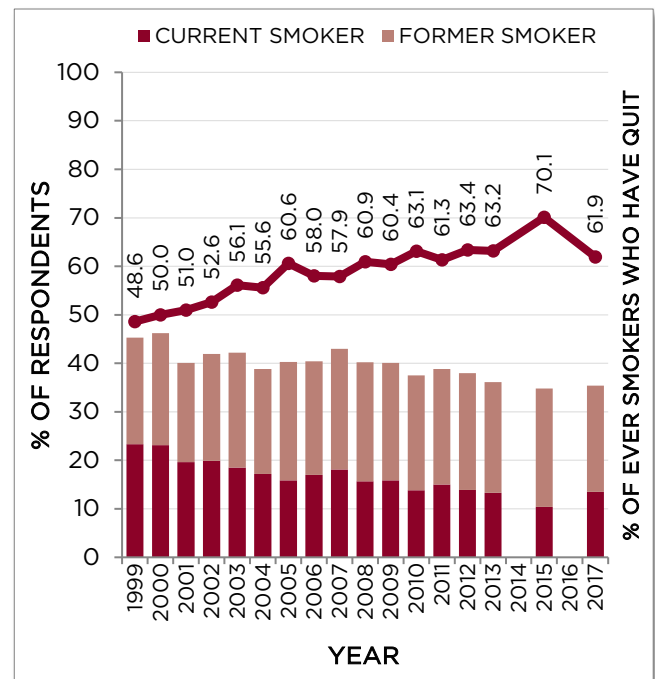
*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCE: CTADS, 2017

FIGURE 6.3: PERCENTAGE OF MALES WHO HAVE EVER SMOKED (CURRENT AND FORMER SMOKERS), AND QUITTER PERCENTAGE*, 1999-2017



*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

FIGURE 6.4: PERCENTAGE OF FEMALES WHO HAVE EVER SMOKED (CURRENT AND FORMER SMOKERS), AND QUITTER PERCENTAGE*, 1999-2017



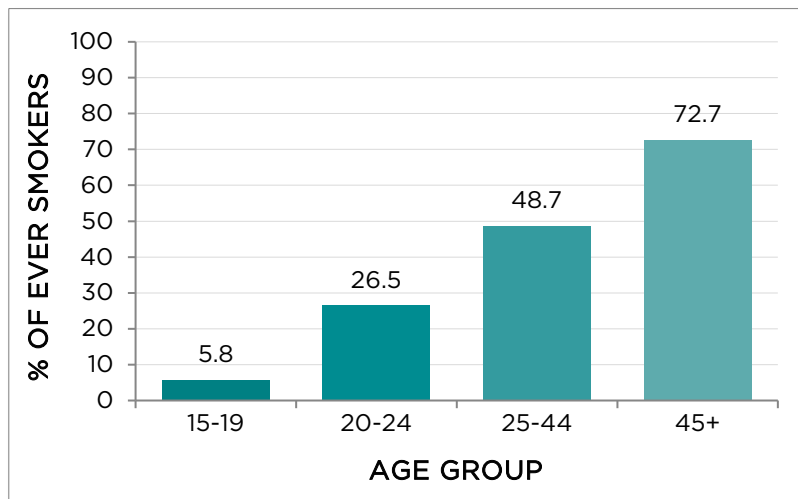
*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Quitter Percentage by Age

Quitter percentage varied significantly by age group,⁶³ increasing dramatically with increasing age, as expected given that older smokers have had more time to become former smokers. In 2017, while just 6% of ever-smokers aged 15-19 were former smokers when surveyed, nearly three-quarters of ever-smokers aged 45 and older had quit (Figure 6.5).

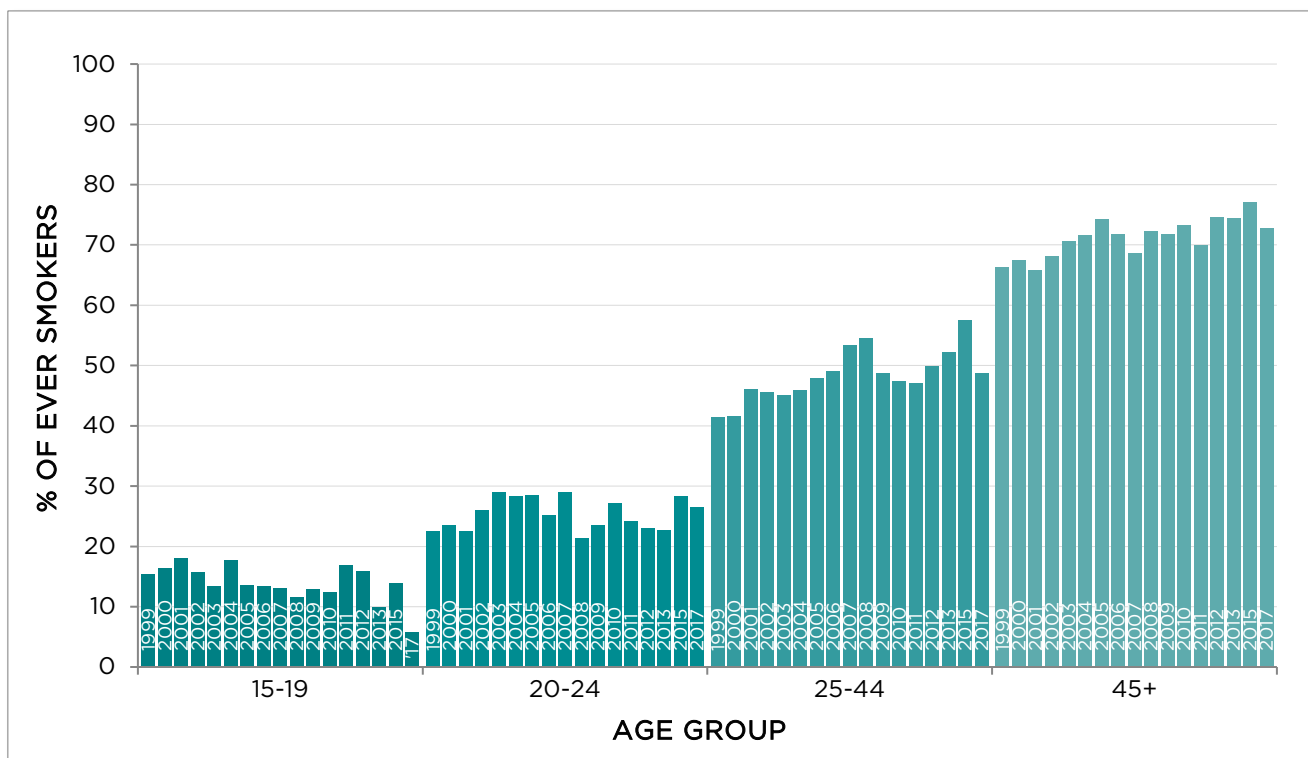
The same pattern of increasing quitter percentage with age was observed in all years since 1999 (Figure 6.6). Between 1999 and 2017, quitter percentages appear to have generally increased among smokers over age 25. Quitter percentages were lower and more variable among younger smokers.

FIGURE 6.5: QUITTER PERCENTAGE AMONG EVER SMOKERS*, BY AGE GROUP, 2017



*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCE: CTADS, 2017

FIGURE 6.6: QUITTER PERCENTAGE AMONG EVER SMOKERS*, BY AGE GROUP, 1999-2017



*QUITTER PERCENTAGE IS CALCULATED AS THE PERCENTAGE OF EVER SMOKERS WHO WERE FORMER SMOKERS AT TIME OF SURVEY.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

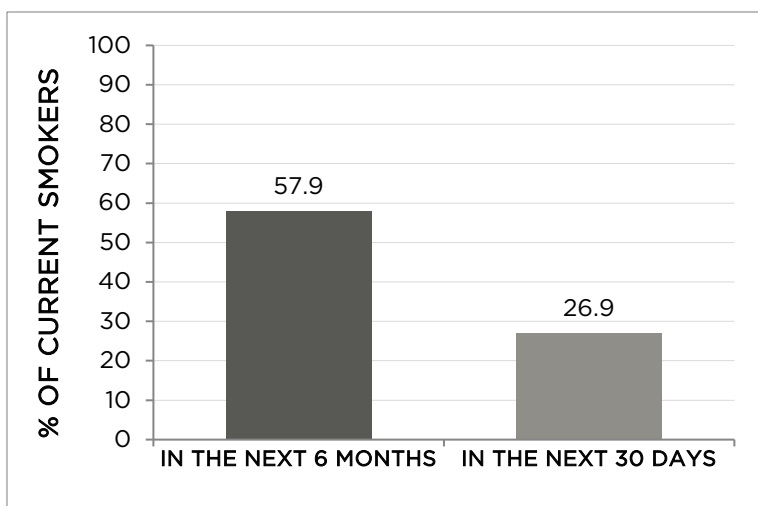
6.2 QUIT INTENTIONS

In 2017, the majority of smokers (57.9%) were seriously considering quitting in the next 6 months (Figure 6.7). Of those, about half (47.5%) were considering quitting within the next 30 days, which was equivalent to 26.9% of all current smokers.

Between 2015 and 2017, the percentage of smokers seriously considering quitting in the next 6 months decreased significantly,⁶⁴ while there was no significant change in the percentage considering quitting in the next 30 days.⁶⁵

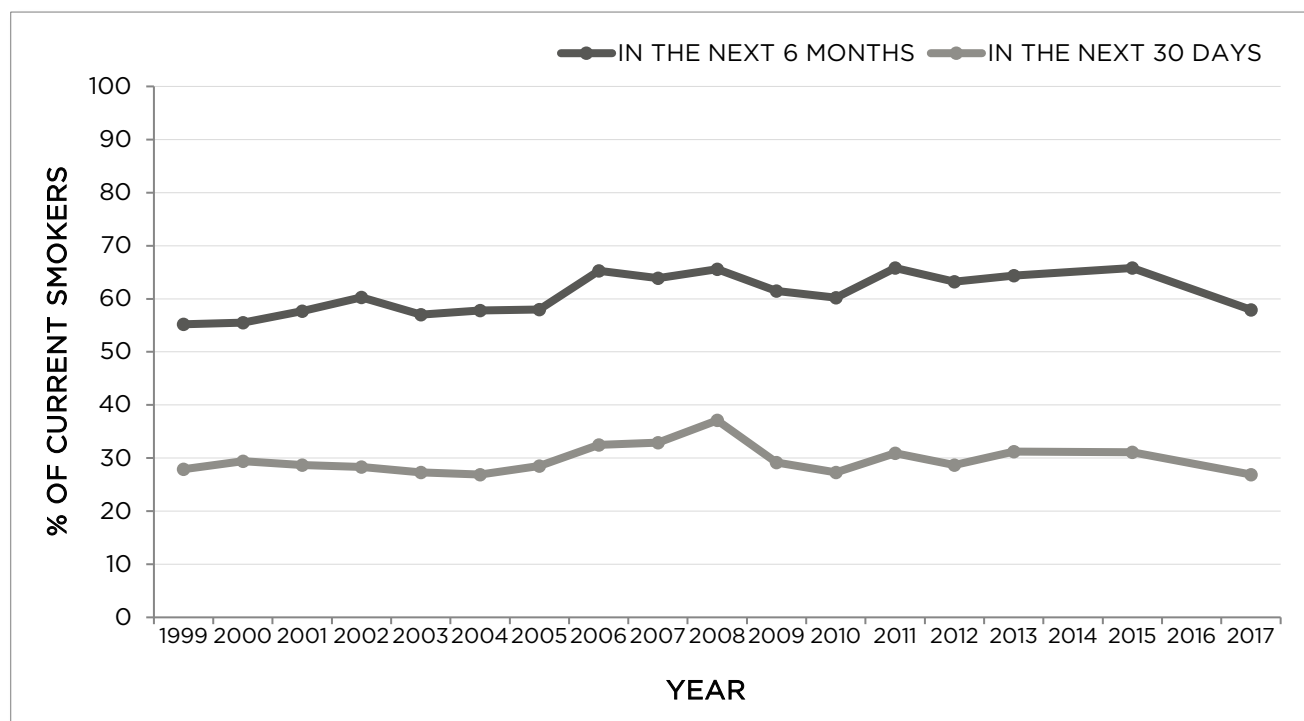
Between 1999 and 2017, while the percentage of smokers seriously considering quitting in the next 6 months appears to have increased in some years, there was little net change. The pattern over time was similar for the percentage seriously considering quitting in the next 30 days (Figure 6.8).

FIGURE 6.7: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, 2017



DATA SOURCE: CTADS, 2017

FIGURE 6.8: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, 1999*-2017



*IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.

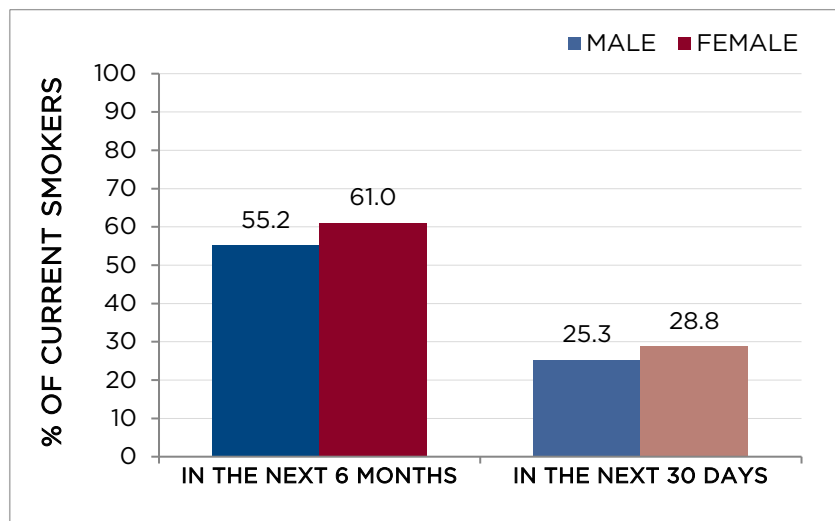
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Quit Intentions by Sex

In 2017, similar proportions of males and females were seriously considering quitting in the next 6 months⁶⁶ and in the next 30 days⁶⁷ (Figure 6.9).

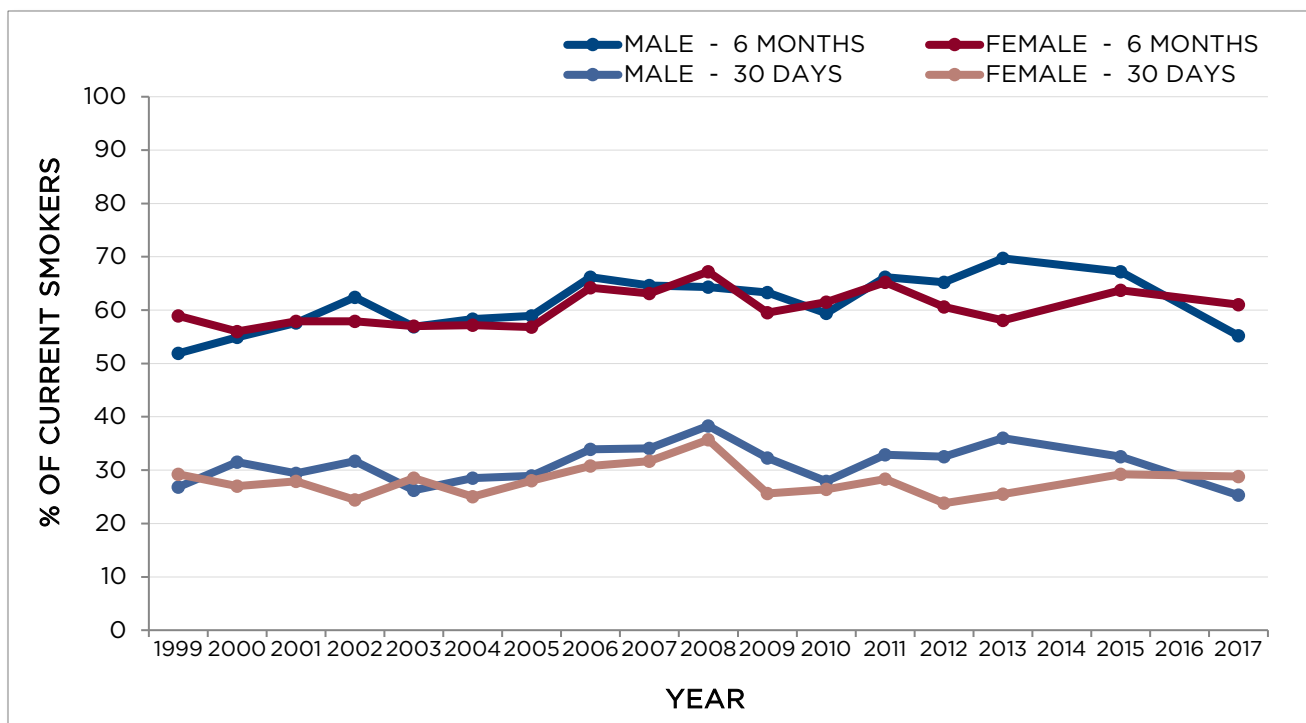
Since 1999, the percentages of male and female smokers considering quitting have been similar in most years, although with some variation from year to year (Figure 6.10).

FIGURE 6.9: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, BY SEX, 2017



DATA SOURCE: CTADS, 2017

FIGURE 6.10: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, BY SEX, 1999*-2017



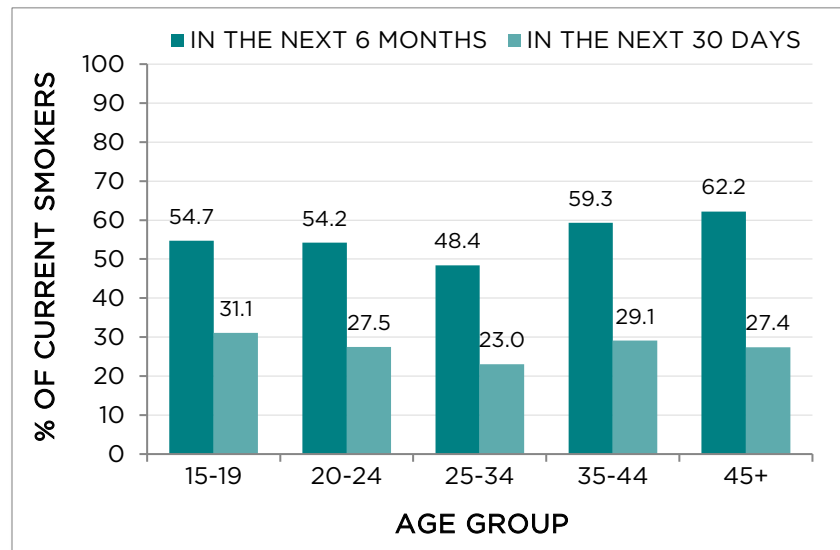
*IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Quit Intentions by Age

In 2017, there was significant variation by age group in the percentage of smokers considering quitting in the next 30 days,⁶⁸ but not in the next 6 months⁶⁹ (Figure 6.11). Of those seriously considering quitting in the next 6 months, roughly half were also considering quitting in the next 30 days: this proportion generally held across age groups.

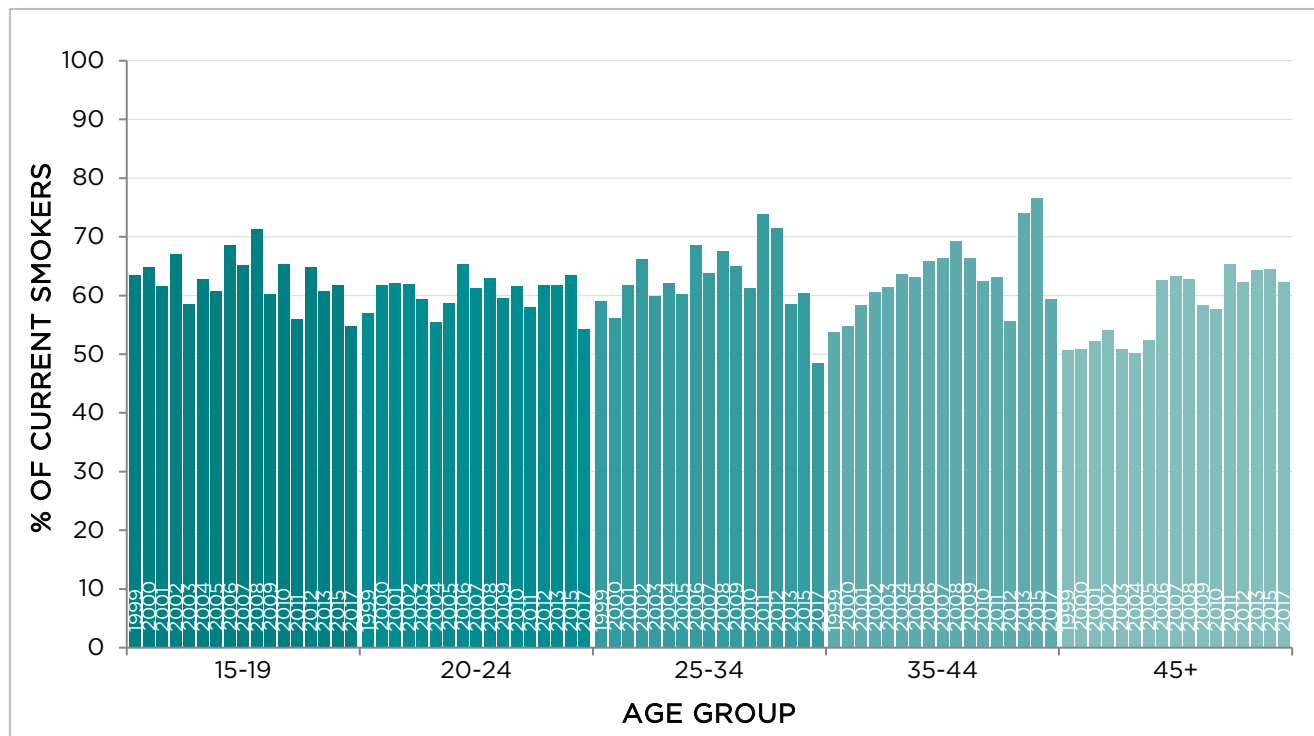
Over time, although no clear patterns emerged among younger smokers, the percentage of smokers over 45 seriously considering quitting in the next 6 months appeared to increase with time (Figure 6.12).

FIGURE 6.11: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, BY AGE GROUP, 2017



DATA SOURCE: CTADS, 2017

FIGURE 6.12: PERCENTAGE OF SMOKERS WHO WERE SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, BY AGE GROUP, 1999*-2017



*IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

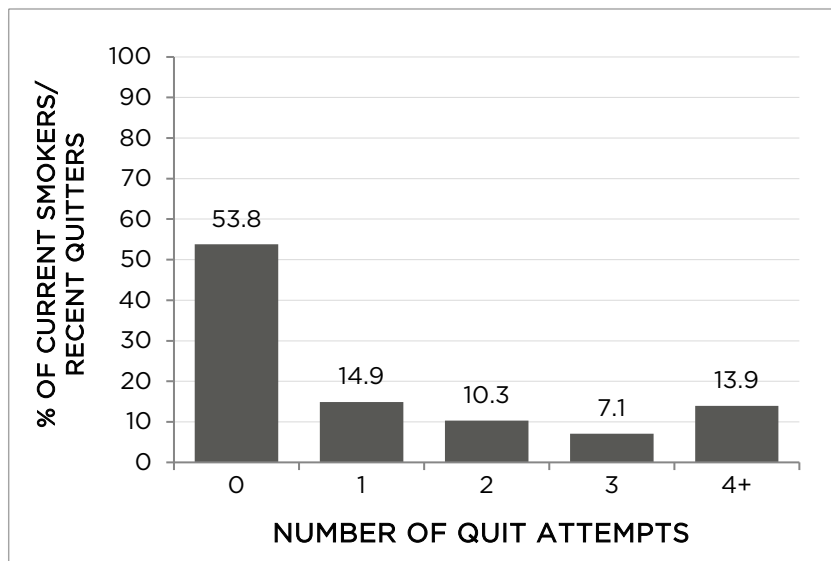
6.3 QUIT ATTEMPTS

In 2017, just under half (46.2%) of smokers and recent quitters reported having made at least one quit attempt in the past year, and nearly one-third (31.3%) had made multiple attempts (Figure 6.13).

There was no significant change between 2015 and 2017 in the percentage of smokers and recent quitters who had attempted to quit in the past 12 months.⁷⁰

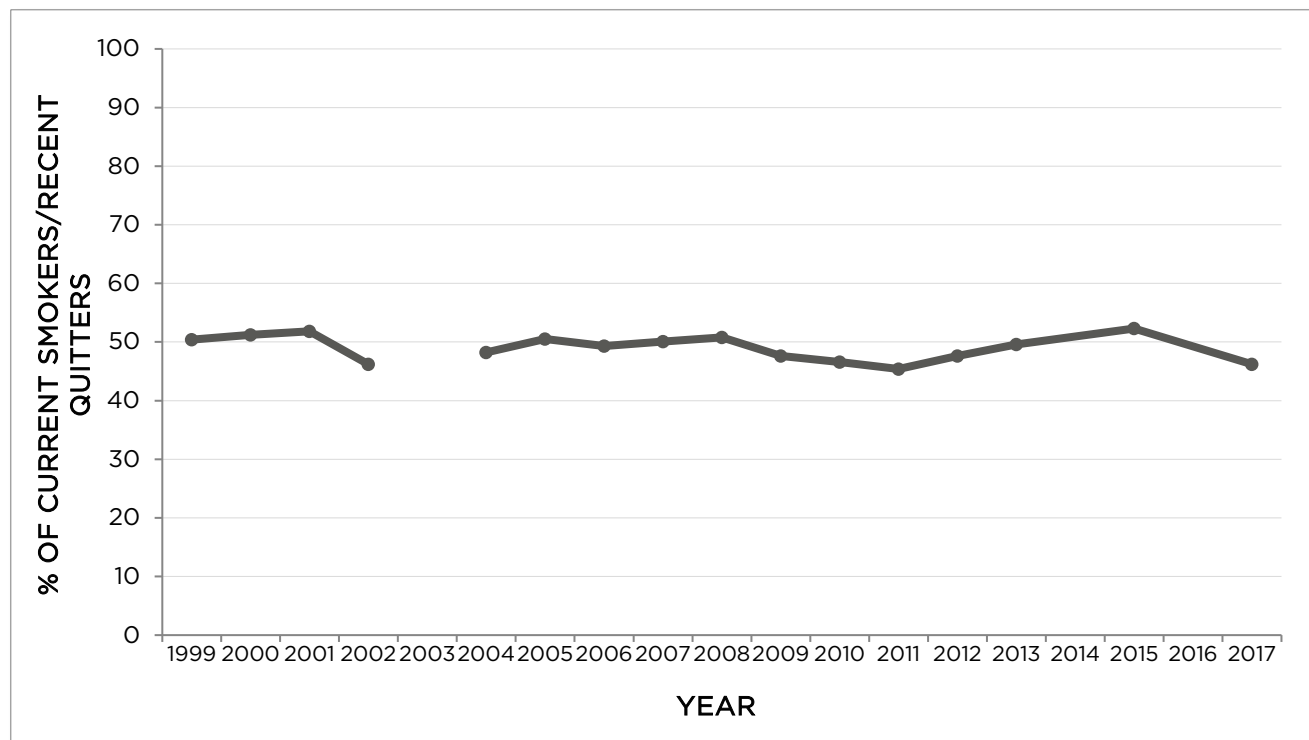
From 1999 to 2017, the percentage of smokers and recent quitters who had attempted to quit in the past 12 months appears to have remained fairly stable, at around half (Figure 6.14).

FIGURE 6.13: NUMBER OF QUIT ATTEMPTS MADE IN THE PAST 12 MONTHS BY SMOKERS AND RECENT QUITTERS*, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCE: CTADS, 2017

FIGURE 6.14: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, 1999**-2017



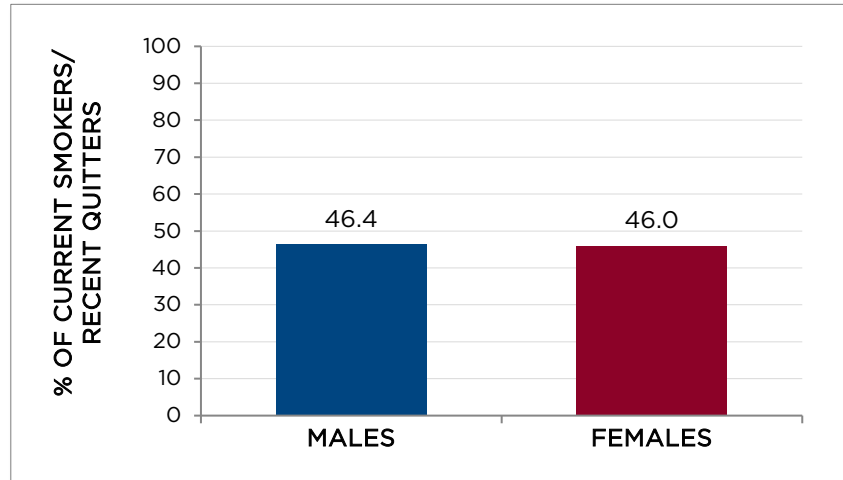
*NOTE: IN 1999-2002, THIS QUESTION WAS ASKED OF CURRENT SMOKERS; 2003 (DATA NOT SHOWN) INCLUDED ONLY SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS; 2004-2017 INCLUDED CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS.
**IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Quit Attempts by Sex

In 2017, the percentages of males and females who had made a quit attempt in the past year did not differ significantly⁷¹ (Figure 6.15).

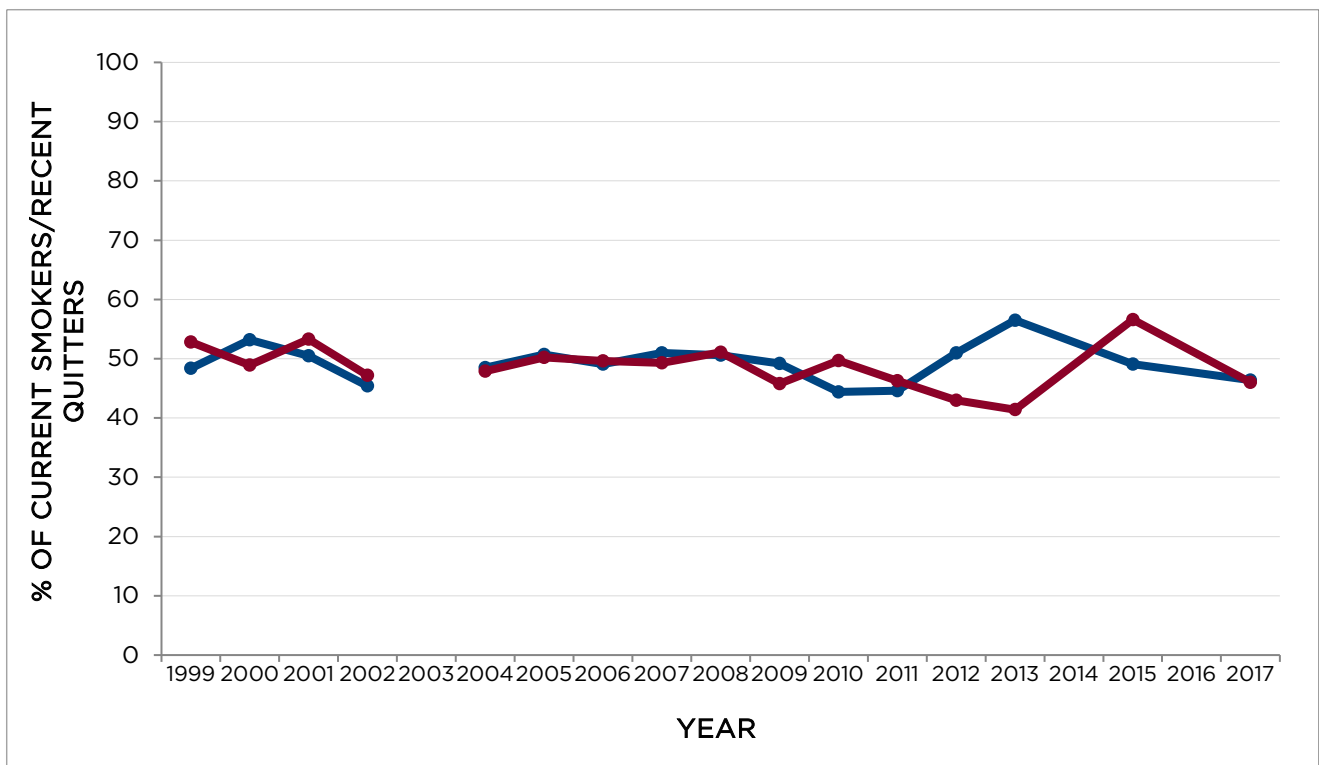
Between 1999 and 2017, the percentages of males and females who had made an attempt were similar in most years, despite greater variation in some recent survey years (Figure 6.16).

FIGURE 6.15: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, BY SEX, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCE: CTADS, 2017

FIGURE 6.16: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, BY SEX, 1999**-2017



*NOTE: IN 1999-2002, THIS QUESTION WAS ASKED OF CURRENT SMOKERS; 2003 (DATA NOT SHOWN) INCLUDED ONLY SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS; 2004-2017 INCLUDED CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS.

**IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.

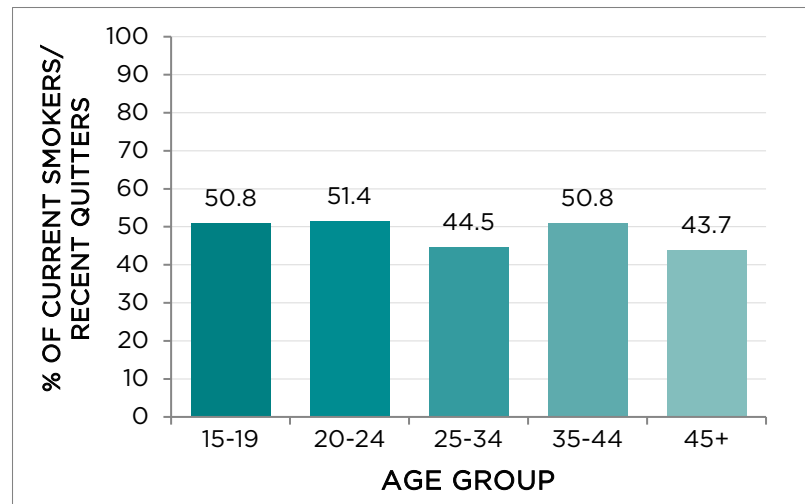
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

Quit Attempts by Age

Quit attempts did not vary significantly by age group in 2017.⁷² In all age groups, close to half of smokers had made a quit attempt in the past year (Figure 6.17).

