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Ontario Tobacco Monitoring Report 2018

Surveillance Report & Environmental Scan

November 2019

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Data Source Note

Some of the data used in this publication came from the Ontario Student Drug Use and Health Survey conducted by the Centre for Addiction and Mental Health and administered by the Institute for Social Research, York University. Its contents and interpretation are solely the responsibility of the author and do not necessarily represent the official view of the Centre for Addiction and Mental Health.

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List of Abbreviations

CAMH – Centre for Addiction and Mental Health

CCHS – Canadian Community Health Survey

CHC – Community Health Centre

CSTADS – Canadian Student Tobacco, Alcohol and Drugs Survey

CTADS – Canadian Tobacco, Alcohol and Drugs Survey

E-Cigarettes – Electronic Cigarettes

FHT – Family Health Team

HTP – Heated Tobacco Products

ITP – Indigenous Tobacco Program

IC – Interpret with Caution

JTI – Japan Tobacco International-MacDonald Corporation

LTPB – Leave The Pack Behind

MOHLTC – Ministry of Health and Long-Term Care

MUH – Multi-Unit Housing

NASEM – National Academies of Sciences, Engineering, and Medicine

N-O-T – N-O-T on Tobacco

NRT – Nicotine Replacement Therapy

OMSC® – Ottawa Model for Smoking Cessation®

OSDUHS – Ontario Student Drug Use and Health Survey

OTRU – Ontario Tobacco Research Unit

PHO – Public Health Ontario

PHU – Public Health Unit

PTCC – Program Training and Consultation Centre

RBH – Rothmans, Benson & Hedges Incorporated

RNAO – Registered Nurses' Association of Ontario

SES – Socio-Economic Status

SFOA – *Smoke-Free Ontario Act*

SFO-SAC – Smoke-Free Ontario Scientific Advisory Committee

SHAF – Smoking and Health Action Foundation

SHL – Smokers' Helpline

SHS – Secondhand Smoke

STOP – Smoking Treatment for Ontario Patients

TCAN – Tobacco Control Area Network

TEACH – Training Enhancement in Applied Counselling and Health

TIMS – Tobacco Informatics Monitoring System

TVPA – *Tobacco and Vaping Products Act*

YATI – Youth Advocacy Training Institute

US – United States

Executive Summary

The Ontario Tobacco Monitoring Report 2018 provides an overview of the progress on comprehensive tobacco control in Ontario. It summarizes tobacco product[i] use and progress in tobacco control primarily over the 2017–18 fiscal year. It represents a transition from previous reports produced by the Ontario Tobacco Research Unit. A series of technical supplements containing additional pertinent information accompany this report.

There has been considerable progress in reducing the prevalence of current cigarette smoking in Ontario from 21% in 2003 to 15% in 2017 as tobacco control partners across Ontario have worked to address the comprehensive goals of protection, cessation and prevention. Despite these efforts, a significant number of Ontarians (2.2 million) still use tobacco and the use of new alternative forms of tobacco is increasing. This includes the emergence of e-cigarettes, which deliver nicotine, the addictive substance in tobacco. E-cigarettes are addressed in a dedicated section of this report.

Tobacco use is the leading preventable cause of premature death in Ontario with 16,000 deaths attributed to tobacco use each year.[1] Further, in 2018, the economic burden attributable to tobacco use in terms of direct and indirect costs was estimated at almost $7.0 billion in Ontario.[2]

Tobacco Use

- In 2017, 18% of Ontarians aged 12 years or over reported past 30-day use of tobacco products (not including e-cigarettes) representing 2,196,200 Ontarians. This has decreased significantly[ii] from 2015 (20%). Inclusion of past month vaping of e-cigarettes increases the overall prevalence of tobacco use to 19%.

- Cigarettes were the most common form of tobacco product used. In 2017, 15% of Ontarians aged 12 years and over reported current smoking compared to 16% in 2015.

- In 2017, there were high rates of cigarette smoking among a number of important sub-populations 18 years or over. For example, high rates of current smoking[iii] were reported among those who used illicit drugs (including cannabis) in the past year (36%), reported food insecurity (33%), had a household income of less than $20,000 (31%), were unemployed (31%[IC]), Indigenous (30%), or had a mood disorder (30%). The higher prevalence of smoking among these sub-populations is of concern from a health equity perspective.

[i] Unless otherwise stated, 'tobacco products' include: cigarettes, cigars, pipes, snuff or chewing tobacco, waterpipe, and e-cigarettes.
[ii] Statistical testing was performed, with $p<0.05$ as the cut-off for significance. This indicates the observed difference is unlikely due to chance.
[iii] Current smoking is defined as smoked in the past 30 days and having smoked 100 cigarettes in one's lifetime.
[IC] Interpret with Caution (IC): Subject to high sampling variability.

- In 2017, half of all current smokers in Ontario (aged 15 and older) reported using an e-cigarette in their lifetime (53%). Among Ontario students in grades 7–12, 64% of past year cigarette smokers reported using an e-cigarette in the past year.
- In 2017, 49% of adult (aged 18 and older) current smokers reported using cannabis in the past year and 79% of past year cigarette smokers in grade 7–12 reported smoking cannabis. In 2016, 32% of adult cannabis users mixed cannabis with tobacco.

Tobacco Product Supply and Demand

Reducing tobacco consumption is essential to improving the population's health and reducing health care costs. Strategies to reduce tobacco consumption include measures that impact the supply and demand for tobacco by addressing: price and taxation; illicit sales; production, distribution and sale of tobacco products (including in the retail environment); product and package innovation; and, promotional activities, among others. In 2017–18, new legislation banning menthol eliminated a strategy to make tobacco more palatable for smokers and was associated with increased cessation attempts.[3,4] At the same time, a variety of new tobacco products were introduced into the market with expanded product promotion through online channels such as social media, among other mechanisms. Importantly, the legalization of nicotine-containing vaping products in Canada has resulted in the introduction of many new electronic nicotine delivery system products into the Ontario market. In Ontario, vaping products are able to be advertised and promoted with product displays and in-store marketing.

Infrastructure

Evidence shows that jurisdictions "that developed stronger program infrastructure to support the implementation of evidence-based strategies had lower cigarette consumption."[5] In 2017–18, Ontario continued a system of enabling supports for comprehensive tobacco control that included: general support (in the form of research, monitoring and evaluation, surveillance, and technical assistance); capacity building and knowledge exchange; leadership (to foster collaboration at all levels of government and implement a strong plan or strategy); and work with Indigenous partners (to address high rates of tobacco use without impinging on the use of tobacco for ceremonial purposes). This was provided through a variety of stakeholders from government, academic, and non-governmental organizations working together to inform policies and deliver programs and services. In April 2018, Public Health Ontario (PHO) was asked to assume some of the functions and deliverables of five tobacco resource centres whose funding was discontinued.

Interventions

To reduce tobacco use and optimize impact, comprehensive tobacco control pursues coordinated interventions to establish smoke-free (and aerosol-free) polices; to promote, encourage and assist smokers to quit smoking; and to prevent youth and young adults from initiating tobacco product use. In

2017–18, Ontario delivered comprehensive tobacco control interventions across the pillars of prevention, cessation and protection to reduce tobacco use.

Prevention

Policies and programs to prevent initiation of tobacco product use among youth and young adults focus on limiting social exposure, decreasing access and availability, increasing knowledge of the harmful effects, and increasing the ability to resist tobacco and e-cigarette use and initiation. In 2017–18, Ontario province-wide prevention programming included Leave The Pack Behind (LTPB), a program in post-secondary institutions to prevent tobacco use initiation and escalation, and the Smoke-Free Movies Campaign, among others.

- In 2017, 21% of Ontarians aged 18–29 years reported using tobacco products (excluding e-cigarettes) in the past 30 days, representing 470,600 young adults. 6% of the same age group reported e-cigarette use in the past 30 days, representing 125,400 young adults.
- In 2017, 7% of Ontarians aged 12–18 years reported using tobacco products (excluding e-cigarettes) in the past 30 days, representing 73,700 youth. 4%[IC] of the same age group reported e-cigarette use in the past 30 days, representing 38,500 youth.
- For young adults, cigarettes were the most common form of tobacco product used with 15% of young adults as current smokers. For youth aged 12-18, 4%[IC] reported smoking cigarettes in the past 30 days.
- In 2017, lifetime abstinence among grades 7-12 was 84%, a significant increase compared to 2013 at 80%, and only 5% of students in grades 7-12 reported using a cigarette; however, 14% (102,900 students) reported using an e-cigarette for the first time in the past year.

Protection

Exposure to secondhand tobacco smoke is causally linked to cancers and cardiovascular diseases among adults, and respiratory diseases and other adverse health effects among infants, children and adults.[6] The *Smoke-Free Ontario Act*, 2017 (*SFOA* 2017) protects non-smokers, reduces smokers' exposure to tobacco use, and prevents relapse among quitters. In Ontario, smoking is banned in enclosed public places, workplaces, hospitality venues, in vehicles with an occupant less than 16 years old, within nine metres of restaurant and bar patios, and within 20 metres of school property, publicly-owned outdoor playgrounds, publicly-owned sporting areas, and community recreational facility grounds. The *SFOA*, 2017 also applies to e-cigarettes, prohibiting their use where smoking is prohibited. Additional restrictions may exist via municipal by-laws.

In 2017, 84% of Ontarians believed that exposure to secondhand smoke posed a moderate or great risk of physical or other harm. Furthermore, 82% of Ontario adults believed that smoking should not be allowed in multi-unit housing (MUH).

Reported exposures of Ontarians to secondhand smoke and vaping varies by setting and age:

- In 2017, 9%[IC] of adult workers were exposed to secondhand smoke indoors at work or inside a workplace vehicle.

- In 2016,[i] 16% of non-smokers in Ontario reported exposure to secondhand smoke every day or almost every day in public places (bars, shopping malls, and arenas) and youth aged 12-15 years reported a higher rate of exposure at 26%; 4% of non-smoking Ontarians 12 years and older were exposed to secondhand smoke in their home every day or almost every day; and, 14%[IC] of Ontario adults living in MUH were exposed to secondhand smoke.

- In 2017, 9% of households in Ontario allowed the use of e-cigarettes inside their homes and 1%[IC] of households reported one or more person(s) vaping inside the home every day or almost every day.

Cessation

A main objective of tobacco control efforts is to increase the proportion of smokers who successfully quit smoking. Tobacco cessation interventions motivate, encourage and provide support to help people to successfully quit.

- In 2017, 58% of adult smokers (aged 18 years or older) intended to quit in the next six months; 25% in the next 30 days.

- In 2017, 47% of adult smokers reported making one or more quit attempts in the past year.

- In 2017, 59% of Ontarians aged 12 years or older who had ever smoked had quit for at least 30 days and among all former smokers in Ontario, 4%[IC] had quit less than one year ago, 17% had quit one to five years ago, and 79% had quit more than five years ago.

In 2017–18, provincial cessation support services included the Ottawa Model for Smoking Cessation®, the Smoking Treatment for Ontario Patients Program, Smokers' Helpline, LTPB, the Ontario Drug Benefit program, the First Week Challenge Contest, and smoking cessation services delivered by family physicians and public health units. These programs reached up to 20% of Ontario smokers in 2017–18, representing 348,884 smokers.

E-Cigarettes

While cigarette smoking continues to be the main focus of tobacco control, there is a need to pay attention to the emergence of nicotine-containing products such as electronic cigarettes (e-cigarettes).

- Data for 2017, which predate many of the recent changes in the Ontario e-cigarette marketplace, still show a significant increase in lifetime use of e-cigarettes among those aged 15 years and older, compared to 2013 data. Lifetime use of e-cigarettes in 2017 was 13% compared to 6% in

[i] The data was not available for 2017.

2013. Past 30-day vaping was 6% for those 18–29 years of age and 3% among those 12 years of age and older in 2017.

- In 2017, lifetime use of e-cigarettes among secondary school students in Ontario has doubled from 2013 (15%) to 2017 (29%) and past year use of e-cigarettes was significantly higher compared to tobacco cigarettes (24% vs. 16%). Past 30-day vaping was 4%[IC] in 2017 for Ontario youth aged 12–18.

Overall, increases in the use of e-cigarettes among young people, which increasingly contain high levels of nicotine, are concerning. While long term health effects of e-cigarette use are still uncertain, current evidence suggests e-cigarette use is not without physiological effects in humans, and can also result in nicotine dependence in youth and young adults.[7,8] There is substantial evidence to suggest that for youth and young adults, e-cigarette use increases the risk of smoking.[8]

Conclusion

The main body of the 2018 Tobacco Monitoring Report provides a more detailed description of comprehensive tobacco control in Ontario. This includes tobacco product use data and trends using the most recent data available and a summary of efforts to address tobacco product supply and demand. In addition, the latest evidence and activity in Ontario for tobacco control program infrastructure, programs and interventions in cessation, prevention and protection at local and provincial levels are highlighted. However, the tobacco control context is rapidly changing with the emergence and promotion of nicotine-containing e-cigarettes and the legalization of cannabis, which can be co-used with tobacco. The 2018 Tobacco Monitoring Report provides insights into these important tobacco-related developments in Ontario. In this dynamic environment, there will be a greater need to monitor tobacco product use to provide feedback on existing efforts and inform future activities. PHO assumed production of the tobacco monitoring report as of April 2018. PHO will seek feedback from users of this report to inform its continuous improvement.

Chapter 1: Introduction

Background

There has been considerable progress in reducing the prevalence of smoking in Ontario from 21% in 2003 to 15% in 2017. From 2004 to 2013, reductions in smoking among Ontarians averted $4.1 billion in health care costs.[9] Nevertheless, tobacco use remains a leading cause of preventable death in Ontario accounting for approximately 16,000 deaths in 2012.[1] Moreover, in 2018, the economic burden attributable to tobacco use is estimated to be $2.7 billion in direct health care costs and $4.2 billion in indirect costs, totalling almost $7.0 billion in Ontario.[2]

Smoking-attributable health care expenditures in Ontario are estimated to amount to $164 billion between 2003 and 2041.[10] Effective strategies to improve tobacco control and reduce smoking prevalence include smoking cessation programs, smoke-free policies, and other "upstream" practices such as taxation. These strategies not only improve population health, but also support a sustainable health care system and save billions due to reduced health care costs associated with reductions in tobacco use.[11]

However, the context for tobacco control is rapidly changing with the emergence of new, nicotine-containing products such as electronic cigarettes (e-cigarettes), as well as the legalization of cannabis, which have the potential to hinder tobacco control progress. As such, a dedicated chapter of this report focusses on e-cigarettes and information on co-use of cannabis and tobacco is provided in the data and trends chapter.

This Ontario Tobacco Monitoring Report provides a summary of progress on comprehensive tobacco control in Ontario. This year's report by Public Health Ontario (PHO), represents a transition from the longstanding leadership provided by the Ontario Tobacco Research Unit (OTRU) in having established and produced such reports in the past. This year's report is influenced by OTRU's work in the past and informed by the evidence for effective tobacco control interventions identified by the Smoke Free Ontario Scientific Advisory Committee (SFO-SAC).[12] This report addresses progress and developments in the key areas of Ontario tobacco control and is accompanied by a series of technical supplements that provide additional pertinent details.

Objectives

The report and technical supplements have been developed to:

- summarize the main patterns and trends in tobacco use for Ontario with a focus on the most recent data available
- highlight the latest evidence and activity in Ontario for tobacco control program infrastructure, programs and interventions in cessation, prevention and protection

- summarize findings related to the supply and demand for tobacco products in Ontario such as tobacco product distribution, advertising and promotion and associated legislative changes
- provide insights into important tobacco related developments in Ontario, specifically e-cigarettes/vaping and co-use of cannabis and tobacco

Approach

This report draws on information from multiple information sources that encompass population surveys, program evaluations, performance reports and administrative data. Overall, the approach to data sources and survey tools is similar to OTRU's approach in previous monitoring reports.

Information is presented primarily for the 2017–18 fiscal year with tailoring of time periods by data source. This includes: most recently available population survey data (see Chapter 2: Data and Trends); surveys of 2017–18 tobacco partner agencies' tobacco control activities funded directly, but not exclusively by the Ministry of Health and Long-Term Care (MOHLTC)[i]; intervention and program data collected from public health units (PHU) and Tobacco Control Area Network (TCAN) coordinators through an online survey to June 2018; and, consultation with relevant tobacco control experts. When recommended by experts, relevant peer-reviewed and grey literature sources were included. Further information was gleaned from administrative documents and discussions with government agencies, service providers and managers. OTRU's Tobacco Informatics Monitoring System (TIMS) provided much of the population-level data analyses. Selected pertinent legislative and policy changes that occurred up to January 2019 have also been included. Further information on the methodological approaches to data collection for each chapter is provided in the accompanying technical supplements.

This report does not draw direct relationships between tobacco control activities and outcomes. There is substantial evidence that tobacco control interventions affect these outcomes, and there is an expectation of synergistic effects from a comprehensive tobacco control approach.[5] However, several forces confound these relationships: variations in implementation including reach and dose of interventions; unknown time lags between implementation and population-level changes; economic and social stresses; environmental factors such as pro-tobacco influences and contraband activity; and other potential unknown confounding factors. In certain cases, existing data for measuring long-term, population-level outcomes do not always offer sufficient precision to identify small, year-over-year changes. Therefore, we include multi-year data, as well as short- and intermediate-level outcomes.

[i] MOHLTC: this report focuses on fiscal year 2017-18 at which time Ontario's health ministry was called the Ministry of Health and Long-Term Care. On June 20, 2019, the ministry was re-named as the Ministry of Health.

Report Structure

This report is organized as follows:

- Chapter 1: Introduction
- Chapter 2: Data and Trends
- Chapter 3: Tobacco Product Supply and Demand
- Chapter 4: Tobacco Control Infrastructure
- Chapter 5: Tobacco Control Interventions
- Chapter 6: Electronic Cigarettes
- Chapter 7: Conclusion

Additional details for chapters two through six are provided in chapter-specific technical supplements. This material may be found on the PHO website.

Chapter 2: Data and Trends

Population-based tobacco monitoring data are essential for understanding the extent of the population burden of tobacco use, assessing public awareness and attitudes, and identifying subgroups in need of tailored programs and services.[13] In this chapter, we present surveillance and monitoring data from the most recently available population-level surveys available at the time of report writing (March 2018) related to tobacco use, youth prevention, cessation, protection, co-use of tobacco and e-cigarettes, and co-use of tobacco and cannabis. Additional details, including full data tables for figures in this chapter, are provided in the Technical Supplement to the Data and Trends chapter.

Methodological Approach

Latest population level survey data (Canadian Community Health Survey (CCHS) 2017, Centre for Addiction and Mental Health Monitor (CAMH-Monitor) 2017, Canadian Tobacco, Alcohol and Drugs Survey (CTADS) 2017, and Ontario Student Drug Use and Health Survey (OSDUHS) 2017) were used to develop this chapter. Details regarding each survey source can be found in the Technical Supplement to the Data and Trends chapter. Throughout the report estimates with high sampling variability are indicated using "IC" for interpret with caution. The historical trends for all indicators from CCHS 2001–14, CAMH-Monitor 2002–16, OSDUHS 2003–15 included in this report were obtained from the OTRU's 2017 Smoke-Free Ontario Strategy Monitoring Report.[14] Findings from the 2017 CAMH-Monitor were obtained from OTRU's TIMS.[15] Analyses from CCHS 2015–17, CTADS 2013–17, and OSDUHS 2017 were completed by PHO.

Similar to the methods used in OTRU's 2017 Smoke-Free Ontario Strategy Monitoring Report,[14] significance tests between two estimates, including any directional statement (e.g., increase, decrease, higher, lower, etc.), were based on non-overlapping 95% confidence intervals. When confidence intervals overlapped, a formal significance test of two proportions was carried out. Estimates that appear to differ but are not reported as significant should be interpreted with caution. In order to protect against misclassification of significance due to many comparisons, we only compared the current year with: the previous year and a five-year benchmark, where possible. The CCHS was redesigned in 2015 and estimates based on the CCHS from 2015 onward should not be compared to previous releases. We only compared the latest findings from CCHS (2017) with previous years (2016 and 2015).

Tobacco Product Use

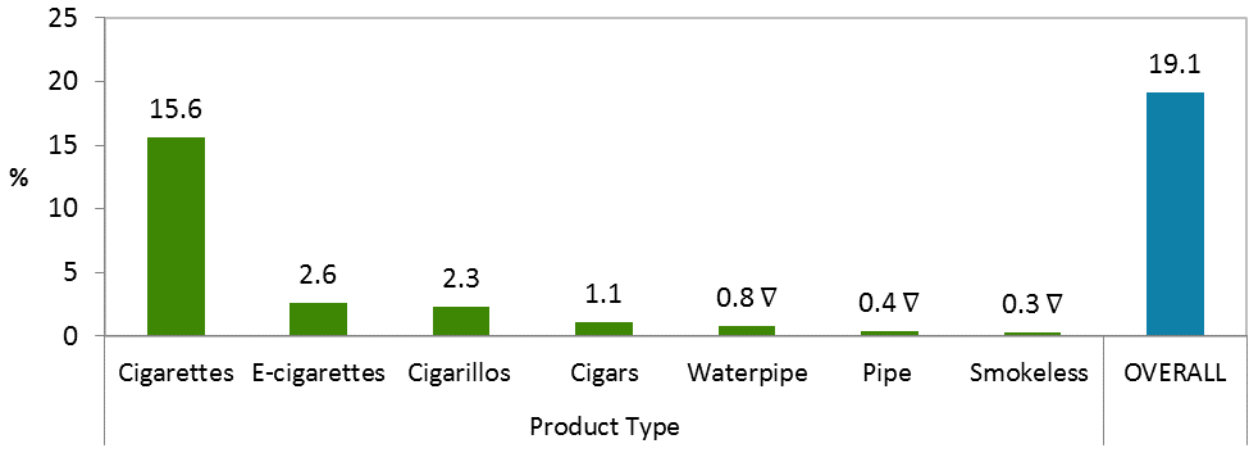
According to the 2017 CCHS, 18% of Ontarians aged 12 years or over reported using tobacco products[i] (excluding e-cigarettes) in the past 30 days. This represents 2,196,200 Ontarians using these products with some individuals using more than one product. The prevalence of tobacco product use decreased significantly between 2015 and 2017 (20% vs. 18%). For the purposes of this report, e-cigarettes are

[i] Unless otherwise stated, 'tobacco products' include: cigarettes, cigars, pipes, snuff or chewing tobacco, waterpipe, and e-cigarettes.

considered a type of tobacco product because nicotine in the e-liquids is derived from tobacco plants.[8] Inclusion of past month vaping of e-cigarettes increases the overall prevalence of tobacco product use to 19% (or 2,311,900 individuals) (Figure 1). This overall use has also decreased significantly from 2015 (21%) (CCHS, 2015–17).

