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Generating knowledge for public health

Smoke-Free Ontario Strategy Evaluation Report

Ontario Tobacco Research Unit

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ACRONYMS AND ABBREVIATIONS

CAMH-M	Centre for Addiction and Mental Health Monitor
CCHS	Canadian Community Health Survey
CCS	Canadian Cancer Society
CLTCI	Comprehensive Local Tobacco Control Index
CTI	Clinical Tobacco Intervention
DTQC	The Driven to Quit Challenge
LAFL	Lungs are for Life
LTPB	Leave the Pack Behind
MHPS	Ministry of Health Promotion and Sport
NRT	Nicotine Replacement Therapy
OMSC	Ottawa Model for Smoking Cessation
OSDUHS	Ontario Student Drug Use and Health Survey
OTRU	Ontario Tobacco Research Unit
OTS	Ontario Tobacco Survey
PHA	Public Health Agency
PHU	Public Health Unit
PIMS	Performance Indicators Monitoring System
PLBTF	Play, Live, Be Tobacco-Free
PTCC	Program Training and Consultation Centre
QGF	Quit & Get Fit
RNAO	Registered Nurses' Association of Ontario
SAC	Scientific Advisory Committee
SC Initiative	Nursing Best Practice Smoking Cessation Initiative
SFOA	<i>Smoke-Free Ontario Act</i>
SFOS	Smoke-Free Ontario Strategy
SHL	Smokers' Helpline
SHL TXT	Smokers' Helpline Text Messaging
SHO	Smokers' Helpline Online
SHS	Secondhand Smoke
SROs	Sports and Recreation Organizations
STOP	Stop Smoking Treatment for Ontario Patients
TCAN	Tobacco Control Area Network
TEACH	Training Enhancement in Applied Cessation Counselling and Health
TIMS	Tobacco Informatics Monitoring System
TSAG	Tobacco Strategy Advisory Group
YAA	Youth Action Alliance
YATI	Youth Advocacy Training Institute
YE Initiative	Youth Engagement Initiative
YTVP	Youth Tobacco Vortal Project

EXECUTIVE SUMMARY

Ontario's investment in the Smoke-Free Ontario Strategy is bearing fruit. The *Smoke-Free Ontario Act* protects most Ontarians most of the time from exposure to secondhand smoke in indoor public places. Smoking bans, social marketing, restrictions on promotion, and youth programs are changing the social climate of tobacco use, leading to declines in smoking rates among youth. The prevalence of smoking among the general population of Ontario's adults continues to decline. This is also the case for particular subpopulations—those with post-secondary education, professional workers and among respondents living in some public health regions.

Tobacco Use

In 2009, 21% of Ontarians aged 12 years and over used some form of tobacco, unchanged from that reported in 2007-2008 (23%). Specifically, 18% smoked cigarettes, 5% smoked cigars, 1% smoked pipes, and 0.5% used either chewing tobacco or snuff in the previous 30 days (these estimates include co-use so do not sum to total tobacco use, or 21%).

The rate of current cigarette smoking (defined as smoking daily or occasionally in the past 30 days and having smoked 100 cigarettes in one's lifetime) declined significantly over the period 2005 to 2009 (20% to 18%). Over this period, current smoking significantly decreased for females (17% to 15%) but not for males (22% vs. 21%).

Regionally, across the province, smoking rates in 2010 ranged from a low of 16% in Ottawa and Halton regions to a high of 31% in Algoma. In ten of Ontario's 36 health regions, 1 in 4 respondents aged 12 years or older smoked daily or occasionally.

Protection

Ontario's smoke-free policies have succeeded in decreasing secondhand smoke exposure in a variety of settings. Exposure to secondhand smoke inside restaurants has decreased from 11% in 2005 to 3% in 2009; exposure inside bars has decreased from 14% to 4%. In 2010, exposure of children and youth to secondhand smoke in vehicles significantly decreased compared to that of 2007 (10.5% vs. 18.5%). Among 12 to 19 year-old nonsmokers, 12% (or 146,700) were exposed to

secondhand smoke in their home in 2010—a significantly lower rate of exposure compared to levels reported in 2005 (18%).

Alongside these accomplishments, large numbers of people are still exposed to secondhand smoke in some settings. Over the period 2005 to 2009, overall (indoor and outdoor) workplace exposure to secondhand smoke in the past 30 days among workers aged 15 years and older has not declined significantly (31% in 2005 and 28% in 2009). Among the 24% of workers exposed at work for 5 or more minutes in the past week, 29% were exposed indoors. Almost a third of those (31%) visiting restaurants and bars in 2009 were still exposed on patios.

Public support for more extensive protection has increased significantly over the past few years with over 80% of Ontarians supporting smoking bans on restaurant and bar patios, in homes with children, and in multi-unit dwellings. Numerous localities have responded by implementing policies restricting smoking on restaurant and bar patios, public parks, beaches and entrances to doorways.

Cessation

In 2010, 7.3% of past-year smokers had quit at some point for a period of 30 days or more over the previous year. Applying a relapse rate of 83% (derived from OTRU's Ontario Tobacco Survey), it is estimated that 1.2% of previous-year smokers remained smoke-free for the subsequent 12 months. To meet targets set out in the Tobacco Strategy Advisory Committee report, it is necessary to at least double this rate.

Increasing the rate of successful quits is driven by increasing the proportions of smokers who intend to quit and who make quit attempts. Rates of intention to quit and quit attempts suggest an opportunity to advance cessation goals; however, these rates have not improved in recent years. The prevalence of six-month quit intentions in 2009 was 52%, and the prevalence of 30-day quit intentions was 25%. Four in ten adult smokers (41%) made one or more quit attempts in the past year.

In 2009, 69% of smokers who had visited a physician and 45% of smokers who visited a dentist in the past year were advised to quit. Only a small proportion of these smokers succeeded in quitting.

Considerable investments have been made in providing training to health professionals in the provision of cessation support. Evaluative information is insufficient at present to assess the effects of this training on the actual provision of cessation support.

Price is one of the most effective policy tools to promote cessation. Yet, taxes on tobacco have increased only once since 2006, and tobacco taxes in Ontario are among the lowest in Canada.

Restrictions on smoking in public and workplaces are also effective policy tools for the promotion of quitting. It is likely that since restrictions were already in place for some 90% of Ontarians prior to the implementation of the *Smoke-Free Ontario Act* in 2006, the fruits of this policy tool in regard to quitting have been reaped in large part in past years.

Ongoing, comprehensive social marketing has been found to be a vital ingredient for facilitating intentions to quit and quit attempts. Specified data on the scope and effects of social marketing campaigns were not readily available for this report; nevertheless, it is evident that recent years have not seen major ongoing campaigns, apart from the annual Driven to Quit Challenge.

The province's cessation efforts have focused largely on providing cessation support to smokers in making quit attempts. To this end, the Smoke-Free Ontario Strategy funds Smokers' Helpline, the Driven to Quit Challenge, the STOP study, Leave the Pack Behind and the Ottawa Model for Smoking Cessation. These interventions appear to reach approximately 5% of smokers annually, and only a small proportion of participants succeed in quitting. Relapse rates are very high and there is currently little support offered to prevent relapse in the post-intervention period. Notwithstanding, these initiatives have laid the foundation for the development of the next phase of a comprehensive cessation system, and recent commitments to cessation services by the government provide additional impetus to addressing this challenge.

Prevention

In 2009, two out of every ten students in Grade 9, three out of every ten students in Grade 10, and four out of every ten students in Grade 11 and 12 had tried smoking in their lifetime.

According to the Ontario Student Drug Use and Health Survey, the prevalence of past 30-day current smoking (daily or occasionally) in 2009 was 2% for students in Grade 9 but jumped to 9% for students in Grade 12, with the rate too low to report for students in Grades 7 and 8.

Indicators show that smoking initiation for students in higher grades has decreased over the past decade, yet the data presented here suggest that over the past couple of years, this decline has stalled. In Grades 11 and 12, lifetime abstinence is 63% and 58% respectively; past year initiation is 9% for both grades; past year smoking is 18% and 20%, respectively, and past 30-day current smoking is 9% across both grades.

According to the Canadian Community Health Survey, the rate of smoking was 13% for young adults aged 18 to 19 but jumped to 26% for young adults aged 25 to 29.

Although these jumps in smoking prevalence are concerning, there was a general downward trend in the prevalence of smoking among young adults in Ontario from 2000 to 2009. Among young adults ages 18 to 19, the rate of smoking dropped for the period 2003 to 2009 from 23.5% to 13%. Among young adults aged 20 to 24, the rate of smoking dropped over the period 2005 to 2009 from 26% to 20%.

Policies and programs to prevent initiation—including taxation, restrictions on youth access, smoking bans, advertising bans, youth engagement initiatives, social marketing and school-based programming—have met with some success in the general youth population. Taxation is a highly effective tool for preventing initiation, yet, among Canadian jurisdictions, Ontario has the second lowest rate of taxes on cigarettes.

Recent population survey data from 2008-2009 suggests a need for tobacco use-related curriculum in higher grades, as approximately 64% of youth in Grades 7-9 reported that they had in-class discussions about the effects of smoking, whereas only 42% of Grade 10-12 students had such discussions.

The Scientific Advisory Committee, in its report *Evidence to Guide Action: Comprehensive Tobacco Control in Ontario*, noted that beyond providing basic information about tobacco in all schools, there is a need to focus prevention efforts on high-risk schools. Analyses conducted recently by OTRU indicate that more than 75% of youth who are current smokers in Grades 7 to 12 also use other drugs or have problem drinking.

Concluding Remarks

There is a need to address forces that work to counter the accomplishments of the Smoke-Free Ontario Strategy and other tobacco control efforts. Widespread availability and use of contraband cigarettes presents a significant risk to Ontario's accomplishments and likely accounts for part of the failure to substantially decrease consumption and prevalence of cigarette use. The increasing availability, marketing and popularity of alternative tobacco forms may pose new challenges to the tobacco control community.

The Smoke-Free Ontario Strategy has made impressive inroads in implementing a comprehensive approach to achieving its vital tobacco control goals. Yet, the evaluative information presented in this report makes it clear that these laudable efforts must be sustained, strengthened and enriched in order to achieve the results that Ontario needs and deserves.

INTRODUCTORY REMARKS

This report presents evaluative information about the activities and results of the Smoke-Free Ontario Strategy (SFOS) for the period 2009 and 2010. We describe Strategy infrastructure and interventions (policies, programs and social marketing), analyze population-level changes, and explore the contributions of interventions.

The purpose of this report is to support learning that will enhance progress toward the achievement of SFOS goals. The report addresses progress to date in the implementation and results of Strategy components. Both accomplishments and challenges are highlighted with the intention of bringing evidence to bear on the continued development of the Strategy. The report is organized around the three major goals of the Smoke-Free Ontario Strategy. These goals were based on the strategic direction set by the Steering Committee of the Ontario Tobacco Strategy in 2003. The ultimate objective of the Strategy is to eliminate tobacco-related illness and death in Ontario. The three goals are:

- Protection: To eliminate Ontarians' exposure to secondhand tobacco smoke
- Cessation: To motivate and support quit attempts by smokers
- Prevention: To prevent smoking initiation and regular use among children, youth, and young adults

During 2009 and 2010, the Ministry of Health Promotion and Sport (MHPS) initiated processes to renew Ontario's tobacco control strategy. In 2010, the Scientific Advisory Committee (SAC) delivered its report, *Evidence to Guide Action: Comprehensive Tobacco Control in Ontario*.¹ Building on this report, the Tobacco Strategy Advisory Group (TSAG) produced *Building on Our Gains, Taking Action Now: Ontario's Tobacco Control Strategy for 2011-2016*.² The Ontario government has indicated that it is renewing and strengthening its commitment to a smoke-free Ontario by addressing the recommendations in this report. It has announced new measures, which include a \$5-million increase to the Smoke-Free Ontario budget, designed to help more people quit smoking and ensure that young people don't become addicted to tobacco products.

The current *Strategy Evaluation Report* relates to the period prior to the renewal of Ontario's tobacco control strategy, using additional evaluative information not available for the SAC and

TSAG reports. Evidence in this report further supports the need for invigorating the Strategy. While there has been some progress, the rate of change is too slow to achieve targets recommended by the Tobacco Strategy Advisory Group and to prevent continued loss of life, consumption of health care services and productivity losses.

There is a need for urgency to advance reforms in the Strategy consistent with the vision set out by the Scientific Advisory Committee and Tobacco Strategy Advisory Group report.

This report draws on information from population-level surveys, program evaluations, performance reports and administrative data. OTRU's Tobacco Informatics Monitoring System (TIMS) provides much of the population-level data analysis. Evaluative information about policy and program interventions is drawn from evaluation work conducted directly by the Ontario Tobacco Research Unit and by others on behalf of organizations that receive Smoke-Free Ontario Strategy funding. OTRU's Performance Indicators Monitoring System (PIMS) provides additional data on implementation and reach of Strategy programming. Further information has been gleaned from administrative documents.

The relationship between Smoke-Free Ontario Strategy interventions and changes in protection, cessation and prevention outcomes is complex. There is substantial evidence that tobacco control interventions affect these outcomes, and there is an expectation for synergistic effects from a comprehensive approach. However, several forces confound these relationships:

- Variations in fidelity, reach and dose of interventions
- Unknown time lags between implementation and population-level changes
- Economic and social perturbations and immigration
- Environmental variation—including tobacco industry and contraband activity

Furthermore, existing tools for measuring population-level outcomes do not always offer sufficient precision for identifying small year-over-year changes. In light of these constraints, we are not able to directly attribute changes in population-level outcomes to Smoke-Free Ontario Strategy expenditures and interventions. Instead the report provides information about the reach and effects of interventions, and identifies contributions and gaps in the existing complement of interventions.

Chapters for each goal area (protection, cessation and prevention) are organized around intervention path logic models. These models provide a simplified visual illustration of how infrastructure and interventions work through paths—identified from the literature—to affect short, medium and long-term outcomes. Measurement challenges and space constraints in this report do not allow for full analysis of the relationships among all of these components. For a more detailed analysis of these relationships for the cessation goal area, see *Evidence to Inform Smoking Cessation Policymaking in Ontario*.³

In 2008-2009, SFOS operated with \$53.2 million in funding from the Ministry of Health Promotion and Sport. In each of the following two years, the Strategy was funded at a reduced level of \$42.8 million.⁴ There is no Canadian equivalent for the US Institute of Medicine (IOM)⁵ per capita targets (\$15 US to \$20 US). However, at \$3.24, Ontario's per capita funding commitment is well below IOM target levels and \$0.40 lower than the average per capita commitment of other provinces and territories (\$3.64). The Ontario amounts omit dollars used for tobacco control that are not disaggregated at source such as funding to: the public health system for chronic disease prevention under the Ontario Public Health Standards, to physicians for cessation-related services under the Ontario Health Insurance Program, and to other sources (e.g., local public health contributions and those from Health Canada, the Public Health Agency of Canada, and other sources).

This report addresses primarily, but not exclusively, interventions funded directly through the SFOS by the Ministry of Health Promotion and Sport. Tobacco use, initiation, and cessation are affected in both directions by forces external to SFOS. The tobacco industry works in many, sometimes opaque, ways to promote tobacco use. In Ontario, there is also substantial trade in contraband tobacco. The Tobacco Strategy Advisory Group report calls for a “whole of government” approach to tobacco control, which requires ministries as varied as Revenue, Agriculture, Food and Rural Affairs, Health and Long-Term Care, and Municipal Affairs and Housing to contribute more to the Ontario government's effort to reduce the burden tobacco places on families, communities, healthcare and the economy.

This report is organized as follows:

- Chapter 1: An overview of key indicators related to **Tobacco Use**. (Additional data on current smoking, as it relates to youth and young adults, can be found in Chapter 4: Youth Prevention).
- Chapter 2: An overview of **Protection** from secondhand smoke
- Chapter 3: An overview of **Smoking Cessation**
- Chapter 4: An overview of **Youth Prevention**
- Chapter 5: **Concluding Remarks**

CHAPTER 1: TOBACCO USE

Reducing the overall use of tobacco is one of the main objectives of the Smoke-Free Ontario Strategy. In addition to smoking cigarettes, Ontarians use a variety of other tobacco products including cigars, pipe, snuff, or chewing tobacco.

Overall Tobacco Use

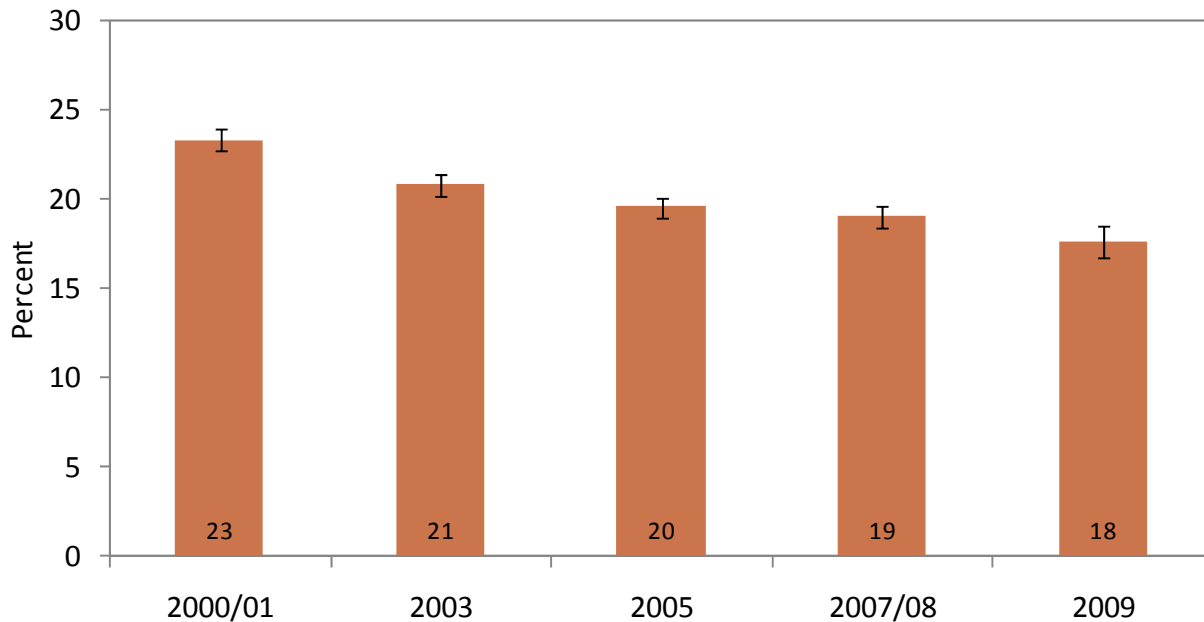
- In a recent survey conducted in 2009, 21% of Ontario respondents aged 12 years or over reported current use of tobacco in the previous 30 days (that is, currently smoked cigarettes, cigars, pipes; or used snuff or chewing tobacco). This represents 2.35 million tobacco users (CCHS, 2009). This rate is not statistically different from that of 2007-2008 (21% vs. 23%).
- In 2009, 18% of Ontarians smoked cigarettes, 5% smoked cigars, 1% smoked a pipe, and 0.5% used chewing tobacco or snuff (combined) in the previous 30 days (Note: These estimates include co-use so do not sum to total tobacco use, or 21%).

Cigarette Smoking

Reducing the prevalence of cigarette smoking is central to the Smoke-Free Ontario Strategy. Indicators that underscore progress toward this goal are past 30-day current smoking (for example, by sex, age, education, occupation, and jurisdiction).

- In 2009, 18% of Ontarians aged 12 years or over smoked in the past 30 days, representing 1.96 million people.
- Over the period 2000-2001 to 2009, there was a statistically significant decline in the prevalence of past 30-day current smoking (23% to 18%, respectively; Figure 1). Since 2005, a significant decline was also observed (20% in 2005 to 18% in 2009).

Figure 1: Current Smoking (Past 30 Days), Ages 12+, Ontario, 2000-2001 to 2009



Note: Vertical lines represent 95% confidence intervals.

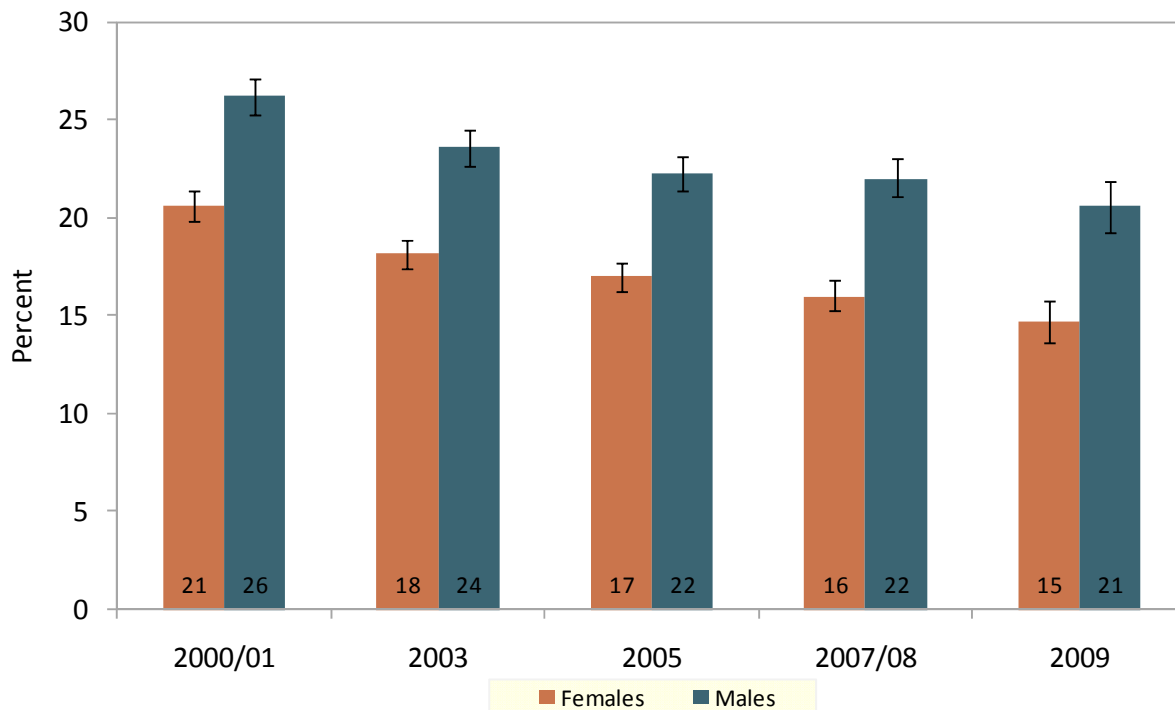
Source: Canadian Community Health Survey 2000-2001 to 2009.

Current Smoking (Past 30 Days) by Sex and Age

- In 2009, females aged 12 years and over had a significantly lower rate of past 30-day current smoking compared to their male counterparts (15% vs. 21%; Figure 2), a finding consistent with previous years.
- From 2005 to 2009, past 30-day smoking among females aged 12 years and over significantly decreased (17% to 15%; Figure 2). During this period, there has not been significant change in the smoking rate for males (22% vs. 21%).
- In 2009, the prevalence of current smoking among Ontarians varied substantially by age and sex (Figure 3).
- The prevalence of current smoking was highest among males aged 25 to 29 years (30%).
- Males in their 30s had a significantly higher smoking prevalence than their female counterparts.
- The greatest number of current smokers among males was in the 50 to 54 year age group, representing 135,700 of the 1.1 million male smokers aged 15 years and over in Ontario (12% of all smokers).

- The greatest number of current smokers among females was in the 40 to 44 year age group, representing 102,000 of the 832,300 female smokers aged 15 years and over in Ontario (12% of all smokers).

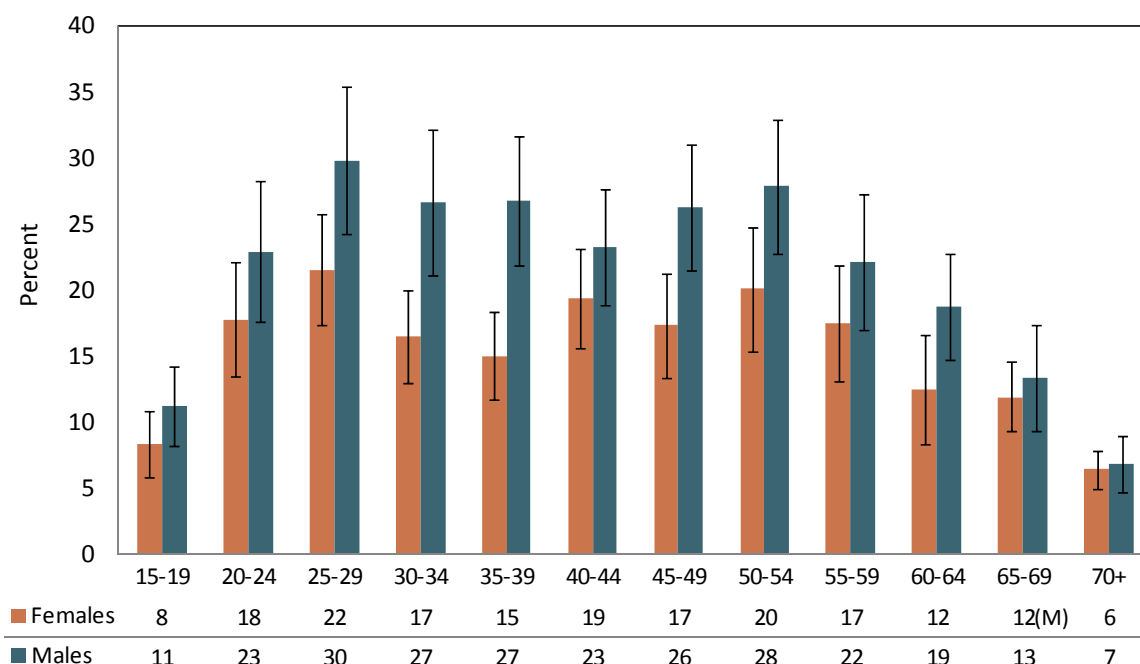
Figure 2: Current Smoking (Past 30 Days), by Sex, Ages 12+, Ontario, 2000-2001 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Canadian Community Health Survey 2000-2001, 2003, 2005, 2007-2008, 2009.

Figure 3: Current Smoking (Past 30 Days) by Age and Sex, Ontario, 2009



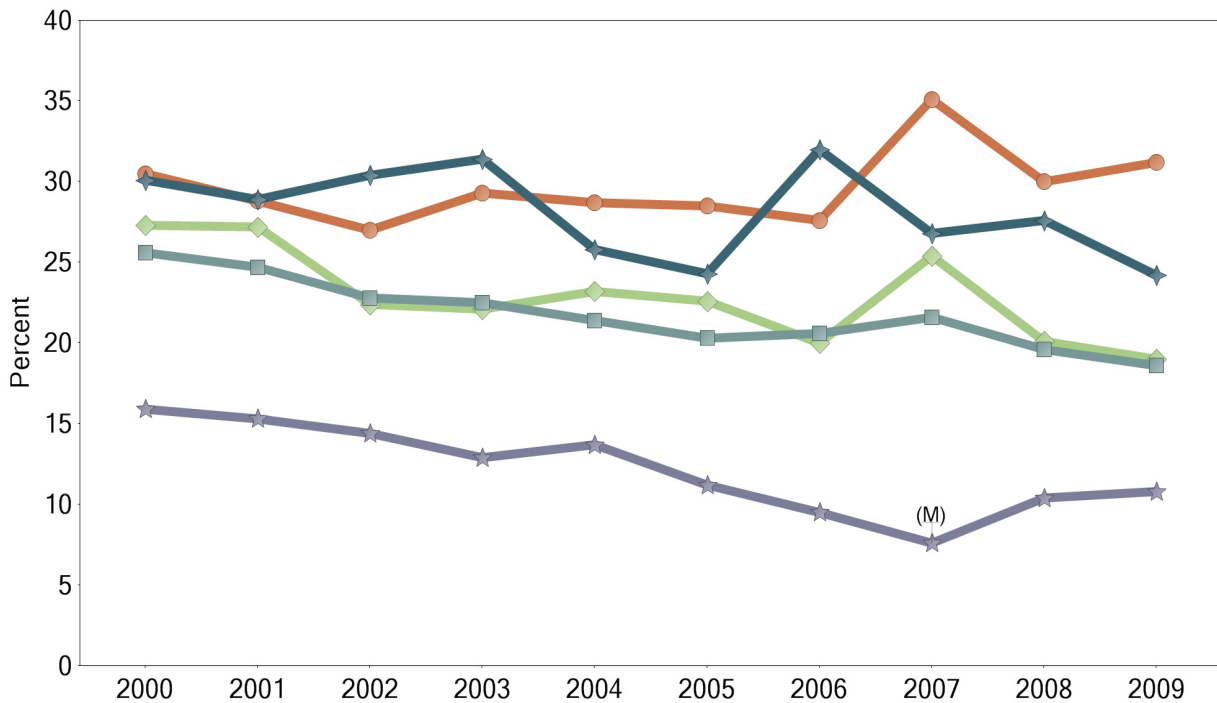
Note: M = Interpret with caution: subject to moderate sampling variability. Vertical lines represent 95% confidence intervals.

Source: Canadian Community Health Survey 2009.