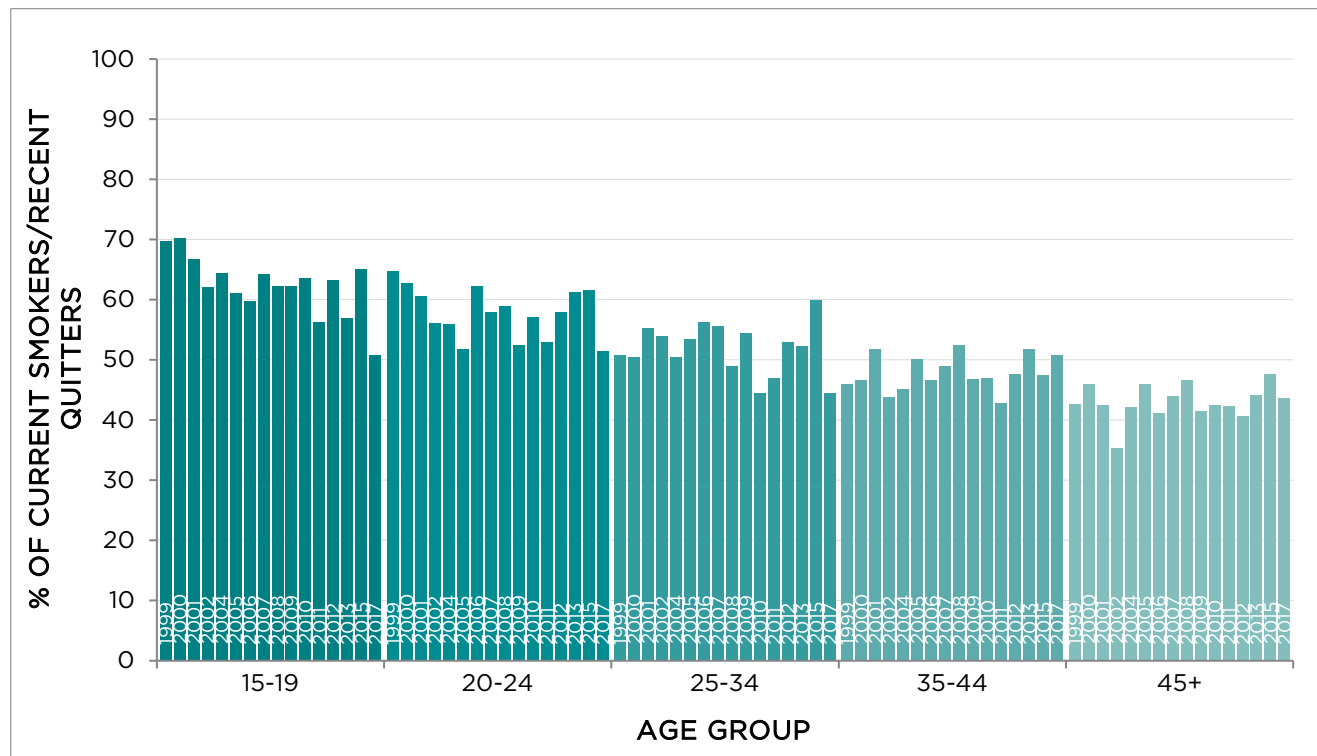
Between 1999 and 2017, in most years, more young smokers had made a quit attempt, and the percentage making quit attempts appeared to decrease with age (Figure 6.18). Although the percentages of each age group who made a quit attempt varied considerably from year-to-year, there were no clear patterns of change over this time period.

FIGURE 6.17: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, BY AGE GROUP, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCE: CTADS, 2017

FIGURE 6.18: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, BY AGE GROUP, 1999- 2017**



*NOTE: IN 1999-2002, THIS QUESTION WAS ASKED OF CURRENT SMOKERS; 2003 (DATA NOT SHOWN) INCLUDED ONLY SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS; 2004-2017 INCLUDED CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS.

**IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS.

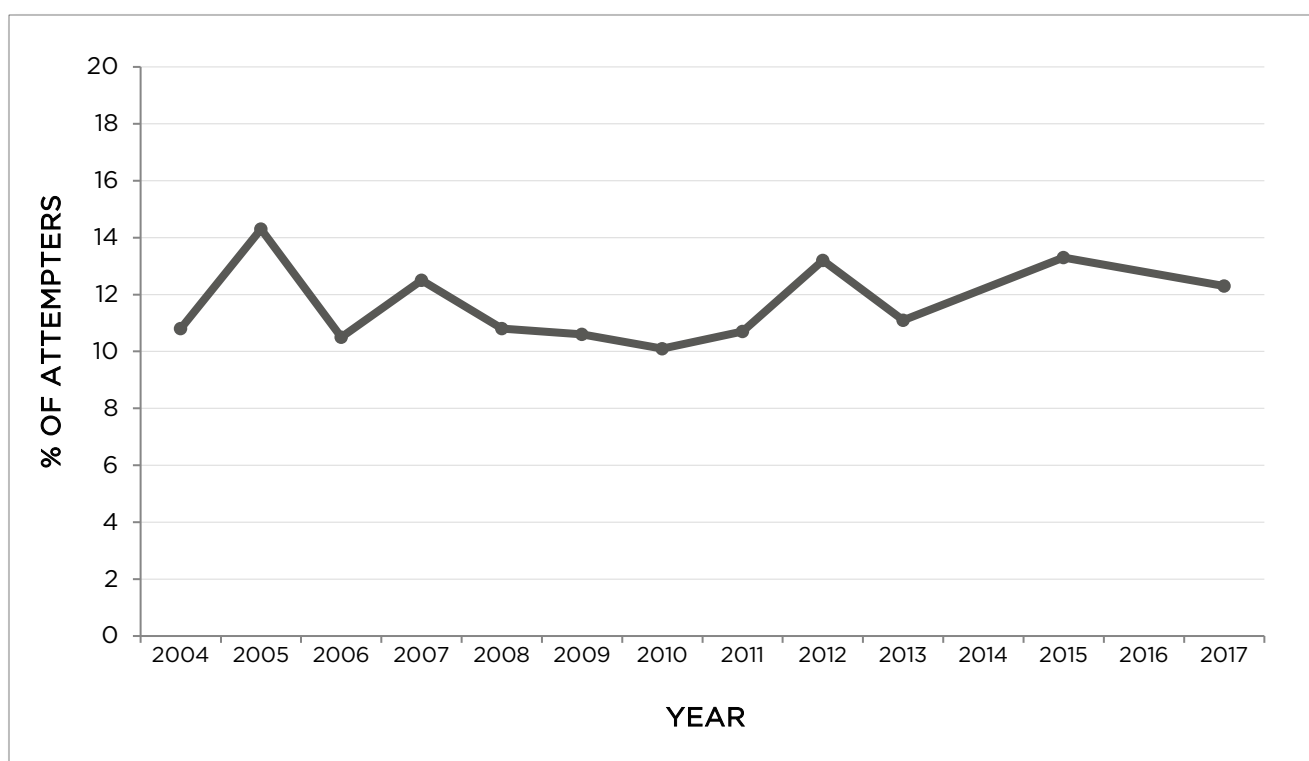
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

6.4 QUIT SUCCESS (POINT ABSTINENCE)

In 2017, of all respondents who had tried to quit for at least 24 hours in the past year (i.e., 46.2% of smokers and recent quitters), 12.3% were still quit at the time they were surveyed. This represents no significant change in quit success from 2015.⁷³

While comparison from 1999 to 2017 is not possible due to changes in question coverage and availability of data,* since 2004, quit success appears to have remained around 10-13%, with some year-to-year fluctuation (Figure 6.19).

FIGURE 6.19: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS AND WERE STILL ABSTINENT AT THE TIME OF SURVEY, 2004-2017



*IN 1999-2002 THIS QUESTION WAS ASKED OF CURRENT SMOKERS (DATA NOT SHOWN); 2003 INCLUDED ONLY SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS (DATA NOT SHOWN); 2004-2017 ASKED CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS.
DATA SOURCES: CTUMS, 2004-2012; CTADS, 2013, 2015, 2017

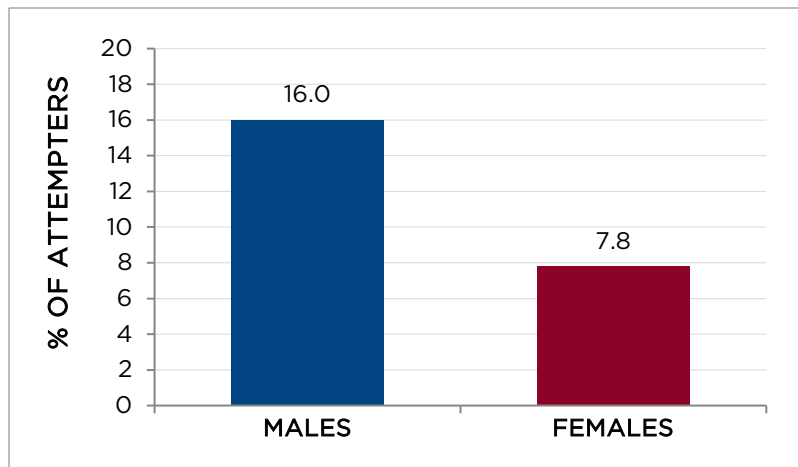
Quit Success by Sex

In 2017, while the percentages of males and females who attempted to quit in the past 12 months and were abstinent at the time of the survey appeared to differ, this sex difference was not statistically significant⁷⁴ (Figure 6.20).

There is considerable variability in this measure due to smaller sample sizes among sub-groups.

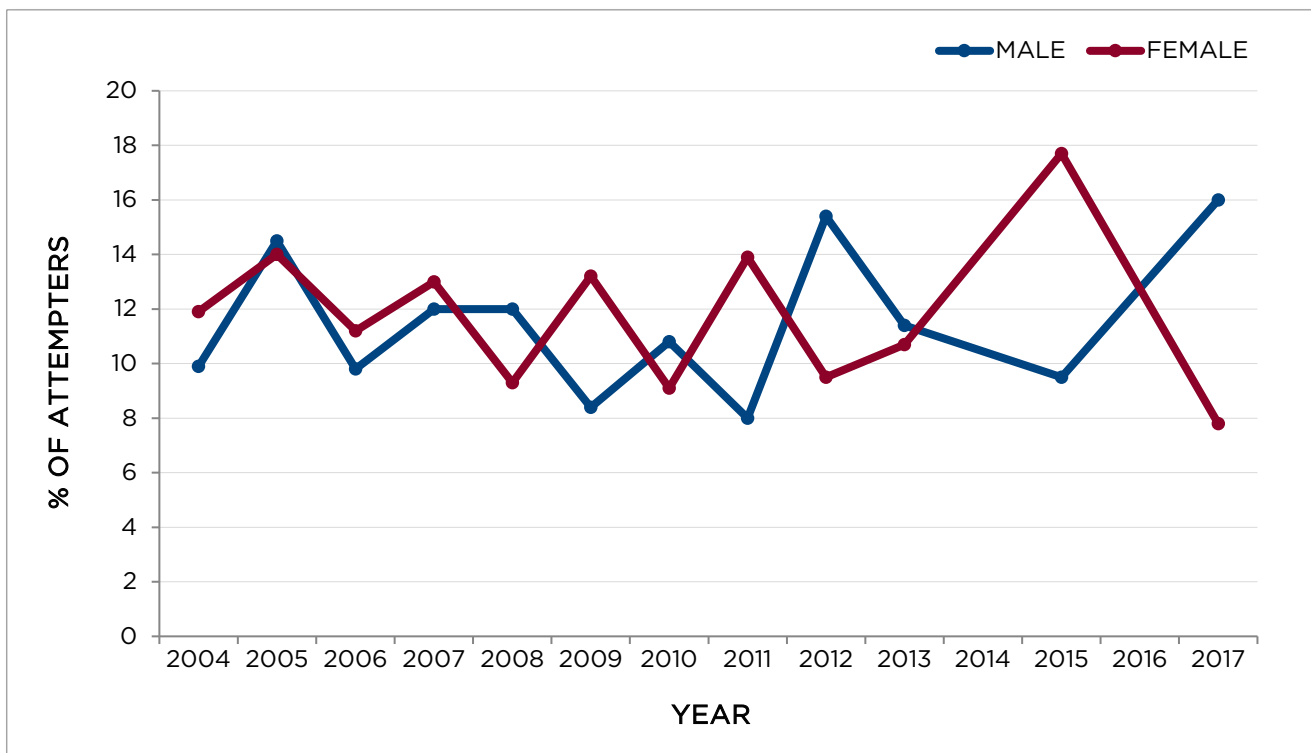
Since 2004, success in remaining abstinent from smoking has fluctuated among both males and females, with no clear pattern emerging (Figure 6.21).

FIGURE 6.20: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS AND WERE ABSTINENT AT THE TIME OF SURVEY, BY SEX, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCE: CTADS, 2017

FIGURE 6.21: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS AND WERE ABSTINENT AT THE TIME OF SURVEY, BY SEX, 2004-2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCES: CTUMS, 2004-2012; CTADS, 2013, 2015, 2017

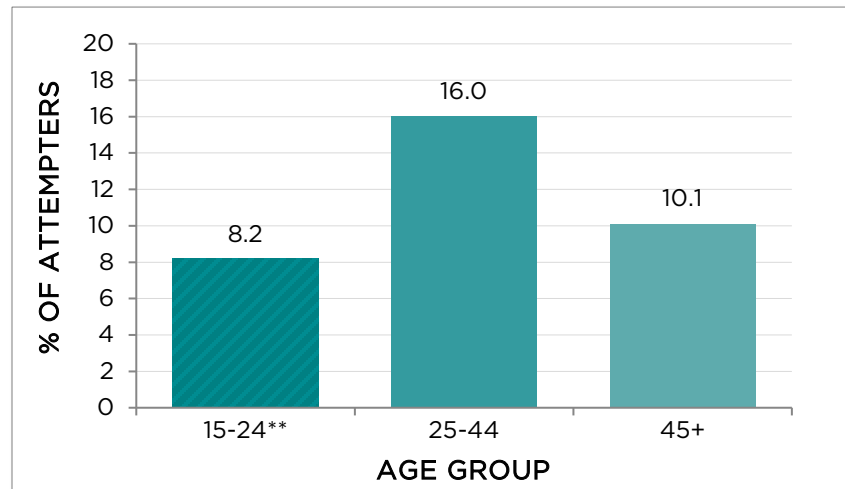
Quit Success by Age

In 2017, smoking abstinence rates among those who attempted to quit in the past 12 months did not differ significantly by age group⁷⁵ although they appeared to be somewhat higher among those aged 25-44 (Figure 6.22).

Over time, quit success within each age group has been highly variable, and no clear patterns by age have emerged (Figure 6.23).

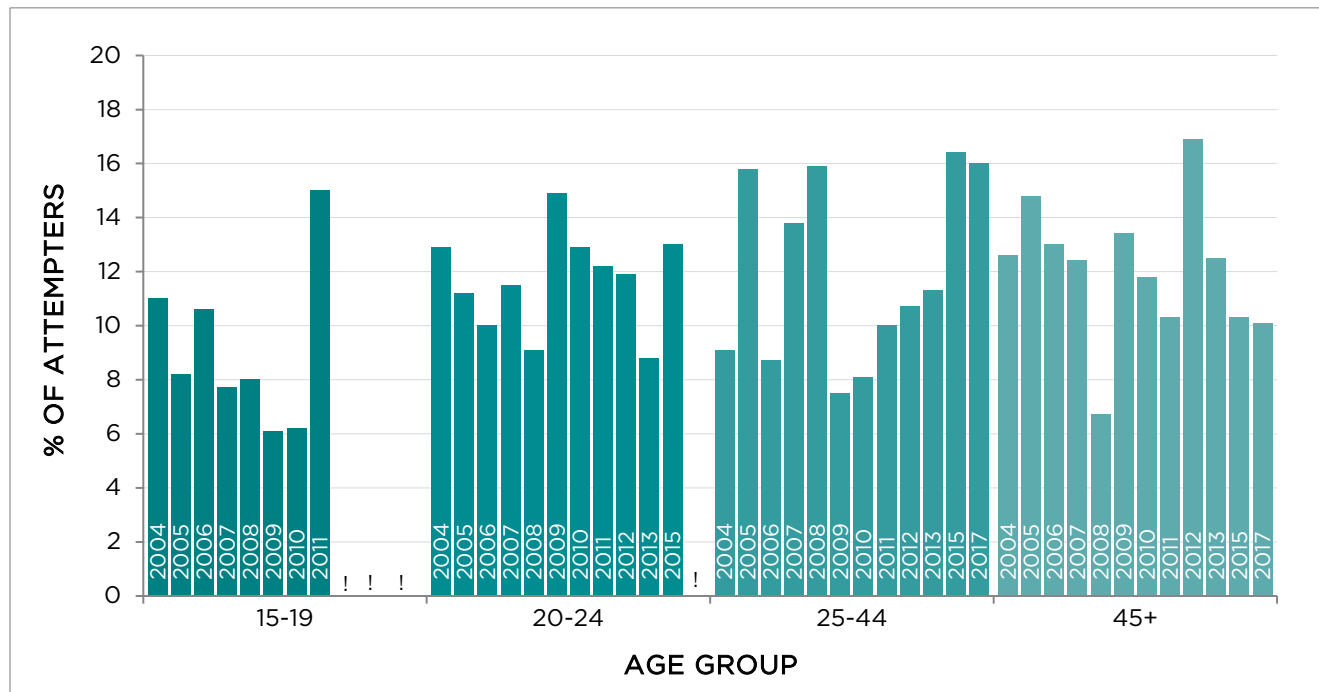
The large increases and decreases observed in some years may reflect high variability due to smaller sample sizes for this measure, rather than real trends.

FIGURE 6.22: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS AND WERE ABSTINENT AT THE TIME OF SURVEY, BY AGE GROUP, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
**AGE GROUPS 15-19 AND 20-24 COMBINED DUE TO LOW NUMBERS
DATA SOURCE: CTADS, 2017

FIGURE 6.23: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS AND WERE ABSTINENT AT THE TIME OF SURVEY, BY AGE GROUP, 2004-2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 2004-2012; CTADS, 2013, 2015, 2017

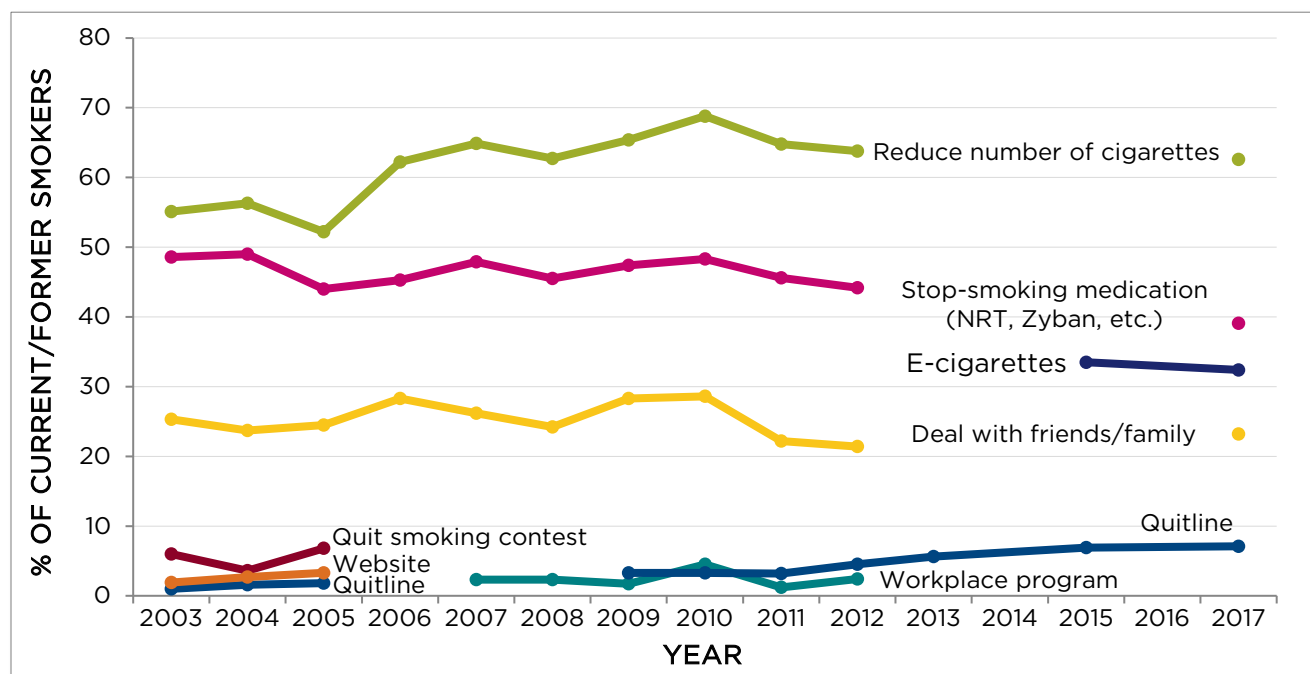
6.5 USE OF CESSATION ASSISTANCE

CESSATION METHODS

The 2017 CTADS asked about a number of cessation methods; estimates of their use in the past two years are presented in Figure 6.24. Reducing cigarette consumption as a way to quit was popular, cited by the majority (62.6%) of smokers. Excluding reduction, two-thirds of smokers (66.5%) who attempted to quit used some form of cessation assistance. Four in ten (39.1%) used stop-smoking medications (SSMs), including nicotine replacement therapy (NRT), or “medications such as Zyban, Wellbutrin or Champix” (see next page for details). One-third (32.4%) reported using an e-cigarette as a cessation aid (see also section 12.5), and 23.2% made a deal with friends or family to quit.

Use of cessation assistance was also included in the previous CTUMS survey, as well as in CTADS 2013 and 2015 (see Figure 6.24). Note that caution should be used when comparing to previous estimates, due to changes in question coverage; recent quitters and smokers who attempted to quit in the last year were asked in CTADS 2013 and 2015, while those who attempted to quit in the past 2 years were asked in CTUMS and in CTADS 2017. Some forms of assistance, such as workplace cessation programs, websites, and quit smoking contests, were used by relatively few people in the years with available data.

FIGURE 6.24: PREVALENCE OF USE OF VARIOUS QUIT METHODS AMONG CURRENT AND FORMER SMOKERS WHO HAD QUIT OR ATTEMPTED TO QUIT SMOKING IN THE PAST 2 YEARS*, 2003-2017



*IN 2013 AND 2015 ONLY, ONLY CURRENT SMOKERS WHO HAD TRIED TO QUIT IN THE LAST YEAR (RATHER THAN PAST 2 YEARS, WHICH WAS DONE IN CTUMS AND CTADS 2017) WERE INCLUDED, AS WELL AS FORMER SMOKERS WHO STOPPED SMOKING IN THE LAST 2 YEARS.
DATA SOURCES: CTUMS, 2003-2012; CTADS, 2013, 2015, 2017

Telephone helplines

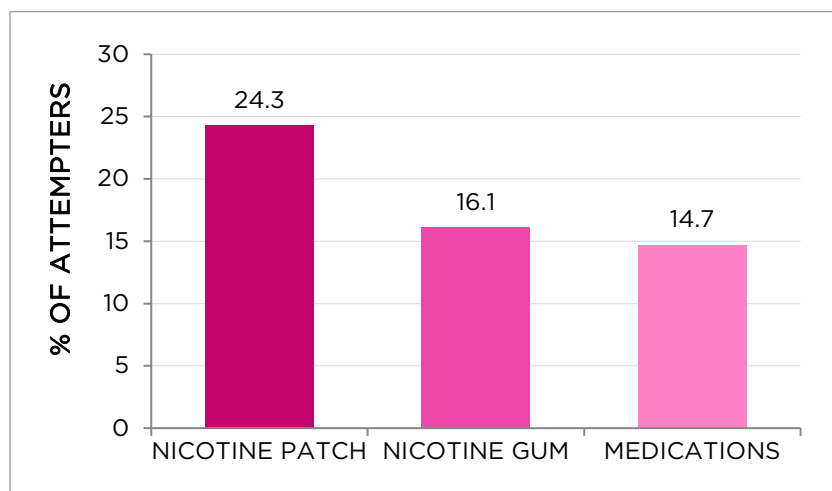
The Smoker’s Helpline number was added to cigarette package warning labels and inserts in 2012.^{xv} In 2017, four out of five current smokers (80.3%) said that they were aware of “1-800 telephone quit-lines or other smoker help lines available to help you quit smoking”. Further, use of a telephone quitline was reported by 7.1% of current and former smokers who had quit or tried to quit in the past 2 years.

USE OF PHARMACOTHERAPY

As noted previously, approximately four in ten (39.1%) of those who attempted to quit in the past 2 years had used some kind of stop-smoking medication (SSM). Nicotine replacement therapy (NRT) was used by 30.8%, about twice the proportion who used “medication such as Zyban, Wellbutrin or Champix” (Figure 6.25).

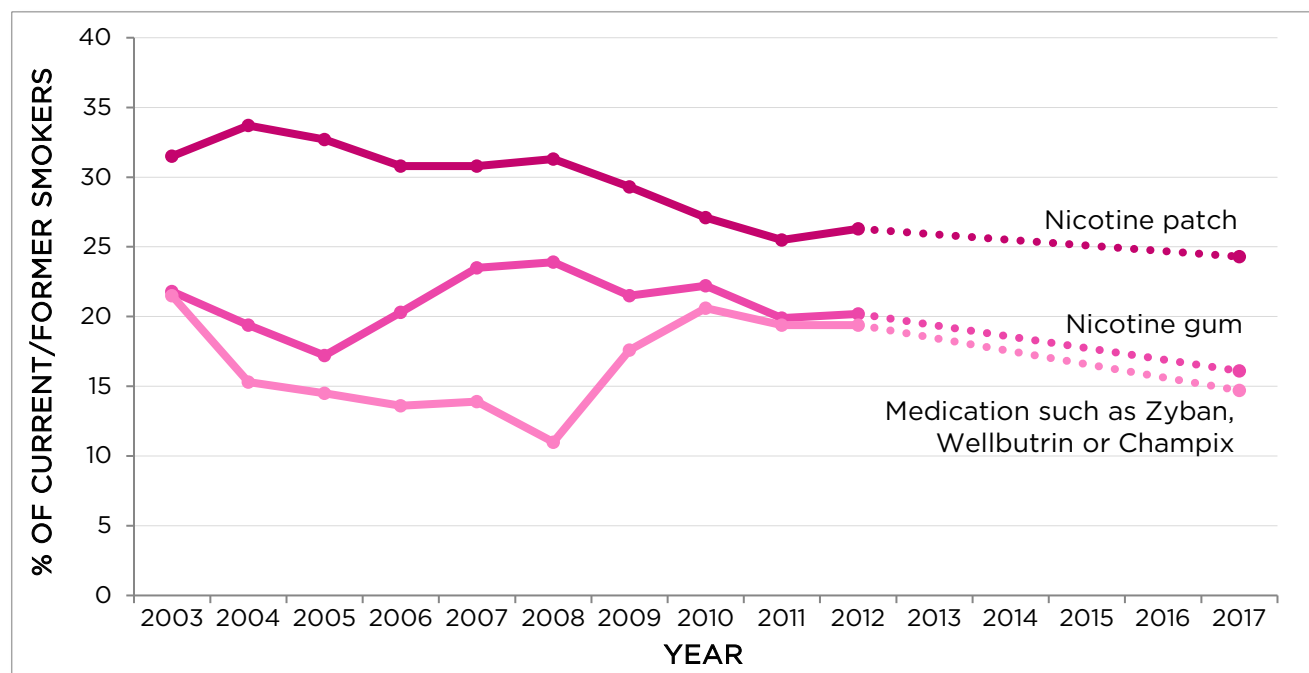
Since 2003, the nicotine patch has been the most popular SSM in all years with available data (Figure 6.26). Use of stop-smoking medications appears to have decreased somewhat in 2017, compared to the previous time period where SSMs were measured.

FIGURE 6.25: PREVALENCE OF USE OF STOP-SMOKING MEDICATIONS AMONG CURRENT SMOKERS AND RECENT QUITTERS* WHO HAD QUIT OR ATTEMPTED TO QUIT SMOKING IN THE PAST 2 YEARS, 2017



*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCE: CTADS, 2017

FIGURE 6.26: PREVALENCE OF USE OF STOP-SMOKING MEDICATIONS AMONG CURRENT SMOKERS AND RECENT QUITTERS* WHO HAD QUIT OR ATTEMPTED TO QUIT SMOKING IN THE PAST 2 YEARS, 2003-2017



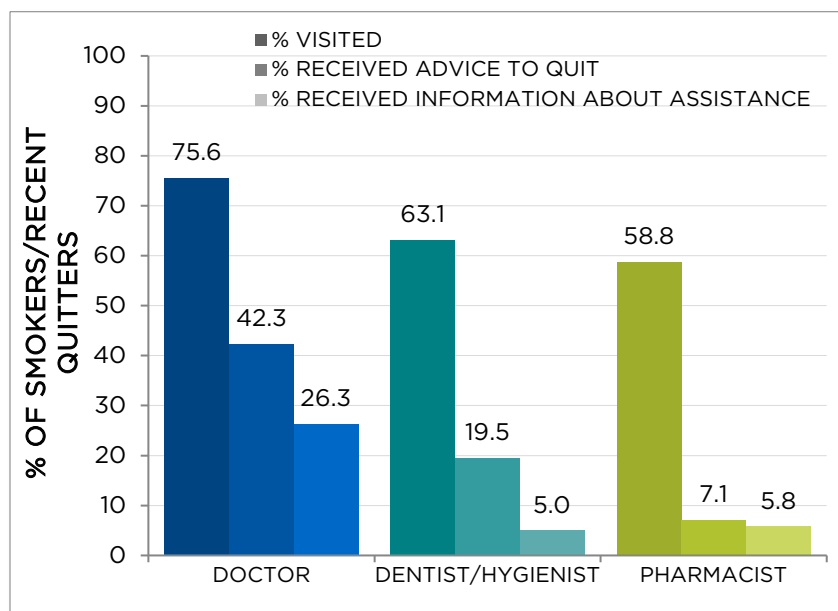
*INCLUDES CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS
DATA SOURCES: CTUMS, 2003-2012; CTADS, 2017

CESSATION ADVICE AND ASSISTANCE FROM HEALTH PROFESSIONALS

Among current smokers and recent (past-year) quitters surveyed in 2017, three-quarters had visited a doctor in the past 12 months, while around six in ten had seen a dentist (or dental hygienist) or talked with a pharmacist (Figure 6.27).

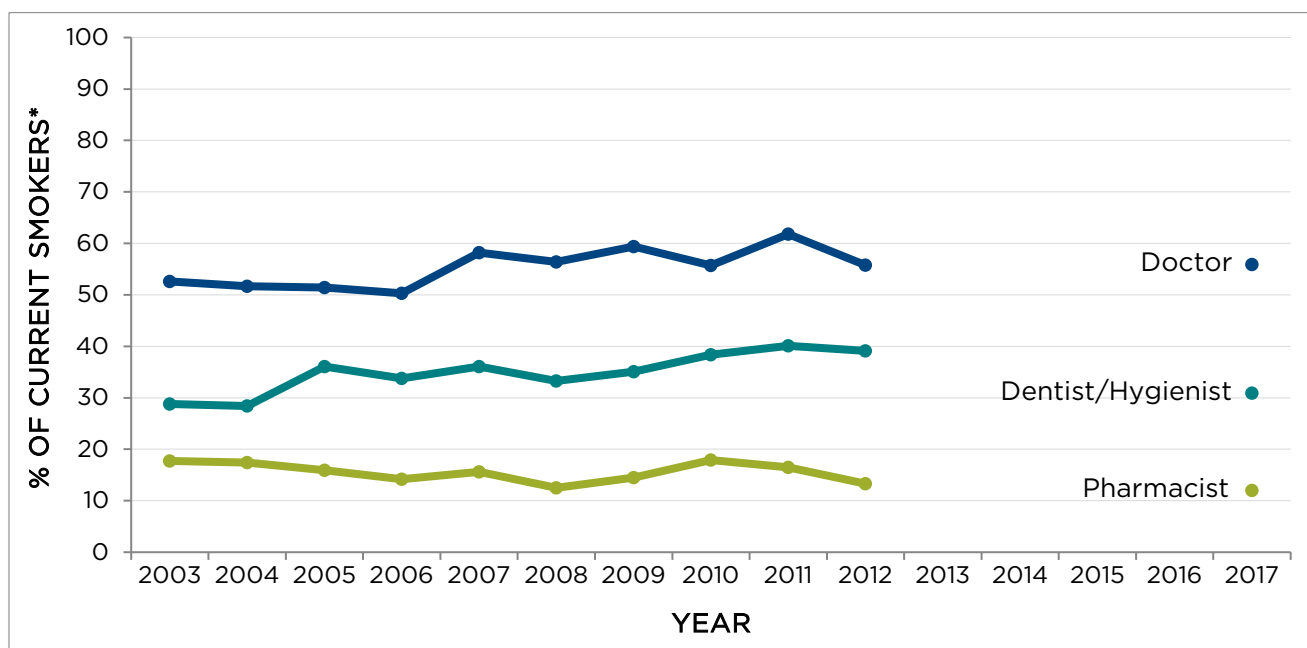
Of those who had visited health professionals, smokers visiting doctors received advice most often. Of smokers who had visited a doctor in the past year, 55.9% received advice to quit smoking, compared to 30.9% of those who visited a dentist, and 12.0% of those who had talked to a pharmacist. Figure 6.28 presents this proportion over time since 2003, but direct comparisons between 2017 and 2003-12 should not be made, due to changes in question coverage.

FIGURE 6.27: PERCENTAGE OF CURRENT SMOKERS AND RECENT QUITTERS WHO RECEIVED ADVICE TO QUIT AND INFORMATION ON QUITTING ASSISTANCE FROM HEALTH PROFESSIONALS IN THE PAST 12 MONTHS, 2017



DATA SOURCE: CTADS, 2017

FIGURE 6.28: PERCENTAGE OF CURRENT SMOKERS (AND RECENT QUITTERS)* WHO RECEIVED ADVICE TO QUIT FROM HEALTH PROFESSIONALS IN THE PAST 12 MONTHS, 2003-2017



*IN 2017 CTADS, CURRENT SMOKERS AND RECENT (PAST YEAR) QUITTERS WERE ASKED. IN 2003-2012 CTUMS, ONLY CURRENT SMOKERS WERE ASKED.
DATA SOURCES: CTUMS, 2003-2012; CTADS, 2017

Of those who visited and received advice to quit, more received information about quitting assistance from pharmacists (82.9%), compared to doctors (62.3%) or dentists (26.0%).

6.6 REASONS FOR QUITTING SMOKING

When recent (past year) quitters were asked about their main reason for quitting smoking, two-thirds (67.5%) cited health; this increased slightly to 68.7% when pregnancy or a baby in the household (i.e., health of a child) was included (Figure 6.29). Few smokers cited the cost of cigarettes as their main reason to quit. One in five (21.6%) cited some other reason.

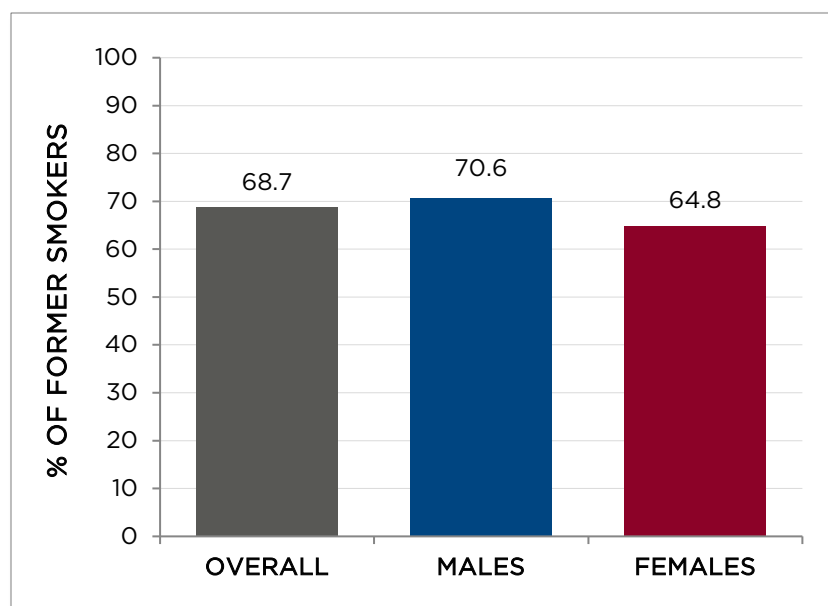
Reasons to Quit by Sex

Health or a pregnancy or baby in the household was the main reason to quit cited by the majority of recent quitters among both males and females; there was no significant difference by sex (Figure 6.29).⁷⁶

Reasons to Quit by Age

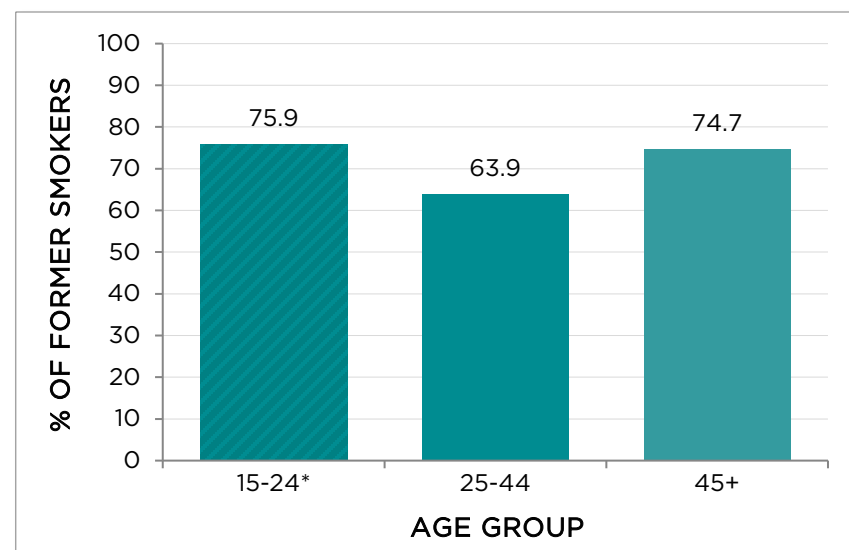
The percentage of recent quitters who cited health or pregnancy as a reason for quitting did not vary significantly by age group⁷⁷ (Figure 6.30).

