MONITORING THE ONTARIO TOBACCO STRATEGY

PROGRESS TOWARD OUR GOALS 1998/1999

FIFTH ANNUAL MONITORING REPORT

Ontario Tobacco Research Unit

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PREFACE

This is the fifth in an annual series of reports that monitor progress toward the objectives of the Ontario Tobacco Strategy (OTS). Preparing it is one of the major responsibilities of the Ontario Tobacco Research Unit (OTRU) and the working group that consists of all the OTRU Principal Investigators.

The organization is similar to that of previous reports. In particular, we have retained a distinction between strategy activities (Chapter 2), indicators of short-term impacts, and progress toward longer-term objectives (Chapter 3). The Implications section (Chapter 4) has been expanded, as requested by users after its introduction last year. We have also added more information about tobacco control *outside* Ontario to Chapter 1, to provide a context for assessing progress on the OTS.

We feel that the Report provides a fairly comprehensive picture of the tobacco-control *status quo* in Ontario, but it is still far from a conclusive evaluation. While we have an increasing amount of trend data, there is still much ambiguity about cause and effect: with the data currently available, it is simply not possible to identify with precision the impact of many OTS activities. We believe that may start to change in 1999/2000, with more deliberate evaluation designs being put in place for some key programs.

ACKNOWLEDGEMENTS

This Report was prepared by Nicole de Guia and Deanna Cape, under the guidance of OTRU's Monitoring Working Group, which consists of all the Principal Investigators. Nicole and Deanna played major roles in collecting and reporting the qualitative evidence in Chapters 1 and 2, and analyzing and writing up the quantitative data in Chapter 3.

Nancy Deming was responsible for layout and production, while Christine Lachetti at Central West Health Planning Information Network and Cheryl Madill at the University of Waterloo provided additional analyses. Ed Adlaf of the Centre for Addiction and Mental Health advised on the analysis of survey data.

OTS partners are owed thanks for detailed descriptions of their activities (Chapter 2), while several individuals contributed their knowledge of tobacco control to Chapter 1: Stan Shatenstein (Non-Smokers' Rights Association), Heather Selin (Pan American Health Organization), Sharon Campbell (University of Waterloo), Cynthia Callard (Physicians for a Smoke-Free Canada), Manuel Arango (Heart and Stroke Foundation of Canada), Rob Cunningham (Canadian Cancer Society), Eleanor Swanson (Newfoundland and Labrador), Nancy Hoddinott (Nova Scotia), Yves Archambault (Quebec), and Shelley Canitz (British Columbia).

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EXECUTIVE SUMMARY

This Monitoring Report, the fifth in an annual series, describes progress toward the goals of the Ontario Tobacco Strategy. While not a formal evaluation of the Strategy, the report provides a context for reviewing the OTS (Chapter 1), summarizes the activities of the main players in the Strategy (Chapter 2), provides quantitative data on potential impacts and outcomes (Chapter 3), and discusses the implications of these findings for reaching the Strategy's goals and objectives (Chapter 4).

BACKGROUND

In 1992, there were 11,649 deaths due to tobacco use in Ontario, over 171,000 "potential years of life lost" (PYLL) due to these deaths occurring earlier than they otherwise would have, and more than one million hospital days due to diseases caused by smoking or exposure to tobacco smoke (Xie et al., 1996).

To reduce this human toll and the associated costs to the public treasury, the Ontario Tobacco Strategy was announced by the Ontario Ministry of Health in 1992 to provide a comprehensive program to reduce tobacco use in the province. The strategy objectives are: 1) to prevent the onset of smoking, 2) to protect non-smokers from environmental tobacco smoke (ETS), and 3) to help smokers quit.

Associated with these objectives are a series of specific goals with target dates established in 1992, based on original targets set by the Premier's Council on Health Strategy (Shamley, 1991).

- By 1995, make all schools, workplaces, and public places smoke-free.
- By 1995, eliminate tobacco sales to persons under the age of 19.
- By 2000, reduce the proportion of 12 to 19 year olds who smoke to 10 percent.
- By 2000, reduce the proportion of women and men aged 20 and over who smoke to 15 percent.
- By 2000, eliminate the use of tobacco products by pregnant women.

The purpose of this report is to provide an overview of progress toward these goals.

MAIN FINDINGS

OTS Partner Activities

- The focus of most agencies continues to be on prevention of smoking and protection from ETS. Only one agency reports that cessation is its main priority.

- The general public is the most frequently mentioned intended beneficiary of the agencies' activities. There continues to be low emphasis on adults, blue-collar workers, less-educated individuals, and ethnic minorities.

Tobacco Marketing and Sales Issues

- Cigarettes are cheaper in Ontario than in any other province or neighboring state (Fig. 4);

- The price of cigarettes has recovered only about 15% of the large price drop that occurred in 1994 when the federal and provincial governments drastically cut cigarette taxes (Fig. 3);

- *More* tobacco retailers are ignoring the *Tobacco Control Act (TCA)* and selling to minors (Fig. 7);

- Since 1995, merchants are asking *fewer* smokers under age 15 for photo ID when they attempt to buy cigarettes (Fig. 11);

- Cigarettes have become much more accessible for minors in both gas stations and chain convenience stores since 1995; gas stations and independent convenience stores remain significant offenders (Fig. 8);

- Inspections and Section 3 charges of retailers under the *TCA* for sales to minors are highly variable across the province (Fig. 13) and, likely, also within regions.

Youth Smoking

- 28% of Ontario students in Grades 7, 9, 11, and 13 report smoking more than one cigarette in the past year (Fig. 16). Rates for male and female students are identical.

- While there has been no significant sex difference in student smoking since 1981, males are consistently heavier smokers than females.

- Smoking *increased* significantly among both male and female students between 1991 and 1999, from 22% to 28%. Smoking rates among students are now where they were in the early 1980s, before a decade of decline in Ontario and other provinces.

- Cigarette use in the past year doubles from Grade 7 to 8, and again from Grade 8 to 10 (Fig. 14). Excluding beginners, use increases *almost four-fold* between Grades 9 and 11 (Fig. 14).

Adult Smoking

- 21% of Ontario adults smoke daily. This represents a significant *decrease* since 1995 when 27% of adults smoked, but is not significantly lower than the 1992 rate of 25%.

- 26% of Ontario adults (28% of men; 24% of women) currently smoke daily or occasionally (Fig. 19). The sex difference is not statistically significant (Fig. 20).

- The vast majority (81%) of adult smokers smoke daily. Differences by sex are not significant (Fig. 21).

- Male daily smokers smoke, on average, a higher number of cigarettes per day than women. The average amount smoked daily by men smokers has increased since 1994 (Fig. 26).

- More than half (56%) of adult daily smokers are at least moderately dependent, but only 12% are highly dependent (Fig. 28).

- A majority of smokers (52%) are at least thinking about quitting (Fig. 31) in the next six months, and more than one-quarter of these are actually preparing to quit in the next month.

- About one fifth of all former smokers quit one to five years ago (Fig. 34).

Other Target Groups

- Blue-collar workers, low-educated adults, and non-student youth have higher current smoking rates than all Ontario adults combined (Fig. 36).

- Smoking among pregnant women continues to be a major concern (Table D).

Exposure to Environmental Tobacco Smoke (ETS)

- Almost one in three Ontario children lives with a smoker who regularly smokes inside the home (Fig. 38). Moreover, many of these children come from homes that are disadvantaged in various ways and live with a heavy, dependent smoker (Fig. 39) who is likely to be unaware of the dangers of ETS.

- Substantial proportions of workers who smoke do not face meaningful restrictions at work (Fig. 40). Smokers in smoke-free worksites tend to smoke fewer cigarettes per day (Fig. 41).

- The proportion of the Ontario population covered by strong or very strong by-laws increased from 19% to 29% from 1994 to 1998 (Fig. 42).

- Based on a 1998 study, municipal by-laws to restrict public smoking were generally rated weak to non-existent (Fig. 43). Strong by-laws, however, have been passed in 1999. The Toronto No Smoking By-law, in particular, will have an impact on a considerable proportion of the Ontario population.