Current Smoking (Past 30 Days) by Education

- In recent years, there has been no clear pattern of change in current smoking rates by educational level (Figure 4).
- In 2009, Ontarians aged 18 years or over, who had less than a high school education or completed high school, reported a higher prevalence of current smoking compared to those with higher levels of education (Figure 4). Those with a university degree were significantly less likely to be current smokers than all others (Figure 4).
- The prevalence of smoking among Ontarians with lower levels of education (31% for those with less than high school education and 24% for those with high school education) has not decreased over the period 2000 to 2009 (Figure 4).
- Among Ontarians with some post-secondary education or a university degree, there appears to be a downward trend in the rate of smoking over the period 2000 to 2008, but differences are not statistically significant (Figure 4).

Figure 4: Current Smoking (Past 30 Days) by Education, Ages 18+, Ontario, 2000 to 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Chart
Less than high school	30.5	28.8	27	29.3	28.7	28.5	27.6	35.1	30	31.2	
Completed high school	30.1	28.9	30.4	31.4	25.8	24.3	32	26.8	27.6	24.2	
Some post secondary	27.3	27.2	22.4	22.1	23.2	22.6	20	25.4	20.1	19	
University degree	15.9	15.3	14.4	12.9	13.7	11.2	9.5	7.6 (M)	10.4	10.8	
Total	25.6	24.7	22.8	22.5	21.4	20.3	20.6	21.6	19.6	18.6	

Note: M = Interpret with caution: subject to moderate sampling variability.

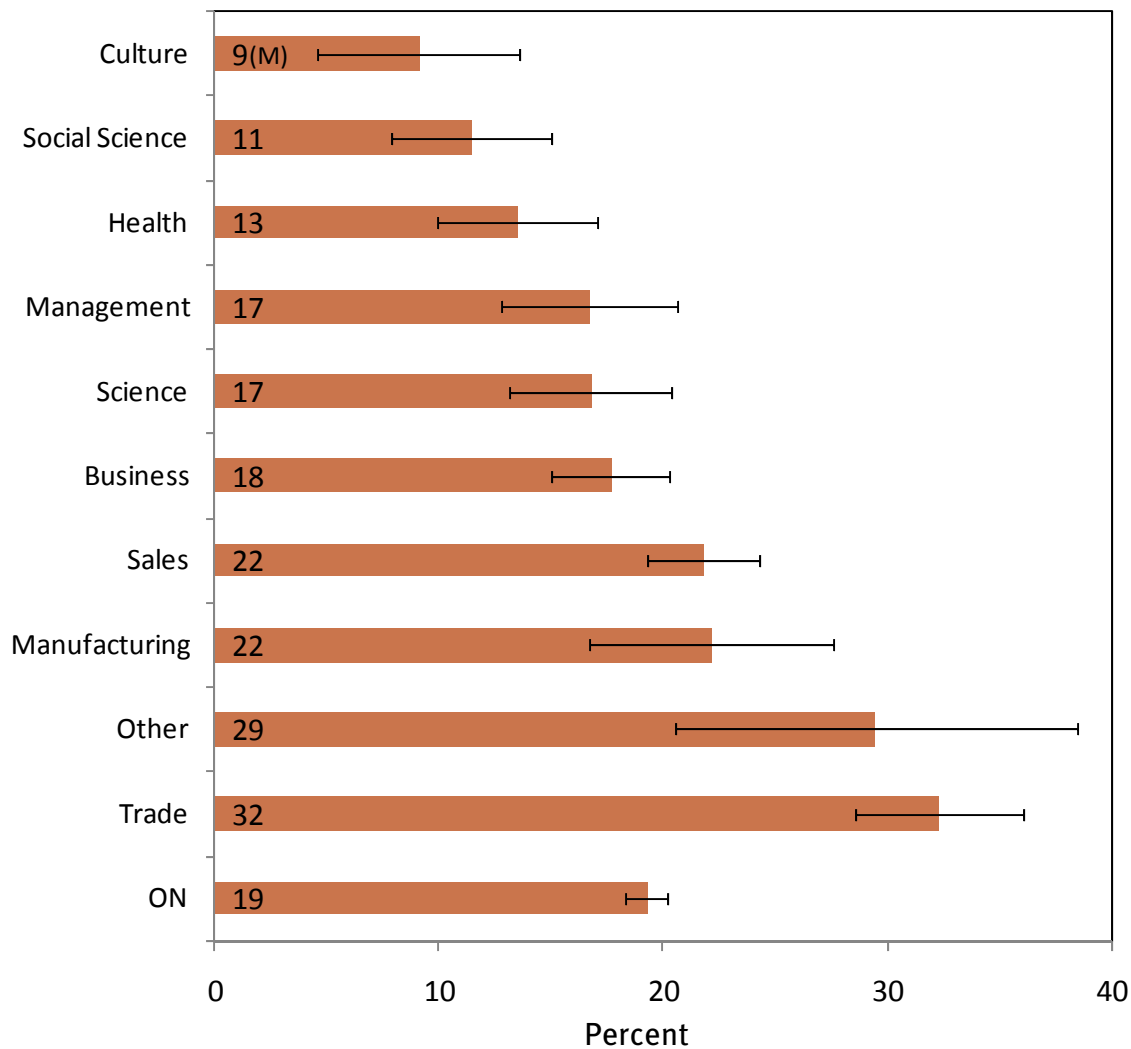
Source: Centre for Addiction and Mental Health Monitor 2000–2009.

Current Smoking (Past 30 Days) by Occupation

- The prevalence of current smoking was highest among workers in trade occupations (32%), representing a combined total of 16% (300,600) of the 1.9 million smokers in Ontario aged 15 to 75 years (Figure 5).
- The occupational classification with the greatest number of current smokers was Sales, representing 17% (332,400) of the 1.9 million smokers in Ontario aged 15 to 75 years (Figure 5).

- Among unemployed Ontarians aged 15 to 75 years, the prevalence of current smoking was 28%, representing 7% (140,500) of the 1.9 million smokers in Ontario aged 15 to 75 years (Data not shown).

Figure 5: Current Smoking (Past 30 Days) by Occupation, Ages 15 to 75, Ontario, 2009



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

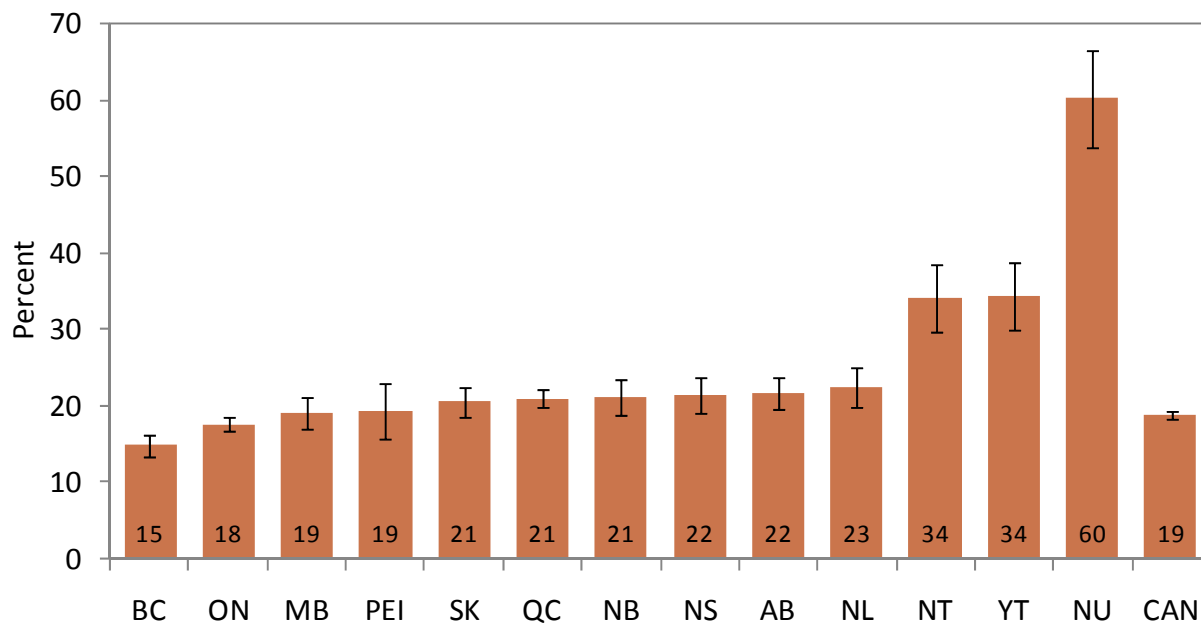
Source: Canadian Community Health Survey 2009.

Current Smoking (Past 30 Days) by Location

Federal, Provincial, Territorial

- The prevalence of past 30-day current smoking in Ontario was not statistically different from the national average (18% vs. 19%; Figure 6).
- Among provinces, current smoking ranged from a low of 15% in British Columbia to a high of 23% in Newfoundland and Labrador. The highest rate of smoking reported in Canada was in Nunavut at 60%.

Figure 6: Current Smoking (Past 30 days), by Jurisdiction, Ages 12+, 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Canadian Community Health Survey 2009.

Ontario Health Region

- In 2010, self-reported smoking (defined as smoking daily or occasionally) ranged from a low of 16% in Ottawa and Halton regions to a high of 31% in Algoma (Table 1).
- From 2009 to 2010, the decline in smoking was statistically significant in only Middlesex-London and Porcupine health regions (Table 1), with the prevalence of smoking significantly increasing only in Toronto. The rate of smoking (current and occasional) in Ontario in 2010 was 19%. The prevalence of smoking was 25% or more in ten of Ontario's 36 health regions (Table 1).

Table 1: Current Smoking, by Public Health Unit, Ages 12+, Ontario, 2000-2001 to 2010

Public Health Unit ^a	Current Smoking (%)						
	2000-01	2003	2005	2007	2008	2009	2010
Ottawa	21	20	19	17	18	15	16
Halton Region	24	21	18.5	18	18	19	16
Peel	21	21.5	19	16	17	14	17
York Region	23	21	16	15	14	17	17
Wellington-Dufferin-Guelph	24	21	21.5	22	24	19	17
Middlesex-London	22	20	18	20	20	23	17
Durham Region	27.5	25	25	22	19	20	17.5
Toronto	22	20	18	18	18	14	18
Grey Bruce	24	19	21	25	19	18	18
Region of Waterloo	27	23	19	22	21	19	18
Huron County	21	22	24	21	24	19	18
Kingston, Frontenac and Lennox & Addington	24.5	26	23	25	23	17 ^M	19
Elgin-St. Thomas	28	24	27	29	25	22.5 ^M	19
City of Hamilton	27	23	23	25	22	18	19.5
Peterborough County-City	23	24	21	21	25	19	20
Northwestern	30	27	22.5	26 ^M	23.5	25	20
North Bay Parry Sound District ^b	27	24	27	29	25	25	20.5
Timiskaming	35	29	26.5	21.1	27 ^M	16 ^M	21
Niagara Region	25	24	23	28	23	21	22
Chatham-Kent	27	26	25	29	25	23	22
Simcoe Muskoka District ^b	29	25	23	23	25	27	22
Porcupine	29	31	31	26	32	30	22
Lambton	27	24	25	29	20	22	23
Oxford	26	24	24	31	26	23	23
Thunder Bay District	29	29	27	26	26	26	23.5
Haldimand-Norfolk	28	28.5	30	27	25	21	24
Renfrew County and District	27	27.5	28	28	21	27	24
Windsor-Essex County	27	21.5	24	19	19	19	25
Leeds, Grenville and Lanark District	30	27	25	26	22	26	25
Eastern Ontario	32	25	27	25	30	26	25
Perth District	24	23	20	17	17 ^M	20 ^M	26
Sudbury and District	32	25	24	27.5	24	25	26
Haliburton, Kawartha, Pine Ridge District	26.5	22	22	26	22	23	27
Brant County	30	26	27	26	17	30	28
Hastings and Prince Edward Counties	27	22	27	26	28	27	28.5
Algoma	30	27	24	26	19.5	26	31
ONTARIO	25	22	21	21	20	19	19

^aOrdered by 2010 current smoking (lowest to highest).

^bMuskoka-Parry Sound Health Unit was dissolved April 1, 2005. Part of the region was merged with North Bay and District Health Unit and part with Simcoe County District Health Unit. Pre- and post-2005 comparisons for these health units need to be made with caution.

Note: M = Interpret with caution: subject to moderate sampling variability. Current smoking defined as smoking daily or occasionally in this Table (definition not restricted to past 30-day use and 100 cigarettes in lifetime). Do not round reported percentages (for example, keep 22.5% as 22.5%).

Source: CCHS 2000-2001–2010 (from the Canadian Socio-economic Information Management System [CANSIM]).

CHAPTER 2: PROTECTION

Protection: Smoke-Free Ontario Strategy

An important goal of tobacco control is to protect the population from exposure to secondhand smoke (SHS). In working toward this goal, desired outcomes include eliminating SHS exposure in public places and workplaces, vehicles in which children are present, and in the home. In Ontario, the protection component of the Smoke-Free Ontario Strategy is the main avenue by which progress toward these desired outcomes are expected to be achieved (Figure 7).

In this chapter, we provide a brief overview of the protection component of the SFOS including infrastructure and intervention components. We follow with an examination of key outcome indicators measuring progress toward protection objectives.

Protection Infrastructure

The SFOS approach to protection includes creating the infrastructure to successfully implement a variety of programs, services, and policies. In recent years, the Ministry of Health Promotion and Sport has funded seven Tobacco Control Area Networks, with a mandate to provide leadership, coordination, and collaborative opportunities. The province's 36 public health units play a pivotal role in efforts to reduce the population's exposure to secondhand smoke. These efforts include:

- Educating the public, workers, workplaces, and establishments about the dangers of secondhand smoke.
- Enforcing smoke-free provisions of existing regulation.
- Promoting more comprehensive protection (e.g., on outdoor patios, multi-unit dwellings, parks).

Protection Interventions

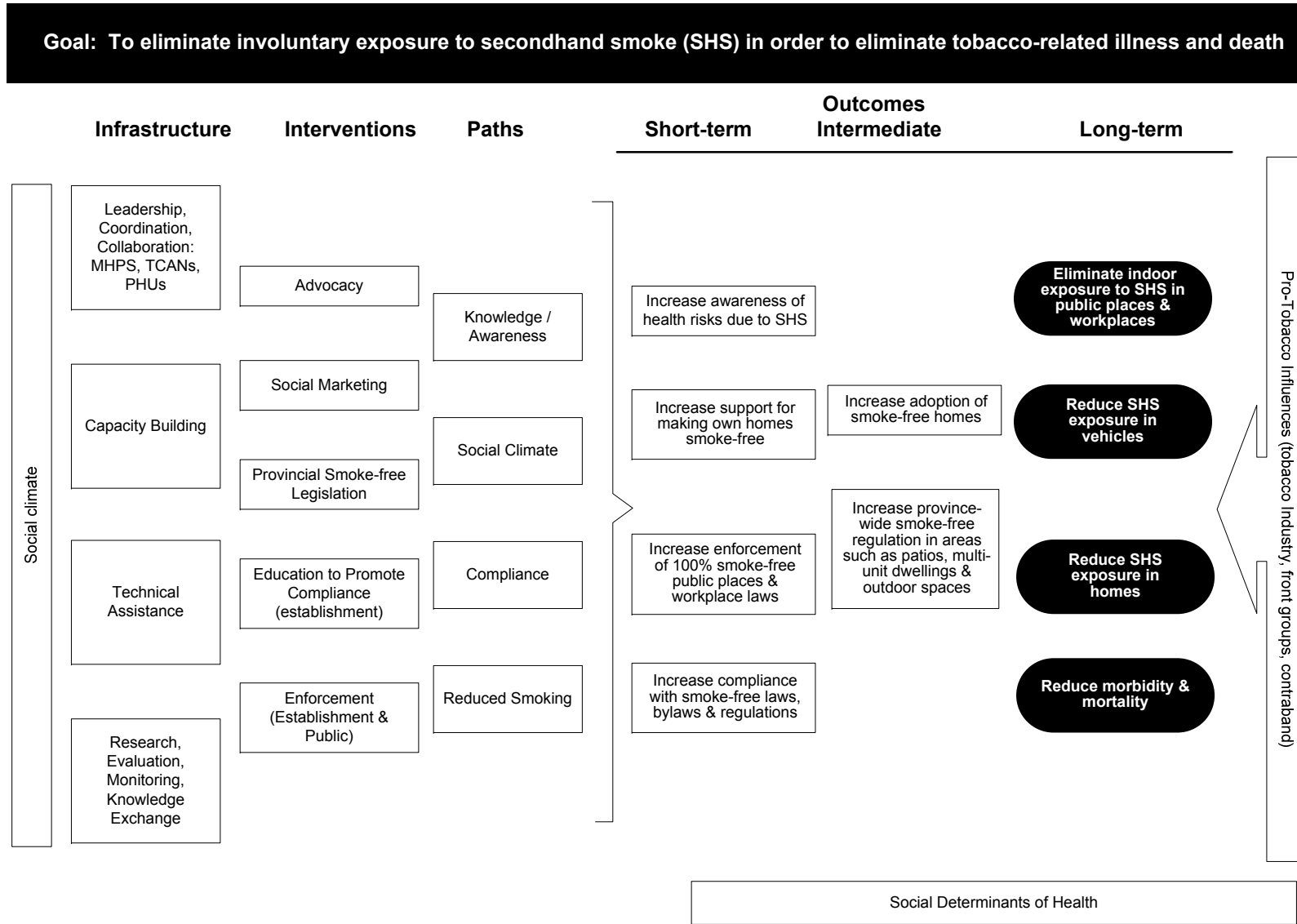
Main components of the SFOS protection efforts include educational activities, policies to protect the public from secondhand smoke, and enforcement of existing laws. Much of this effort is centred on the *Smoke-Free Ontario Act* (SFOA), a key piece of legislation in the province's protection strategy.

Smoke-Free Ontario Act

On May 31, 2006, the smoke-free provisions of the SFOA came into force, prohibiting smoking in workplaces and enclosed public places including restaurant, bars, casinos and common areas of multi-unit dwellings. Smoking is also prohibited on restaurant or bar patios having a roof structure. The SFOA bans designated smoking rooms and designated smoking areas. Prior to the SFOA coming into force, 9 out of 10 Ontarians were covered by local smoke-free restaurant and bar bylaws (91% and 87%, respectively). However, more than half of these bylaws (54%) allowed for designated smoking rooms.

Smoking exceptions are allowed for residents of residential care, psychiatric and veterans' facilities. Smoking is banned within 9 metres of a hospital entrance or exit. The SFOA entitles home healthcare workers to request no smoking in clients' homes while providing healthcare.

Figure 7: Protection Path Logic Model



Vehicles

In an amendment to the SFOA, effective January 21, 2009, Ontario banned smoking in vehicles with children under the age of 16, with a fine of \$125 for each offence.

Voluntary Household Policies

From a public health standpoint, promoting the prohibition of smoking in homes, especially if children and youth are present, is a component of many comprehensive tobacco control programs.

Educational Programs and Enforcement

The Ministry of Health Promotion and Sport's *Protocol for Smoke-Free Inspection for Enclosed Workplaces and Public Places* applies a continuum of progressive enforcement actions—starting with education and progressing from warnings to increasingly more serious charges to match the nature and frequency of contraventions under the *Act*.⁶

Local Policy Initiatives

At the local level, several jurisdictions have extended protection beyond provincial regulation to other settings including:

- Outdoor parkland, playgrounds, sports fields, and beaches
- Outdoor patios
- Transit shelters
- Hospital and long-term care grounds
- Buffer zones around doorways and windows, and multi-unit dwellings.⁷

For instance, Ottawa and Woodstock ban smoking near bus stops or bus shelters. Collingwood, Orillia, Woodstock and Cornwall ban smoking near municipal playgrounds. In January 2009, a Toronto bylaw banned smoking in parks within a 9-metre radius of a playground, splash pad or wading pool, or at Riverdale Farm or High Park Zoo, popular family-oriented recreational sites.

Waterloo was the first Regional Municipality in Ontario to implement a 100% smoke-free policy for new leasesⁱ for its regionally-owned and operated community housing units.⁸

Haliburton Community Housing Corporation also prohibits indoor smoking in the two multi-unit dwellings it owns, with existing units grandfathered until such time as the unit becomes vacant.⁹

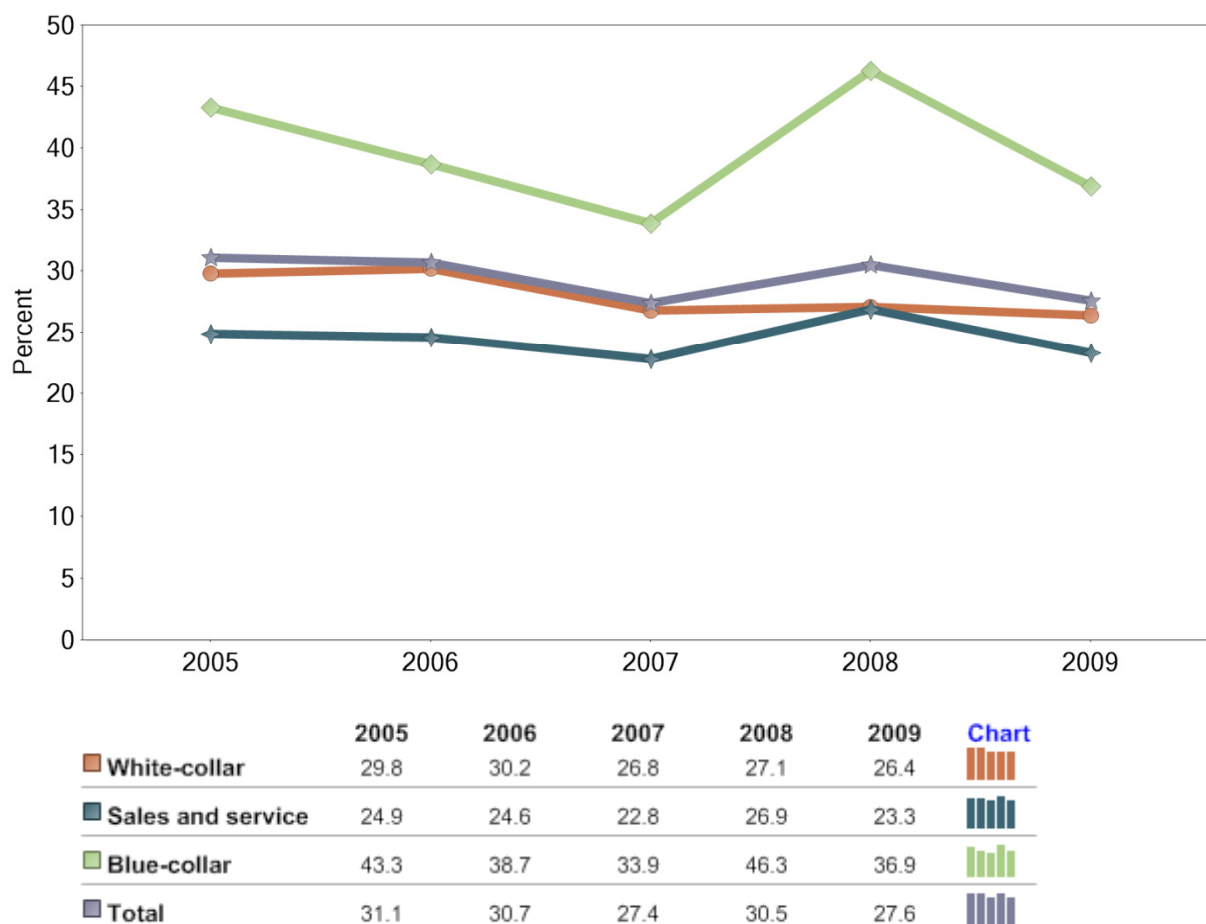
Protection Outcomes: Population Level

Workplace Exposure

- According to the Canadian Tobacco Use Monitoring Survey, exposure to secondhand smoke at the workplace in the past 30 days among workers aged 15 years and older has not declined significantly over the period 2005 to 2009 (31% in 2005 and 28% in 2009; Figure 8).
- Blue-collar workers had a significantly higher level of exposure to secondhand smoke while working compared to workers in other occupations (Figure 8).
- According to the CAMH Monitor, among the 24% of adult workers exposed to SHS at work for 5 or more minutes in the past week, 29% were exposed indoors (data not shown).
- The proportion of Ontario workers who reported that their workplace was covered by a total indoor smoking ban increased from 64% in 1998 to 96% in the first half of 2007, the most current year for which data is available (CAMH Monitor, data not shown) (The *Smoke-Free Ontario Act*, which banned smoking in indoor workplaces—as well as other sites—came into force May 31, 2006).

ⁱ This policy only applies to new leases because residential tenancy law requires existing leases to be grandfathered.

Figure 8: Workplace Exposure, by Occupation, Ages 15+, Ontario 2005 to 2009



Source: CTUMS 2005–2009.

Public Places Exposure

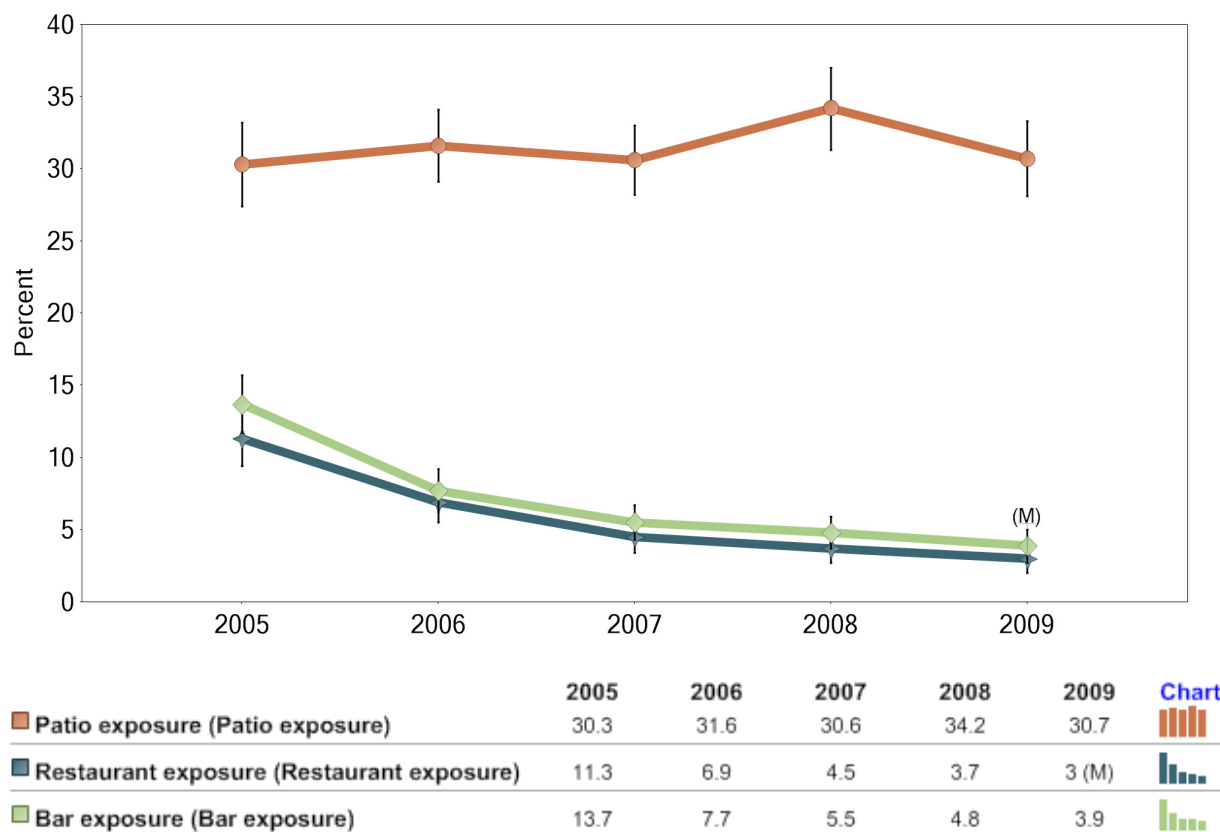
Restaurant and Bars

- In 2005, the year before implementation of the *Smoke-Free Ontario Act*, 11% of Ontario adults reported exposure to secondhand smoke inside a restaurant. Since that time, exposure has decreased significantly to 7% in 2006 (year of implementation), 5% in 2007 (one year after implementation), 4% in 2008 (2 years after implementation), and 3% in 2009 (3 years after implementation; Figure 9).
- Secondhand smoke exposure in bars was 14% in 2005 (the year prior to the *Act*), 8% in 2006 (year of implementation), 6% in 2007 (one year following implementation), 5% in 2008 (two years following implementation), and 4% in 2009 (three years following implementation).
- Exposure to secondhand smoke on restaurant and bar patios was 30% in 2005 (the year prior to the *Act*). Since that time, similar rates of exposure were reported (32% in 2006, 31% in 2007, 34% in 2008, and 31% in 2009).
- Over the first 6 months of 2009, 4 in 5 Ontario adults (80%) agreed that smoking should not be allowed on restaurant and bar patios, a significant increase over 2007 (61%) and a substantial increase from the level of support in 2005 (50%; CAMH Monitor, data not shown).

Other Public Places

- In 2009, about half of all Ontarians reported being exposed to secondhand smoke at entrances to buildings in the previous month (53%), a level of exposure that has remained unchanged in recent years (CTUMS, data not shown).
- Exposure to secondhand smoke outdoors has also remained relatively stable in recent years (52% in 2006 and 56% in 2009; CTUMS, data not shown).
- In 2009, half of Ontario adults (50%) agreed that smoking should be banned on sidewalks. The level of support among Ontario adults for banning smoking in parks and on beaches increased significantly from 50% in 2008 to 60% in 2009 (CAMH Monitor, data not shown).