FIGURE 6.29: PERCENTAGE OF RECENT QUITTERS WHOSE MAIN REASON TO QUIT WAS HEALTH OR PREGNANCY/BABY, OVERALL AND BY SEX, 2017



DATA SOURCE: CTADS, 2017

FIGURE 6.30: PERCENTAGE OF RECENT QUITTERS WHOSE MAIN REASON TO QUIT WAS HEALTH OR PREGNANCY/BABY, BY AGE GROUP, 2017



*AGE GROUPS 15-19 AND 20-24 WERE COMBINED DUE TO LOW NUMBERS
DATA SOURCE: CTADS, 2017

SECTION III: TOBACCO USE AMONG CANADIAN YOUTH



HIGHLIGHTS

Among youth in grades 7-9, in 2016-17:

8.6% of students in grades 7-9 overall had ever tried a cigarette, ranging from 4.4% in grade 7 to 13.5% in grade 9. (pages 71-72)

One-third of never-smokers in grades 7-9 were classified as susceptible to smoking. (p. 73)

1.0% of students in grades 7-9 were current smokers overall, with grade-specific estimates ranging from 0.3% in grade 7 to 1.9% in grade 9. (p. 75)

- Smokers were fairly evenly split between daily (0.4%) and non-daily (0.5%) smoking. (p. 75)
- Similar percentages of males (1.1%) and females (0.8%) were current smokers. (p. 77)
- Prevalence varied by province, and was highest in Newfoundland & Labrador, at 2.5%. (p. 78)

Daily smokers in grades 7-9 smoked an average of 7.5 cigarettes per day. (p. 80)

4.7% of students in grades 7-9 had ever smoked a cigar or cigarillo. (p. 83)

Most smokers in grades 7-9 usually obtained their cigarettes from social sources, including buying, taking, or being given cigarettes by friends, family or others, or having others buy cigarettes for them. (p. 82)

Three-quarters of current smokers in grades 7-9 reported ever trying to quit smoking. (p. 87)

Among youth aged 15 to 19, in 2017:

One in six youth (16.4%) reported ever having smoked a whole cigarette, ranging from 6.7% of 15-year-olds to 24.6% of 19-year-olds. (page 73)

Overall, 7.9% of youth aged 15 to 19 were current smokers, with age-specific rates ranging from 4.1% among 15- and 16-year-olds to 14.4% of 19-year-olds. (p. 75-76)

- Daily smoking (2.9%) accounted for less than half of youth prevalence (4.9% non-daily). (p. 75)
- Prevalence was significantly higher among males (9.7%) than females (5.9%). (p. 77)
- Saskatchewan had the highest provincial prevalence estimate, at 21.9%. (p. 79)

16% of youth aged 15 to 19 had ever smoked a cigarillo; 10% had ever smoked a cigar. (p. 83)

- Males were more likely to have used these products: 16% of males (vs. 5% of females) had smoked a cigar, while 21% of males (vs. 10% of females) had smoked a cigarillo. (p. 84)

Daily smokers aged 15 to 19 smoked an average of 9.4 cigarettes per day. (p. 80)

Among smokers aged 15 to 18, the most common source of cigarettes was buying them from a store (44%), while 37% were given cigarettes by social sources, and one in five obtained them through “other” sources (including buying from others and on/from First Nations Reserves). (p. 82)

Six out of ten smokers aged 15 to 19 were seriously considering quitting in the next 6 months. (p. 86)

Half of smokers aged 15 to 19 had made a quit attempt in the past 12 months. (p. 88)

7. SMOKING INITIATION

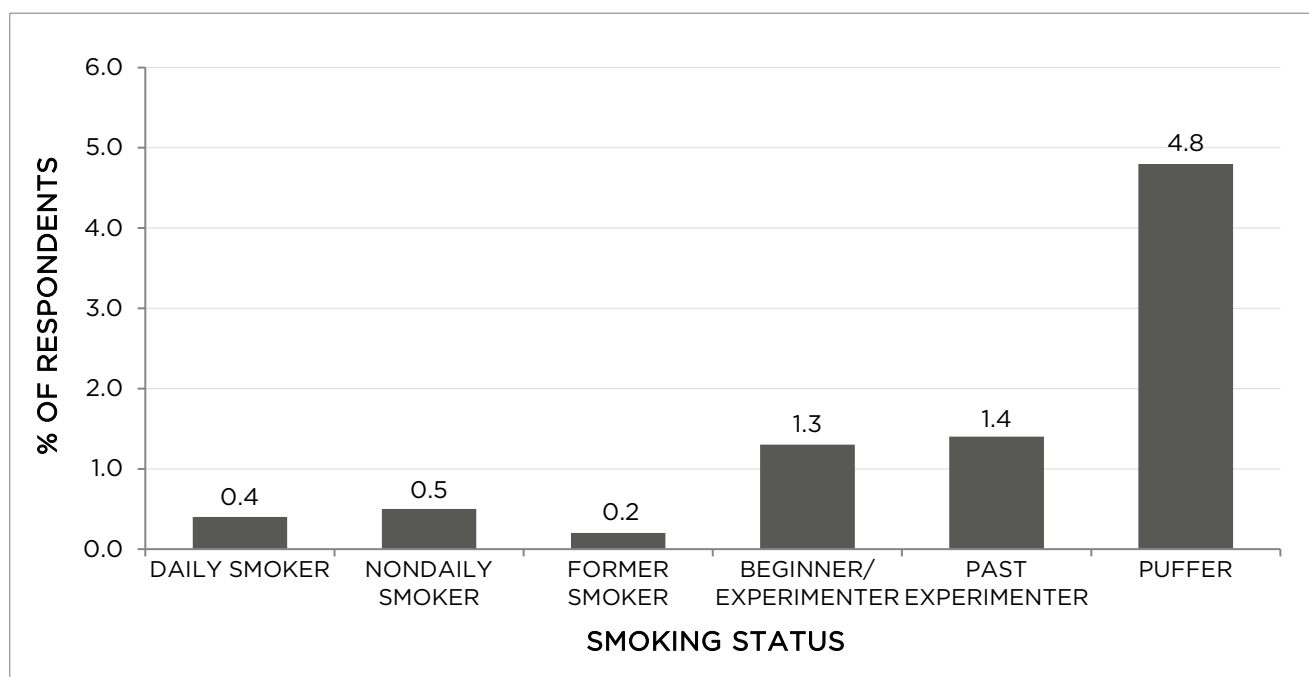
Previous research indicates that most smokers begin smoking by age 19.^{xvi} Accordingly, preventing smoking initiation is the target of many youth tobacco interventions, and youth initiation is monitored by Canada's national tobacco surveys.

7.1 EVER SMOKING

Ever smoking among students in grades 7-9

In 2016-17, the majority (91.4%) of students surveyed in grades 7-9 had never tried smoking cigarettes, ranging from 95.6% in grade 7 to 86.5% in grade 9. However, 8.6% of students overall *had* tried smoking. Figure 7.1 (below) provides a breakdown of the smoking status of these students.

FIGURE 7.1: SMOKING STATUS OF STUDENTS IN GRADES 7-9 WHO HAD EVER TRIED SMOKING CIGARETTES, 2016-17



CURRENT SMOKER: SMOKED 100+ CIGARETTES IN LIFETIME, INCLUDING:

- **DAILY SMOKER:** AT LEAST ONE CIGARETTE PER DAY FOR EACH OF THE 30 DAYS PRECEDING THE SURVEY
- **NON-DAILY SMOKER:** AT LEAST ONE CIGARETTE DURING THE LAST 30 DAYS, BUT NOT EVERY DAY

FORMER SMOKER: SMOKED 100+ CIGARETTES IN LIFETIME AND HAS NOT SMOKED AT ALL IN THE LAST 30 DAYS

BEGINNER/EXPERIMENTER: SMOKED ≥1 WHOLE CIGARETTE AND HAS SMOKED IN THE LAST 30 DAYS

PAST EXPERIMENTER: SMOKED ≥1 WHOLE CIGARETTE AND HAS NOT SMOKED AT ALL IN THE LAST 30 DAYS

PUFFER: TRIED A FEW PUFFS, BUT NEVER SMOKED A WHOLE CIGARETTE

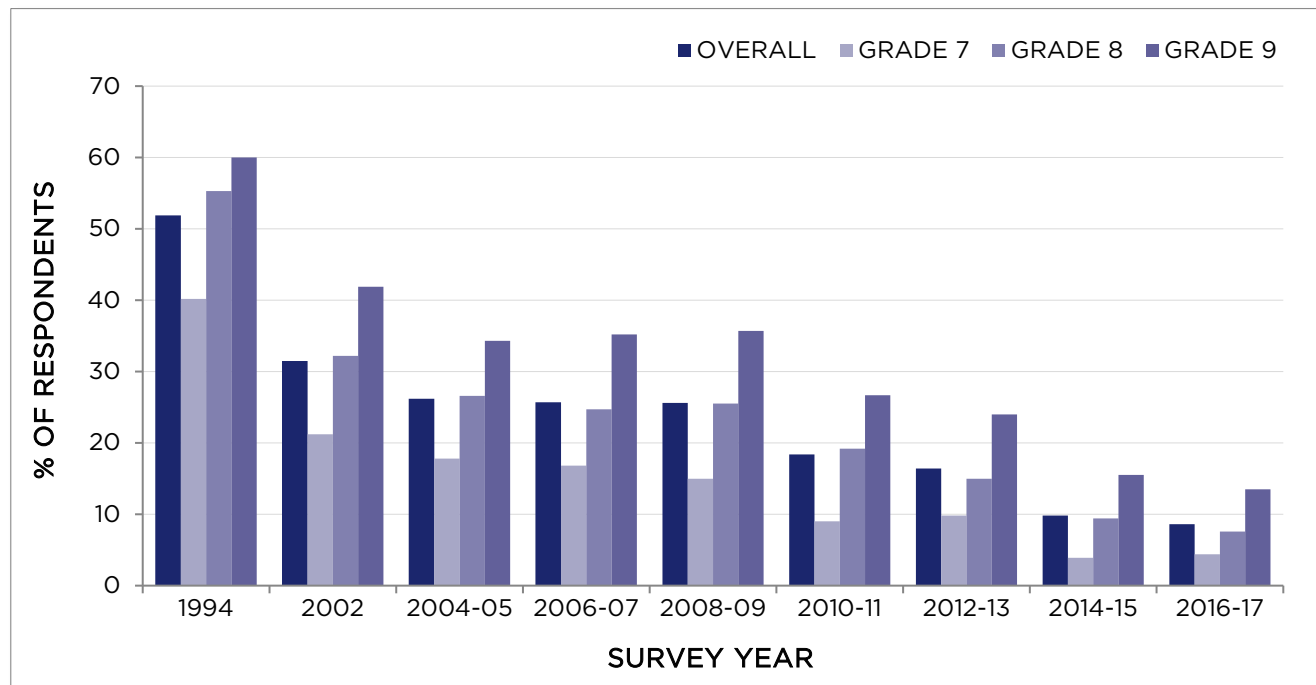
DATA SOURCE: CANADIAN STUDENT TOBACCO, ALCOHOL AND DRUGS SURVEY (CSTADS), 2016-17

In 2016-17, the percentages of male (9.1%) and female (8.1%) students in grades 7-9 who had tried smoking cigarettes were not significantly different.⁷⁸

91.4% of students in grades 7-9 had never tried smoking cigarettes.

The overall percentage of students in grades 7-9 who had ever tried smoking dropped substantially between 1994 and 2002, and appears to have declined slowly since then; the slight decrease in prevalence of ever smoking between 2014-15 and 2016-17 was not statistically significant⁷⁹ (Figure 7.2). The percentage of students who had tried smoking a cigarette increased with grade level: in 2016-17, 4.4% of students in grade 7 had tried smoking, compared to 13.5% of grade 9 students.

FIGURE 7.2: PERCENTAGE OF STUDENTS IN GRADES 7-9 WHO HAVE EVER TRIED SMOKING A CIGARETTE, BY GRADE, 1994-2016-17

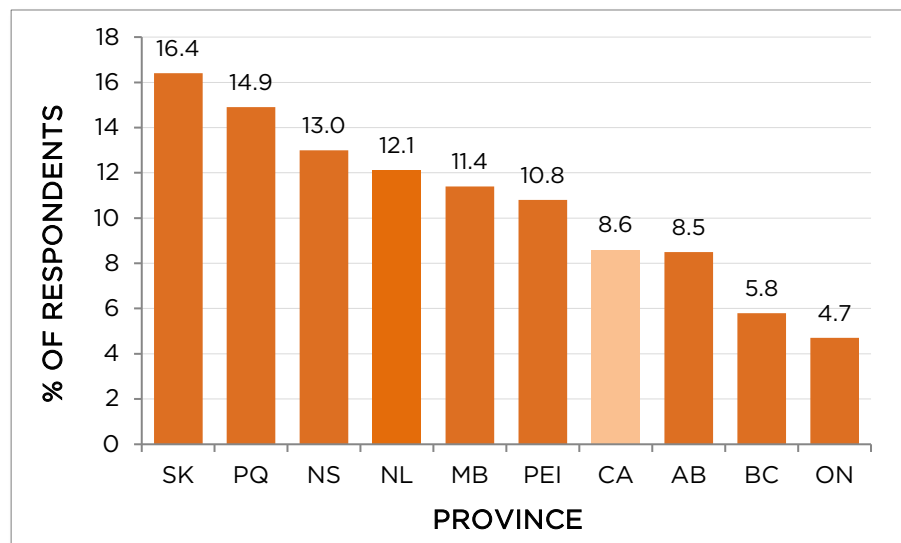


DATA SOURCES: YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

The percentage of students in grades 7-9 who had ever tried smoking a cigarette varied significantly by province⁸⁰ (Figure 7.3). For example, 4.7% of youth in Ontario had tried smoking, while more than triple that (16.4%) in Saskatchewan had tried.

Note that there are no provincial estimates reported for New Brunswick, as the province declined to participate in the 2016-17 cycle of CSTADS.

FIGURE 7.3: PERCENTAGE OF STUDENTS IN GRADES 7-9 WHO HAD EVER TRIED SMOKING A CIGARETTE, BY PROVINCE*, 2016-17



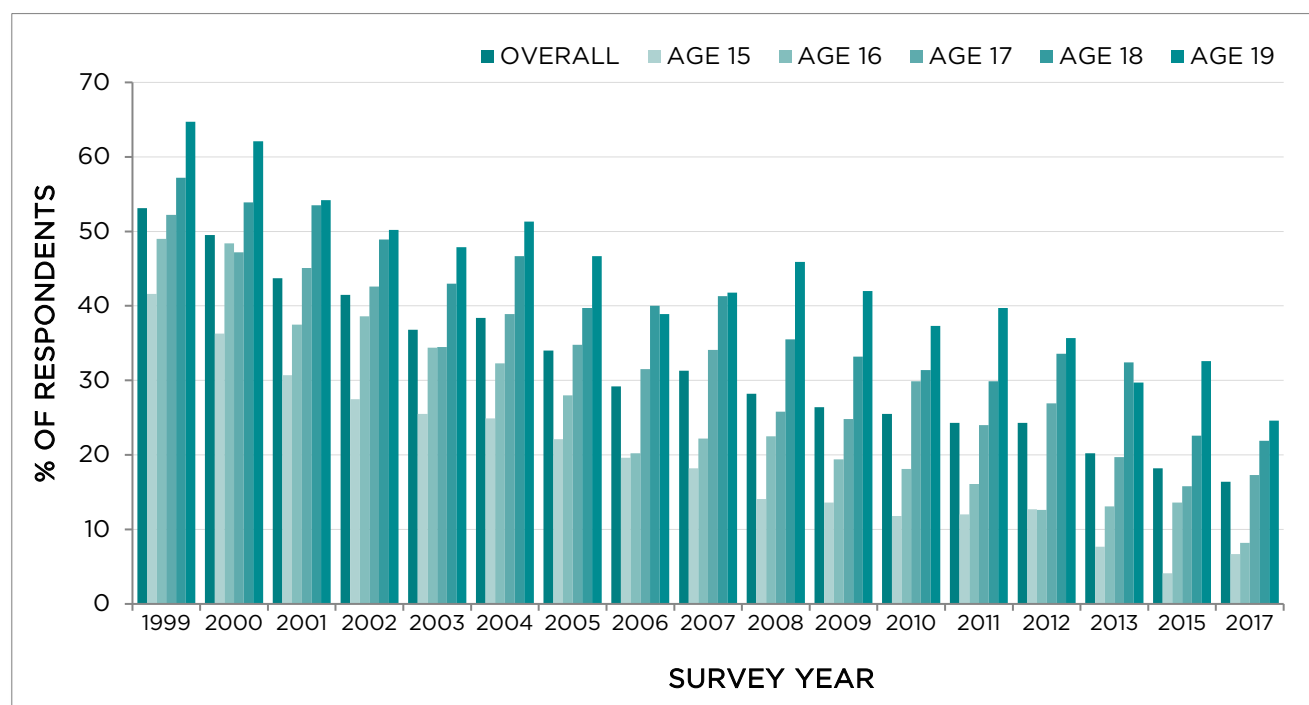
* NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS.
DATA SOURCE: CSTADS, 2016-17

Ever smoking among youth aged 15-19

Among youth aged 15-19, 16.4% reported ever having smoked a whole cigarette in 2017, not significantly different from the 2015 estimate of 18.2%⁸¹ (Figure 7.4). Significantly more males (19.0%) than females (13.6%) had smoked a whole cigarette.⁸²

The percentage of students who had ever smoked a whole cigarette increased with age in most years between 1999 and 2017. This age gradient appeared to be particularly steep in the most recent years; in 2017, prevalence of ever smoking among 19-year-olds was roughly triple that of 15- and 16-year-olds.

FIGURE 7.4: PERCENTAGE OF YOUTH AGED 15-19 WHO HAVE EVER SMOKED A WHOLE CIGARETTE, BY AGE, 1999-2017



DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

It appears that in addition to fewer youth starting to smoke over time, fewer youth are initiating smoking in their early teens. Rather, youth are continuing to pick up the habit throughout adolescence; in the past few years, more youth smoked their first cigarette after age 15 than earlier. In 2017, the mean age at which ever-smokers age 25 and older had smoked their first cigarette was 16.5.

7.2 SUSCEPTIBILITY TO SMOKING

Although current smoking prevalence was fairly low among the youngest respondents, youth may be susceptible to future smoking. Susceptibility to smoking is defined as “the absence of a firm decision not to smoke,” and can predict future smoking among youth.^{xvii}

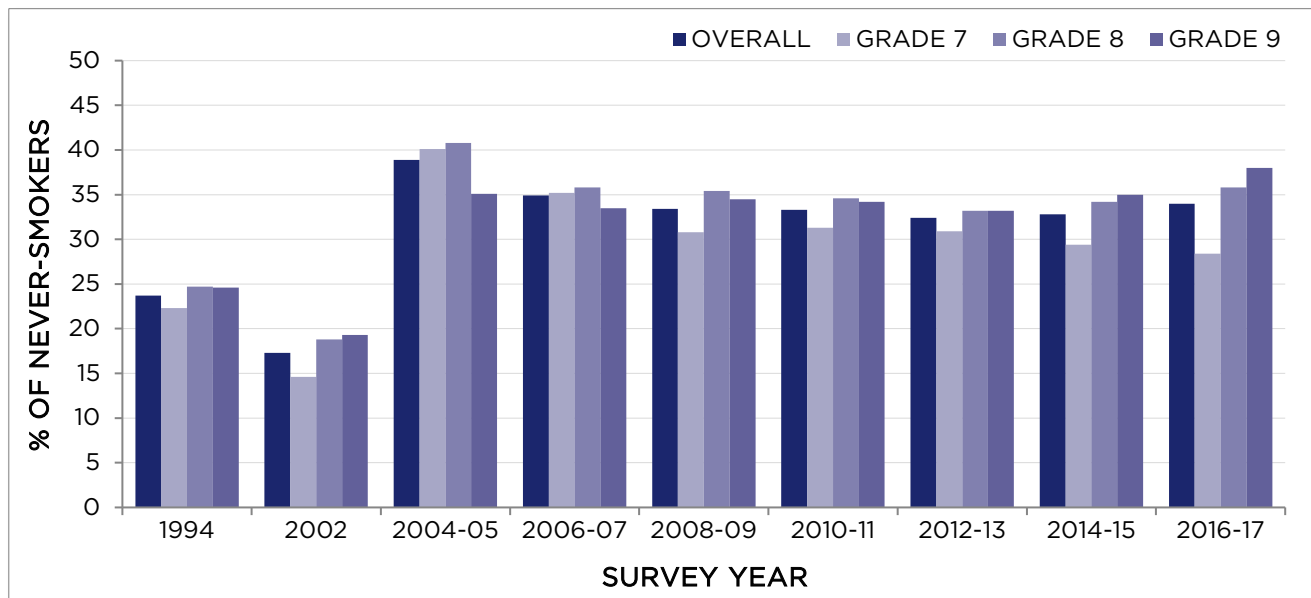
Overall, approximately one-third (34.0%) of never-smokers in grades 7-9 were classified as susceptible to smoking* in 2016-17, which was not significantly different from 32.8% in 2014-15.⁸³ Similar percentages of males (34.3%) and females (33.7%) were susceptible to smoking.⁸⁴

* Students were classified as NOT susceptible if they responded “definitely not” to the following three items: “Do you think in the future you might try smoking cigarettes?”, “If one of your best friends was to offer you a cigarette would you smoke it?”, and “At any time during the next year do you think you will smoke a cigarette?”; all other students were classified as susceptible.

Susceptibility to smoking by grade

Susceptibility to smoking among never-smoking students in grades 7-9 did not change significantly between 2014-15 and 2016-17⁸³ (Note: comparisons with the earliest survey years are not possible due to question changes). In most survey years since 1994, the percentage of never-smokers who were susceptible to smoking was lower among the youngest students: for example, in 2016-17, 28.4% of students in grade 7 were susceptible, compared to 35.8% of grade 8 and 38.0% of grade 9 students (Figure 7.5). Susceptibility among grade 8 and grade 9 students was similar in most survey years.

FIGURE 7.5: PERCENTAGE OF NEVER-SMOKERS IN GRADES 7-9 WHO WERE SUSCEPTIBLE TO SMOKING*, BY GRADE, 1994-2016-17



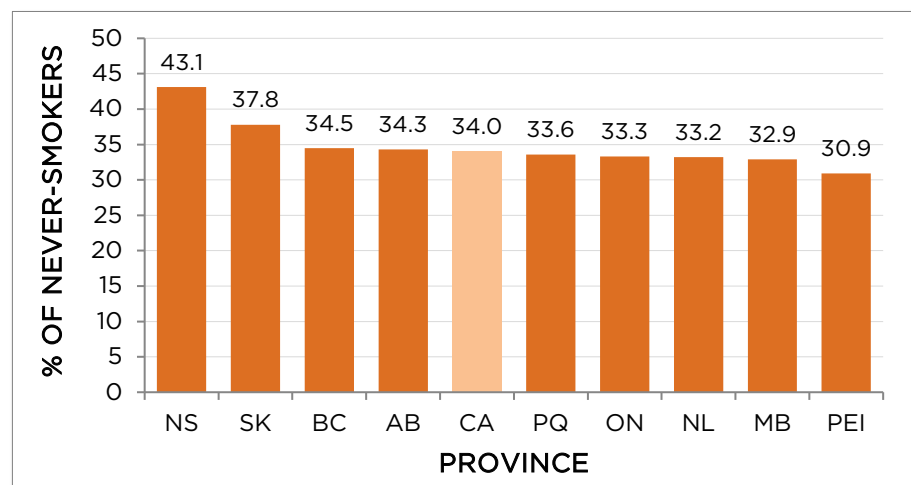
*FROM 2004-05 TO 2016-17, SUSCEPTIBILITY WAS DEFINED AS OUTLINED ABOVE (PAGE 73). IN 1994 AND 2002, STUDENTS WERE CLASSIFIED AS NOT SUSCEPTIBLE IF THEY RESPONDED "NO" TO BOTH OF THE FOLLOWING ITEMS: "HAVE YOU EVER SERIOUSLY THOUGHT ABOUT TRYING SMOKING?" AND "DO YOU THINK YOU MIGHT TRY SMOKING WITHIN THE NEXT MONTH?"; OTHERS WERE CLASSIFIED AS SUSCEPTIBLE.

DATA SOURCES: YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

Susceptibility to smoking by province

The percentage of never-smokers in grades 7-9 who were susceptible to smoking varied significantly by province⁸⁵ (Figure 7.6). For example, just 30.9% of students in Prince Edward Island were susceptible to smoking, while 43.1% of students in Nova Scotia were susceptible.

FIGURE 7.6: PERCENTAGE OF NEVER-SMOKERS IN GRADES 7-9 WHO WERE SUSCEPTIBLE TO SMOKING, BY PROVINCE*, 2016-17



*NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS

DATA SOURCE: CSTADS, 2016-17

8. CURRENT SMOKING AMONG YOUTH

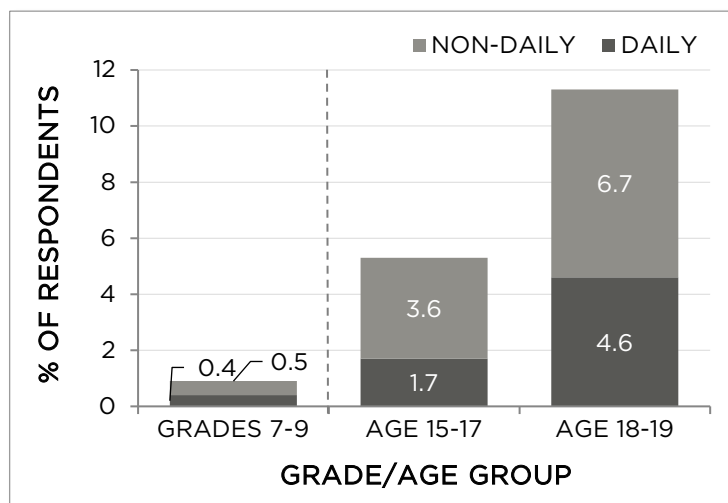
8.1 SMOKING PREVALENCE

In 2016-17, smoking prevalence among students in grades 7-9 was 1.0% overall. Among adolescents aged 15-19, 7.9% were current smokers in 2017 (2.9% daily and 4.9% non-daily). However, there was substantial variation by age, from 5.3% among 15- to 17-year-olds to 11.2% of 18- and 19-year-olds. Daily smoking also increased with age (Figure 8.1).

Smoking prevalence among students in grades 7-9 dropped by more than half between 1994 and 2002, and has since remained low. Between 2014-15 and 2016-17, there was no significant change in overall, daily, or non-daily smoking prevalence⁸⁶⁻⁸⁸ (Figure 8.2).

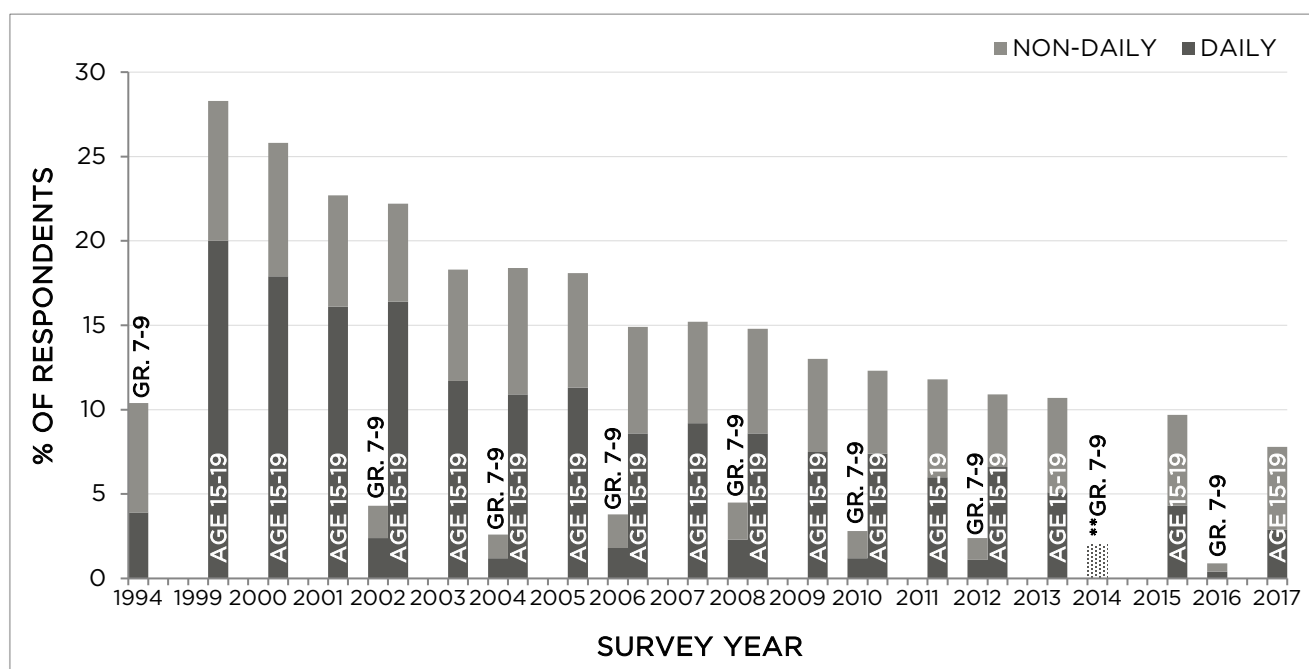
Among youth aged 15-19, smoking prevalence declined steadily after 1999 for several years before levelling off and then again decreasing to another plateau; over the past decade, prevalence appears to have declined very slowly and gradually (Figure 8.2). Between 2015 and 2017, there was no significant change in overall, daily, or non-daily smoking prevalence.⁸⁹⁻⁹¹ Most of the decline in smoking observed among 15- to 19-year-olds appears to be due to decreasing daily smoking.

FIGURE 8.1: CURRENT SMOKING PREVALENCE, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

FIGURE 8.2: CURRENT SMOKING PREVALENCE* (DAILY AND NON-DAILY), GRADES 7-9 AND AGE 15-19, 1994-2017



*CURRENT DAILY/NON-DAILY SMOKER AND SMOKED IN PAST 30 DAYS

**EXACT ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY. THE UPPER BOUND OF THE ESTIMATE IS <2%.

DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

Smoking Prevalence by Age

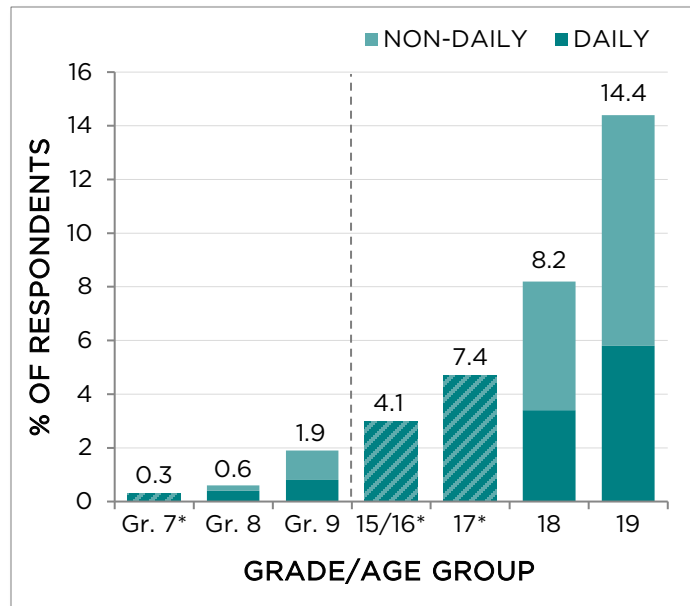
Smoking prevalence appeared to increase sharply with age, ranging from 0.3% of grade 7 students to 14.4% of 19-year-olds (Figure 8.3).

As noted, data up to grade 9 is provided by CSTADS, and data from CTADS is used for older youth (see p. 112). There may be some overlap in coverage between grade 9 students and 15-year-olds.

Among students in grades 7-9, the pattern of increasing use by grade was consistent over time (Figure 8.4). After a substantial drop between 1994 and 2002, prevalence remained fairly low, and appears to have decreased further in the most recent years.

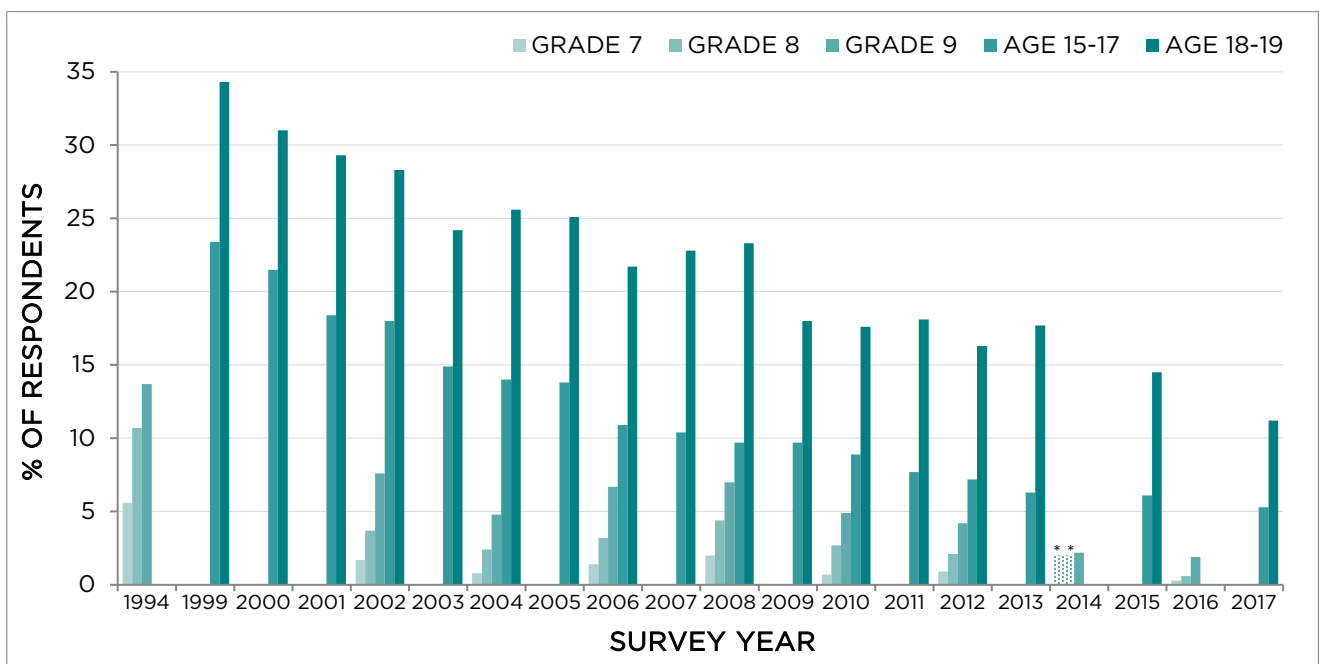
Over time, smoking among youth aged 15-17 declined fairly steadily overall, although there was little change in the most recent waves (Figure 8.4). Among 18- and 19-year-olds, smoking also declined overall, but less consistently, and appears to have decreased in the most recent years. The relative difference between these groups has increased over this time: in 2017, smoking prevalence among 18- and 19-year-olds was more than double that of 15- to 17-year-olds.