Cigarettes, e-cigarettes and cigarillos were the most common tobacco products used by Ontarians in the past 30 days. In 2017, 15.6% of Ontarians aged 12 years or over smoked cigarettes in the past 30 days,[i] 2.6% used e-cigarettes, 2.3% smoked cigarillos, 1.1% smoked another form of cigar, 0.8%[IC] used a tobacco waterpipe[ii], 0.4%[IC] smoked pipes, 0.3%[IC] used smokeless tobacco (Figure 1). Since these estimates include co-use, they do not sum to the total overall population estimate of tobacco product use.

Figure 1: Tobacco Use, by Product Type, Ontario, 12+, 2017



Note: Overall tobacco use was defined as use of cigarettes, e-cigarettes, cigarillos, cigars, waterpipe, pipe, and/or smokeless tobacco in the past 30 days. These estimates include co-use and therefore do not sum to the total overall population estimate of tobacco product use.∇ = Interpret with caution: subject to high sampling variability.
Source: Canadian Community Health Survey (CCHS) 2017 Share file

Cigarette Use

Cigarettes are the most commonly used tobacco products in Ontario. In this report we define 'current smoking' as having smoked in the past 30 days and having smoked 100 cigarettes in one's lifetime.

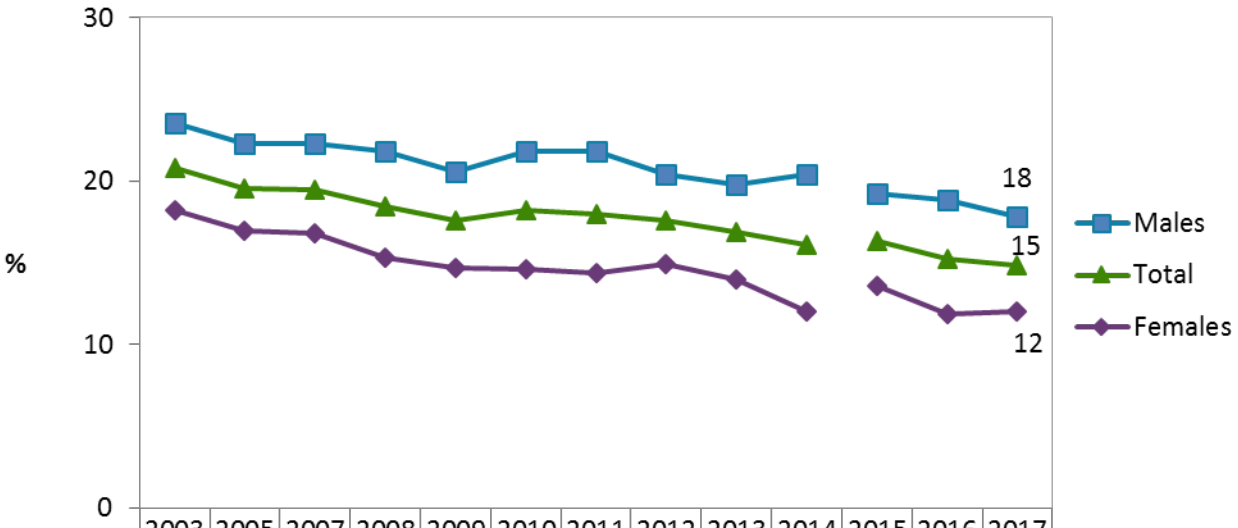
In 2017, 14.9% of Ontarians aged 12 years or older were current smokers (Figure 2; CCHS, 2017), representing 1,797,800 individuals. This represents a significant decrease from 2015 (16.4%). Similar to

[i] Cigarette smoking in this Tobacco Product Use section of the report includes having smoked in the past 30 days but does not include having smoked 100 cigarettes in one's lifetime because lifetime quantity is not measured for the other forms of tobacco products listed.
[IC] Interpret with Caution (IC): Subject to high sampling variability.
[ii] Wastepipes are also known as a hookah, shisha, nargeelay, hubble-bubble or gouza used to smoke tobacco.

previous years, males reported significantly higher prevalence of smoking compared to females in 2017 (18% vs. 12%).

While the overall rates have decreased, among those aged 12 years and older, the proportion of current smokers who smoke daily has increased significantly in 2017 (82%) from 2015 (77%) (CCHS, 2015–17). In 2017, 12.1% of Ontarians aged 12 years and older reported daily smoking and 2.7% reported past-month occasional smoking. The mean number of cigarettes smoked per day among daily smokers aged 12 years or older was 14.4, with a significant sex difference (12.8 for females vs. 15.5 for males; CCHS, 2017).

Figure 2: Current Smoking, by Sex, Ontario, 12+, 2003–17



	2003	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Males	24	22	22	22	21	22	22	20	20	20	19	19	18
Total	21	20	20	19	18	18	18	18	17	16	16	15	15
Females	18	17	17	15	15	15	14	15	14	12	14	12	12

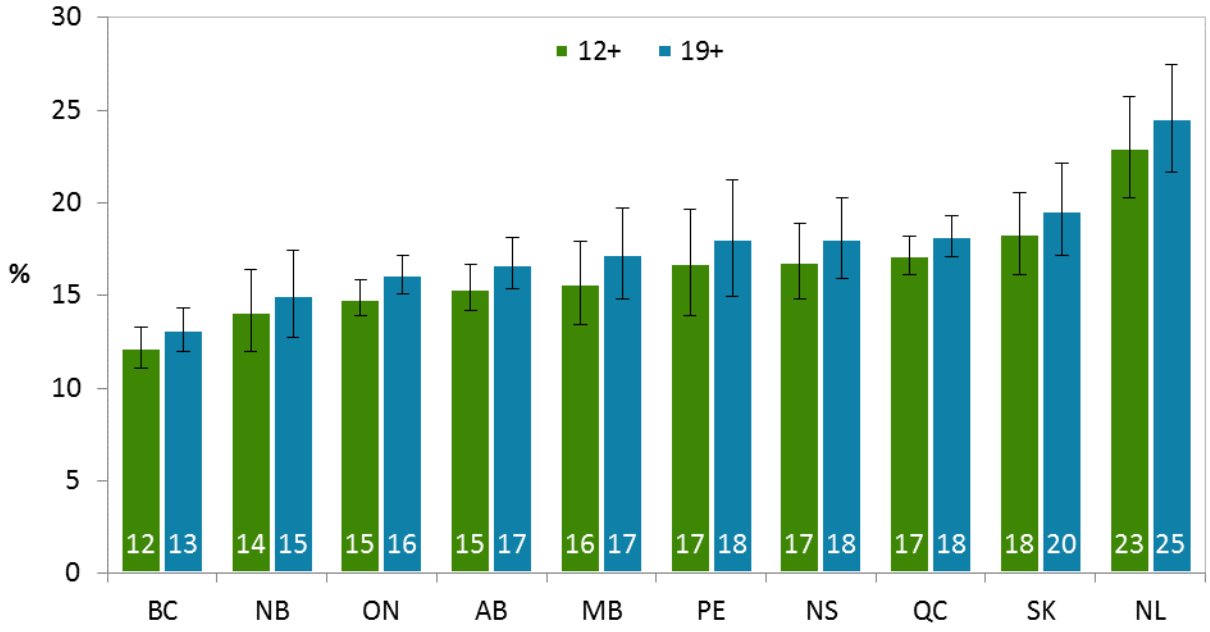
Note: Year Intervals are not uniform. The CCHS was redesigned in 2015. Estimates based on the CCHS from 2015 onward should not be compared to previous releases of the CCHS.
Source: 2003–14 Canadian Community Health Survey (CCHS) Master file; 2015–17 CCHS Share file

GEOGRAPHICAL PATTERNS OF CURRENT SMOKING

At the national level (excluding the territories), 15.4% of Canadians aged 12 years and older reported current smoking (CCHS, 2017). Across the ten Canadian provinces, current smoking among those aged 12 years and older ranged from 12% in British Columbia to 23% in Newfoundland and Labrador (CCHS, 2017; Figure 3). The rate of current smoking was significantly lower in British Columbia compared to Ontario (12% vs. 15%). Québec (17%), Saskatchewan (18%), and Newfoundland and Labrador (23%) had a significantly higher rate of current smoking compared to Ontario.

In 2017, 16% of Ontarians aged 19 years or older (the legal age to be sold cigarettes) were current smokers (CCHS, 2017; Figure 3), representing 1,777,300 individuals. The federal minimum age to be sold tobacco is 18, but select provinces, including Ontario, have higher minimum age at 19 years.[16]

Figure 3: Current Smoking, by Provinces, Ages 12+ and 19+, Canada, 2017

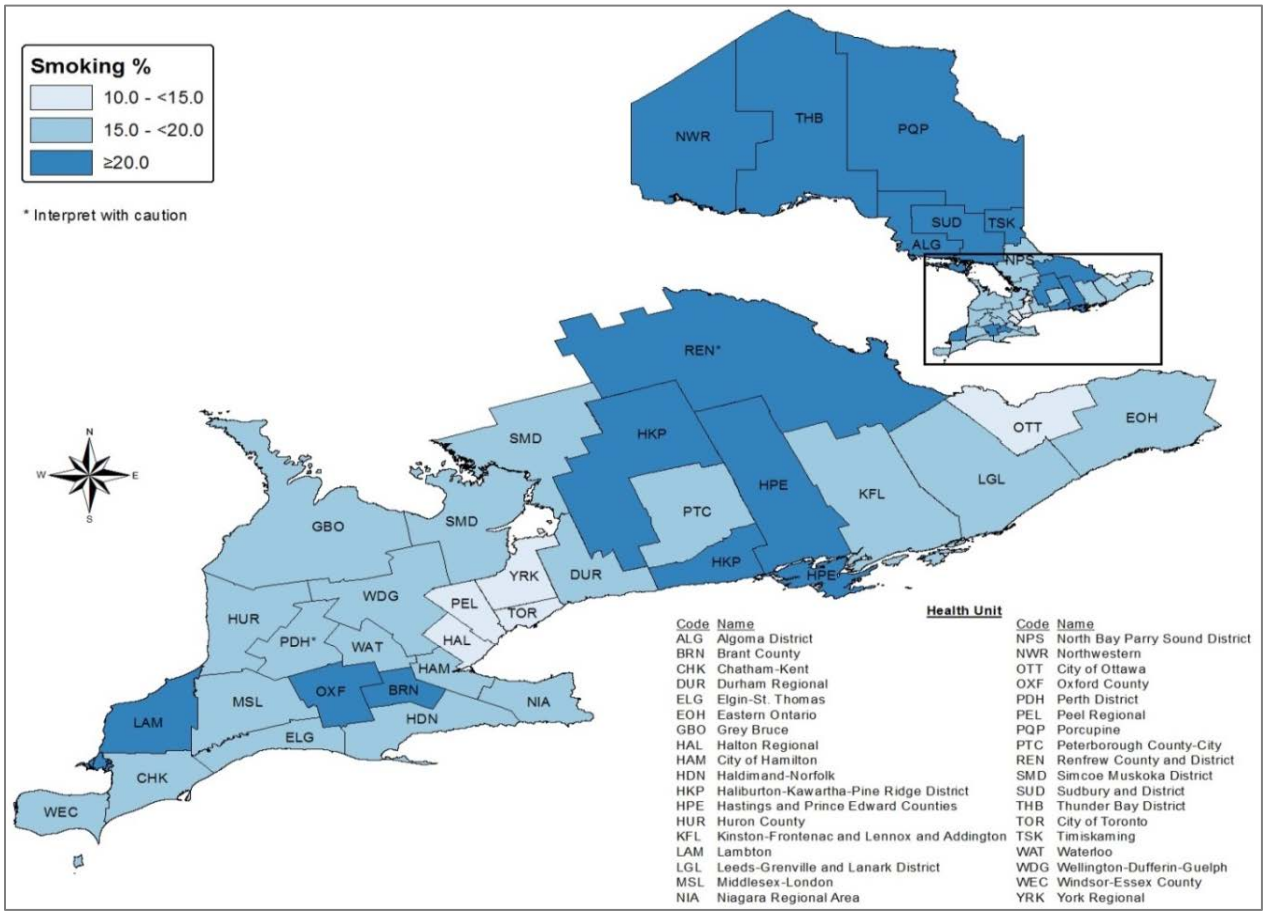


Note: Vertical lines at top of bars represent 95% confidence intervals.
Source: Canadian Community Health Survey (CCHS); 2017 Share file

According to the CCHS 2015–16 (combined year file)[i], prevalence of current smoking across the 36 PHUs in Ontario ranged from 10% in Peel to 26% in Algoma. PHUs in the Greater Toronto Area (Peel, York, Halton, Toronto) and Ottawa reported the lowest current smoking prevalence (<15%) (Figure 4). Twelve PHUs, mainly from North West and some North East regions, reported current smoking prevalence of 20% or more. Current smoking prevalence by PHUs from 2005 to 2015–16 can be found in the Appendix (Table A1).

[i] Combined years of data are needed in order to report smoking prevalence for all 36 PHUs.

Figure 4: Current Smoking, by Public Health Units, Ontario, 12+, 2015–16



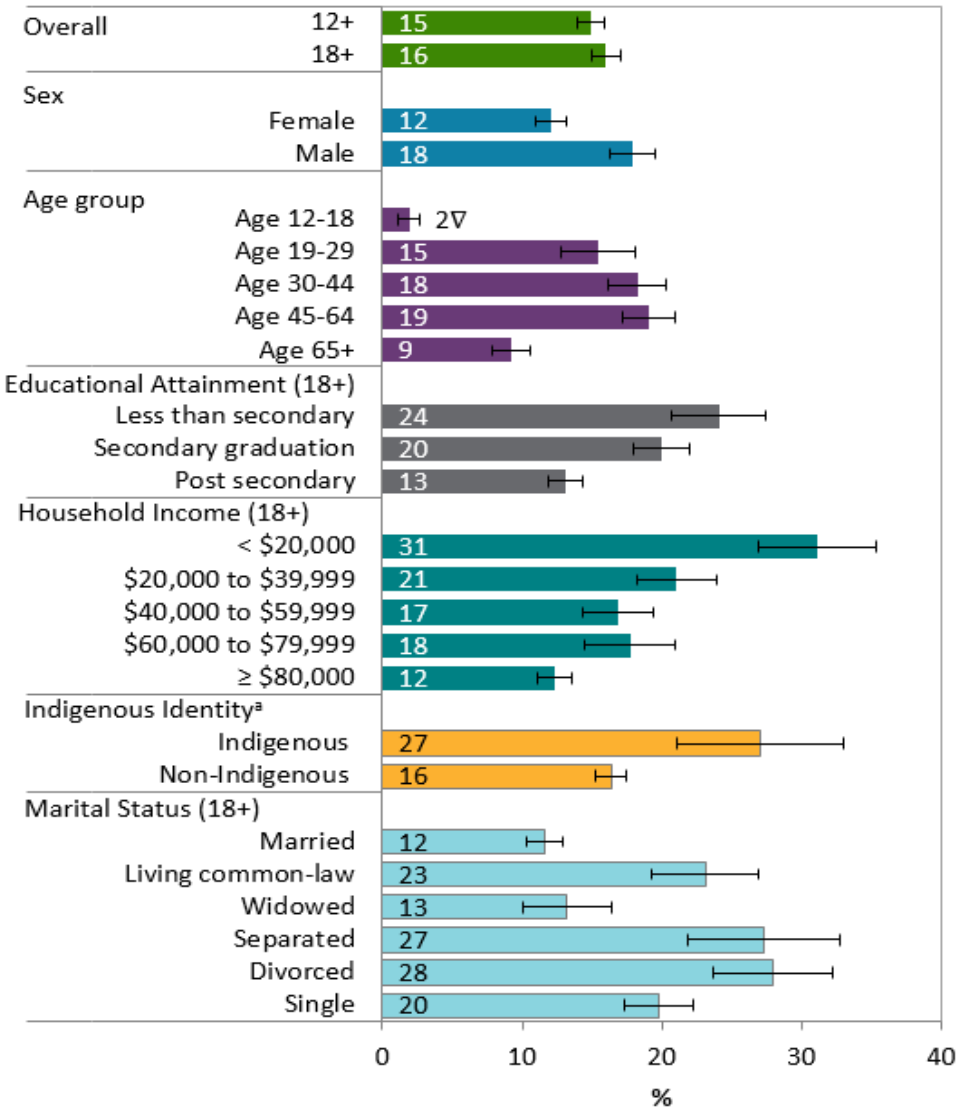
Note: Full data table for this map provided in the Appendix (Table A1).
Source: Canadian Community Health Survey (CCHS); 2015–16 (combined years) Master file

DEMOGRAPHIC CHARACTERISTICS OF CURRENT SMOKERS

Among Ontarians aged 12 years and older, males reported a significantly higher rate of current smoking compared to females (18% vs. 12%) (CCHS, 2017; Figure 5). The current smoking rate among Ontario's Indigenous population, living off reserve, was 11 percentage points higher compared to the non-Indigenous population. Indigenous current smokers represented 88,000 individuals and non-Indigenous current smokers represented 1,241,900 individuals.

Among adults (18+), the current smoking rate increased with lower levels of educational attainment (CCHS, 2017; Figure 5). Ontarians with less than secondary school graduation had a significantly higher rate of current smoking (24%) compared to those who had completed secondary school (20%) and post-secondary education (13%). Adults with a household income of less than $20,000 reported the highest rate of current smoking (31%). The smoking rate among those divorced (28%), separated (27%) and living with a common-law partner (23%) was higher compared to those married (12%) or widowed (13%).

Figure 5: Current Smoking, by Demographics, Ontario, 12+, 2017



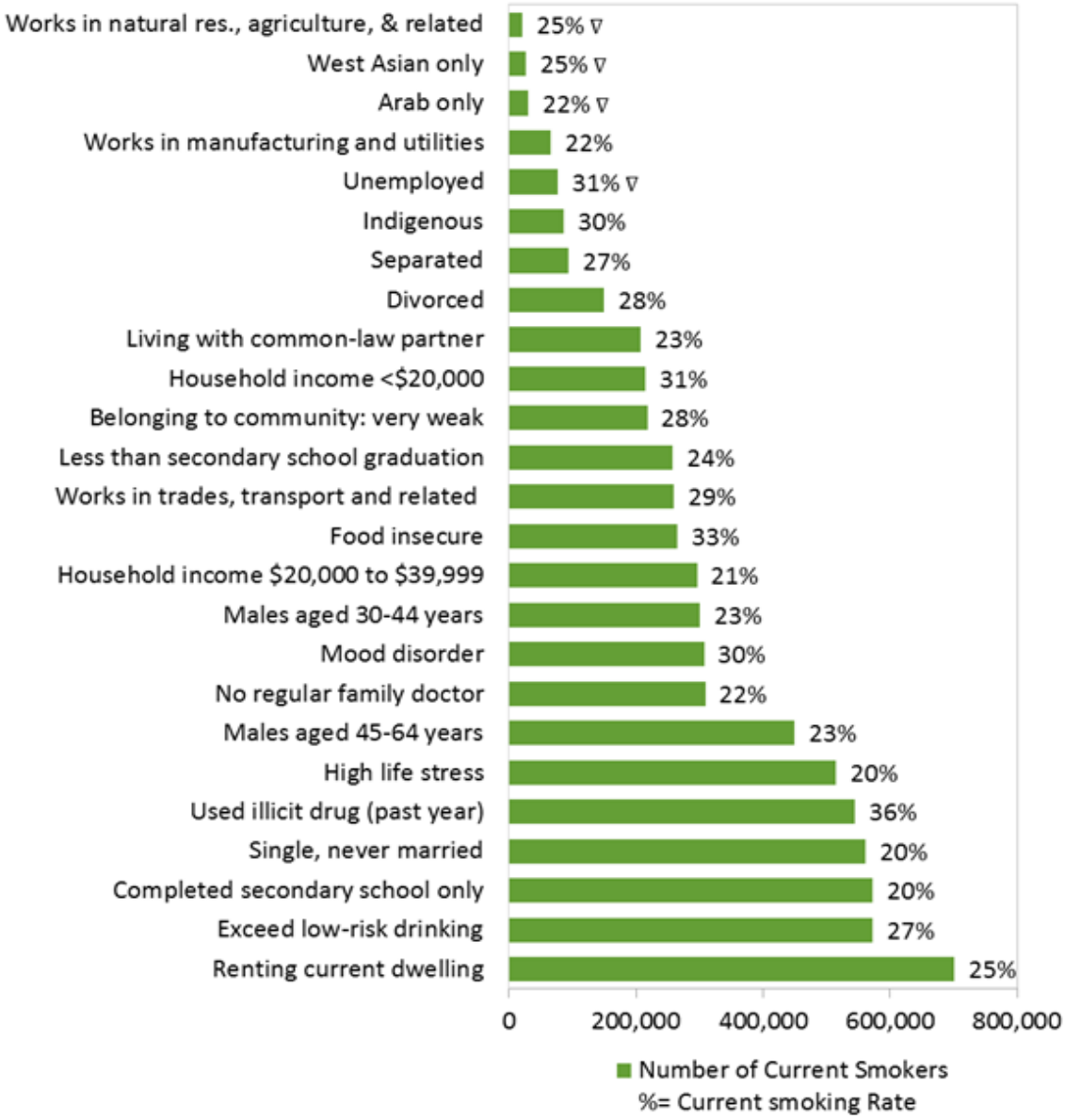
Note: [a] Indigenous identity refers to those who identified as Aboriginal, that is, First Nations, Métis or Inuk (Inuit). The numbers reflect Indigenous people living off reserve — residents living on reserves were excluded from the survey's coverage. ∇ = Interpret with caution: subject to high sampling variability; Vertical lines at top of bars represent 95% confidence intervals.
Source: Canadian Community Health Survey (CCHS); 2017 Share file

PRIORITY POPULATIONS

In Figure 6, subpopulations with a current smoking rate of 20% or more are shown along with the number of smokers represented within each group. The groups were identified by examining current smoking prevalence across demographic characteristics, social determinants of health, chronic disease risk factors, risky behaviours, and others. The same smokers could be included in multiple subpopulations as the factors examined in Figure 6 tend to co-occur in individuals (e.g., rental dwelling,

household income less than $20,000, completed secondary school only, high “life stress”). The list of all indicators examined along with their definitions can be found in the Appendix (Table A2).