Figure 9: Exposure to SHS at Restaurants or Bars, Ages 18+, Ontario, 2005 to 2009



Note: Vertical lines represent 95% confidence intervals. The *Smoke-Free Ontario Act* was implemented May 31, 2006.

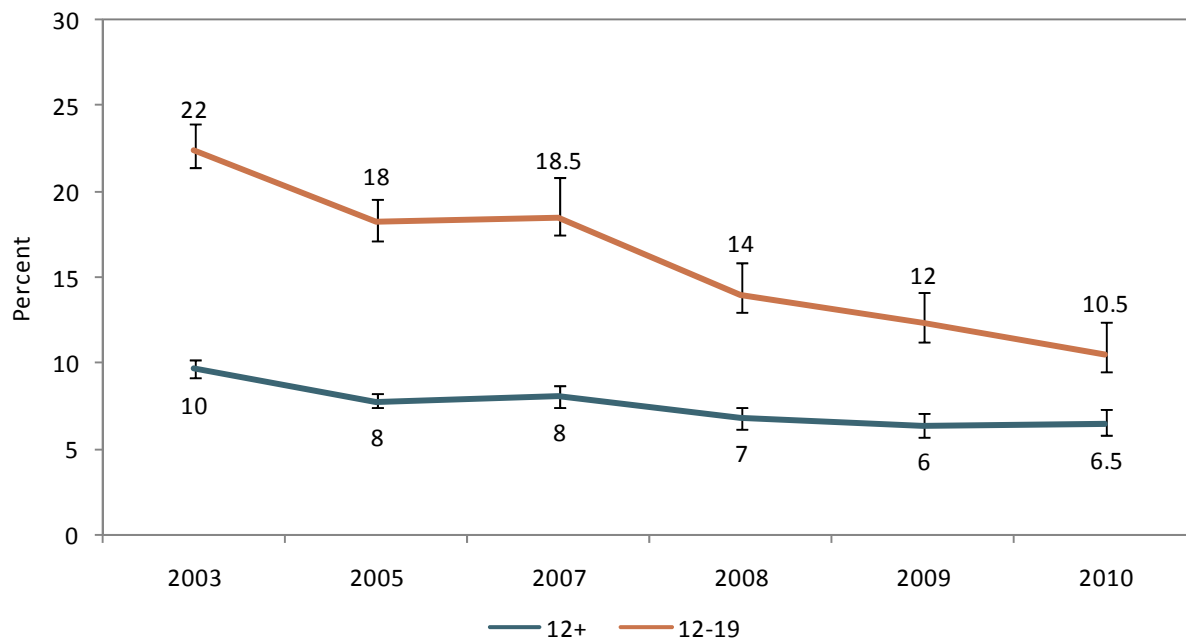
Source: CTUMS 2005–2009.

Vehicle Exposure

Reduction of secondhand smoke exposure in vehicles is one objective of the SFOS, with particular emphasis on protecting children and youth from secondhand smoke.

- Among nonsmoking Ontarians aged 12 years and over, exposure to secondhand smoke in vehicles was significantly lower in 2010 (6.5%) compared to 2007 (8%; Figure 10).
- In 2010, exposure to secondhand smoke in vehicles among nonsmokers aged 12 to 19 significantly decreased compared to that of 2007 (10.5% vs. 18.5%; Figure 10). In 2010, exposure among 12 to 19 year olds was significantly higher compared to all Ontarians aged 12 years and older (10.5% vs. 6.5%).

Figure 10: Nonsmokers' Exposure to Secondhand Smoke in Vehicles (Every Day or Almost Every Day), by Age and Year, Ontario



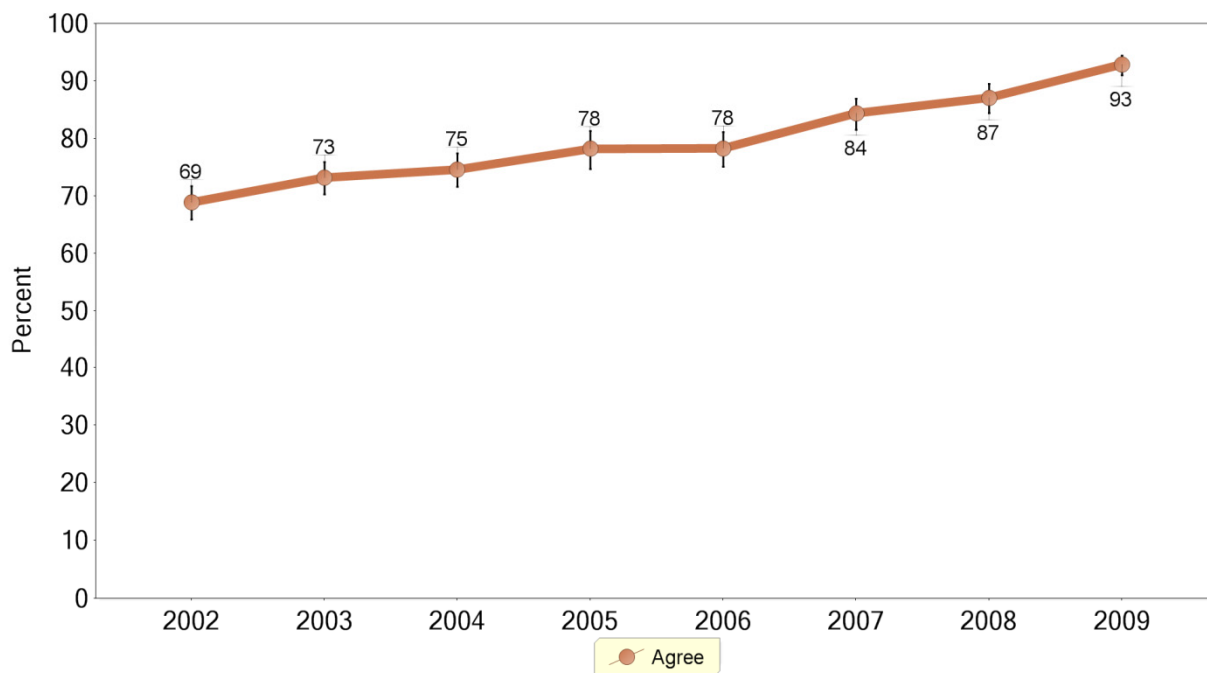
Note: Vertical lines represent 95% confidence intervals.

Source: CCHS. Statistics Canada. Table 105-0501 - Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories, health regions (2007 boundaries) and peer groups, occasional, CANSIM (database).

Public Opinion about Smoking in Vehicles

- In the first half of 2009, 93% of Ontario adults agreed smoking should not be allowed in cars with children, significantly higher than the 87% support reported in 2008 (Figure 11). Support across all ages was high, with no significant difference by age group reported (data not shown).

Figure 11: Agreement that Parents Should be Banned from Smoking Inside a Car if Children Present, Ages 18+, Ontario, 2002 to 2009



Note: Vertical lines represent 95% confidence intervals.

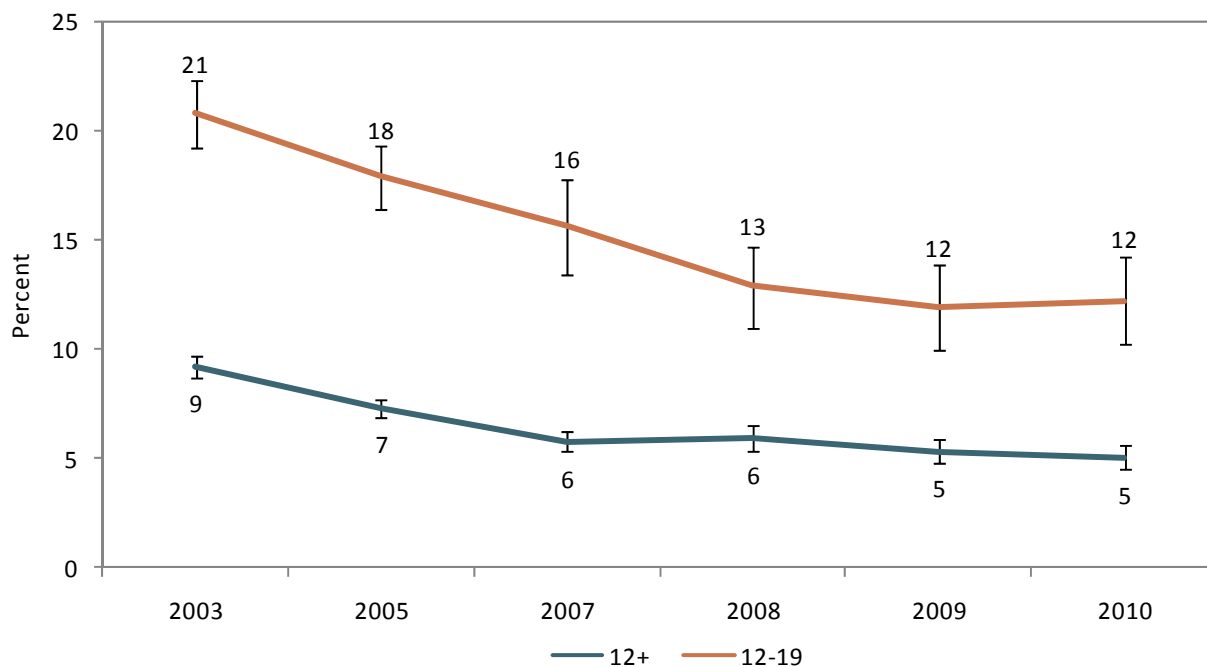
Source: Centre for Addiction and Mental Health Monitor 2002–2009.

Household Exposure

One general objective of tobacco control is to increase the adoption of voluntary policies to make homes smoke-free.

- In 2010, 5% of nonsmoking Ontarians aged 12 years and older were exposed to secondhand smoke in their home every day or almost every day (Figure 12). This level is a significant decrease from the level reported in 2005 (7%).
- Among 12 to 19 year old nonsmokers, 12% (or 146,700) were exposed to secondhand smoke in their home in 2010, which is more than double the exposure reported by all respondents aged 12 and over (or 5%). Respondents aged 12 to 19 had a significantly lower rate of exposure in 2010 compared to levels reported in 2005 (18%).

Figure 12: Nonsmokers' Exposure to Secondhand Smoke at Home (Every Day or Almost Every Day), by Age and Year, Ontario



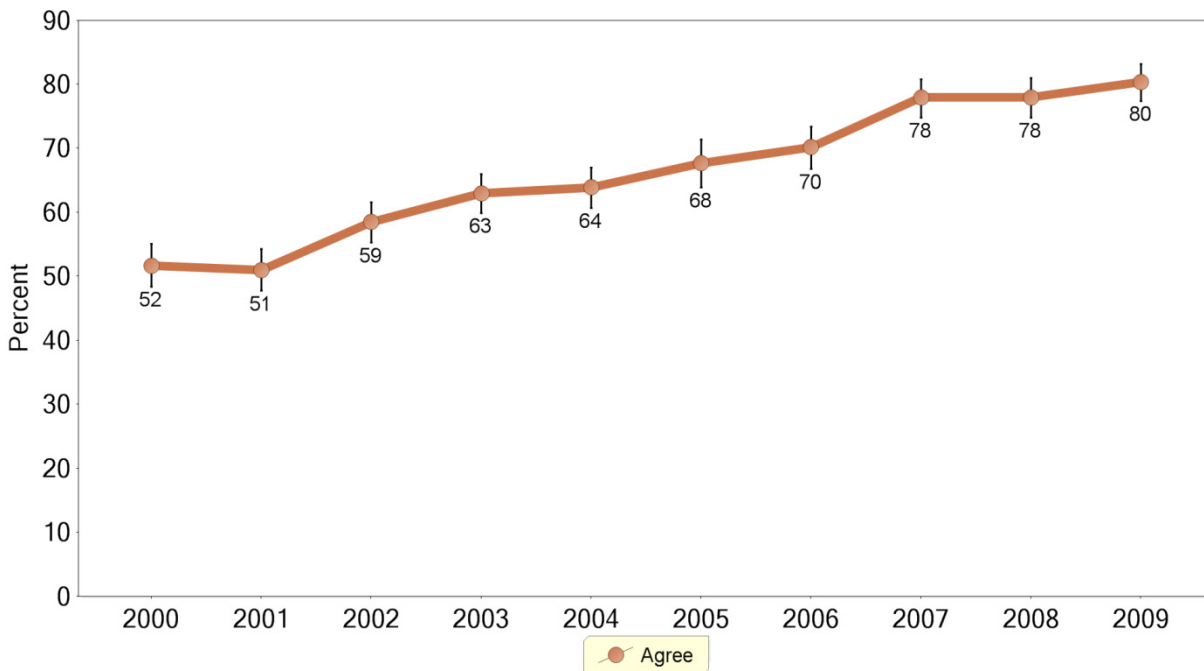
Note: Vertical lines represent 95% confidence intervals.

Source: CCHS. Statistics Canada. Table 105-0501 - Health indicator profile, annual estimates, by age group and sex, Canada, provinces, territories, health regions (2007 boundaries) and peer groups, occasional, CANSIM (database).

Public Opinion about Smoking in Homes

- In 2009, eight in ten respondents (80%) agreed that parents should not be allowed to smoke inside their home when children are present, which is significantly higher than the level of agreement reported in 2006 (70%; Figure 13).
- In 2009, 84% of adults in Ontario believed that smoking should not be allowed inside multi-unit dwellings with shared ventilation including apartment buildings, rooming houses, and retirement homes. This is an 11% increase in support from 2006 (84% vs. 73%; CAMH Monitor, data not shown).

Figure 13: Agreement that Parents Should Not be allowed to Smoking Inside their Home if Children are Living there, Ages 18+, Ontario, 2000 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Centre for Addiction and Mental Health Monitor 2000–2009.

Summary

Smoke-Free policies are showing their effects. Exposure to secondhand smoke in restaurants, bars and vehicles is significantly lower than it was five years ago. There is also substantially decreased exposure in homes. Public support for more extensive protection has increased significantly over the past few years with over 80% of Ontarians supporting smoking bans on restaurant and bar patios, in homes with children, and in multi-unit dwellings. Numerous localities have responded to this support with policies restricting smoking on restaurant and bar patios, public parks, beaches and entrances to doorways.

Full achievement of the goal of eliminating exposure to secondhand smoke in Ontario requires further action. Too many Ontarians are still exposed to secondhand smoke in a variety of settings: 28% of working Ontarians are exposed at work; 31% of Ontarians who visited restaurants or bars are exposed on patios; 12% of nonsmokers aged 12 to 19 are still exposed in their home and 10.5% are exposed in vehicles.

Implementation of the Tobacco Strategy Advisory Group protection recommendations would be important next steps to offer further protection for Ontarians: banning smoking on all bar and restaurant patios, and amending *Residential Tenancies Act* to give landlords the authority to set nonsmoking clauses in leases.

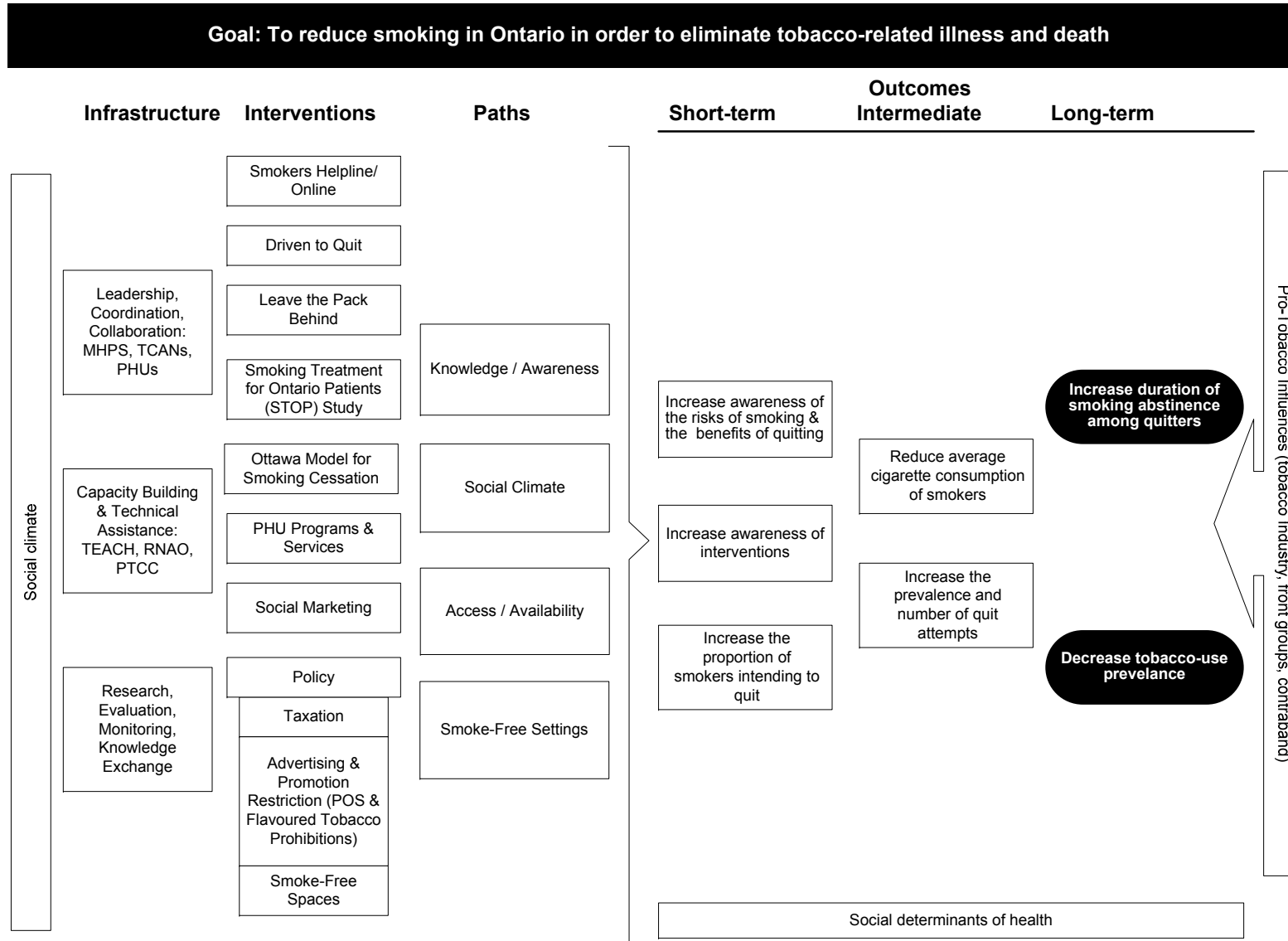
CHAPTER 3: SMOKING CESSATION

Cessation: Smoke-Free Ontario Strategy

A main objective of tobacco control efforts is to increase the proportion of smokers who quit. In working toward this goal, desired outcomes include increasing the proportion of smokers intending to quit, decreasing cigarette consumption (for example, transitioning smokers to non-daily smoking or greatly reducing number of cigarettes smoked per day), and increasing the actual number of quit attempts. It is also desirable to have these quit attempts and successful quits occur earlier in a smoker's life. In Ontario, the cessation component of the Smoke-Free Ontario Strategy is the main avenue by which progress toward these desired goals is expected to be achieved. Figure 14 depicts a general path logic model that maps the infrastructure and intervention components of the Strategy to key paths for achieving desired cessation outcomes.

In this chapter, we provide a brief overview of the SFOS cessation system including infrastructure and intervention components. We follow with an examination of progress toward cessation objectives at the population level. Finally, intervention specific outcomes are reported.

Figure 14: Cessation Path Logic Model



Cessation Infrastructure

Several cessation infrastructure components support the development and implementation of a variety of programs, services, and policies. For example, seven Tobacco Control Area Networks, representing the 36 public health regions, have been set up across the province to provide leadership, coordination, and collaborative opportunities. The Ministry of Health Promotion and Sport also has dedicated staff working on the cessation portfolio.

To ensure success, the cessation system has been designed to build capacity, provide technical assistance, and offer research and evaluation support to key stakeholders—including public health unit staff, nurses, physicians and other health professionals—to deliver evidenced-based programs, services, and policies to the public. This infrastructure function is delivered by several key organizations including the Program Training and Consultation Centre (PTCC), Training Enhancement in Applied Cessation Counselling and Health (TEACH) Project, the Registered Nurses' Association of Ontario's (RNAO) Nursing Best Practice Smoking Cessation Initiative (SC Initiative), and the Ontario Tobacco Research Unit (OTRU).

Capacity Building Components

RNAO Nursing Best Practice Smoking Cessation Initiative

Since 2007, the Ontario Ministry of Health Promotion and Sport has funded the Registered Nurses' Association of Ontario to implement the Nursing Best Practice Smoking Cessation Initiative in Ontario. The goal of the Initiative is to increase the capacity of nurses in integrating smoking cessation best practices into daily practice, and adopting the RNAO Smoking Cessation Best Practice Guidelines at the organizational and team levels.

This initiative emphasizes the leadership role of public health units in supporting implementation of the program and adoption of the Best Practice Guidelines among nurses. Various programmatic activities have been developed and implemented to ensure achievement of the goal including: establishment of pilot smoking cessation project sites in several public health units across Ontario, development and enhancement of the Smoking Cessation Coordinator role, and the Smoking Cessation Champion Program and other activities.

Program Training and Consultation Centre

The Program Training and Consultation Centre, a resource centre of the Smoke-Free Ontario Strategy, is responsible for providing training and technical assistance to health professionals working in tobacco control in Ontario.¹⁰ In the area of smoking cessation, PTCC offers workshops on a range of topics, including brief counseling techniques for tobacco cessation, cessation strategies for specific populations—such as pregnant women and Lesbian, Gay, Bisexual and Transgendered (LGBT) individuals—as well as key principles and practical tips for community engagement to support smoking cessation. Training workshops are conducted in collaboration with public health units and Tobacco Control Area Networks.

Training Enhancement in Applied Cessation Counselling and Health Project

TEACH aims to enhance treatment capacity for tobacco cessation interventions by offering evidence-based, accredited, accessible, and clinically relevant curricula to a broad range of health practitioners, such as registered nurses, addiction counsellors, social workers, respiratory therapists, pharmacists and others. The core training course focuses on essential skills and evidence-based strategies for intensive cessation counselling. The project also offers 14 specialty courses targeting interventions for specific populations. Other key elements of the TEACH Project include collaboration and partnership with other cessation training groups, hospitals, community stakeholders, and government; community of practice activities to provide health practitioners with clinical tools and applications, as well as opportunities for networking and continuing professional education; and an evaluation component to examine project impact and knowledge transfer.

Clinical Tobacco Intervention

The Clinical Tobacco Intervention (CTI) program was a joint project among the Ontario Dental Association, Ontario Medical Association and the Ontario Pharmacists' Association. The project aimed to increase the capacity of physicians, dentists and pharmacists in providing evidence-based smoking cessation and prevention interventions. The program emphasized the minimal contact intervention approach and is modeled on the 5 As - *Ask, Advise, Assess, Assist and Arrange*. Profession-specific education kits and training workshops were developed and provided across the province at no charge. In 2010, the CTI program was scaled back due to funding cuts. Although CTI materials are still available for interested practitioners, workshops are no longer offered.

Cessation Interventions

Tobacco Control Policies

Price

There is strong evidence that an increase in cigarette taxes is an effective policy measure to drive down cigarette consumption, encourage current smokers to quit and prevent youth from becoming regular smokers. In Ontario, the last change in provincial tobacco tax was on February 1, 2006, when the tax for 200 cigarettes was increased to \$24.70 (or \$27.61 adjusted to August 2011 dollars).¹¹ The recent introduction of the harmonized federal/provincial sales tax (HST) in July 1, 2010 has resulted in more than a \$5 increase in the total provincial tax for 200 cigarettes (from \$24.70 to \$29.80), an increase of 7.9% since February 2006 after adjustment for inflation.¹¹ However, Ontario continues to have the second lowest tobacco tax of any Canadian province or territory.

Availability

Restricting the retail distribution and availability of tobacco products is considered an important mechanism to limit their consumption and subsequent health effects. In Ontario, tobacco sales are banned from vending machines, at pharmacies, hospitals and other health care facilities and residential-care facilities. Some municipalities and cities (Ottawa, Hamilton) have introduced licensing for retail tobacco sales. In some places, tobacco sales may also be restricted due to voluntary administrative policies (e.g., bans on sales on university and college campuses). Despite these advances, tobacco products continue to be available across the province through a large number of retail outlets (approximately 14,500 retail outlets in 2008), primarily convenience and grocery stores.

Marketing Restrictions

Restrictions on marketing and promotion of tobacco products is another essential policy tool aimed at reducing tobacco use. In Ontario, a complete ban on the retail and wholesale display of tobacco products took effect May 31, 2008. Marketing, promotion and sponsorship of tobacco products is also regulated under the *Federal Tobacco Act*. A recent amendment to this *Act* (Bill C-32) has further restricted the marketing opportunities of tobacco companies by imposing a total ban on tobacco advertising in newspapers and magazines.

Smoke-Free Policies

Policies to protect against secondhand smoke have been introduced in the past five years in Ontario. These include bans on smoking in public places, workplaces, and cars transporting minors. While these policy measures are not directly related to cessation, studies have shown¹² that smoke-free policies reduce consumption, and support recent quitters by reducing cues for smoking and increasing their likelihood of quitting permanently.

Social Marketing

Social marketing campaigns (known as the Smoke-Free Ontario Campaigns) have run for several years but not on an on-going basis. The campaigns have evolved from providing broad support for smoke-free policies to targeting smokers to raise their awareness of services and promote quit attempts. The most recent campaign targeted young men aged 19 to 29, who have one of the highest rates of smoking in the province.

Cessation Programs and Services

The Strategy funds several smoking cessation programs and services dedicated to encouraging people to quit smoking and helping them in their quit attempts (Figure 14).

Smokers' Helpline (SHL)

The Canadian Cancer Society's Smokers' Helpline is a free, confidential and province-wide smoking cessation service that provides support to individuals who want to quit, are thinking about quitting, have quit but want support, continue to smoke and do not want to quit, and want to help someone else quit smoking. The Helpline uses various ways of delivering cessation support, including over the phone, web-based and text messaging services.

Smokers' Helpline (Phone support)

SHL phone-based support is provided by trained quit specialists. They assist callers to create a quit plan, support them throughout the quitting process, provide them with printed materials and referrals to local programs and services, and make follow-up calls.

Smoker's Helpline Online (SHO)

This online resource offers 24/7 web-based, interactive assistance moderated by program staff and Evolution Health Systems Inc., the program vendor. Since its introduction in

2005, the program has been providing smokers with online support groups, email support, instant messenger service, and personalized feedback about financial and health gains associated with quitting.

Smokers' Helpline Text Messaging (SHL TXT)

In 2009, the Smokers' Helpline introduced a text messaging, smoking cessation service. The service is provided either as a stand-alone service or in conjunction with the phone-support and online services. Registrants receive a series of supportive messages and can text key words to get help with preparing for their quit attempt, coping with their cravings, withdrawal symptoms and stress, identifying quit tips and aids, and staying motivated to maintain their quit.

The Driven to Quit Challenge (DTQC)

This program is the annual provincial quit smoking contest implemented by the Canadian Cancer Society. The main objectives of the contest are to encourage quit attempts, to increase awareness of cessation resources among tobacco users and to encourage them to seek help through SHL/SHO. The contest is open to all Ontario residents over the age of 19 who have used tobacco for at least one year. Participants register online, by fax, telephone or mail with a “buddy” who supports his/her pledge to remain smoke-free during the quit month in order to be eligible for one of several prizes. In a departure from previous years, when participants of the contests were required to be daily tobacco users only, the 2010 Driven to Quit Contest extended its primary target audience by allowing occasional tobacco users to enter the contest.

Leave the Pack Behind (LTPB)

This program aims to reduce tobacco use and support healthy lifestyles among college and university aged students in Ontario. Health professionals and student teams located on campuses across Ontario advocate for smoke-free places, engage in tobacco industry denormalization, and seek to increase knowledge of the risks of tobacco use. Smoking cessation is a major component of the program and is delivered through a range of program activities including: training and support for campus health professionals to provide smoking cessation counseling; distribution of self-help cessation materials; provision of Nicotine Replacement Therapy (NRT); peer-to-peer tobacco education and cessation support; and a quit contest.

The Smoking Treatment for Ontario Patients (STOP) Study

STOP is a research project that aims to examine the most effective methods of delivering free smoking cessation medication and counseling support to smokers across Ontario. The study uses the existing healthcare infrastructure as well as new and innovative means to reach smokers from all parts of the province. Since its inception in 2005, the STOP study has examined the effectiveness of various Nicotine Replacement Therapy distribution models, including:

- Distribution through tertiary-care institutions
- Mass distribution through a call centre
- Distribution (together with brief individual counseling sessions) through public health units, community pharmacists, Community Health Centers, and Aboriginal Health Access Centers
- Distribution by mail
- Online enrolment (together with weekly motivational emails)
- STOP on the Road, an initiative that offers workshops in various locations across Ontario, where smoking cessation clinics are not easily accessible.

Ottawa Model for Smoking Cessation (OMSC)

Led by the University of Ottawa Heart Institute, the Ottawa model is a clinical smoking cessation program designed to help hospitalized smokers quit smoking and stay smoke-free. The overall goal of the program is to reach a greater number of tobacco users with effective, evidence-based tobacco dependence treatments delivered by health professionals. This is accomplished by systematically identifying and documenting the smoking status of all admitted patients, providing evidence-based cessation interventions—including counseling and pharmacotherapy—and conducting follow-up with patients after discharge. The program has been implemented in a number of hospitals across Ontario as well as other provinces of Canada.