FIGURE 8.3: CURRENT SMOKING PREVALENCE BY GRADE/AGE, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



*OVERALL PREVALENCE SHOWN FOR GR. 7, AGE 15/16 (COMBINED), AND AGE 17
DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

FIGURE 8.4: CURRENT SMOKING PREVALENCE* BY GRADE/AGE, GRADES 7-9 AND AGE 15-19, 1994-2017



*FOR GRADES 7-9: CURRENT DAILY/NON-DAILY SMOKER AND SMOKED IN PAST 30 DAYS; FOR AGE 15-19: CURRENT DAILY OR NON-DAILY SMOKER
*EXACT ESTIMATES SUPPRESSED DUE TO UNACCEPTABLE QUALITY. THE UPPER BOUNDS FOR THE ESTIMATES ARE LESS THAN 2%.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

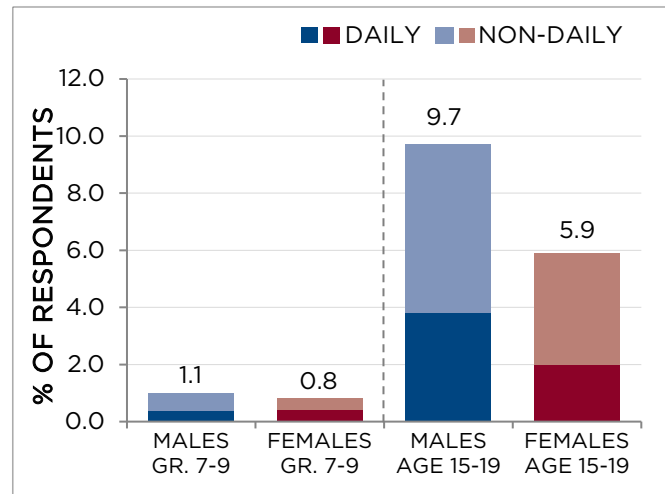
Smoking Prevalence by Sex

Smoking prevalence was not significantly different between male and female students in grades 7-9 in 2016-17.⁹² Among youth aged 15-19, however, smoking prevalence was significantly greater among males than females in 2017⁹³ (Figure 8.5).

Over time, among 15- to 19-year-olds, prevalence patterns have shifted from higher female patterns (from 1999 until the mid-2000s), to a greater percentage of males smoking for most of the last decade (Figure 8.6).

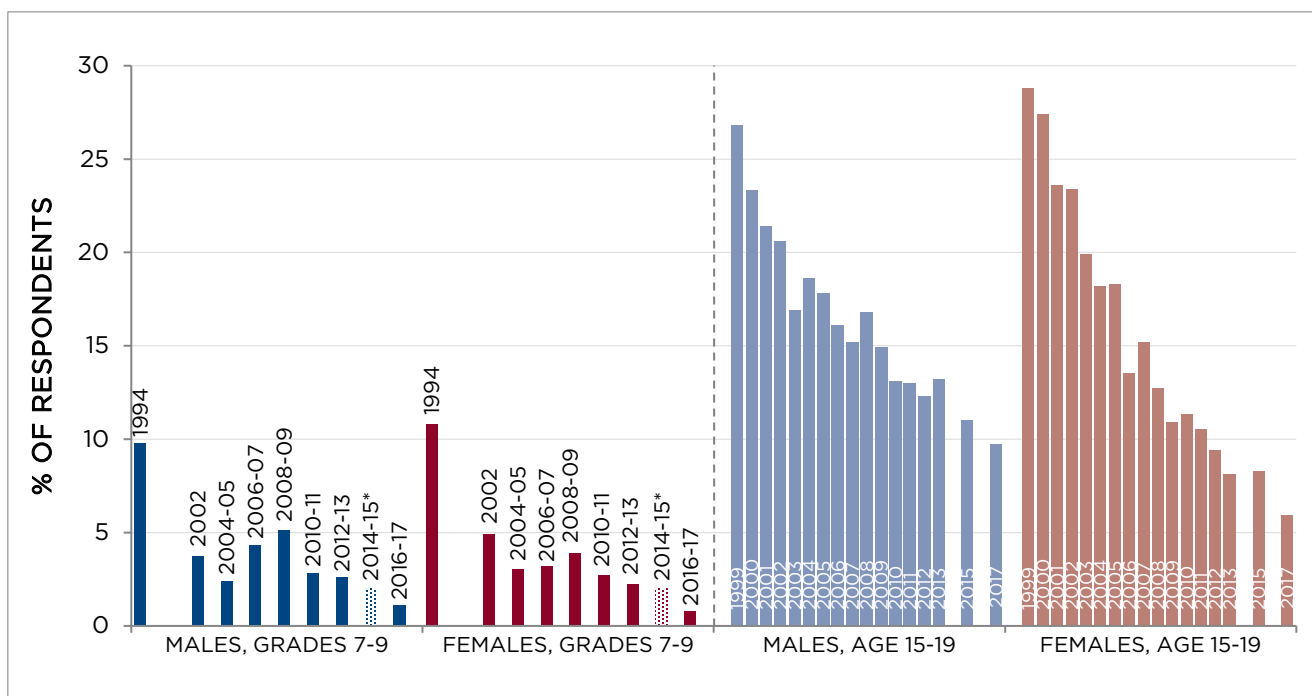
Among students in grades 7-9, the same general pattern was observed, although with much smaller differences between the sexes: females had slightly higher smoking rates from 1994 to 2004-05, followed by slightly higher rates among males, but equalizing in the most recent waves (Figure 8.6).

FIGURE 8.5: CURRENT SMOKING PREVALENCE BY SEX, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

FIGURE 8.6: CURRENT SMOKING PREVALENCE (DAILY AND NON-DAILY) BY SEX, GRADES 7-9 AND AGE 15-19, 1994-2017



*EXACT ESTIMATES SUPPRESSED DUE TO UNACCEPTABLE QUALITY. THE UPPER BOUNDS FOR THE ESTIMATES ARE LESS THAN 2%.
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

Smoking Prevalence by Province

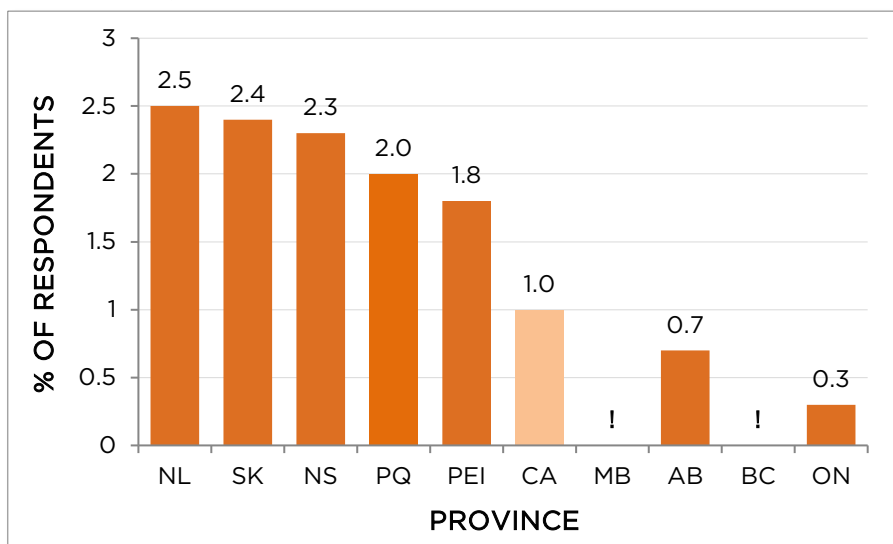
PREVALENCE AMONG STUDENTS IN GRADES 7-9

Smoking prevalence among students in grades 7-9 varied significantly by province in 2016-17⁹⁴ (Figure 8.7).

Prevalence estimates for several provinces are not reported for 2016-17, due to unacceptable quality or non-participation.

In the decade from 1994 to 2004-05, smoking declined substantially in all provinces; although small increases were observed in some provinces in the waves that followed, prevalence appears to have decreased to 2004-05 levels or lower in most provinces in recent waves (Table 8.1).

FIGURE 8.7: CURRENT SMOKING PREVALENCE BY PROVINCE*, GRADES 7-9, 2016-17



* NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CSTADS, 2016-17

TABLE 8.1: CURRENT SMOKING PREVALENCE* BY PROVINCE, GRADES 7-9, 1994-2016-17

YEAR	1994	2002	2004-05	2006-07	2008-09	2010-11	2012-13	2014-15	2016-17
CANADA	10.3%	4.3%	2.7%	3.8%	4.5%	2.8%	2.4%	<2%**	1.0%
BRITISH COLUMBIA	9.9	2.9	!	4.0	4.2	2.6	!	!	!
ALBERTA	9.9	!	!	!	!	!	1.3	!	0.7
SASKATCHEWAN	7.5	4.0	!	!	7.8	!	2.8	!	2.4
MANITOBA	8.5	5.5	!	3.9	3.2	2.3	^a	1.4	!
ONTARIO	5.9	!	1.3	2.6	1.9	1.3	1.1	!	0.3
QUEBEC	18.4	9.8	5.6	6.4	9.6	5.3	5.5	!	2.0
NEW BRUNSWICK	10.6	6.3	!	4.3	4.6	^b	4.3	^b	^b
NOVA SCOTIA	9.7	6.0	!	5.0	!	4.1	2.5	!	2.3
PEI	9.7	!	!	2.9	2.9	!	!	!	1.8
NFLD & LABRADOR	12.3	7.5	4.8	!	7.3	5.1	2.3	!	2.5

*CURRENT DAILY/NON-DAILY SMOKER AND SMOKED IN PAST 30 DAYS

**EXACT ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY. THE UPPER BOUND FOR THE ESTIMATE IS LESS THAN 2%.

^aIN 2012-13, MANITOBA DECLINED PARTICIPATION IN THE YSS.

^bIN 2010-11, NEW BRUNSWICK DECLINED PARTICIPATION IN THE YSS; IN 2014-15, PROVINCIAL ESTIMATES FOR NEW BRUNSWICK NOT REPORTED BECAUSE CSTADS DID NOT ACHIEVE A GENERALIZABLE SAMPLE OF NB STUDENTS; NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS.

! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY

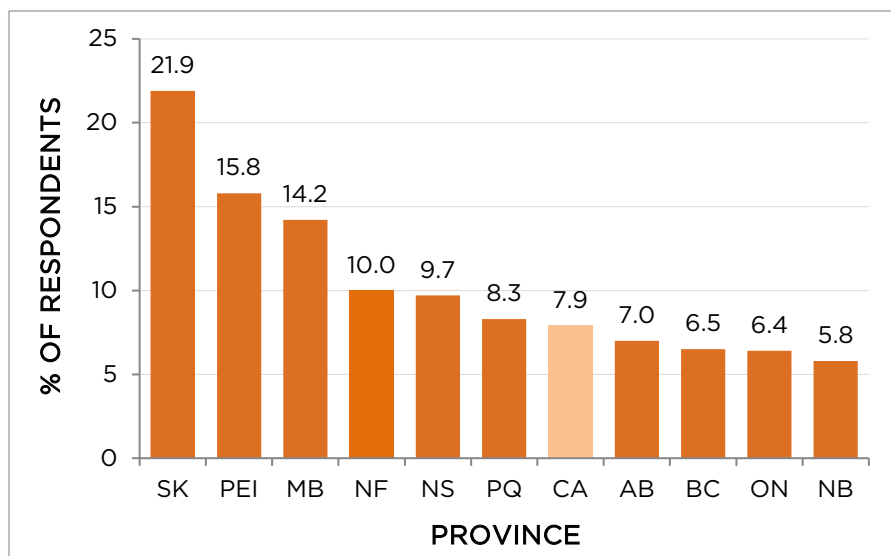
DATA SOURCES: YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

PREVALENCE AMONG YOUTH AGED 15-19

Among youth aged 15-19, smoking prevalence varied significantly by province in 2017,⁹⁵ ranging from 5.8% in New Brunswick to 21.9% in Saskatchewan (Figure 8.8).

Between 1999 and 2017, smoking prevalence among youth decreased by more than two-thirds in Canada, as well as in many provinces (Table 8.2). In some provinces (such as Saskatchewan, Manitoba, and PEI), there was little change, and even some increases, in the most recent survey wave.

FIGURE 8.8: CURRENT SMOKING PREVALENCE BY PROVINCE*, AGE 15-19, 2017



DATA SOURCE: CTADS, 2017

TABLE 8.2: CURRENT SMOKING PREVALENCE* BY PROVINCE, AGE 15-19, 1999-2017

YEAR	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015	2017
CANADA	27.7	25.3	22.5	22.0	18.3	18.4	18.1	14.9	15.2	14.8	13.0	12.2	11.8	10.9	10.7	9.7	7.9
BRITISH COLUMBIA	20.2	18.0	16.8	14.8	13.6	12.8	14.4	12.4	9.0	15.2	12.5	8.9	10.1	9.6	9.5#	!	6.5
ALBERTA	26.4	24.4	24.1	19.0	18.1	15.7	18.9	15.2	20.1	16.0	12.4	17.0	8.3	9.9	8.8#	!	7.0
SASK.	31.4	24.1	27.1	29.0	28.2	24.7	24.9	20.8	22.0	20.0	18.3	20.3	19.8	20.2	12.9	13.7	21.9
MANITOBA	29.5	25.4	28.2	23.3	20.3	21.0	20.0	19.7	20.1	17.0	17.9	15.0	14.3	12.5	12.6	12.7	14.2
ONTARIO	24.8	25.1	18.8	19.2	14.5	16.8	16.0	12.5	13.5	12.8	9.1	9.1	9.1	9.0	9.5	!	6.4
QUEBEC	35.7	29.6	28.6	32.0	25.5	24.1	22.8	18.3	17.4	16.6	18.1	15.0	17.3	13.4	13.9	12.9	8.3
NEW BRUNSWICK	27.4	29.9	24.6	17.6	21.6	17.7	17.9	15.7	16.8	14.2	15.7	11.9	13.8	14.0	12.4	!	5.8
NOVA SCOTIA	30.1	25.1	26.8	20.2	18.4	20.3	12.9	14.8	13.4	14.4	14.2	15.8	11.8	10.7	9.7	!	9.7
PEI	28.3	21.5	20.4	19.3	19.5	16.6	12.9	14.1	13.1	13.7	14.2	11.3	14.4	8.5	11.5	13.2	15.8
NFLD & LABRADOR	29.9	28.4	22.0	22.2	22.0	21.1	19.0	16.2	16.8	14.7	16.0	15.1	11.1	12.2	12.4	!	10.0

*INCLUDES DAILY AND NON-DAILY SMOKERS

#CAUTION: THESE ESTIMATES DO NOT MEET STATISTICS CANADA'S QUALITY STANDARDS. CONCLUSIONS BASED ON THESE DATA WILL BE UNRELIABLE, AND MOST LIKELY INVALID.

! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY

DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

8.2 CIGARETTE CONSUMPTION

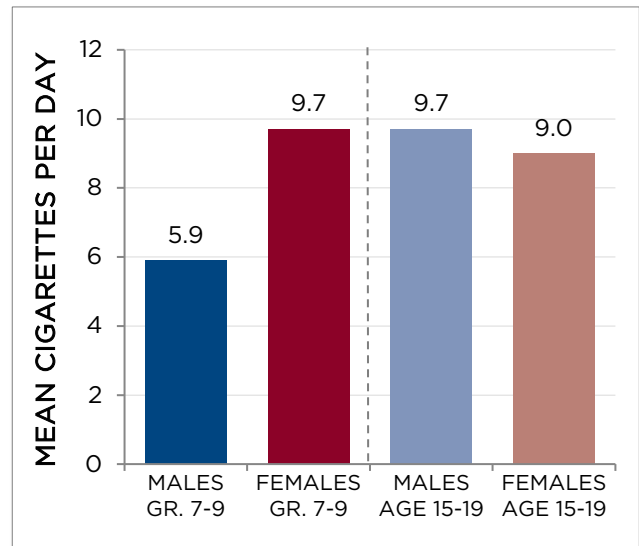
In 2016-17, average daily cigarette consumption among daily smokers in grades 7-9 was 7.5, which was not significantly different from the 2014-15 estimate of 8.8.⁹⁶ Among 15- to 19-year-olds, average daily cigarette consumption was 9.4 in 2017, no significant change from the 2015 estimate of 11.6.⁹⁷

Cigarette Consumption by Sex

Among daily smokers in grades 7-9, the difference in mean daily cigarette consumption between males and females was not significant in 2016-17 (Figure 8.9).⁹⁸ In this age group, consumption appears to have fluctuated more over time among males, but remained relatively stable among females (Figure 8.10).

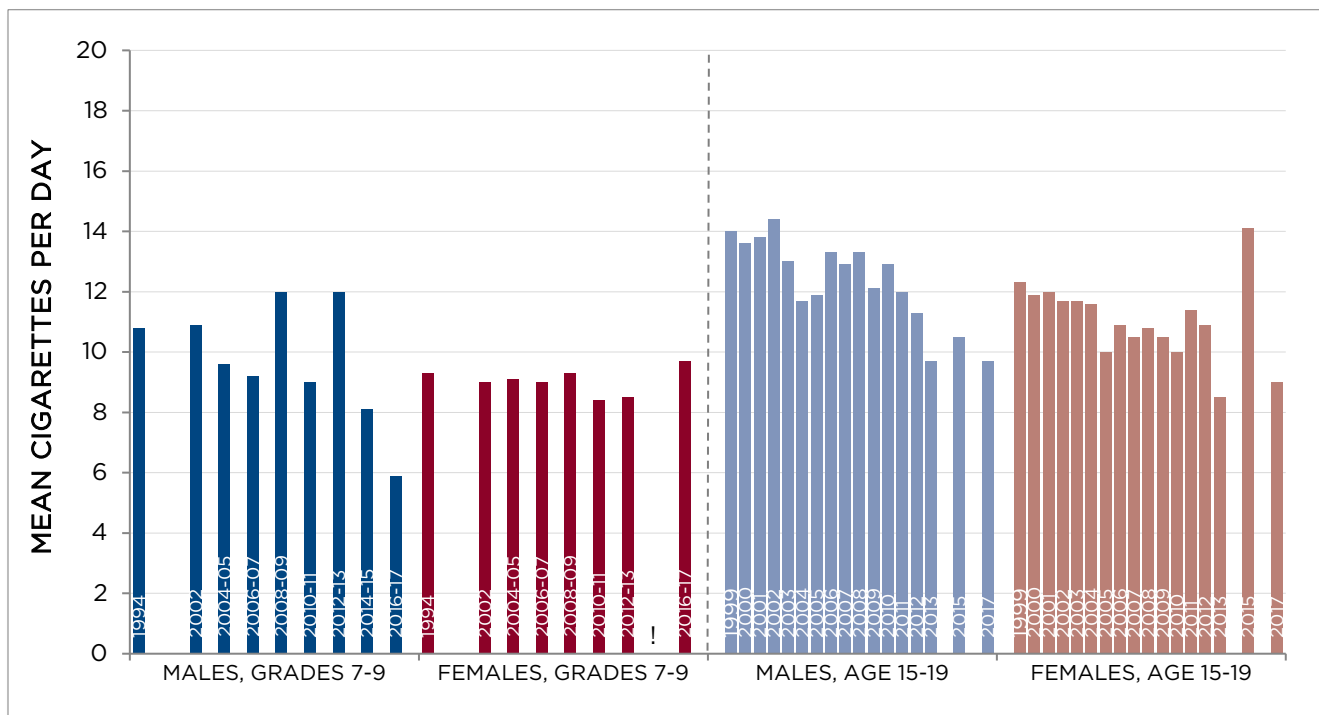
Among daily smokers aged 15-19, mean daily cigarette consumption was similar for males and females in 2017⁹⁹ (Figure 8.9). However, males appeared to have smoked more than females in most of the preceding years (Figure 8.10).

FIGURE 8.9: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



*AMONG DAILY SMOKERS
DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

FIGURE 8.10: AVERAGE DAILY CIGARETTE CONSUMPTION* BY SEX, GRADES 7-9 AND AGE 15-19, 1994-2017



*AMONG DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

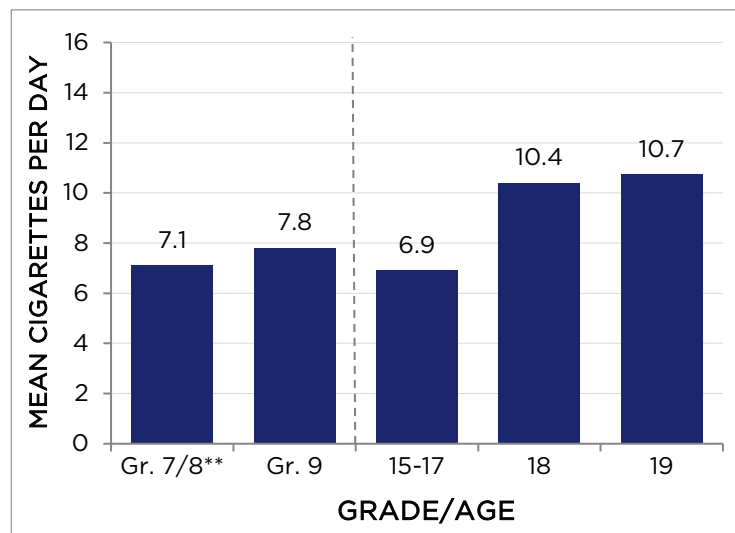
Cigarette Consumption by Age

As shown in Figure 8.11, cigarette consumption among daily smokers appeared to be lower among students in grades 7-9 (in 2016-17) and age 15-17 than among youth aged 18 and 19 (in 2017).

Among daily smokers aged 15-19, between 1999 and 2017, there appeared to be a net decrease in average daily cigarette consumption, but there has been considerable variation rather than a smooth downward trend, including some periods of increase (Figure 8.12).

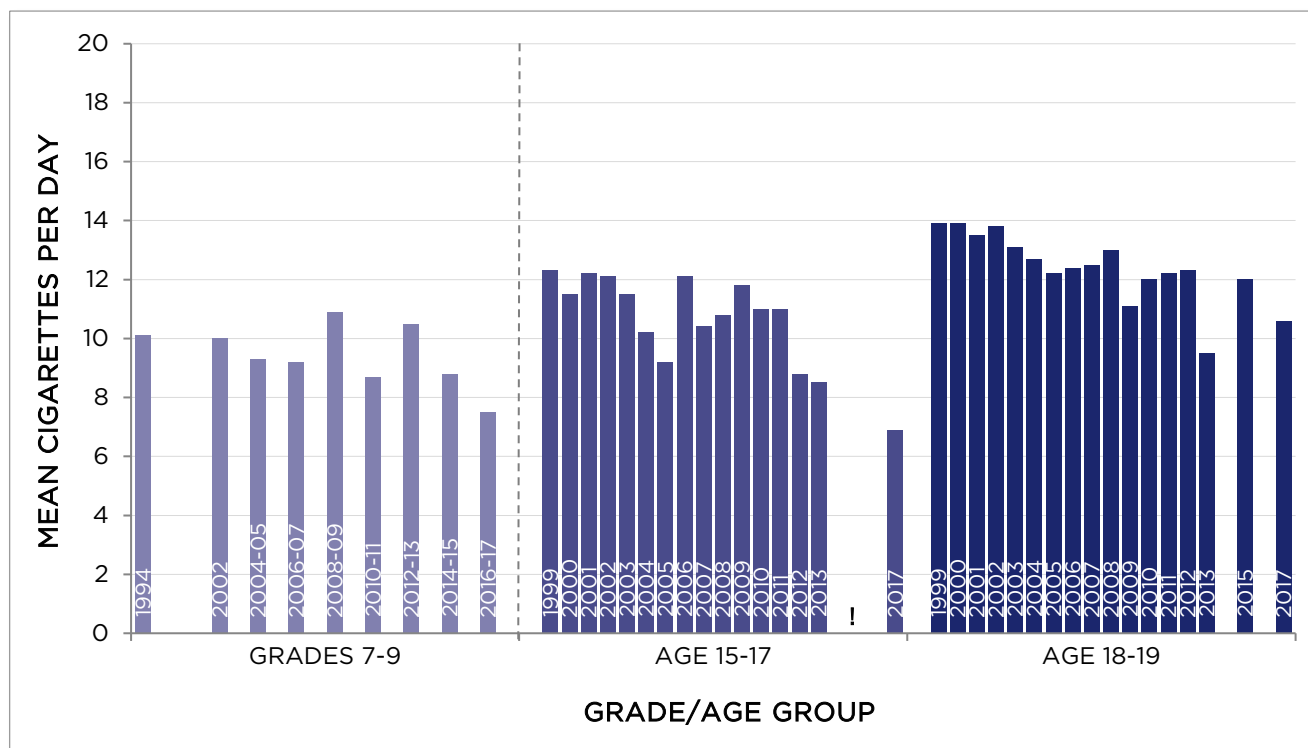
Among smokers in grades 7-9, between 1994 and 2014-15, daily consumption varied by survey year, but remained between approximately 8 and 11 cigarettes (Figure 8.12).

FIGURE 8.11: AVERAGE DAILY CIGARETTE CONSUMPTION* BY AGE, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



*AMONG DAILY SMOKERS
**GRADES 7/8 AND AGES 15/16/17 COMBINED DUE TO LOW NUMBERS
DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

FIGURE 8.12: AVERAGE DAILY CIGARETTE CONSUMPTION* BY AGE GROUP, GRADES 7-9 AND AGE 15-19, 1994-2017



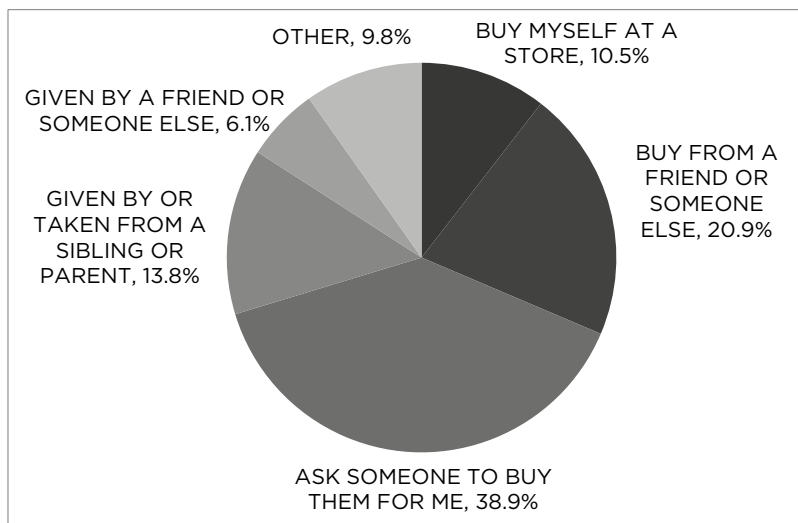
*AMONG DAILY SMOKERS
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

9. SOURCES OF CIGARETTES

SOURCES OF CIGARETTES FOR STUDENTS IN GRADES 7-9

In 2016-17, when smokers in grades 7-9 were asked where they usually got their cigarettes, most reported obtaining them from social sources. Nearly two in five smokers usually asked someone to buy cigarettes for them, and another one in five bought them from a friend or someone else. One in five reported being given cigarettes by a friend, family member or someone else, or taking them from a family member (Figure 9.1).

FIGURE 9.1: USUAL SOURCES OF CIGARETTES FOR CURRENT SMOKERS* IN GRADES 7-9, 2016-17



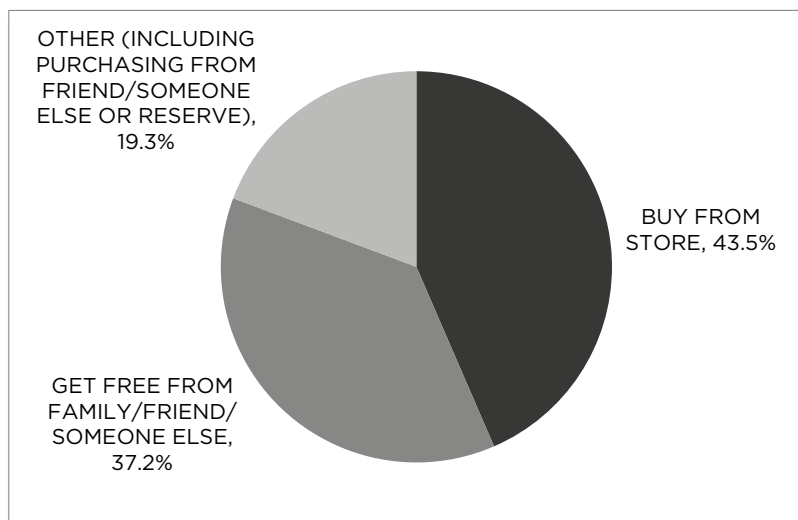
*CURRENT SMOKER: SMOKED 100+ CIGARETTES IN LIFETIME AND SMOKED IN THE PAST 30 DAYS
NOTE: SOME CATEGORIES HAVE BEEN COMBINED: "I BUY THEM FROM A FRIEND", AND "I BUY THEM FROM SOMEONE ELSE"; "MY BROTHER OR SISTER GIVES THEM TO ME", "MY MOTHER OR FATHER GIVES THEM TO ME" AND "I TAKE THEM FROM MY MOTHER, FATHER, OR SIBLINGS"; "A FRIEND GIVES THEM TO ME" AND "SOMEONE ELSE GIVES THEM TO ME".
DATA SOURCE: CSTADS, 2016-17

SOURCES OF CIGARETTES FOR 15- TO 18-YEAR-OLDS

The legal age to purchase cigarettes is 19 in most provinces, with the exception of Alberta, Saskatchewan, Manitoba, and Quebec, where the legal purchase age is 18. In the 15-18 age group, most of the smokers surveyed would be underage for purchasing cigarettes.

In 2017, when smokers aged 15-18 were asked where they usually got their cigarettes, the most common source was purchasing from a store, primarily small grocery/corner stores (Figure 9.2). Nearly as many reported being given cigarettes by another person, including friends, family and others. Approximately one in five reported getting cigarettes from "other" sources, which included purchasing from friends/others, and on/from First Nations reserves.

FIGURE 9.2: PERCENTAGE OF SMOKERS AGED 15-18 WHO USUALLY GET CIGARETTES FROM VARIOUS SOURCES, 2017



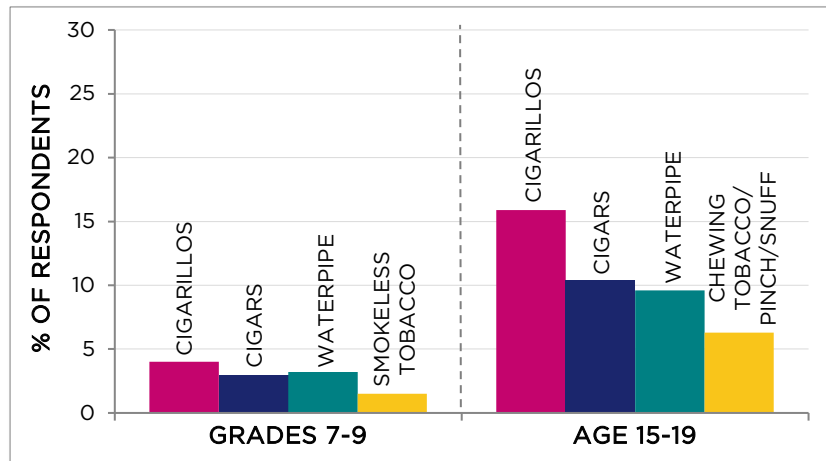
NOTE: SOME CATEGORIES HAVE BEEN COMBINED DUE TO LOW NUMBERS: "BUY FROM STORE" INCLUDES "SMALL GROCERY/CORNER STORE", "SUPERMARKET" AND "ANOTHER KIND OF STORE"; "GET FREE FROM FAMILY/FRIEND/SOMEONE ELSE" INCLUDES "A FRIEND OR SOMEONE ELSE GIVES THEM TO ME" AND "I TAKE THEM FROM MY MOTHER, FATHER OR SIBLINGS"; "OTHER" INCLUDES "BUY ON A FIRST NATIONS RESERVE", "BUY FROM A FIRST NATIONS RESERVE", "BUY FROM FRIEND/SOMEONE ELSE", AND "OTHER".
DATA SOURCE: CTADS, 2017

10. USE OF OTHER TOBACCO PRODUCTS

In 2016-17, 4.0% of students in grades 7-9 reported having ever smoked a cigarillo, and 2.9% had smoked a cigar (Figure 10.1). In 2017, among youth aged 15-19, these figures were 15.9% and 10.4%, respectively. Waterpipe use was also popular, with 3.2% of grades 7-9 students and 9.6% of youth aged 15-19 reporting ever use. Fewer youth reported having used smokeless tobacco products (1.5% of grades 7-9; 6.3% of age 15-19).

NOTE: CSTADS 2014-15 and 2016-17 asked about use of each tobacco product individually (yes/no), whereas previous years asked in a “check all that apply” format; estimates may not be comparable over time.

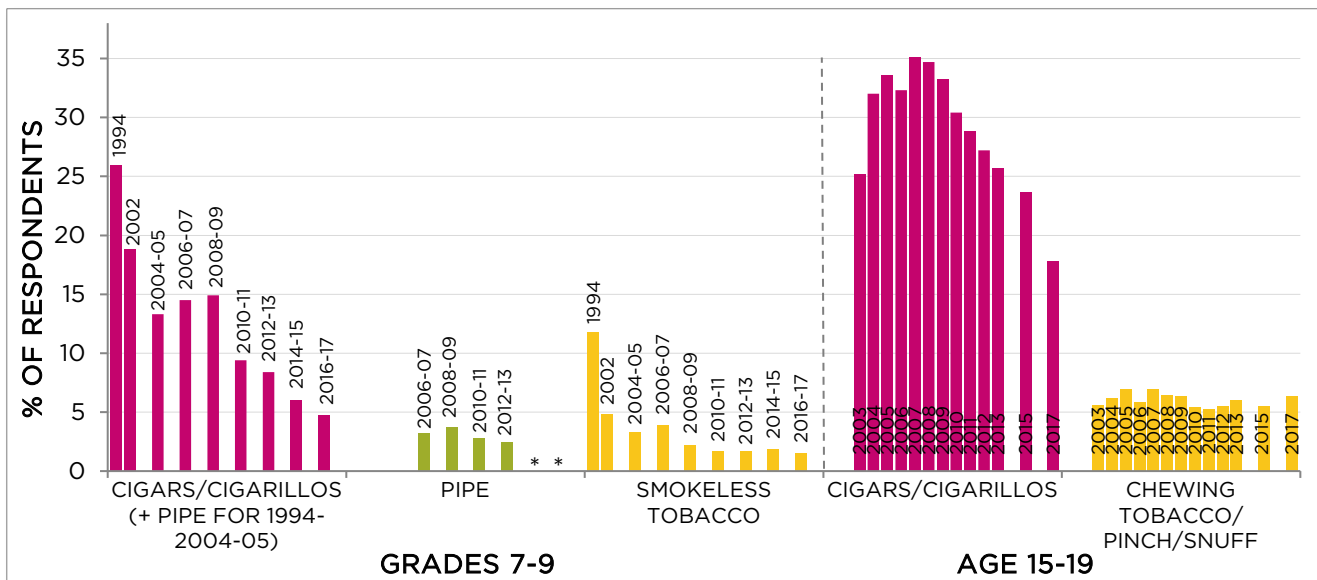
FIGURE 10.1: PERCENTAGE OF YOUTH WHO HAVE EVER TRIED VARIOUS TOBACCO PRODUCTS, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

As shown in Figure 10.2, among students in grades 7-9, ever use of cigars/cigarillos has decreased over time since 1994, while smokeless tobacco use dropped substantially after 1994 and has remained low since, and pipe use was low in all years measured. Between 2014-15 and 2016-17, there were no significant changes in ever use of cigars/cigarillos or smokeless tobacco among students in grades 7-9.^{100,101} Among youth aged 15-19, ever use of cigars/cigarillos increased between 2003 and 2007, but has declined steadily since then; ever use of chewing tobacco/pinch/snuff has remained stable since 2003. Between 2015 and 2017, use of cigars/cigarillos decreased significantly in the 15-19 age group,¹⁰² while there was no significant change in chewing tobacco/pinch/snuff.¹⁰³

FIGURE 10.2: PERCENTAGE OF YOUTH IN GRADES 7-9 AND AGE 15-19 WHO HAVE EVER TRIED VARIOUS TOBACCO PRODUCTS, 1994-2017



NOTE: CATEGORIES HAVE BEEN COMBINED IN SOME CASES: CTUMS ITEMS FOR CIGARS AND CIGARILLOS COMBINED IN 2007-2013; YSS ITEMS FOR CIGARS AND CIGARILLOS COMBINED FROM 2008-09 ONWARD; YSS ASKED ABOUT CIGARS, CIGARILLOS, AND PIPE AS A SINGLE ITEM PRIOR TO 2006-07; YSS ITEMS FOR CHEWING TOBACCO AND SNUFF COMBINED UNTIL 2006-07, AND ASKED AS A SINGLE “SMOKELESS TOBACCO” ITEM FROM 2008-09 ONWARD
*EVER USE OF PIPE NOT ASKED IN CSTADS 2014-15 OR 2016-17

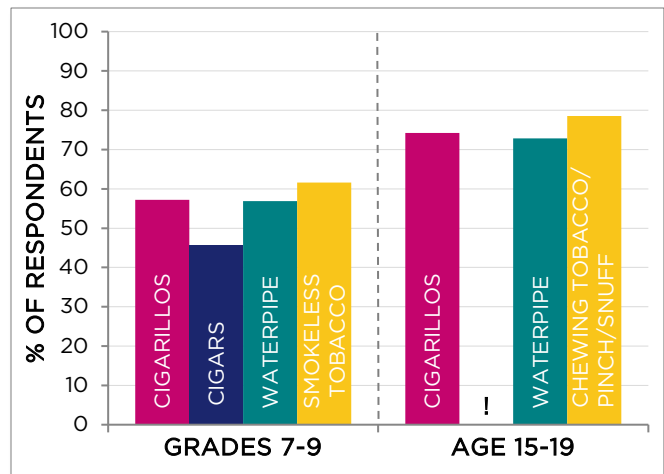
DATA SOURCES: CTUMS, 2003-2012; CTADS, 2013, 2015, 2017; YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

FLAVOURED TOBACCO PRODUCTS

Previous research has shown that flavoured tobacco products have greater appeal among youth,^{xviii} and both federal and provincial legislation has been enacted to reduce the availability of such products.^{xi-xiv} However, some flavoured products remain on the market. Among all students in grades 7-9, 1.7% reported using a flavoured tobacco product in the past 30 days.