Attitudes of the Public toward Tobacco Control Policies

- A large majority of the public supports, at minimum, smoking only in enclosed, ventilated areas in workplaces and restaurants (80% and 70%, respectively), and almost half (46%) support this restriction, at minimum, in bars and taverns (Fig. 44).

IMPLICATIONS

Implications for Prevention

- It is clear that the OTS objective of 10% of 12-19 year-olds smoking will not be met by 2000, and will be achieved by 2005 only with great effort.

- Considering the young age at which smoking begins and the rapid rate at which it increases, effective school-based programs should begin well before Grade 8 and be reinforced throughout secondary school.

Some of the recommendations of the Minister's Expert Panel (1999) bear repeating here:

- ***"…Ontario tobacco prices should be raised and maintained at levels at least comparable to surrounding jurisdictions"***

- ***"Provincial sales-to-minors regulations should be strengthened by larger and stronger point-of-sale health warnings signage, and by eliminating all point-of-sale tobacco product advertising"***

- ***"The [TCA] should be strengthened by increasing enforcement resources, increasing fines for non-compliance, and by requiring the posting of a prominent sign at convicted retail premises after first convictions, together with a prescribed notice in local newspapers paid for by the retailer"***

- ***"The [TCA] should be amended to make it easier to prosecute vendors, and***

should be streamlined and clarified in order to prevent senior courts from diluting its intent"

- ***"Tobacco products should be placed out of sight of customers behind counters at point-of-sale"***

Implications for Protection

- The 1997 Mandatory Health Programs and Services Guidelines call for 100% of public places and workplaces to be smoke-free by 2005. It seems highly unlikely that this goal will be met without dramatic developments.

- The OTS and the 1997 Guidelines call for an increase in smoke-free homes in the province by 2010. Since no target level has been established, and since good trend data are lacking, it is not possible to say how likely this increase is to be achieved. The provincial government should set a target for smoke-free homes.

Again, it is worth repeating the relevant recommendations of the Expert Panel:

- ***Require that indoor public places be smoke-free, with immediate implementation in youth recreation facilities***

- ***Incrementally ban smoking in all indoor workplaces except where smoking areas are separately enclosed and separately ventilated to the exterior, beginning at once with offices and industrial worksites***

- ***Mount intensive mass media-based and community-based public education programs***

Implications for Cessation

- Reducing the proportion of adults who smoke daily to 15% by 2005, from the current level of 21%, is possible, but it will require a major effort.
- Cessation programs may have more success with younger smokers, if effectively delivered to them. However, there is no single program proven effective in helping adolescent smokers to quit. Developing such a program should be a priority.

- Worksite restrictions are associated with reduced smoking by workers and would serve the goals of cessation as well as protection. Health messages and social support are also important to quitting (Fig. 35).

- A central contact point like a 1-800 quit line must have both adequate services and effective promotion.

Relevant recommendations of the Expert Panel are:

- ***"A toll-free number…on every package of tobacco products sold in the province to provide direct access to cessation services"***

- ***Media-based public education on cessation***

- ***Physicians, pharmacists, dentists, and other health care providers in Ontario trained to enable them to systematically and effectively motivate and help smokers to quit.***

Implications for Monitoring, Evaluation, and Research

- To better understand progress on *prevention*, we need to monitor on a regular basis, preferably annually:
    - the price of cigarettes
    - retailer compliance with the *TCA*
    - other factors affecting the supply of cigarettes to youth
    - youth and adult smoking behaviour, including onset, amount smoked, stages of change, and cessation, including by high-risk youth
    - public attitudes to tobacco control policy
    - implementation of smoke-free by-laws
    - level of use of effective tobacco education programs in schools
    - extent and nature of mass media campaigns
- With respect to *protection*, there needs to be regular monitoring using consistent questions of:
    - exposure to ETS at home
    - exposure to ETS at work
    - the extent and nature of restrictions on smoking at work
    - smoking by pregnant women
- For *cessation* purposes, we need:
    - updated information on the number and activity of physicians, pharmacists, and other health professionals who can help motivate and guide their patients and clients toward effective cessation
    - better information on the reasons and context for relapsing
    - better information on smokers' access and barriers to cessation services
- The 1999 Canadian Tobacco Use Monitoring Survey (CTUMS) will provide useful in-depth information on smoking, particularly by youth. We need such a national survey for ongoing comparisons between Ontario and the other provinces. We also need the regular monitoring of tobacco-related attitudes and knowledge that CTUMS can provide.
- For the purpose of evaluation, we need more conclusive evidence linking the activities of OTS partners with progress toward OTS goals.

CONCLUSION

Five years of monitoring progress toward the goals of the Ontario Tobacco Strategy reveal mixed success: declining smoking among adults, but increased smoking by youth; increased protection against environmental tobacco smoke in many public settings, but more ready access to cigarettes for minors; fairly widespread interest in quitting on the part of adult smokers, but an increase in the average amount smoked daily by men. Clearly, much has been accomplished since the initiation of the OTS, but much remains to be done. The renewal of the Strategy in September 1999, with an additional $10 million in funding, is a clear indication that much more will be done. Next year's report will provide an initial assessment of the outcome of the renewed OTS.

CHAPTER 1. BACKGROUND

This chapter provides some background information on the health burden of smoking at both the national and provincial level (Ontario). It also highlights tobacco control developments in 1998/1999 from a provincial, national, and international perspective, as well as recent developments in the tobacco industry in Canada.

As with the rest of this report, the focus here is on the fifth year of the Ontario Tobacco Strategy, ending March 1999. With the announcement by the Minister of Health in mid-1999 that the OTS would be renewed and reinvigorated with an additional $10 million in funding, it becomes clear that the first five years can be considered as the initial phase of the strategy. A preliminary evaluation of the activities of the renewed OTS will be the subject of next year's report.

1.1 Health Burden of Smoking: Canada

- In 1991/1992, smoking caused between 33,500 (Single et al., 1999a) and 45,000 deaths (Ellison et al., 1995) among Canadians. These estimates vary, depending on the relative risk assumptions made in the study. In 1995/1996, smoking caused 34,728 deaths among Canadians (representing 500,345 potential years of life lost) and more than 3 million hospital days (Single et al., 1999b).

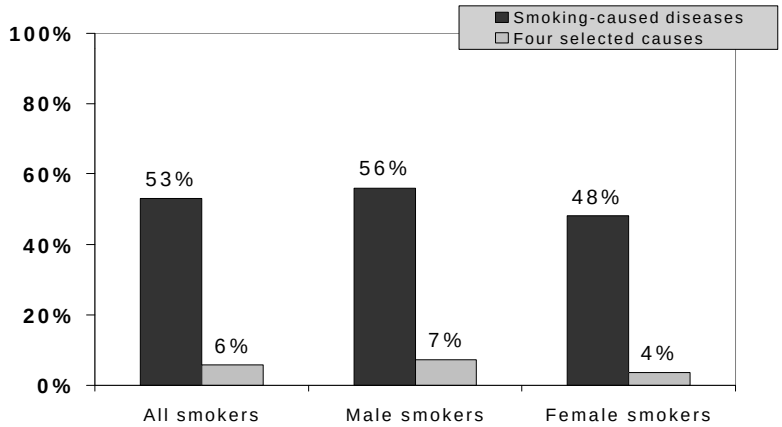
- Estimates by Single et al. are derived from pooled relative risk estimates across several studies, whereas those by Ellison et al. are based on relative risks taken from the American Cancer Society's Cancer Prevention Study.

- All three estimates underscore the substantial death toll caused by smoking. Regardless of the assumptions, studies show an increasing number of deaths attributable to smoking, with each passing year.

- Predictions based on a cohort of 100,000 male and 100,000 female smokers now age 15 show that more than 20,000 males and 11,000 females will die due to smoking before age 70 (Ellison et al., 1999).

- More than half of all premature deaths among smokers (53%) will be caused by smoking, compared to 6% from homicide, car crashes, HIV/AIDS, and suicide *combined*.