Figure 6: Priority Populations with High Rate of Smoking (≥20%) and Numbers of Smokers, Ontario, 18+, 2017



Note: ∇ = Interpret with caution: subject to high sampling variability. Smoking is defined as having smoked cigarettes in the past 30 days and having smoked 100 cigarettes in one’s lifetime. Indicator definitions are provided in Appendix (Table A2). Populations are not mutually exclusive and individuals may appear in more than one category.

Source: Canadian Community Health Survey (CCHS) 2017 Share file

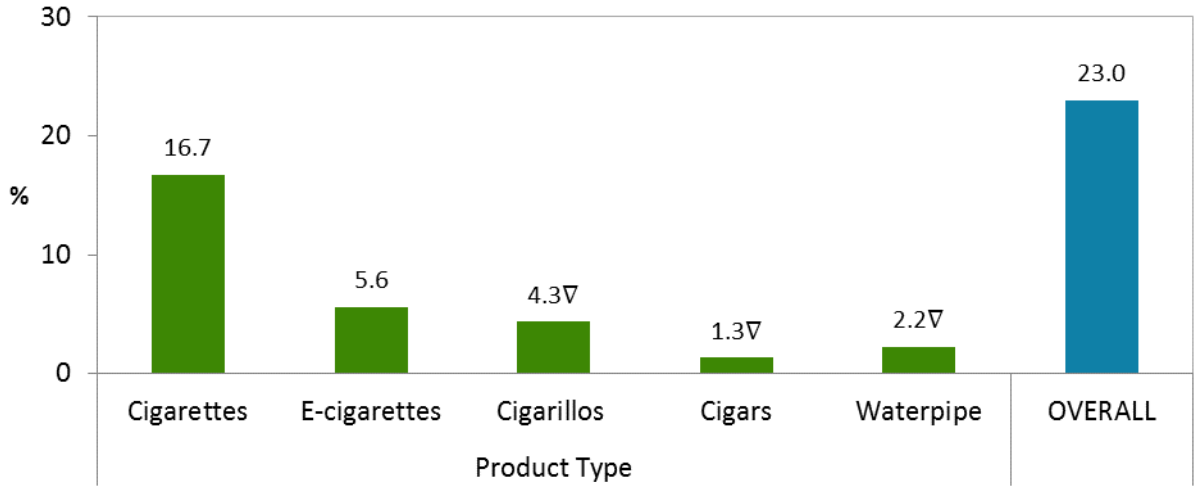
Among adults, the highest rate of current smoking was reported among those who used illicit drugs (including cannabis) in the past year (36%), reported food insecurity (33%), had a household income of less than $20,000 (31%), were unemployed (31%[IC]), Indigenous (30%), or had a mood disorder (30%) (CCHS, 2017; Figure 6). The high rate of cigarette smoking for certain subpopulations is of concern from a health equity perspective. In addition, it is also important to look at subpopulations which account for a significant portion of the overall number of smokers.

Among adults with a high rate of smoking (≥20%), higher numbers of smokers (more than 500,000 smokers) were represented by those who lived in a rental dwelling, reported excess alcohol consumption, only completed secondary education, were single and never married, used illicit drugs in the past year, and reported high life stress (Figure 6). Some subpopulations had a high smoking rate but made up a smaller number of smokers (e.g., low income population (<$20,000): smoking rate of 31%, represented 214,900 smokers). Conversely, some populations had a lower smoking rate but accounted for higher numbers of smokers (e.g., completed secondary school only: smoking rate of 20%, represented 572,100 smokers).

Tobacco Product Use among Young Adults

In 2017, 21% of Ontarians aged 18–29 years reported using tobacco products (excluding e-cigarettes) in the past 30 days (CCHS, 2017). This represents 470,600 young adults. Inclusion of past month vaping of e-cigarettes (125,400 individuals) increases the overall prevalence of tobacco product use to 23% (or 517,300 individuals) (Figure 7). Since these estimates include co-use, they do not sum to the total overall population estimate of tobacco product use.

Figure 7: Tobacco Use among Young Adults (18–29 years), by Product Type, Ontario, 2017

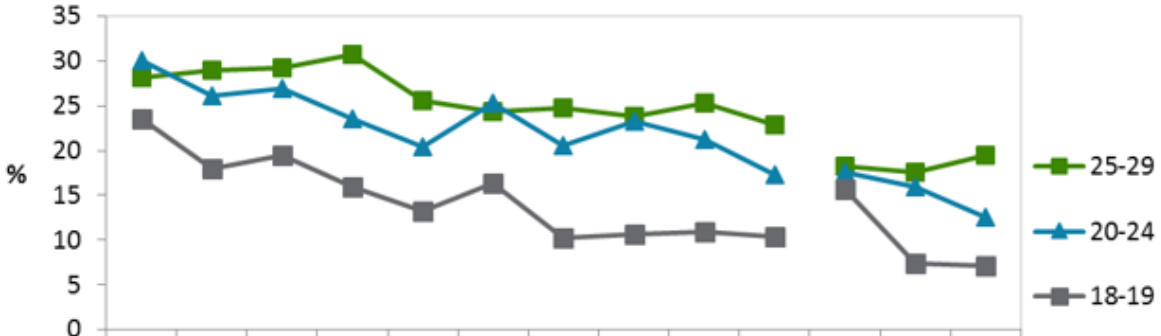


Note: Overall tobacco use was defined as use of cigarettes, e-cigarettes, cigarillos, cigars, waterpipe, pipe, and/or smokeless tobacco in the past 30 days. These estimates include co-use and therefore do not sum to the total overall population estimate of tobacco product use. ∇ = Interpret with caution: subject to high sampling variability. Use of pipe and smokeless tobacco were suppressed due to high sampling variability.
Source: Canadian Community Health Survey (CCHS) 2017 Share file

Cigarette Use among Young Adults

In 2017, 14.6% of Ontarians aged 18–29 years were current smokers (CCHS, 2017), representing 329,400 individuals. This did not show a significant change from 2015 (17.5%). Current smoking among 20–24 year-olds (13%) and 25–29 year-olds (20%) was significantly higher compared to those aged 18–19 years (7%[IC]) (Figure 8; CCHS, 2017).

Figure 8: Current Smoking among Young Adults (18–29 years), Ontario, 2003–17



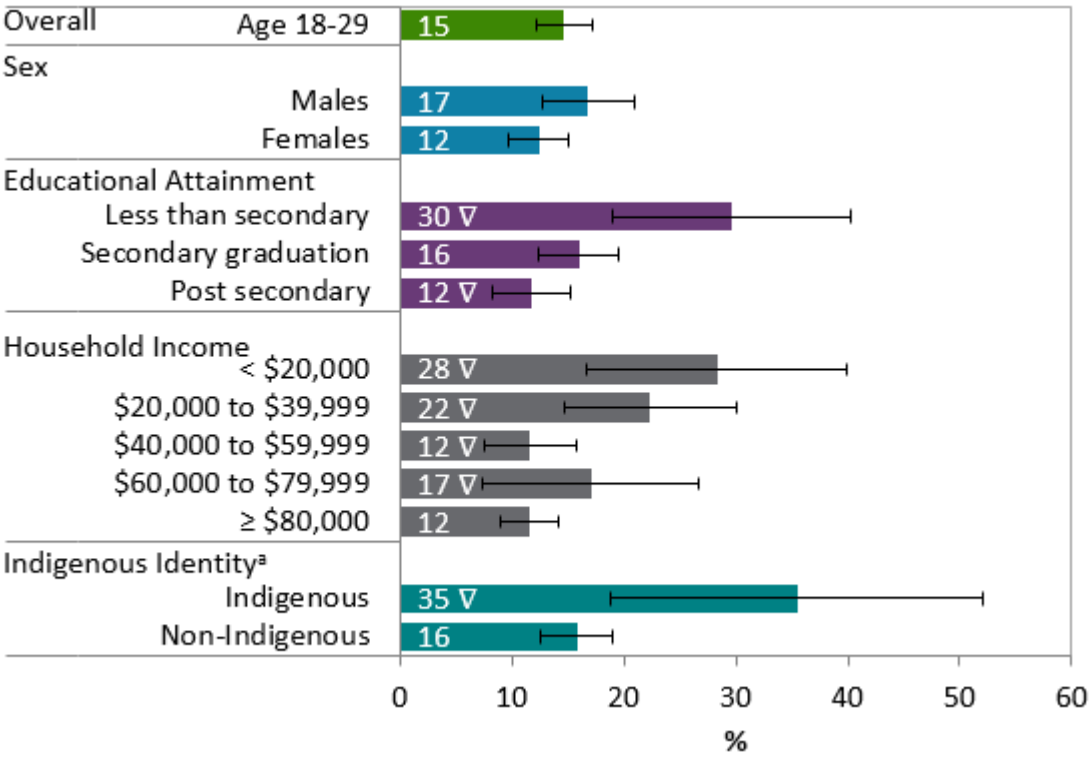
	2003	2005	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
25-29	28	29	29	31	26	24	25	24	25	23	18	18	20
20-24	30	26	27	24	20	25	21	23	21	17	18	16	13
18-19	24	18	19	16	13	16	10∇	11∇	11∇	10∇	16∇	7∇	7∇

Note: ∇ = Interpret with caution: subject to high sampling variability Year Intervals are not uniform. The CCHS was redesigned in 2015. Estimates based on the CCHS from 2015 onward should not be compared to previous releases of the CCHS.
Source: 2003–14 Canadian Community Health Survey (CCHS) Master file; 2015–17 CCHS Share file

DEMOGRAPHIC CHARACTERISTICS OF YOUNG ADULT CURRENT SMOKERS

Among young adults, a statistically significant difference was not detected between current smoking prevalence among males (17%) as compared to females (12%) (Figure 9; CCHS, 2017). Young adults with less than secondary education reported a significantly higher rate of smoking (30%[IC]) compared to those who had completed secondary education (16%) and some post-secondary education (12%[IC]). Young adults with a household income of less than $20,000 reported a significantly higher rate of smoking (28% [IC]) compared to those with incomes of $40,000 to $59,999 (12% [IC]) and ≥ $80,000 (12%). The highest prevalence of smoking was reported among young adults with Indigenous identity (35%[IC]), which was significantly higher compared to the non-Indigenous population (16%).

Figure 9: Current Smoking among Young Adults (18–29 Years), by Demographics, Ontario, 2017



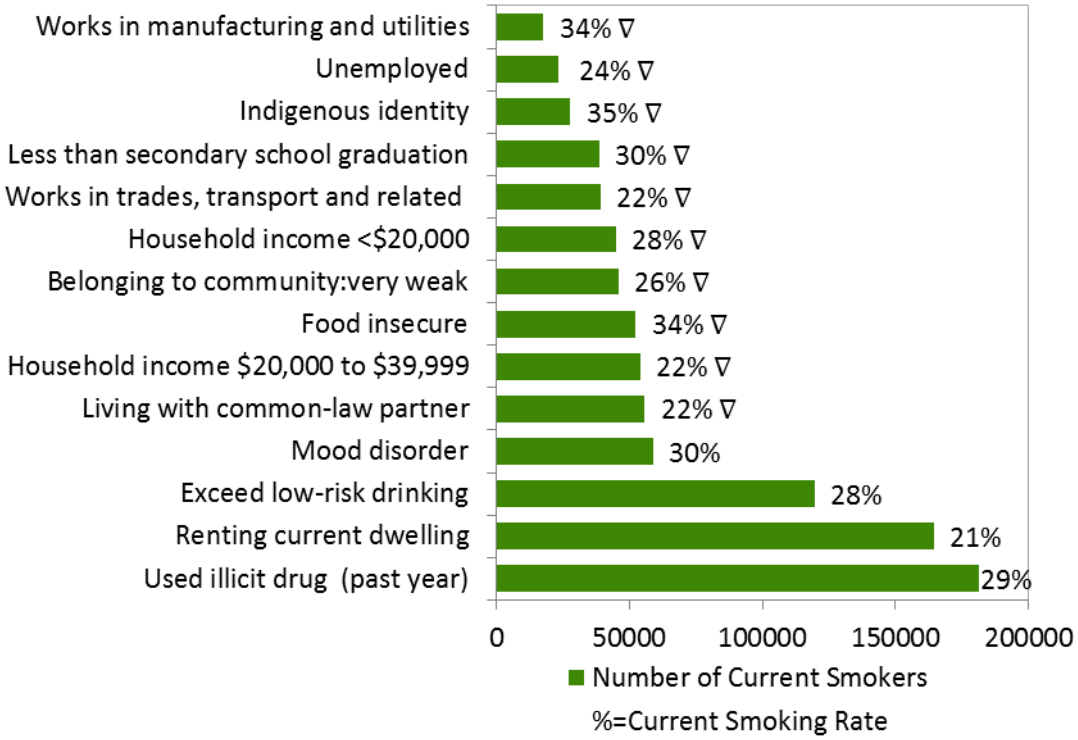
Note: [a] Indigenous identity refers to those who identified as Aboriginal, that is, First Nations, Métis or Inuk (Inuit). The numbers reflect Indigenous people living off reserve. ∇ = Interpret with caution: subject to high sampling variability. Vertical lines at top of bars represent 95% confidence intervals.
Source: Canadian Community Health Survey (CCHS) 2017 Share file

PRIORITY POPULATIONS AMONG YOUNG ADULT SMOKERS

In Figure 10, subpopulations with a current smoking rate of 20% or more are shown along with the number of smokers represented within each group. A detailed list of indicators examined can be found in the Appendix (Table A2). Among young adults (18–29 years), the highest rate of current smoking was reported among those who identified as Indigenous (35%^{IC}), reported food insecurity (34%^{IC}), and worked in manufacturing and utilities (34%^{IC}) (CCHS, 2017; Figure 10).

Among adults with high rate of smoking (≥20%), higher numbers of smokers were represented among those who used illicit drugs (including cannabis) in the past year (181,200), lived in rental dwelling (164,300), and reported excess alcohol consumption (119,500) (CCHS, 2017; Figure 10). Some subpopulations had a high smoking rate but made up a smaller portion of smokers (e.g., the off-reserve Indigenous population: smoking rate of 35%, represented 27,900 smokers); conversely some populations had a lower smoking rate but accounted for higher numbers of smokers (e.g., lived in rental dwelling: smoking rate of 21%, represented 164,300). (Note: smokers may belong to multiple subpopulations examined in Figure 10).

Figure 10: Priority Populations with High Rate of Smoking (≥20%) and Numbers of Smokers, Ontario, 18–29 Years, 2017



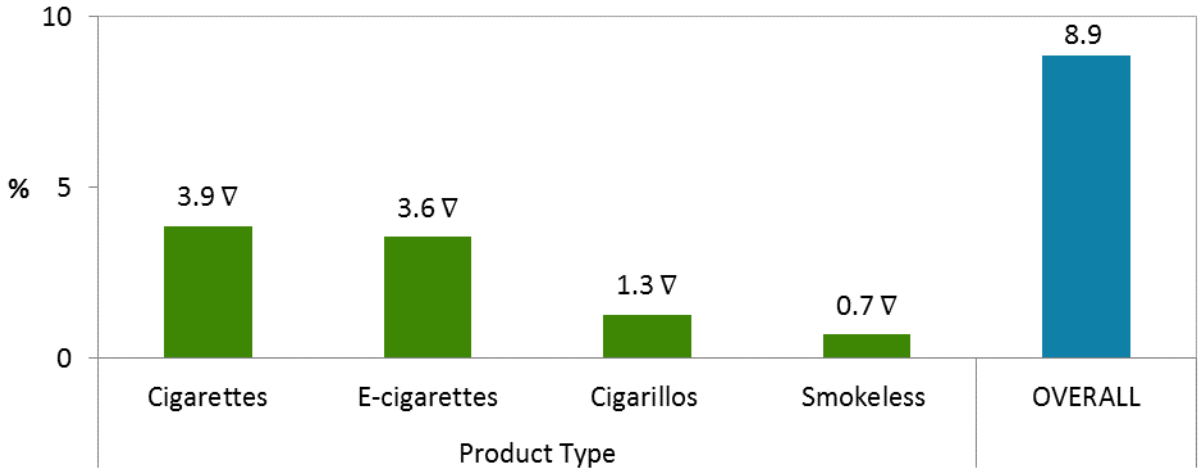
Note: ∇ = Interpret with caution: subject to high sampling variability. Smoking is defined as having smoked cigarettes in the past 30 days and having smoked 100 cigarettes in one's lifetime. Indicator definitions are provided in Appendix (Table A2). Populations are not mutually exclusive and individuals may appear in more than one category.
Source: Canadian Community Health Survey (CCHS) 2017 Share file

Tobacco Product Use among Youth

According to the 2017 CCHS, 6.8%[IC] of Ontarians aged 12–18 years reported using cigarettes, cigars, pipes, snuff or chewing tobacco, and waterpipe in the past 30 days. This represents 73,700 individuals. Inclusion of past month vaping of e-cigarettes (38,500 individuals) increases the overall prevalence of tobacco product use to 8.9% (or 95,600 individuals) (Figure 11). Since these estimates include co-use, they do not sum to the total overall population estimate of tobacco product use. In 2017, 3.9% of youth aged 12–18 years smoked cigarettes in the past 30 days[i], 3.6%[IC] used e-cigarettes, 1.3%[IC] smoked cigarillos, and 0.7%[IC] used smokeless tobacco (Figure 11).

[i]Cigarette smoking in the Tobacco Product Use section includes having smoked in the past 30 days but does not include having smoked 100 cigarettes in one's lifetime.

Figure 11: Tobacco Use among Youth, by Product Type, Ontario, 12–18 years, 2017

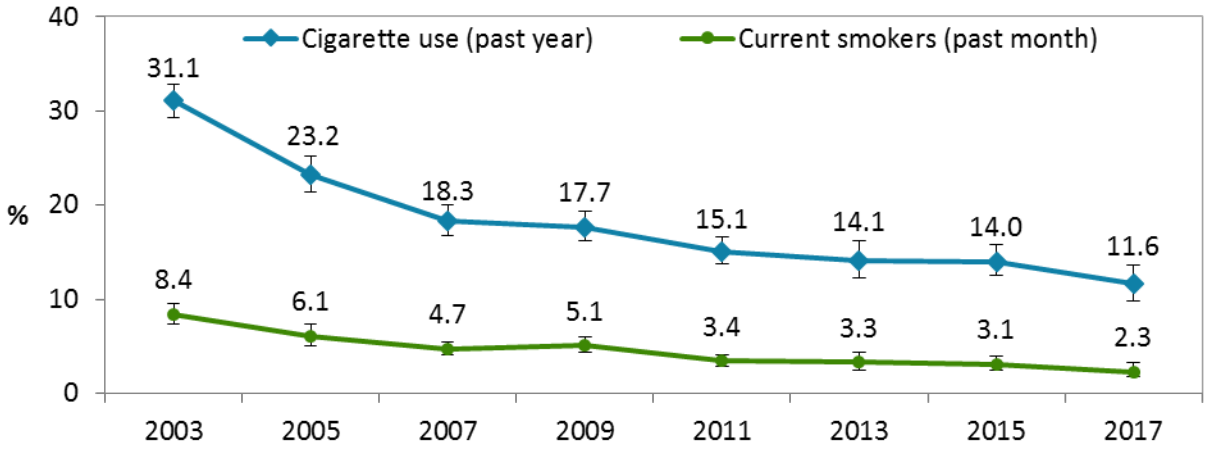


Note: Overall tobacco use was defined as use of cigarettes, e-cigarettes, cigarillos, cigars, waterpipe, pipe, and/or smokeless tobacco in the past 30 days. Data for cigar, waterpipe, and pipe were suppressed due to extreme sampling variability. ∇ = Interpret with caution: subject to high sampling variability.
Source: Canadian Community Health Survey (CCHS) 2017 Share file

Cigarette Use among Youth

According to the 2017 OSDUHS, 11.6% of students in grades 7–12 reported smoking cigarettes in the past year (Figure 12). This did not show a statistically significant change from 2013 (14.1%) and 2015 (14%). In 2017, 2.3% of students reported smoking in the past month and there was no significant change from 2013 (3.3%) and 2015 (3.1%).