Figure 10.3 shows the percentage of youth who had used a flavoured product in the last 30 days, among those who had used each type of product in the last 30 days. Overall, 57.9% of youth in grades 7-9 and 74.5% of youth aged 15-19 who had used any non-cigarette tobacco product in the last 30 days had used a flavoured product, although this varied by product type. Further, 26.4% of past-30-day smokers in grades 7-9, as well as 13.4% of youth aged 15-19 who had smoked in the past 30 days, had smoked a menthol cigarette in that time.

FIGURE 10.3: PERCENTAGE OF YOUTH WHO HAD USED FLAVOURED TOBACCO PRODUCTS, AMONG LAST 30-DAY USERS, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



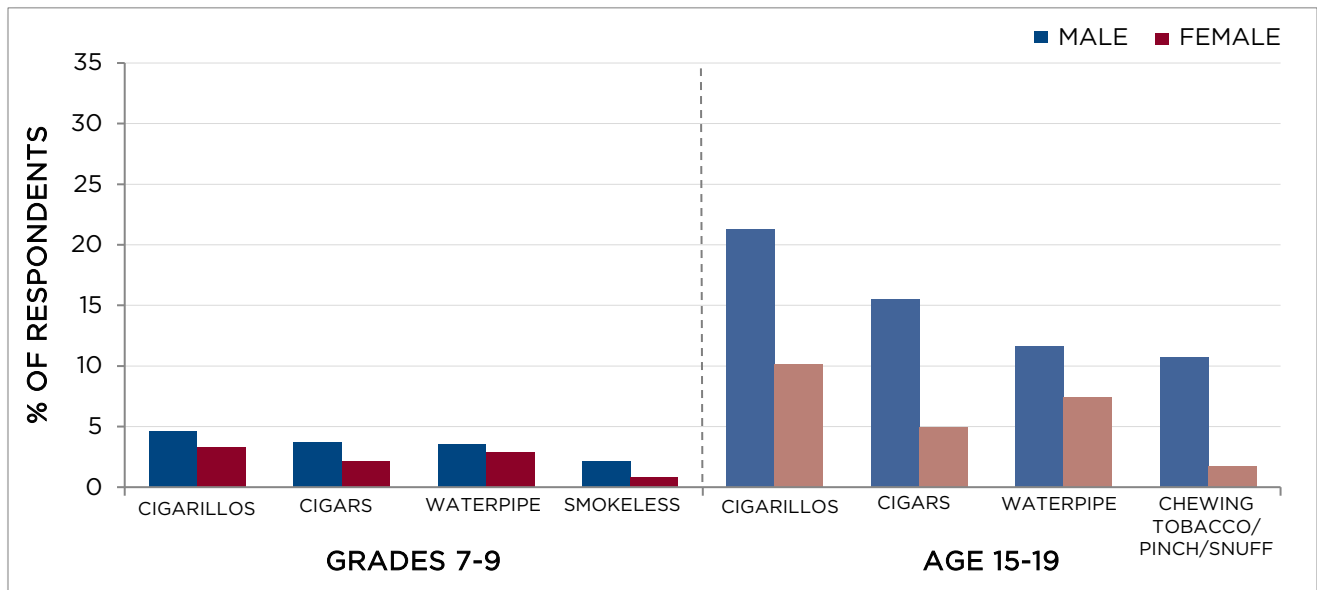
! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

DEMOGRAPHIC PATTERNS IN OTHER TOBACCO USE

Use of Other Tobacco Products by Sex

In 2017, among youth aged 15-19, significantly more males than females had tried cigars, cigarillos, chewing tobacco/snuff, and waterpipe¹⁰⁴⁻¹⁰⁷ (Figure 10.4). A similar pattern was observed among students in grades 7-9: prevalence estimates were significantly higher among males for ever trying cigars, cigarillos, and smokeless tobacco,¹⁰⁸⁻¹¹⁰ though not for waterpipe.¹¹¹

FIGURE 10.4: PERCENTAGE OF YOUTH WHO HAVE EVER TRIED VARIOUS TOBACCO PRODUCTS, BY SEX, GRADES 7-9, 2016-17, AND AGE 15-19, 2017



DATA SOURCES: CTADS, 2017; CSTADS, 2016-17

Use of Other Tobacco Products by Province

Among students in grades 7-9, use of all types of other tobacco products varied significantly by province¹¹²⁻¹¹⁵ in 2016-17 (Table 10.1). Quebec had the highest percentages of youth ever trying cigars or cigarillos (9.2%) and waterpipe (5.5%). Prince Edward Island and Saskatchewan had the highest prevalence estimates of youth ever trying smokeless tobacco (4.3% and 4.2%, respectively).

TABLE 10.1: PERCENTAGE OF YOUTH IN GRADES 7-9 WHO HAVE EVER TRIED VARIOUS TOBACCO PRODUCTS, BY PROVINCE*, 2016-17

PROVINCE	Cigars or Cigarillos	Cigarillos	Cigars	Waterpipe	Smokeless tobacco
CANADA	4.7%	4.0%	2.9%	3.2%	1.5%
BRITISH COLUMBIA	2.9	2.5	1.7	2.2	1.3
ALBERTA	4.6	3.5	2.8	2.7	2.5
SASKATCHEWAN	7.3	6.3	3.8	3.3	4.2
MANITOBA	5.0	4.2	3.1	2.9	2.3
ONTARIO	2.4	2.1	1.4	2.3	0.7
QUEBEC	9.2	7.7	5.8	5.5	1.7
NOVA SCOTIA	6.6	5.5	4.5	4.5	2.5
PRINCE EDWARD ISLAND	5.1	4.4	3.2	3.0	4.3
NFLD. & LABRADOR	5.2	4.4	3.7	2.8	1.4

*NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS
DATA SOURCE: CSTADS, 2016-17

Among youth aged 15-19, in 2017, use varied significantly by province for cigars¹¹⁶ and chewing tobacco/snuff,¹¹⁷ but not for cigarillos¹¹⁸ or waterpipe¹¹⁹ (Table 10.2). Saskatchewan had the highest percentages of youth who had used cigars (13.1%) and chewing tobacco or snuff (17.8%). Quebec had the highest estimate for youth ever trying cigarillos (21.0%). Ontario had the highest estimate for waterpipe use (10.8%).

TABLE 10.2: PERCENTAGE OF YOUTH AGED 15-19 WHO HAVE EVER TRIED VARIOUS TOBACCO PRODUCTS, BY PROVINCE, 2017

PROVINCE	Cigarillos	Cigars	Waterpipe	Chewing tobacco/snuff
CANADA	15.9%	10.4%	9.6%	6.3%
BRITISH COLUMBIA	19.5	9.9	8.6	!
ALBERTA	16.7	9.8	9.3	7.4
SASKATCHEWAN	18.8	13.1	!	17.8
MANITOBA	15.2	11.8	!	!
ONTARIO	11.9	9.4	10.8	6.0
QUEBEC	21.0	12.7	10.3	!
NEW BRUNSWICK	11.2	7.4	!	!
NOVA SCOTIA	15.8	!	!	!
PRINCE EDWARD ISLAND	15.6	9.9	!	9.4
NFLD. & LABRADOR	18.3	9.4	!	!

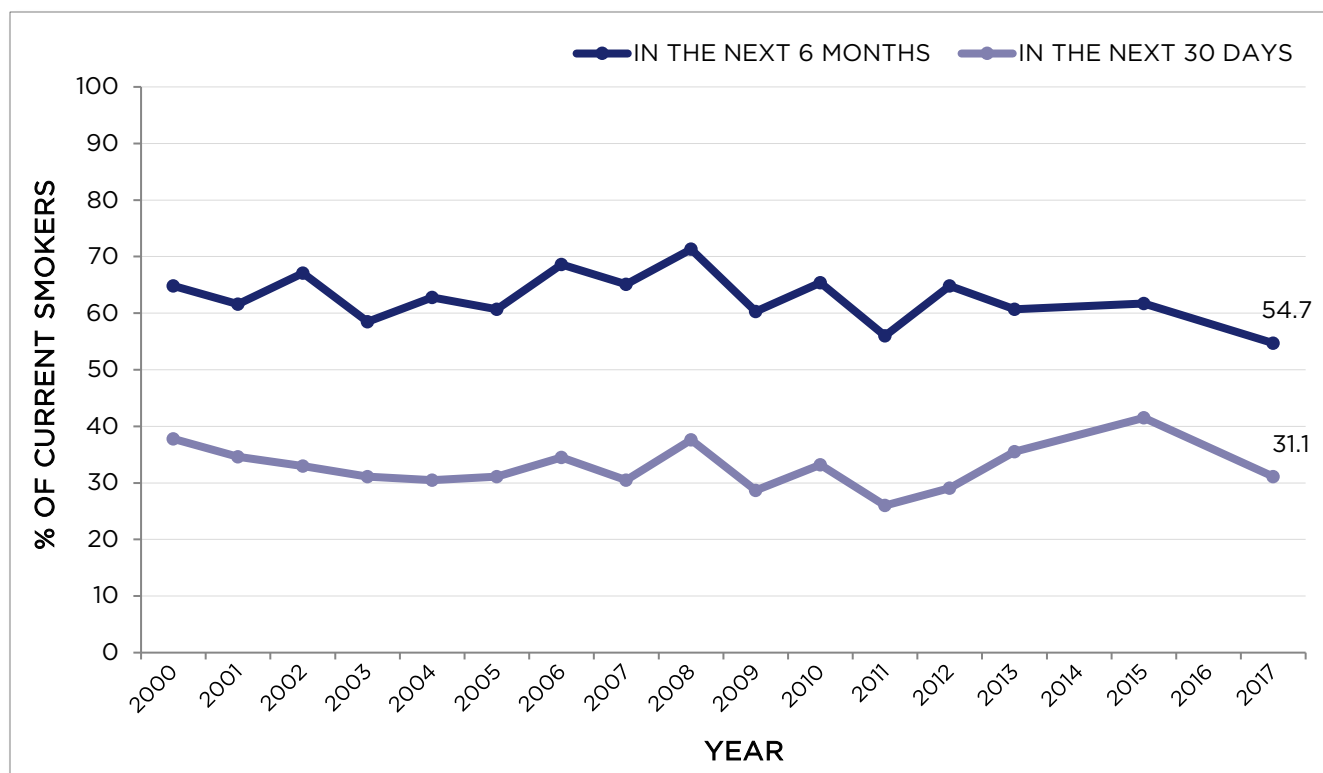
! ESTIMATES SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

11. QUITTING SMOKING

11.1 QUIT INTENTIONS

In 2017, more than half of smokers aged 15 to 19 (54.7%) were seriously considering quitting in the next 6 months, and the majority (57.5%) of those were considering doing so in the next 30 days—equivalent to 31.1% of all current smokers (Figure 11.1). Since 2000, the proportion of smokers seriously considering quitting in the next 6 months has been roughly six in ten, although estimates have fluctuated from year to year, ranging from 55% to 70% (Figure 11.1). The proportion seriously considering quitting in the next 30 days has paralleled this variation over time, though at lower levels of roughly thirty to forty per cent.

FIGURE 11.1: PERCENTAGE OF SMOKERS AGED 15-19 SERIOUSLY CONSIDERING QUITTING IN THE NEXT 6 MONTHS, AND IN THE NEXT 30 DAYS, 2000-2017



DATA SOURCES: CTUMS, 2000-2012; CTADS, 2013, 2015, 2017

The majority of youth smokers were interested in quitting:

- More than half of smokers aged 15 to 19 were seriously considering quitting.
- Three-quarters of smokers in grades 7-9 and six out of ten of smokers aged 15 to 19 had ever attempted to quit.
- Half of smokers aged 15 to 19 had attempted to quit in the past year.

11.2 QUIT ATTEMPTS

Quit attempts among students in grades 7-9

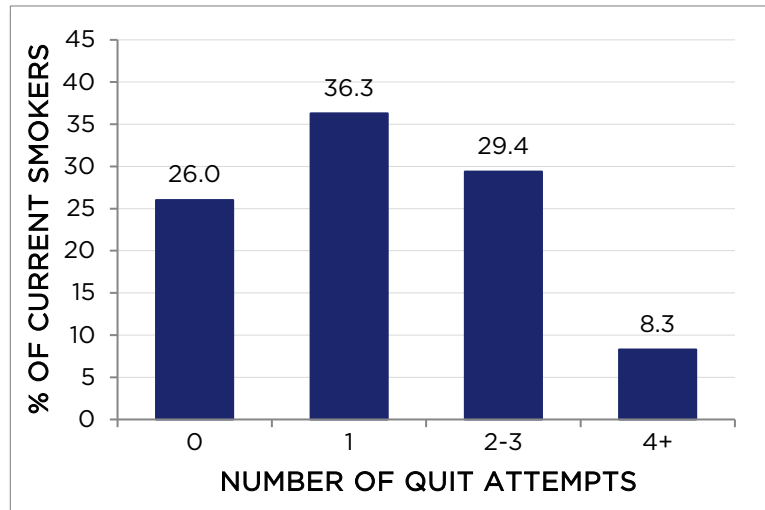
Among current smokers in grades 7-9, three-quarters (74.0%) had ever tried to quit smoking.

Most smokers who had ever tried to quit had made one to three attempts, with 8% having made four or more attempts (Figure 11.2).

Between 2014-15 and 2016-17, there was no significant change in the percentage of smokers in grades 7-9 who had ever tried to quit smoking.¹²⁰

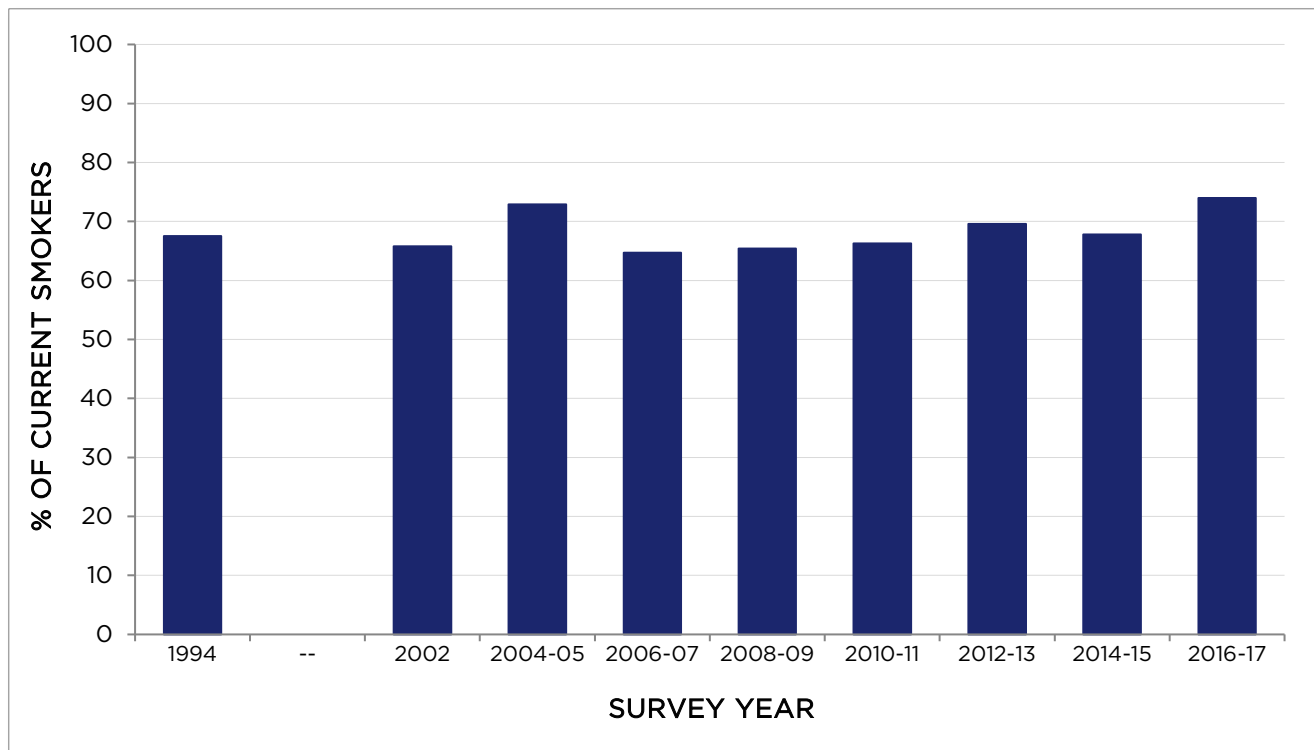
The percentage of current smokers who had ever attempted to quit has remained fairly stable over time at around two-thirds, although there was slight variation from wave to wave (Figure 11.3).

FIGURE 11.2: NUMBER OF QUIT ATTEMPTS EVER MADE BY CURRENT SMOKERS, GRADES 7-9, 2016-17



DATA SOURCE: CSTADS, 2016-17

FIGURE 11.3: PERCENTAGE OF CURRENT SMOKERS WHO HAVE EVER MADE A QUIT ATTEMPT, GRADES 7-9, 1994-2016-17



DATA SOURCES: YSS, 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13; CSTADS, 2014-15, 2016-17

Quit attempts among youth aged 15-19

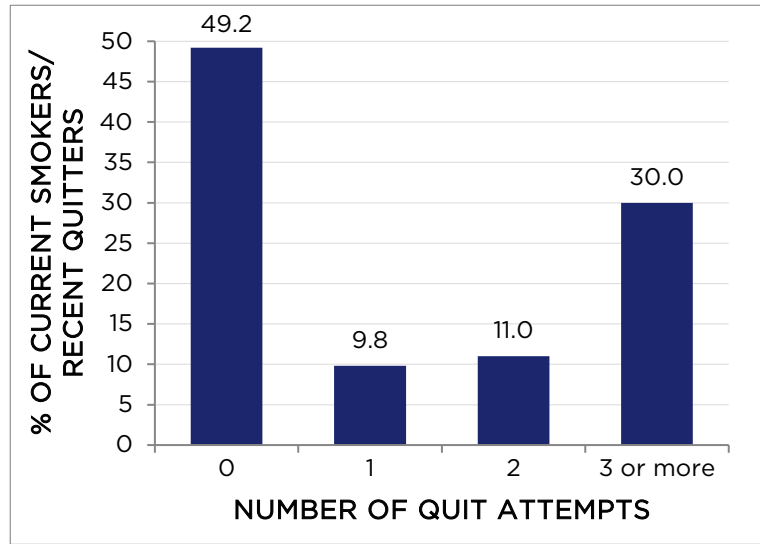
Among current smokers aged 15-19, six out of ten (61.4%) reported having ever attempted to quit smoking.

Half (50.8%) of current smokers and recent quitters aged 15-19 had made a quit attempt lasting at least 24 hours in the past 12 months: approximately 20% had made one or two attempts, while 30% had made three or more attempts (Figure 11.4).

Between 2015 and 2017, there was no significant change in the percentage of smokers aged 15-19 who had tried to quit smoking in the past 12 months.¹²¹

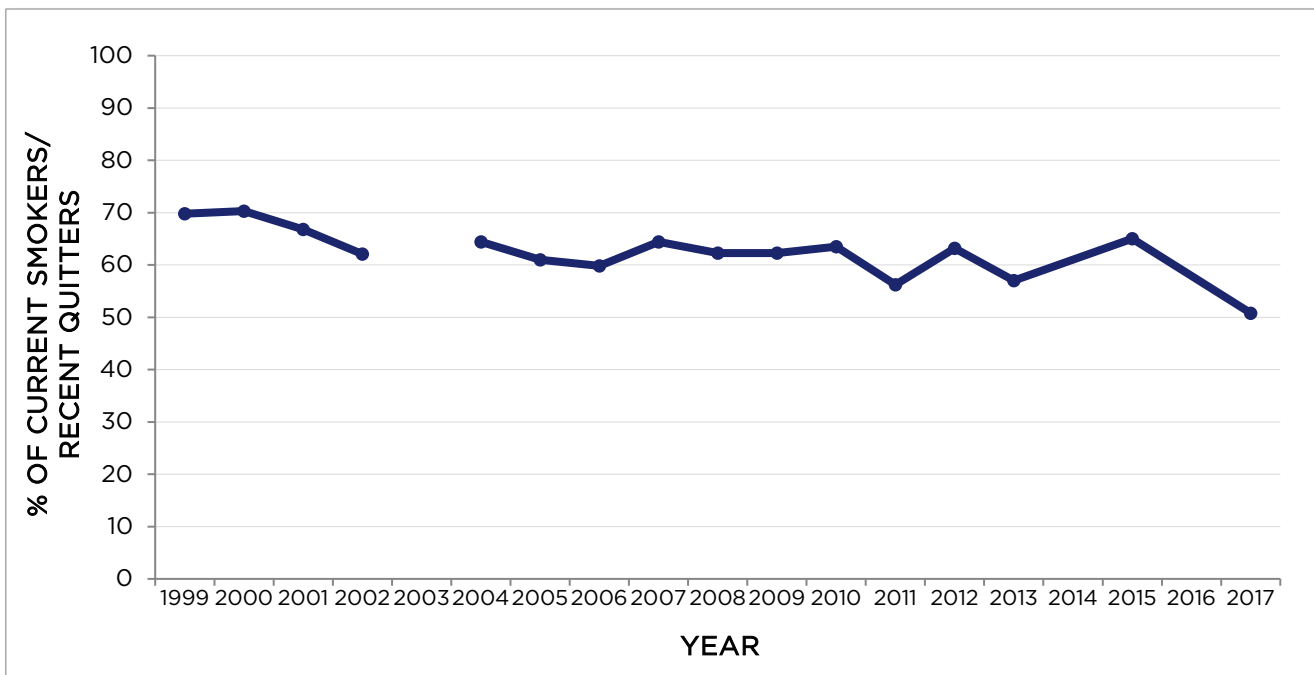
Since 1999, the proportion of smokers and recent quitters who had attempted to quit in the past 12 months has remained above half (Figure 11.5).

FIGURE 11.4: NUMBER OF 24-HOUR QUIT ATTEMPTS MADE IN THE PAST 12 MONTHS BY SMOKERS AND RECENT QUITTERS, AGE 15-19, 2017



DATA SOURCE: CTADS, 2017

FIGURE 11.5: PERCENTAGE OF SMOKERS AND RECENT QUITTERS* WHO ATTEMPTED TO QUIT IN THE PAST 12 MONTHS, BY AGE GROUP, 1999-2017**



*NOTE: IN 1999-2002, THIS QUESTION WAS ASKED OF CURRENT SMOKERS; 2003 (DATA NOT SHOWN) INCLUDED ONLY SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS; 2004-2015 INCLUDED CURRENT SMOKERS AND FORMER SMOKERS WHO HAD QUIT IN THE PAST 12 MONTHS

**IN 1999, ONLY CYCLE 2 WAS ASKED THE RELEVANT SURVEY ITEMS

DATA SOURCES: CTUMS, 1999-2012; CTADS, 2013, 2015, 2017

SECTION IV: E-CIGARETTE USE



HIGHLIGHTS

2017 data presents a snapshot of e-cigarette use prior to new federal regulations in May 2018.

In 2017, among Canadians age 15 and older:

Many Canadians had tried e-cigarettes, but few reported using them daily:

- 15.4% (4.6 million) reported having ever tried an e-cigarette;
- 2.9% (~863,000) used one in the past 30 days;
- 1.0% (~292,000) reported daily use. (page 90)

Ever use of e-cigarettes increased significantly between 2015 and 2017, while past 30-day use did not change significantly. (p. 90)

Among past 30-day users of e-cigarettes, approximately one-third used them every day. (p. 90)

E-cigarette use was most prevalent among younger age groups:

- 29.3% of young adults aged 20 to 24 and 25.6% of those aged 25 to 34 reported ever trying an e-cigarette, as did 22.8% of youth aged 15 to 19.
- Approximately 6% of youth and young adults had used an e-cigarette in the past 30 days. (p. 92)

Ever use of e-cigarettes was more prevalent among males (18.8%) than females (12.0%), as was past 30-day use (3.6% vs. 2.2%, respectively). (p. 91)

- Sex differences were more pronounced among younger age groups. (p. 93)

Past 30-day e-cigarette use varied significantly by province. (p. 94)

Prevalence of e-cigarette use was much greater among smokers:

- **54.1% of current smokers had ever used e-cigarettes, compared to 6.7% of nonsmokers.**
- Past 30-day use was 12.2% among current smokers and 2.4% among non-smokers. (p. 95)

Nearly two-thirds of e-cigarette users (64.4%) reported that the last e-cigarette they used contained nicotine, despite nicotine-containing e-cigarettes not being approved for sale in Canada at the time of the survey. (p. 99)

Fruit and tobacco were the most commonly cited flavours of e-cigarettes “last used”. Fruit flavours were most popular among younger users, while tobacco flavour was more popular among older users and smokers. (p. 100)

Among all ever users, **nearly one-quarter (23.6%) reported using e-cigarettes to help them quit smoking** within the past two years. (p. 101)

Nearly half (44.6%) of e-cigarette ever-users who were also cigarette smokers reported using an e-cigarette when they were unable to smoke, or to smoke fewer cigarettes. (p. 101)

Among youth in grades 7-9, in 2016-17:

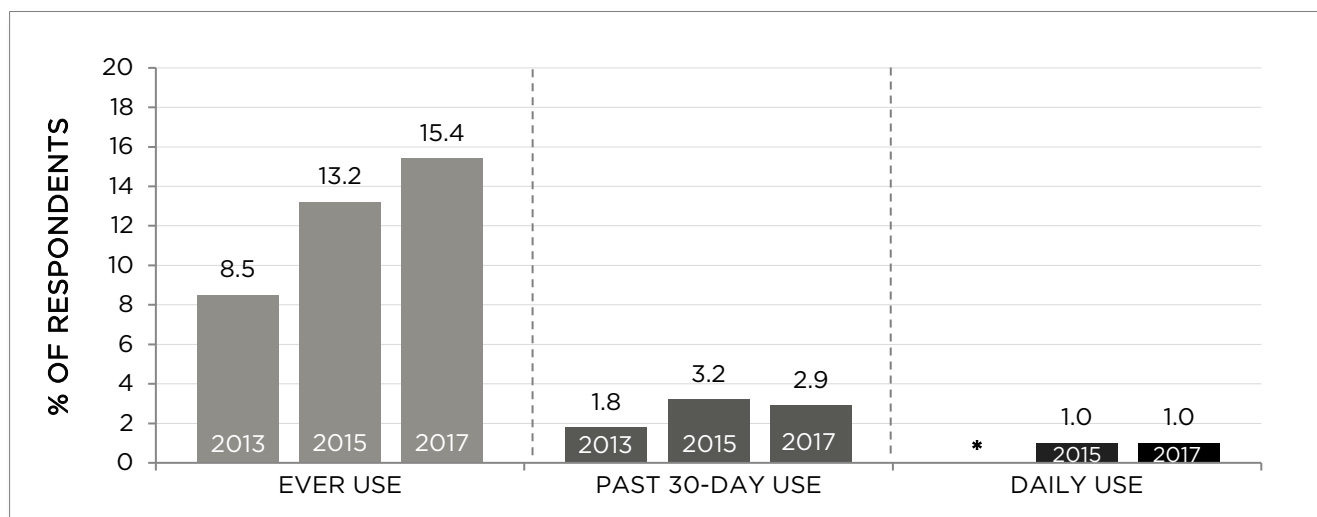
- **12.6% of Canadian students in grades 7-9 reported having ever tried an e-cigarette.** (p. 102)
- 5.4% had used an e-cigarette in the past 30 days. (p. 102)
- **Two-thirds of current smokers in grades 7-9 had used e-cigarettes in the past 30 days**, compared to approximately 5% of non-smokers. (p. 104)
- E-cigarette use varied by province: prevalence was lowest in Ontario, highest in Nova Scotia. (p.103)

12. E-CIGARETTE USE AMONG CANADIAN ADULTS

12.1 PREVALENCE OF E-CIGARETTE USE

In 2017, 15.4% of Canadians age 15 and older (4.6 million) reported having ever tried an e-cigarette, and 2.9% (~863,000) had used an e-cigarette in the past 30 days. Prevalence of ever using e-cigarettes increased significantly between 2015 and 2017,¹²² while past 30-day use did not change significantly¹²³ (Figure 12.1).

FIGURE 12.1: PREVALENCE OF EVER USE, PAST 30-DAY USE, AND DAILY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, 2013-2017



*DAILY USE OF E-CIGARETTES NOT ASKED IN CTADS 2013
DATA SOURCE: CTADS, 2013, 2015, 2017

The past 30-day prevalence of using e-cigarettes was much lower than for smoking cigarettes, which 15.3% of Canadians reported doing in the past 30 days. However, past 30-day prevalence of using e-cigarettes was greater than for other tobacco products, like cigarillos and cigars (see *Figure 4.1*).

Frequency of E-cigarette Use

Daily use of e-cigarettes was reported by 1.0% (~292,000) of Canadians age 15 and older (Figure 12.1).

Of those who reported ever trying an e-cigarette, most were not current users: 81.4% had not used an e-cigarette in the past 30 days, while 18.6% had.

Of those who reported using an e-cigarette in the past 30 days, the mean number of days of use in the past 30 was 13.5. Approximately one-third (33.9%) used an e-cigarette every day, and 38.2% reported using an e-cigarette on 20 or more days in the past 30 (including those who used one every day).

Over 4.6 million Canadians have tried e-cigarettes.

DEMOGRAPHIC PATTERNS IN E-CIGARETTE USE

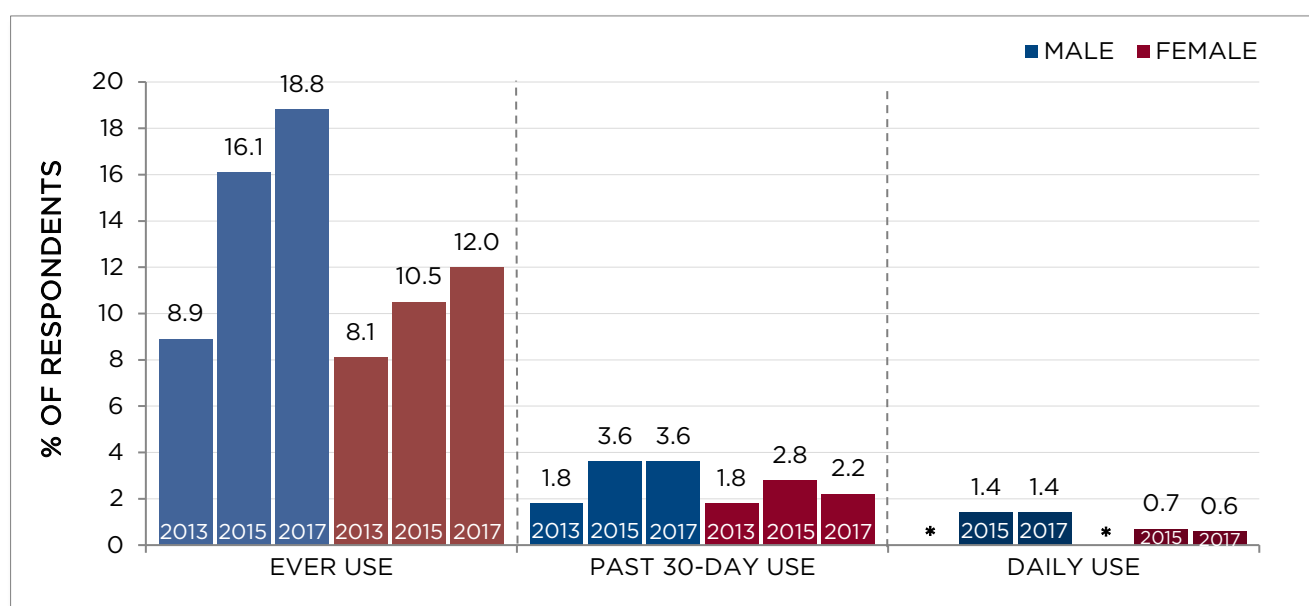
Prevalence by Sex

Ever use of e-cigarettes was significantly more prevalent among males, at 18.8% (2.8 million), compared to 12.0% of females (1.8 million) (Figure 12.2).¹²⁴

Similarly, e-cigarette use in the past 30 days was significantly more prevalent among males (3.6%) than females (2.2%) (Figure 12.2).¹²⁵

However, the magnitude of sex differences appeared to vary by age group (see page 93).

FIGURE 12.2: PREVALENCE OF EVER USE, PAST 30-DAY USE, AND DAILY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY SEX, 2013-2017



*DAILY USE OF E-CIGARETTES NOT ASKED IN CTADS 2013
DATA SOURCE: CTADS, 2013, 2015, 2017

Frequency of E-cigarette Use by Sex

Daily use of e-cigarettes was significantly more prevalent among males, at 1.4%, compared to 0.6% of females (Figure 12.2).¹²⁶

Of those who reported ever trying an e-cigarette, similar proportions of males (19.1%) and females (18.0%) had used an e-cigarette in the past 30 days.¹²⁷

Of those who reported using an e-cigarette in the past 30 days, the proportions of males (38.9%) and females (25.8%) that used one every day were not significantly different.¹²⁸ The proportions of males (40.4%) and females (34.6%) using e-cigarettes on 20 or more of the past days also did not differ significantly.¹²⁹

Among past 30-day users of e-cigarettes, the mean number of days of use in the past 30 was similar for males (14.0) and females (12.7).¹³⁰

Prevalence by Age

Ever Use

Prevalence of ever using e-cigarettes varied significantly by age group:¹³¹ use was highest among young adults aged 20-24 and 25-34, as well as youth, and decreased with age into adulthood (Figure 12.3). Between 2015 and 2017, ever use significantly increased only among adults aged 25-34 and 35-44.¹³²⁻¹³⁶

Among youth aged 15-19, the prevalence estimate for ever trying e-cigarettes was higher than for cigarettes (16.4%) or any other tobacco product (see Figure 10.1).

Past 30-day Use

Past 30-day use of e-cigarettes also varied significantly by age group:¹³⁷ prevalence was highest among youth and young adults (Figure 12.4). Between 2015 and 2017, past 30-day use did not change significantly in any age group.¹³⁸⁻¹⁴¹

Among youth aged 15-19, past 30-day use of e-cigarettes was comparable to cigarette smoking, which was reported by 6.6%.

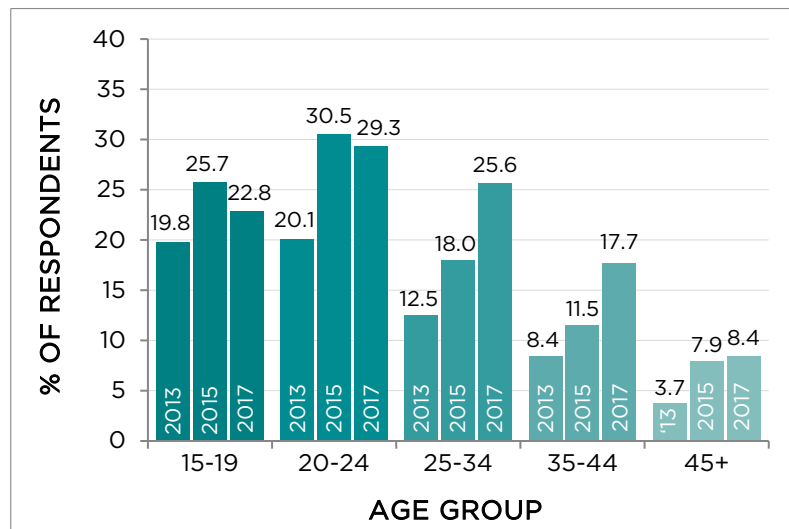
Of those who reported ever trying an e-cigarette, use in the past 30 days varied significantly by age group:¹⁴² 27.6% of ever-users aged 15-19 had used an e-cigarette in the past 30 days, as well as 20.7% aged 20-24, 14.6% aged 25-44, and 20.9% aged 45 and older.