Fig. 1: Expected Deaths Before Age 70 due to Smoking* and Other Selected Causes in Cohorts of Male and Female Smokers Now Age 15,**
Canada 1996/1997



* Coronary heart disease, cerbrovascular disease, cancer, and COPD
** Homicide, car crashes, suicide, and HIV/AIDS, all combined
Source: Ellison et al., 1999

1.1 Health Burden of Smoking: Ontario

- The latest estimates (1992) show that more than 11,600 Ontarians die each year from tobacco use. Each year, tobacco use also accounts for over 171,000 potential years of life lost (PYLL) and more than one million hospital days in Ontario.

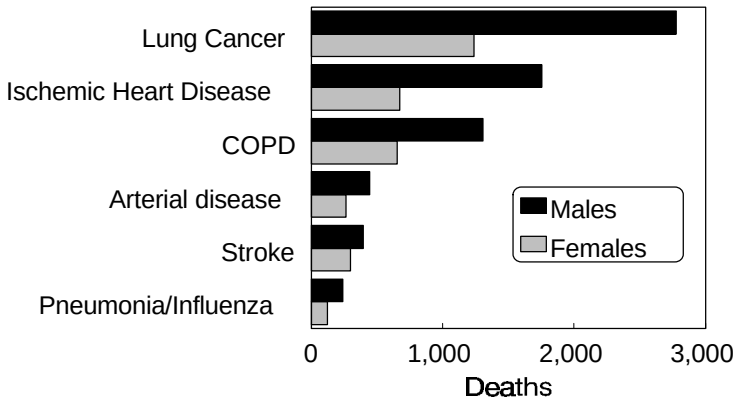
Table A: Deaths, Potential Years of Life Lost (PYLL), and Hospital Days due to Tobacco Use, Ontario 1992

	Males			Females			Total		
	Deaths	PYLL	Hosp days	Deaths	PYLL	Hosp days	Deaths	PYLL	Hosp days
All Ages	7,932	109,798	596,414	3,717	61,642	412,323	11,649	171,440	1,008,737
0-19	40	2,973	4,728	32	2,565	4,792	72	5,538	9,520
20-44	202	7,752	29,730	93	4,248	35,698	295	12,000	65,428
45-64	2,249	48,143	171,506	909	24,000	88,412	3,158	72,141	259,918
65+	5,441	50,930	390,450	2,683	30,829	283,421	8,124	81,759	673,871

Source: Xie et al., 1996

- Major causes of tobacco-related deaths in Ontario are lung cancer, ischemic heart disease, chronic obstructive pulmonary disease (COPD), arterial disease, and stroke (see also Table 4-1, Appendix 4).
- In Ontario, twice as many men die from tobacco use as women. This gap is expected to narrow in the future, reflecting the current, converging trends in smoking between men and women (Section 3.5).

Fig. 2: Deaths Attributable to Tobacco Use, by Sex and Major Smoking-Caused Disease Type, Ontario 1992



Source: Xie et al., 1996
Note: COPD=Chronic Obstructive Pulmonary Disease

1.2 Provincial Government Activities in Ontario in 1998/1999

Expert Panel on the Renewal of the Ontario Tobacco Strategy: In March 1999, the report, *Actions Will Speak Louder Than Words: Getting Serious about Tobacco Control in Ontario* (Expert Panel, 1999), was submitted to the Minister of Health by her Expert Panel on the Renewal of the Ontario Tobacco Strategy[1]. The Expert Panel recommended that the Ontario Government take action on tobacco prices, public education, marketing (including packaging, labeling and information disclosure), retail controls, smoke-free spaces, supports for smoking cessation, finance and infrastructure, research, monitoring and evaluation, and cost-recovery litigation. The report stressed that "piece-meal" measures, based on low cost and convenience of implementation would not work.

On April 23, 1999 Health Minister Elizabeth Witmer responded to the Expert Panel's recommendations by committing an additional $10 million in funds to support public education and awareness campaigns, comprehensive school-based smoking prevention programs, smoking cessation telephone support and community initiatives to reduce tobacco use. Additional activities will include a review of the *Tobacco Control Act*, developing options for packaging, labelling and information disclosure, and tracking and monitoring the implementation of the strategy to guide future changes. These activities will be reported on in next year's Monitoring Report.

The Expert Panel subsequently issued its own response, stressing again the need for action on all fronts including tobacco taxation[2].

Cessation Aids: In April 1999, the Ontario government removed the nicotine patch and 4 mg nicotine gum from prescription status. Smokers can now purchase these products over-the-counter, and manufacturers can advertise directly to consumers.

Public Health Units: Throughout 1998/1999, the 37 Public Health Units continued with tobacco education, enforcement of the *Tobacco Control Act*, and by-law development with both provincial and municipal funding. Much of the education is in collaboration with OTS partners (see Chapter 2) and other community agencies, and is in fulfillment of the Mandatory Health Services Guidelines. Enforcement involves inspections of retailers' compliance with the *TCA* (see Section 3.3), as well as regulations about banning smoking on school property. The development of by-laws to restrict public smoking (see Section 3.7) is achieved through a combination of advising municipal councils and educating the public as to the need for restrictions. This year, a new procedure was initiated for more systematic collection of data from the Units on these and other activities. Although these data are not yet available for 1998/1999, they are expected to become an important and regular part of future Monitoring Reports.

[1] See the Ontario Tobacco Research Unit (OTRU) website for full report www.arf.org/otru

[2] Response available at the OTRU website www.arf.org/otru

1.3 Federal Developments

In December 1998, Bill C-42, *An Act to Amend the Tobacco Act*, received third reading in the Senate and Royal Assent. These amendments govern sponsorship restrictions, which will be phased in during the period December 10, 1998 to October 1, 2003. Effective October 1, 2003, there will be a total ban on all tobacco sponsorship promotions.

In August 1998, Zyban® (buproprion hydrochloride), the first non-nicotine-based stop-smoking medication approved by Health Canada, was introduced to the market.

In January 1999, Health Canada released consultation papers for regulations on promotion and labeling, proposing to use 60% of the cigarette package for health warning messages.

Also in January, the Federal Government rejected a private member's bill (S-13), introduced by Senator Colin Kenny, that would have placed a levy on the tobacco industry ($120 million per year) to fund a foundation to prevent teens from smoking. The Federal Government promised an alternative.

Health Minister Allan Rock announced in January 1999 that the Department would produce an annual report on the progress of its work on the anti-tobacco front that will include tobacco sales and cigarette emission data.

In February 1999, the Cabinet approved the formal adoption *of Tobacco (Access) Regulations* and *Tobacco (Seizure and Restoration) Regulations.*

There was no tobacco tax increase in the February federal budget, despite the November 1998 U.S. litigation settlement that resulted in price increases in the U.S. A carton of cigarettes is now $17.00 Cdn. higher in U.S. border states than in Ontario or Quebec.
The Steering Committee of the National Strategy to Reduce Tobacco Use was reactivated.

1.4 Significant Developments in Other Provinces

Quebec: In June 1998, the Quebec legislature passed Bill 444, which banned smoking and the sale of cigarettes in public places such as schools, hospitals, workplaces, and recreational facilities starting October 1998. It requires restaurants with 35 or more seats to set up ventilated non-smoking areas within two years. There will be a legislated ban on the sale of cigarettes in pharmacies after two years (however, tobacco products had already been removed by order of the Quebec Order of Pharmacists, and the Quebec Court upheld this ruling).

British Columbia: In June 1998, British Columbia passed legislation that will attempt to hold the tobacco industry accountable for its actions and the harm caused by its products. *Tobacco Act* amendments require tobacco companies to disclose ingredients in tobacco and tobacco smoke. B.C. is the first jurisdiction in the world to require such disclosure. Also, *Tobacco Recovery Act* amendments provide new information about the practices of the tobacco industry and create an opportunity for legal action in B.C. to recover health costs from the industry. The *Tobacco Free Act* will require tobacco manufacturers to be licensed to sell tobacco products in B.C. The province has begun the process of suing tobacco manufacturers.