Figure 12: Current Smoking and Past Year Cigarette Use, Ontario, Grades 7–12, 2003–17

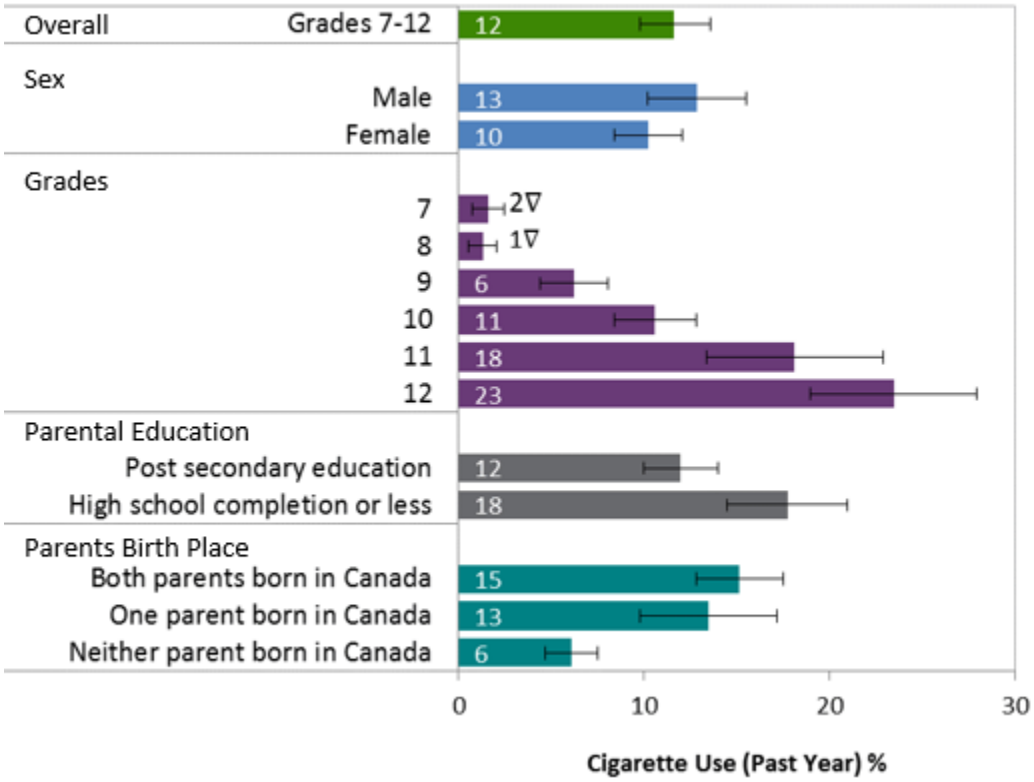


Note: Vertical lines represent 95% confidence intervals.
Source: Ontario Student Drug Use and Health Survey (OSDUHS) 2003–17

DEMOGRAPHIC CHARACTERISTICS OF YOUTH CIGARETTE SMOKERS

Among students in grades 7–12, 13% of males reported smoking a cigarette in the past year compared to 10% of females (Figure 13, OSDUHS, 2017). The current smoking rate increased with higher grades. Students whose parents' education was high school or less, reported a six percentage-point higher rate of past year cigarette smoking compared to those with parents with post-secondary education (18% vs. 12%). Students with Canadian-born parents (15%) or one Canadian-born parent (13%) reported a higher rate of past year smoking compared to those with foreign-born parents (6%).

Figure 13: Cigarette Use (Past Year), by Demographics, Ontario, Grades 7–12, 2017



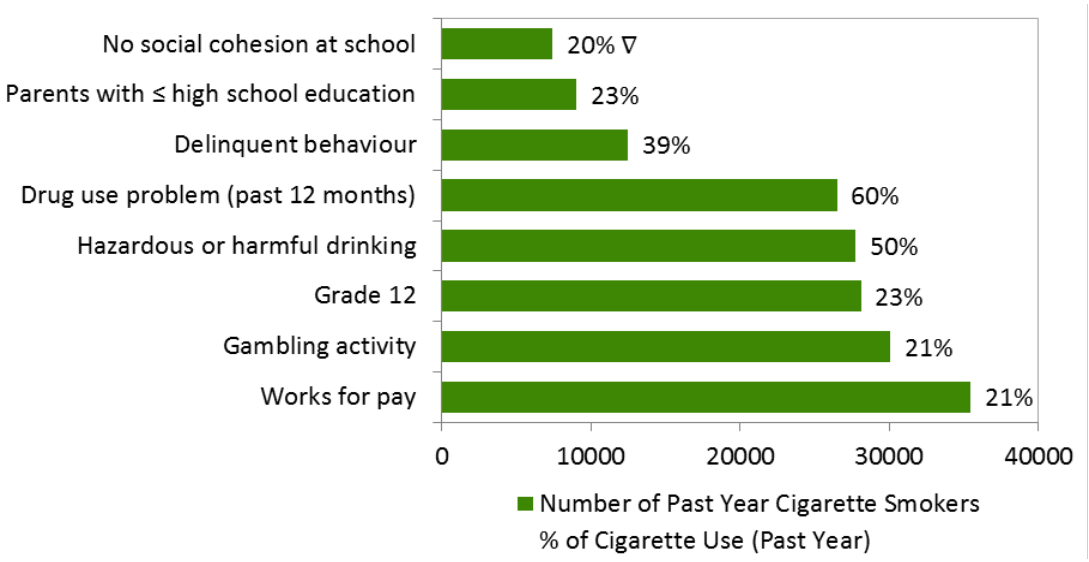
Note: ∇ = Interpret with caution: subject to high sampling variability. Vertical lines at top of bars represent 95% confidence intervals.
Source: Ontario Student Drug Use and Health Survey (OSDUHS), 2017

PRIORITY POPULATIONS AMONG YOUTH SMOKERS

In Figure 14 subpopulations with past year cigarette smoking of 20% or more are shown along with the number of smokers represented within each group. The list of indicators examined can be found in the Appendix (Table A3). In 2017, the highest rate of past year cigarette smoking was reported among those who reported a drug use problem (60%) and hazardous or harmful drinking of alcohol (50%) (OSDUHS, 2017; Figure 14).

Among youth with high rate of past year smoking (≥20%), higher numbers of smokers were represented among those who work for pay outside their home (35,500) and those who reported gambling activity in the past year (30,100) (OSDUHS, 2017; Figure 14). (Note: smokers may belong to multiple subpopulations examined in Figure 14).

Figure 14: Priority Populations with High Rate of Smoking (≥20%) and Numbers of Smokers, Ontario, Grades 9–12, 2017



Note: ∇ = Interpret with caution: subject to high sampling variability. Smoking is defined as having smoked cigarettes in the past year. Indicator definitions are provided in the Appendix (Table A3). Populations are not mutually exclusive and individuals may appear in more than one category.
Source: Ontario Student Drug Use and Health Survey (OSDUHS), 2017

Youth Prevention

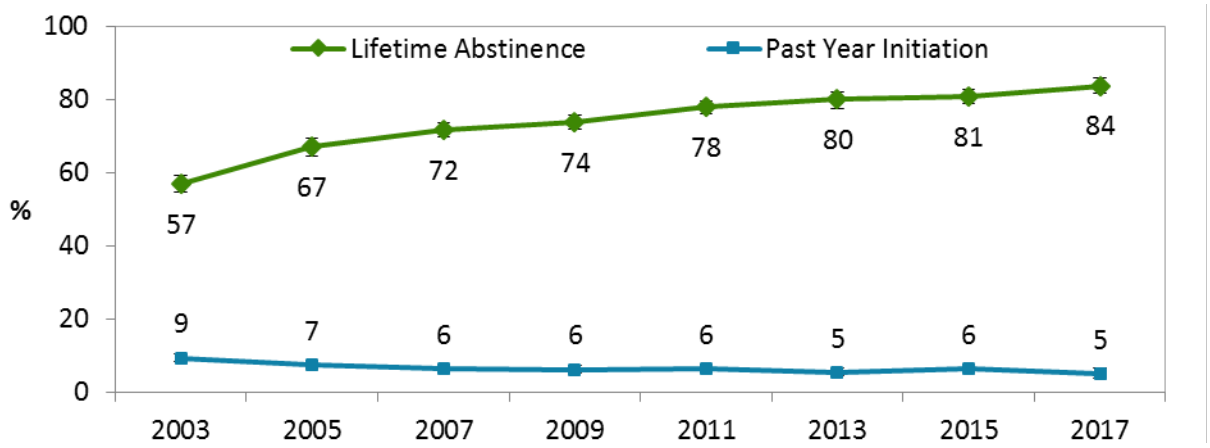
The long-term goals of tobacco control prevention are to reduce initiation of tobacco use and to increase tobacco abstinence among children, youth and young adults. In addition to the tobacco use and cigarette use information presented in previous sections, this section presents the latest findings on lifetime abstinence[i], past year initiation, and social climate among youth and young adults.

Lifetime Abstinence

In 2017, overall lifetime abstinence from cigarettes among students in grades 7–12 was 84 % (Figure 15, OSDUHS 2017). This represented a significant increase in lifetime abstinence from 2013 (80%) and 2015 (81%). Across the grades, in 2017 lifetime abstinence from cigarettes ranged from 96% in students in grade 7 and 8 to 69% of students in grade 12.

[i] "Lifetime abstinence" indicates never smoked a whole cigarette in one's lifetime.

Figure 15: Liftetime Abstinence and Use of Cigarettes for the First Time in the Past Year, Ontario, Grades 7–12, 2003–17



Note: Vertical lines represent 95% confidence intervals.
Source: Ontario Student Drug Use and Health Survey (OSDUHS), 2013–17

Past Year Initiation

In 2017, 5% of students in grades 7–12, reported use of cigarettes for the first time in the past year (Figure 15, OSDUHS 2017). This did not show any significant change from 2013 (5%) and 2015 (6%).

Social Climate

A healthy social climate is a key component for achieving and sustaining the desired outcomes of a comprehensive tobacco control program. In 2017, 90% of adults aged 18 and older viewed smoking by teenagers as highly unacceptable (CAMH Monitor, 2017), which was similar to the rates reported in 2013 (87%) and 2016 (89%) (CAMH Monitor, 2013–17). Acceptability of adults smoking cigarettes was significantly higher compared to smoking by teenagers. In 2017, 51% of Ontarians viewed smoking by adults as highly unacceptable, which did not differ significantly from rates reported in 2013 (48%) and 2016 (54%) (CAMH Monitor, 2013–17).

Ease of Obtaining Cigarettes

According to the 2017 OSDUHS, half of the students (50%) in grades 7–12 under the age of 19 believed it was fairly easy or very easy to obtain cigarettes. This was not significantly different from the 53% reported in 2015 (OSDUHS, 2015–17).

Support for Measures Related to Product Availability

In 2017, the majority of students (62%) in grades 7–12 under 19 years of age indicated their support for further restrictions on tobacco sales: 35% agreed that tobacco products should not be sold at all and 27% agreed that tobacco products should be sold in government-owned stores. Sixteen percent reported that tobacco products should be “sold in a number of places as they are now” (OSDUHS 2017).

Among adults, 44% indicated their support for further restrictions on tobacco retail locations: 17% reported tobacco products should not be sold at all and 27% reported tobacco should be sold in government-owned stores (CAMH Monitor 2017). Half of Ontarians (53%) aged 18 and older agreed that tobacco should be "sold in a number of different places as they are now" (CAMH Monitor, 2017).

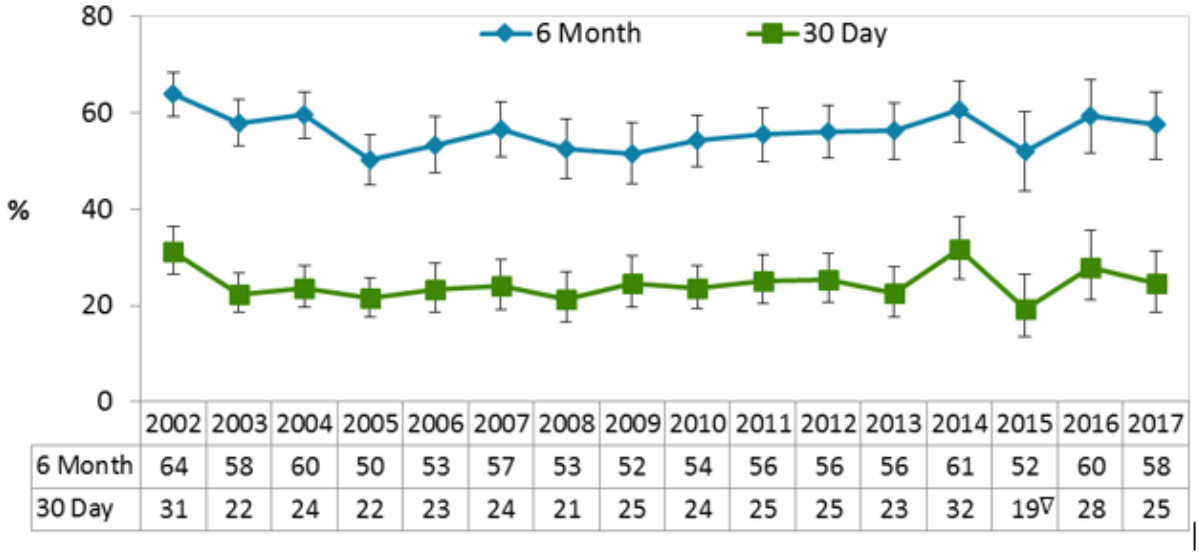
Cessation

The long-term goals of tobacco cessation are to reduce current smoking and to increase smoking abstinence among quitters. This is an important measure of success for tobacco control programs and interventions. Information regarding the reach of Ontario's tobacco control programs and interventions can be found in Chapter 5: Tobacco Control Interventions. This section presents the latest findings on quit rates, quit intentions and quit attempts from population-level surveys.

Quit Attempts and Intentions

In 2017, more than half of all adult smokers intended to quit smoking in the next six months (58%) and a quarter of them (25%) intended to quit smoking in the next 30 days (Figure 16, CAMH Monitor, 2017). There were no significant changes in 6-month and 30-day quit intentions in recent years.

Figure 16: Intentions to Quit Smoking in the Next Six Months and 30 Days, Ontario, 18+, 2002–17



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
6 Month	64	58	60	50	53	57	53	52	54	56	56	56	61	52	60	58
30 Day	31	22	24	22	23	24	21	25	24	25	25	23	32	19∇	28	25

Note: ∇ = Interpret with caution: subject to high sampling variability. Vertical lines represent 95% confidence intervals.

Source: Centre for Addiction and Mental Health Monitor (CAMH-Monitor), 2002–17

Approximately half (47%) of all adult smokers (aged 18 years and older) reported making one or more quit attempts in the past year (CAMH Monitor 2017), which was not (statistically) significantly[i] different from rates reported in 2016 (43%) and 2013 (39%) (see Technical Supplement to the Data and Trends chapter for rates from 2000–17).

Annualized Quit Rate

While a large proportion of smokers intend to quit, actually quitting is a major challenge for smokers. In 2017, 5% of past year smokers reported quitting for 30 days or longer (CCHS, 2017). OTRU's Ontario Tobacco Survey showed that 79% of quitters relapse by the following year.[14] After applying this relapse rate, it is estimated only 1% of past year smokers remained smoke-free for the subsequent 12 months.

Lifetime Quit Ratio

In 2017, 59% of Ontarians aged 12 years and older who have ever smoked (more than 100 cigarettes in their lifetime) had quit for at least 30 days at the time of the survey (CCHS, 2017). This was similar to the rates reported in 2016 (58%) and 2015 (57%).

Among all former smokers in Ontario, 4%[IC] had quit less than one year ago, 17% had quit one to five years ago, and 79% had quit more than five years ago (CCHS, 2017).

Quit Methods

Among smokers who made a quit attempt or had quit in the past two years, 65% reduced the number of cigarettes, 28%[IC] used e-cigarettes, 28%[IC] made a deal with family or friend, 23%[IC] used nicotine patch, and 14%[IC] used nicotine gum to quit smoking (CTADS, 2017).

Use of nicotine replacement therapy (NRT), including nicotine patch and gum, was reported by 26%[IC] of smokers who made a quit attempt or had quit in the past two years (CTADS, 2017). Use of stop-smoking medications, including NRT and cessation medications such as "Zyban", "Wellbutrin" or "Champix", was reported by 33%[IC] of smokers who made a quit attempt or had quit in the past two years (CTADS, 2017).

Awareness and Use of Quit Aids

In 2017, 18% of adults in Ontario were aware of a 1-800 telephone quitline. Current smokers reported significantly higher level of awareness to a 1-800 quitline (42%) compared to former smokers (13%[IC]) and never smokers (13.5%) (CAMH-Monitor, 2017).

Protection

One of the primary goals of tobacco control is to protect the population from exposure to tobacco smoke. This section presents latest findings on Ontarians exposure to tobacco smoke in public places, home, vehicles, and workplaces.

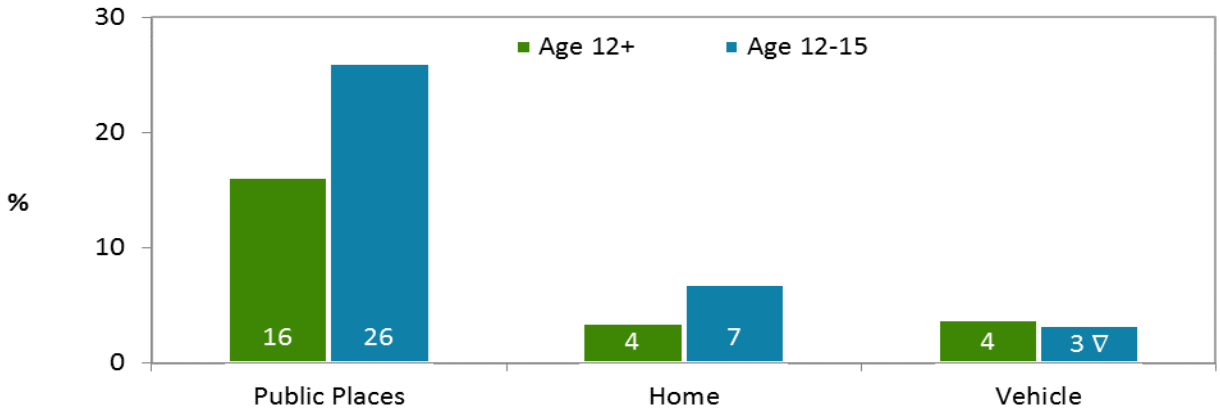
[i] The lack of statistical significance may be due to large variability around these estimates.

Exposure in Public Places

In Ontario, smoking in enclosed public places was banned on May 1, 2006.[17] Subsequently, on January 1, 2015, further restrictions came into effect, which banned smoking on restaurant and bar patios, within 20 metres of publically-owned outdoor playgrounds, and sports fields and surfaces.[17] On October 17, 2018, the *Smoke-Free Ontario Act* (*SFOA*), 2017 further prohibited smoking within nine meters of restaurant or bar patios and 20 meters within school property, children's playgrounds, publicly owned sporting areas, and community recreational facility grounds.[18] Additional restrictions exist within *SFOA*, 2017 and may also exist via municipal bylaws.

In 2016, 16% of non-smokers in Ontario reported exposure to secondhand smoke (SHS), every day or almost every day, in public places (such as bars, restaurants, shopping malls, arenas, bingo halls, bowling alleys) (Figure 17; CCHS, 2016). This has not changed significantly from 2015 (16%) and previous years (see Technical Supplement to the Data and Trends chapter for rates from 2003–16). (Note: CCHS 2017 did not survey exposure to SHS among Ontarians). Across Ontario's PHUs, exposure to SHS in public places among non-smokers (aged 12 years and older) ranged from 8% in Timiskaming to 21% in City of Toronto (CCHS, 2015–16) (see Technical Supplement to the Data and Trends chapter for rates across PHUs).

Figure 17: Non-smokers' Exposure to Secondhand Smoke at Home, Public Places, and Vehicles (Every Day or Almost Every Day), by Age, Ontario, 2016



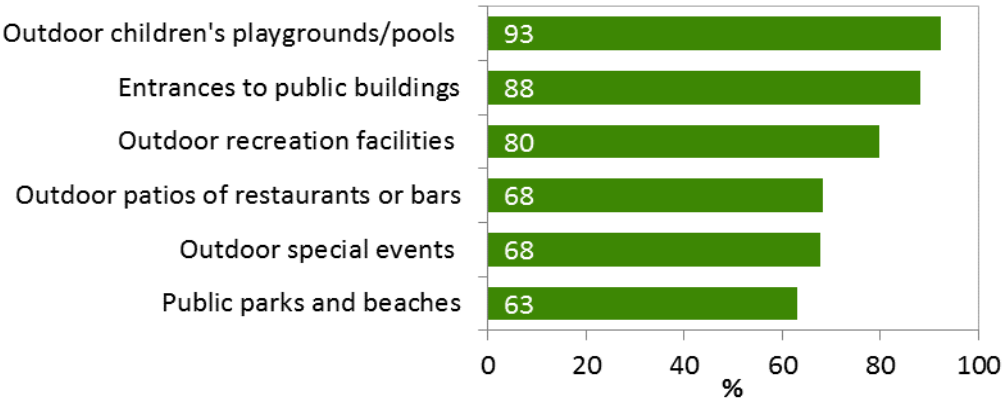
Note: ∇ = Interpret with caution: subject to high sampling variability; Public places include bars, restaurants, shopping malls, arenas, bingo halls, and bowling alleys; 2017 CCHS did not measure exposure to secondhand smoke in Ontario
Source: Canadian Community Health Survey (CCHS) 2016 Share file

Youth non-smokers aged 12–15 years reported much higher rate of exposure to SHS in public places compared to all Ontarians aged 12 years and older (26% vs. 16%) (Figure 17; CCHS, 2016). This was similar to the rate reported by youth in 2015 (27%).