Daily Use

Overall prevalence of daily e-cigarette use varied significantly by age group,¹⁴³ reported by 1.8% of young people aged 15-24, 1.2% of adults aged 25-44, and 0.6% of adults age 45 and older.

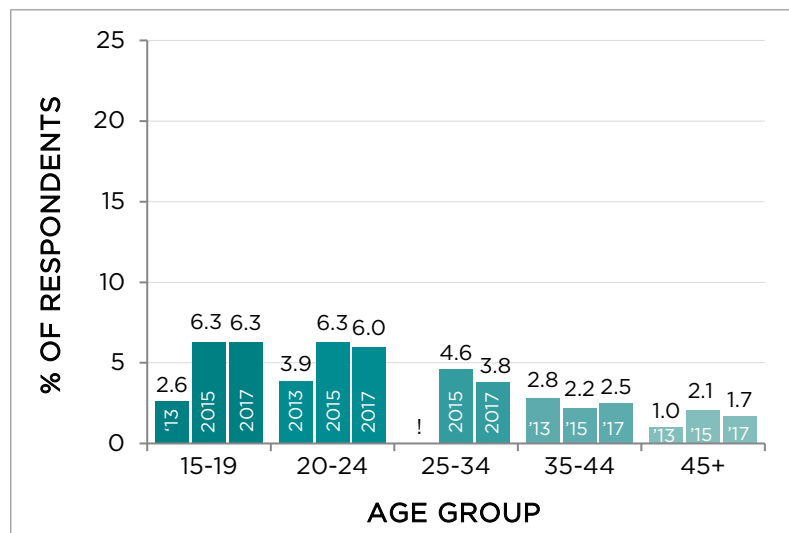
However, of those reporting using e-cigarettes in the past 30 days, the proportion using daily did not differ significantly by age group:¹⁴⁴ 29.8% of users aged 15-24, 39.2% of users aged 25-44, and 32.0% of users aged 45 and older.

FIGURE 12.3: PREVALENCE OF EVER USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY AGE GROUP, 2013-2017



DATA SOURCE: CTADS, 2013, 2015, 2017

FIGURE 12.4: PREVALENCE OF PAST 30-DAY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY AGE GROUP, 2013-2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2013, 2015, 2017

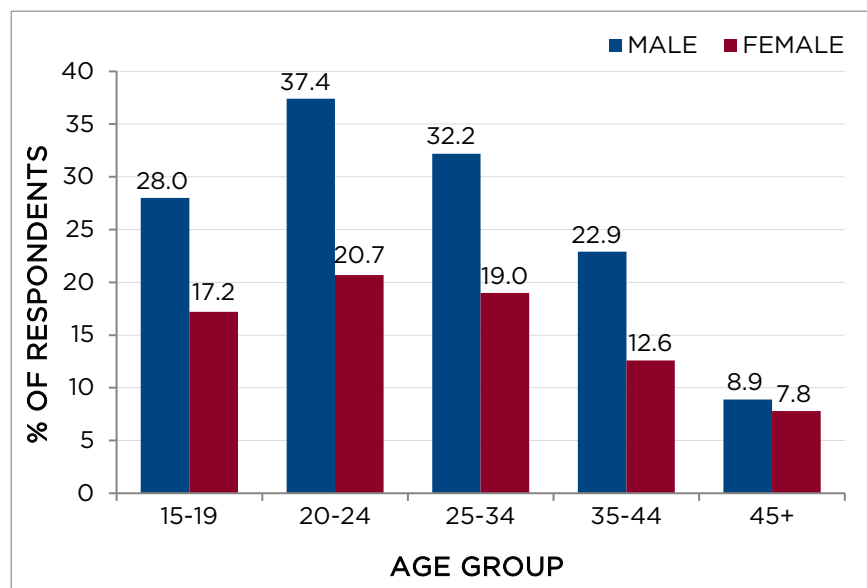
Similarly, among past 30-day users, the proportion using e-cigarettes on 20 or more of the past 30 days did not differ significantly by age group (35.1% among age 15-19, 31.1% among 20-24, 45.7% among 25-44, and 34.7% among 45+).¹⁴⁵ The mean days of use in the past 30 were also similar across age groups (13.5 among age 15-19, 11.3 among 20-24, 15.2 among 25-44, and 12.7 among 45+).¹⁴⁶

Prevalence by Sex and Age Group

Ever Use

Prevalence of ever using e-cigarettes was significantly higher among males in all age groups except those age 45 and older¹⁴⁷⁻¹⁵¹ (Figure 12.5). Sex differences were most pronounced among young adults.

FIGURE 12.5: PREVALENCE OF EVER USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY AGE GROUP AND SEX, 2017

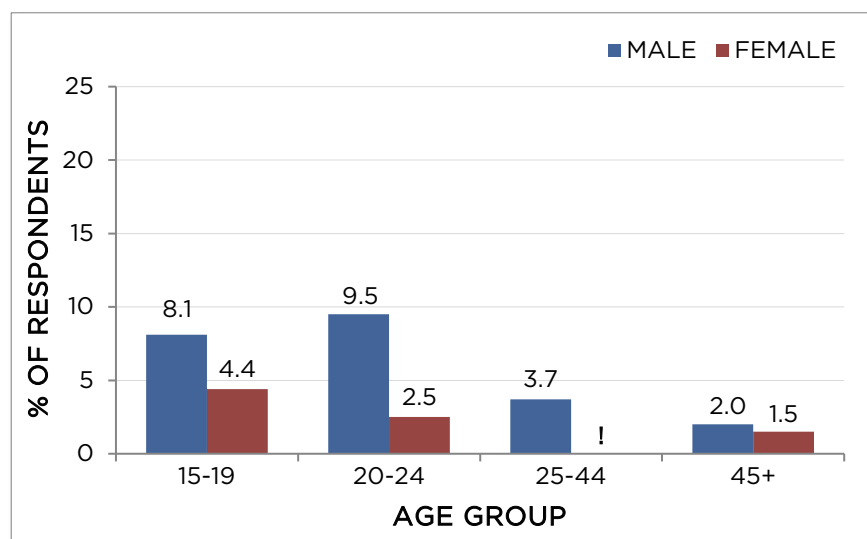


DATA SOURCE: CTADS, 2017

Past 30-day Use

While prevalence of e-cigarette use in the past 30 days was much lower than ever use, similar patterns were observed: past 30-day use was more prevalent among male youth and young adults,^{152,153} but there were no significant sex differences among older age groups^{154,155} (Figure 12.6).

FIGURE 12.6: PREVALENCE OF PAST 30-DAY USE OF E-CIGARETTES, AMONG CANADIANS AGE 15+, BY AGE GROUP AND SEX, 2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

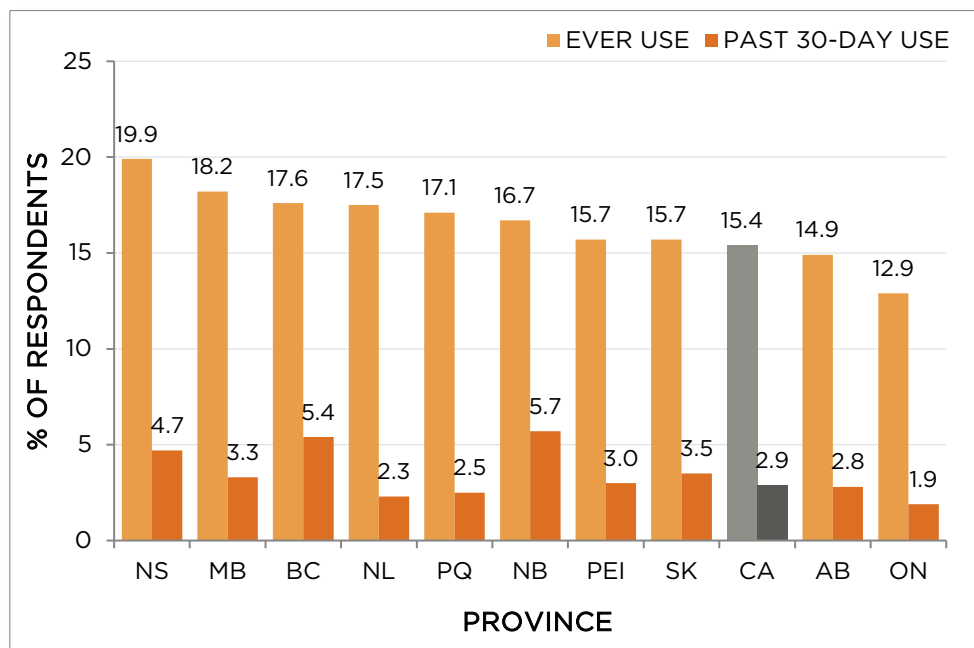
Prevalence by Province

While differences between provinces in prevalence of ever using e-cigarettes were not statistically significant,¹⁵⁶ estimates ranged from a low of 12.9% in Ontario to a high of 19.9% in Nova Scotia (Figure 12.7).

Use of e-cigarettes in the past 30 days, however, did vary significantly by province, ranging from 1.9% in Ontario to 5.7% in New Brunswick.¹⁵⁷

Between 2013 and 2017, ever use of e-cigarettes appears to have increased in all provinces, while past 30-day use was more variable (Table 12.1).

FIGURE 12.7: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY PROVINCE, 2017



DATA SOURCE: CTADS, 2017

TABLE 12.1: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY PROVINCE, 2013-2017

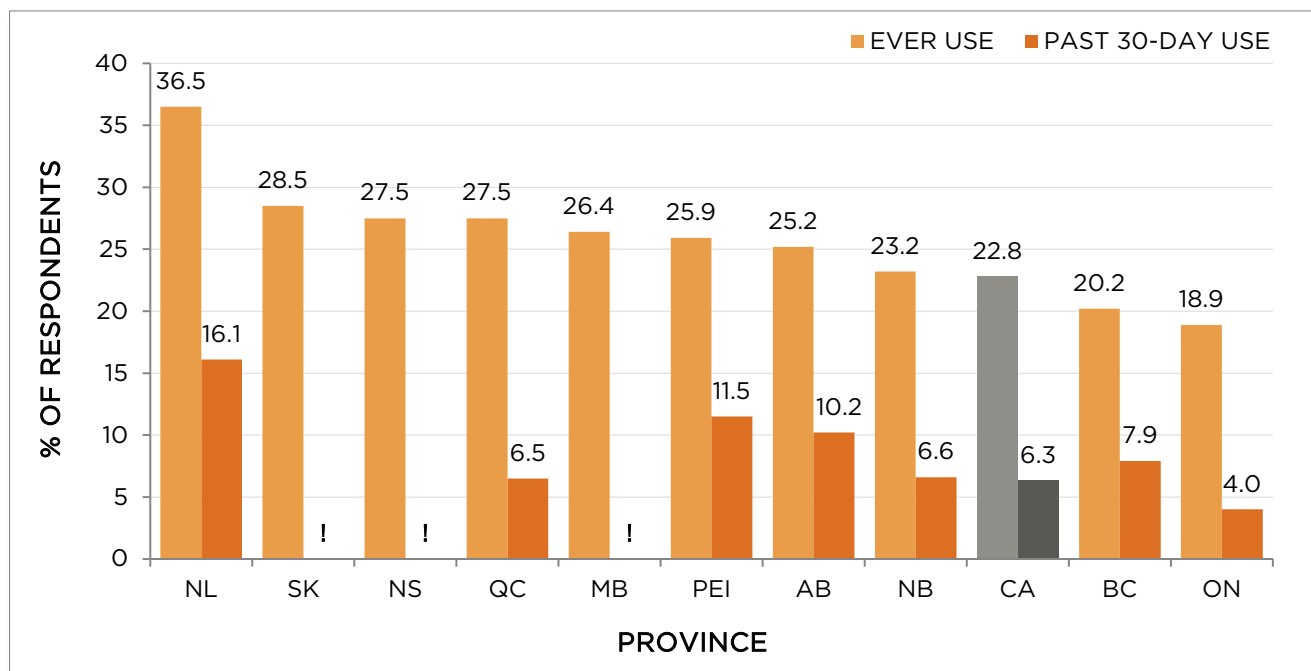
YEAR	EVER USE			PAST 30-DAY USE		
	2013	2015	2017	2013	2015	2017
CANADA	8.5%	13.2%	15.4%	1.8%	3.2%	2.9%
BRITISH COLUMBIA	10.1	14.2	17.6	2.4	2.8	5.4
ALBERTA	11.0	15.5	14.9	2.6	2.8	2.8
SASKATCHEWAN	8.2	16.9	15.7	!	3.7	3.5
MANITOBA	8.2	14.2	18.2	!	4.2	3.3
ONTARIO	5.6	10.4	12.9	!	2.7	1.9
QUEBEC	10.0	14.7	17.1	1.7	3.8	2.5
NEW BRUNSWICK	12.9	16.3	16.7	2.8	6.0	5.7
NOVA SCOTIA	13.4	18.8	19.9	2.0	4.2	4.7
PEI	11.1	11.5	15.7	1.8	3.1	3.0
NFLD & LABRADOR	12.5	15.2	17.5	3.2	2.4	2.3

! ESTIMATES SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2013, 2015, 2017

Youth aged 15-19

There is a great deal of concern about youth uptake of e-cigarettes. Eight of the ten provinces (all except Alberta and Saskatchewan) had introduced age restrictions on sales of e-cigarettes to minors^{xix} prior to the federal legislation in May 2018,^{xiii} as well as restrictions on advertising and promotion.^{xix}

FIGURE 12.8: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES AMONG YOUTH AGED 15-19, BY PROVINCE, 2017



! ESTIMATES SUPPRESSED DUE TO UNACCEPTABLE QUALITY
DATA SOURCE: CTADS, 2017

Among youth aged 15-19, prevalence of ever using e-cigarettes varied significantly by province,¹⁵⁸ ranging from approximately one in five in Ontario and British Columbia, to more than one-third of youth in Newfoundland and Labrador (Figure 12.8).

Prevalence of using e-cigarettes in the past 30 days among youth aged 15-19 also varied significantly by province,¹⁵⁹ and was again greatest in Newfoundland and Labrador (Figure 12.8).

Between 2013 and 2017, ever use of e-cigarettes among youth aged 15-19 appears to have increased in most provinces, though 2015 estimates were higher in some (Table 12.2).

TABLE 12.2: PREVALENCE OF EVER USE OF E-CIGARETTES AMONG YOUTH AGED 15-19, BY PROVINCE, 2013-2017

YEAR	2013	2015	2017
CANADA	19.8%	25.7%	22.8%
BRITISH COLUMBIA	15.6	27.1	20.2
ALBERTA	18.8	24.2	25.2
SASKATCHEWAN	19.7	27.5	28.5
MANITOBA	16.2	21.4	26.4
ONTARIO	14.9	22.1	18.9
QUEBEC	30.9	32.6	27.5
NEW BRUNSWICK	26.2	27.1	23.2
NOVA SCOTIA	25.5	25.8	27.5
PEI	23.4	25.0	25.9
NFLD & LABRADOR	25.6	31.6	36.5

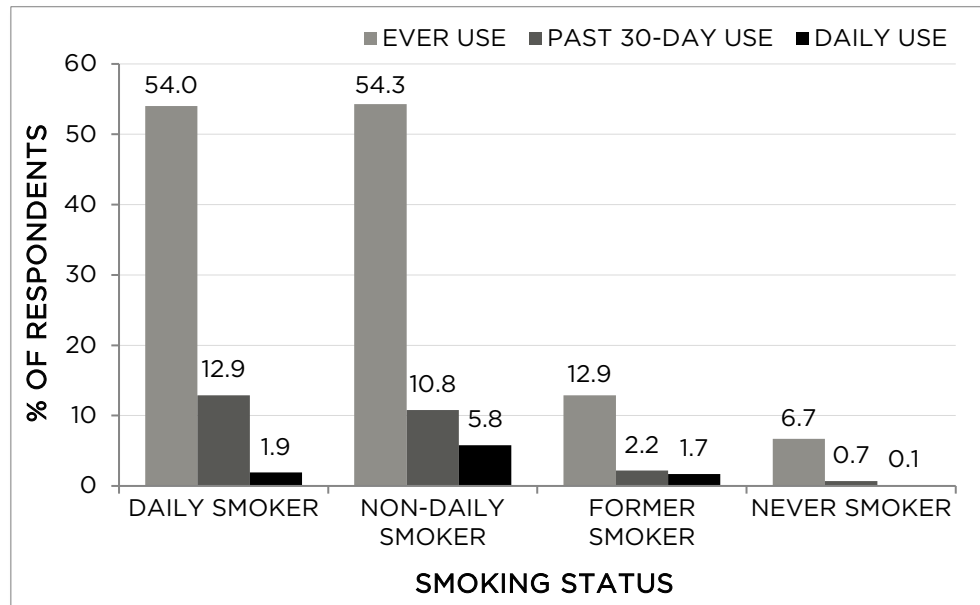
DATA SOURCE: CTADS, 2013, 2015, 2017

Prevalence by Smoking Status

As shown in Figure 12.9, prevalence of e-cigarette use varied greatly by smoking status, both for ever use¹⁶⁰ and past 30-day use.¹⁶¹

Half (54.1%) of current smokers (including daily and non-daily smokers) had ever used e-cigarettes, compared to 8.5% of non-smokers (including former and never smokers). Similarly, past 30-day use was 12.3% among current smokers and just 1.2% among non-smokers. Daily e-cigarette use was 3.0% among current smokers and 0.6% among non-smokers.

FIGURE 12.9: EVER USE AND PAST 30-DAY USE OF E-CIGARETTES BY SMOKING STATUS AMONG CANADIANS AGE 15+, 2017



DAILY SMOKER: RESPONDED "EVERY DAY" TO "AT THE PRESENT TIME DO YOU SMOKE CIGARETTES EVERY DAY, OCCASIONALLY OR NOT AT ALL?"; **NON-DAILY SMOKER:** RESPONDED "OCCASIONALLY" TO "AT THE PRESENT TIME DO YOU SMOKE CIGARETTES EVERY DAY, OCCASIONALLY OR NOT AT ALL?"; **FORMER SMOKER:** SMOKED "NOT AT ALL" AT THE TIME OF THE SURVEY, BUT HAD SMOKED 100+ CIGARETTES IN LIFETIME
DATA SOURCE: CTADS, 2017

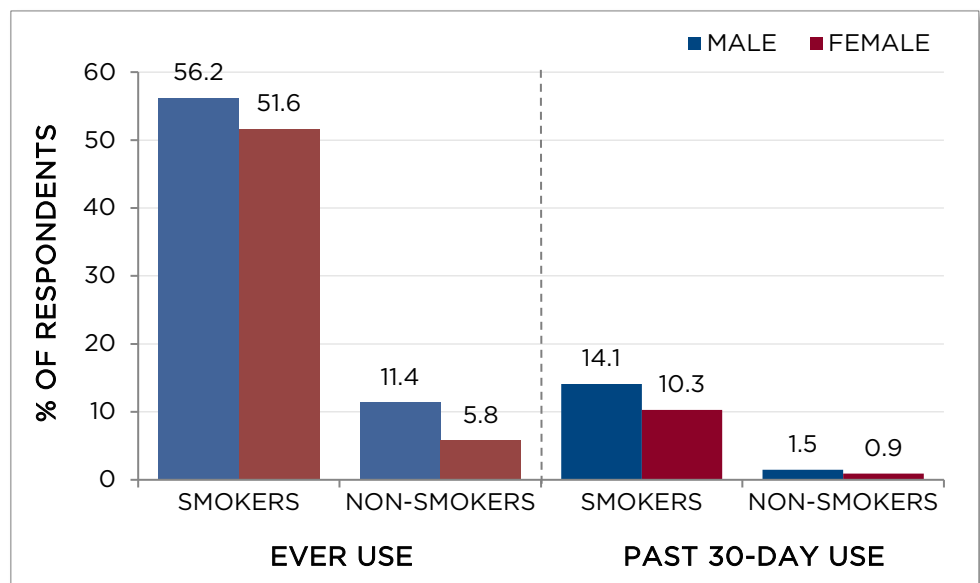
Prevalence by sex, among smokers and non-smokers

As shown in Figure 12.10, prevalence of using e-cigarettes was similar among male and female smokers for both ever use and past 30-day use.^{162,163}

Among non-smokers, ever-use of e-cigarettes was significantly more prevalent among males,¹⁶⁴ but past 30-day use did not differ significantly by sex.¹⁶⁵

This pattern held among youth aged 15-19, with greater sex differences observed among non-smokers than smokers (*data not shown*).

FIGURE 12.10: EVER USE AND PAST 30-DAY USE OF E-CIGARETTES AMONG CANADIANS AGE 15+, BY SEX AND SMOKING STATUS*, 2017

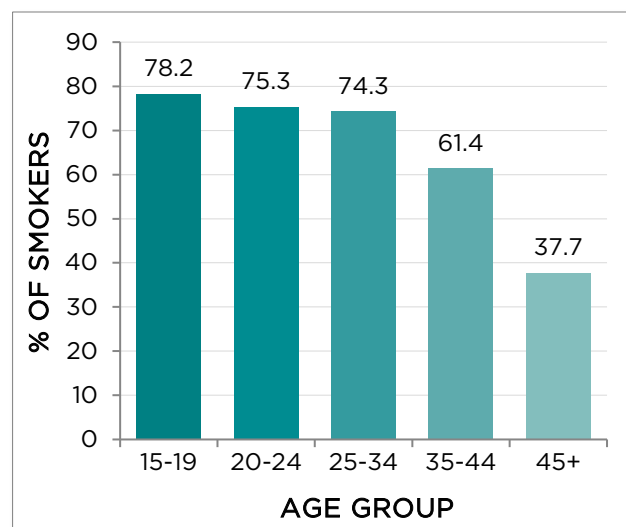


*SMOKERS INCLUDES DAILY AND NON-DAILY SMOKERS; NON-SMOKERS INCLUDES FORMER AND NEVER SMOKERS
DATA SOURCE: CTADS, 2017

Prevalence by age group, among smokers and non-smokers

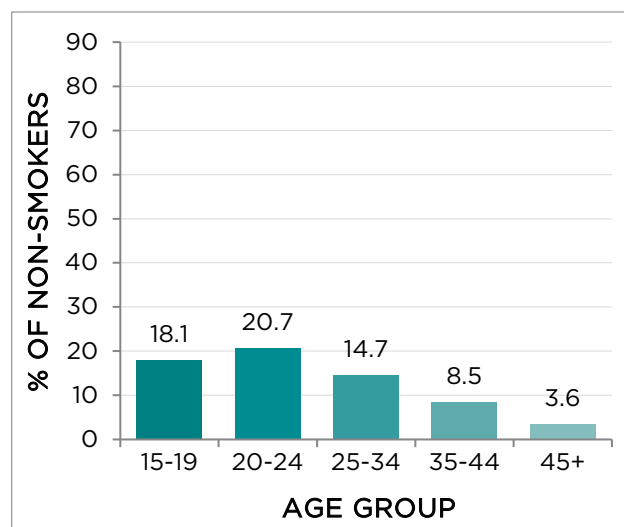
Prevalence of using e-cigarettes differed significantly by age among both smokers and non-smokers.^{166,167} While smokers had much higher prevalence than non-smokers, the same pattern of greater use among youth and younger adults, declining with age, was observed in both groups (Figure 12.11, Figure 12.12).

FIGURE 12.11: EVER USE OF E-CIGARETTES BY AGE GROUP AMONG SMOKERS, 2017



SMOKERS INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCE: CTADS, 2017

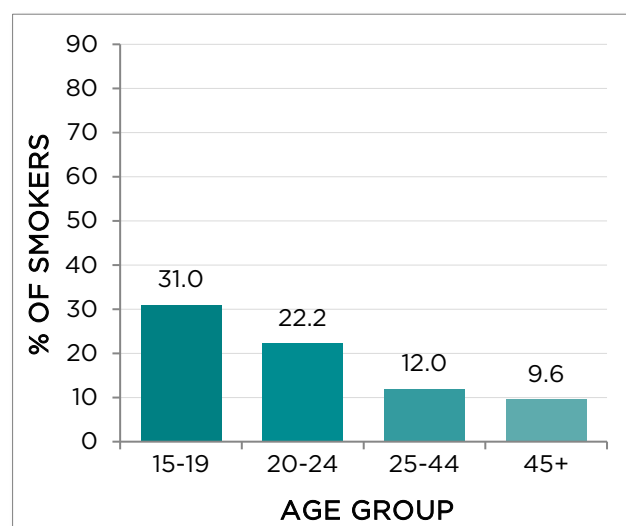
FIGURE 12.12: EVER USE OF E-CIGARETTES BY AGE GROUP AMONG NON-SMOKERS, 2017



NON-SMOKERS INCLUDES FORMER AND NEVER SMOKERS
DATA SOURCE: CTADS, 2017

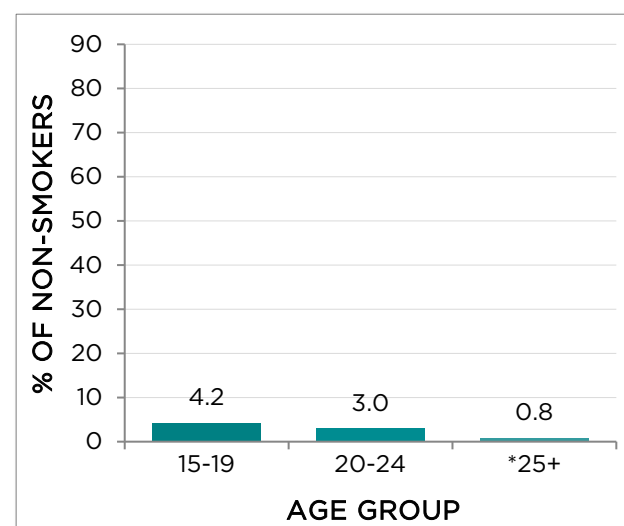
Use of e-cigarettes in the past 30 days also varied by smoking status and age group,^{168,169} again with much higher use observed among smokers than non-smokers and similar patterns by age group, although at much lower prevalence levels than for ever use (Figure 12.13, Figure 12.14).

FIGURE 12.13: PAST 30-DAY USE OF E-CIGARETTES BY AGE GROUP AMONG SMOKERS, 2017



SMOKERS INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCE: CTADS, 2017

FIGURE 12.14: PAST 30-DAY USE OF E-CIGARETTES BY AGE GROUP AMONG NON-SMOKERS, 2017

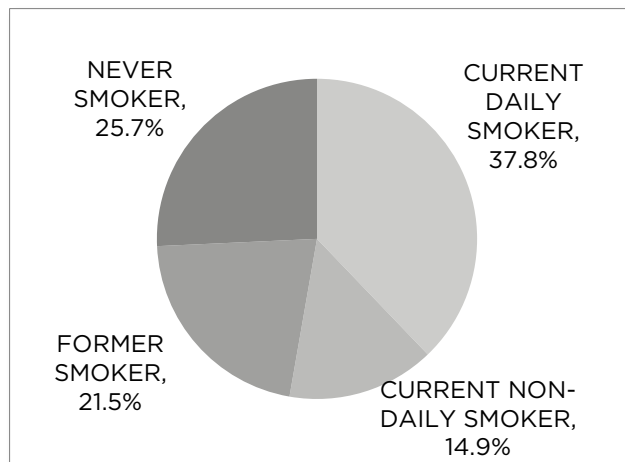


*AGE GROUPS 25-44 AND 45+ COMBINED DUE TO LOW NUMBERS
NON-SMOKERS INCLUDES FORMER AND NEVER SMOKERS
DATA SOURCE: CTADS, 2017

12.2 SMOKING STATUS OF E-CIGARETTE USERS

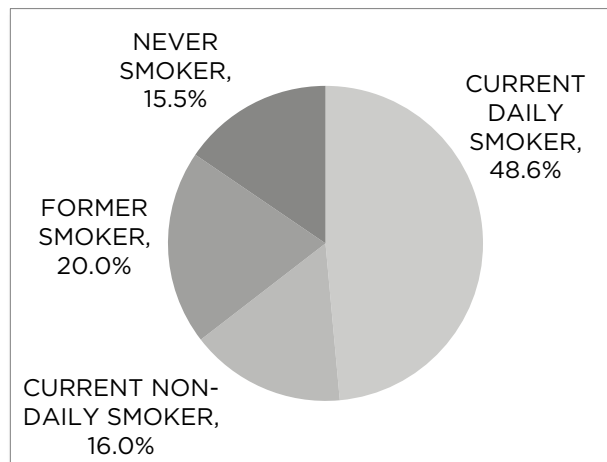
Half (52.7%) of ever users and a majority (64.5%) of past 30-day users of e-cigarettes were current smokers, suggesting that dual use of cigarettes and e-cigarettes is high. Approximately one in five ever and past 30-day e-cigarette users were former smokers. One-quarter of ever users and 15.5% of recent users of e-cigarettes had never been a smoker, indicating interest among non-smokers (Figure 12.15; Figure 12.16). There were no differences between males and females in the percentages of ever or past 30-day users who were smokers (49.3% vs. 58.0% and 64.6% vs. 64.3%, respectively).^{170,171}

FIGURE 12.15: SMOKING STATUS OF EVER USERS OF E-CIGARETTES, 2017



DATA SOURCE: CTADS, 2017

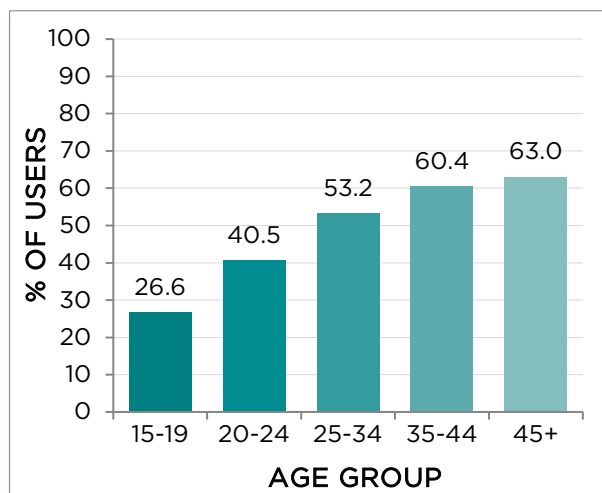
FIGURE 12.16: SMOKING STATUS OF PAST 30-DAY USERS OF E-CIGARETTES, 2017



DATA SOURCE: CTADS, 2017

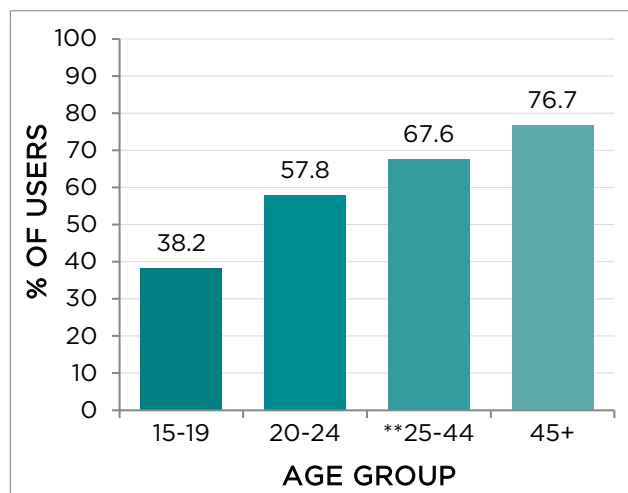
The percentages of ever and past 30-day e-cigarette users who were current smokers were lowest among youth aged 15-19, increasing with age^{172,173} (Figure 12.17; Figure 12.18). Among youth aged 15-19, never smokers comprised the majority of ever (71.7%) and past 30-day (60.5%) e-cigarette users; among young adults aged 20-24, never smokers comprised 48.4% and 30.6% of ever and recent users, respectively. Never smokers comprised 29.8% of ever users aged 25-34, but few recent users in this age group. E-cigarette use among never smokers over age 35 was rare.

FIGURE 12.17: PERCENTAGE OF EVER E-CIGARETTE USERS WHO WERE CURRENT SMOKERS*, BY AGE GROUP, 2017



*INCLUDES DAILY AND NON-DAILY SMOKERS
DATA SOURCE: CTADS, 2017

FIGURE 12.18: PERCENTAGE OF PAST 30-DAY E-CIGARETTE USERS WHO WERE CURRENT SMOKERS*, BY AGE GROUP, 2017

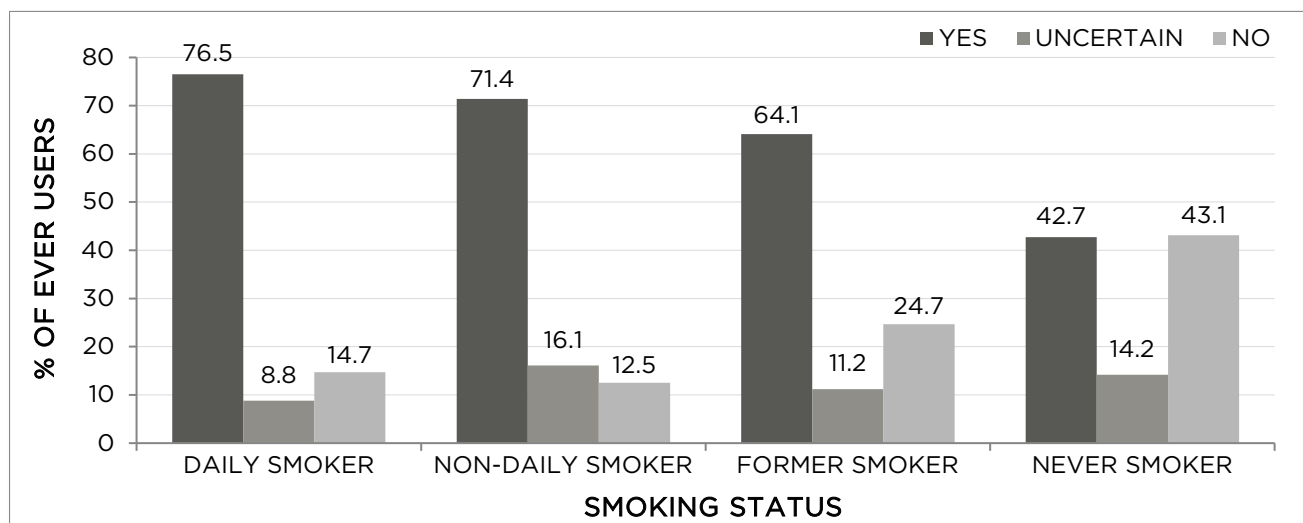


*INCLUDES DAILY AND NON-DAILY SMOKERS
**AGES 25-34 AND 35-44 WERE COMBINED DUE TO LOW NUMBERS
DATA SOURCE: CTADS, 2017

12.3 NICOTINE IN E-CIGARETTES

When ever-users of e-cigarettes were asked whether the last one they used contained nicotine, nearly two-thirds (64.4%) said it did, despite nicotine-containing e-cigarettes not being approved for sale in Canada at the time of the survey.^x This represented a significant increase from 47.8% of users in 2015.¹⁷⁴ In 2017, 23.8% said the last e-cigarette they used did not contain nicotine. Approximately one in eight users (11.8%) did not know whether their last e-cigarette contained nicotine, highlighting the importance of clear product labelling. Use of nicotine-containing e-cigarettes varied significantly by smoking status¹⁷⁵ (Figure 12.19); three-quarters (75.0%) of current smokers used e-cigarettes containing nicotine, as well as the majority (64.1%) of former smokers, compared to less than half (42.7%) of never smokers.