In January 1999, the *Tobacco Sales Act* was amended to allow for tougher enforcement

measures against non-compliant retailers. The new measures include increased court-imposed fines and increased length of suspension, and requires suspended retailers to post signs indicating that they have been suspended from selling tobacco products.

Newfoundland: In January 1999, the establishment of the Provincial Tobacco Reduction Coalition was announced by the Premier and the Minister of Health and Community Services. The eight-member Coalition is to provide direction and support for the Tobacco Reduction Strategy. The provincial government will commit $900,000 over the next three years to implement the strategy. The coalition will implement a long-term comprehensive Tobacco Reduction Strategy to include: legislation, enforcement, community education and research. The legislative measures will focus on sales to youth and recovery of damages from the tobacco industry.

The Newfoundland Liberal Party included suing the tobacco industry in its 1999 election platform.

Nova Scotia: In June 1999, Nova Scotia banned tobacco sales in pharmacies as well as counter-top displays.

Alberta: In January 1999, Alberta passed a bill delaying the implementation of the *Protection from Second-Hand Smoke in Public Buildings Act*, plus another bill that weakened the provisions in the Act.

In March 1998, the Alberta government funded the Alberta Tobacco Reduction Alliance for $1,000,000 annually for 4 years. The Alliance is a coalition of more than 50 agencies and organizations that worked with the government to establish a tobacco reduction plan. This is the first time that the Alberta government has funded tobacco control.

1.5 Significant International Developments

United States: In the spring and summer of 1998, the McCain Bill (Senate Bill S-1415) was debated in the U.S. Senate. Its aim was to regulate tobacco in a variety of ways, including regulation of the product, packaging warnings, and advertising restrictions. Although finally defeated, the debate generated a lot of attention.

In November 1998, the State Attorneys-General signed an agreement with major U.S. tobacco companies to settle lawsuits by states to recover Medicaid costs related to tobacco use. This agreement was with 46 states; four states had signed earlier, separate agreements. The total amount of the settlement was US $206 billion to be paid over 25 years; it is expected that a substantial proportion of the funds will be directed to smoking prevention programs.

In August 1998, the Court of Appeal ruled that the Food and Drug Administration (FDA) was not allowed to regulate tobacco. The Supreme Court heard the case in full in April 1999, with a decision expected in the Spring of 2000 on the authority of the FDA to regulate cigarettes and smokeless tobacco.

The Doggett Amendment was expanded, in late 1998, to cover the entire federal government. It prohibits any federal department from using federal government money to promote the sale or export of tobacco products.

European Union: The EU's advertising and sponsorship ban led to a legal challenge by the tobacco industry.

Multinational: The Tobacco Free Initiative was established in July 1998 by the World Health Organization (WHO), to coordinate an improved global strategic response to tobacco as an important public health issue.

The Initiative aims to take a global leadership role in promoting policies and interventions that will truly reduce smoking prevalence and associated health outcomes. Success will be measured in terms of actions achieved at local, country and global levels that lead to control of tobacco use.

In May 1999, the World Health Assembly, the governing body of the World Health Organization, unanimously backed a resolution calling for work to begin on the Framework Convention on Tobacco Control. This new legal framework will address issues as diverse as tobacco advertising, promotion, agricultural diversification, smuggling, taxes and subsidies. Pledges for financial and political support for the Convention were given by a record 50 nations. This is the first time that WHO has exercised its constitutional mandate to negotiate a Convention. It is planning to complete the Convention process by 2003, after which it will be open for ratification.

The World Bank published a report in May 1999, *Curbing the Epidemic: Governments and the Economics of Tobacco Control* (World Bank, 1999). The report examines the economic questions that policymakers must address when contemplating tobacco control. It assesses the expected consequences of tobacco control for health, for economies and for individuals, and shows that the economic fears that have deterred policymakers from taking action are largely unfounded. The World Bank is aiming to work in partnership with the World Health Organization by offering its analytical resources in economics. Since 1991, the World Bank has had a formal policy on tobacco that prohibits its own lending for the tobacco industry and encourages tobacco control efforts.

British American Tobacco (BAT) has acquired Rothmans International, but, in Canada, will be required to divest the holdings of Rothmans.

BAT is at present intending to acquire more ownership of Imperial Tobacco, and to sell other Imasco interests, including Canada Trust and Shoppers Drug Mart.

1.6 Tobacco Industry Activity

RJR-MacDonald's parent company has recently changed to Japan Tobacco, from R.J. Reynolds.

The Canadian Tobacco Manufacturers' Council in conjunction with the Canadian Coalition for Tobacco Retailing have been pilot testing *Operation ID School Zone*. This is a campaign designed to discourage retailers from selling cigarettes to minors, and is focussed on retailers around schools. Pilot communities are being used across Canada. It is unknown if this program will be expanded, having been identified in Alberta, Manitoba and Ontario by various agencies such as the Ontario Campaign for Action on Tobacco and the Manitoba Lung Association as a public relations campaign for tobacco companies.

CHAPTER 2. STRATEGY ACTIVITIES

This section describes the tobacco control activities of the major players in the Ontario Tobacco Strategy in 1998/1999. The agencies are grouped according to whether they provide resources and infrastructure for the OTS (Section 2.1) or deliver services and programs at the community level (Section 2.2). Background information on these partners is found in Appendix 3; OTS goals and objectives are summarized in Appendix 1. Activities are described under standard headings pertaining to information resources produced and/or distributed, services provided, networking, activities, and policy-change efforts. As well, each agency report describes who is intended as the main recipient or beneficiary of activities, and concludes with a brief comment on direction intended for the coming year.

With the very limited mandate for evaluation in this report, it is not feasible to assess the impact of individual strategy activities in a definitive manner. However, we offer an overview of these activities vis-à-vis the goals of the OTS and intended target groups (Section 2.3). More comprehensive evaluation would require substantial additional resources.

2.1 Resources and Infrastructure for the OTS

Ontario Campaign for Action on Tobacco (OCAT)

- **Information Resources**

This year OCAT developed a specialized website focussing on second hand smoke related issues, bylaws, health effects, economic issues, and the *Tobacco Control Act*. OCAT still utilizes its fax network to inform member agencies of pertinent developments. As well, OCAT produces specialized memoranda for member agencies upon request. Several hundred individuals across the province access OCAT information through its website or via the fax network. This resource is approximately 10-15% of the OTS-related effort of OCAT.

- **Networking and Collaborative Activities**

OCAT is a coalition network of agencies (see Appendix 3). These member agencies form a steering committee to plan directions for activities and goals. Consultations account for 20% of OCAT's efforts.

- **Policy Change Initiatives 1998/1999**

Over the past year, OCAT was more actively involved at the municipal than at the provincial level. OCAT assisted dozens of municipalities, including those in the regions of Toronto, Thunder Bay, Sudbury, and Hamilton-Wentworth, in their local by-law campaigns by providing consultations to health agencies and activists regarding strategy and media relations. In the last quarter of the fiscal period, OCAT began to focus its attention at the provincial level, working behind the scenes in support of the comprehensive revision of the Ontario Tobacco Strategy undertaken by the Minister's Expert Panel. In addition, OCAT worked with the Ontario Medical Association on a position statement regarding the use of nicotine replacement therapy (NRT). OCAT also assisted in campaigning to have NRT (patch and gum) made available over-the-counter rather than as prescription items. Policy change accounts for 60% of OCAT's work.

- **OTS Objectives and Intended Beneficiaries**

Over the past fiscal year, OCAT devoted 50% of its OTS effort toward protection from ETS, 40% toward smoking prevention, and 10% toward smoking cessation. OCAT's major intended beneficiaries are the Ontario public and youth, and health community workers such as Public Health Unit staff, volunteers and staff with its member health charities, and physicians with the Ontario Medical Association.

- **Intended Directions for 1999/2000**

In 1999 and beyond, OCAT will continue to encourage and train members of the health community to become more actively involved in advocacy activities. OCAT will also help support community coalitions with information and consultation on policy issues.