PUBLIC OPINION ABOUT SMOKING IN OUTDOOR PUBLIC PLACES

According to the 2017 CAMH Monitor, 80% or more of adults in Ontario were supportive of smoking bans in children's playground/pools (93%), entrances to public buildings (88%), outdoor recreational facilities (e.g., sports fields, stadiums, and entrances to arenas) (80%) (Figure 18). Over 60% of Ontario's adults were supportive of smoking bans in outdoor patios of restaurant or bars (68%), outdoor special events (e.g., concerts, festivals or parades) (68%), and public parks and beaches (63%) (Figure 18). Adult current smokers aged 18 years and older reported a significantly lower rate of support for smoking bans in parks and beaches (31%) compared to former smokers (59%) and never smokers (74%) (CAMH-Monitor, 2017).

Figure 18: Agreement that Smoking Should be Banned in Outdoor Public Places, Ontario, 18+, 2017



Source: Centre for Addiction and Mental Health Monitor, 2017

Exposure in Vehicles

Ontario banned smoking in vehicles with children under the age of 16 on January 21, 2009.[17] In 2016, 3%[IC] of young non-smokers (19,600) aged 12–15 years of age reported exposure to SHS every day or almost every day, in a car or other private vehicle (Figure 17; CCHS, 2016). This was similar to the rate reported in 2015 (4%[IC]) (CCHS, 2015). Among non-smoking Ontarians aged 12 years and older, exposure to SHS in vehicles was reported at 4% in 2016 (Figure 17; CCHS, 2016) and the same rate (4%) was reported in 2015 (CCHS, 2015) (see Technical Supplement to the Data and Trends chapter for rates from 2003–16).

Exposure in Home

In 2016, 4% of non-smoking Ontarians aged 12 years and older reported exposure to SHS in their home every day or almost every day (Figure 17; CCHS, 2016). The same rate was reported in 2015 (4%) (see Technical Supplement to the Data and Trends chapter for rates from 2003–16).

HOUSEHOLD SMOKING RESTRICTIONS

In 2017, 7.3% of households in Ontario allowed cigarette smoking inside their home and 4.3% of households reported at least one person smoking cigarettes inside the home every day or almost every day (CTADS, 2017). Details regarding household vaping restrictions are provided in Chapter 6: Electronic Cigarettes Exposure in multi-unit housing (MUH).

According to the 2016 CAMH-Monitor, 14%[IC] of Ontario adults (aged 18 years and older) living in MUH were exposed to SHS drifting between units at least once in the past month. This was similar to the rate reported in 2015 (15%[IC]) (CAMH Monitor, 2015–16).[14]

PUBLIC OPINION ABOUT SMOKING IN MULTI-UNIT HOUSING

In 2017, 82% of Ontario adults (aged 18 years and older) believed that smoking should not be allowed inside MUH including apartment buildings, rooming houses and retirement homes (CAMH Monitor, 2017).

Exposure at Work

In Ontario, smoking in enclosed workplaces (including workplace vehicles) was banned on May 1, 2006.[17] In 2017, 9%[IC] of adult workers (aged 18 years and older) were exposed to SHS indoors at work or inside a work vehicle for five or more minutes in the past week (CAMH Monitor, 2017). This did not show any significant change from 2013 (10%[IC]) and 2016 (11%[IC]) (CAMH Monitor, 2013–17).

Risk Perception about Secondhand and Thirdhand Smoke

In 2017, 84% of Ontarians aged 18 years and older believed that exposure to SHS posed a moderate or great risk of physical or other harm. Over half of adults in Ontario (56%) believed thirdhand smoke (i.e., the residual nicotine and other chemicals left on indoor surfaces by tobacco smoke) posed a moderate or great risk of physical or other harm (CAMH-Monitor, 2017).

Co-Use of Tobacco and E-Cigarettes

Ever use of e-cigarettes among Ontarians has increased significantly since 2013. In 2017, 13% of Ontarians aged 15 years and older reported ever use of e-cigarettes. This was a significant increase compared to 2013 (6%), but not significantly different from 2015 (10%) (CTADS, 2013–17). In 2017, half of all current smokers in Ontario (aged 15 and older) reported using an e-cigarette in their lifetime (53%) (CTADS, 2017). In 2017, half of ever e-cigarette users (49%) in Ontario, aged 15 years and older, were current smokers (CTADS, 2017). Among Ontario students in grades 7–12, 64% of past year cigarette smokers reported using an e-cigarette in the past year (OSDUHS, 2017). The e-cigarette market in Ontario has undergone rapid changes in recent years. Details regarding the recent changes, including data and trends related to e-cigarette use, are provided in Chapter 6: Electronic Cigarettes.

Co-Use and Dual-Use of Tobacco and Cannabis

Cannabis is a psychoactive drug that comes from preparations of the cannabis sativa and cannabis indica plant and is used for recreational and medical purposes.[19] In Ontario, past year cannabis use has increased more than two fold among adults between 1996 (8.7%) and 2017 (19.4%).[20] Among Ontario students in grades 7–12, 19% used cannabis in 2017, which has significantly decreased from 1999 (28%).[21]

On October 17, 2018, recreational use of cannabis was legalized in Canada through the *Cannabis Act*. In Ontario, the minimum age to buy, use, possess and grow recreational cannabis is 19 years and Ontarians are allowed to smoke recreational cannabis where smoking tobacco is permitted.

Cannabis is typically inhaled as smoke and can be combined with tobacco through co-use and dual-use.[19] Information on the co-use and dual-use of tobacco and cannabis is included in this report for several reasons: synergies in use of these two substances; long-term trends of increases in cannabis use; and, the recent legalization of cannabis use in Canada.

Trends in Tobacco and Cannabis Use

Most cannabis users report a history of cigarette smoking.[22] In fact, an association between tobacco and cannabis use has been observed where the use of one substance is associated with increased use of the other.[23] The health effects of smoking tobacco and cannabis in combination or the co-use of these substances can cause compounded and greater health effects than when used alone.[23,24]

The legalization of cannabis could have adverse impacts on tobacco use and therefore requires monitoring.[25] At the time of writing, population level data post-legalization of cannabis was not available. Thus, we provide the most current information available on co-use and dual-use of tobacco prior to the legalization of cannabis.

CO-USE

The co-use of tobacco and cannabis involves using tobacco during the same time period as cannabis. Among students in grades 7–12, 79% of past year cigarette smokers also reported smoking cannabis in the past year (OSDUHS, 2017). This did not show a significant change from 2015 (81%).

In 2017, 49% of adult (aged 18 and older) current smokers reported using cannabis in the past year (CAMH Monitor, 2017). This was a 14 percentage point increase compared to 2016 (49% vs. 35%). It is important to note that past-year users of cannabis may include regular and occasional users.

DUAL-USE

Dual use is defined as mixing both cannabis and tobacco into a blunt, joint or spliff (i.e., cannabis and tobacco rolled into a paper). In 2016, approximately a third of past year adult cannabis users (32%) in Ontario mixed cannabis with tobacco (CAMH Monitor, 2016). This did not show a significant difference from 2015 (31%).

Chapter 3: Tobacco Product Supply and Demand

Tobacco is the leading preventable cause of death in Ontario accounting for 16,000 deaths per year with an estimated annual economic burden of almost $7.0 billion in direct and indirect costs in 2018.[2] Reducing tobacco consumption is essential to improving the population's health and reducing health care costs. Strategies to reduce tobacco consumption include measures that impact the supply and demand for tobacco by addressing: price and taxation; illicit sales; production, distribution and sale of tobacco products (including in the retail environment); product and package innovation; and, promotional activities. This chapter summarizes progress on key interventions that impact on the supply and demand for tobacco products, with additional details provided in the Technical Supplement to the Tobacco Product Supply and Demand chapter.

Several leading organizations and jurisdictions have recognized the importance of monitoring tobacco industry activities to provide context for interpreting outcomes of tobacco control programs and to inform tobacco control initiatives.[14,26-29] While industry monitoring is out of scope of this report, information about specific industry activities is mentioned where relevant to the goal of reducing tobacco consumption to improve health. Tobacco industry activities include factors responsible for producing, supplying, marketing and promoting commercial tobacco.[14,30] These may include direct efforts from tobacco companies, but may also include efforts by other groups that directly or indirectly encourage tobacco use.

Price and Taxation

Increasing cigarette price through taxation is an effective policy measure where on average, a 10% increase in tobacco price results in an approximate 3–5% reduction in adult cigarette consumption and 7% to 9% reduction in children and adolescents smoking initiation[12] and a subsequent decrease in smoking-attributable deaths.[6,12,14,31-35] In addition, higher tobacco prices increase the likelihood of cessation among smokers and prevention of initiation of tobacco use, especially among youth and young adults.[12]

Ontario tobacco tax rates, as set by the provincial government, were last changed on March 29, 2018. These include $4.62 for a pack of 25 cigarettes, and $36.95 for a carton (See Table 3-1 in the Technical Supplement to the Tobacco Product Supply and Demand chapter).[36] No tax increases are scheduled to be implemented in 2019.[37]

Ontario's total tobacco taxes (federal and provincial) in 2018 were $73.40 per 200 cigarettes, with other Canadian provinces and territories ranging from $58.24 in Québec to $98.94 in Manitoba. (See Table 3-2 in the Technical Supplement to the Tobacco Product Supply and Demand chapter).[38] As a percentage,

total tobacco taxes in Ontario accounted for 67% (a 2.3% increase from 2017) of the retail price of a carton of 200 cigarettes.[38]

Illicit Sales

Illicit tobacco sales circumvent tobacco control efforts. Factors associated with contraband tobacco use include: easy access; misperceptions that purchasing lower-cost, tax-reduced cigarettes on First Nations' reserves is legal; insufficient enforcement and penalties; and, organized criminal activity.[39] Policies introduced to tackle cigarette contraband from the mid-2000s to late 2000s, at both federal and provincial levels, may have dampened the demand for contraband cigarettes (See Table 3-3 in the Technical Supplement to the Tobacco Product Supply and Demand chapter).[40]

OTRU's previous report provided information on seizures of illicit tobacco products by the Royal Canadian Mounted Police for Ontario and the Central region (Ontario and Québec),[14] as well as Health Canada compliance monitoring data.[41] More recent data was not available from either source at the time of report writing.

In 2017, 17%[IC] of current smokers in Ontario aged 15 years or older had purchased cigarettes on a First Nations' reserve in the past six months (CTADS, 2017). This is similar to results from 2015 (16%[IC]) (CTADS, 2015). See Figure 3-1 in the Technical Supplement to the Tobacco Product Supply and Demand chapter.

Agriculture and Production

Number of Farms and Production

According to Statistics Canada, the overall number of tobacco farms in Ontario decreased from 1,021 in 2001 to 195 in 2016.[42] In 2018, Ontario had 211 tobacco growers compared with 219 in 2017 (See Table 3-4 in the Technical Supplement to the Tobacco Product Supply and Demand chapter).[43] Although the total acres approved to be grown for tobacco increased in 2018 by 439 acres, the expected kilograms to be grown decreased by 304,471 kg.[43]

Distribution and Sales

The three largest tobacco companies in Canada are Imperial Tobacco Canada Limited (Imperial Tobacco), Rothmans, Benson & Hedges Incorporated (RBH), and JTI-Macdonald Corporation (JTI). In 2017, Imperial Tobacco had the highest market volume share (52%), followed by RBH (32%) and JTI (8%), with the remaining market share split between several smaller companies, the largest of which was Grand River Enterprises.[44] Total sales of cigarettes in Ontario decreased from 10.3 billion cigarettes in 2016 to 9.8 billion cigarettes in 2017 (See Figure 3-2 in the Technical Supplement to the Tobacco Product Supply and Demand chapter). For more information on sale trends of cigarettes and other

[IC] Interpret with Caution (IC): Subject to high sampling variability.

tobacco products, including cigars, fine-cut tobacco, pipe tobacco, and smokeless tobacco, see the Distribution and Sales section in the Technical Supplement to the Tobacco Product Supply and Demand chapter.

Retail Availability

Tobacco retail outlet density has been shown to be significantly associated with tobacco use.[45] Strategies to reduce density include prohibiting where tobacco can be sold and introducing disincentives such as licencing fees to sell tobacco products. Under Ontario's *SFOA*, 2017 it is illegal to sell tobacco products via vending machines, and at pharmacies, long-term care homes, hospitals, and psychiatric facilities.[46] It is also illegal to sell tobacco products on university and college campuses, on property owned or leased by post-secondary institutions or student unions, and in schools, child care centres and places where home child care is provided (effective January 1, 2015).[46] Table 3-5 in the Technical Supplement to the Tobacco Product Supply and Demand chapter shows the locations where selling tobacco is prohibited by province/territory.

Tobacco Retail Outlets

As of April 2018, there were 9,510 retail outlets that sell tobacco,[47] primarily in corner/convenience stores, gas and grocery stores, which is a decrease of 215 retailers that sold tobacco as of June 2017.[14] A recent study in Ontario found urban neighbourhoods with the highest deprivation were approximately three times more likely to have a tobacco retail outlet in their neighbourhood.[45] This suggests that tobacco retail density tends to be higher in more vulnerable neighbourhoods (e.g., lower socio-economic status (SES) neighbourhoods).[45]

Retail Licencing

Under the *Tobacco Tax Act*, 1990 tobacco retailers in Ontario are required to possess a no-cost permit to sell tobacco products.[48] In addition, 14 Ontario cities (e.g., Hamilton, Ottawa and Kingston) require payment of an annual fee for tobacco licenses.[31,49] As of July 2018, these fees ranged between $40 in Cornwall to $893 in Ottawa.[49]

Product and Package Innovation

The introduction of new tobacco products (e.g., heated tobacco products, vape products, etc.), as well as changes to existing products (e.g., flavours, filter technology, etc.), may serve to encourage rather than decrease tobacco use.[14] New tobacco products, for example, vape pod products containing nicotine salts have grown rapidly in popularity, (see Chapter 6: Electronic Cigarettes for more information). Potential impacts include encouraging people who might otherwise never have considered smoking to use tobacco products and maintaining, at least in part, the nicotine dependence of smokers who would otherwise have quit altogether.[14]

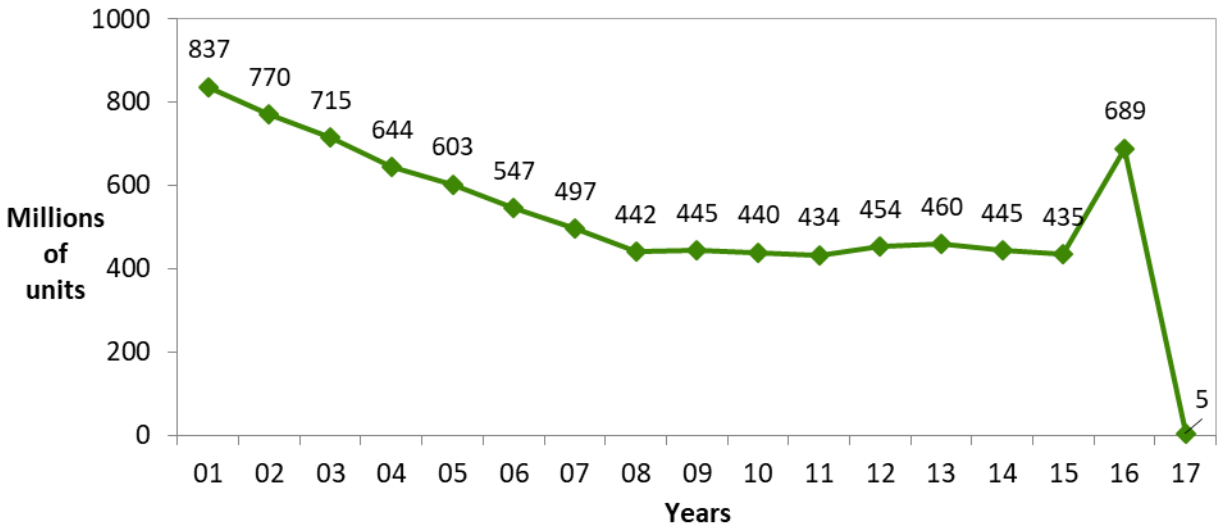
Banning Flavoured Tobacco Products – Focus on Menthol in Cigarettes

Flavoured tobacco products encourages uptake by youth and makes tobacco use more palatable for adult smokers.[50,51] The issue of e-cigarette flavours is addressed in the "Flavours" sub section of Legislation and Regulation in Chapter 6: Electronic Cigarettes.

As of January 1, 2016, Ontario prohibited the sale and distribution of flavoured tobacco products, and as of January 1, 2017, Ontario implemented a full menthol cigarette ban. At the federal level, a menthol ban was included in the *Tobacco and Vaping Products Act* (*TVPA*) on November 19, 2018.[4] Prior to the legislation in 2015, 35% of Ontarians aged 15 years and older reported using menthol cigarettes in their lifetime and 1.6%[IC] reported using menthol cigarettes in the past 30 days (CTADS, 2015). After the legislation, past 30-day use of menthol among Ontarians was so low that the measure was unreliable to publish (CTADS, 2017).

Flavour bans can positively impact cessation efforts. In a study that analyzed the association of the menthol ban with smoking behaviour, Chaiton et al. found that 40% of menthol smokers attempted to quit smoking at one month after the ban's implementation, which is higher than the 10% of participants that reported intentions of quitting smoking before the ban was implemented.[52] Similarly, the sales of menthol cigarette units in Ontario show a steep decline in 2017, compared to 2016 before the implementation of the total menthol ban (Figure 19).

Figure 19: Sales of Menthol Cigarettes in Ontario, 2001–17



Note: On January 1, 2017, Ontario implemented a full ban on menthol cigarettes
Source: Health Canada, 2017 (As reported by tobacco companies under the tobacco reporting regulations)[53]

The menthol ban eliminated traditional menthol cigarettes and menthol capsule cigarettes from the market.[54] However, new filter technologies that are separate from the cigarette are still allowed (See Table 3-6 in the Technical Supplement to the Tobacco Product Supply and Demand chapter for more details on legislation on flavours of tobacco products). A recent study by Borland et al. (2018) analyzed

pre- and post-ban menthol products in Ontario.[54] Results suggest efforts were made to maintain menthol smokers in Ontario by pre-ban promotion of menthol capsule cigarettes (see Figure 19) and directing smokers to non-menthol alternatives whose packaging both in text and in colour connoted menthol-like qualities.[54]

Heated Tobacco Products

Heated tobacco products (HTPs) are battery-powered electronic devices that heat processed tobacco instead of combusting it to produce a nicotine-infused aerosol, which is then inhaled by the user through the mouth.[55,56] The heating systems may be in the form of an external heat source that is used to aerosolize nicotine from specially designed tobacco sticks, also known as 'HeatSticks' (used in the iQOS brand), or a heating chamber that aerosolizes nicotine directly from tobacco leaf. (e.g., Ploom, Pax).[55-57] In Ontario, HTPs were available on the market as of early 2017.[58] Independent studies report that some degree of combustion does take place with these products, although they are marketed as non-combusting.[59,60]

HTPs are regulated as tobacco products under the federal *TVPA*, 2018.[61] Within the *Act*, Health Canada classifies HTP devices as "manufactured tobacco other than cigarettes and tobacco sticks."[56] As such, they do not fall under the Tobacco Products Labelling Regulation, which only applies to cigarettes and little cigars, and they are not required to have graphic warnings on 75% of the package.[62] However, they are subject to marketing bans including point-of-sale display and promotion bans.[61] HTPs do not require pre-market approval in Canada.[58]

In Ontario, two HTPs are being sold: iQOS (by Rothmans, Benson and Hedges, an affiliate of Philip Morris International)[58] and Ploom by Japan Tobacco International.[14] Additionally, i-glo is being sold by British American Tobacco (the parent company to Imperial Tobacco Canada) in a variety of test markets (e.g., Vancouver), however, it is not currently sold in Ontario.[14] A cross-sectional survey of Ontario smokers (n=727), found that 10% of the respondents were aware of heated tobacco products, and 3% had ever used them.[63]

E-Cigarettes

The *TVPA*, 2018 permits nicotine in e-cigarettes enabling the entry of multinational tobacco corporations which have recently either acquired or are introducing products into the Ontario market such as Juul, Vype and Logic.[61] These products are nicotine salt based as compared to freebase nicotine. The nicotine content in most freebase nicotine e-cigarettes varies from 0 to 30 mg/ml,[64,65] with nicotine salt based products such as Juul containing higher nicotine content per 'pod', which is equivalent to a pack of cigarettes (e.g., 40 mg per pod based on 59mg/ml).[66-69] As of January 2018, Juul is estimated to have 76% of the United States (US) e-cigarette retail convenience market.[70]

For more information about E-cigarettes, please see Chapter 6: Electronic Cigarettes.

Plain and Standardized Packaging

Plain and standardized packaging means the use of a standard size, shape and material, with no logos, colours, or advertising on, inside or attached to the package (e.g., inserts and onserts).[71] Among Ontario adults surveyed in 2017, there was high agreement that cigarettes should be sold in plain white packages: 86% of never smokers, 75% of former smokers, and 70% of current smokers (TIMS, 2017).[15]

The *TVPA* was enacted in May 2018 (a significant amendment to the *Tobacco Act*, 1997 and the *Non-Smokers' Health Act*, 1985).[72] The proposed regulations include standardizing the overall appearance of tobacco packaging (including colour and font) and requiring cigarette packages to be a standard size, shape and have a standard opening (e.g., slide and shell).[73]

Health Warning Labels

The 2012 federal Tobacco Products Labeling Regulations (SOR/2011–177) addresses the use of graphic health warning messages, labels with toxic emissions statements, interior health information messages and inclusion of a phone number to a toll-free quitline.[74] The regulation states that graphic health warning messages must cover 75% of the front and back of cigarette and little cigar packages. Labels must include easy-to-understand toxic emissions statements and interior health information messages; and cigarette packages must include a phone number to a toll-free quitline (e.g., smokers' helpline (SHL)).[74]

Regularly updating the content and styles of tobacco health warning labels is used to make the warnings more noticeable, memorable, and engaging.[75] As of 2018, Health Canada is consulting with Canadians on the following components related to health warning labels: labelling on cigarettes, labelling content and design, health information messages, toxic statements (i.e., toxic emissions statements and toxic constituents statements), connecting labelling elements, quitline information, labelling size and placement, labelling for all tobacco products that do not currently require labels, and labelling rotations.[75]

The federal government is considering a requirement for individual cigarettes to carry health warning labels as part of an effort to find new ways to reduce smoking levels. Research from the United Kingdom has demonstrated that the cigarette stick is an important communications tool, and that dissuasive cigarettes with a warning label, such as 'Smoking Kills', may help to reduce the desirability of cigarettes.[76]

Advertising and Promotion

According to the *TVPA*, 2018, "no person shall promote a tobacco product by means of advertising that depicts, in whole or in part, a tobacco product, its package or a tobacco product-related brand element or that evokes a tobacco product or a tobacco product-related brand element".[61] However, the promotion of tobacco products can still occur via publications that are addressed and sent to an adult who is identified by name,[61] as well as through industry-incentives, social media marketing and the existence of smoking in movies. A list of Canada's regulations for advertising and promotion of tobacco

products at retail are summarized in Table 3-7 in the Technical Supplement to the Tobacco Product Supply and Demand chapter.