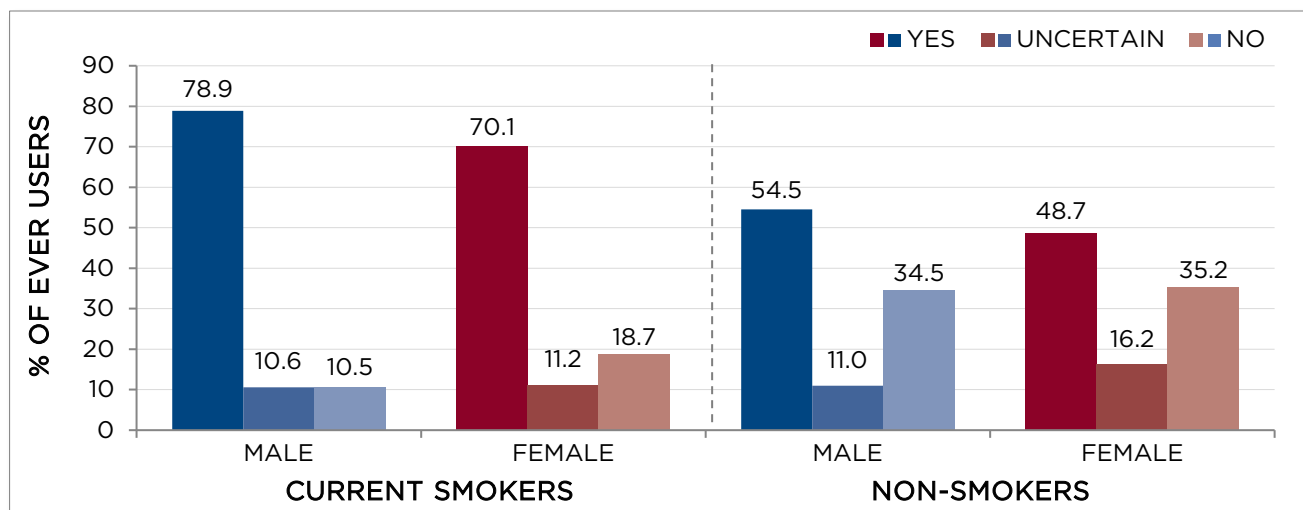
FIGURE 12.19: RESPONSES TO “THE LAST TIME YOU USED AN E-CIGARETTE, DID IT CONTAIN NICOTINE?” AMONG EVER USERS OF E-CIGARETTES, BY SMOKING STATUS, 2017



DAILY SMOKER: RESPONDED “EVERY DAY” TO “AT THE PRESENT TIME DO YOU SMOKE CIGARETTES EVERY DAY, OCCASIONALLY OR NOT AT ALL?”
NON-DAILY SMOKER: RESPONDED “OCCASIONALLY” TO “AT THE PRESENT TIME DO YOU SMOKE CIGARETTES EVERY DAY, OCCASIONALLY OR NOT AT ALL?”
FORMER SMOKER: SMOKED “NOT AT ALL” AT THE TIME OF THE SURVEY, BUT HAD SMOKED 100+ CIGARETTES IN LIFETIME
DATA SOURCE: CTADS, 2017

As shown in Figure 12.20, while it appears that slightly more male smokers and non-smokers (vs. females) used e-cigarettes containing nicotine, neither difference was statistically significant.^{176,177}

FIGURE 12.20: RESPONSES TO “THE LAST TIME YOU USED AN E-CIGARETTE, DID IT CONTAIN NICOTINE?” AMONG EVER USERS OF E-CIGARETTES, BY SEX AND SMOKING STATUS, 2017



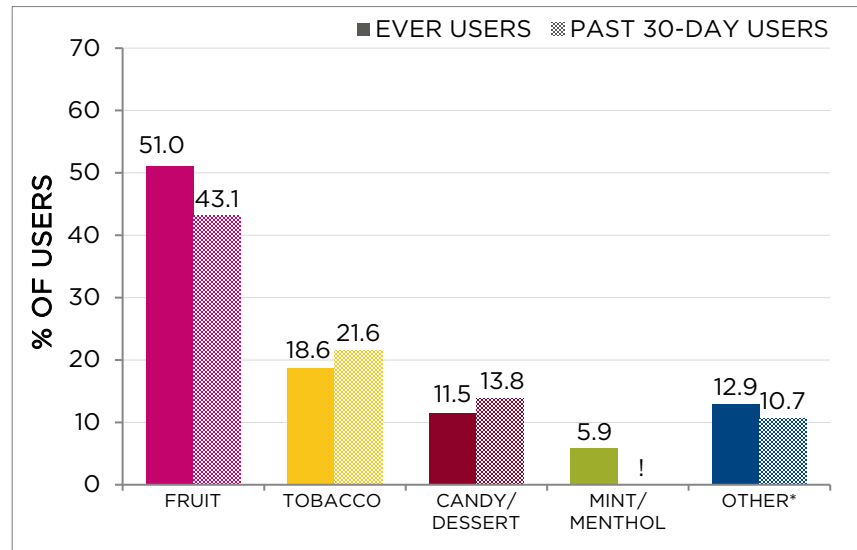
DATA SOURCE: CTADS, 2017

12.4 FLAVOURS IN E-CIGARETTES

E-cigarettes and e-liquids are manufactured in a variety of flavours. When e-cigarette users were asked, “The last time you used an e-cigarette, what flavour was it?”, fruit was the most prevalent flavour among both ever and past 30-day users, followed by tobacco (Figure 12.21).

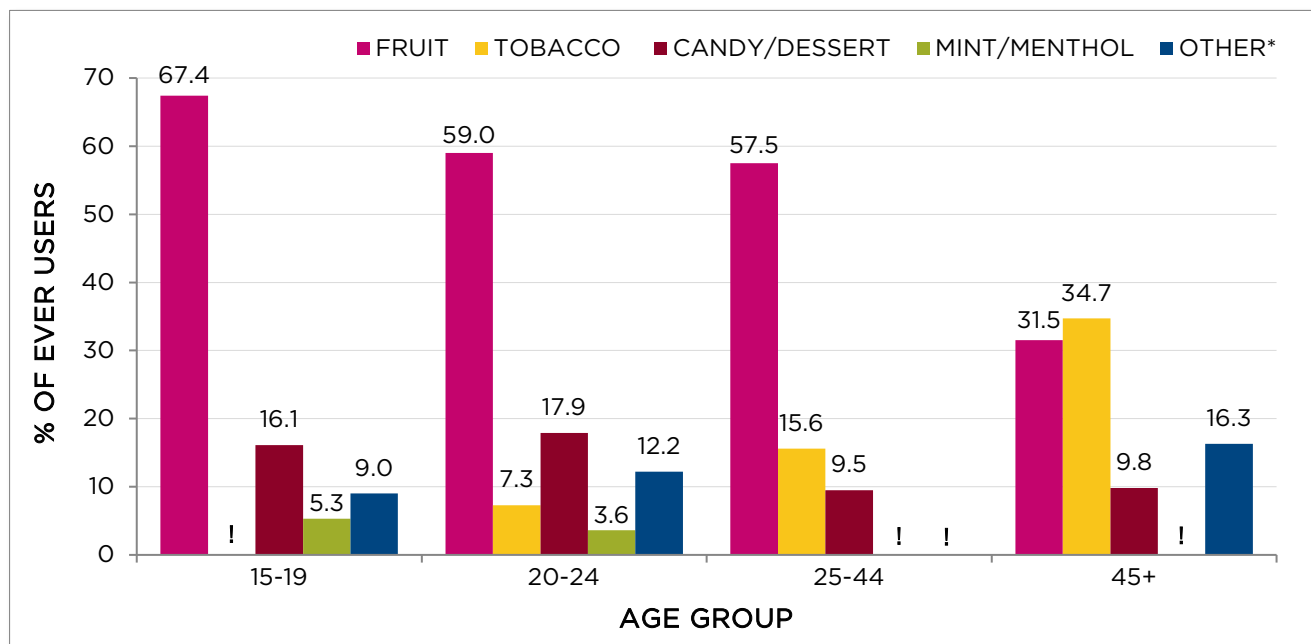
Last-used flavours were similar by sex (*data not shown*). However, they appeared to vary by age (Figure 12.22), with fruit flavours most popular among younger age groups, and tobacco flavour most popular among older users.

FIGURE 12.21: E-CIGARETTE FLAVOUR LAST USED AMONG EVER AND PAST 30-DAY USERS OF E-CIGARETTES, 2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
**"OTHER" INCLUDES ALCOHOL FLAVOURS
DATA SOURCE: CTADS, 2017

FIGURE 12.22: E-CIGARETTE FLAVOUR LAST USED AMONG EVER USERS OF E-CIGARETTES, BY AGE GROUP, 2017



! ESTIMATE SUPPRESSED DUE TO UNACCEPTABLE QUALITY
**"OTHER" INCLUDES ALCOHOL FLAVOURS
DATA SOURCE: CTADS, 2017

Considering the smoking status of e-cigarette users, tobacco was the last-used flavour reported by 21.8% of current daily smokers, 22.9% of non-daily smokers, and 25.2% of former smokers, but too few never smokers to report an estimate.

12.5 REASONS FOR USE OF E-CIGARETTES

USE AS A SMOKING CESSATION AID

Ever-users of e-cigarettes who were either recent quitters or current smokers that had tried to quit in the past 2 years, were asked “(In the past two years), did you use an e-cigarette to quit smoking?”; half (53.5%) reported doing so.

Use of e-cigarettes to quit smoking did not differ significantly between males (57.4%) and females (49.3%).¹⁷⁸ However, there were significant differences by age group in use as a cessation aid,¹⁷⁹ with higher prevalence among older smokers (Figure 12.23).

When considering all those who had ever used an e-cigarette (of any smoking status), 23.6% reported using it as a quit aid within the past 2 years (21.7% of males; 26.5% of females).

Three-quarters (74.4%) of smokers who had used e-cigarettes in the past 30 days were intending to quit smoking in the next 6 months, significantly greater than the 55.4% of smokers who had NOT used e-cigarettes.¹⁸⁰ Intentions to quit smoking in the next 30 days were not significantly different between past 30-day users (31.1%) and non-users (26.1%) of e-cigarettes.¹⁸¹

USE TO REPLACE CIGARETTES

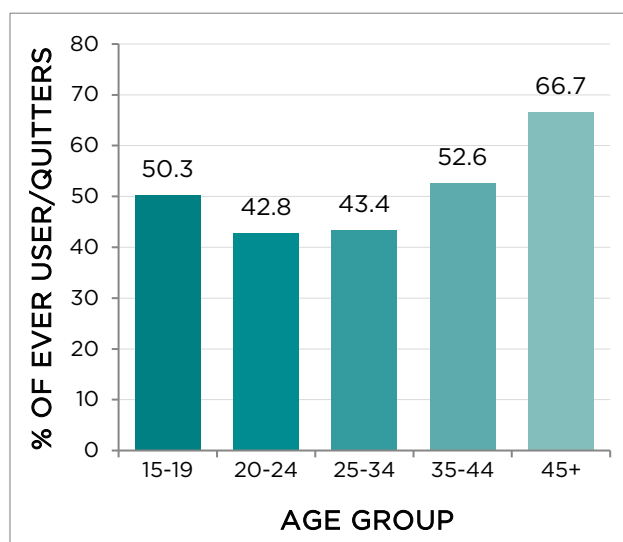
Current smokers (who had used e-cigarettes) were asked the following: “Sometimes smokers use e-cigarettes even when they are not attempting to quit smoking. Have you ever used e-cigarettes when you were not able to smoke or when you wanted to smoke fewer cigarettes?”

Overall, nearly half (44.6%) of e-cigarette ever-users who were also cigarette smokers reported using an e-cigarette when they were unable to smoke, or to smoke fewer cigarettes.

This type of use was not significantly different between males (41.4%) and females (48.8%),¹⁸² or between age groups¹⁸³ (Figure 12.24).

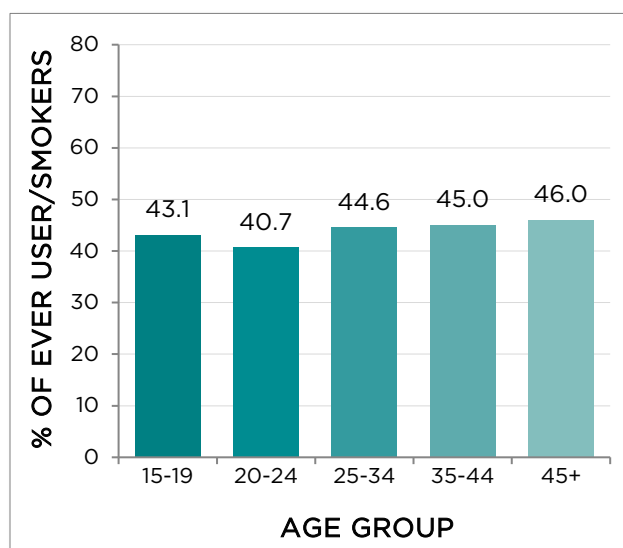
When all current smokers were considered, 23.8% reported ever using an e-cigarette to replace cigarettes (22.8% of males; 25.1% of females).

FIGURE 12.23: USE OF E-CIGARETTES TO QUIT SMOKING, AMONG EVER USERS WHO WERE EITHER RECENT QUITTERS OR SMOKERS WHO HAD TRIED TO QUIT IN THE PAST 2 YEARS, BY AGE GROUP, 2017



DATA SOURCE: CTADS, 2017

FIGURE 12.24: USE OF E-CIGARETTES TO REPLACE CIGARETTES, AMONG EVER USERS WHO WERE CURRENT SMOKERS, BY AGE GROUP, 2017



DATA SOURCE: CTADS, 2017

13. E-CIGARETTE USE AMONG STUDENTS IN GRADES 7-9

13.1 PREVALENCE OF E-CIGARETTE USE

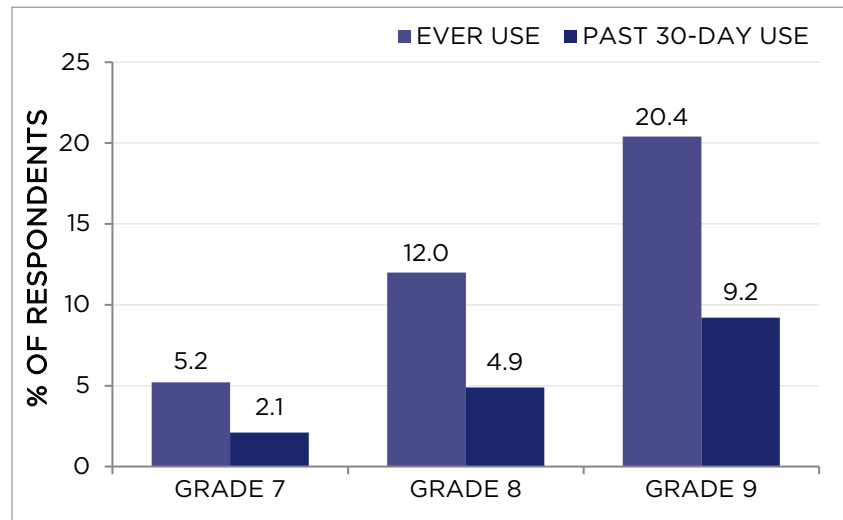
The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS) began including questions about e-cigarettes in 2014-15.

In 2016-17, 12.6% of Canadian students in grades 7-9 reported having ever tried an e-cigarette, not significantly different from 12.3% in 2014-15.¹⁸⁴

Past 30-day use of e-cigarettes was 5.4% in 2016-17, which was also not significantly different from the 2014-15 prevalence of 3.9%.¹⁸⁵

E-cigarette use (ever and in the past 30 days) differed significantly by grade,^{186,187} increasing with each grade level, as shown in Figure 13.1.

FIGURE 13.1: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES, BY GRADE, 2016-17

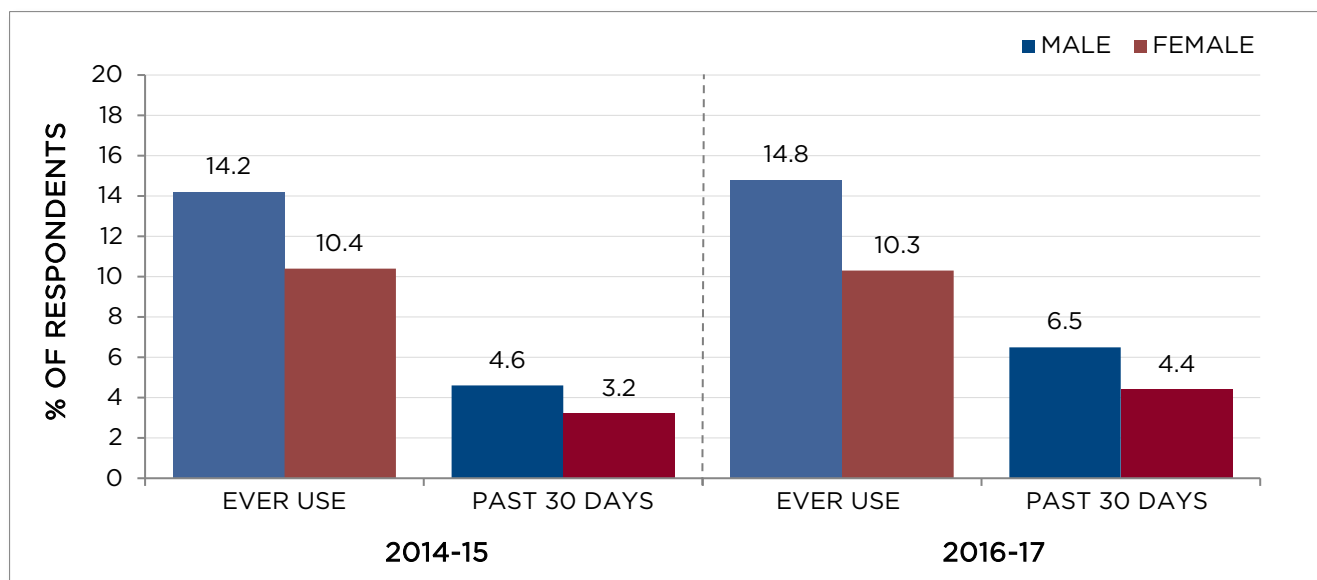


DATA SOURCE: CSTADS, 2016-17

E-cigarette Use by Sex

In 2016-17, ever use of e-cigarettes was significantly more prevalent among males than females, as was past 30-day use^{188,189} (Figure 13.2). Similar differences by sex were observed in 2014-15.

FIGURE 13.2: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES, BY SEX, GRADES 7-9, 2014-15 AND 2016-17



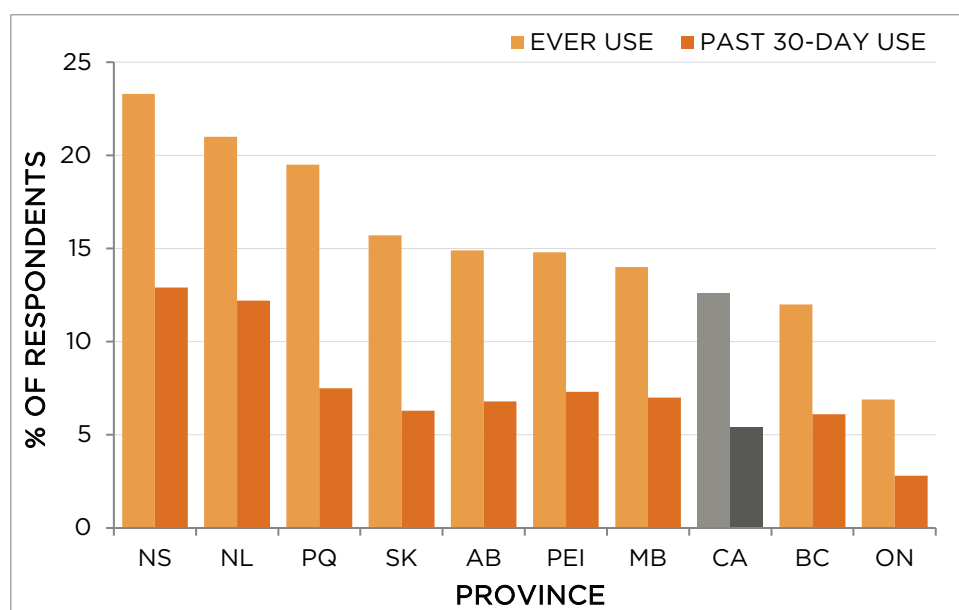
DATA SOURCE: CSTADS, 2014-15, 2016-17

E-cigarette Use by Province

Prevalence of ever trying e-cigarettes among students in grades 7-9 varied significantly by province,¹⁹⁰ ranging from 6.9% in Ontario to 23.3% in Nova Scotia (Figure 13.3).

Past 30-day use of e-cigarettes also varied significantly by province,¹⁹¹ ranging from 2.8% in Ontario to 12.9% in Nova Scotia.

FIGURE 13.3: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES, BY PROVINCE*, GRADES 7-9, 2016-17



*NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS
DATA SOURCE: CSTADS, 2016-17

Between 2014-15 and 2016-17, estimates for ever use of e-cigarettes increased in some provinces, while remaining similar or even decreasing slightly in others (Table 13.1). Estimates for past 30-day use appear to have increased in all provinces, although to varying degrees. Increases in prevalence estimates between survey waves were particularly large in Nova Scotia.

TABLE 13.1: PREVALENCE OF EVER USE AND PAST 30-DAY USE OF E-CIGARETTES BY PROVINCE*, GRADES 7-9, 2014-15 AND 2016-17

YEAR	EVER USE		PAST 30-DAY USE	
	2014-15	2016-17	2014-15	2016-17
CANADA	12.3%	12.6%	3.9%	5.4%
BRITISH COLUMBIA	11.9	12.0	4.5	6.1
ALBERTA	11.5	14.9	3.1	6.8
SASKATCHEWAN	12.8	15.7	5.0	6.3
MANITOBA	11.0	14.0	5.8	7.0
ONTARIO	7.2	6.9	2.3	2.8
QUEBEC	21.9	19.5	6.4	7.5
NOVA SCOTIA	11.7	23.3	4.6	12.9
PRINCE EDWARD ISLAND	11.9	14.8	5.6	7.3
NEWFOUNDLAND & LABRADOR	15.2	21.0	6.5	12.2

*PROVINCIAL ESTIMATES FOR NEW BRUNSWICK NOT REPORTED BECAUSE CSTADS DID NOT ACHIEVE A GENERALIZABLE SAMPLE OF NB STUDENTS IN 2014-15; NEW BRUNSWICK DECLINED TO PARTICIPATE IN THE 2016-17 CYCLE OF CSTADS
DATA SOURCE: CSTADS, 2014-15, 2016-17

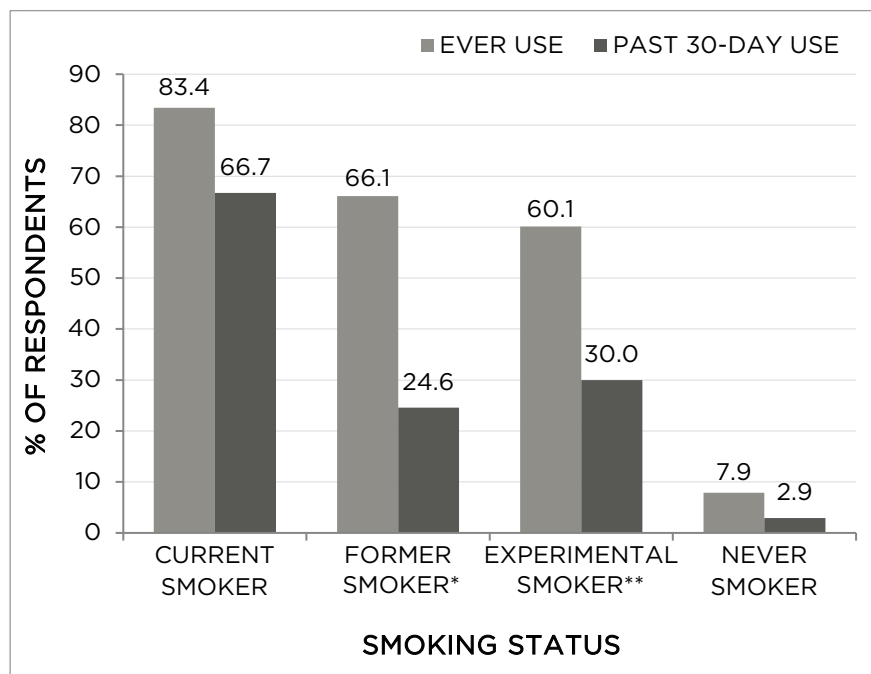
E-cigarette Use by Smoking Status

Among students in grades 7-9, e-cigarette use (ever and in the past 30 days) varied significantly by smoking status^{192,193} (Figure 13.4).

Four out of five current smokers (83.4%) had ever tried e-cigarettes, compared to about one in eight non-smokers (11.9%). Two-thirds (66.7%) of current smokers had used e-cigarettes in the past 30 days, compared to just one in twenty non-smokers (4.8%).

When asked, “Which did you try first: smoking a cigarette or an e-cigarette (electronic cigarette)?”, nearly half (44.4%) of students who had used both products reported using e-cigarettes first.

FIGURE 13.4: EVER USE AND PAST 30-DAY USE OF E-CIGARETTES BY SMOKING STATUS, GRADES 7-9, 2016-17



*INCLUDES PAST EXPERIMENTERS AND FORMER SMOKERS (SEE PAGE 106 FOR DEFINITIONS)

**INCLUDES PUFFERS AND EXPERIMENTAL SMOKERS (SEE PAGE 106)

DATA SOURCE: CSTADS, 2016-17

Between 2014-15 and 2016-17, while prevalence estimates appeared to increase, there was no significant change in ever use of e-cigarettes among current smokers, former smokers, experimental smokers, or never smokers¹⁹⁴⁻¹⁹⁷ (Table 13.2). Similarly, when considering e-cigarette use in the past 30 days, prevalence did not change significantly between 2014-15 and 2016-17 among current or former smokers,^{198,199} despite higher point estimates. However, past 30-day use of e-cigarettes increased significantly among experimental smokers and never smokers.^{200,201}

TABLE 13.2: EVER USE AND PAST 30-DAY USE OF E-CIGARETTES BY SMOKING STATUS*, GRADES 7-9, 2014-15 AND 2016-17

YEAR	EVER USE		PAST 30-DAY USE	
	2014-15	2016-17	2014-15	2016-17
CURRENT SMOKER	79.1	83.4	49.9	66.7
FORMER SMOKER*	64.8	66.1	18.3	24.6
EXPERIMENTAL SMOKER**	55.8	60.1	23.4	30.0
NEVER SMOKER	7.3	7.9	1.7	2.9

*INCLUDES PAST EXPERIMENTERS AND FORMER SMOKERS (SEE PAGE 106 FOR DEFINITIONS)

**INCLUDES PUFFERS AND EXPERIMENTAL SMOKERS (SEE PAGE 106)

DATA SOURCE: CSTADS, 2014-15, 2016-17

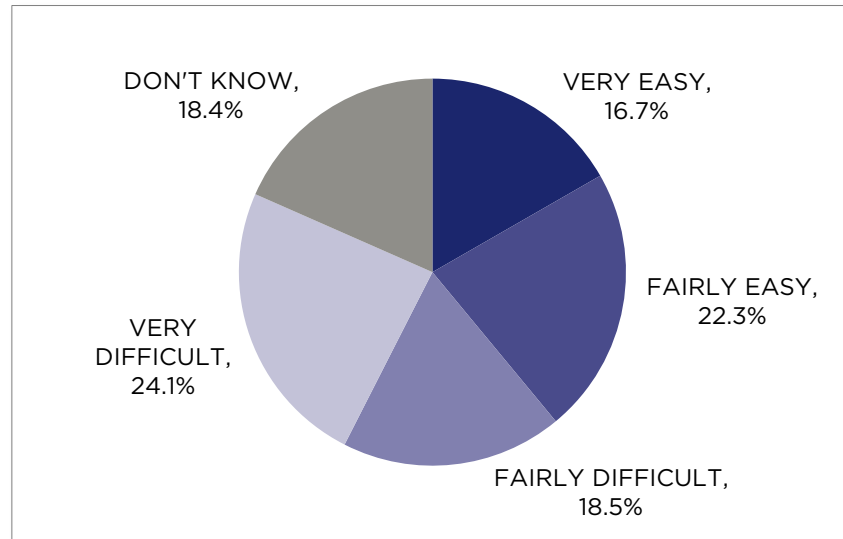
13.2 BELIEFS ABOUT E-CIGARETTES

Ease of Access

Students were asked, “How difficult or easy do you think it would be for you to get each of the following types of substances, if you wanted some?” (Figure 13.5). For e-cigarettes, the proportion of grade 7-9 students who thought that it would be “fairly easy” or “very easy” (39.0%) was similar to the proportion who thought it would be “fairly difficult” or “very difficult” (42.6%).

However, perceived access varied significantly by e-cigarette use status:²⁰² most ever-users (80.3%) thought it would be “fairly easy” or “very easy,” compared to one-third (33.0%) of never-users of e-cigarettes.

FIGURE 13.5: PERCEIVED EASE OF ACCESSING E-CIGARETTES, GRADES 7-9, 2016-17



DATA SOURCE: CSTADS, 2016-17

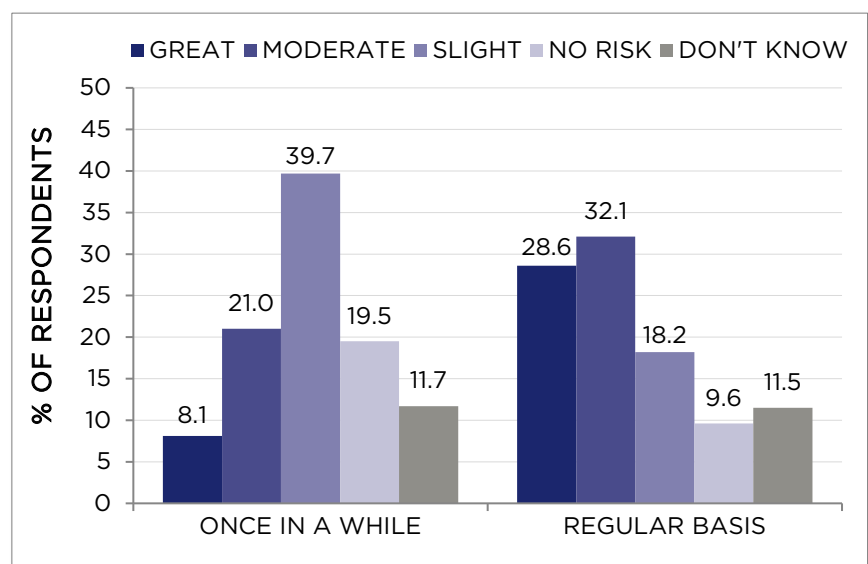
Perceived Risk

Perceived risk was assessed by asking “How much do you think people risk harming themselves when they do each of the following activities?” for “Use an e-cigarette once in a while” and “Use an e-cigarette on a regular basis” (Figure 13.6).

Overall, the majority of students in grades 7-9 perceived “no risk” or “slight” risk of using e-cigarettes “once in a while”, but “moderate” or “great” risk of regular use.

Significantly more e-cigarette users perceived “no risk” of using e-cigarettes once in a while (46.3%) or on a regular basis (19.0%), compared to never users (17.4% and 8.7%, respectively).^{203,204}

FIGURE 13.6: PERCEIVED RISK OF E-CIGARETTE USE, ON A REGULAR BASIS AND ONCE IN A WHILE, GRADES 7-9, 2016-17



DATA SOURCE: CSTADS, 2016-17

GLOSSARY

CTADS/CTUMS

Smoking status has been defined to be consistent with the definitions used in other national Health Canada surveys that collect data on tobacco use.

Smoking prevalence: the estimated number of smokers in a specified group, divided by the total population of that group, expressed as a percentage; also referred to as the "smoking rate".

Cigarette consumption: the number of cigarettes reported smoked by either daily or occasional smokers. In this report, consumption is reported only for daily smokers.

Current smoker: includes daily and non-daily (occasional) smokers. Determined from the response to the question "At the present time do you smoke cigarettes every day, occasionally, or not at all?"

- **Current daily smoker:** refers to those who respond "every day" to the question "At the present time do you smoke cigarettes every day, occasionally or not at all?"
- **Current non-daily smoker:** often referred to as "occasional" smoker, refers to those who respond "Occasionally" to the question "At the present time do you smoke cigarettes every day, occasionally or not at all?"

Former smoker: was not smoking at the time of the interview, however, answered "YES" to the question "Have you smoked at least 100 cigarettes in your life?"

Ever-smokers: current and former smokers combined.

Never-smoker: was not smoking at the time of the interview and answered "NO" to the question "Have you smoked at least 100 cigarettes in your life?"

Non-smokers: former smokers and never-smokers combined.

Quitter percentage: the ratio of the number of former smokers in a specified group divided by the number of ever-smokers in that group.

E-cigarette use has been defined as follows:

- **Ever e-cigarette use:** "yes" to "Have you ever tried an electronic cigarette, also known as an e-cigarette."
- **Past 30-day e-cigarette use:** responded "yes" to "In the past 30 days did you use an electronic cigarette, also known as an e-cigarette?" OR "every day" to "At the present time, do you use an electronic cigarette, also known as an e-cigarette every day, occasionally or not at all?"
- **Daily e-cigarette use:** responded "every day" to the question "At the present time, do you use an electronic cigarette, also known as an e-cigarette every day, occasionally or not at all?" OR "yes" to "During the past 30 days, did you use an electronic cigarette, also known as an e-cigarette every day?"

CSTADS/YSS

Current smoker: has smoked at least 100 cigarettes in his/her lifetime; includes daily and non-daily smokers.

- **Current daily smoker:** a current smoker who has smoked at least one cigarette per day for each of the 30 days preceding the survey.
- **Current non-daily smoker:** a current smoker who has smoked at least one cigarette during the past 30 days, but has not smoked every day.

Former smoker: smoked at least 100 cigarettes in his/her lifetime and has not smoked at all during the past 30 days.

Experimental smoker (beginner): has smoked at least one whole cigarette and has smoked in the last 30 days.

Former experimental smoker (past experimenter): has smoked at least one whole cigarette and has not smoked at all in the past 30 days.

Puffer: someone who has just tried a few puffs of a cigarette, but has never smoked a whole cigarette.

Ever tried a cigarette: someone who has ever tried a cigarette, even a few puffs.

Never tried a cigarette: someone who has never tried a cigarette, not even a few puffs.

Smoking prevalence: the estimated number of smokers in a specified group, divided by the total population of that group, expressed as a percentage.

Cigarette consumption: the average number of cigarettes smoked per day by daily smokers.

Ever e-cigarette use: responded "yes" to the item "Using e-cigarettes (electronic cigarettes)" when asked, "Have you ever tried any of the following?"

Past 30-day e-cigarette use: responded "yes" to the item "E-cigarettes (electronic cigarettes)" when asked, "In the last 30 days, did you use any of the following?"