Council for a Tobacco-Free Ontario (CTFO)

- **Information Resources**

CTFO is responsible for developing program supports for National Non-Smoking Week (NNSW). The 1999 theme was *Smoke-Free Workplaces*. Kits, 150 in number, consisting of fact sheets, pamphlets, draft media releases and evaluation forms

were distributed to local councils on smoking and health, public health units and associate members. Support materials included *Smoke-Free Works for All of Us* paraphernalia. This campaign was extended through World No Tobacco Day (May 31). Kits for Grades 5, 6, 7, and 8 were distributed to local councils and teachers for *Smoke-Free Class of 2000*. Upgrades were made to the content of the website, administered by the Ontario Prevention Clearinghouse. Restaurant stickers, smoke-free homes pamphlets and *How Not to Smoke* videos were distributed to local councils, health organizations and interested members of the public.

- **Direct Services Provided**

Consultation, advice and referrals were provided to 56 local councils on smoking and health. On-site consultations provided advice on specific issues and referred questions to other resource centres. A total of 1,061 calls came via the toll-free line during the year. CTFO also circulated a variety of materials such as newspaper articles and fact sheets on an as-needed basis to its members. A total of 804 inquiries, consultations and requests for materials were received during the year from members and the public. Email requests, mostly from the public, increased by 69% from April 1998 to the end of March 1999.

- **Networking and Collaborative Activities**

CTFO supported quarterly board meetings of its society, associate, individual and regional representatives to discuss issues, trends, potential activities and directions for the Council and various governance issues. CTFO also arranged northern region conference calls. The Council added seven new local councils in northern Ontario during the year. CTFO is a provincial partner, along with the PTCC (Program Training and Consultation Centre), the Health Communication Unit and the Ministry of Health in a three-year program designed to promote local media-based messages via councils and regions. During the past year, 41 local councils were involved in seven projects that focussed mainly on second-hand smoke and cessation.

- **Policy Change Initiatives**

CTFO was a supporter of the National *Tobacco or Kids* campaign, along with other provincial and national health care organizations. It supported the Canadian Senate campaign designed to create a separate organization to focus on youth cessation initiatives (see Section 1.3). A joint by-law bulletin was developed with the Ontario Campaign for Action on Tobacco, and placed on the CTFO website.

- **OTS Objectives and Intended Beneficiaries**

CTFO devoted 45% of its OTS effort to protection from ETS, 40% toward smoking prevention and 15% toward cessation. Its major intended beneficiaries were local councils, youth aged 12-19, and the general public. Pregnant women were also considered to be important, long-term beneficiaries.

- **Intended Direction for 1999/2000**

CTFO is launching a province-wide cessation campaign starting in December 1999; A *Quit Smoking 2000* contest will be launched during National Non-Smoking Week (January 16-22). The campaign will involve local councils, health units and other health partners, and will focus on the adult smoking population with a variety of support messages and contest prizes. Assistance to local councils will continue to be provided, including support for regional

meetings and teleconferences, consultations, information and referrals.

National Clearinghouse on Tobacco and Health (NCTH)

- **Information Resources**

Fact Sheet Series: Fact sheets that highlight selected topics such as *Second Hand Smoke* and *Sponsorship,* were produced and disseminated. One-page fact sheets, written in plain language, were used by many clients as handouts.

Website: This includes the availability of the NCTH Library catalogue online, *Frequently Asked Questions, Statistics, The Photo Gallery* and website links. This past year, 704,000 hits were recorded with 68,400 user visits. Web site hits have increased by 67% over the past year.

Library: The NCTH library currently holds over 25,000 items, and its maintenance continues to be a priority for NCTH. In this reporting period, 3,200 items were acquired, including journal articles, monographs, cartoons and news releases.

- **Direct Services Provided**

NCTH's success on the world wide web has resulted in a shift from traditional client services (i.e., by phone, fax, or mail) to non-traditional services (through the internet mailbox). However, 1,927 requests were made through traditional means in 1998/1999 (primarily through the 1-800 phone line), about half of these by Ontario clients.

- **Networking and Collaborative Activities**

As part of its mandate, the NCTH is an active member of the Resource Centres Working Group. The Tobacco and Health Network Directory, 1999 version, is available as a document on the website. Users of this directory are mainly health professionals working in the tobacco control field. Many local organizations collaborated in its production.

- **Policy Change Initiatives**

No direct initiatives were undertaken, but information was provided to support the efforts of others.

- **OTS Objectives and Intended Beneficiaries**

Since the NCTH library focuses on the comprehensive collection and dissemination of materials and documents, each of the OTS objectives have equal priority. Similarly, direct beneficiaries of Clearinghouse activities are other tobacco control organizations.

- **Intended Directions for 1999/2000**

NCTH received core funding from Health Canada for three years to maintain the library functions, ensure an information infrastructure for tobacco control, focus on cessation activities, develop new partnerships with the private sector, and expand beyond traditional clientele to a general public clearinghouse function.

Program Training and Consultation Centre (PTCC)

- **Information Resources**

Throughout 1998/1999, the PTCC continued to disseminate tobacco control resources, a total of 6,534 items, including 480 in French. Resources addressed all objectives of the OTS, with primary emphasis on cessation. Resources with highest

distribution were: *One Step at a Time for Teens; How to Make $1,000 By Doing Nothing; Stopping When You're Ready; Start Quit, Stay Quit*. Recipients of resources were members of PTCC's target audiences: public health units, local tobacco-free councils, community health centres, and health resource centres.

In collaboration with the Health Communication Unit and the Council for a Tobacco-Free Ontario, *Planner: A Guide and Worksheet for Community-Based Media Campaigns to Promote Nonsmoking*, was developed as part of a special project to support local media campaigns in support of the OTS. The PTCC enhanced its website for consultation and resource distribution. The website included information on PTCC services available, 10 resources/information packs and guides (8 in both English and French, 2 English only), and links to over 15 other related websites (international, national, provincial and local).

Also in 1998/1999 the PTCC launched the Resources Dissemination Service (RDS) as a core service -- a collaborative project with OTRU and (the former) COMMIT to a Healthier Brant. This service identifies, reviews and distributes information with the aim of ensuring that tobacco resources of high quality are available and distributed to service providers throughout Ontario.

- **Direct Services Provided**

PTCC held 12 workshops with 488 participants in 1998/1999. It also provided 12 on-site individualized intensive consultations with over 100 participants in local health organizations and groups involved in tobacco programming. In 1998/1999, 363 off-site consultations were completed; most were via PTCC's toll-free telephone line, however, mail, email and fax were also used. Consultations addressed OTS objectives in the following proportions: cessation, 50%; prevention, 26%; protection, 12%; general, 12%.

- **Networking and Collaborative Activities**

PTCC participated in 161 collaborative efforts with individuals (87) or organizations (74) for the purposes of: resource development (20%), coordination of activities (20%), planning collaborative activities (19%), information sharing (17%), reviewing materials (12%), new service opportunities (4%), and other activities (9%). Collaborators were the Ontario Physical and Health Education Association (OPHEA), Centre for Applied Health Research, Ontario Ministry of Health, the Health Communication Unit, Council for a Tobacco-Free Ontario, Health Canada, the National Clearinghouse on Tobacco and Health, as well as many others. Projects included tobacco control initiatives in schools, support of local media campaigns to promote nonsmoking, and support of heart health programs. Major collaborative projects included training educators and health professionals in the delivery of ACTION, an alcohol, cannabis and tobacco prevention program for youth, in collaboration with CAMH and OPHEA, and supporting community education campaigns, in collaboration with CTFO and the Health Communication Unit. PTCC has a representative on OTRU's Advisory Board.

- **Policy Change Initiatives**

PTCC's Senior Consultant participated as a member of the Minister's OTS renewal Expert Panel (see Section 1.2). PTCC also collaborated on funded projects with policy change objectives. Collaborative projects in 1998/1999 were aimed at enhancing school-based tobacco reduction programming.

- **OTS Objectives and Intended Beneficiaries**

Overall, PTCC devoted approximately 55% of its OTS effort toward smoking cessation, 30% toward protection from ETS, and 15% toward smoking prevention. Although PTCC's direct clients were service providers, its major intended beneficiaries were youth aged 12-19, pregnant women, women aged 20+, and the general public. Adults, in general, are also an important, although not major, intended beneficiary.