Incentives & Social Media Marketing

In 2017–18, several of Canada's largest cigarette manufacturers used retail reward programs such as trips, rebates and other offers.[77] These retailer incentive programs allowed manufacturers to keep prices artificially low by controlling profit margins and to have control over pricing of discount brands enabling them to use price segmentation strategies.[77] Area-level differences in tobacco pricing exist as tobacco product prices have been found to be lower in low SES neighbourhoods and when the percentage of youth in the neighbourhood is high.[78] With the enacting of the *TVPA* on May 23, 2018, manufacturers are prohibited from incentivizing retailers with gifts, cash rebates or bonuses.[61]

Tobacco companies and social media are international in scope, and social media influencers can be incentivized to advertise tobacco products. For example, social media influencers in Europe have reported receiving incentives for cigarette brand posts, which include money and free cigarettes, free trips, and training on how to be a successful influencer.[79]

A survey conducted in 2015 by Campaign for Tobacco-Free Kids, interviewed young social media influencers and reviewed social media platforms like Instagram, Facebook and Twitter in 40 countries, including Canada, by looking for hashtags that were connected to tobacco cigarette brands.[79] Young people with significant numbers of online followers reported being provided with training and compensation to post photos featuring various cigarette brands.[80] Such campaigns have significant reach; for example, it was estimated that tobacco social media campaigns have been viewed more than 25 billion times worldwide, including 8.8 billion times in the US.[79]

Similar marketing strategies incorporating social media and use of social influencers have been used by the e-cigarette companies, for example Juul, whose market share had risen to about 40% of e-cigarette retail convenience market in the US in 2017[69] and has reportedly increased to 76% in 2018.[70] Juul became available in the Canadian marketplace in August 30, 2018.[81]

Smoking in Movies

The tobacco advertising is intended to create positive imagery about a product, generate positive product associations or connect the product with desirable traits, activities or outcomes.[82] Portrayals of tobacco use onscreen often include images of tobacco product brand names and logos and rarely show the health consequences of smoking.[83] Higher exposure to onscreen tobacco has been demonstrated to increase the uptake of smoking among youth, thus undermining prevention efforts.[84] In 2017, there were 132 top grossing movies in Ontario, of which 54% contained tobacco imagery.[85] Eight-five percent of the movies with tobacco content were youth-rated in Ontario, which is much higher compared to their US counterparts (42%).

For more information please see 'Smoke-Free Movies' in the Technical Supplement to the Interventions chapter.

Chapter 4: Tobacco Control Infrastructure

A key element of comprehensive tobacco control programming is infrastructure. The U.S. Centers for Disease Control and Prevention state that "program infrastructure is the foundation that supports program capacity, implementation, and sustainability."[5] Functioning tobacco control program infrastructure includes strong partnerships, leadership, data utilization, managed resources, and responsive planning.[5] Evidence from the evaluation of a multi-year tobacco control initiative across the US showed that jurisdictions "that developed stronger program infrastructure to support the implementation of evidence-based strategies had lower cigarette consumption."[5]

Over the period of April 1, 2017 to March 31, 2018, Ontario continued a longstanding system of enabling supports for comprehensive tobacco control that included: general; capacity building and knowledge exchange; leadership; and work with Indigenous partners. This was provided through a variety of stakeholders, from government, government agencies, academic, and non-governmental organizations, working together to inform policies and deliver programs and services.

The tobacco resource centres provided a range of general support, knowledge exchange and capacity building-related activities. Fiscal year 2017–18 was the final year of government funding for five tobacco resource centres: OTRU, Program Training and Consultation Centre (PTCC), Smoking and Health Action Foundation (SHAF), Training Enhancement in Applied Cessation Counselling and Health (TEACH) Project, and Youth Advocacy Training Institute (YATI). In April 2018, PHO was asked to assume some of the functions and deliverables of these resource centres, including the production of this report.

In this chapter, we provide an overview of the infrastructure initiatives delivered in the 2017–18 fiscal year. The initiatives are presented in the following thematic groupings: general support, capacity building and knowledge exchange, leadership, and Indigenous partners. Greater detail of the work carried out by the tobacco control resource centres and other organizations or groups that make-up the comprehensive tobacco control infrastructure in Ontario can be found in the Technical Supplement to the Infrastructure chapter. In addition to the aforementioned resource centres, information is also provided for: the Indigenous Tobacco Program (ITP) as part of the Indigenous Cancer Control Unit at Cancer Care Ontario; the Ottawa Model for Smoking Cessation® (OMSC®); PHO; local PHUs; the Registered Nurses' Association of Ontario (RNAO); TCANs; and, You Can Make It Happen.

General Support

General support to provide current research findings, evaluation, monitoring, and surveillance data is important to inform policy and practice and implementing evidence-based programs and services. These supports were provided by OTRU, PTCC, and SHAF. For example, OTRU produced an annual tobacco strategy monitoring report, developed and maintained a database on key tobacco control surveillance indicators (TIMS), and conducted many research and evaluation projects. OTRU also disseminated the findings from these projects to knowledge users by producing peer-reviewed articles and special reports. PHO released the SFO-SAC report providing a comprehensive assessment of the tobacco control

interventions that would have the greatest impact on reducing tobacco use and its associated burden in Ontario.[12] In addition, SHAF provided a variety of consultations on prevention- and protection-related training, technical assistance and knowledge exchange to Smoke-Free Ontario partners and monitored tobacco control policies through their searchable database of smoke-free laws across Canada.

Capacity Building and Knowledge Exchange

The right evidence, tools, resources, knowledge and skills, and ongoing opportunities for knowledge and skills development to build capacity are needed in order to effectively implement the pillars of comprehensive tobacco control (i.e., prevention, protection, and cessation). Sufficient capacity ensures "program sustainability, efficacy, and efficiency" which is supported by strong leadership and collaboration.[5] A system of supports using the latest research, knowledge, monitoring and surveillance information and data, and practice-based knowledge helps those working in tobacco control to inform practice and policy decisions.

Capacity building and knowledge exchange can take different forms such as conferences, training sessions, and e-learning (e.g., online courses and webinars). Across Ontario, there were various tobacco-related organizations that provided these types of supports typically focussing on specific aspects of tobacco control. These organizations included: OTRU, SHAF, OMSC®, RNAO, TEACH, YATI, and the 'You Can Make It Happen' initiative of Ontario PHUs in partnership with SHL. For example, RNAO delivered training workshops in tobacco cessation to nurses and other health care practitioners, provided online e-learning courses on its website, and engaged with schools of nursing in the province to disseminate and implement best practice tobacco cessation guidelines. Additionally, PTCC's website had a webpage that housed all project resources and training materials for the Media Capacity Building Project and provided many training workshops related to the three pillars (cessation, prevention, and protection) that were tailored to meet the needs of local PHUs and their community partners and agencies. An example of OTRU's work in this area included their knowledge exchange activities for tobacco control stakeholders by developing and disseminating data tools, as well as providing training through an online course about tobacco and public health.

Leadership

Coordination and leadership, along with the dedicated resources to foster collaboration among all levels of government and local communities, are important to develop and implement a strong plan or strategy.[5] A central part of the tobacco control leadership in Ontario is the health ministry that coordinates implementing the *SFOA*, 2017, maintaining the Tobacco Inspection System database, and creating and promoting provincial-wide tobacco-related mass media and social marketing campaigns. The TCANs and PHUs provide respectively, regional and local leadership, coordination and implementation for programs, services, and policies in their communities. For youth and young adult smoking prevention, an initiative of the TCANs is to provide a forum for leaders to collaborate, develop, implement and evaluate a comprehensive, coordinated, evidence-informed approach to reduce tobacco use among young adults in Ontario. The Ontario Tobacco Control System Committee provided system leadership and partnership and was comprised of MOHLTC staff, TCAN coordinators, tobacco control

scientists, public health leaders, and representatives from the tobacco control resources centres, including OTRU, and non-governmental organizations. This Committee has not met since 2017.

Indigenous Partners

Establishing partnerships with Indigenous leaders and communities is important to support approaches to address high rates of smoking among Indigenous populations without impinging on the use of tobacco for traditional or ceremonial purposes. To effect change, it is important for there to be self-determination and community engagement, taking into account local contexts.[86,87] The ITP is a key component of the Ontario comprehensive tobacco control landscape, as part of the Indigenous Cancer Control Unit at Cancer Care Ontario, which works with First Nation, Inuit, Métis, Urban Indigenous and non-Indigenous partners to reduce and prevent commercial tobacco addiction.

Chapter 5: Tobacco Control Interventions

Comprehensive Tobacco Control

A comprehensive tobacco control approach across the pillars of prevention, cessation and protection is important to prevent and reduce exposure to tobacco and increase the number of smokers who successfully quit.[5,12] Further, policies that address tobacco product supply and demand (see Chapter 3: Tobacco Product Supply and Demand), as well as program infrastructure to support the capacity, implementation, and sustainability of tobacco control programming (see Chapter 4: Tobacco Control Infrastructure), are fundamental to a comprehensive tobacco control approach.[12]

Tobacco control interventions that are coordinated and part of a comprehensive strategy have the opportunity for greater impact across the pillars.[12] A coordinated and comprehensive approach implies that the various stakeholders are working together using integrated approaches (e.g., educational, clinical, regulatory, economic, and social strategies).[12] A comprehensive strategy uses a combination of population-wide and individual or targeted interventions to reduce smoking rates among the general population and within priority populations or those who bear an undue burden from tobacco.[12] Taking an approach focusing on population-based programs and interventions tailored or adapted to priority populations can have a greater impact in reducing overall smoking prevalence and tobacco-related health inequities (see Chapter 2: Data and Trends for a list of populations with high rates of smoking).[88-90] The SFO-SAC Report (2016) has identified effective interventions within and across each of the pillars.

In Ontario, there are a variety of tobacco control interventions that range from population health approaches to interventions for individual tobacco users. There are broad provincial policies that reach large segments of the population, for example, tobacco taxes, smoke-free policies, and advertising bans. These policies are designed to reach large segments of the overall population while also further supporting specific sub-populations that are at higher risk of tobacco use and its impacts. For instance, price and taxation has been proven effective in reducing the demand for tobacco products, reducing the prevalence, initiation and uptake of tobacco use among young people and increasing smoking cessation.[12]

In addition to broad provincial policies, interventions and programs implemented at both the provincial and community level are integral parts of comprehensive tobacco control. These approaches range from broad mass media campaigns, targeted campaigns and services to key target populations (e.g., youth), to supports and services, such as pharmacotherapy or behavioural counselling, for tobacco users.

This chapter highlights select province-wide (April 1, 2017 to March 31, 2018) and local-level tobacco control interventions (July 2017 to June 2018) across the pillars of prevention, protection, and cessation that took place in Ontario. Provincial programs and interventions that were implemented during the above time period are listed in Table 1, Table 2, and Table 3 respectively.

Table 1: Prevention Provincial-Level Programs and Interventions

Intervention	Target Group and Program/Intervention Goal
Indigenous Tobacco Program	Working with First Nation, Inuit, Métis, Urban Indigenous communities, organizations and non-Indigenous partners to reduce and prevent commercial tobacco use and addiction, specifically holding cessation focused workshops
Freeze The Industry	Targeted towards youth to advocate for standardized plain tobacco packaging
Leave the Pack Behind	Multi-pronged program targeted to young adults. The goals of this program are to achieve smoke-free post-secondary institutions, campuses and communities, and to support tobacco-users to quit and discourage non-smokers from initiating any tobacco product
School Health and Physical Education Curriculum	Target group: elementary school students (grades 1–8) and secondary school students (grades 9–12) to learn about what tobacco is, as well as the influences and decisions on tobacco uptake, and the harms associated with tobacco smoke
Smoke-Free Movies	A coalition of health related organizations to endorse policy recommendations to reduce exposure of smoking in youth rated movies
Youth Access Laws and Vendor Compliance – Laws that prohibit selling tobacco products and e-cigarettes to minors (<19 years old)	Targeted towards minors by prohibiting tobacco retail outlets from selling tobacco and e-cigarette products to minors

Table 2: Cessation Provincial-Level Programs and Interventions

Intervention	Target Group and Program/Intervention Goal
Indigenous Tobacco Program	Working with First Nation, Inuit, Métis, Urban Indigenous communities, organizations and non-Indigenous partners to reduce and prevent commercial tobacco use and addiction, specifically holding prevention focused workshops for youth and young adults
Leave The Pack Behind	Multi-pronged program targeted to young adults. The goals of this program are to achieve smoke-free post-secondary institutions, campuses and communities, and to support tobacco-users to quit and discourage non-smokers from initiating any tobacco product

Intervention	Target Group and Program/Intervention Goal
Ontario Drug Benefit and Pharmacy Smoking Cessation Program	Targeted towards Ontario Dug Benefit recipients who want to quit smoking and seek cessation services from pharmacists
Ottawa Model for Smoking Cessation®	Targeted towards tobacco users for smoking cessation treatment, delivered by knowledgeable health care professionals
Smokers' Helpline	Targeted to smokers by offering support and information about quitting smoking and tobacco use and counselling services
Smoking Cessation by Family Physicians	Smoking Cessation services provided by family physicians is targeted towards those who want smoking cessation counselling services
Smoking Treatment for Ontario Patients (STOP) Program	STOP delivers smoking cessation treatment and counseling support to eligible Ontario smokers who wish to quit smoking
Youth Advocacy Training Institute N-O-T on Tobacco	Targeted towards youth and young adults and provided knowledge and skills through training workshops to prevent and reduce tobacco use, promote health and advocate for positive change in communities through youth engagement
Mass Media and Digital Media Campaigns	The Digital Marketing Campaign run by the Ministry of Health and Long-Term Care targeted regular smokers aged 18-34 to make a quit attempt

Table 3: Protection Provincial-Level Programs and Interventions

Intervention	Target Group and Program/Intervention Goal
Smoke-Free Ontario Act, 2017 • Prohibits smoking in all enclosed workplaces, public places and common areas of multi-unit housing • Enables home health care workers to request no smoking in clients' homes while providing health care • Prohibits smoking in cars transporting children under the age of 16 • Prohibits display of tobacco products at retail • Prohibits e-cigarette use in places where smoking is prohibited and permits home health care workers the right to request a	Targeted to all Ontarians to protect them from exposure to smoking, in particular secondhand smoke

Intervention	Target Group and Program/Intervention Goal
person not to use an e-cigarette in their presence while providing care	

At the local level, a combination of programs, interventions and local policy initiatives were pursued (Table 4) to address tobacco control in a comprehensive manner.

A detailed description and review of other tobacco control interventions at the provincial and the local level are provided in the Technical Supplement to the Interventions chapter.

Table 4: Local-Level Programs and Interventions

Intervention	Target Group and Program/Intervention Goal
Public Health Unit's Smoking Cessation Services	Targeted to all smokers wanted smoking cessation services (e.g., free nicotine replacement therapy and/or cessation counselling programs and services). Some PHUs targeted specific populations such as low socio-economic status populations, young adults and post-partum women.
Bad Ways to Be Nice	Campaign in Central East Tobacco Control Area Network (TCAN) in partnership with the Indigenous Tobacco Program to raise awareness among young adults about the social supply of cigarettes.
Love My Life	Initiative in Eastern TCAN, 'Love My Life Tobacco-Free.' Focuses on engaging youth aged 10 to 24 years of age and support development of leadership skills and health promotion messaging. The goal is to provide skills and support for youth to influence their environments and promote healthy living among their peers.
Hey Parents Smoke-Free Movies Campaign	Public education initiative across six TCANs in support of smoke-free movies. The objective of the campaign was to increase parental advocacy in support for an 18A rating for movies that contain smoking and obtain support for smoke-free youth-rated movies.
That's Risky	Social marketing campaign originating in the Central East TCAN. This campaign targeted young adults 17-29 years of age with the main objective to increase awareness that smoking and exposure to secondhand smoke during breast development increases risk of breast cancer at a young age.
UPRISE: Youth Social Identities and Tobacco Use Prevention Project	Campaign that uses a social marketing strategy called *Social Branding*. The target for this campaign was youth aged 13-18 years of age who identify with the alternative peer crowd. The objective of the campaign was to eliminate the pro-tobacco perceived norms of

Intervention	Target Group and Program/Intervention Goal
	alternative youth while increasing the belief that being tobacco-free is an important component of being part of this peer crowd.
Don't Quit Quitting	Initiative with Central East TCAN and Smokers' Helpline. Campaign aims to provide information and support for individuals ready to make a quit attempt.
Enforcement of *Smoke-Free Ontario Act*, 2017 • Conducting youth access compliance checks at retail outlets that sell tobacco products and e-cigarette products, ensuring they are not selling to under age customers (<19 years) • Restaurant and Bar inspections • Outdoor Public Places inspections (playgrounds, sports fields, hospitals)	*SFOA* targets all Ontarians to protect them from exposure to secondhand smoke. Enforcing the *Act* is to ensure compliance in areas where it's prohibited from smoking and sales of tobacco and e-cigarette products to minors.

Table 5: Local Level Policy Initiatives

Policy Initiative	Target Group and Program/Intervention Goal
Smoke-Free Multi-Unit Housing	Public Health Units (PHU) supporting both private and non-profit housing corporations to adopt 100% smoke-free policies.
Smoke-Free Post-Secondary Campuses	PHUs providing support to post-secondary campuses within their communities to adopt smoke-free policies on campus.
Municipal By-laws	PHUs working with local municipal and regional governments to support developing or amending local smoke-free by-laws that exceed *Smoke-Free Ontario Act*.

Prevention

Tobacco use prevention is an important aspect of tobacco control as youth and young adults are susceptible to initiating tobacco use particularly during the transition from adolescence to young adulthood. Tobacco prevention programming includes interventions to prevent tobacco use entirely, as well as its escalation from occasional to daily use.[12,30,91] The timeframe of reported tobacco prevention programs pre-dates the legalization of nicotine-containing e-cigarettes.

Tobacco prevention intervention strategies include:

- Limiting social exposure to tobacco use among youth and young adults
- Decreasing access and availability of tobacco products
- Increasing knowledge of the harmful effects of tobacco use, nicotine and vaping products
- Increasing youth and young adults' ability to make healthy choices and resist tobacco use initiation

While efforts have been made over the years to prevent and reduce the number of youth and young adults who smoke, there are 2.3% of youth (grades 7–12) (OSDUHS, 2017) and 15% of young adults (ages 18–29) who are current smokers (CCHS, 2017). In 2017, lifetime abstinence among grades 7-12 was 84%, a significant increase compared to 2013 at 80%, and only 5% of students in grades 7-12 reported using a cigarette for the first time in the past year (OSDUHS, 2013–17).

The 2018 list of tobacco prevention interventions that were implemented in Ontario ranges from province-wide interventions with general population reach to interventions that were targeted to priority populations. Some leading and cross-cutting prevention interventions are described below. A full description of the interventions across Ontario (e.g., Smoke-Free Movies Campaign, information about Youth Access Laws and Vendor Compliance, School Health and Physical Education Curriculum), and at regional and local levels can be found in the Technical Supplement to the Interventions chapter.

Across Ontario, the **ITP** (https://tobaccowise.cancercareontario.ca/en) partners with First Nation, Inuit, Métis, Urban Indigenous and non-Indigenous partners and communities to build capacity and empower them to become 'Tobacco-Wise' in order to reduce and prevent commercial tobacco use and addiction. Based on the communities' needs, they deliver tailored programs and workshops on commercial tobacco prevention, cessation, and protection. In 2017–18, the ITP delivered 35 commercial tobacco use prevention workshops in health centres and schools within 27 communities across Ontario, which reached 1,562 youth and adults. In addition, the ITP and partners held cessation and prevention community events that reached 1,200 people and they attended 52 regional events for youth and provided information on commercial smoking cessation and prevention.