INDEX OF STATISTICAL TESTS

^WWald test used to compute the p-value

^FF test used to compute the p-value

^RRegression of the log of the outcome variable on time

- ¹Difference in overall smoking prevalence between 2015 and 2017: $p=0.02^W$
- ²Difference in daily smoking prevalence between 2015 and 2017: $p=0.07^W$
- ³Difference in non-daily smoking prevalence between 2015 and 2017: $p=0.21^W$
- ⁴Overall effect of time (1999-2017) on smoking prevalence: $p<0.0001^F$
- ⁵Overall annual rate of decline in prevalence, 1999-2017=3.2%; relationship of log prevalence & time: $p<0.0001^R$
- ⁶Difference in overall smoking prevalence between males and females in 2017: $p=0.03^W$
- ⁷Difference in daily smoking prevalence between males and females in 2017: $p=0.09^W$
- ⁸Difference in non-daily smoking prevalence between males and females in 2017: $p=0.24^W$
- ⁹Difference in current smoking prevalence among females between 2015 and 2017: $p=0.004^W$
- ¹⁰Difference in current smoking prevalence among males between 2015 and 2017: $p=0.47^W$
- ¹¹Difference in current smoking prevalence between age groups in 2017: $p=0.02^W$
- ¹²Difference in consumption between 2015 and 2017: $p=0.84^W$
- ¹³Overall effect of time (1999-2017) on consumption: $p<0.0001^F$
- ¹⁴Overall annual rate of decline in consumption, 1999-2017=1.2%; relationship of log CPD & time: $p<0.0001^R$
- ¹⁵Difference in consumption between males and females in 2017: $p=0.01^W$
- ¹⁶Difference in consumption among males between 2015 and 2017: $p=0.81^W$
- ¹⁷Difference in consumption among females between 2015 and 2017: $p=0.83^W$
- ¹⁸Difference in consumption between age groups in 2017: $p<0.0001^W$
- ¹⁹Difference in self-rated health (excellent/very good vs. other) by smoking status in 2017: $p<0.0001^W$ (contrast for current vs former smoker: $p=0.15$; current vs never smoker: $p<0.0001$)
- ²⁰Difference in (excellent/very good) self-rated health by smoking status, age 15-19, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ²¹Difference in (excellent/very good) self-rated health by smoking status, age 20-24, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ²²Difference in (excellent/very good) self-rated health by smoking status, age 25-34, in 2017: $p=0.002^W$ (contrast for current vs never smoker: $p=0.0004$)
- ²³Difference in (excellent/very good) self-rated health by smoking status, age 35-44, in 2017: $p=0.19^W$ (contrast for current vs never smoker: $p=0.15$)
- ²⁴Difference in (excellent/very good) self-rated health by smoking status, age 45+, in 2017: $p=0.046^W$ (contrast for current vs never smoker: $p=0.03$)
- ²⁵Difference in self-rated mental health (excellent/very good vs. other) by smoking status in 2017: $p<0.0001^W$ (contrasts for current vs former smoker: $p=0.0001$; current vs never smoker: $p<0.0001$)
- ²⁶Difference in (excellent/very good) self-rated mental health by smoking status, age 15-19, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ²⁷Difference in (excellent/very good) self-rated mental health by smoking status, age 20-24, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ²⁸Difference in (excellent/very good) self-rated mental health by smoking status, age 25-34, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ²⁹Difference in (excellent/very good) self-rated mental health by smoking status, age 35-44, in 2017: $p=0.006^W$ (contrast for current vs never smoker: $p=0.02$)
- ³⁰Difference in (excellent/very good) self-rated mental health by smoking status, age 45+, in 2017: $p<0.0001^W$ (contrast for current vs never smoker: $p<0.0001$)
- ³¹Difference in smoking prevalence between provinces in 2017: $p=0.03^W$
- ³²Difference in consumption between provinces in 2017: $p=0.26^W$
- ³³Difference in cigar use between males and females in 2017: $p<0.0001^W$
- ³⁴Difference in cigarillo use between males and females in 2017: $p=0.003^W$
- ³⁵Difference in chewing tobacco/snuff use between males and females in 2017: $p<0.0001^W$
- ³⁶Difference in pipe use between males and females in 2017: $p=0.08^W$
- ³⁷Difference in waterpipe use between males and females in 2017: $p=0.15^W$
- ³⁸Difference in cigar use between (3) age groups in 2017: $p<0.0001^W$
- ³⁹Difference in cigarillo use between (4) age groups in 2017: $p<0.0001^W$
- ⁴⁰Difference in waterpipe use between (2) age groups in 2017: $p=0.002^W$
- ⁴¹Difference in chewing tobacco/snuff use between (2) age groups in 2017: $p=0.055^W$
- ⁴²Difference in cigar/cigarillo use between provinces in 2017: $p=0.78^W$
- ⁴³Difference in prevalence of ever using menthol cigarettes between 2015 and 2017: $p=0.25^W$
- ⁴⁴Difference in prevalence of past 30-day menthol cigarette use between 2015 and 2017: $p=0.67^W$

- ⁴⁵Difference in prevalence of past 30-day menthol cigarette use among past 30-day smokers between 2015 and 2017: $p=0.28^W$
- ⁴⁶Difference in prevalence of ever using menthol cigarettes between (5) age groups in 2017: $p<0.0001^W$
- ⁴⁷Difference in prevalence of ever using menthol cigarettes between 2015 and 2017, age 15-19: $p=0.003^W$
- ⁴⁸Difference in prevalence of ever using menthol cigarettes between 2015 and 2017, age 20-24: $p=0.03^W$
- ⁴⁹Difference in prevalence of ever using menthol cigarettes between 2015 and 2017, age 25-34: $p=0.02^W$
- ⁵⁰Difference in prevalence of ever using menthol cigarettes between 2015 and 2017, age 35-44: $p=0.86^W$
- ⁵¹Difference in prevalence of ever using menthol cigarettes between 2015 and 2017, age 45+: $p=0.52^W$
- ⁵²Difference in prevalence of past 30-day menthol cigarette use (among past 30-day smokers) between (4) age groups in 2017: $p=0.25^W$
- ⁵³Difference in past 30-day menthol cigarette use (among smokers) between 2015 and 2017, age 15-19: $p=0.79^W$
- ⁵⁴Difference in past 30-day menthol cigarette use (among smokers) between 2015 and 2017, age 20-24: $p=0.01^W$
- ⁵⁵Difference in past 30-day menthol cigarette use (among smokers) between 2015 and 2017, age 25-44: $p=0.43^W$
- ⁵⁶Difference in past 30-day menthol cigarette use (among smokers) between 2015 and 2017, age 45+: $p=0.08^W$
- ⁵⁷Difference in any SHS exposure in past month between males and females in 2017: $p=0.0002^W$
- ⁵⁸Difference in any SHS exposure in past month between age groups in 2017: $p<0.0001^W$
- ⁵⁹Difference in any SHS exposure in past month by smoking status in 2017: $p<0.0001^W$
- ⁶⁰Difference in quitter percentage between males and females in 2017: $p=0.51^W$
- ⁶¹Difference in ever smoking between males and females in 2017: $p<0.0001^W$
- ⁶²Difference in current smoking between males and females in 2017: $p=0.03^W$
- ⁶³Difference in quitter percentage between age groups in 2017: $p<0.0001^W$
- ⁶⁴Difference in 6-month quit intentions between 2015 and 2017: $p=0.02^W$
- ⁶⁵Difference in 30-day quit intentions between 2015 and 2017: $p=0.19^W$
- ⁶⁶Difference in 6-month quit intentions between males and females in 2017: $p=0.30^W$
- ⁶⁷Difference in 30-day quit intentions between males and females in 2017: $p=0.46^W$
- ⁶⁸Difference in 30-day quit intentions between age groups in 2017: $p=0.048^W$
- ⁶⁹Difference in 6-month quit intentions between age groups in 2017: $p=0.86^W$
- ⁷⁰Difference in having made a quit attempt in the past year between 2015 and 2017: $p=0.07^W$
- ⁷¹Difference in having made a quit attempt in the past year between males and females in 2017: $p=0.94^W$
- ⁷²Difference in having made a quit attempt in the past year between age groups in 2017: $p=0.48^W$
- ⁷³Difference in quit success (among past-year attempters) between 2015 and 2017: $p=0.75^W$
- ⁷⁴Difference in quit success (among past-year attempters) between males and females in 2017: $p=0.08^W$
- ⁷⁵Difference in quit success (among past-year attempters) between (3) age groups in 2017: $p=0.38^W$
- ⁷⁶Difference in health or pregnancy/baby as the main reason for quitting between males and females in 2017: $p=0.71^W$
- ⁷⁷Difference in health or pregnancy/baby as the main reason for quitting between (3) age groups in 2017: $p=0.66^W$
- ⁷⁸Difference in ever trying a cigarette between males and females in 2016-17, grades 7-9: $p=0.09^W$
- ⁷⁹Difference in ever trying a cigarette between 2014-15 and 2016-17, grades 7-9: $p=0.32^W$
- ⁸⁰Difference in ever trying a cigarette between provinces in 2016-17, grades 7-9: $p<0.0001^W$
- ⁸¹Difference in ever smoking a whole cigarette between 2015 and 2017, age 15-19: $p=0.28^W$
- ⁸²Difference in ever smoking a whole cigarette between males and females in 2017, age 15-19: $p=0.008^W$
- ⁸³Difference in susceptibility between 2014-15 and 2016-17, grades 7-9: $p=0.42^W$
- ⁸⁴Difference in susceptibility between males and females in 2016-17, grades 7-9: $p=0.51^W$
- ⁸⁵Difference in susceptibility between provinces in 2016-17, grades 7-9: $p<0.0001^W$
- ⁸⁶Difference in smoking prevalence between 2014-15 and 2016-17, grades 7-9: $p=0.65^W$
- ⁸⁷Difference in non-daily smoking prevalence between 2014-15 and 2016-17, grades 7-9: $p=0.61^W$
- ⁸⁸Difference in daily smoking prevalence between 2014-15 and 2016-17, grades 7-9: $p=0.73^W$
- ⁸⁹Difference in smoking prevalence between 2015 and 2017, age 15-19: $p=0.15^W$
- ⁹⁰Difference in daily smoking prevalence between 2015 and 2017, age 15-19: $p=0.13^W$
- ⁹¹Difference in non-daily smoking prevalence between 2015 and 2017, age 15-19: $p=0.61^W$
- ⁹²Difference in smoking prevalence between males and females in 2016-17, grades 7-9: $p=0.10^W$
- ⁹³Difference in smoking prevalence between males and females in 2017, age 15-19: $p=0.007^W$
- ⁹⁴Difference in smoking prevalence between provinces in 2016-17, grades 7-9: $p<0.0001^W$
- ⁹⁵Difference in smoking prevalence between provinces in 2017, age 15-19: $p=0.004^W$
- ⁹⁶Difference in consumption between 2014-15 and 2016-17, grades 7-9: $p=0.54^W$
- ⁹⁷Difference in consumption between 2015 and 2017, age 15-19: $p=0.17^W$
- ⁹⁸Difference in consumption between males and females in 2016-17, grades 7-9: $p=0.054^W$
- ⁹⁹Difference in consumption between males and females in 2017, age 15-19: $p=0.74^W$
- ¹⁰⁰Difference in cigar/cigarillo use between 2014-15 and 2016-17, grades 7-9: $p=0.21^W$
- ¹⁰¹Difference in smokeless tobacco use between 2014-15 and 2016-17, grades 7-9: $p=0.27^W$
- ¹⁰²Difference in cigar/cigarillo use between 2015 and 2017, age 15-19: $p=0.0005^W$
- ¹⁰³Difference in chewing tobacco/snuff use between 2015 and 2017, age 15-19: $p=0.41^W$
- ¹⁰⁴Difference in cigar use between males and females in 2017, age 15-19: $p<0.0001^W$
- ¹⁰⁵Difference in cigarillo use between males and females in 2017, age 15-19: $p<0.0001^W$

- ¹⁰⁶Difference in chewing tobacco/snuff use between males and females in 2017, age 15-19: $p < 0.0001^W$
- ¹⁰⁷Difference in waterpipe use between males and females in 2017, age 15-19: $p = 0.006^W$
- ¹⁰⁸Difference in cigar use between males and females in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁰⁹Difference in smokeless tobacco use between males and females in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹¹⁰Difference in cigarillo use between males and females in 2016-17, grades 7-9: $p = 0.0019^W$
- ¹¹¹Difference in waterpipe use between males and females in 2016-17, grades 7-9: $p = 0.12^W$
- ¹¹²Difference in cigar use between provinces in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹¹³Difference in cigarillo use between provinces in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹¹⁴Difference in smokeless tobacco use between provinces in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹¹⁵Difference in waterpipe use between provinces in 2016-17, grades 7-9: $p = 0.0001^W$
- ¹¹⁶Difference in cigar use between provinces in 2017, age 15-19: $p = 0.04^W$
- ¹¹⁷Difference in chewing tobacco/snuff use between provinces in 2017, age 15-19: $p = 0.005^W$
- ¹¹⁸Difference in cigarillo use between provinces in 2017, age 15-19: $p = 0.57^W$
- ¹¹⁹Difference in waterpipe use between provinces in 2017, age 15-19: $p = 0.98^W$
- ¹²⁰Difference in ever having made a quit attempt between 2014-15 and 2016-17, grade 7-9 smokers: $p = 0.68^W$
- ¹²¹Difference in having made a quit attempt in the past 12 months between 2015 and 2017, smokers age 15-19: $p = 0.06^W$
- ¹²²Difference in prevalence of ever e-cigarette use between 2015 and 2017: $p = 0.01^W$
- ¹²³Difference in past 30-day e-cigarette prevalence between 2015 and 2017: $p = 0.42^W$
- ¹²⁴Difference in prevalence of ever e-cigarette use between males and females in 2017: $p < 0.0001^W$
- ¹²⁵Difference in past 30-day e-cigarette prevalence between males and females in 2017: $p = 0.01^W$
- ¹²⁶Difference in prevalence of daily e-cigarette use between males and females in 2017: $p = 0.01^W$
- ¹²⁷Difference in past 30-day e-cigarette prevalence among ever users, between males and females in 2017: $p = 0.76^W$
- ¹²⁸Difference in prevalence of daily e-cigarette use among past 30-day users, between males and females in 2017: $p = 0.19^W$
- ¹²⁹Difference in prevalence of using e-cigarettes on 20+ days in past month among past 30-day users, between males and females in 2017: $p = 0.59^W$
- ¹³⁰Difference in mean number of days using e-cigarettes in past month among past 30-day users, between males and females in 2017: $p = 0.66^W$
- ¹³¹Difference in prevalence of ever e-cigarette use between age groups in 2017: $p < 0.0001^W$
- ¹³²Difference in prevalence of ever e-cigarette use between 2015 and 2017, age 15-19: $p = 0.11^W$
- ¹³³Difference in prevalence of ever e-cigarette use between 2015 and 2017, age 20-24: $p = 0.55^W$
- ¹³⁴Difference in prevalence of ever e-cigarette use between 2015 and 2017, age 25-34: $p = 0.01^W$
- ¹³⁵Difference in prevalence of ever e-cigarette use between 2015 and 2017, age 35-44: $p = 0.009^W$
- ¹³⁶Difference in prevalence of ever e-cigarette use between 2015 and 2017, age 45+: $p = 0.60^W$
- ¹³⁷Difference in past 30-day e-cigarette prevalence between age groups in 2017: $p < 0.0001^W$
- ¹³⁸Difference in past 30-day e-cigarette prevalence between 2015 and 2017, age 15-19: $p = 0.997^W$
- ¹³⁹Difference in past 30-day e-cigarette prevalence between 2015 and 2017, age 20-24: $p = 0.77^W$
- ¹⁴⁰Difference in past 30-day e-cigarette prevalence between 2015 and 2017, age 25-44: $p = 0.77^W$
- ¹⁴¹Difference in past 30-day e-cigarette prevalence between 2015 and 2017, age 45+: $p = 0.44^W$
- ¹⁴²Difference in past 30-day e-cigarette prevalence among ever-users, between age groups in 2017: $p = 0.02^W$
- ¹⁴³Difference in prevalence of daily e-cigarette use between age groups in 2017: $p = 0.001^W$
- ¹⁴⁴Difference in prevalence of daily e-cigarette use among past 30-day users, between age groups in 2017: $p = 0.66^W$
- ¹⁴⁵Difference in prevalence of using e-cigarettes on 20+ days in past month among past 30-day users, between age groups in 2017: $p = 0.69^W$
- ¹⁴⁶Difference in mean number of days using e-cigarettes in past month among past 30-day users, between age groups in 2017: $p = 0.56^W$
- ¹⁴⁷Difference in prevalence of ever e-cigarette use between males and females in 2017, age 15-19: $p < 0.0001^W$
- ¹⁴⁸Difference in prevalence of ever e-cigarette use between males and females in 2017, age 20-24: $p < 0.0001^W$
- ¹⁴⁹Difference in prevalence of ever e-cigarette use between males and females in 2017, age 25-34: $p = 0.02^W$
- ¹⁵⁰Difference in prevalence of ever e-cigarette use between males and females in 2017, age 35-44: $p = 0.02^W$
- ¹⁵¹Difference in prevalence of ever e-cigarette use between males and females in 2017, age 45+: $p = 0.43^W$
- ¹⁵²Difference in past 30-day e-cigarette prevalence between males and females in 2017, age 15-19: $p = 0.001^W$
- ¹⁵³Difference in past 30-day e-cigarette prevalence between males and females in 2017, age 20-24: $p < 0.0001^W$
- ¹⁵⁴Difference in past 30-day e-cigarette prevalence between males and females in 2017, age 25-44: $p = 0.50^W$
- ¹⁵⁵Difference in past 30-day e-cigarette prevalence between males and females in 2017, age 45+: $p = 0.51^W$
- ¹⁵⁶Difference in prevalence of ever e-cigarette use between provinces in 2017: $p = 0.26^W$
- ¹⁵⁷Difference in past 30-day e-cigarette prevalence between provinces in 2017: $p = 0.03^W$
- ¹⁵⁸Difference in prevalence of ever e-cigarette use between provinces in 2017, age 15-19: $p = 0.02^W$
- ¹⁵⁹Difference in past 30-day e-cigarette prevalence between provinces in 2017, age 15-19: $p = 0.0004^W$
- ¹⁶⁰Difference in prevalence of ever e-cigarette use by smoking status in 2017: $p < 0.0001^W$
- ¹⁶¹Difference in past 30-day e-cigarette prevalence by smoking status in 2017: $p < 0.0001^W$
- ¹⁶²Difference in prevalence of ever e-cigarette use between male and female smokers in 2017: $p = 0.40^W$
- ¹⁶³Difference in past 30-day e-cigarette prevalence between male and female smokers in 2017: $p = 0.24^W$

- ¹⁶⁴Difference in prevalence of ever e-cigarette use between male and female non-smokers in 2017: $p < 0.0001^W$
- ¹⁶⁵Difference in past 30-day e-cigarette prevalence between male and female non-smokers in 2017: $p = 0.09^W$
- ¹⁶⁶Difference in prevalence of ever e-cigarette use between age groups, among smokers in 2017: $p < 0.0001^W$
- ¹⁶⁷Difference in prevalence of ever e-cigarette use between age groups, among non-smokers in 2017: $p < 0.0001^W$
- ¹⁶⁸Difference in past 30-day e-cigarette prevalence between age groups, among smokers in 2017: $p < 0.0001^W$
- ¹⁶⁹Difference in past 30-day e-cigarette prevalence between age groups, among non-smokers in 2017: $p < 0.0001^W$
- ¹⁷⁰Difference in smoking prevalence between males and females, among ever e-cigarette users in 2017: $p = 0.10^W$
- ¹⁷¹Difference in smoking prevalence between males and females, among past 30-day e-cigarette users in 2017: $p = 0.98^W$
- ¹⁷²Difference in smoking prevalence between age groups, among ever e-cigarette users in 2017: $p < 0.0001^W$
- ¹⁷³Difference in smoking prevalence between age groups, among past 30-day e-cigarette users in 2017: $p = 0.0005^W$
- ¹⁷⁴Difference in percentage of ever e-cigarette users who reported that their last e-cigarette contained nicotine between 2015 and 2017: $p < 0.0001^W$
- ¹⁷⁵Difference in percentage of ever e-cigarette users who reported that their last e-cigarette contained nicotine, by smoking status, in 2017: $p < 0.0001^W$
- ¹⁷⁶Difference in percentage of ever e-cigarette users who reported that their last e-cigarette contained nicotine between male and female smokers in 2017: $p = 0.13^W$
- ¹⁷⁷Difference in percentage of ever e-cigarette users who reported that their last e-cigarette contained nicotine between male and female non-smokers in 2017: $p = 0.40^W$
- ¹⁷⁸Difference in percentage of ever e-cigarette users (who either quit smoking tried to quit in the past 2 years) who reported that they used e-cigarettes as a cessation aid, between males and females in 2017: $p = 0.34^W$
- ¹⁷⁹Difference in percentage of ever e-cigarette users (who either quit smoking tried to quit in the past 2 years) who reported that they used e-cigarettes as a cessation aid, between age groups in 2017: $p = 0.02^W$
- ¹⁸⁰Difference in percentage of smokers who intended to quit in the next 6 months, between past 30-day e-cigarette users vs. non-users in 2017: $p = 0.003^W$
- ¹⁸¹Difference in percentage of smokers who intended to quit in the next 30 days, between past 30-day e-cigarette users vs. non-users in 2017: $p = 0.41^W$
- ¹⁸²Difference in percentage of ever e-cigarette users who were current smokers who reported using e-cigarettes when unable to smoke or to smoke fewer cigarettes between males and females in 2017: $p = 0.34^W$
- ¹⁸³Difference in percentage of ever e-cigarette users who were current smokers who reported using e-cigarettes when unable to smoke or to smoke fewer cigarettes between age groups in 2017: $p = 0.95^W$
- ¹⁸⁴Difference in prevalence of ever e-cigarette use between 2014-15 and 2016-17, grades 7-9: $p = 0.77^W$
- ¹⁸⁵Difference in past 30-day e-cigarette prevalence between 2014-15 and 2016-17, grades 7-9: $p = 0.07^W$
- ¹⁸⁶Difference in prevalence of ever e-cigarette use between grades in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁸⁷Difference in past 30-day e-cigarette prevalence between grades in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁸⁸Difference in prevalence of ever e-cigarette use between males and females in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁸⁹Difference in past 30-day e-cigarette prevalence between males and females in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁹⁰Difference in prevalence of ever e-cigarette use between provinces in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁹¹Difference in past 30-day e-cigarette prevalence between provinces in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁹²Difference in prevalence of ever e-cigarette use by smoking status in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁹³Difference in past 30-day e-cigarette prevalence by smoking status in 2016-17, grades 7-9: $p < 0.0001^W$
- ¹⁹⁴Difference in prevalence of ever e-cigarette use among current smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.32^W$
- ¹⁹⁵Difference in prevalence of ever e-cigarette use among former smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.79^W$
- ¹⁹⁶Difference in prevalence of ever e-cigarette use among experimental smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.16^W$
- ¹⁹⁷Difference in prevalence of ever e-cigarette use among never smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.36^W$
- ¹⁹⁸Difference in past 30-day e-cigarette prevalence among current smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.10^W$
- ¹⁹⁹Difference in past 30-day e-cigarette prevalence among former smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.15^W$
- ²⁰⁰Difference in past 30-day e-cigarette prevalence among experimental smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.046^W$
- ²⁰¹Difference in past 30-day e-cigarette prevalence among never smokers between 2014-15 and 2016-17, grades 7-9: $p = 0.006^W$
- ²⁰²Difference in percentage who perceived “easy” or “very easy” access to e-cigarettes between ever e-cigarette users vs. non-users in 2016-17, grades 7-9: $p < 0.0001^W$
- ²⁰³Difference in percentage who perceived “no risk” of using e-cigarettes once in a while between ever e-cigarette users vs. non-users in 2016-17, grades 7-9: $p < 0.0001^W$
- ²⁰⁴Difference in percentage who perceived “no risk” of using e-cigarettes on a regular basis between ever e-cigarette users vs. non-users in 2016-17, grades 7-9: $p < 0.0001^W$

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APPENDIX A: Canadian Tobacco, Alcohol and Drugs Survey (CTADS)/Canadian Tobacco Use Monitoring Survey (CTUMS)

CTADS/CTUMS is conducted by Statistics Canada with the cooperation and support of Health Canada. CTUMS (1999-2012) was developed to provide Health Canada and its partners with timely, reliable, and continual data on tobacco use and related issues. Beginning in 2013, new content covering alcohol and drug use (prescription and non-prescription) was added to CTUMS to create the Canadian Tobacco, Alcohol and Drugs Survey (CTADS). CTADS/CTUMS uses a repeated cross-sectional survey design. Data are collected from February to December (annually for CTUMS; biannually for CTADS), using computer-assisted random-digit-dialed telephone interviews.

The samples for CTADS/CTUMS were selected using a two-phase stratified random sampling procedure. The two-phase design was used in order to increase the representation in the sample of respondents belonging to the 15 to 19 and 20 to 24 age groups, which are populations that are most at risk of becoming smokers. In the first phase, households were selected using random-digit-dialing. In the second phase, one or two individuals (or none) were selected based on household composition. This ensured the representation of individuals in the younger age groups because the random selection was implemented such that at least one person in the 15 to 19 or 20 to 24 age groups would be selected within a household, if they existed. The samples included the population of Canada aged 15 years and over, excluding residents of Yukon, Northwest Territories and Nunavut, as well as full-time residents of institutions and individuals without telephones (or with cell phones only, prior to 2015). Each year from 1999-2010, CTUMS released two semi-annual files and a yearly summary; this report uses the yearly summary data sets, except where noted. In 2011 and 2012, only annual files were released. CTADS releases data sets every two years, from 2013 onward.

CTADS documentation available at <http://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4440>

CTADS and CTUMS datasets and documentation available at <http://www.statcan.gc.ca/dli-ild/products-eng.htm>

APPENDIX B: Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS)/Youth Smoking Survey (YSS)

The Canadian Student Tobacco, Alcohol and Drugs Survey (CSTADS; renamed from the Youth Smoking Survey (YSS) in 2014-15) is funded by Health Canada, and since 2004-05 has been implemented biennially by the Propel Centre for Population Health Impact at the University of Waterloo, in partnership with researchers across Canada. CSTADS/YSS provides timely and reliable data on tobacco, alcohol and drug use and related issues among Canadian students (grades 7-9/10-12) attending generalizable samples of private, public, and Catholic schools. CSTADS/YSS uses a repeated cross-sectional survey design to collect data through classroom-based surveys. Nine cycles of the CSTADS/YSS have been conducted: 1994, 2002, 2004-05, 2006-07, 2008-09, 2010-11, 2012-13, 2014-15 and 2016-17. Sampling methodology varied by survey cycle, as outlined below.

In 1994 and 2002, schools were stratified by census metropolitan area (CMA) versus non-CMA. Grades within schools were then sampled by two levels of stratification in 1994 (province and grade) and three levels of stratification in 2002 (province, school, and grade). Students in grades 5-9 were included in the target sample. In 1994 and 2002, one class was randomly selected in the desired grade in the selected schools and all students within each selected class were invited to participate in the survey. In 1994, all grade 5-9 students completed the same questionnaire. In 2002, grade 5 and 6 students completed a version of the questionnaire that excluded the drug and alcohol questions.

In 2004-05, the sampling of schools was conducted in two stages. At stage 1, school boards were sampled within each province using a stratified sampling design. The school boards were rank ordered based on their adult smoking rates, and each board was assigned to one of two strata (low or high smoking rate), so that approximately half of the total student enrolment in any province was assigned to each stratum. At stage 2, schools were sampled from the selected school boards, according to two strata: senior (senior elementary or high school grades) and junior (junior elementary grades). From 2004-05 onward, all eligible students within participating schools/classrooms were invited to participate in the survey. Similar to 2002, grade 5 and 6 students completed a version of the questionnaire that excluded the drug and alcohol questions.

Beginning in 2006-07, schools became the sampling units, and grade 10-12 students were also included in the target population. In 2006-07, a stratified single-stage cluster design with strata based on health region smoking rate and type of school was employed. In each province, two health region smoking rate categories (low and high) and two school-level categories (elementary and secondary) were defined and crossed to create four strata. Similar to 2002 and 2004-05, grade 5 and 6 students completed a version of the questionnaire that excluded the drug and alcohol questions. However, grade 7-12 students were randomly selected to receive one of two versions (modules) of the questionnaire that included the alcohol and drug questions. For this reason, the 2006-07 YSS data has two survey weights (rather than one, as in other years), the use of which depends on which questionnaire module(s) included the variables being analysed (see *2006-2007 YSS Main Microdata User Guide*).

For the 2008-09 to 2016-17 cycles, a third health region smoking rate category (urban) was introduced, and grade 5 students were removed from the target population. Grade 6 students were also removed from the target population in 2016-17. Similar to 2006-07, a stratified single-stage cluster design with strata based on health region smoking rate and type of school was employed. In each province, two or three health region smoking rate categories (low, high, urban) and two school-level categories (elementary and secondary) were defined and crossed to create four or six strata. In Prince Edward Island (PEI) in 2016-17, there were no health region categories, only school level categories, since there is only one health region in that province. The urban category was introduced in Ontario in 2008-09, Alberta in 2010-11, Quebec in 2012-13, Nova Scotia in 2014-15, and Newfoundland and Labrador in 2016-17. For the 2008-09 to 2014-15 cycles, with the removal of the grade 5 population, only the grade 6 students responded to a version of the questionnaire that excluded the drug and alcohol questions. In 2016-17, after the grade 6 population was removed, all grade 7-12 students completed the same questionnaire.

Once the sampling frame was defined, schools were randomly selected within each stratum to ensure a generalizable sample of schools for each province and for Canada. The following details some variations in the sampling methodology since 2006-07.

- In 2008-09, a census sample was conducted in the province of PEI, in partnership with another project.
- In 2010-11, the province of New Brunswick did not participate in the survey. Based on comparative analysis conducted using 2008-09 survey data, there were no statistically significant differences in national estimates for current or ever smoking with and without New Brunswick. A census sample was conducted in the province of PEI, in partnership with another project. Stratification in Quebec was based on different classifications, due to collaboration with another project (see *2010/2011 YSS Microdata User Guide*).
- In 2012-13, the province of Manitoba did not participate in the survey. Based on comparative analysis conducted using 2010-11 survey data, there were no statistically significant differences in national estimates for current or ever smoking with and without Manitoba. A census sample was conducted in each of the provinces of PEI and New Brunswick, each in partnership with another project.
- In 2014-15, a provincially generalizable sample was not obtained in the province of New Brunswick; therefore, provincial estimates are not available, but data from the participating New Brunswick students was included in the estimates for Canada. A census sample was conducted in the province of PEI, in partnership with another project.
- In 2016-17, the province of New Brunswick did not participate in the survey. In Nova Scotia, schools were stratified by school type (elementary, secondary) and health zone (6 zones), yielding 12 strata. CSTADS planned to implement in additional schools in this province using this design in order to obtain regionally generalizable data within six health zones, due to a provincial collaboration. Despite the intention to collect additional data in Nova Scotia, labour strife and numerous school days cancelled due to inclement weather resulted in fewer data collections than anticipated in the province. In Quebec, schools were sampled using a very different sampling design from the rest of CSTADS, due to collaboration with another project (see *2016/2017 Canadian Student, Tobacco, Alcohol and Drugs Survey Microdata User Guide*).

In all years, the sample excluded residents of the Yukon, Nunavut and Northwest Territories, residents of institutions, and those attending schools on First Nations reserves, special needs schools (e.g., schools for visually- or hearing-impaired individuals) or schools located on military bases; schools that did not have at least 20 students enrolled in at least one eligible grade were also excluded.

Additional information on the CSTADS/YSS is available at www.cstads.ca
 CSTADS/YSS datasets are available from Propel's Data Repository at
<https://uwaterloo.ca/propel/resources-researchers/propels-data-repository>

APPENDIX C: Data Analysis

Data analysis was completed by Robin Burkhalter, MMath, Ulaina Tariq, MSc, and Vicki Rynard, MSc, of the Propel Centre for Population Health Impact, using datasets made available by Statistics Canada and Health Canada. Statistical guidance for previous editions was provided by K. Stephen Brown, PhD, of the Department of Statistics & Actuarial Science, University of Waterloo. We are grateful to Rashid Ahmed for statistical contributions to previous editions.

This report and the views expressed herein do not necessarily reflect the views or opinions of Statistics Canada or Health Canada.

Estimates

The data presented in this report are weighted estimates, unless otherwise noted. The CTADS/CTUMS survey weights assigned by Statistics Canada in the annual datasets were used for CTADS/CTUMS analyses, and CSTADS/YSS survey weights were used for CSTADS/YSS analyses; CTADS/CTUMS and CSTADS/YSS were not analysed together and there was no overlap of the survey weights between the two surveys. Estimates for categorical measures were generated using the SURVEYFREQ procedure in SAS statistical software (Version 9.4), while estimates for continuous variables (e.g., cigarettes per day) were generated using the SURVEYMEANS procedure in SAS.

Confidence intervals were generated using SAS and the statistical software Stata (Version 14.2) using the bootstrap weights where they were available (CTADS 2013 to 2017, CTUMS 2001 to 2012, CSTADS 2014-15 and 2016-17, and YSS 2004-05 to 2012-13). Confidence intervals for CTADS/CTUMS were calculated in SAS or Stata using the Mean Square Error (MSE) method of calculation with bootstrap weights. Confidence intervals for CSTADS/YSS in the current (2019) edition were calculated in SAS using the MSE. However, the confidence intervals for CSTADS/YSS reported in previous versions of this report did not use the MSE method and were calculated in Stata. This also applies to any CSTADS/YSS confidence intervals in this report that were drawn directly from previous reports.

Reporting

Confidence intervals are available in data tables posted on the website (www.uwaterloo.ca/tobacco-use-canada/); caution should be used when making comparisons without first checking the confidence intervals. Estimates are not reported where specific categories included less than 30 individuals (unweighted), except where noted as not meeting Statistics Canada's quality standards. In addition to this rule, Health Canada also recommends calculating the coefficient of variation to determine the quality level of the estimate (for further information, please refer to the documentation for specific surveys and waves/years). Estimates with coefficients of variation in excess of 33.3% are suppressed in the analysis of CTADS 2015 and 2017, CSTADS 2016-17, and most historical CSTADS/YSS (i.e., 1994 to 2014-15); otherwise, such estimates may not have been suppressed. Some estimates included in this report may be reported "with caution" or not reported by Health Canada in their releases. In some cases for CSTADS 2014-15 estimates, to facilitate interpretation of these suppressed estimates based on less than 30 individuals, an upper bound of the estimate was calculated. The upper bound is the percentage that would occur if 30 individuals were in the numerator rather than the number less than 30. Similarly, for estimates with coefficients of variation in excess of 33.3%, an upper bound of the estimate was calculated. The upper bound, in this case, is the percentage estimate that would be needed to achieve a coefficient of variation of 33.3%. When either of these upper bounds are <2%, they have been reported as such.

Rounding

Estimates in figures and the associated data tables have been rounded to one decimal place. Provincial estimates for numbers of smokers reported in sections 2.1-2.10 have been rounded to the nearest thousand.

Significance Testing

Statistical comparisons between groups/years were tested using regression analysis, with $p < 0.05$ as the cut-off for significance. Bootstrap weights were used to perform significance testing between groups or between the two most recent years, where they were available (CTADS 2013 to 2017, CTUMS 2001 to 2012, CSTADS 2014-15 and 2016-17, and YSS 2004-05 to 2012-13). For binary response variables, statistical comparisons were performed using the "SURVEYLOGISTIC" procedure in SAS (Version 9.4). For continuous variables, comparisons were performed using the "svy: regress" command in Stata (Version 14.2). Comparisons of prevalence rate and cigarettes per day (CPD) over the time period 1999-2017 (#4, #5, #13 and #14) were tested using a dataset of the prevalence rates and CPD by year. The GLM procedure in SAS was used with the yearly prevalence rate regressed on year for #4, the log of yearly prevalence rate regressed on year for #5, yearly CPD regressed on year for #13 and log of yearly CPD regressed on year for #14.

Where statistical testing has been performed, comparisons are marked with a superscript number, which refers to a p-value that can be found in the *Index of Statistical Tests* (p. 107). Throughout the report, the term "significant" has been reserved for use where statistical testing has been performed at the 5% of level of significance (i.e., $p < 0.05$).

Data for Section III (Youth)

Both CSTADS/YSS and CTADS/CTUMS data were used for the youth analysis: CSTADS/YSS data were used for youth in grades 7-9, who were approximately aged 12-14, and CTADS/CTUMS was used for youth aged 15-19. Earlier waves of the CSTADS/YSS included students in grade 6 (CSTADS 2014-15 and earlier) or grades 5 and 6 (YSS 2006-07 and earlier); neither of these grades are included in this report, for purposes of comparability between survey waves. The more recent waves of the CSTADS/YSS (from 2006-07 onward) also included students in grades 10-12, but these students were not included in the analysis due to their overlap in age with the CTADS/CTUMS sample; CTADS/CTUMS was selected as the data source for older youth since the sampling frame includes youth both in and out of school, whereas the CSTADS/YSS only samples youth who are attending school.

CSTADS/YSS and CTADS/CTUMS data have been integrated where possible. However, differences in the questions asked on each survey and the timing of the surveys does not allow for parallel reporting of all measures. The most recent wave was 2017 for CTADS, and 2016-17 for CSTADS. The CSTADS/YSS runs on school years (data collection between September and June), while CTADS/CTUMS runs on calendar years (data collection from February to December). Data collected via the CSTADS/YSS (grades 7-9) are presented by grade rather than age, as the survey was school-based and sampling was done by grade. CTADS/CTUMS is not school-based; data are presented by age. The CSTADS/YSS and CTADS/CTUMS base their definition of a current smoker on different items: the CSTADS/YSS defines a current smoker as having smoked at least 100 cigarettes in his/her lifetime and smoked in the 30 days preceding the survey; CTADS/CTUMS defines a current smoker using their response to the question "At the present time do you smoke cigarettes every day, occasionally, or not at all?".

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