Cessation Outcomes: Population Level

The long-term goals of the cessation system are to lower the rate of current smoking and to increase the duration of smoking abstinence among quitters. In working toward these desired outcomes, the more immediate objectives of the Strategy are to increase program uptake, decrease cigarette consumption (for example, transitioning smokers to non-daily smoking), increase the proportion of smokers intending to quit, and increase the prevalence and actual number of quit attempts.

Long-Term Outcomes

The cessation goal of the Strategy is to eliminate tobacco-related illness and death. Desired long-term outcomes include increasing the duration of smoking abstinence among quitters and reducing the overall prevalence of tobacco use.

Former Smokers

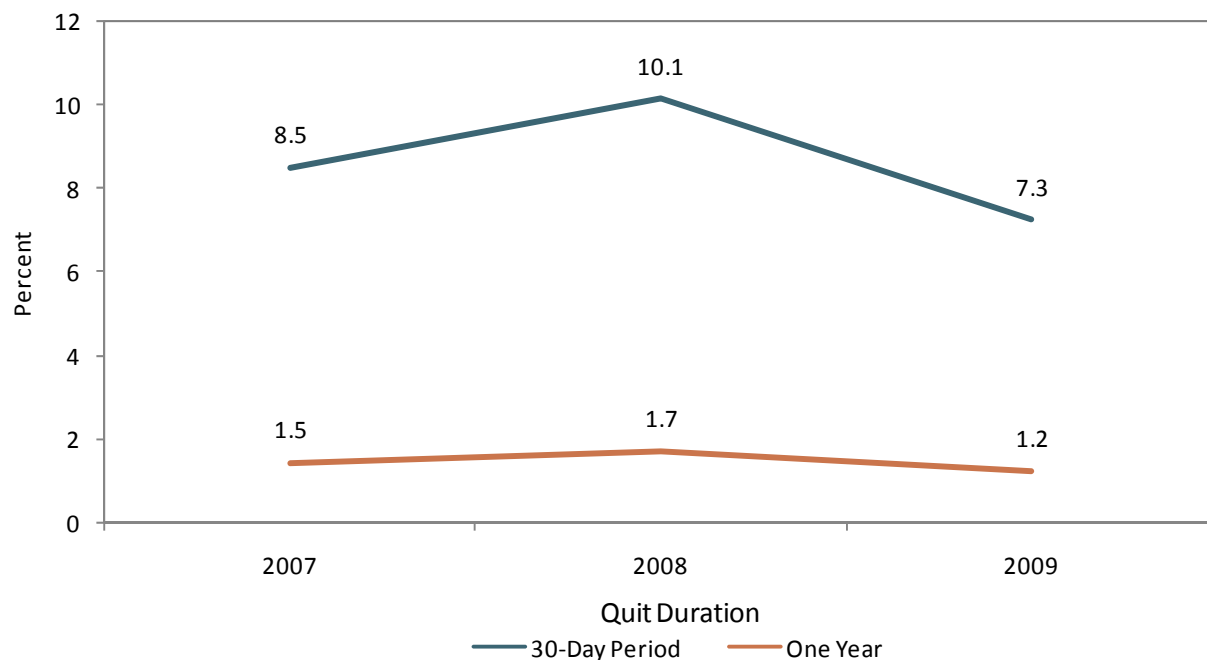
Quit Duration

- In 2009, 8% of ex-smokers (or 204,600 people) reported quitting between 1 and 11 months ago; 14% of ex-smokers quit between 1 and 5 years ago, and 78% quit smoking more than 5 years ago (CAMH Monitor 2009, data not shown).

Annualized (Recent) Quit Rate

- In 2010, 7.3% of past-year smokers had quit at some point for a period of 30 days or more over the previous year. Applying a relapse rate of 83% (derived from OTRU's Ontario Tobacco Survey), it is estimated that 1.2% of previous-year smokers remained smoke-free for the subsequent 12 months (Figure 15). Quit rates have remained stable over the period 2007 to 2009.

Figure 15: Annualized (Recent) Quit Rate among Past-Year Smokers, by Duration of Quit, Ontario, 2007 to 2009



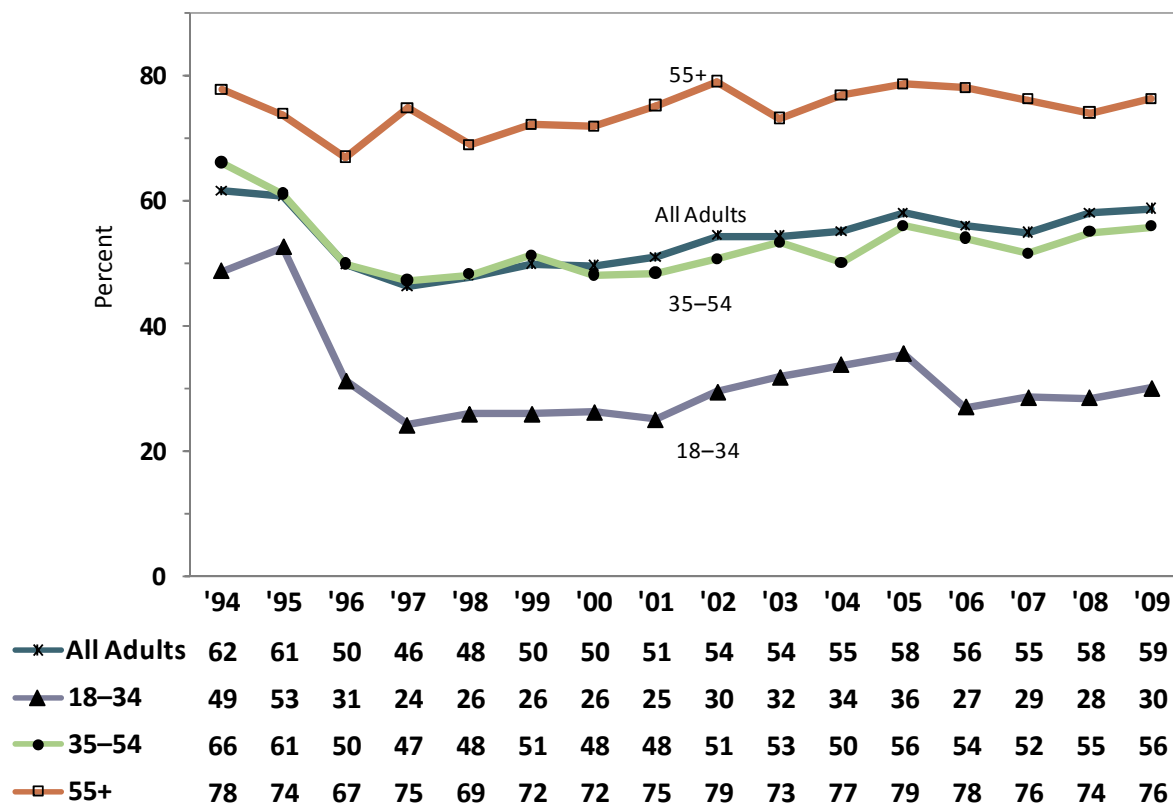
Source: Canadian Community Health Survey 2007-2009.

Lifetime Quit Rate

The lifetime quit rate is the percentage of ever smokers (that is, former and current smokers) who have successfully quit smoking (based on 30-day abstinence) and is derived by dividing the number of former smokers by the number of ever smokers in a population.

- In 2009, 6 in 10 adults who had ever smoked had quit for at least one year (Figure 16).
- Adults aged 18 to 34 had the lowest rate of quitting (30%) among all ever smokers.
- In recent years, there is no clear pattern of change in quit rates.
- Among adult ever smokers, there has been an increase in the lifetime quit rate over the last decade from 48% in 1998 to 59% in 2009. In recent years, there has been no significant change.

Figure 16: Quit Rate (Former Smokers as a Proportion of Ever Smokers), by Age, Ontario, 1994 to 2009



Source: CAMH Monitor 1994–2009.

Short and Intermediate-Term Outcomes

To reach desired cessation outcomes, the Strategy must increase the awareness and use of evidence-based cessation initiatives, decrease cigarette consumption, increase the proportion of smokers intending to quit, and increase the prevalence and actual number of quit attempts. Population-level data for these indicators is presented next.

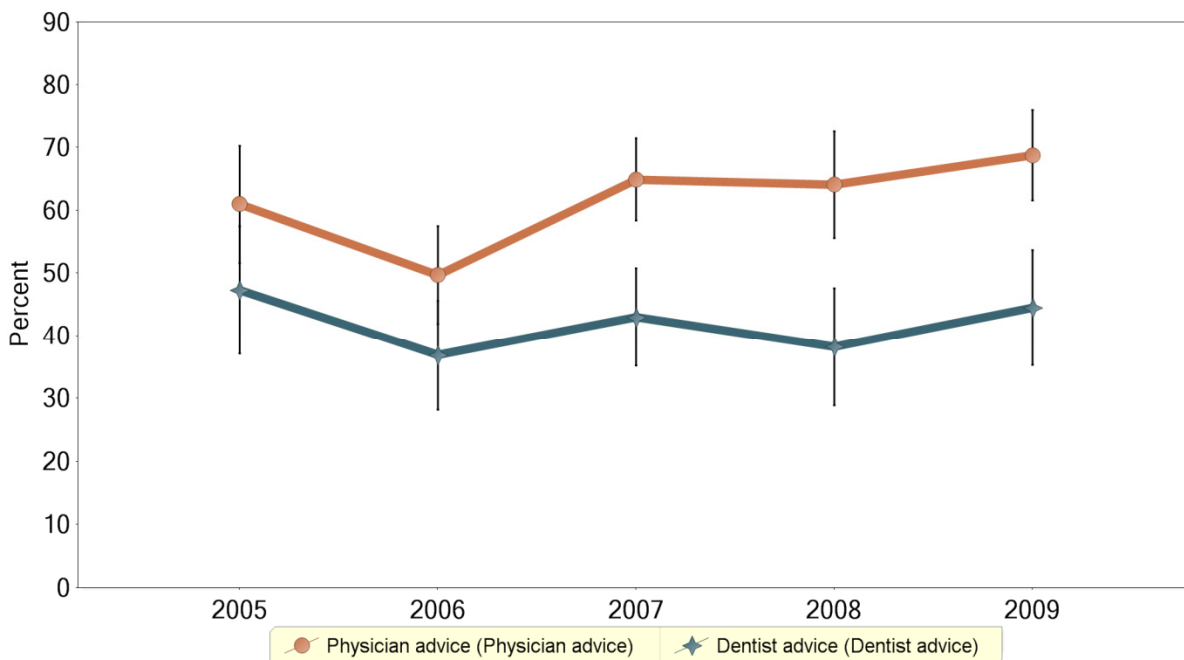
Advice, Awareness and Use of Quit Aids

Health Professional Advice

In 2009, 7 in 10 smokers aged 18 or older (69%) who had visited a physician in the past year had been advised to quit smoking (Figure 17), a significant increase over 2006 levels.

- Among those advised to quit by a physician, 55% received information on quit smoking aids.
- Of current smokers in Ontario who had visited a dentist in the past year, 45% reported that their dentist had advised them to quit smoking (Figure 17).

Figure 17: Health Professional Advice, by Occupation, Ages 18+, Ontario, 2005 to 2009



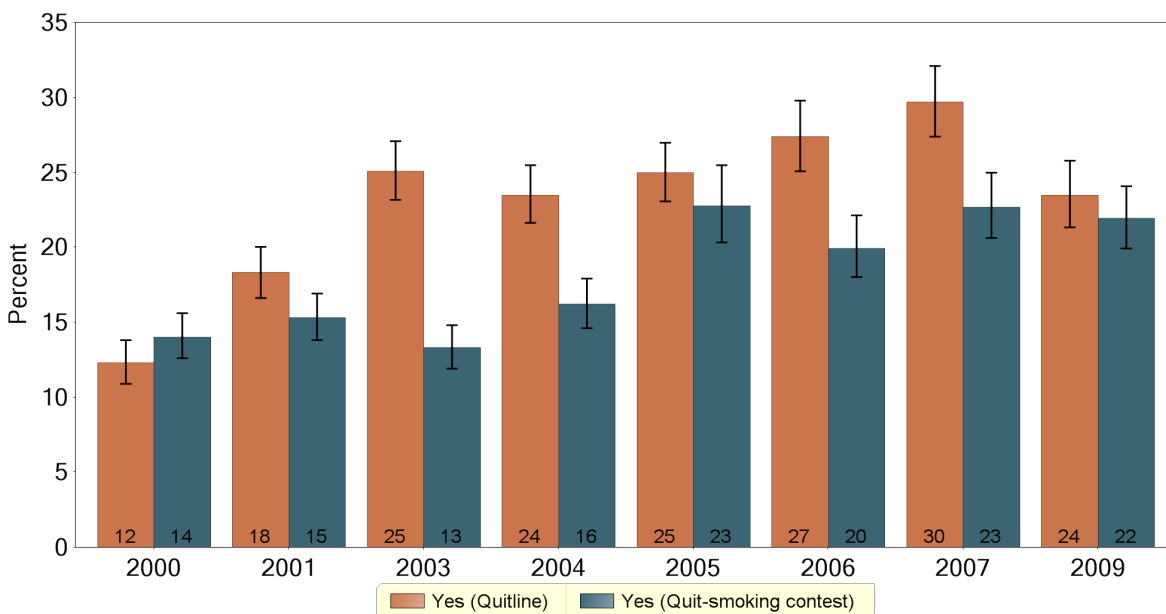
Note: Vertical lines represent 95% confidence intervals.

Source: Canadian Tobacco Use Monitoring Survey 2005–2009.

Quit Aids Uptake

- Among all Ontarians aged 18 years or over, there was a statistically significant increase in the awareness of a 1-800 quitline over the period 2000 to 2009 (12% vs. 24%), although awareness declined in 2009 over that of 2008 (24% vs. 30%; Figure 18).
- However, in 2009, there was no significant change in awareness of a quit-smoking contest or in the use of nicotine patch or gum or of behavioural or pharmaceutical aids.
- Among Ontarians aged 18 years and over, 22% of Ontarians reported being aware of a quit-smoking contest in 2009 (Figure 18).
- In 2009, smokers' use of the nicotine patch or gum was 17% and 16%, respectively (Figure 19), with no significant change in recent years.
- In 2010, among Ontario smokers and recent (6-month) quitters who had attempted to quit smoking or reduce their smoking in the previous 6 months, there were no significant changes in use of behavioural or pharmaceutical aids from that of 2008 (Figure 20). In 2010, four in ten respondents (41%) had used some sort of behavioural or pharmaceutical aid. Specifically, 13% used behavioural aids such as self-help materials, website, group counselling, support from a specialized addiction counsellor, a smokers' telephone helpline, or a quit program, and three in ten (34%) used pharmaceutical aids such as the nicotine patch, gum, inhaler, Zyban™ or Wellbutrin™.

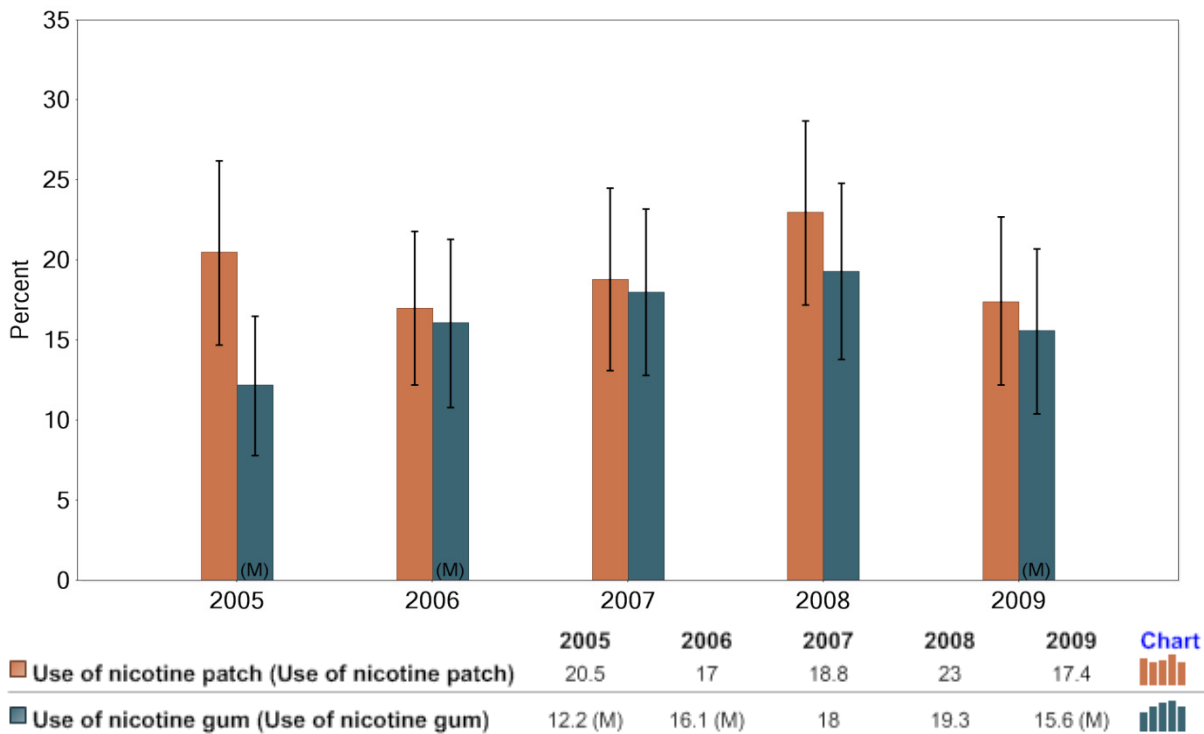
Figure 18: Awareness of a 1-800 Quitline (Past 30 Days) and Awareness of a Quit Smoking Contest (Past 30 Days), Ages 18+, Ontario, Select Years 2000 to 2009



Note: Vertical lines represent 95% confidence intervals. Survey question not asked continuously over reporting period.

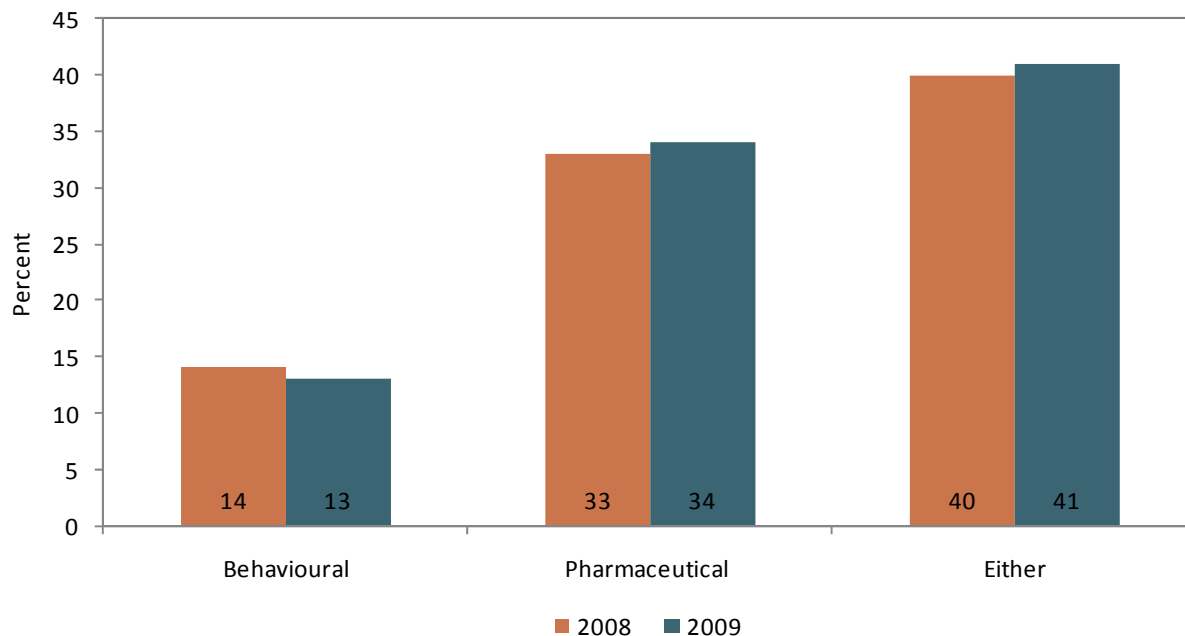
Source: Centre for Addiction and Mental Health Monitor 2000, 2001, 2003, 2004, 2005, 2006, 2007, 2009.

Figure 19: Use of Nicotine Patch (Past 2 Years) and Use of Nicotine Gum (Past 2 Years), Ages 15+, Ontario, 2005 to 2009



Note: M= Interpret with caution: subject to moderate sampling variability. Vertical lines represent 95% confidence intervals.
Source: Canadian Tobacco Use Monitoring Survey 2005–2009.

Figure 20: Use of Behavioural or Pharmaceutical Aids, Ontario, 2008 and 2010



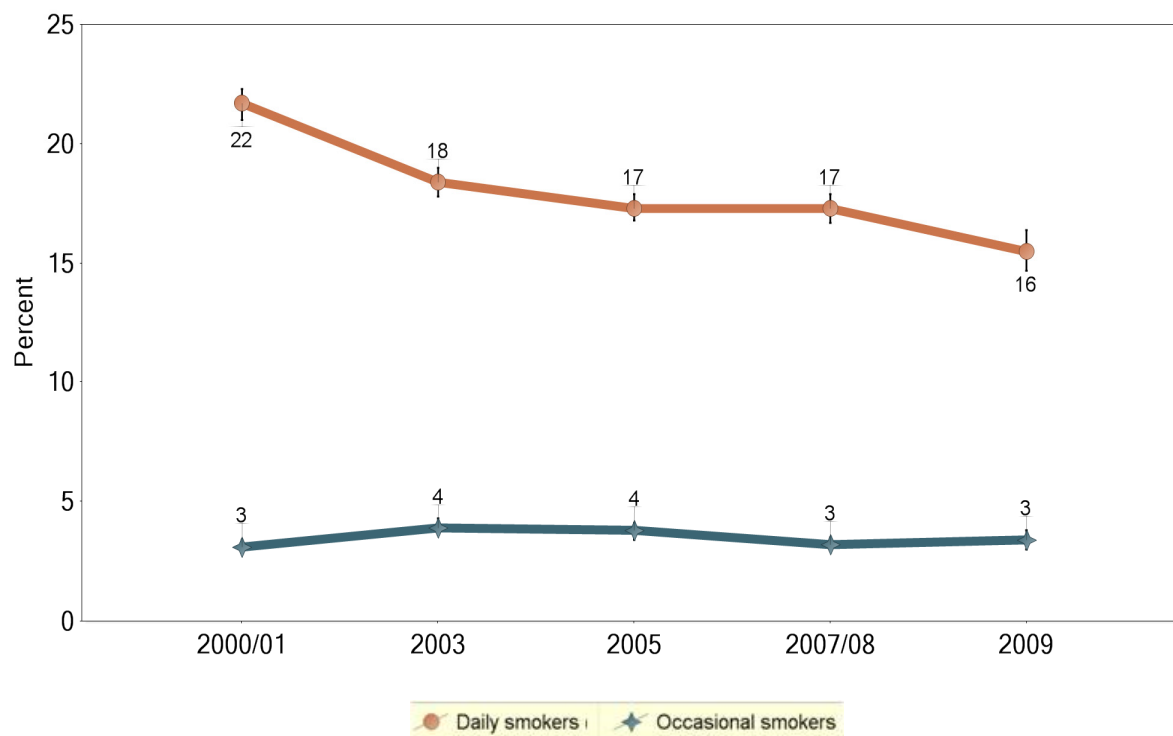
Source: Ontario Tobacco Survey 2008 and 2010.

Cigarette Consumption

Daily and Occasional Smoking (Past 30 Days)

- In Ontario in 2009, the prevalence of current smoking among adults aged 18 or older was 19% according to the Canadian Community Health Survey, with 16% smoking daily and about 3% smoking occasionally in the past month (Figure 21)
- The rate of daily smoking decreased significantly between 2007-2008 and 2009 (17% vs. 16%). The rate of occasional smoking has remained unchanged in recent years (Figure 21)
- In 2009, 82% of current smokers were daily smokers, unchanged in recent years (Figure 22).

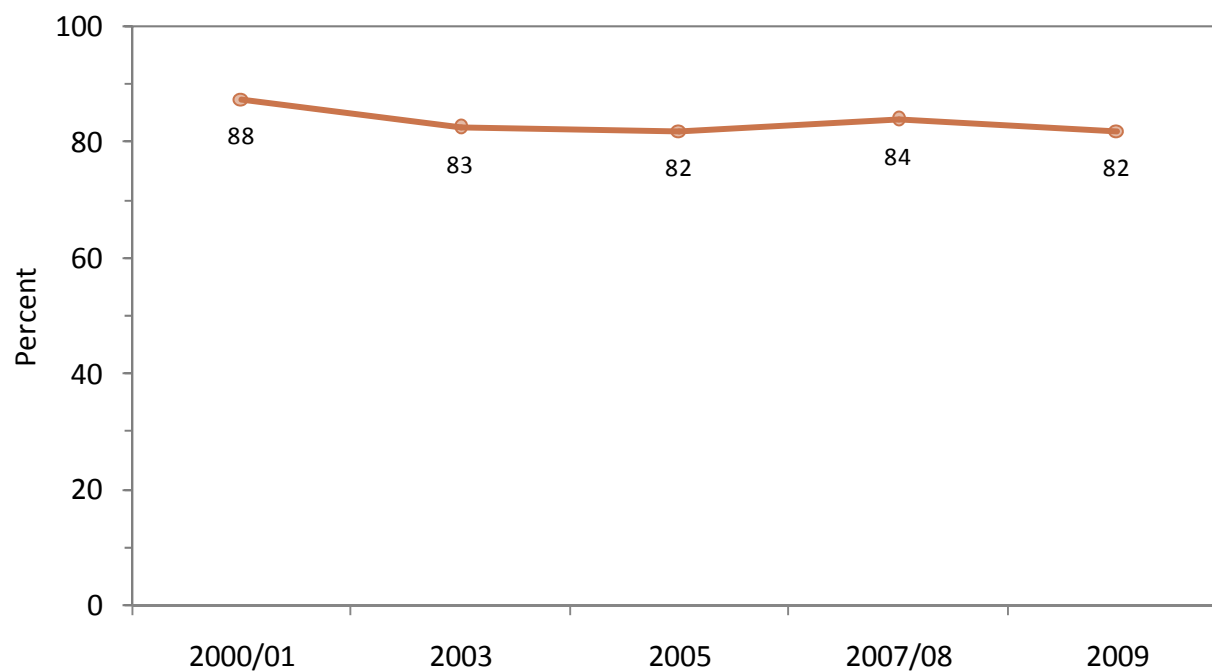
Figure 21: Daily and Occasional Smoking (Past 30 Days), Ages 18+, Ontario, 2000-2001 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Canadian Community Health Survey 2000-2001 to 2009

Figure 22: Daily Smoking as a Proportion of Current Smoking, Ages 18+, Ontario, 1999 to 2009



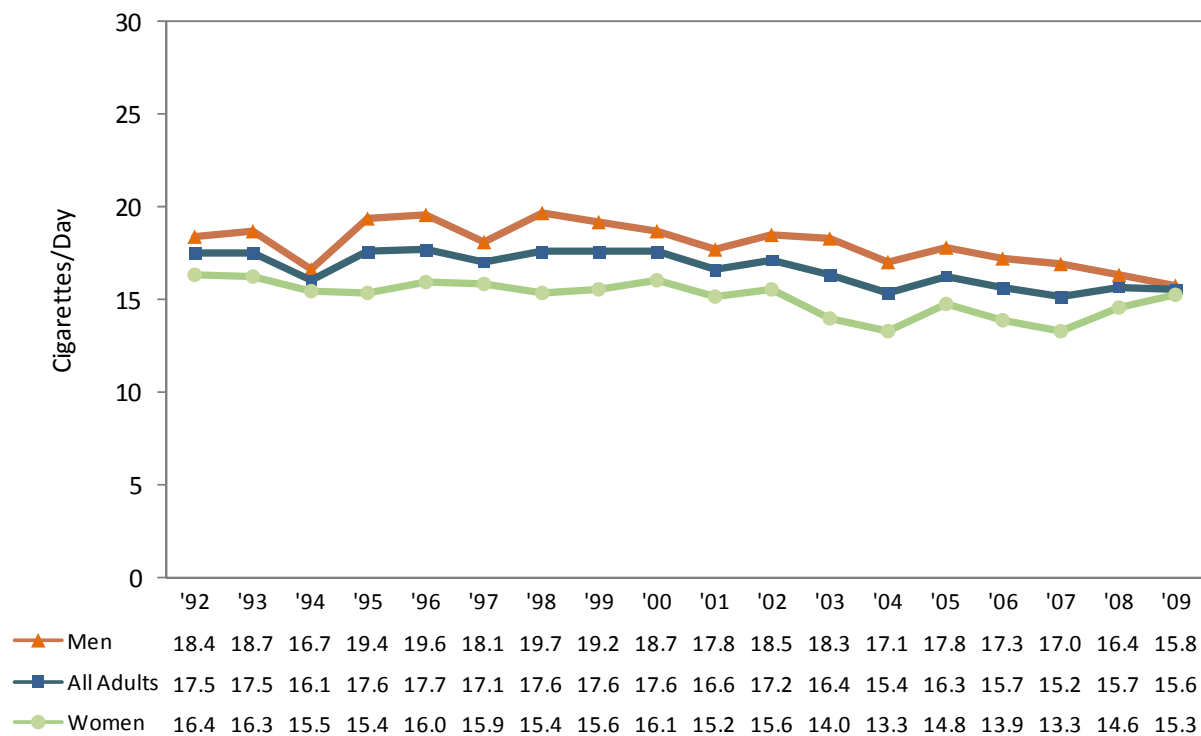
Source: Canadian Community Health Survey 2000-2001 to 2009

Level of Use: Cigarettes per Day

Change in the average number of cigarettes smoked (consumption) among those who continue to smoke is a commonly used indicator in tobacco control.