The ITP is a key component of a comprehensive tobacco control strategy to address the needs of the Indigenous community and partners with them to develop knowledge, skills, and resiliency to achieve commercial tobacco-free communities while maintaining the traditional and sacred use of tobacco.[92]

LTPB (https://leavethepackbehind.org/) is a provincial program targeted to youth and young adults attending post-secondary institutions to prevent smoking/tobacco use initiation and escalation. The multipronged program has elements of a comprehensive tobacco control program combining smoking cessation options, tobacco use prevention campaigns, and promoting smoke-free environments. LTPB offers access to NRT for smoking cessation (5,198 smokers accessed NRT via online or at a campus clinic) and uses social media campaigns (e.g., *wouldurather…* and *Party Without the Smoke*) on campuses and in the community to target young adults to prevent them from using cigarettes and/or other tobacco

products, particularly when they're in social settings (2,669 pledged not to start smoking). LTPB also works with colleges and universities to promote and support smoke-free campuses to protect students and staff from exposure to SHS and social exposure by denormalizing tobacco use. Last year, LTPB was implemented in 39 post-secondary institutions across the province reaching over 32,500 young adults at post-secondary institutions and in the communities where the institutions are located. Eleven post-secondary institutions in Ontario are 100% smoke free as of January 2019.[93,94]

Ontario Coalition for Smoke-Free Movies (http://smokefreemovies.ca/) is a province-wide initiative that local PHUs, TCANs, and several health related organizations collaborate on to endorse policy recommendations to reduce exposure of smoking in youth rated movies, as directed by the World Health Organization in 2009.[95] The Coalition's goal is to raise awareness of the impact that smoking in movies has on youth smoking and they have supported a change in the rating system to ensure that any future movies released in Ontario rated for children and teens (G, PG, 14A) are free from smoking images and tobacco products.[96]

Cessation

Tobacco cessation interventions aim to increase quit attempts and reduce the harms of tobacco use by motivating, encouraging and providing support to help people to successfully quit smoking. Population-level interventions, including taxation and smoke-free bylaws, as well as mass media/social media campaigns, can have a broad focus and reach. These complement individual level interventions such as smoking cessation using nicotine replacement therapy, pharmacotherapy, and/or behavioural therapy. Interventions can also target specific populations with high smoking prevalence that bear a greater burden of tobacco use. In 2017, 15% of the Ontario adult population smoked, which is 1,787,434 adults aged 18 years and older (see the Trends and Data chapter for more details of smoking rates in Ontario by different groups) that could benefit from cessation interventions (CCHS, 2017). Cessation related interventions aim to achieve smoking cessation outcomes by evidence-based pathways such as:

- Decreasing the availability of tobacco products
- Increasing the knowledge of the harms of tobacco use and the availability of tobacco cessation supports
- Promoting and supporting quit attempts
- Providing effective treatments that support tobacco cessation
- Limiting physical and social exposure to tobacco products to support quit attempts

Across Ontario there are a variety of interventions that reach the general population and interventions that reach priority populations or those with higher smoking rates than the general smoking population. Intervention reach is an important determinant of overall population health impact of effective cessation interventions for the smoking population.[97]

Table 6 summarizes the intervention reach in terms of smokers enrolled across various smoking cessation programs and services available in Ontario. Some interventions are more clinical in nature, for example the provision of NRT, pharmacotherapy, and/or behavioural counselling. In 2017–18, 348,884 Ontario smokers were enrolled in these smoking cessations services compared to 334,423 smokers in 2016–17.[14] This translates to approximately 20% of the adult smoking population in Ontario (aged 18 years and older) were reached by one of these services, assuming that individual smokers only contacted one of the programs, which is similar to the previous year's reach of 19% (CCHS, 2017). Approximately half (47%) of all adult smokers reported making one or more quit attempts in the past year (CAMH Monitor, 2017). While a large proportion of smokers intend to quit, actually quitting is a major challenge for smokers with many quit attempts occurring before quitting achieved. In 2017, only 5% of past year smokers reported quitting for 30 days or longer (CCHS, 2017).

Table 6: Smokers Enrolled in Ontario Smoking Cessation Interventions 2017–18

Program	Program Reach
Smoking Cessation by Family Physicians	192,158*
The Smoking Treatment for Ontario Patients Program	27,822*
Ontario Drug Benefit and Pharmacy Smoking Cessation Program (pharmacotherapy and counselling)	23,731*
Ottawa Model for Smoking Cessation (OMSC©) (hospital sites)	19,601*
Public Health Unit cessation counselling and Nicotine Replacement Therapy (NRT) distribution	16,873*
Smokers' Helpline (SHL) Phone Support	8,055*
OMSC© (primary care sites' quit plan visits)	8,157*
Quit Cards (distributed by OMSC©)	3,510*
Leave The Pack Behind (LTPB) (Health professional cessation counselling and NRT distribution)	5,198*
LTPB Programs (excluding counselling and NRT distribution)	32,528
First Week Challenge Contest	5,680
SHL Online	5,009
SHL Text Messaging	526
Youth Advocacy Training Institute N-O-T on Tobacco Smoking Cessation	36
Total	**348,884**

Note: Reach is calculated as total number of people in the program. Only Smokers' Helpline is available to all Ontario smokers, with the other programs serving sub-populations. Comparisons among programs should not be made, as they provide varying services to different populations of smokers. A smoker could have accessed more than one of the programs during the fiscal year and therefore the sum of all smokers reached is greater than the total population estimate due to the possibility of accessing multiple programs

* Denotes that these interventions are clinical in nature (e.g., provided nicotine replacement therapy (NRT) and/or pharmacotherapy and/or behavioural counselling)

The range of programs and services offered across Ontario last year included: programs and services for youth and young adults (e.g., YATI N-O-T on Tobacco); smoking cessation services provided by family physicians and local PHUs; cessation services offered by SHL (via phone, online and SMS text messaging service); and, eligible smokers accessing pharmacotherapy and other cessation treatments via the Ontario Drug Benefit program. Below are some leading examples of smoking cessation interventions. A full description of interventions across Ontario is provided in the Technical Supplement to the Interventions chapter.

The **OMSC®** (ottawamodel.ottawaheart.ca/) is a systematic and comprehensive program where clinicians within a supportive health care delivery system identify and treat all tobacco users who would like to quit smoking. Those identified are offered available counselling treatments, medications, and follow-up to support their successfully quitting smoking. The OMSC® was originally developed to be in hospital settings (both inpatient and outpatient); it was adapted to primary care settings using the 3A's approach for smoking cessation (ask, advise, and act). Over the past 2017–18 fiscal year, the OMSC® was implemented in 116 Ontario hospital sites (inpatient and outpatient) and partnered with 114 primary care organizations. Combined, these programs reached 27,758 patients (19,601 hospital patients and 8,157 primary care patients) and distributed over 3,500 quit cards each with $300 worth of redeemable vouchers for nicotine replacement therapy in Ontario pharmacies. This represents a 14% increase over the 24,037 patients reached from the combined programs (hospital patients and primary care patients) from the 2016–17 fiscal year. By offering smoking cessation services in hospitals, through primary care and collaborating with other smoking cessation service providers (e.g., Smoking Treatment for Ontario Patients (STOP), SHL) the OMSC® is scaling up services and overall reach. For patients accessing the OMSC® via hospital and specialty care settings, the one-month responder-quit[i] rate was 44% (seven-day point prevalence abstinence) and the six-month responder-quit rate was 48%. For patients accessing the OMSC® via primary care organizations, the one-month responder-quit rate was 56% (seven-day point prevalence abstinence) and the six-month responder-quit rate was 57%.

The **STOP** Program (www.nicotinedependenceclinic.com/en/stop/home) provides smoking cessation counselling and treatment to eligible Ontario smokers to help them make a quit attempt. STOP partners with Family Health Teams (FHTs), Community Health Centres (CHCs), Aboriginal Health Access Centres, and addictions agencies to deliver smoking cessation treatment for smokers who want to quit. Since 2005, STOP has reached over 100,000 clients via the different health care partners. In addition to the regular STOP program, there is STOP on the Road. It provides smoking cessation treatments to smokers in their communities by partnering with local PHUs and TCANs that offer smoking cessation services via community workshops (i.e., three hours of group counselling and a five week supply of NRT).[98] Through the provision of services via health care partners and within communities, STOP has reached a large number of smokers wanting to quit (27,109 smokers reached in 2017–18 compared to 27,719 smokers reached in 2016–17). The self-report seven-day point prevalence responder quit rate at six-month post-

[i] The responder-quit rate is defined as all participants who report having quit using tobacco divided by all those who completed the follow-up survey/evaluation

treatment ranged from 32% for STOP with Nurse Practitioner Lead Clinics, STOP with FHTs, and STOP on the Road VIII to 34% for STOP with CHCs.

Protection

Exposure to secondhand tobacco smoke is causally linked to cancers and cardiovascular diseases among adults, and respiratory diseases and other adverse health effects among infants, children and adults.[30] Protecting non-smokers from involuntary exposure to tobacco smoke and products is an important goal of comprehensive tobacco control. The outcome of eliminating SHS exposure in public places such as restaurants and bars, workplaces, and in vehicles with children, is important for protecting human health.[30] In 2016, 16% of non-smokers in Ontario reported exposure to SHS, every day or almost every day, in public places, 26% of youth (aged 12–15 years) reported exposure to SHS in public places (CCHS, 2016), and 14%[IC] of Ontario adults (aged 18 years and older) living in MUH reported exposure to SHS drifting between units at least once in the past month (CAMH-Monitor, 2016). The *SFOA*, 2017 protects non-smokers from SHS and secondhand e-cigarette aerosol. Tobacco-free and vape free environments also reduce smokers' and non-smokers' social exposure to tobacco use, which helps to decrease initiation and supports quit attempts among tobacco users. The components of the *SFOA*, 2017 and select local or municipal protection related interventions and initiatives are reviewed, with more detail provided in the Technical Supplement to the Interventions chapter.

Ontario's policies and legislation help protect individuals from SHS and e-cigarette aerosol in indoor public places, a variety of outdoor public places (e.g., hospital grounds, restaurant and bar patios, playgrounds, publicly owned sports areas, reserved outdoor seating venues, and entrances of public buildings), workplaces, hospitality venues, and in vehicles when there's an occupant who's less than 16 years old.[12,18] Amendments to the provincial *SFOA*, 2017 introduced new regulations prohibiting the smoking of recreational cannabis and vaping in prescribed public places and workplaces. Many workplaces, post-secondary institutions and private landlords have also taken steps to implement new policies or amend existing policy to exceed the new act. Some examples include 100% smoke-free and aerosol-free multi-unit residential buildings, including individual living units, balconies and properties; and 100% smoke-free, tobacco-free, and aerosol-free post-secondary campuses. Since the passing of the *SFOA*, 2017, local PHUs have continued to work with local municipalities to support the development and amendment of local smoke-free by-laws to include vaping and cannabis and/or expand smoke-free and aerosol-free spaces in their communities.

Smoke-free MUH provides protection from SHS to all tenants and occupants, in particular to priority populations such as children and those who do not have financial means to move to new housing accommodation where they are not exposed to SHS. Across Ontario there are over 300 MUH residential sites with 100% smoke-free policies as of March 2018.[99] Some jurisdictions have implemented a 100% smoke-free policy in all of their municipal owned and operated social housing (e.g., Region of Waterloo Housing, York Region Housing, Windsor Essex Community Housing, Ottawa Community Housing).[100-103]

[IC] Interpret with Caution (IC): Subject to high sampling variability.

Across Ontario, most public college and university institutions have policies that exceed the *SFOA*, 2017 requirements (i.e., no smoking indoors and no smoking around building entrances, and prohibition from selling tobacco products on campus or the institutions' property).[12] As of January 1, 2019, there are 11 institutions whose campuses are 100% smoke and aerosol-free (i.e., not being allowed to smoke or vape anywhere on the institution's property) and six additional institutions who have announced smoke-free policies being implemented in the near future.[93,94,104] These policies protect non-smokers from exposure to SHS, and protect smokers and non-smokers from social exposure to tobacco use which helps to denormalize smoking and encourage smokers who have quit smoking to remain quit. Further, post-secondary institutions can optimize the impact of these policies by offering smoking cessation programs to current smokers.

Chapter 6: Electronic Cigarettes

E-cigarettes have evolved rapidly over the last decade as an emerging product with potential for individual harm reduction among smokers, but also with potential risks to increase tobacco cigarette smoking among youth and young adults. Following brief overviews of the current evidence on e-cigarettes in terms of harms and benefits associated with use, and current legislation governing the manufacture, sale and promotion of e-cigarettes, this chapter summarizes recent data on e-cigarette use among adults and youth. Additional details are provided in the Technical Supplement to the E-Cigarettes chapter.

What are E-Cigarettes?

E-cigarettes are battery-powered devices that electronically heat a solution to create an inhalable aerosol.[7] This solution, also known as 'e-liquid' or 'e-juice' may be flavoured and can contain nicotine.

E-cigarette devices have advanced rapidly since they were first introduced in the early 2000s (Figure 20).[50,105,106] While earlier e-cigarette devices resembled traditional cigarettes, recent devices may include tank systems and other adaptations that may look like USB sticks, pens or other everyday devices.[107] For the purposes of this report, the term e-cigarette refers to all forms of battery-powered vaping devices or electronic nicotine delivery systems.

Figure 20: Evolution of E-Cigarettes

Source: Getty Images

Current Evidence on E-Cigarettes

A 2018 report by the National Academies of Sciences, Engineering, and Medicine (NASEM),[8] reviewed evidence of health effects related to the use of e-cigarettes, and concluded as follows:-

- There is 'conclusive evidence' that use of e-cigarettes increases airborne concentrations of particulate matter, nicotine and other toxicants in indoor environments, compared to background levels.
- There is 'moderate' to 'substantial evidence' that use of e-cigarettes can have acute physiological effects including increases in heart rate, blood pressure, and coughing and wheezing. Long-term health consequences are uncertain.
- There is 'substantial evidence' that use of e-cigarettes can result in dependence and increases risk of ever using tobacco cigarettes in youth and young adults.

A 2018 PHO literature review included evidence from the NASEM (2018) report as well any primary literature published until July 2018.[7] The PHO (2018) review found limited evidence that e-cigarettes may be effective aids to promote smoking cessation.[7] Compared with combustible cigarettes, secondhand exposure to e-cigarette aerosol has lower levels of many substances (e.g., nicotine, particulates), but some exposures may be higher (e.g., some metals).[7]

The emergence of e-cigarette products is a recent phenomenon. Further research is required to assess the harms and benefits of e-cigarette use, including dual-use among those who do not quit smoking.

Legislation and Regulation of E-Cigarettes

New legislation regulating e-cigarettes came into force at the federal and provincial level in the past year. The federal *TVPA*, enacted on May 23, 2018, merges the provisions of the former *Tobacco Act* with new provisions that regulate the manufacture, sale, labelling and promotion of recreational vaping products in Canada.[61] The *Act* prohibits sale or supply of vaping products to anyone less than 18 years of age.[107] In Ontario, the new *SFOA*, 2017[108,109] which came into effect on October 2018, regulates, the sale, advertising, and promotion of vaping products and it further restricts the sale of these products to anyone less than 19 years of age.[110]

Specific legislative changes are discussed briefly below. Further details on key aspects of the regulatory changes related to legislation are provided in the Technical Supplement to the E-Cigarettes chapter.

Nicotine E-Cigarettes

Prior to May 2018, e-cigarettes containing nicotine were not allowed to be sold in Canada, although these were available illegally.[63,111] Nicotine is an addictive substance, with children and youth being especially susceptible to its negative effects, as it has been known to alter brain development, and affect memory and concentration.[112] The *TVPA*, 2018 creates a new legal framework for regulating vaping products to protect youth and young adults from nicotine addiction and tobacco use, while allowing adults access to vaping products as a less harmful alternative to smoking.[113] The *TVPA*, 2018 now regulates the manufacture, sale, labelling and promotion of recreational vaping products with or without nicotine as a separate category from tobacco products.[61,72,114]

These legislative changes have made nicotine e-cigarettes legally available in Canada and allowed for the entry of newer nicotine e-cigarette brands such as Juul and Vype into Canadian markets.[81] These newer products use nicotine salts in place of freebase nicotine, making them less harsh and more palatable to users, despite higher nicotine levels.[66-69,115]

Promotion of E-Cigarettes

According to *SFOA*, 2017, the sale, advertising and promotion of vaping products is allowed in Ontario at both specialty vape shops (i.e., 85% of their total sales are from vaping products, and allow entry only for those 19 years or older), as well as other retail outlets selling tobacco and vaping products such as convenience stores, gas stations, grocery stores, etc.,[18,108,109,116] as long as they comply with federal *TVPA*, 2018 regulations.[117] In addition, *SFOA,* 2017 regulations also allow actual product displays and testing/sampling of vaping products at specialty vape shops.[118]

The promotion of e-cigarettes has become widespread in Ontario. E-cigarette manufacturers have entered into exclusive agreements with convenience stores and retail chains to market their products.[81,119] Prominent e-cigarette advertisements can be seen at convenience stores, gas stations,[81,119,120] as well as at public places. See Figure 21

Figure 21: E-Cigarette Marketing and Promotion in Ontario, April 2019

Source: Pictures taken by Public Health Ontario staff

Flavours

Flavours have been known to influence smoking initiation and increase progression by masking the bitter taste of nicotine in e-cigarettes.[121,122] Flavours are identified as one of the top reasons among youth for e-cigarette use.[121] E-cigarette liquids come in variety of flavours and are widely available across Canada. Recent regulations under the *TVPA*, 2018*,* as of November 19, 2018,[4] restrict vaping products with youth-appealing flavours like candy, dessert or confectionary flavours such as crème brûlée and blueberry cake.[61,123] However, other flavours (such as mint, mango, vanilla, fruit, cucumber, strawberry, etc.) that may be appealing to youth continue to be sold.[124,125]

Health Canada 2019 Consultations

Concerned with the recent increase in youth vaping and the promotion of vaping products, Health Canada, as of February 5, 2019, has initiated consultations on proposed new measures to protect youth and non-users of tobacco products from enticements to use vaping products.[126,127] The proposed measures include: restricting point of sale advertisements and actual product display at point of sale in non-specialty vape shops; limitations on vaping product advertisements at public places where youth have access; placing restrictions on social as well as print media advertisements; requiring health warning messages on permitted advertisements; as well as examining the role of flavours, nicotine concentration and product design in making these products appealing to youth and non-smokers.[126-128]

E-Cigarette Use

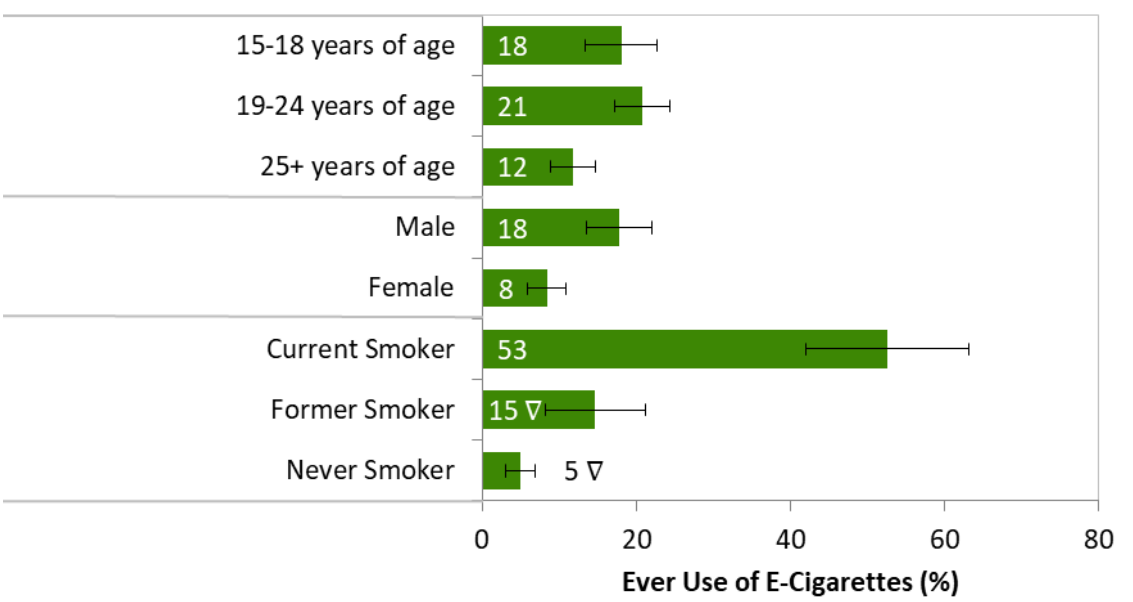
Ever use of e-cigarettes among Ontarians has increased significantly since 2013. In 2017, 13% of Ontarians aged 15 years and older reported ever (i.e., lifetime) use of e-cigarettes. This was a significant increase compared to 2013 (6%) (CTADS, 2013–17). Past-month vaping was 2%[IC] in 2017 and did not show a significant change compared to 2015 (CTADS, 2015–2017).

Across Canada, ever use of e-cigarettes ranged from 13% in Ontario to 20% in Nova Scotia (CTADS, 2017). In 2017, the prevalence of ever use of e-cigarettes in Ontario was significantly lower compared to Quebéc (17%), Manitoba (18%), and Nova Scotia (20%).

In Ontario, ever use of e-cigarettes was higher among youth, young adults, males, and current smokers (Figure 22). In 2017, youth (15–18 year-olds) (18%) and young adults (19–24 year-olds) (21%) reported higher use of e-cigarettes in their lifetime compared to those aged 25 years and older (12%). Males reported higher rate of e-cigarette use in their lifetime compared to females (18% vs. 8%). In the past five years, ever use of e-cigarettes among males increased three fold (2017=18% vs. 2013=6%; data not shown) while the rate showed no significant change among females (2017=8% vs. 2013=6%[IC]). Half of all current smokers reported using an e-cigarette in their lifetime (53%) and 5%[IC] of never smokers, representing 375,500 Ontarians, reported using e-cigarettes in their lifetime.

[IC] Interpret with caution: subject to high sampling variability.

Figure 22: Ever Use of E-Cigarettes by Age, Sex and Smoking Status, 15+, Ontario, 2017



Note: ∇ = Interpret with caution: subject to high sampling variability. Error bars represent 95% Confidence Intervals.
Source: Canadian Tobacco, Alcohol and Drugs Survey (CTADS), 2017

Reason for Using E-Cigarettes among Ever Vapers

The majority of ever vapers (61%), aged 15 years and older in Ontario, reported using e-cigarettes because they were curious about the taste (CTADS, 2017). Perceived harm reduction was another common reason for use of e-cigarettes, where 48% of ever vapers reported e-cigarettes as less harmful to self than smoking cigarettes and 46% reported vaping as less harmful to people around them than smoking cigarettes. Forty-six per cent of ever vapers used e-cigarettes because they perceived e-cigarettes help people quit smoking. Other reasons for e-cigarettes use included flavours (39%) and greater acceptability of e-cigarettes among non-tobacco users (39%).