- **Intended Directions for 1999/2000**

Over the past five years, the PTCC has provided information, training and consultation services to over 3,000 different individuals. It continues to attract new clients (approximately 50% of PTCC clients each year are new), and provide services to clients who access PTCC services repeatedly. Cessation has been the primary focus of the PTCC over the past two years, consistent with collaborative plans established with OTS partners. This focus will continue throughout 1999/2000. In comparison to past years, a major addition to PTCC services is the OTS Resource Dissemination Service. Additional objectives are to transfer findings from the COMMIT demonstration project (1997/1998 Monitoring Report) to other communities, and to develop and implement a process to identify "best practices".

Smoking and Health Action Foundation (SHAF)

- **Information Resources**

SHAF has over 20 documents in use from previous years in the form of issue analyses, fact sheets, brochures, papers and articles. New information resources developed in the fiscal year 1998/1999 included charts, papers, journal articles and fact sheets on key tobacco control issues, such as tobacco industry economics, tobacco taxes and prices in Canada and the provinces, alternate nicotine delivery, packaging and labelling, sponsorship and advertising, and ETS in the home. SHAF's intended users are other health and human service agencies, public health units, legislators and policy makers, other tobacco control agencies, the media and the general public.

- **Direct Services Provided**

SHAF's direct services include speaking engagements, presentations, and participation in seminars and on panels. This past year topics of interest included: tobacco companies and industry structure, Canadian smoking patterns, tobacco taxation history, the new *Tobacco Act*, ETS issues in the home and workplace, package warnings and plain packaging and industry denormalization campaigns. SHAF staff gave a detailed presentation on tobacco taxation to the Minister's Expert Panel on the Revising the Ontario Tobacco Strategy (see Section 1.2), addressed the Drugs and Pharmacotherapy Committee of the OMA, and gave a speech on tobacco and nicotine regulation at the February meeting of the Drug Information Association in Toronto.

Networking and Collaborative Activities

SHAF collaborated with CTFO in producing a fact sheet on Ontario's *Smoking in the Workplace Act*.

SHAF also participates in CTFO activities and on the Ontario Tobacco Strategy Steering Committee to assist in co-ordination of tobacco activities and resources across the province.

SHAF worked with the Centre for Addiction and Mental Health, OTRU, the Ontario

Medical Association, Non-Smokers' Rights Association (NSRA), the Quebec Coalition on Tobacco and the Quebec Council on Smoking and Health on various projects. SHAF provides ongoing research support to NSRA, the *National Tobacco or Kids Campaign*, NCTH, and OCAT.

SHAF had representatives on the OTRU Advisory Board and the OCAT executive committee.

- **Policy Change Initiatives**

Virtually all of SHAF's work relates to policy change. Some highlights of the year include:

Bill S-13 and Mass Media Campaigns: SHAF testified before the Senate Committee hearings on Bill S-13. It also provided information and analyses to health groups, legislators and the media regarding Bill S-13. In addition, SHAF provided information to health officials, health groups, legislators and other interested parties on various types of tobacco control mass media and public education campaigns and the importance of focusing on denormalizing the tobacco industry.

Taxation and Smuggling: SHAF continued to work on issues of current and past tobacco smuggling in Canada, including reviewing corporate documents, and briefing the media on the role of tobacco companies in causing smuggling. It assisted in the passage of U.S. border states' tobacco tax increases by providing background information on taxation and smuggling to U.S. officials.

Packaging and Labelling: SHAF produced, together with constitutional legal experts, a legal opinion on the constitutionality of plain packaging. It completed the design and production of actual samples of plain packages, warning slides, and coloured warnings, and continued work on how best to integrate effective tax markings into tobacco packaging. SHAF manufactured samples of plain packages and disseminated these, with an accompanying background paper, to all health and human service organizations in Ontario and the rest of Canada in order to educate people about the impact of plain packaging.

- **OTS Objectives and Intended Beneficiaries**

In 1998/1999 SHAF continued to devote 70% of its OTS effort toward smoking prevention, 25% toward protection from ETS, and 5% toward smoking cessation. SHAF's major intended beneficiaries are tobacco control researchers and advocates, policy-makers, health organizations and units, community educators, municipal governments, the media, and thus indirectly, the general public.

Intended Directions for 1999/2000

SHAF's intentions are to move towards more 'popularized' forms of communication -- website, email, fax and mailings of simple, easy-to-read, short fact sheets, graphs and maps to enable a much broader cross-section of people to understand tobacco control issues.

Ontario Tobacco Research Unit (OTRU)

- **Information Resources**

During the reporting period, OTRU produced 10 Working Papers describing original tobacco research, 11 issues of Current Abstracts on Tobacco plus 1 index issue, 4 Special Reports, and 1 issue of Tobacco Research News. These were

distributed to over 250 tobacco control researchers, programmers, policy-makers, and public health experts, mainly in Ontario. The Fourth Annual Report monitoring the OTS was released in November 1998. The OTRU website registered approximately 600 hits per month during the reporting period. Producing and distributing information resources accounted for 25% of OTRU's effort.

- **Direct Services Provided**

Library Services: 13 major literature searches were conducted for tobacco control research projects. There are over 200 updated major searches on file as well as more than 4000 electronically catalogued documents. A review of on-line tobacco-related databases was prepared (released in July 1999).

Consultations: Twenty-one major consultations, and many minor consultations were conducted in-person, or by phone with policy-makers, community groups, courts and health professionals. OTRU also responded to numerous ad hoc queries from the media and public health professionals.

Workshops: Planning for a workshop on Monitoring Maternal Smoking was started; it will be held in 1999/2000.

Conferences: OTRU investigators made 56 presentations at various conferences, in addition to the OPHA annual conference.

- **Networking and Collaborative Activities**

Committees: OTRU investigators took part in 29 committees including those for communities, policy-makers and university academics. OTRU participated in 4 meetings of the OTS Steering Committee. OTRU's Advisory Board consisted of representatives of 14 organizations; it held 4 meetings in the reporting period.

OTRU-NET: There were 111 subscribers to this electronic forum.

Tobacco Research News: 252 individuals and organizations received one issue of the OTRU newsletter.

- **Policy Change Initiatives**

OTRU's work informs the agents of policy change and development. During 1998/1999 OTRU participated in the Ontario Minister of Health's "Expert Panel" on the renewed OTS. The Panel's report, *Actions Will Speak Louder Than Words: Getting Serious about Tobacco Control in Ontario*, contains 29 specific tobacco control policy recommendations. It is available on the unit's website: www.arf.org/otru.

OTS Objectives and Intended Beneficiaries

In 1998/1999 OTRU devoted equal amounts of its OTS effort toward smoking prevention, protection from ETS, and cessation. Its major intended beneficiaries are youth, the general public, and policy makers.

- **Intended Directions for 1999/2000**

OTRU will continue to organize research and collaborative activities around four themes: Monitoring and Evaluation; Program and Policy Research and Development; Information Analysis and Dissemination; and Communications and Networking.

2.2 Community Programming

Public Health Units

Under the Mandatory Health and Services Guidelines, released in December 1997, the 37 public health units across the province are mandated to provide (directly or indirectly) at least a minimum level of public health programs and services in specified areas including tobacco-free living. The public health units are a joint undertaking of the provincial and municipal governments. They are described in Section 1.2 as well as here.

The public health units work in partnership with community agencies, coalitions and groups to provide tobacco-related public education through community events and dissemination of public information through telephone advice lines, the internet, and use of the community mass media. In addition, they provide information and education on the benefits of quitting smoking and smoking cessation programs available in their local community.

Public health units are mandated to enforce the *Tobacco Control Act* through inspection visits to tobacco vendors, compliance checks, and the laying of charges for noncompliance under the *Act* (see Section 3.3). Public Health Units also take responsibility for inspection of primary and secondary schools for compliance with the *TCA*, and work with schools to implement health promotion programming including tobacco prevention initiatives.