- In 2009, the mean number of cigarettes smoked per day by daily smokers in Ontario was 15.6 (Figure 23), a level that has remained unchanged in recent years.
- Over the period 1992 to 2009, men have consistently used more cigarettes per day than women (Figure 23).

Figure 23: Mean Number of Cigarettes Smoked Daily, by Sex, Daily Smokers, Ages 18+, Ontario, 1992 to 2009



Source: CAMH Monitor 1992–2009.

Quitting Behaviour

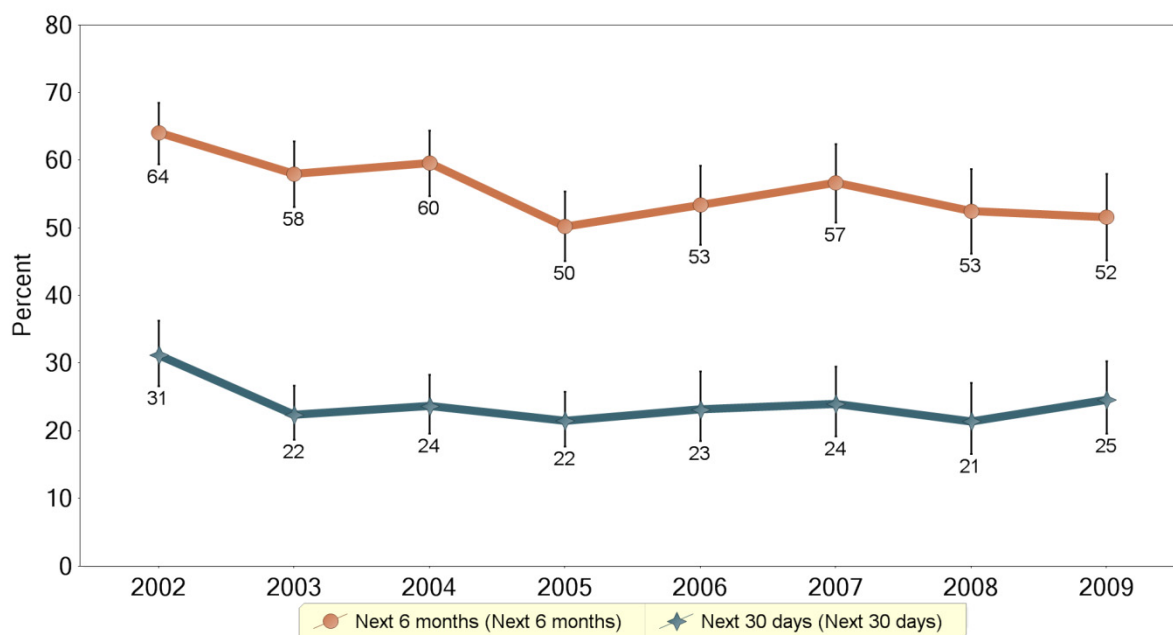
Intentions to Quit

- In recent years, there has been no significant change in the proportion of adult smokers who intend to quit smoking in the next six months.
- Six-month quit intentions in 2009 were lower in comparison to the rate in 2002 (52% vs. 64%; Figure 24)
- The prevalence of 30-day quit intentions in 2009 among Ontario smokers was 25%, a rate unchanged in recent years.

Quit Attempts

- Four in ten (41%) adult smokers in Ontario made one or more quit attempts in the past year. There has been no change in the proportion of adult smokers making quit attempts over the last decade (Figure 25).

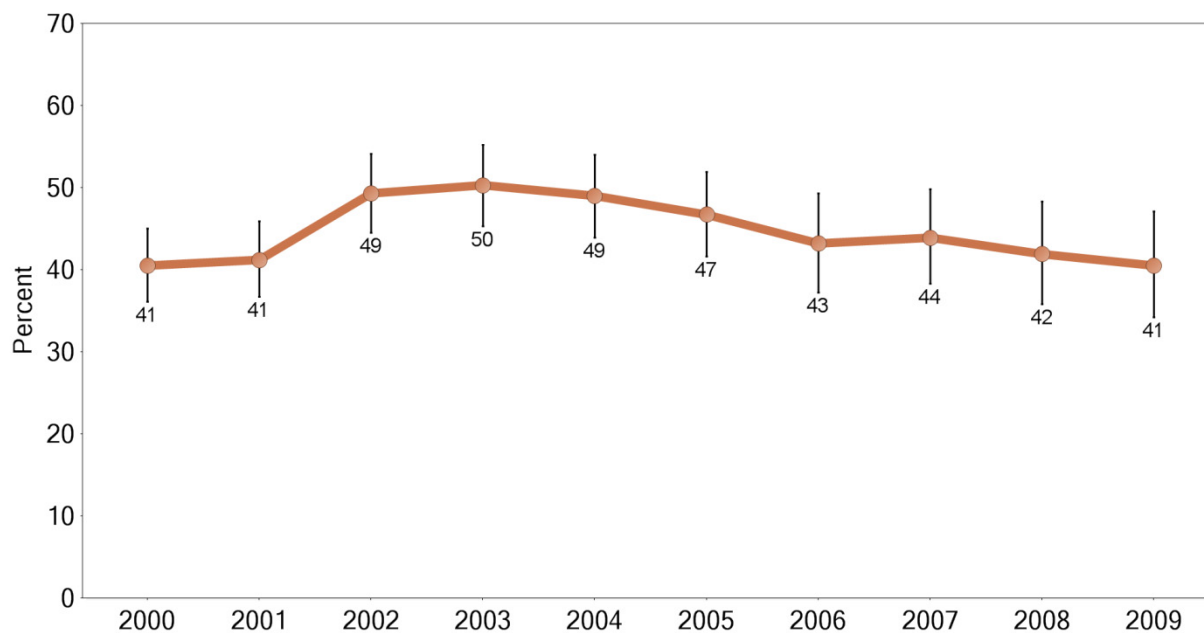
Figure 24: Intentions to Quit Smoking in the Next 6 Months and Next 30 Days, Ages 18+, Ontario, 2002 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Centre for Addiction and Mental Health Monitor 2002–2009.

Figure 25: One or More Quit Attempts in the Past Year, Current Smokers, Ages 18+, Ontario, 2000 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: Centre for Addiction and Mental Health Monitor 2000–2009.

Contributions: Capacity Building Programs

This following section describes progress made in 2009-2010 toward enhancing health professionals' capacity in providing cessation support.ⁱⁱ

RNAO Nursing Best Practice Smoking Cessation Initiative

The overall goal of the RNAO Initiative is to increase the capacity of nurses in integrating smoking cessation best practices into daily practice, and adopting the RNAO Smoking Cessation Best Practice Guidelines at the organizational and team levels.

Reach

The RNAO smoking cessation initiative trained 543 nurses, nursing students, and other health care professionals as Smoking Cessation Champions in the period from 2007 to 2010, including 262 in 2009-10. The project data show an increase in the number of health care professionals trained over time. Over three years, the project has spread throughout all seven TCAN regions reaching 29 public health units which have been engaged as project sites and/or through the training of Champions.

Effects

A recent evaluation of the SC Initiative, which utilized a mixed-method approach (web survey of Champions, case studies of public health and health care organizations) revealed the critical leadership role of public health nurses (Champions) in increasing nurses' knowledge base and skills in addressing smoking cessation, disseminating information about the SC Initiative and supporting the Best Practice Guidelines implementation process. Key findings include:

- Acceptance and self-reported use of the Best Practice Guidelines by the majority of nurses who participated in the SC Initiative (93%).
- An increase in nurses' perceived levels of comfort and confidence in addressing smoking cessation.
- Nurses' widespread use of minimal smoking cessation interventions in their daily practice.

While the SC Initiative appears to be effective in building the individual capacity of nurses and other health care professionals who have been trained directly, it is limited in its ability to

ⁱⁱ It should be noted that complete data for FY 2010-2011 for capacity building programs and cessation interventions was not available at the time of writing this report. This data will be presented in the next reporting period (Fall 2012).

influence the promotion of cessation policies and practices among Ontario's public health and health care organizations. Barriers to adoption and sustainability of cessation practices at the organization level include: lack of staff time, funding, lack of buy-in from senior management and limited availability of cessation resources. Evaluation findings need to be interpreted with caution due to the survey response bias and limitations on the ability to generalize from information gathered through case studies.

TEACH Project

Reach

From 2006 to 2010, TEACH provided training to 1570 unique practitioners (practitioners may take more than one TEACH course) across Ontario. In 2009-10, TEACH trained a total of 350 practitioners in Core Course trainings.¹³

Over 60% of the practitioners were registered nurses, addiction counsellors and social workers. Other trainees included respiratory therapists, asthma educators and pharmacists. Practitioners from all seven TCANs attended TEACH trainings.¹³

Effects

As part of the project evaluation, follow-up surveys are conducted with participants at 3 and 6 months post-training to assess long-term changes in practice behaviour. It should be noted that the follow-up response rates were less than 50% at 3 months (42%) and 6 (49%) months, which may introduce bias in the estimates of practice changes as a result of TEACH project. Caution is required in interpreting the follow-up findings. Findings from 2009-10 follow-up surveys suggest that health practitioners' capacity and engagement in the provision of smoking cessation services increased as a result of the project. At three months, 72% of respondents reported that TEACH enhanced their skills and knowledge to a high or very high extent; at six months, 76% reported the same. Furthermore, the proportion of respondents currently delivering intensive cessation interventions increased from 11% pre-training to 21% at 3 months and 22% at 6 months post-training. Delivery of brief cessation interventions and use of cessation tools rose from 2% pre-training to 15% at 3 months, and then declined to 11% at 6 months.¹³ Barriers to engaging in smoking cessation identified by TEACH participants, include: lack of practitioners' time, client

motivation to quit, lack of organizational support and insufficient staff for delivering cessation support.

Program Training and Consultation Centre

Reach

In 2009-2010, 172 public health practitioners attended PTCC cessation training workshops. Since any individual attending each specific workshop was counted, this number may not reflect the total number of unique workshop participants (Personal communication, PTCC Staff, 2011). The total number of workshop attendees for 2009-2010 is less than that reported in 2008-2009 (267 participants). The workshops were attended predominantly by the staff of local public health units (e.g., public health nurses, health promoters, etc.), working in tobacco control or other program areas (Personal communication, PTCC Staff, 2011).

Workshop feedback forms are completed at each session with the focus on assessing participant reaction to the training. No formal evaluation has been conducted to examine the effects of the training on participants' practice behaviour.

Contributions: Interventions

This section describes progress in promoting quit attempts and helping smokers quit in 2009-2010 by province-wide cessation interventions.

Smokers' Helpline

Reach

The reachⁱⁱⁱ of SHL has decreased marginally over time. In the 2009-10 fiscal year, SHL reached 0.43% of the smoker population in Ontario (see Table 2). This is slightly lower than the reach reported between 2005-2006 and 2008-2009. Although the current reach rate is higher than the median reach of quitlines in Canada in 2009 (0.27%), it is considerably lower than the median reach of quitlines in the US as reported by North American Quitline Consortium at 1.18% in 2009.^{14,15} This rate also falls far short of the reach of leading quitlines in individual US

ⁱⁱⁱ Measure of reach is based on the definition used by North American Quitline Consortium and Propel (a research institution based at the University of Waterloo) and reflects the number of new callers (not including repeat or proactive calls) contacting the Helpline divided by the total number of Ontario smokers aged 18 and over.

jurisdictions such as New York state (4.6%)¹⁶ and Maine (6%),¹⁷ which have been successful in achieving higher smoker penetration as a result of increased paid media and/or distribution of free cessation medication. Differences may also be due to differences in population smoking estimation resulting from different survey research methods and comparisons among jurisdictions should be interpreted with caution.

Table 2: Smokers' Helpline Reach, 2005-2006 to 2009-2010

Fiscal year	No. of New Callers (Calling for Self) ^a	Proportion of Ontario Smokers Reached, % ^b
2005-2006	6,127	0.4
2006-2007	6,983	0.43
2007-2008	7,290	0.39
2008-2009	6,464	0.38
2009-2010	5,820	0.37

^a Administrative data provided by SHL.

^b Estimates of the total population of smokers aged 18+ from 2005 to 2009 were calculated based on CTUMS (TIMS data).

Similar to previous years, females made up the greater proportion of smokers reached by SHL in 2009-2010 (59.1%). This is consistent with the experience of other quitlines,¹⁸ although the majority of Ontario smokers are males (55.3%; CAMH Monitor, 2009).

Individuals 40 or more years of age made up the majority (69.6%) of SHL callers in 2009-2010, which explains a relatively high average age of SHL callers—46.9 years of age. In contrast, young adults (19-29) comprised 12.9% of all new callers in 2009-2010, although this population still has the highest smoking rate of any age group (33%; CAMH Monitor, 2008). In general, SHL serves callers older than the average age of the Ontario smoking population (41.8 years).¹⁹

Effects

The 7-month client follow-up survey conducted in 2009-2010 revealed that 89.0% of survey respondents had taken some action toward quitting in the period following their first contact with SHL. This proportion is similar to that reported in 2008-2009 (90%). The most frequently reported actions include reduction in cigarette consumption (73.3%), a quit attempt lasting 24 hours (70.5%) and setting a quit date (60.3%).¹⁹ Quit rates at the 7-month follow-up were as follows: 7-day point prevalence was 20%, 30-day point prevalence was 17%, and 6 months prolonged abstinence was 7%.

As indicated in Table 3, in the period from 2006-2007 to 2009-2010, the Smokers' Helpline has seen a 4.3 and 3.6 percentage-point increase in the proportion of users reporting 7-day and 30-day point prevalence abstinence, respectively. Furthermore, the 7-day and 30-day quit rates achieved in 2009-2010 compare favorably with the same cessation indicators reported in studies of the US quitlines that did not provide cessation medication (e.g., NRT) as part of quitline counseling service.^{iv}

Table 3: Smokers' Helpline Quit Rates from 2006-2007 to 2009-2010

Indicator	2006-2007	2007-2008	2008-2009	2009-2010	US Quitlines Quit Rates (from Published Literature) ^a
7- day PPA	15.9%	15.0%	17.0%	20.2%	6%-27%
30-day PPA	13.2%	13.0%	14.6%	16.8%	16%-23%

^a North American Quitline Consortium review of US quitlines quit rates, 2009.

Smokers' Helpline Online

Reach

In total, 9,539 smokers registered for SHO in the 2009-2010 fiscal year. As Table 4 indicates, the number of registrants has increased by 66.6% since 2008-2009¹⁹ and almost three-fold since the launch of the program. SHO reach also has a tendency to grow over time, with the program being able to enroll an estimated 0.61% of the smoking population in 2009-2010. Several activities, such as revision of the website aesthetics, equal weight to all SHL services (phone, online, texting) during promotion, use of social media tools as well as the 2010 Driven to Quit Challenge are believed to have contributed to an increase in the utilization of SHO in 2009-2010.^{19,20}

^{iv} Due to differences in the content of province-wide cessation interventions (SHL, STOP, DTQC, OMSC) and methodologies adopted for assessing smoking abstinence, a direct comparison of the quit rates reported across these interventions is not advised.

Table 4: Smokers' Helpline Online Registration, 2006-2007 to 2009-2010

Fiscal year	No. of Registrants	Proportion of Ontario Smokers Reached, % ^a
2005-2006	3,365	0.22
2006-2007	7,084	0.44
2007-2008	7,692	0.41
2008-2009	5,724	0.34
2009-2010	9,539	0.61

^a Estimates of the total population of smokers aged 18+ from 2005 to 2009 were calculated based on CTUMS (TIMS data).

There were more male than female SHO participants in 2009-10 (56.5% vs. 43.5%).¹⁹ This is different from previous years of the program implementation as female registrants traditionally made up the majority of the SHO registrants. The average age of SHO registrants was 41 years, with 46% of them being under the age of 40.¹⁹ The majority of participants (75.5%) reported being daily smokers at registration.¹⁹

Effects

A 7-month web-based follow-up survey was conducted among SHO participants registered in the period from September 1, 2008 to August 31, 2009. However, a low response rate to the survey has prevented reporting any effects of SHO on smokers' quitting behaviour. Some preliminary findings suggest that participants tended to cut down on smoking and set a quit date as a result of their contact with SHO.¹⁹

Smokers' Helpline Text Messaging

Reach

SHL introduced a text messaging smoking cessation service in the 2009-10 fiscal year. In this time period, 218 participants registered for the text messaging service, with females comprising a majority of participants (67.7%).¹⁹ Fifty-six percent of participants were under 40 years of age; the average age of registrants was 37 years.¹⁹

No information is available concerning the effects of SHL TXT on participants' quitting behaviour.

The Driven to Quit Challenge

Reach

In 2010, 28,835 smokers registered for the Driven to Quit Challenge (DTQC).²¹ This is the highest number of registrants ever reported and represents a 29% increase over 2009 and an overall 12.5% increase since 2006, when the Canadian Cancer Society started to host DTQC (see Table 5). The estimated reach of DTQC was also the highest in 2010 (1.8%).

The average age of registrants was 40 years. Almost all (98%) participants reported being cigarette users, and 68% of participants had their first cigarette within 30 minutes of waking, a common marker of increased nicotine addiction.²¹

Table 5: Total Number of DTQC Registrants and Reach, 2006-2010

Fiscal year	No. of Enrollees	Proportion of Ontario Smokers Reached, % ^a
2006	25,642	1.64
2007	26,950	1.68
2008	26,623	1.43
2009	22,365	1.33
2010	28,835	1.83

^a Estimates of the total population of smokers from 2006 to 2010 were calculated based on CTUMS (TIMS data).

The increase in number of contest participants may be attributed partially to changes in eligibility criteria that occurred in 2010. In a departure from previous years, when participants of the contests were required to be daily tobacco users only, the 2010 DTQC extended its primary target audience to occasional tobacco users. Use of a range of new promotion strategies may have also contributed to the increase in the number of registrants. In particular, several new promotional strategies implemented in 2010 included: pre-promotion of the contest in mid-December 2009; an early bird registration prize; extensive use of social media tools (YouTube, Facebook, Twitter and a DTQC blog); first time award of a hybrid SUV as the grand prize; and pharmacy promotion.

Effects

A survey of 753 current and 47 former tobacco users with or without prior participation in DTQC was conducted to explore the contest effects on participants' knowledge of cessation supports and quitting behaviour. Findings need to be interpreted with caution due to methodological limitations, such as the small sample of former tobacco users and cross-sectional nature of the study. The latter precludes an understanding of the progress and magnitude of behavioural change among smokers as a result of the contest.

According to the survey findings, DTQC succeeded in encouraging quit attempts, increasing awareness and use of cessation resources. In particular, tobacco users who had previously enrolled in DTQC were significantly more likely to say that DTQC had influenced their decision to try to quit.²² The study also showed that awareness of different supports, specifically Smokers' Helpline (both phone and web-based) were higher for those who were aware of DTQC and even higher for those who participated in the contest.²²

Administrative data from SHL and SHO suggest that during the promotion and quit period of DTQC, demand for both these services increased substantially. In the period from January 4 to March 31, 2010, SHL received 3,251 calls, which is the largest number of calls in 2009-10 fiscal year and 38.6% of them were related to DTQC.²¹ In the same period, there were 7,644 new registrations to SHO, which accounted for 80% of all registrations in 2009-2010. Thus, DTQC appears to play a substantial role in promoting SHL and SHO services among tobacco users.

Leave the Pack Behind

Reach

In 2009-2010, LTPB operated at 41 post-secondary campuses: 19 (of 20) of Ontario's universities and 22 of 24 applied arts colleges.²³ LTPB's tobacco control programming was estimated to be available to a total of 544,000 students, including approximately 140,374 smokers.^v

Since 2007-2008, the number of student smokers using various LTPB cessation resources (e.g. *Smoke/Quit* booklets, Wouldrather, quit contest, campus health professional support) has more

^v LTPB estimated the value based on smoking prevalence of 22% for university students and 33% for college students (*Leave The Pack Behind. Final Report, April 1, 2009–March 31, 2010*. Prepared for the Ministry of Health Promotion and Sport. St. Catharines, Canada: Brock University, 2010).

than doubled (Table 6), likely due to the large increase in the number of campuses in which LTBP operated. According to program data, 15,142 smokers received a *Smoke/Quit* booklet in 2009-2010, which is almost twice as many as the number of student smokers (8,122) receiving the booklet in 2007-2008. In total, 22,153 smokers directly accessed LTPB cessation resources in 2009-2010, representing 15.8% of all student smokers (140,374 smokers).²³ This is the highest LTPB reach over the past three years.

Table 6: Use of LTPB Cessation Resources 2007-2008 to 2009-2010

Fiscal year	No. of Smokers Accessing Materials and Services	Proportion of Ontario Student Smokers Receiving Resources, % ^a
2007-2008	9,895	7.4
2008-2009	13,573	10.2
2009-2010	22,153	15.8

^a Based on LTPB estimates of the total population of student smokers from 2007-2008 to 2009-2010.

Effects

A randomized controlled study conducted in 2003 found an 11.4% quit rate (7-day point prevalence at the 3 month follow-up) among LTBP *Smoke/Quit* booklet users, which compared favorably with the quit rates reported for other intervention conditions, such as the Canadian Cancer Society *One Step at a Time* booklet (5.6%) and usual care kit (2.9%).²⁴ Considering this finding and a conservative quit rate for using health professional advice in conjunction with the self-help booklet (11.4%), LTPB estimated that at least 2,345 smokers quit using LTPB's evidence-based resources in 2009-2010.²⁴ This represents 11% of young adult smokers reached by LTPB and 1.7% of all smokers in the target population in the referenced period.

STOP Study

Reach

In the 2009-2010 fiscal year, three modes of NRT delivery were implemented: STOP on the Road, mass distribution models, and a model exploring the effectiveness of distributing bupropion for smoking cessation via Community Health Centres and Family Health Teams (Zyban™ model).²⁵ The vast majority of participants (85.5%) were enrolled through the mass distribution model.

During the reporting period, a total of 3,189 smokers—or 0.2% of the general smoking population—were enrolled in the study. This is a relatively low reach compared to that reported in the previous fiscal year (15,338 smokers or 0.7% of all Ontario smokers in 2008-2009).

Effects

At 6 months post-treatment, the self-reported quit rates (7-day point prevalence) ranged from 17% (STOP on the Road) to 33% (mass distribution). Quit rates for the participants in the Zyban™ model were not reported. Caution is required when interpreting the quit rates due to the small sample sizes of participants at follow-ups (Personal communication, STOP study staff, 2010).

Ottawa Model for Smoking Cessation

Reach

Since the beginning of the program in 2002, the Ottawa Model for Smoking Cessation has expanded to hospitals across Ontario. By the end of the 2008-2009 fiscal year, the OMSC network included 37 hospitals.²⁶ The network continued to grow in 2009-2010, bringing the total number of participating hospitals to 40.²⁶ Some hospitals have strategically chosen to implement the OMSC first in high-risk smoking units (e.g., cardiology, vascular units) with plans to expand to other areas, whereas others have implemented OMSC on a hospital-wide basis.

In 2009-2010, OMSC provided services to 7,086 smokers in participating hospitals (see Table 7). This is an increase of 10.5% in service provision over 2008-2009 and a 1.6-fold increase over 2006-2007.

Table 7: Number of Smokers Reached in Ontario by OMSC, 2006-2007 to 2009-2010

Fiscal year	No. of Smokers Reached by OMSC
2006-2007	2,733
2007-2008	5,514
2008-2009	6,410
2009-2010	7,086

High-risk smokers appear to comprise a greater proportion of all hospitalized smokers admitted to the OMSC program. Baseline data collected in 23 participating hospitals (79 nursing units)

reveal that in the period from April 1, 2008 to March 31, 2010, 66.5% of inpatients enrolled in the OMSC were admitted with a smoking-related diagnosis. Program data also shows that smokers receiving intervention in that period were 56.0 ± 12.8 years of age, more likely male (62.1%), had long smoking histories (36.3 ± 14.5 years smoked), smoked a mean 18.6 ± 9.8 cigarettes per day and 38.9% of them had their first cigarette within 28.9 minutes of awakening.

Effects

An evaluation of the OMSC impact conducted in 9 eastern Ontario hospitals in 2006-2009 suggests that OMSC can lead to higher long-term cessation rates. Controlling for hospital, the 6-month continuous abstinence (intention-to-treat) rate was higher after than before the introduction of OMSC (29.4% vs. 18.3%).²⁷

Table 8 summarizes the direct reach of the interventions as well as some characteristics of smokers enrolled in those interventions in 2009-2010.

Table 8: Program Reach, Characteristics of Smokers Enrolled in Ontario Smoking Cessation Programs in 2009-2010

Program	Reach in 2009-2010	Gender (Female)	Age (Mean)
Smokers' Helpline	5,820	59.1%	46.9
Smokers' Helpline Online	9,539	43.5%	41
Smokers' Helpline Text Messaging	218	67.7%	37
The Driven to Quit Challenge	28,835	54.0%	40
Leave the Pack Behind (smokers accessing materials and services)	22,153	57.0%	21.8
The Ottawa Smoking Cessation Model (based on 23 hospitals)	7,086	38.9%	56.0
The Stop Study (mass distribution model only)	3,189	55.1%	45.8

Smoking cessation programs in Ontario are directly engaging about 77,000 smokers, or 5% of Ontarian smokers^{vi} (assuming all clients are smokers and that they only use one of the services). This does not include cessation services provided by health professionals outside of SFOS programming. Furthermore, these programs are reaching more female than male smokers and in

^{vi} Estimate of the total population of smokers in 2009 was calculated based on CTUMS (TIMS data).

general, tend to serve the older smoking population (with the exception of LTPB, which has a specific target group of young adults).

Quit and Get Fit

In 2010, the Ontario Lung Association, in partnership with GoodLife Fitness Centres Inc. and with funding from the Ontario Ministry of Health Promotion and Sport, implemented the Quit & Get Fit (QGF) pilot cessation program. The overall goal of the pilot program was to increase quit attempts and successful quits among smokers by integrating quit supports with physical activities. The program was open to both members and nonmembers of fitness facilities who were smokers over the age of 18 years at the time of recruitment in the program. Over the course of 6 weeks, 124 smokers received 12 personal training sessions and cessation support from a specially trained personal trainer.

An evaluation was conducted to learn about program implementation and assess the effects of the program on participants' smoking and physical activity behaviours. A mixed methods approach was applied, including web-based base-line and follow-up surveys of participants and interviews with various key informant groups involved in the development and implementation of the program.

Self-reported 30-day smoking abstinence was 42.5% at the end of intervention (the intention-to-treat [ITT] quit rate = 25.0%) and 34.2% at 3 months post-intervention (ITT = 20.2%). Among participants who did not succeed in quitting, the substantial reductions in the average daily cigarette consumption (from 14.3 to 4.4, $P=0.001$) and level of tobacco dependence achieved during the intervention were sustained in the post-intervention period. Similarly, the increased levels of physical activity observed during the intervention period were maintained by smoker and nonsmoker participants over the 3 months post-intervention. Participants' physical activity was associated with smoking abstinence at the end of intervention ($P=0.03$). Evaluation findings also indicate some challenges in program implementation and provide suggestions for improvements.

The evaluation demonstrates that Quit and Get Fit is a promising intervention for promoting smoking cessation, reducing consumption of cigarettes, and increasing engagement in physical activity. Evaluation findings support the need for further refinement of the intervention to increase the likelihood of successful quitting through a regular exercise.

Summary

While 7.3 % of Ontario's smokers report quitting for 30 days or more at some point in the past year, Ontario data suggest that 83% of these recent quitters relapse during the course of the year. The proportion of Ontario's smokers who successfully quit each year (defined as 12 month abstinence) is estimated to be 1.2%. In order to achieve a 5 percentage-point decrease in the prevalence of smoking over the course of a five-year period (with prevalence currently at 18%), there is a need to at least double the proportion of smokers who successfully quit.

Price is one of the most effective policy tools to promote cessation. Yet, taxes on tobacco have increased only once since 2006, and tobacco taxes in Ontario are among the lowest in Canada.

Restrictions on smoking in public and workplaces are also effective policy tools for the promotion of quitting. It is likely that since restrictions were already in place for some 90% of Ontarians prior to the *Smoke-Free Ontario Act* in 2006, the fruits of this policy tool in regard to quitting have been reaped in large part in past years.

Ongoing, comprehensive social marketing has been found to be a vital ingredient for facilitating intentions to quit and quit attempts. MHPS has funded specific social marketing campaigns through the Heart and Stroke Foundation of Ontario, Canadian Cancer Society, Ontario Lung Association and Tobacco Control Area Networks. Specified data on the scope and effects of these campaigns were not readily available for this report; nevertheless it is evident that recent years have not seen major ongoing campaigns, apart from the annual Driven to Quit Challenge.