Additional details with respect to perceived risk of use of e-cigarettes are provided in the Technical Supplement to the E-Cigarettes chapter.

E-cigarette Use among Youth

Information on e-cigarette use among youth includes rates of ever use and past year use.

Ever Use of E-Cigarettes

In 2017, 21.6% (163,300) of Ontario students in grades 7–12 reported ever use of e-cigarettes. The prevalence did not differ significantly from 2015 (22.6%) (OSDUHS). Secondary school students (grades 9–12) reported a higher rate of ever use (29.2%) compared to elementary school students (5%[IC]) in

grades 7–8. Ever use of e-cigarette among secondary school students has doubled between 2013 (14.6%) and 2017 (29.2%).

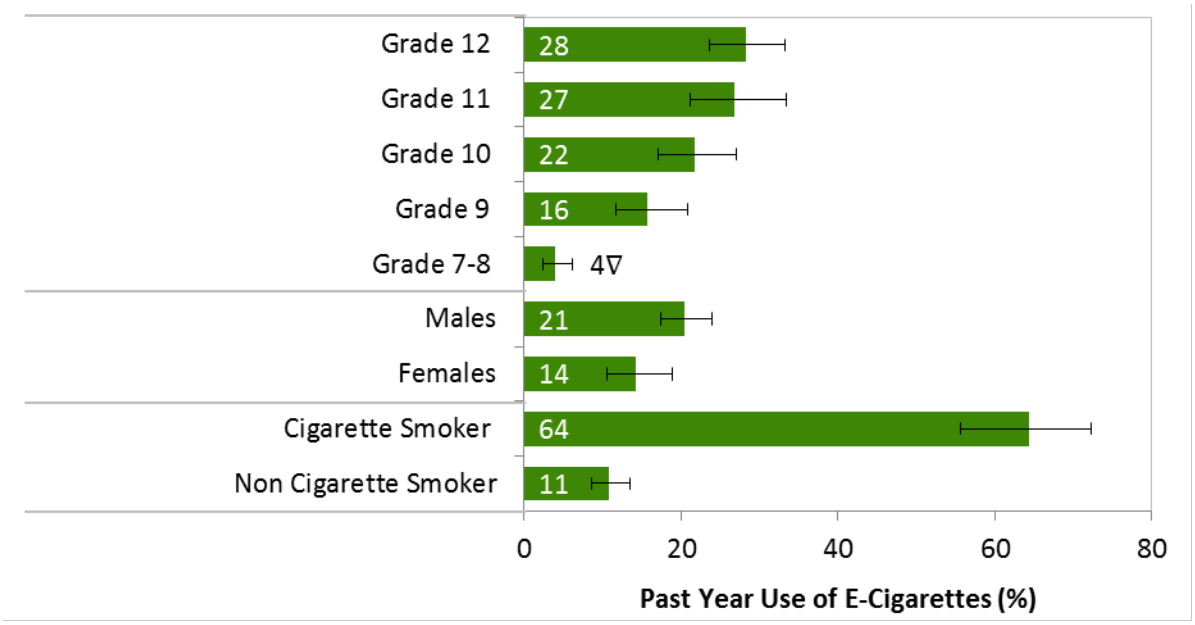
Past Year Use of E-Cigarettes

In 2017, 14% of students in grades 7–12 (102,900 individuals) reported using an e-cigarette for the first time in the past year (OSDUHS, 2017). Past year use of e-cigarettes, including only a few puffs, among students in grades 7–12 was 17.5% (132,400 students). The prevalence did not differ significantly from 2015 (18.7%) (OSDUHS, 2017).

Secondary school students (grades 9–12) reported a higher rate of past year e-cigarette use (23.8%) compared to elementary school students (4%[IC]). It is important to note that past year e-cigarette use among secondary school students is significantly higher compared to past year cigarette use (23.8% vs. 15.5%) (OSDUHS, 2017).

Over a quarter of students in grades 12 (28%) and 11 (27%) reported using e-cigarettes in the past year (Figure 23). Male students reported higher prevalence of e-cigarettes use compared to female students (21% vs. 14%). Approximately two thirds of the students (64%) who had smoked cigarettes in the past year also used e-cigarettes.

Figure 23: Past Year Use of E-Cigarettes by Age, Sex and Smoking Status, Grades 7–12, Ontario 2017



Note: ∇ = Interpret with caution: subject to high sampling variability. Error bars represent 95% Confidence Intervals.
Source: Ontario Student Drug Use and Health Survey (OSDUHS), 2017

Past Month Use of E-Cigarettes

According to the 2017 CCHS, 3.6%[IC] of youth aged 12–18 years of age reported using e-cigarettes in the past 30 days. The prevalence did not differ significantly from 2016 (2.4%[IC]) and 2015 (4.3%[IC]).

Source of E-Cigarettes

Among past year vapers, the majority of students (65%) reported obtaining e-cigarettes from social sources such as buying it off a friend or someone else, 9%[IC] bought them from a retail source and 10%[IC] bought them from a vape shop or the internet (OSDUHS, 2017).

Co-Use of E-Cigarettes and Cigarettes

In 2017, half of ever e-cigarette users (49%) in Ontario, aged 15 years and older, were current smokers. The remaining e-cigarette users were split between former smokers (26%[IC]) and never smokers (25%[IC]) (CTADS, 2017).

Among students in grades 7–12, 50% of those who used an e-cigarette in their lifetime had never smoked a cigarette (OSDUHS, 2017). In Ontario, 19% of ever vapers in grades 7–12 reported using e-cigarettes before trying cigarettes (CSTADS, 2016–17). As previously noted, evidence suggests that e-cigarette use is associated with increased risk of cigarette smoking in youth and young adults.[7]

Use of Nicotine in E-Cigarettes

Use of nicotine in e-cigarettes has increased significantly in recent years, despite the fact that e-cigarettes and e-liquids were not permitted to contain nicotine in Canada prior to May 2018.[61] In 2017, 65% of ever vapers, aged 15 and older in Ontario, reported using nicotine in their last e-cigarette, a significant increase since 2015 (42%) and 2013 (26%[IC]) (CTADS). Among current smokers who have used an e-cigarette, 75% used nicotine in their last e-cigarette (CTADS, 2017; data not shown), compared to 61% of former smokers and 52% of never smokers (CTADS, 2017[IC]). The majority of vapers who used nicotine in their last e-cigarette were aged 25 years and older (81%) (CTADS, 2017), the remaining 13% were 19–24 year-olds and 7%[IC] were 15–18 year-olds.

In 2017, 23% of ever vapers in grades 7–12 used e-cigarettes with nicotine in the past year (OSDUHS, 2017). This was a significant increase from 2015 (14%). Seventeen per cent of past year vapers in grades 7–12 were not sure whether they had used nicotine (OSDUHS, 2017).

Use of Flavoured E-Cigarettes

In Ontario, among ever users of e-cigarettes (aged 15 and older), 43% used fruit flavoured, 15%[IC] used tobacco flavoured, and 8%[IC] used candy/dessert flavoured e-cigarette the last time they vaped (CTADS, 2017).

Among Ontario students in grades 7–12, 85% of past month vapers reported using flavoured e-cigarettes in the past month (CSTADS, 2017).

Advertising and Social Exposure to E-Cigarettes

In 2017, half of adults aged 18 and older in Ontario saw someone use an e-cigarette often or always (10%), sometimes (13%), or rarely (27%) in the week prior to the survey (CAMH Monitor 2017). Thirty nine per cent of adults reported noticing advertising of e-cigarettes on billboards, internet, in a newspaper, magazine, or in bars or stores in the past month in 2017 (CAMH Monitor). At the time of data collection, advertising of e-cigarettes was restricted to provincially prescribed signage.[117]

Household Vaping Restrictions

In 2017, 9% of households in Ontario allowed the use of e-cigarettes inside their homes and 1%[IC] of households reported one or more person(s) vaping inside the home every day or almost every day (CTADS, 2017). Conversely, 7.3% of households in Ontario allowed cigarette smoking inside their home and 4.3% of households reported at least one person smoking cigarettes inside the home every day or almost every day (CTADS, 2017).

Public Opinion on E-Cigarette Use

Ontarians aged 18 and older perceived e-cigarette use by adults to be more acceptable (54%) compared to teenagers (16%) (CAMH Monitor, 2017). Adults, aged 18 and older, perceived e-cigarette use by teenagers to be more acceptable compared to cigarettes (16% vs. 8%) (CAMH Monitor, 2017).

In 2017, over half of adults in Ontario (52%) believed flavours should be banned in all e-cigarettes (CAMH Monitor, 2017). However, 88% of past year vapers disagreed with banning of flavours in all e-cigarettes.

Additional Information

Further details on e-cigarettes are provided in the Technical Supplement to the E-Cigarettes chapter. This includes: information on pertinent legislation and regulation; e-cigarette use among adults and youth; and public opinion on e-cigarette use.

Chapter 7: Conclusion

This 2018 Tobacco Monitoring Report has provided an overview of progress on comprehensive tobacco control in Ontario. Although there has been a substantial improvement in smoking rates among Ontarians from 21% in 2003 to 15% in 2017, rates are higher than 20% among certain population sub-groups. For example, individuals that self-reported a mood disorder (including depression) had twice the prevalence of smoking compared to the provincial average (30%; 15%).

Among youth, there has been continued progress in lifetime abstinence from cigarette smoking. At the same time, there has not been a significant change to youth and young adult current smoking in recent years with young adults continuing to have a higher prevalence of smoking compared to youth. In addition, lifetime use of an e-cigarette is more prevalent among youth and young adults.

The *SFOA*, 2006 was created to protect the public from SHS by prohibiting smoking in all enclosed public places and workplaces (such as restaurants, bars, work vehicles and offices). While there have been further amendments to *SFOA*, 2017 legislation, as well as expansion of local by-laws and other voluntary SHS policies (e.g. post-secondary campuses), Ontarians continue to be exposed to SHS in a variety of settings. For example, a quarter of youth continue to report exposure to SHS in outdoor public places and approximately one in seven adults living in MUH reported being exposed at least once in the past month. This data predates the passing of *SFOA*, 2017*,* which provides further protection from SHS in Ontario*.*

While a large proportion of smokers intend to quit, quitting is a major challenge for smokers. In 2017, about half of adult smokers (47%) made a quit attempt in the past year and up to 20% of the adult smoking population in Ontario received cessation services (assuming that individual smokers only contacted one of the programs). Nevertheless, quit rates on a population level remain low. While there is interest among tobacco users that e-cigarettes may assist with cessation, there is limited evidence of the effectiveness of e-cigarettes as a cessation aid.[8]

Tobacco is the leading preventable cause of death in Ontario accounting for 16,000 deaths per year with an estimated annual economic burden of almost $7.0 billion in direct and indirect costs in 2018.[2] In order to reduce the overall rate and disparities of tobacco use, a comprehensive tobacco control approach would support the implementation of evidence based strategies at local and provincial levels. Evidence indicates that population-level policy and program interventions can be highly effective in assisting smokers to quit and prevent youth and young adults from starting to smoke.[12]

As described in this report, the tobacco control context is rapidly changing. Existing evidence indicates the importance of a supporting system infrastructure to inform and continually learn from programming and policy interventions. For the 2017-18 fiscal year, five tobacco resource centres provided capacity building, knowledge development and exchange to support comprehensive tobacco control in Ontario. In April 2018, PHO was asked to assume some of the functions and deliverables of these centres whose funding was discontinued.

The emergence and widespread promotion of e-cigarette products that can now legally contain nicotine occurred with the enactment of the *TVPA* on May 23, 2018. These changes occurred after the 2017–18 reporting period of this Tobacco Monitoring Report and population-level estimates of e-cigarette use following these legislative and marketplace changes were not available. However, as a comparison, the US has seen rapid increases in e-cigarette use among youth and young adults. Public health authorities are concerned that there will be a new generation of individuals addicted to nicotine, transition of e-cigarette users to combustible tobacco, and unknown long-term health impacts from regular e-cigarette use.

Another major change to the Ontario tobacco control context is the legalization of non-medical use of cannabis. Since a large percentage of smokers (49%) in Ontario use cannabis, if increases in cannabis occur, there may be an adverse impact on tobacco use and cessation. Similar to the e-cigarette phenomenon, this will need to be monitored especially as population survey data becomes available covering more recent time periods.

This Tobacco Monitoring Report itself reflects change, as PHO has assumed its production from OTRU. PHO will seek feedback from users of this report to inform its continuous improvement.

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Appendix

Table A1: Current Smoking, by Public Health Units, Ontario, 12+, 2015–16

Public Health Unit	2005	2007–08	2009–10	2011–12	2013–14	2015–16
Peel	17.4	15.3	14.8	14.2†	10.9	10
York	14.5	13.6	15.2	14.7	15.1	11.6
Ottawa	16.9	16.3	14.3	14.1	14.1	12.4
Halton	17.2	17.7	16.1	17.4	13.6	13
Toronto	17	16.2	15	15.3	14.6	13.7
Peterborough	20	21.7	18.5	23.8†	25.4	15
Grey Bruce	20	19.9	17	21.5†	18.2	15.6
Middlesex-London	16.7	18.9	19.5	18.4	15	15.7
Durham Region	24.1	19.7	17.9	20.8	16.3	16.4
Windsor-Essex County	22.6	18.3	21.1	16.1	17	16.5
Elgin St. Thomas	25.8	24.7	19.3	25.4	18.2	16.5
Waterloo	18	20.4	17.1	19.9	16	17.1
Perth	18.2	16	21.5	19.1	19.7	17.1∇
Haldimand-Norfolk	28.7	24.1	21.8	22.6	19.2	17.2
Kingston, Frontenac, Lennox & Addington	21.5	23.2	17	17.1	19.5	17.2
Wellington-Dufferin-Guelph	20.4	22.1	17.3	19.4	18.3	17.4
Huron County	23	22	17.1	21.4	19.1	18
Eastern Ontario	25.9	26	24.7	23.7	19.8	18.1
Niagara Region	21.8	23.8	20.2	17.3	21.4	18.1
Leeds, Grenville & Lanark	24	22.6	24.5	23.2	22.5	18.1
Simcoe Muskoka	22.4	22	23.2	18.6	19.3	18.3
Hamilton	21.7	21.6	18.2	18.9	18.8	18.5
North Bay Parry Sound	25.4	25.9	22	25.6	18.2	19.9
Chatham-Kent	23.4	25.8	20.5	24	21.8	19.9
Oxford County	22.1	27.7	22.5	26.3	20.2	20
Renfrew County	26.8	23.8	24.1	20.7	21.8	20∇
Brant	24.7	22	26.4	22.9	25	20
Haliburton, Kawartha, Pine Ridge	21.1	23.3	24	23.2	18.8	21
Lambton	24.4	23.8	22.3	23.5	21.6	21

Public Health Unit	2005	2007–08	2009–10	2011–12	2013–14	2015–16
Thunder Bay	26.1	25.2	23.6	21.7	23.1	21
Northwestern	21.2	23.2	21.6	16	19.2	23
Sudbury	23.2	24.5	23.7	25.3	22.4	23
Hastings Prince Edward	25.6	26.2	26.2	26.7	22.6	24
Porcupine	28.2	27.7	24.6	27.1	23.8	24
Timiskaming	25.9	22.7	19.2	22.8	29.1	25
Algoma	22.5	21.7	27.4	22.7	22.6	26
Ontario	19.6	19	17.9	17.8	16.5	15.3

Note: Current smoking is defined as past 30-day use and 100 cigarettes in lifetime; Ordered by 2015/16 current smoking (lowest to highest); CCHS was redesigned in 2015. Estimates based on the CCHS from 2015 onward should not be compared to previous releases of the CCHS.

∇ = Interpret with caution: subject to high sampling variability

Source: Canadian Community Health Survey (CCHS) 2015–16 (combined years) Master file

Table A2: Priority Population Determinants for Current Smoking, CCHS

Indicator	Definition
Age and Sex	Four age groups (18–29; 30–44; 45–64; and 65+years) among males and females.
Educational attainment	Highest level of education attained (less than secondary school graduation; secondary school graduation, no post-secondary education; or post-secondary certificate/diploma or university degree).
Household income	Total household income from all sources (less than $20,000; $20,000 to less than $40,000; $40,000 to less than $60,000; $60,000 to less than $80,000; and $80,000 and more).
Marital Status	Marital status (married; living common-law; widowed; separated; divorced; single, and never married)
Immigrant	Immigrants include landed immigrants and non-permanent residents. Respondents who declared being born in Canada are considered non-immigrant.
Aboriginal identity	Respondent reported being an Aboriginal person (First Nations, Métis, Inuk/Inuit). Residents of First Nations reserves are excluded from the CCHS, therefore the respondents reflect people living off reserve.
Cultural background	Cultural or racial background of the respondent (White only, South Asian only, Chinese only, Black only, Filipino only, Latin American only, Arab only, Southeast Asian only, West Asian only, Korean only, Japanese only, Other racial or cultural origin (only), or multiple racial or cultural origins).

Indicator	Definition
Occupation	Respondent's occupational group, according to the National Occupational Classification 2016 (Management occupations; Business, finance and administration occupations; Natural and applied sciences and related occupations; Health occupations; Occupations in education, law and social, community and government services; Occupations in art, culture, recreation and sport; Sales and service occupations; Trades, transport and equipment operators and related occupations; Natural resources, agriculture and related production occupations; and Occupations in manufacturing and utilities).
Employment status	Working status of respondent in the week prior to the interview (employed, unemployed, not looking for work).
Sexual orientation	Respondent considers self as heterosexual or homosexual/bisexual.
Alcohol consumption	Respondent has increased long term health risks due to their drinking habits, according to Canada's Low-Risk Alcohol Drinking Guidelines (LRADG). For women, no more than 10 drinks a week and no more than 2 drinks per day, with more than 2 non-drinking days a week. For men, no more than 15 drinks a week and no more than 3 drinks per day, with more than 2 non-drinking days a week. The LRADG's additional guidance for preventing injuries and for specific situations (e.g., operating vehicle or machinery, etc.) are not addressed in this report.
Unhealthy Eating	Respondent eats less than 5 servings of fruits and vegetables per day.
Physical Activity	Physically inactive according to the Canadian Physical Activity Guidelines (CPAG). Physically active is defined by the CPAF as having at least 150 minutes of moderate to vigorous intensity aerobic physical activity per week, in bouts of 10 minutes or more.
Overweight/obese	Respondent's Body Mass Index (underweight/acceptable weight vs. overweight/obese) based on the body weight classification system recommended by Health Canada and the World Health Organization (WHO).
Mood Disorder	Respondent reported mood disorder such as depression, bipolar disorder, mania or dysthymia.
Illicit Drug Use	Respondent used any illicit drug (marijuana, hashish, cocaine, amphetamines, speed, methamphetamines, crystal, ecstasy, hallucinogens, glue, gasoline, other solvents, or injected a non-prescribed drug) in the last 12 months.
Life stress	Perceived life stress on most days reported by respondent (quite a bit/extremely stressful; a bit stressful; not at all/not very stressful).
Food insecurity	This variable is based on a set of 10 adult-referenced questions and describes the food security situation of the adult members of the household in the previous 12 months. Food insecurity indicates compromise in quality/quantity of food consumed or reduced food intake and disrupted eating patterns.
Renting current dwelling	Respondent's dwelling is rented, even if no cash rent is paid.
No family doctor	Respondent has regular family doctor or general practitioner.

Indicator	Definition
Sense of belonging to community	Respondent's sense of belonging to their local community (very strong; somewhat strong; somewhat weak; very weak)

Source: Canadian Community Health Survey (CCHS) 2017

Table A3: Priority Population Determinants for Current Smoking among Youth, OSDUHS

Indicator	Definition
Sex	Respondent's sex
Grade	Respondent's grade (9 to 12)
Parents with ≤high school education	Parents (both for two parents families and one for single families) have high school education or less
Parental birth place	Birth place of parents (two (or more) parents born in Canada; one parent born in Canada; no parent born in Canada)
Drug use problem	Reported at least 2 of the 5 items (used drugs to relax or fit in, used drug alone, forgotten things while using drugs, gotten into trouble while on drugs, had family say cut down on drugs) on the CRAFFT screener, which measures a drug use problem that may require treatment (in the past 12 months).
Hazardous or harmful drinking	Scored at least 8 out of 40 (Likert scoring) on the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT) screen, which measures heavy drinking and alcohol-related problems during the past 12 months.
Work for pay	Students reported working for pay outside the home during the school year
Gambling	Reporting gambling money on 1 or more of 17 gambling activities during the past 12 months: card games, dice games, games of skill (such as pool, darts, chess, bowling), bingo, sports pools or fantasy sports, sports lottery tickets, other lottery tickets, video gambling/machines/slot machines, casino, video game, dare or private bet, online poker, online bingo, sports betting online, other online game, online lottery tickets, and other.
Health Professional Visit for Mental Health Problems	Reported at least one visit to a doctor, nurse, or counsellor for emotional or mental health reason in the last 12 months
Delinquent Behaviour	Reported at least 3 of the following 10 delinquent behaviours in the 12 months before the survey: stole a car, vandalized property, sold marijuana, theft of goods worth less than $50, theft of goods worth $50 or more, assaulted someone (not a sibling), break and entering, carried a weapon, ran away from home, and arson.
No Social Cohesion at School	Students who did not "feel close to people at school" or did not feel like they are "part of the school"
Rated Poor Health	Rating one's physical health as either "fair" or "poor"

Source: Ontario Student Drug Use and Health Survey (OSDUHS) 2017

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