As well, public health units continue to take a lead role in policy development and enforcement of municipal bylaws to reduce smoking in public places and workplaces (see Section 3.7).

Heart Health Resource Centre (HHRC)

The mandate of the HHRC is to enhance the capacity of public health agencies and their community partners from across the province to implement comprehensive, community-based heart health programs. In order to meet this mandate, the HHRC has identified four main program components: coordination and communication, support for peer to peer learning, resource development and dissemination, and training and consultation. Every effort is made to anticipate and meet the needs of those working throughout the province to deliver heart health programs through community coalitions and networks. There are currently 727 heart health initiatives being implemented by communities across this province. These focus on increasing awareness, education and skill building, community mobilization, environmental support and policy change. Forty-five percent address all three major risk factors for heart disease (tobacco use, unhealthy eating and physical inactivity), and 18% of activities address tobacco use as a single risk factor.

Canadian Heart Health Initiative Ontario Project (CHHIOP)

The Canadian Heart Health Initiative (CHHI) is a 15-20 year commitment to increase knowledge about heart health. CHHIOP, the Ontario project within CHHI, is a collaborative endeavour with Principal Investigators from the Ontario Ministry of Health, the University of Waterloo, and McMaster University. CHHIOP aims to understand how public health units are addressing cardiovascular disease prevention in their communities; in particular, the modifiable risk factors of

tobacco use, nutrition and physical activity. CHHIOP finished the dissemination and research project in November 1998 and at present is working on planning a deployment research phase project with data collection anticipated to begin in the year 2000.

The Centre for Addiction and Mental Health (CAMH)

- **Information Resources**

Pamphlets and Booklets: 70,956 English and 8,225 French versions of *Facts about Tobacco, Do You Know - Tobacco,* and *About Smoking* were distributed to health professionals and the general public through the CAMH's Information Centre and Marketing Department.

Library: The Centre maintains an extensive public library that includes tobacco-related material. Access is granted to members of the CAMH and students and faculty of the University of Toronto, and the public.

Surveys: In the 1998 calendar year, fieldwork was conducted for the annual Ontario Drug Monitor; the report is currently being prepared. In addition, the CAMH released the 1997 report of the biennial Ontario Student Drug Use Survey. These surveys continue to provide information about tobacco use among adults aged 18+ and among adolescents, respectively, in Ontario (see Sections 3.4 and 3.5).

- **Direct Services Provided**

Treatment Services for Smokers: The Centre has expanded its smoking treatment services this year, with new clinics for the general public, and specialty programs for clients with concomitant mental health or addiction problems. Services nearly doubled, with 324 new clients being seen and 1022 appointments in these programs. Another 850 addiction treatment clients received two-hour education sessions about smoking and cessation.

Training of Professionals: The Centre provides residency training for physicians in smoking cessation treatment and this year added a smoking cessation workshop to its Education and Training Calendar.

INFO-CAMH: This toll-free drug and alcohol information line provided two taped tobacco-related messages to the general public in English and in French.

Clinical and Research Seminar (CARS) Series: Guest speakers in the tobacco field (researchers at the CAMH, the University of Toronto, Canadian and international universities and organizations) participated in this weekly seminar series.

Consultation and Support: The Centre provided consultation and support to 22 community coalitions, such as councils on smoking and health, on a variety of tobacco issues, mainly regarding municipal by-law development.

Community Presentations/Training: The CAMH responded to dozens of requests for presentations and training on drug-related issues, of which tobacco use was a recurring topic of discussion.

- **Networking and Collaborative Activities**

ACTION Program: In collaboration with PTCC and Ontario Public Health Association (OPHA), the CAMH trained more than 35 educators and health professionals, who in turn delivered this alcohol, cannabis, and tobacco use prevention program to grades 7, 8, and 9

students in Ontario schools and communities.

***Opening Doors* Program**: The CAMH collaborated with various community agencies to implement this personal and social skills-building program that targeted high-risk grade 9 students and their parents in 32 sites (23 English, 9 French) across Ontario. The program aimed to reduce the risks for all types of drug use, including tobacco.

Sponsorship/Membership: The CAMH is a co-sponsor of OTRU, and an associate member of CTFO, and was a sponsor of the *Tobacco or Kids* campaign. The CAMH is also a sponsor of the graduate collaborative program on Alcohol, Tobacco, and Other Psychoactive Substances (ATOPS) at the University of Toronto.

- **OTS Objectives and Intended Beneficiaries**

The CAMH devoted about 60% of its OTS effort toward smoking prevention, 30% toward smoking cessation, and 10% toward protection from ETS. Its major intended beneficiaries are the general population and youth aged 12-19.

- **Intended Directions for 1999/2000**

Over the next year, the CAMH intends to expand its *Opening Doors* and *ACTION* programs. In addition, work will be underway to co-ordinate smoking cessation programs, and to integrate smoking information into the other mental health and addiction services offered by the Centre.

The Canadian Cancer Society - Ontario Division (CCS)

- **Information Resources**

The CCS has self-help cessation booklets for those over the age of 18 who are ready to quit smoking. Additional smoking cessation materials, based on the stages of change, are being developed for adults and teens.
The Canadian Cancer Society – Ontario Division continues to distribute educational and promotional materials (48 unique items of which 21 were available in French) across Ontario in the form of pamphlets, posters, bookmarks, kits, buttons, stickers and tent cards. It distributes its tobacco-related materials through its network of offices, the Cancer Information Service and community collaboration. CCS added to the number distributed last year by placing three key products on its website.

- **Direct Services Provided**

Cancer Information Service: Tobacco-related inquiries from the Ontario public on the Society's toll-free line included requests for information materials on smoking and mortality/morbidity statistics as well as requests for referrals regarding smoking cessation resources and programs.

- **Networking and Collaborative Activities**

National Non-Smoking Week (NNSW): Collaborative activities were undertaken in 1998/1999, including a smoke-free homes contest with the Coalition for a Tobacco Free Peterborough and an Algonquin College Survey in partnership with the Lung Association, and the College health department. Other NNSW activities included distribution of materials, displays, and presentations. Further, CCS worked with local tobacco coalition members to launch media campaigns in 16 Ontario communities to promote NNSW.

1-800 Quit Line: This pilot project, currently in the development stage, is a collaborative effort of the Canadian Cancer Society - Ontario Division, the Ministry of Health, and the University of Waterloo.

Local and Provincial Networks: CCS volunteers and staff participated in councils at both the local and provincial level, including local councils on smoking and health, OCAT, CTFO, and the OTRU Advisory Board.

Policy Change Initiatives

As a major partner in OCAT, CCS - Ontario Division volunteers were involved in letter writing and telephone campaigns in support of smoke-free by-law initiatives in dozens of municipalities.

- **OTS Objectives and Intended Beneficiaries**

The Canadian Cancer Society - Ontario Division, devoted 75% of its OTS effort toward smoking prevention and protection from ETS, and 25% toward smoking cessation. Its major intended beneficiaries are adults, women, youth, pregnant women, the general public, local councils, and policy makers.

- **Intended Directions for 1999/2000**

Over the next fiscal year, the Canadian Cancer Society - Ontario Division, will focus more of its OTS effort toward smoking cessation strategies. It will also evaluate its existing resources and collaborations and continue with effective strategies, while enhancing information outreach. Further, the CCS will continue its advocacy efforts in support of anti-smoking legislation at the municipal, provincial, and federal levels.

Heart and Stroke Foundation of Ontario (HSFO)

- **Information Resources**

The Foundation has an inventory of 18 tobacco-related fact sheets and pamphlets (9 available in French). About 143,000 copies of these materials were distributed to health professionals and the public through the toll-free line, area offices, Heart Health Networks, and special events in 1998/1999. The Foundation also distributed tobacco-related information specific to women. Callers could also get this information through the toll-free Healthline (in Ontario). *HeartSmart™ Family Fun Pack* and *Heart Health Kids Toolbox, Vol. II* include materials to create awareness and provide information about healthy lifestyle choices, of which a smoke-free environment is a major component.