The province's cessation efforts have focused largely on providing cessation support to smokers in making quit attempts. To this end, the SFOS funds Smokers' Helpline, the Driven to Quit Challenge, the STOP study, LTPB and the Ottawa model. These interventions appear to reach approximately 5% of smokers annually, and only a small proportion of participants succeed in quitting. Relapse rates are very high and there is currently little support offered to prevent relapse in the post-intervention period. SFOS also funds considerable efforts to train health professionals in providing cessation support through TEACH, RNAO and PTCC. Evaluative evidence about the impact of these efforts in Ontario on actual provision of support to smokers is unknown at this point. It appears that only a small proportion of the 69% of smokers who were advised by physicians and 45% who were advised by dentists to stop smoking took any action to obtain formal support.

This year's data indicate no significant change in the proportion of smokers who intend to quit and the proportion of smokers who made a quit attempt in the past year. These are vital precursors to successful quits and it is worrisome that these numbers are not showing signs of increasing. Recent commitments to cessation services by the government are one step toward addressing this situation.

CHAPTER 4: YOUTH PREVENTION

Prevention: Smoke-Free Ontario Strategy

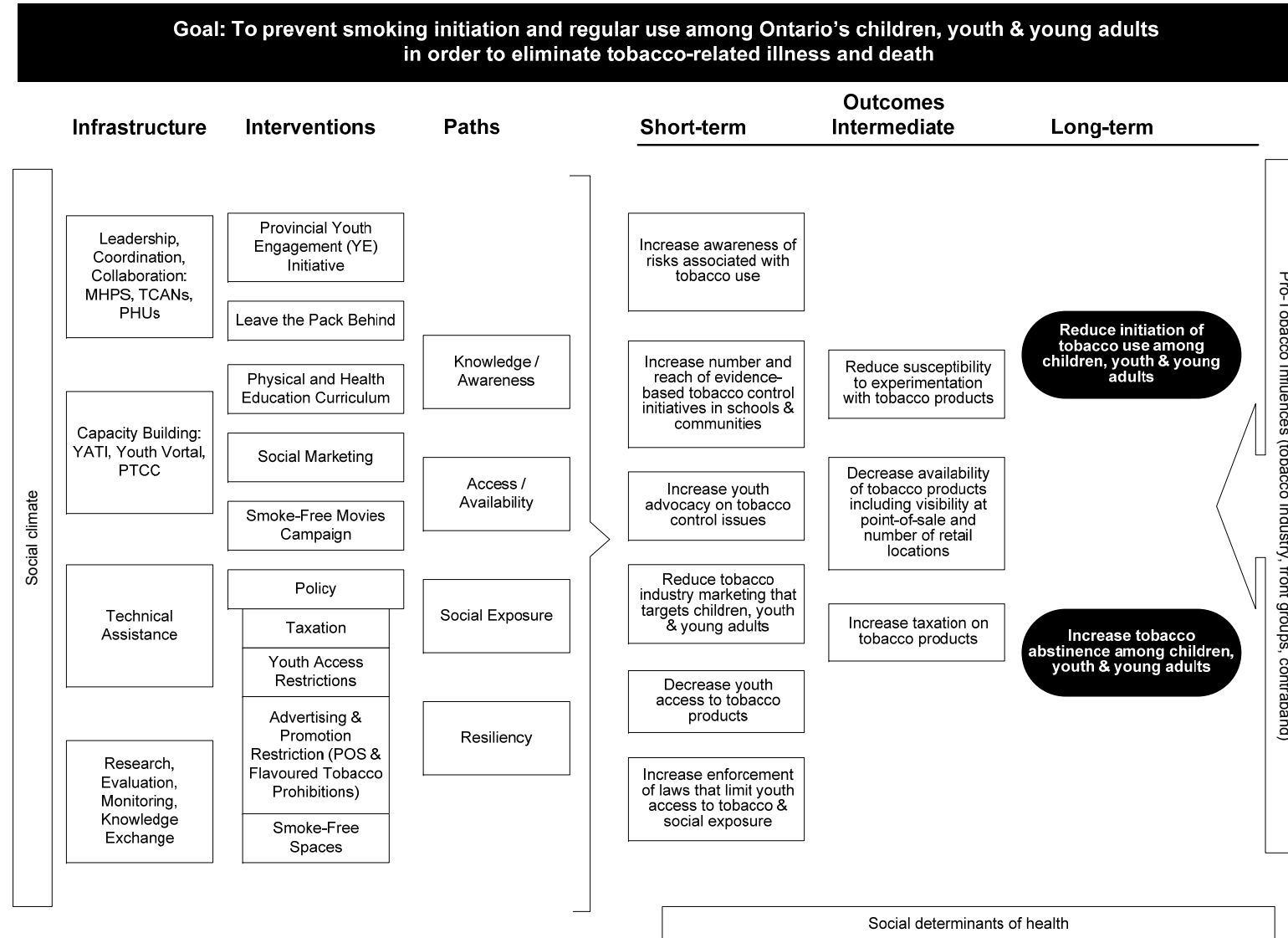
Due to the complexity of factors that determine smoking initiation among youth, a comprehensive approach is required to prevent and reduce prevalence of tobacco use among this population.²⁸ This approach includes infrastructure development programs that build capacity for the implementation of various interventions, such as federal and provincial policies as well as regional public health and social programming. These interventions seek to prevent use through a number of pathways, such as:

- Limiting *social exposure* to tobacco use among youth.
- Decreasing *access and availability* of tobacco products.
- Increasing *knowledge* of the harmful effects of tobacco use.
- Increasing youth *resiliency* to make healthy choices and resist tobacco use initiation.

In Ontario, the prevention component of the Smoke-Free Ontario Strategy is the main avenue by which progress toward these pathways/desired goals is expected to be achieved (Figure 26).

In this chapter, we provide an overview of current infrastructure, policy measures and prevention-related interventions in Ontario that seek to prevent tobacco use among youth. We follow with an examination of progress toward prevention objectives at the population level. The final section reports intervention specific outcomes.

Figure 26: Prevention Path Logic Model



Prevention Infrastructure

The prevention strategy functions to bring together infrastructure, which allows for the implementation of a variety of programs, services, and policies. The seven Tobacco Control Area Networks, representing the 36 public health regions, provide leadership, coordination, and collaborative opportunities. The Ministry of Health Promotion and Sport, and the public health units, also have dedicated staff working on the prevention portfolio including program staff and enforcement staff.

To ensure success, the prevention system has been designed to build capacity, provide technical assistance, and offer research and evaluation support to key stakeholders—including public health unit staff, educators, and service providers—and to deliver evidenced-based programs, services, and policies to the public. This infrastructure function is delivered by several key organizations including the Youth Advocacy Training Institute (YATI), Tobacco Control Area Networks, public health units, the Program Training and Consultation Centre, Youth Tobacco Vortal Project (YTVP) and the Ontario Tobacco Research Unit.

Youth Advocacy Training Institute

The Youth Advocacy Training Institute was established in 2005 to support youth engagement initiatives by providing youth and adults with knowledge and skills to engage in advocacy and health promotion activities related to the Smoke-Free Ontario Strategy. YATI seeks to increase youth and adult skills for the creation of effective advocacy and health promotion campaigns for tobacco-free sports and recreation, denormalization of the tobacco industry, community health improvement and influence of public policy. YATI performs these objectives through the provision of training, training conferences, keynote speaking, and training resources to youth and adults.²⁹

Tobacco Control Area Networks

The TCANs work with PHUs in their regions to coordinate tobacco control activities at regional and local levels. As part of this work, they collaborate with PHUs, non-governmental organizations and other partners to develop regional action plans that focus on joint activity in the areas of cessation, prevention, enforcement, training, media and public relations.³⁰ Regional action planning in the area of prevention has involved the development of the Play, Live, Be Tobacco-Free (PLBTF) initiative focused on promoting tobacco-free sports and recreation across

the province. This initiative is funded through the Ministry of Health Promotion and Sport's Healthy Communities Fund project. With Healthy Communities Fund funding received in 2009, this program has developed a provincial framework, resources and a collaborative network to support local and regional communities to develop tobacco-free policies within sport and recreation organizations. The key deliverables include: development of partnerships and provision of support for local, regional and provincial tobacco-free sports and recreation policy; promotion of consistent communication and messaging through social marketing campaigns; capacity building through success stories and information exchange; establishment of a tobacco-free sports and recreation community of practice; development and sharing of a tobacco-free policy model and implementation of capacity building initiatives.³¹

Public Health Units

PHUs are important stakeholders in the implementation of tobacco use prevention programming in the province. As the focus of this chapter is on prevention interventions at the provincial level, descriptions and evaluative evidence from PHU specific programs is not presented. However, given the key role of PHUs in the implementation of many prevention programs (e.g., the provincial Youth Engagement Initiative), some evidence pertaining to programming at the PHU-level is provided.

Program Training and Consultation Centre

The PTCC provides training and technical assistance to health professionals working in tobacco control. The PTCC builds capacity locally for tobacco control through the provision of training, consultation, referral and resource development to PHUs, TCANs, community health centres, volunteer organizations and healthcare providers.³² Some of PTCC training pertains to the area of tobacco use prevention in that the Centre provides foundations and conflict resolution training to Tobacco Enforcement Officers, who are involved in a variety of enforcement activities, including the enforcement of youth access policies.

Youth Tobacco Vortal Project

The Youth Tobacco Vortal Project was initiated in 2001 through funding from the Ministry of Health Promotion with the goal of supporting public health agencies to engage and inform youth, aged 12 to 19, about tobacco control issues through web-based technology. The project also

sought to establish and maintain partnerships with community organizations to further promote their work. The project's main website, Smoke-FX, contained information on tobacco facts, tobacco laws, cessation, tobacco industry, secondhand smoke, and smoking in movies, all delivered in an interactive manner. YTVP provided content through other social media, with the development and promotion of a youth-designed campaign entitled Smells Like Ash through YouTube, Twitter, and Facebook.

Prevention Interventions

The Strategy includes several programs, services, and policies focused on prevention and reduction of tobacco use among youth through limiting *social exposure* to tobacco use, decreasing *access and availability* of tobacco products, increasing *knowledge* of the harmful effects of tobacco use, and increasing youth *resiliency* to make healthy choices and resist tobacco use initiation.

Interventions to Limit Social Exposure

A number of tobacco control policies have been implemented to limit social exposure (i.e., the visual exposure to tobacco products and/or use in social environments) and availability of tobacco products for youth, including minimum age restrictions on purchase, display bans at point of purchase, bans on the sale of single cigarettes/cigarillos, and restrictions on smoking in schools, bars and restaurants, vehicles and workplaces.^{33,34}

Recent tobacco control policy changes that focus on limiting social exposure and availability of tobacco among youth in the province of Ontario are discussed next.

Advertising and Promotion of Cigarillos, Blunt Wraps and Flavoured Tobacco

Bill C-32, the *Cracking Down on Tobacco Marketing Aimed at Youth Act* (1) amended the *Tobacco Act* to ban the addition of flavours and additives to tobacco products and any images of fruit or flavours on packaging (except for menthol). The Bill also repealed the provision that allowed the promotion of tobacco products in publications with an adult readership greater than 85%.

Point-of-Sale Display Ban

In addition to the immediate and long-term health effects associated with physical exposure to secondhand smoke,³⁵ there are implications associated with social exposure to tobacco products. Such exposure may promote the normalization of tobacco use,

trigger initiation in youth and young adults through processes of social influence and modeling, and may encourage the continued use of tobacco among smokers and relapse among quitters.^{36,37} On May 31, 2008 a complete ban on the retail and wholesale display of tobacco products was implemented in Ontario in order to discourage youth from starting to smoke.³⁸ Those exempted from this ban include tobacconists, duty free retailers and manufacturers.

Protection from Exposure to Secondhand Smoke

In May 2006, the *Smoke-Free Ontario Act* prohibited smoking in various enclosed public spaces and workplaces such as bars, restaurants, casinos, and common areas of multi-unit dwellings.³⁹ In January 2009, Ontario also prohibited smoking in vehicles with children under the age of 16, the most recent provincial legislation that aims to protect youth from physical and social exposure to SHS. Municipalities continue to extend protection beyond that covered by the *Smoke-Free Ontario Act*. Bylaws that ban smoking on patios are increasingly being adopted by municipalities throughout Ontario⁴⁰ and restrictions within the park, sports and recreation industry have also gained momentum.^{41,39} Furthermore, some municipalities have banned smoking in public housing.⁸ The restriction of smoking outside entrances to buildings, in both the public and private sectors, is also becoming increasingly common.⁴⁰

Activities to Promote Smoke-Free Movies

An abundance of research demonstrates that exposure to smoking in movies is associated with the uptake of smoking among youth.⁴² Recent studies have noted that over half of PG-13 movies in the United States contain smoking, and that the total number of in-theatre tobacco depictions, while on the decline, was approximately 17 billion in 2009.⁴³ In Canada, youth may be exposed to a higher number of tobacco depictions than youth in the US, because provincial rating agencies rarely apply adult ratings to top-grossing movies that are rated R in the US.³⁹ In response to the high number of tobacco depictions found in youth-rated (PG and 14A) films shown in theatres across Canada, the Ontario Coalition for Smoke-Free Movies formed in May 2010 and launched a website providing information on smoking in movies and related advocacy activities to reduce exposure of youth to smoking in movies. This initiative involves partnerships between YATI, the Ontario Lung Association and the TCANs. The website receives financial and in-kind contributions from these partners. The Coalition seeks to mitigate the harmful

impact of smoking in movies and supports the following five actions to reduce exposure to on-screen smoking:

1. Rate new movies with an adult rating.
2. Require strong anti-smoking ads prior to movies depicting tobacco use in all distribution channels.
3. Certify no payoffs for displaying tobacco.
4. Stop identifying tobacco brands.
5. Require films with tobacco imagery assigned a youth rating to be ineligible for government film subsidies.

In addition to providing sections on research information, multimedia and social media, the website provides an opportunity for visitors to learn about advocacy activities to support the campaign for smoke-free movies. Advocacy activities include letters of support, advocacy emails and youth designed advocacy postcards to local politicians. There has also been the opportunity for youth to become engaged in the campaign through involvement in Action Week (see next section), by submitting film reviews and critiques and sharing advocacy stories, photos and videos.⁴⁴

Interventions to Limit Availability and Access

Various tobacco control policies have also been implemented to limit the availability of tobacco products to youth, contributing to prevention and reduction of tobacco use. These policies include minimum age restrictions on purchase, bans on the sale of single and flavoured cigarillos and tobacco price increases.³⁴

Minimum Age of Cigarette Purchase

The minimum age of cigarette purchase in Ontario is 19 years old; it is an offence to sell or supply tobacco to anyone under the age of 19. As of May 31, 2006, the *Smoke-Free Ontario Act* requires retailers to request identification if a person trying to buy cigarettes appears to be under the age of 25.³³

Bans on the Sale of Single and Flavoured Cigarillos

Cigarillos are classified as smaller versions of cigars that are wrapped in tobacco leaf and contain a cellulose acetate filter. They each weigh less than 1.4 grams and physically

resemble a cigarette in size and shape. Previously, cigarillos were sold in a variety of flavours (grape, vanilla, maple, cherry, strawberry, etc.) and were available in tubes or small boxes resembling candy or lip gloss. Prices for a single cigarillo were as low as \$1. Bill C-32, the *Cracking Down on Tobacco Marketing Aimed at Youth Act* (1), aligned the packaging requirements of cigarillos and blunt wraps^{vii} with that of cigarettes. Rather than being sold as single units, cigarillos and blunt wraps must be sold as part of a package that contains a minimum quantity of 20. The bans on the manufacture and importation as well as the sale of these products were effective as of April 6 and July 5, 2010 respectively. At the provincial level, an amendment to the *Smoke-Free Ontario Act* (effective July 1, 2010) also prohibits the sale of cigarillos with flavours (except menthol) and requires unflavoured or menthol cigarillos to be sold in packs of 20 or more.³³

Tobacco Price

Youth, particularly older adolescents, are very sensitive to the cost of tobacco products.^{45,46,47} Specifically, higher cigarette prices have been shown to prevent youth initiation,⁴⁶ prevent adolescents from becoming daily, addicted smokers and can impact the smoking behaviour of those youth who are further along the smoking uptake continuum.⁴⁸ Thus, increases in the price of tobacco are central to any preventive approach.²⁸ On July 1, 2010, the Harmonized Sales Tax was implemented in Ontario and consumers are now required to pay both the 8% Provincial Sales Tax and 5% federal Goods and Services Tax. The provincial tax on a carton of 200 cigarettes increased from \$24.70 to \$29.80, representing a 7.9% increase after adjusting for inflation. However, Ontario taxes on tobacco products are still relatively low compared to most other provinces and territories.¹¹

Interventions to Build Knowledge and Resiliency

Youth engagement programs, whereby youth are directly involved in program planning and implementation, educational programs like Leave the Pack Behind, Lungs are for Life (LAFL), the provincial Physical and Health Education Curriculum, and social marketing are interventions that aim to increase knowledge and resiliency to prevent tobacco use among youth. A number of changes have occurred in the province of Ontario with respect to the implementation of these interventions from 2009 to 2010.

^{vii} Similar to rolling paper, a blunt wrap is a sheet or tube made of tobacco, which can be used to roll cigarette tobacco.

Youth Engagement Programs

There is growing recognition that a youth engagement approach is an important strategy with which to promote positive health behaviour change.^{49,50,51,52} A youth engagement approach is in keeping with recent recommendations issued by the Tobacco Strategy Advisory Group to the Minister of Health Promotion and Sport to decrease the number of youth who try smoking. Research studies have shown that it is a promising approach to raise awareness of the harmful effects of tobacco use, empower youth and build skills to resist tobacco use initiation.^{50,53}

Youth Action Alliances

The Youth Action Alliance (YAA) program was a youth engagement prevention intervention funded by the Ontario Ministry of Health Promotion and Sport under the Smoke-Free Ontario Strategy from 2005-2009. The program involved the engagement and empowerment of high school youth to undertake tobacco control activities with peers and other youth in the community. The program was the subject of a formative evaluation conducted by OTRU in 2008. In 2009-2010, the YAA program was de-funded and the MHPS committed funding to a new initiative that is engaging youth in health promotion for the prevention of tobacco and other substance use and promotion of physical activity and healthy eating.

Provincial Youth Engagement Initiative

The YE Initiative involves the adoption of youth engagement principles across MHPS initiatives, the provision of training on the principles of engagement to youth, the funding of youth-led health promotion activities, and opportunities for peer networking and learning.³⁰ Youth Engagement Initiative Funding supports the hiring of Youth Engagement Coordinators in each public health unit to develop and implement activities. The Youth Engagement Coordinators leverage initiatives across various risk factor-related programs and work with Youth Development Specialists at the Tobacco Control Area Networks to establish regional plans and priorities.³⁰ OTRU is working with the MHPS, TCANs, public health units and youth representatives to design and implement formative and outcome evaluations of the YE Initiative. The evaluation provides real-time knowledge about facilitators, challenges and mechanisms to inform development and refinement of the Initiative. It will also examine the impact of the Initiative at individual and community

levels and further build the evidence-base with respect to implementation of prevention interventions.

Smoke-Free Ontario Action Week

Started in 2006, Action Week is an annual event organized by the Smoke-Free Ontario Youth Task Group^{viii} to encourage youth to take action against the tobacco industry and promote the prevention of youth smoking. Action Week promotes youth action through the development of a guide with suggested advocacy activities. Action Week themes vary from year to year, for example the theme for Action Week 2009 was Tobacco-Free Sports and Recreation and the theme for 2010 was Smoke-Free Movies. Action Week 2010 encouraged youth in Ontario to take action to eliminate exposure of youth to smoking in films rated G, PG and 14A. In the promotion of Action Week, PHUs and Leave the Pack Behind held movie nights featuring smoke-free movies and organized advocacy activities such as postcard writing to politicians, to raise awareness and support for a campaign to increase the ratings of films that depict smoking.

The Access Project

This research project was undertaken by the Youth Voices Research Group, based at the Dalla Lana School of Public Health at the University of Toronto, to explore perceptions and experiences with contraband tobacco use in Ontario to increase knowledge on this issue and to inform future tobacco control policy.⁵⁴ The project was conducted in three phases. The first involved youth photography and film projects to capture perceptions of access to contraband cigarettes and cessation options for youth. The second involved consultation events with youth in three communities in Ontario; and the third involved interviews with researchers, service providers and decision-makers in tobacco control. Youth were engaged in all phases of the project.

^{viii} The Smoke-Free Ontario Youth Task Group is a group of stakeholders involved in youth tobacco prevention programming in the province of Ontario. The task group meets monthly to discuss current programming across TCANS, organize knowledge translation, and engage in discussion and planning for future tobacco control activity planning.

Educational Programs

Lungs Are for Life

Lungs Are for Life was an educational tobacco prevention program developed by the Ontario Lung Association. LAFL provided teachers with lesson plans to educate children from Kindergarten to Grade 12 about causes and effects of smoking to provide them with skills to be and stay smoke-free. Uptake of LAFL modules was about 65% of Ontario schools from 2002-2006 but declined to 10% of schools by 2008-2009.⁵⁵ Due to the de-funding of the program by MHPS, the Ontario Lung Association is no longer offering Lungs are For Life but is currently exploring other options for child and community prevention work.

Ontario's New Health and Physical Education Curriculum

In September 2010, Ontario public schools began implementing the Ministry of Education's revised interim health and physical education curriculum for Grades 1 to 8. This is the first revision since 1998. The revised curriculum seeks to provide:

*... knowledge and skills that will benefit students throughout their lives and help them to thrive in an ever-changing world by enabling physical and health literacy as well as developing the comprehension, capacity, and commitment needed to lead healthy, active lives and to promote healthy, active living.*⁵⁶

The health and physical education expectations of students are grouped into three related strands: Active Living, Movement Competence, and Healthy Living. Living Skills expectations are also found within each strand. The Healthy Living strand comprises four topic areas, one of which concerns Substance Use, Addictions and Related Behaviours. Under this topic area, students begin to learn about tobacco during the junior grades (specifically Grades 4 to 7). Learning focuses on understanding what tobacco is, what influences its uptake (i.e., peer pressure, industry advertising) and the effects and consequences of its use (i.e., health effects, social implications). This knowledge is integrated with the development of a variety of living skills (e.g., decision making and refusal skills) that help students make and maintain healthy choices. The Ontario Physical and Health Education Association is in the process of developing lesson plans for

teachers relating to specific topics in the curriculum, including substance use, and as of December 2010, 58 out of 72 school boards have signed on to receive these lesson plans (Ontario Physical and Health Education Association staff, personal communication). The Ontario Physical and Health Education Association will evaluate school board access and uptake of the lesson plans and also assess the quality of the plans by the end of 2011.

Leave the Pack Behind

Leave the Pack Behind is a program focused on promoting tobacco use prevention and cessation resources for the post-secondary student population. It seeks to build social norms that support tobacco use cessation, healthy eating and active living, and advocates for enhanced tobacco control policies on post-secondary school campuses.²³ They address these goals through the provision of peer-to-peer tobacco education, peer-to-peer cessation support, sustained social norms marketing, interactions with health professionals, and an interactive, multi-component website.

Prevention Outcomes: Population Level

The Prevention goal of the Strategy is to prevent smoking initiation and regular use among Ontario's children, youth, and young adults in order to eliminate tobacco-related illness and death. As shown in Figure 26 (Logic Model), the long-term goals of prevention are to reduce initiation of tobacco use and to increase tobacco abstinence among children, youth and young adults. In working toward these desired outcomes, the more immediate objectives of the Strategy are to increase awareness and adoption of school and community tobacco prevention initiatives.

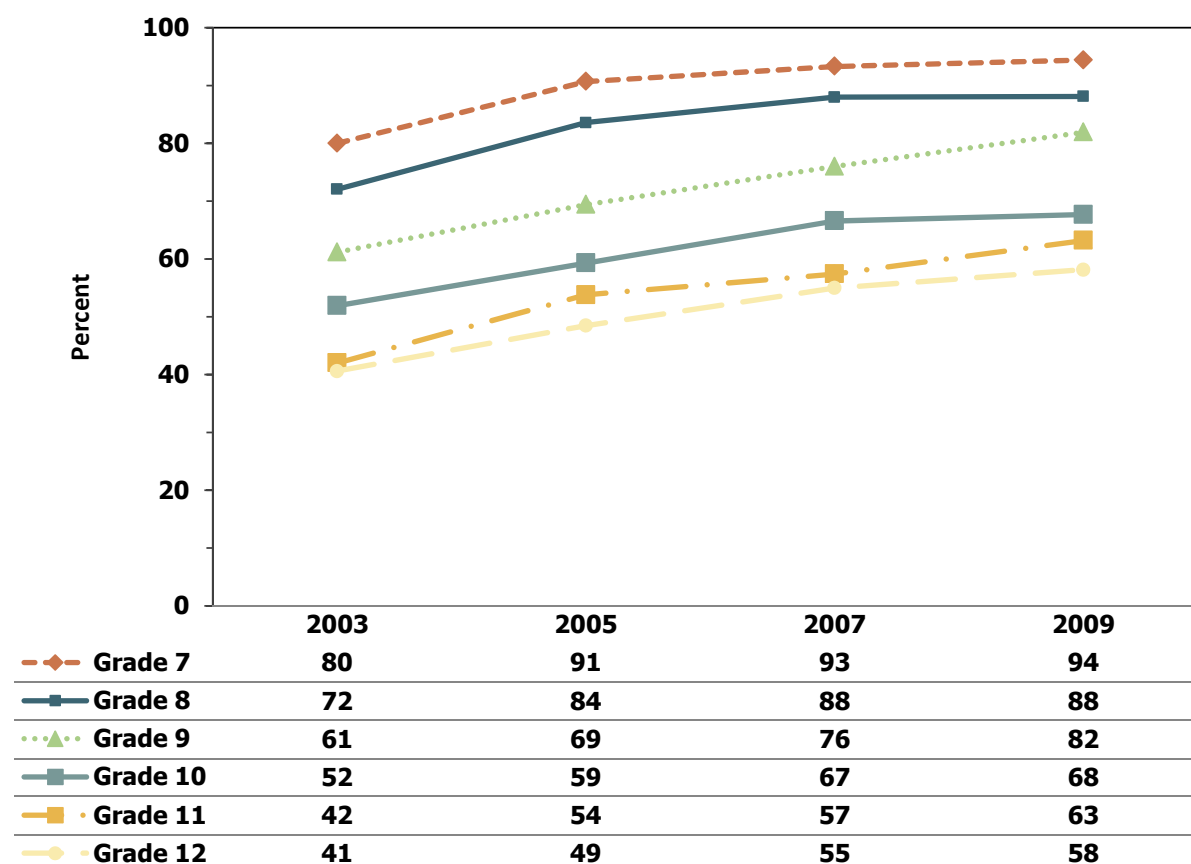
Long-Term Outcomes

Comprehensive tobacco control programs, such as the SFOS, focus on reducing the initiation and prevalence of tobacco use among children, youth, and young adults. Indicators related to progression to smoking include lifetime abstinence, past-year initiation, past-year smoking, and past 30-day current smoking.

Lifetime Abstinence: Students in Grades 7 to 12

- In 2009, four out of every ten students in Grades 11 and 12, three out of every ten students in Grade 10, and two out of every ten students in Grade 9 had tried smoking in their lifetime.

Figure 27: Lifetime Abstinence, by Grades 7–12, Ontario, 2003 to 2009

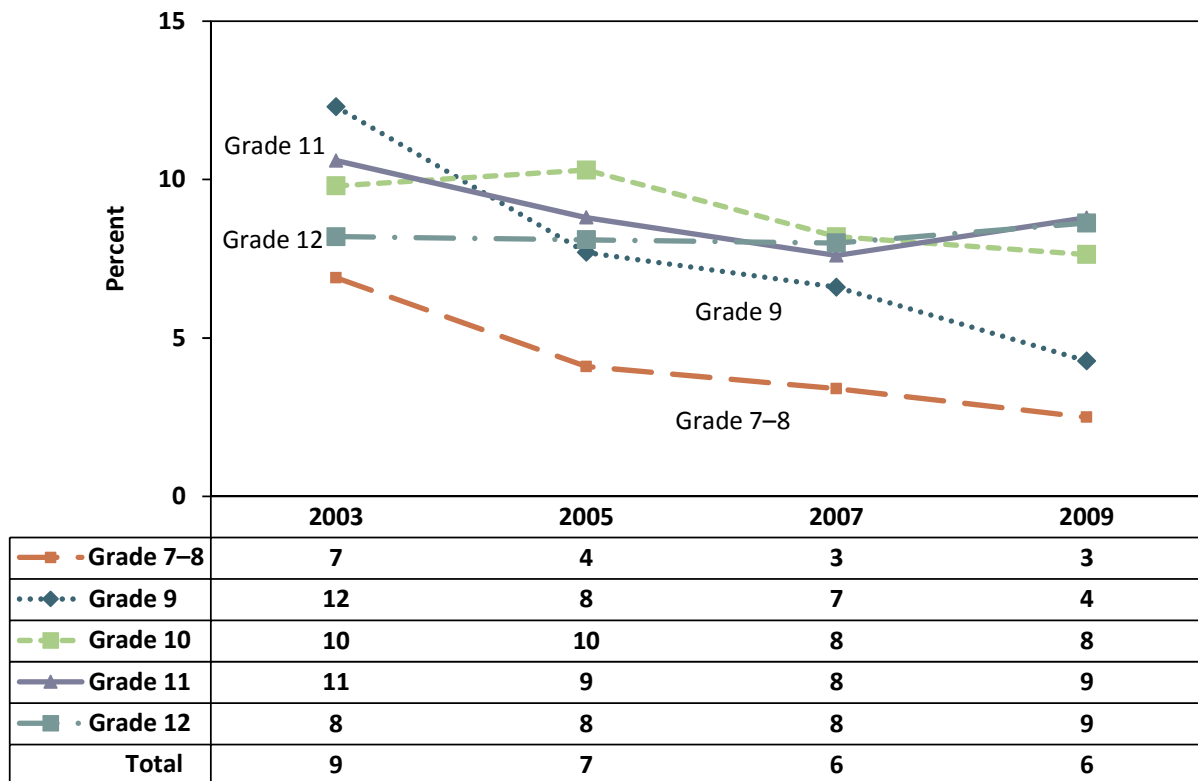


Source: OSDUHS 2003–2009 (Biennial).

Past-Year Initiation: Students in Grades 7 to 12

- In 2009, first use of cigarettes at any time in the previous 12 months ranged from 3% of Grade 7/8 students (combined) to 9% of Grade 11 and 12 students (Figure 28).
- Over the period 2003 to 2009, past-year initiation decreased significantly for students in Grades 7 through 9, but not for students in Grades 11 and 12.
- From 2007 to 2009, the prevalence of initiating smoking in the previous year remained static for all students (6%) and across grades (Figure 28).
- Over the period 2003 to 2009, past-year initiation among all students decreased from 9% to 6%.

Figure 28: First Use of Cigarettes in the Past Year, by Grades 7–12, Ontario, 2003 to 2009



Source: OSDUHS 2003–2009 (Biennial).

Initiation to Current Smoking in Past Year

- In 2009, among current smokers aged 14 to 25, 1.3% smoked their first cigarette over the previous 12 months, a rate not significantly different from that of previous years.

Table 9: Past-Year Initiation, by Year (2007 to 2009), Ages 14 to 25, Ontario

Year	Value (%)	95% CI
2007	0.84M	0.4 to 1.2
2008	0.96M	0.5 to 1.4
2009	1.29M	0.8 to 1.8

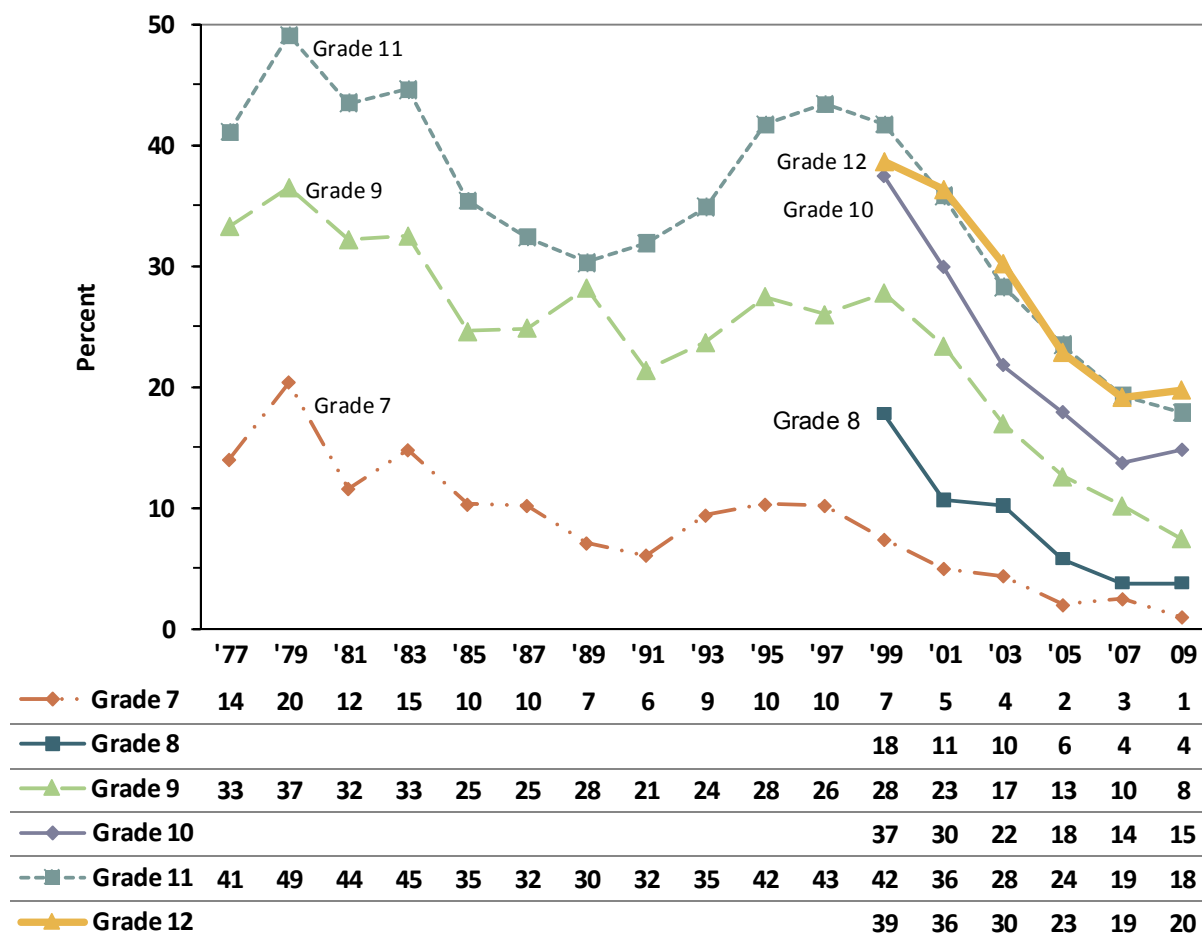
Note: M = Marginal. Interpret with caution: subject to moderate sampling variability.

Source: CCHS.

Past-Year Smoking: Students in Grades 7 to 12

- Among students in Grades 7 to 12, the overall prevalence of smoking more than one cigarette in the past year (1-year current smoking) was 12% in 2009, representing 119,600 Ontario students (OSDUHS, data not shown).
- In 2009, 20% of Grade 12 students, 18% of Grade 11 students and 15% of Grade 10 students smoked cigarettes at some point in the past year.
- Significant declines in past-year smoking for students in Grades 10 through 12 from 1999 to 2007 appear to have leveled off over the period 2007 to 2009.
- Rates of past-year smoking have declined over the past decade across grade; more recently, rates have remained relatively stable among all students (12% in 2007 and 2009) and across grade.
- In 2009, rates of past-year smoking among Ontario students continued to increase with grade, ranging from 1% for Grade 7 to 20% for Grade 12 (Figure 29).

Figure 29: Past-Year Smoking, by Grades 7–12, Ontario, 1977 to 2009



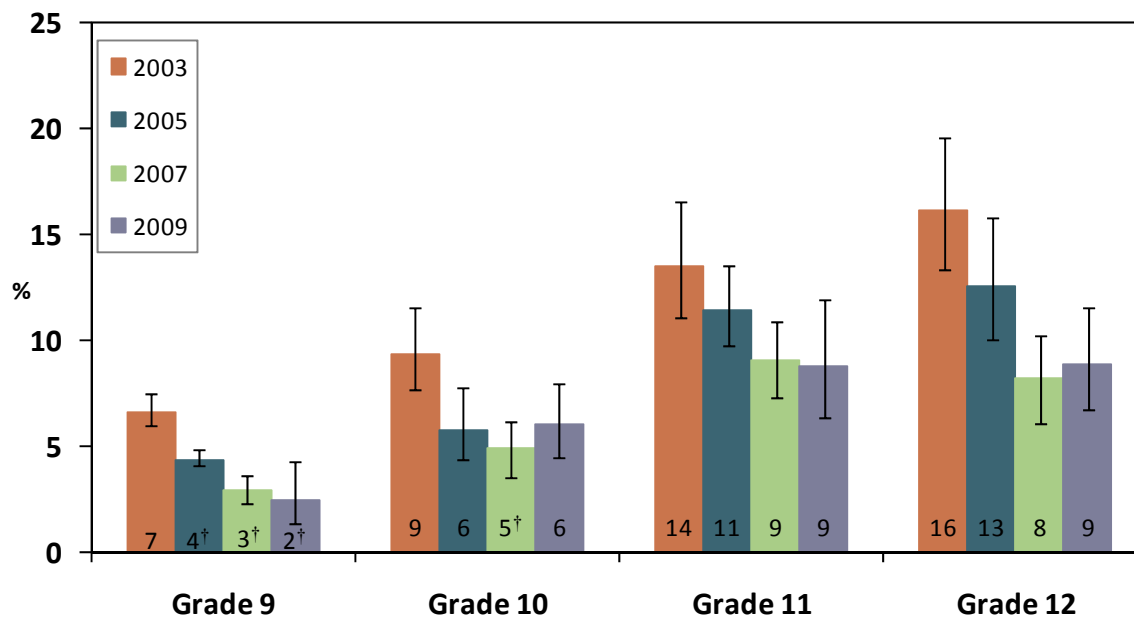
Note: Data collection for Grades 8, 10, and 12 started in 1999.

Source: OSDUHS 1977–2009 (Biennial).

Current Smoking (Past 30 Days): Students in Grades 9 to 12

- From 2007 to 2009, the prevalence of past 30-day current smoking has remained static across all grades (Figure 30). (Data for Grades 7 and 8 are not reportable due to high sampling variability.)
- From 2003 to 2009, the rate of past 30-day current smoking among students in Grade 9 and Grade 12 declined significantly (Figure 30).
- In 2009, the prevalence of smoking in the past 30 days ranged from 2% in Grade 9 to 9% in Grades 11 and 12 (Figure 30).

Figure 30: Current Smoking (Past 30 Days), by Grades 7-12, Ontario, 2003 to 2009



† Interpret with caution, moderate levels of error associated with estimate—Coefficient of Variation (CV) between 16.6% and 33.3%.

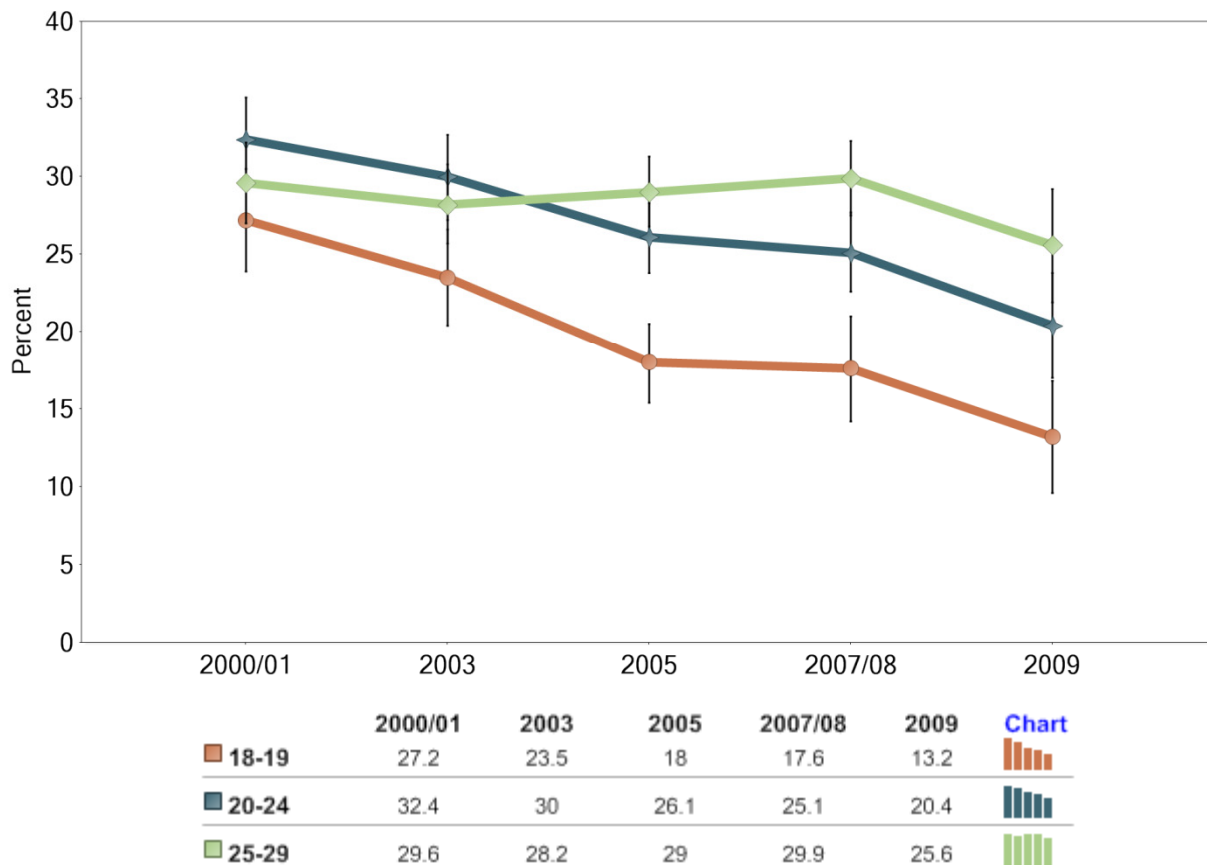
Note: Vertical lines represent 95% confidence intervals.

Source: OSDUHS 2003–2009 (Biennial).

Current Smoking (Past 30 Days): Young Adults aged 18 to 29

- From 2000 to 2009, there was a general downward trend in the prevalence of smoking among young adults in Ontario (Figure 31).
- Among young adults ages 18 to 19, the rate of smoking dropped for the period 2003 to 2009 from 23.5% to 13%.
- Among young adults aged 20 to 24, the rate of smoking dropped over the period 2005 to 2009 from 26% to 20%.
- In recent years, young adults aged 25 to 29 had the highest rate of smoking among all young adults.

Figure 31: Current Smokers (Past 30 Days), Young Adults, Ontario, 2000 to 2009



Note: Vertical lines represent 95% confidence intervals.

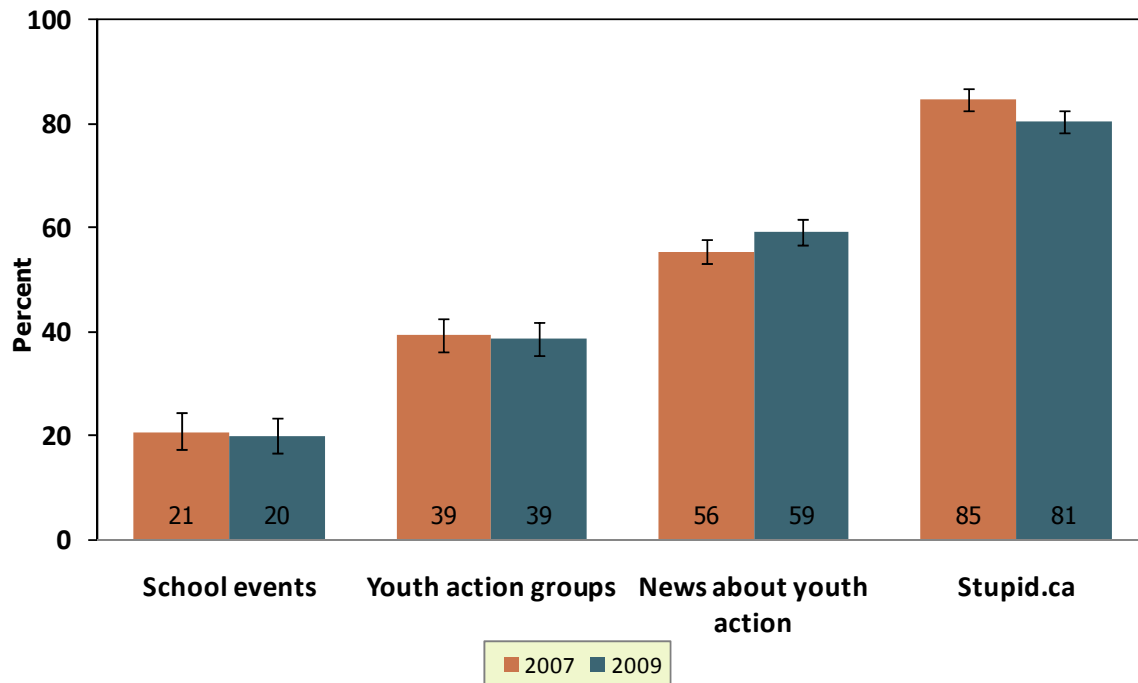
Source: Canadian Community Health Survey (Master File) 2000–2009.

Short and Intermediate-Term Outcomes

Awareness of School and Community Prevention Initiatives

- In 2009, 20% of students in Grades 7 to 12 were aware of activities or events at their school to stop students from smoking, unchanged from 2007 (21%; Figure 32).
- In 2009, 39% of all students were aware that there were groups of youth in their community who were working together to raise awareness about smoking and tobacco issues, unchanged from 2007.
- Six in ten students (59%) were aware of news stories about youth trying to raise awareness about cigarette smoking in 2009, which is not statistically different from the level of awareness reported in 2007 (56%).
- Between 2007 and 2009, student awareness of banners or advertisements (for example, on TV, in the theatre, or on a billboard) with the phrase stupid.ca statistically decreased from 85% to 81%.
- Among students in Grades 10 to 12, 21% participated in an anti-smoking activity in 2008-2009, statistically unchanged from 2006-2007 (27%). Among students in Grades 7 to 9, participation remained stable for the period 2006-2007 to 2008-2009 (30% vs. 34%) (Figure 33).
- Between 2006-2007 and 2008-2009, the proportion of students in Grades 10 to 12 reporting that they had in-class discussions about the effects of smoking remained stable (49% vs. 42%; Figure 34). Similarly, the proportion of students in Grades 7 to 9 reporting in-class discussions remained statistically unchanged over this period (67% vs. 64%)

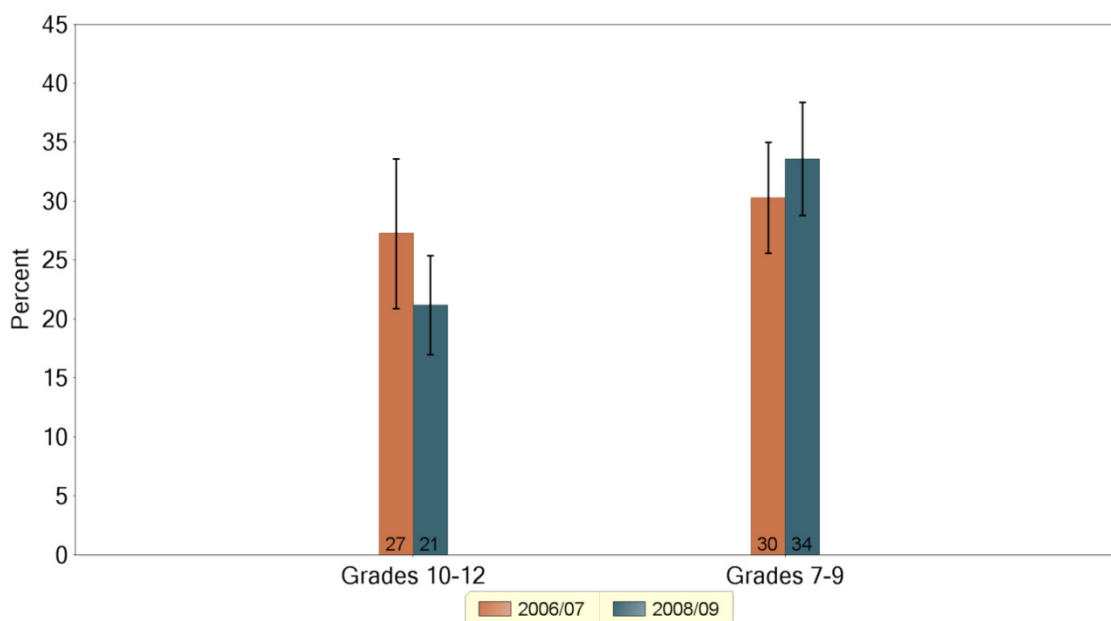
Figure 32: Student Awareness of School and Community Prevention Initiatives, Students (Grades 7 to 12), Ontario, 2007 and 2009



Note: Vertical lines represent 95% confidence intervals.

Source: OSDUHS 2007–2009 (Biennial).

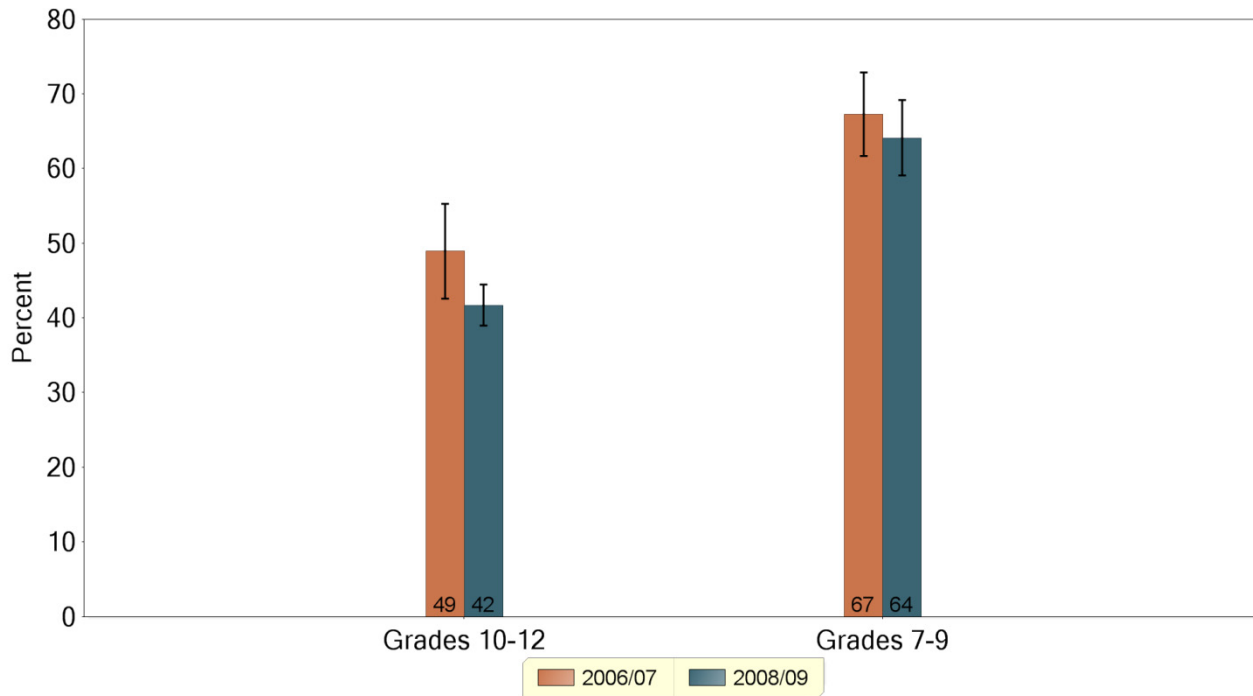
Figure 33: Participation in Anti-Smoking Activity (Past Year), by Grade, Ontario, 2006-2007 and 2008-2009



Note: Vertical lines represent 95% confidence intervals.

Source: Youth Smoking Survey 2006-2007 and 2008-2009.

Figure 34: Talked about the Effects of Smoking in Class, by Grade, Ontario, 2006-2007 and 2008-2009



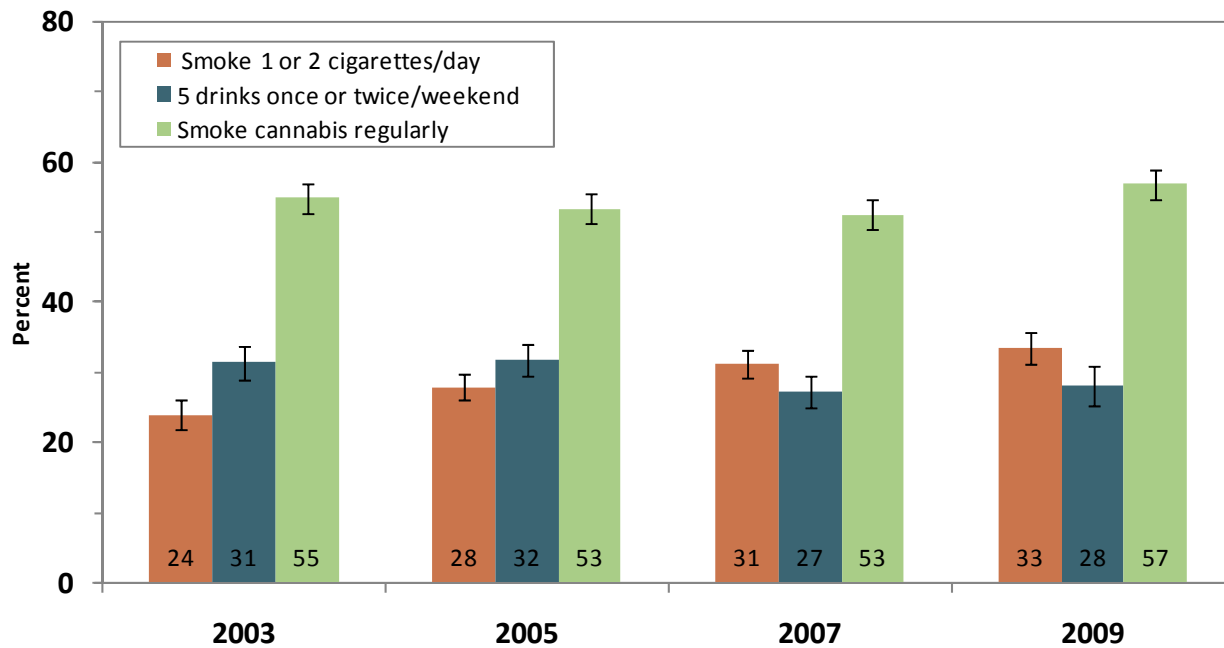
Note: Vertical lines represent 95% confidence intervals.

Source: Youth Smoking Survey 2006-2007 and 2008-2009.

Perceptions of Risk/Harm

- Among students in Grades 7 to 12, 33% believe that smoking 1 or 2 cigarettes a day puts them at great risk of harming themselves, a significant increase over the level reported in 2003 (24%) and 2005 (28%; Figure 35).
- Fewer students believe that smoking 1 or 2 cigarettes a day puts them at great risk (33% of students) compared to smoking cannabis regularly (57% of students).
- Nonsmokers were more likely to believe that smoking one or two cigarettes a day was a great risk compared to current smokers (35% vs. 8%; data not shown).
- Compared to students in Grade 10 to 12, significantly fewer students in Grade 7 to 9 believed cigarettes were more harmful than marijuana (45% vs. 26%; Figure 36).

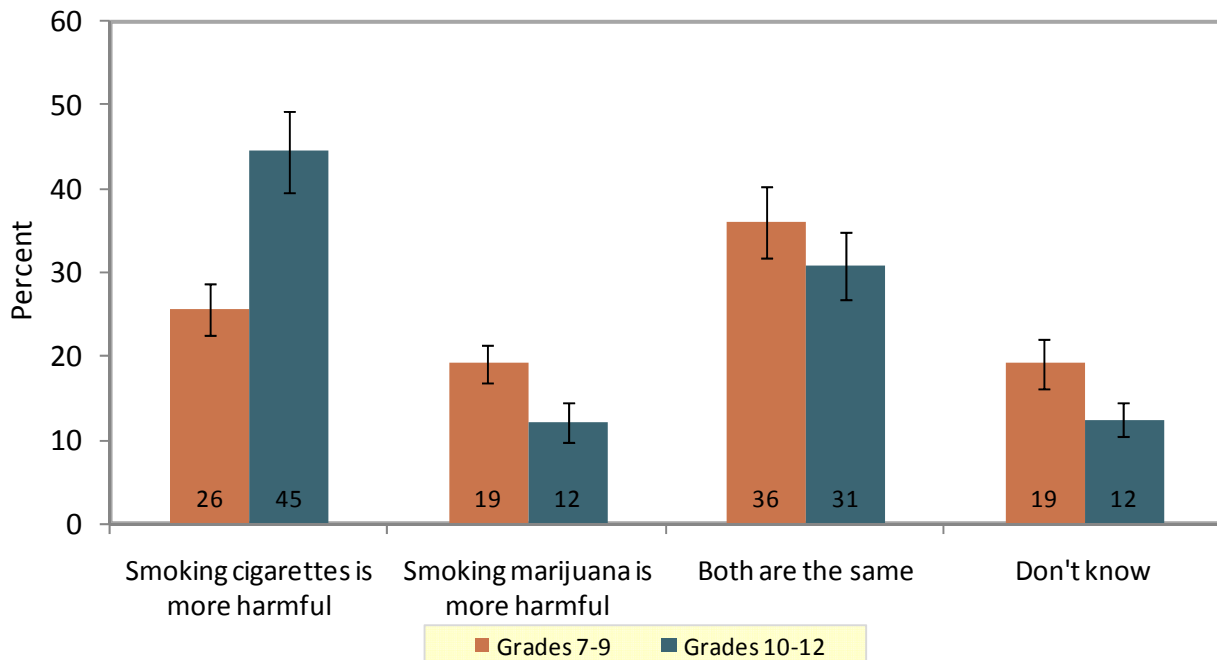
Figure 35: Student Beliefs about How Much of a Risk there is to themselves by Using Cigarettes, Alcohol, or Cannabis, Students (Grades 7 to 12), Ontario, 2003 to 2009



Note: Vertical lines represent 95% confidence intervals.

Source: OSDUHS 2003–2009 (biennial).

Figure 36: Opinion about Harmfulness of Cigarettes versus Marijuana, Ontario, by Grade, 2006-2007



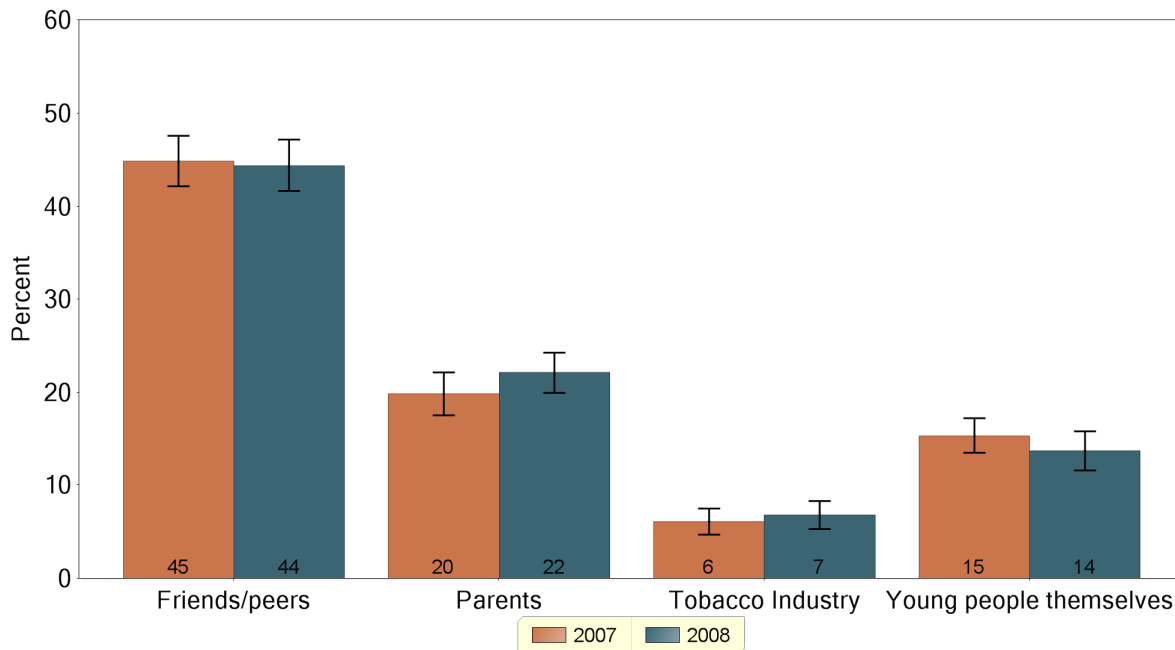
Note: Vertical lines represent 95% confidence intervals.

Source: Youth Smoking Survey 2006-2007.

Responsibility

- Ontarians aged 15 years and over believed that friends and peers were most responsible for smoking initiation by youth (44% in 2008; Figure 37).
- Only 7% of respondents believed the tobacco industry was responsible for smoking initiation by youth.

Figure 37: Responsible Party for Smoking Initiation by Youth, Ages 15+, Ontario, 2007 and 2008



Note: Vertical lines represent 95% confidence intervals.

Source: Canadian Tobacco Use Monitoring Survey 2007, 2008.

Contributions: Infrastructure/Capacity Building Programs

In this section, we discuss contributions over the last year of infrastructure development and capacity building programs for which evaluative data are available, namely the Youth Advocacy Training Institute, the Play, Live, Be Tobacco-Free campaign in TCANs and the Youth Tobacco Vortal Project.

Youth Advocacy Training Institute

In 2010-2011, YATI conducted 65 trainings across the province (up from 62 in 2009-2010), including 50 youth trainings, 15 adult trainings, seven special event trainings and nine partnership event trainings. YATI almost doubled participation in youth trainings in 2010-2011, having trained 1,212 youth (up from 681 youth in 2009-2010), while participation in adult trainings decreased slightly from 400 adults in 2009-10 to 362 adults in 2010-11. Four hundred and fifty-four youth completed pre- and post-training knowledge surveys and 215 youth participants completed surveys examining self-efficacy pre- and post-training. Both of these surveys showed statistically significant increases in knowledge and self-efficacy among youth participants. Fifty-five youth responded to a follow-up survey available on the YATI website on how they were using the skills they learned at YATI trainings, and 37% indicated that they are creating programs, workshops or campaigns, 21% reported working or volunteering in their community, 16% are making personal behaviour changes, and 12% are sharing information with others.⁵⁷ These evaluative findings must be interpreted with caution because of limited response rates to the follow-up survey and lack of implementation of pre-post surveys at some trainings.⁵⁷

Play, Live, Be Tobacco-Free Initiative

An evaluation of this initiative has been completed. Results of the evaluation indicate that many of the initiative deliverables have been achieved. A number of partnerships between PHUs and sports and recreation organizations have been established, and both paid and earned media have been secured to promote the initiative. Traffic to the program website has increased over time, from 13,968 hits in 2009 to 32,149 hits in 2010, reflecting increased awareness. Seed grant funding has also been awarded to assist organizations in implementing policies. A database of tobacco-free sports and recreation policies has been established. The database contains 71 policies, which include municipal and sports and recreation organization policies (not all of which may have been implemented since the beginning of the program).^{31,41} However, some of

these policies are of varying quality (e.g., some submissions were not policy documents, and some did not contain a policy approval process or rationale). Interviews and surveys with stakeholders showed that capacity building work such as workshops, toolkits and tobacco-free sports and recreation fact sheets were well received by public health units, TCANs and sports and recreation organizations, however, surveys suffered from low response rates. Interviews and surveys with stakeholders also highlighted the importance of networking to share workload and learn from successes and challenges in implementation. The evaluation also indicated that greater support is needed locally and at the provincial level to facilitate communications and social marketing activities, and to enable sport and recreation organizations to develop and implement policies.³¹

Youth Tobacco Vortal Project

This program reported challenges in maintaining and expanding partnerships with community agencies and project promotion due to the de-funding of the Youth Action Alliance program by the Ministry in 2009.⁵⁸ However, results of a recent evaluation have indicated that increased traffic to their Smoke-FX website annually since its inception, and an increase of 7.5%, growing from 20,173 visits in 2008-2009 to 21,680 in 2009-2010. However, length of time spent on the web pages decreased from approximately 3 minutes in 2008-2009 to 2 minutes in 2009-2010. A survey of a convenience sample of 174 website users conducted in 2010 indicated that 30% of users were 19 years of age or older, and their main reasons for visiting the site included “just browsing” (32%) and “gathering information for a school project” (29%). The Smells Like Ash campaign on Facebook generated 899 fans over the course of the first month of existence, and its YouTube videos had from 280 to 399 views over that time.⁵⁸

Contributions: Interventions

We now present evaluative evidence concerning the effects of the various interventions that focus on prevention and reduction of tobacco use among youth. Given the nature of some of the prevention interventions and challenges in attributing changes in prevention-related outcomes at the population level to particular interventions, evaluative data are not currently available for all prevention interventions discussed in this chapter. Recent data on the effects of price, availability of contraband cigarettes and smoke-free policies on prevention-related outcomes are also not currently available.

Interventions to Limit Social Exposure

Point-of-Sale Display Ban

Recent focus groups conducted with youth by OTRU have suggested that youth have mixed opinions regarding the effectiveness of the point-of-sale display ban. Some participants in the focus groups felt that the display ban could be helpful for individuals who are trying to quit smoking by eliminating cues, but many also thought that it might have little effect on youth who do not smoke as they may still be exposed to cigarette use through exposure from family, friends and popular culture. These findings suggest that further research is needed on youth attitudes towards tobacco control policies, and that more research on program or policy options to address social exposure to tobacco use among youth is warranted. OTRU is currently engaged in a new study to address these questions.

Interventions to Limit Availability and Access

Minimum Age of Cigarette Purchase

In 2009, approximately 17% of Ontario students in Grades 7 to 12 who had smoked a whole cigarette in the last 12 months reported purchasing their cigarette from a corner store, grocery store, supermarket, gas station or bar. Fifty-eight percent reported getting their cigarette from a friend or family member.⁵⁹ These data indicate that access to cigarettes by youth under the age of 19 persists and that non-compliance with the SFOA by tobacco vendors is an issue. OTRU, in partnership with the Ministry of Health Promotion and Sport, is currently evaluating a pilot project that is focusing resources on addressing non-compliance concerning youth access to tobacco products.

Bans on the Sale of Single and Flavoured Cigarillos

A recent survey of 72 young adults aged 19-29 in Ontario and Alberta, conducted by OTRU and Alberta Health Services, found that 67% of participants were aware of the legislation banning the sale of single cigarillos and 58% were aware of the legislation banning the sale of flavoured cigarillos. However, 53% of participants indicated that they had purchased flavoured cigarillos since the implementation of the ban in July 2010. These results show that flavoured cigarillos are still accessible despite the ban. Evidence has emerged that some cigarillo distributors are skirting the cigarillo classification under Bill C-32 by increasing the weight of the product and removing the filter. These changes to the appearance and weight of the product have allowed manufacturers to circumvent the bill and continue the sale of flavoured cigarillos.⁶⁰

Interventions for Building Knowledge and Resiliency

Youth Engagement Programs

Youth Action Alliances

In 2009, OTRU conducted case studies exploring the successes and challenges of YAA programs in Toronto and Aboriginal communities.^{61,62} A focus on YAAs in underserved and Aboriginal communities was important as these communities are considered to be at-risk for higher rates of tobacco use, and youth may be harder to mobilize and engage in prevention activities.⁶¹ Key informant interviews and focus groups were conducted with program staff members, peer leaders and youth advisors. Evaluation results revealed a number of program successes including the recruitment of enthusiastic youth within underserved communities, youth participants acting as positive role models for other youth, and the establishment of beneficial community partnerships. However, the programs also experienced challenges with recruiting younger and, in some programs, nonsmoking youth, and those outside the targeted communities or neighbourhoods, and demonstrating broader program impacts.^{61,62} These evaluations provided knowledge for future program development, such as how to recruit and engage harder to reach youth and the need to diversify the youth involved in youth engagement initiatives in order to effectively address the issue in a variety of communities. While YAA programs have since been discontinued, these evaluations served to inform the development of the MHPS Youth Engagement Initiative and ongoing, tobacco control-related, youth engagement work in the province.

New Provincial Youth Engagement Initiative

A number of youth-oriented activities are currently being rolled out within the public health units (PHUs) as part of the new provincial Youth Engagement Initiative, and PHUs are at different stages of YE Initiative implementation. Examples of some of the youth engagement work being conducted include the promotion in TCANs of video contests in which youth are invited to create videos encouraging peers to be tobacco-free and describe related benefits (e.g., Tobacco-Free Sports and Recreation, Be Your Best Self). Some PHUs have conducted mini-conferences where youth are invited to learn more about youth engagement and brainstorm about the development of future activities. PHUs in at least four TCANs are working with “high-school champions” who promote advocacy work on healthy choices in high schools. PHUs in four TCANs are working with youth to develop

cessation resources for youth or to develop contests to promote youth cessation. One PHU has established a youth network through which youth engagement activities will be developed, and another has developed a campaign which encourages youth to advocate for the creation of legislation that will further restrict the tobacco industry from marketing flavoured tobacco products to youth (Flavour...GONE! campaign). Some PHUs are focusing on capacity building for youth engagement by partnering with existing community organizations that support this approach. PHUs have also worked with youth to promote existing community-level initiatives such as Smoke-Free Ontario Action Week and the Ontario Coalition for Smoke-Free Movies website. Youth involved in the YE Initiative typically undergo training provided by the Youth Advocacy Training Institute on youth advocacy and leadership. OTRU is currently conducting a formative cluster evaluation of the provincial Youth Engagement Initiative in partnership with MHPS, TCANs and PHUs across the province.

Smoke-Free Ontario Action Week

OTRU completed an evaluation of Action Week, and found that, of 27 participants who completed the survey, 81% conducted an activity related to the Smoke-Free Movies theme. Due to the small number of respondents to this survey, results should be interpreted with caution. Of those who conducted an activity, 43% held educational booths, 43% participated in advocacy activities such as postcard campaigns, 30% participated in a movie night, 30% held presentations, 22% did street marketing activities, and 22% held a competition or trivia game. Many participants indicated that they liked the theme, but some felt that advertisements and materials could have been made available earlier so as to facilitate planning and uptake of activities.⁶³

The Access Project

The youth photography/film projects and youth “unconference” consultation phases of the Access Project engaged twelve 14-year olds and fifty-one 24-year olds, respectively. Findings from these phases highlighted a lack of awareness of many issues concerning contraband cigarettes, but identify the perception that cigarettes are more easily accessible to youth.

Youth indicated that there are few attractive and accessible smoking cessation options other than cold turkey for youth. The projects also showed that youth feel that current print and electronic anti-smoking campaigns do not speak to them, and that social

networks are key sources for both obtaining cigarettes and for supporting smoking cessation.⁵⁴ Interviews with adult professionals revealed a number of recommendations for future research and programming, including: the need for an increased research focus on smoking cessation options for youth; the development of a comprehensive, provincial, systems-oriented tobacco control strategy; more concerted effort to decrease supply of contraband tobacco; an increased focus on education messages for youth in a variety of settings, such as schools and community, through social and mainstream media outlets; and the creation of more programming that employs a youth engagement approach and captures the youth voice to facilitate reach to the population.⁵⁴

Educational Programs

Leave the Pack Behind

With respect to prevention-related educational work, in 2009-2010, LTPB interacted with 24% of all students on the 19 university campuses and 22 of 24 college campuses in Ontario in which they are active through face-to-face contact at outreach events hosted by student teams. The program assisted 3 colleges and 6 universities to implement tobacco control policies/procedures (e.g., banning tobacco sales, improving enforcement, health plan coverage of NRT/pharmacotherapy). LTPB has integrated prevention and cessation resources into healthy lifestyle activities by providing their materials to students using the fitness facilities on 17 campuses. The program also includes 29 peer teams that implement social marketing campaigns on how tobacco relates to healthy eating, physical activity, sexuality, stress, and on hookah, marijuana and cigarillo use.²³ Leave the Pack Behind also runs an annual contest focused on cessation, reduction and prevention, which students can enter: Quit for Good; Keep the Count – to reduce the amount smoked by half; Party without the Smoke – to avoid smoking when socializing; and Don't Start and Win – for ex- and nonsmokers. Among the latter prevention focused group, Don't Start and Win, enrollment changed from 1,209 participants in 2009 to 2,050 in 2010 (Personal communication, Leave the Pack Behind, February 8, 2011).

Summary

Initiation among Ontario students in lower grades is quite low, with lifetime abstinence being 94% in Grade 7 and 88% in Grade 8 and past-year initiation at 3% in both grades. Among students in Grades 9 and 10, lifetime abstinence was 82% and 68%, respectively; past-year initiation was 4% and 8%; and past-year smoking 8% and 15%, respectively. Reporting of past 30-day current smoking is too small in the lower grades to adequately measure, but is 2% in Grade 9 and 6% in Grade 10. Overall, Grade 9 appears to be an important year for initiation to smoking.

Indicators show that initiation for students in higher grades has decreased over the past decade, yet the data presented here suggest that over the past couple of years, this decline has stalled. In Grades 11 and 12: lifetime abstinence is 63% and 58%; past year initiation is 9% for both grades; past year smoking is 18% and 20%, respectively, and past 30-day current smoking is 9% across both grades.

Compared to school-aged youth, rates of current smoking are much higher for young adults (18% for females and 23% for males aged 20 to 24, Figure 3) suggesting that initiation continues into early adulthood. Efforts being made to prevent initiation in this young adult age group include expanding Leave the Pack Behind to community colleges and targeted social marketing campaigns. There is a lack of evidence as to the reach and effectiveness of these efforts.

Policies and programs to prevent initiation—including taxation, restrictions on youth access, smoking bans, advertising bans, youth engagement initiatives, social marketing and school-based programming—have met with some success in the general youth population. Yet despite improvements in recent years, smoking is still firmly established among close to 10% of high school graduates and over 20% of young adults aged 20 to 24.

Recent population survey data from 2008-2009 suggests a need for tobacco use-related curriculum in higher grades, as approximately 64% of youth surveyed in Grades 7 to 9 reported that they had in-class discussions about the effects of smoking, whereas only 42% of Grade 10 to 12 students had such discussions (Figure 34). The Scientific Advisory Committee, in its report *Evidence to Guide Action: Comprehensive Tobacco Control in Ontario*, noted that beyond providing basic information about tobacco in all schools, there is a need to focus prevention efforts on high-risk schools. There are several factors that might make a school high-risk

including demographics, geographical location, socioeconomic status of students and community, and prevalence of other risky behaviours. For instance, analyses conducted recently by OTRU indicate that upwards of 75% of youth who are current smokers in Grades 7 to 12 also use other drugs or have problem drinking.

The amount of youth engagement programming has increased in the province over the last year, including the launch of the MHPS Youth Engagement Initiative, continued work through Action Week, and learning from the Access Project. Continued youth engagement work under the Strategy is important, as recent population survey data indicate that youth participation in tobacco-related advocacy activities has declined slightly from 2006-2007 to 2008-2009 across grades in Ontario (see Figure 33). The provincial youth engagement initiative evaluation being conducted by OTRU will provide further insight into how youth engagement programs work to engage and reach youth and will help to clarify impacts at individual and community levels.

CHAPTER 5: CONCLUDING NOTE

Ontario's investment in the Smoke-Free Ontario Strategy is bearing fruit. The *Smoke-Free Ontario Act* protects most Ontarians most of the time from exposure to secondhand smoke in indoor public places. Smoking bans, social marketing, restrictions on promotion and youth programs are changing the social climate of tobacco use, leading to declines in smoking rates among youth. There is a continuing trend of decreased prevalence of adult smoking in the general population and among particular subpopulations—those with post-secondary education, professional workers and among respondents of some public health units.

Alongside these positive developments are several worrisome trends:

Smoking rates among low socioeconomic status subpopulations and in several PHUs are not noticeably decreasing. The Ontario Public Health Standards require that PHUs ensure local comprehensive tobacco control, and MHPS contributes to these efforts by funding Tobacco Control Managers and other initiatives. Evaluative information on the scope and effects of PHU-level efforts is spotty. The Ontario Tobacco Research Unit has developed and piloted an instrument, the Comprehensive Local Tobacco Control Index (CLTCI), which would provide valuable information about PHU tobacco control.

Protection

Smoke-Free policies are showing their effects. Exposure to secondhand smoke in restaurants, bars, and vehicles is significantly lower than it was five years ago. There is also substantially decreased exposure in homes. Full achievement of the goal of eliminating exposure to secondhand smoke in Ontario requires further action. Too many Ontarians are still exposed to secondhand smoke in a variety of settings: 28% of working Ontarians are exposed at work; 31% of Ontarians who visited restaurant or bar patios are exposed; 12% of nonsmokers aged 12 to 19 are still exposed in their home and 10.5% in vehicles.

The Smoke-Free Ontario Strategy is supporting positive changes in the physical and social climates for tobacco use, creating environments conducive to decreased initiation and increased cessation. Yet, review of the scope and reach of tobacco control interventions indicates several gaps which hinder progress in achieving Smoke-Free Ontario Strategy goals. In order to reap the fruits of SFOS efforts and to further reinforce them, there is an urgent need to address

intervention gaps noted in the SAC and TSAG reports, and echoed in this evaluation report. For instance, while evidence suggests that increasing taxes on tobacco products is highly effective in reducing smoking rates, Ontario has the second lowest provincial tax on a carton of cigarettes among all provinces and territories.

Cessation

The proportion of current smokers who are daily smokers declined by only 1% over the period 2007-2008 to 2009. There has been no significant change in the proportion of smokers who intend to quit within 30 days and the proportion of smokers who intend to quit within 60 days is also flat. The proportion of smokers who made at least one quit attempt in the past year has not increased. The province's cessation efforts, which focus on providing cessation support to smokers in making quit attempts, appear to reach only about 5% of smokers annually, and only a small proportion of these smokers succeed in quitting. Relapse rates are high, and there is currently little support offered to prevent relapse during the post-intervention period. SFOS also funds considerable efforts to train health professionals in providing cessation support through TEACH, RNAO and PTCC. Evaluative evidence about the impact of these efforts in Ontario on actual provision of support to smokers is unknown at this point. Following previous expert reports, the Scientific Advisory Committee and the Tobacco Strategy Advisory Group (TSAG) have advised on ways to further develop cessation support into a comprehensive and cohesive system. In order to reach prevalence reduction targets set by TSAG, there is a need to at least double the annualized quit rate from 1.2% to 2.4%. New cessation initiatives announced in recent months by MHPS indicate that attention is being given to this issue.

Prevention

There has been important progress in decreasing current smoking among older teens and young adults. Nevertheless, by age 20 to 24, smoking prevalence is still over 20%. Policies and programs to prevent initiation—including taxation, restrictions on youth access, smoking bans, advertising bans, youth engagement initiatives, social marketing and school-based programming—have met with some success in the general youth population. Yet there are gaps in reaching susceptible youth with appropriate tobacco control measures. Less than half of students in Grades 10-12 had in-class discussions about the effects of smoking. Beyond providing basic information about tobacco in all schools there is a need to focus prevention efforts on high-risk schools and high-risk youth. Analyses conducted recently by the Ontario

Tobacco Research Unit indicate that more than 75% of youth who are current smokers in Grades 7 to 12 also use other drugs or have problem drinking.

There is a need to address forces that work to counter the accomplishments of the Smoke-Free Ontario Strategy and other tobacco control efforts. Widespread availability and use of contraband cigarettes presents a significant risk to Ontario's accomplishments and likely accounts for part of the failure to substantially decrease consumption and prevalence of cigarette use. The increasing availability, marketing and popularity of alternative tobacco forms may pose new challenges to the tobacco control community.

The Smoke-Free Ontario Strategy has made impressive inroads in implementing a comprehensive approach to achieving its vital tobacco control goals. Yet, the evaluative information presented in this report makes it clear that these laudable efforts must be sustained, strengthened and enriched in order to achieve the results that Ontario needs and deserves.

APPENDIX: TECHNICAL INFORMATION ABOUT POPULATION SURVEYS

Data Sources

Canadian Tobacco Use Monitoring Survey (CTUMS)

Health Canada's Canadian Tobacco Use Monitoring Survey is an ongoing cross-sectional nationwide, tobacco-specific, random telephone survey, conducted every year since 1999. Annual data are based on two cycles, the first collected from February to June, and the second from July to December. The sample design is a two-stage stratified random sample of telephone numbers. To ensure that the sample is representative of Canada, each province is divided into strata or geographic areas (Prince Edward Island had only one stratum). As part of the two-stage design, households are selected first and then, based on household composition, one, two, or no respondents are selected. The purpose of this design is, in part, to over-sample individuals 15-24 years of age. In general, CTUMS samples the Canadian population aged 15 and older (excluding residents of the Yukon, Northwest Territories, Nunavut, and full-time residents of institutions). The annual sample for CTUMS in 2009 was 20,121. All survey estimates were weighted, and variance estimates were calculated using bootstrap weights.

Centre for Addiction and Mental Health Monitor (CAMH Monitor)

The Centre for Addiction and Mental Health's CAMH Monitor is an Ontario-wide, random telephone survey, focusing on addiction and mental health issues. Administered by the Institute for Social Research at York University, this ongoing monthly survey has a two-stage probability selection design. The survey represents Ontario residents aged 18 and older, excluding people in prisons, hospitals, military establishments, and transient populations such as the homeless. The CAMH Monitor replaced earlier surveys at the Centre including the Ontario Alcohol and Other Drug Opinion Survey (1992-1995) and the Ontario Drug Monitor (1996-1999). Reported trend data are based on all of these surveys, which used similar questions and sampling methods. In 2009, estimates were based on telephone interviews with 2,037 adults (57% of eligible respondents), conducted between January and December. All survey estimates were weighted, and variance estimates and statistical tests were corrected for the sampling design.

Ontario Student Drug Use and Health Survey (OSDUHS)

The Centre for Addiction and Mental Health's Ontario Student Drug Use and Health Survey is a province-wide survey, first implemented in 1977 and conducted every two years (in the spring) by the Institute for Social Research at York University. The survey uses a two-stage (school, class) cluster sample design and samples classes in elementary and secondary school grades (i.e., grades 7 to 12). Students enrolled in private schools, special education classes, those institutionalized for correctional or health reasons, those on Indian reserves and Canadian Forces bases, and those in the far northern regions of Ontario were not included in the target population. These exclusions comprise approximately 7% of Ontario students. In total, 9,241 students participated in the survey in 2009, with a student participation rate of 65%. All survey estimates were weighted, and variance estimates and statistical tests were corrected for the complex sampling design.

Youth Smoking Survey (YSS)

The Youth Smoking Survey is a school-based survey of students in grades 6 through 12 in the ten Canadian provinces. Funded by Health Canada, the YSS provides national data on youth tobacco, drug, and alcohol use and is intended to assist in the development of programs and policies to address these risk behaviours. YSS was first administered in 1994 and was repeated in 2002, 2004/2005, 2006/2007 and most recently in 2008/2009. The Propel Centre for Population Health Impact (Propel, formerly the Centre for Behavioural Research and Program Evaluation) at the University of Waterloo in partnership with a consortium of researchers in 10 provinces across Canada coordinates the implementation of the YSS. A total of 33 boards, 46 schools, and 9,011 students in Ontario (166 boards, 329 schools, and 51,922 students in Canada) participated in the 2008-09 school year. All survey estimates were weighted, and variance estimates and statistical tests were corrected for the complex sampling design.

Canadian Community Health Survey (CCHS)

The Canadian Community Health Survey is an ongoing cross-sectional population survey that collects information related to health status, health care utilization and health determinants. Initiated in 2000, it operated on a two-year collection cycle but changed to annual data collection in 2007. The CCHS is a large-sample general population health survey, designed to provide reliable estimates at the health region level. The CCHS samples respondents living in private dwellings in the ten provinces and the three territories, covering approximately 98% of the

Canadian population aged 12 or older. People living on Indian reserves or Crown lands, residents of institutions, full-time members of the Canadian Forces and residents of certain remote regions are excluded from the survey. The CCHS uses the same sampling frame as the Canadian Labour Force Survey, which is a multistage stratified cluster design, where the dwelling is the final sampling unit. The annual targeted sample size for 2010 was 65,724. All survey estimates were weighted, and variance estimates were calculated using bootstrap weights.

Unless otherwise noted, current smoking is defined as past 30-day use and 100 cigarettes in lifetime. Canadian Socio-Economic Information Management System [CANSIM] results of CCHS are based on current smoking defined as smoking daily or occasionally (see Table 1). All tobacco use (and alternative tobacco products) is based on past 30-day use only.

Strengths and Weaknesses of Surveys

Each of the surveys described has its own particular strengths, and we draw on these throughout the report. For instance, because of the lengthy period over which the CAMH surveys have been conducted—since 1977 for OSDUHS and since 1991 for the CAMH Monitor—trend data on provincial smoking behaviour are unsurpassed. CTUMS strengths include breadth of tobacco-specific questions and the opportunity it affords to make inter-provincial comparisons. CTUMS includes information on use of cigarettes and alternative forms of tobacco, age of initiation, access to cigarettes, cessation (including reasons and incentives), use of cessation aids, readiness to quit, secondhand smoke exposure, restrictions on smoking at home, and attitudes toward tobacco control policies. The CCHS includes information on type of smoker, amount smoked, cessation, age of initiation, use of other tobacco products, workplace restrictions and secondhand smoke exposure. The strength of CCHS is its large sample size and geographic coverage (down to health region).

Direct comparison of results from different surveys might not always be appropriate because the surveys employ different methodologies (e.g., school-based vs. telephone surveys) and can have different question wording and response categories. Moreover, the target population (e.g., people aged 12 or over vs. people aged 15 or over), as well as purpose and response rates of surveys, can vary. To aid the reader, figures and tables depicting survey data are accompanied by a detailed title, which typically provides information on the survey question, population of interest, age, and survey year. Figures and tables also have data sources listed in figure and table notes.

Estimating Population Parameters

One should exercise caution when interpreting trend data (e.g., differences in yearly estimates) and comparisons between two or more estimates (e.g., men and women). Statements of significance are based on non-overlapping confidence intervals.

Sample surveys are designed to provide an estimate of the true value of a particular characteristic in the population such as the population's average tobacco-related knowledge, attitudes, or behaviours (e.g., the percentage of Ontario adults who report smoking cigarettes in the past month). Because not everyone in a province is surveyed, the true population value is unknown and is therefore estimated from the sample. Sampling error will be associated with this estimate. A confidence interval provides an interval around survey estimates and contains the true population values with a specified probability. In this report, 95% confidence intervals are used, which means that if equivalent size samples are drawn repeatedly from a population and a confidence interval is calculated from each sample, 95% of these intervals will contain the true value of the quantity being estimated in the population. For instance, if the prevalence of current smoking among Ontario adults on Survey A is 25% and the 95% confidence interval is 22% to 28%, we are 95% confident that this interval (22% and 28%) will cover the true value in the population.

It is equally true that an estimate of 20% (± 3) from population A is not statistically different from a 25% (± 4) estimate from population B (e.g., female vs. male). This occurs because the upper limit on population A's estimate ($20 + 3 = 23\%$) overlaps with the lower limit on population B's estimate ($25 - 4 = 21\%$), albeit a formal test of significance might prove otherwise. This argument holds for comparisons of estimates from different survey years, and between other groupings within the same survey. To aid the reader in making comparisons, 95% confidence intervals are provided where possible.

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