- **Networking and Collaborative Activities**

The Foundation is a member of CTFO and a partner in the Ontario Heart Health Network (OHHN), the Ministry of Health Initiative and OCAT (see above). As well, it is involved in the local community activities of these organizations.

- **Policy Change Initiatives**

As a member of OCAT, the Foundation was involved in dozens of advocacy initiatives at the municipal level to create smoke-free public places in 1998/1999.

- **OTS Objectives and Intended Beneficiaries**

The Foundation reported devoting about 25% of its efforts to prevention and 75% to protection. Its major intended beneficiaries

are the general public with an important focus being youth aged 12-19.

- **Intended Directions for 1999/2000**

In the 1999/2000 year, the Foundation intends to focus most of its OTS effort toward funding and participating in OCAT's advocacy activities in support of strong tobacco control policies. The Foundation will continue distribution of the *HeartSmart™ Family Fun Pack* and other information.

The Ontario Lung Association

- **Information Resources**

Get on Track: This smoking cessation kit includes a self-help manual, a telephone hotline number, and a variety of tobacco-related pamphlets. Since 1995, over 120,000 kits have been distributed throughout Ontario. This was initially designed for adults aged 25-44 who are primarily blue collar workers. However, the kit has been used by a wide variety of audiences due to its ease of use.

- **Direct Services Provided**

Lungs Are for Life **School Program**: This school-based smoking prevention program is delivered across Ontario by teachers, public health nurses, and the Ontario Lung Association staff and volunteers. The program varies with the ages of the students and uses discussion, videos, games, and demonstrations to encourage the children to explore their own ideas about smoking and to make informed decisions based on fact, not peer pressure. This past year the program reached over 120,000 students from kindergarten to grade 12.

- **Networking and Collaborative Activities**

Representation on Councils: The Ontario Lung Association is represented on all the councils for tobacco and health including CTFO and is a member of the Ontario Campaign for Action on Tobacco. The division has partnered with OPHEA for the promotion of *Lungs Are for Life* to teachers.

1-800 Quit Line: This pilot project, currently in the development stage, is a collaborative effort with the Canadian Cancer Society - Ontario Division, the Ministry of Health, and the University of Waterloo.

- **OTS Objectives and Intended Beneficiaries**

In 1998/1999, the Ontario Lung Association devoted half of its OTS effort toward smoking prevention, 30% toward smoking cessation, and 20% toward protection from ETS. Its major intended beneficiaries are youth aged 9-19. Other important, but not major beneficiaries, are pregnant women, ethnic minorities, blue-collar workers, and the general public.

- **Intended Directions for 1999/2000**

Throughout the sixth year of the Ontario Tobacco Strategy, the Ontario Lung Association hopes to maintain participation as part of OCAT and CTFO, and continue its volunteer representation on local and provincial councils. Because of budget cuts, all cessation resources will be focused on *Get on Track.*

2.3 Summary

Table B: Proportion of Effort Devoted to OTS Objectives in 1998/1999, as Reported by Agencies

	Prevention	Protection	Cessation
Resources and Infrastructure			
OCAT	35%	50%	15%
CTFO	40%	45%	15%
NCTH	30%	34%	36%
PTCC	15%	30%	55%
SHAF	70%	25%	5%
OTRU	33.3%	33.3%	33.3%
Community Programming			
CAMH	60%	10%	30%
CCS – Ont.	37.5%	37.5%	25%
HSFO	25%	75%	0%
Ontario Lung Assoc.	50%	20%	30%
Average	**40%**	**36%**	**24%**

- The focus of most agencies continues to be on smoking prevention and protection from ETS, followed by smoking cessation. Compared to 1997/1998, CTFO, PTCC, OCAT and HSFO appear to have shifted some of their effort from protection to prevention.
- Only one agency, PTCC, reports that cessation is its main priority.
- Despite varying emphasis by the agencies, it should be noted that progress on any one objective has an impact on the others. For example, successful smoking prevention and cessation efforts may reduce the need for efforts toward protection from ETS; similarly, reduced smoking in public places for the sake of protection may support prevention and cessation efforts by making smoking less visible and less “normal”.
- These are approximate proportions, as estimated by the agencies.

Table C: Intended Long-Term Beneficiaries* of Agencies' Efforts in Tobacco Control, as Reported by Agencies

	Tobacco Control Group**	General Public	Adults	Women	Youth	Blue-collar workers; less-educated individuals	Ethnic Minorities
Resources and Infrastructure							
OCAT	✓✓	✓✓			✓✓		
CTFO	✓✓	✓		✓***			
NCTH	✓✓	✓		✓***		✓	
PTCC	✓	✓✓		✓✓	✓✓		
SHAF	✓✓	✓✓					
OTRU	✓	✓		✓✓***	✓✓		
Community Programming							
CAMH		✓✓			✓✓		
CCS - Ont.	✓✓	✓✓	✓✓	✓✓***	✓✓		
HSFO		✓✓			✓✓		
Ontario Lung Assoc.		✓	✓	✓***	✓✓	✓	✓
Total	**7/10**	**10/10**	**2/10**	**6/10**	**7/10**	**2/10**	**1/10**

* As defined in the Tobacco Strategy Framework in the Ministry of Health Ontario Tobacco Strategy Overview (October 15, 1993).
** Research and program delivery: health organizations and units; tobacco control researchers; community workers
*** Including pregnant women

✓✓ denotes a major beneficiary
✓ denotes an important but not major beneficiary

- Compared to similar reports a year earlier, the emphasis on youth is somewhat reduced, while it has increased for women and ethnic minorities.
- The continued low emphasis on adults, blue-collar workers, less educated Ontarians, and ethnic minorities is consistent with the greater focus on prevention rather than cessation (see Table B).
- The general public is the most frequently mentioned intended beneficiary, perhaps because of the long-term focus of this question. Whether such a broad focus is the most effective for tobacco control requires further analysis.

CHAPTER 3. PROGRESS TOWARD OTS OBJECTIVES

- This chapter provides a description of short-term impacts and longer-term outcomes of tobacco control activities, some of which are described in Chapter 2.

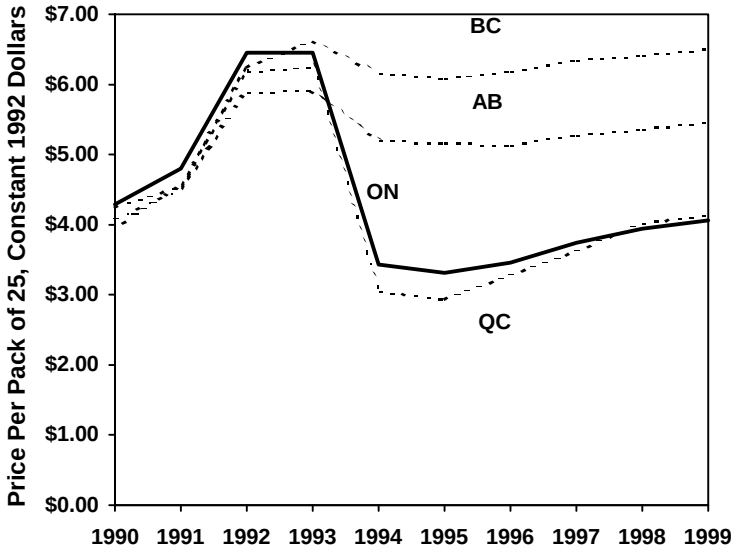
- To establish a causal relation between tobacco control activities and outcomes, a much more complex research design would be required – one that accounts for tobacco industry promotion and the normal delays encountered in any comprehensive program directed at deeply ingrained public and private behaviour. Nonetheless, this monitoring report does provide a description and increased understanding of the tobacco-control situation within Ontario.

3.1 Retail Cigarette Prices

- The price of cigarettes in Canada varies significantly across provinces. Though some of this difference can be accounted for by the wholesale/retail margins, by far the largest difference is attributable to varying tax levels. Among the four largest provinces, prices have been consistently lower in Ontario (and Quebec) than the two western most provinces since 1994.

- The price of cigarettes is an even more effective deterrent to smoking than bylaws restricting public smoking or health education expenditures (Stephens et al., 1999).

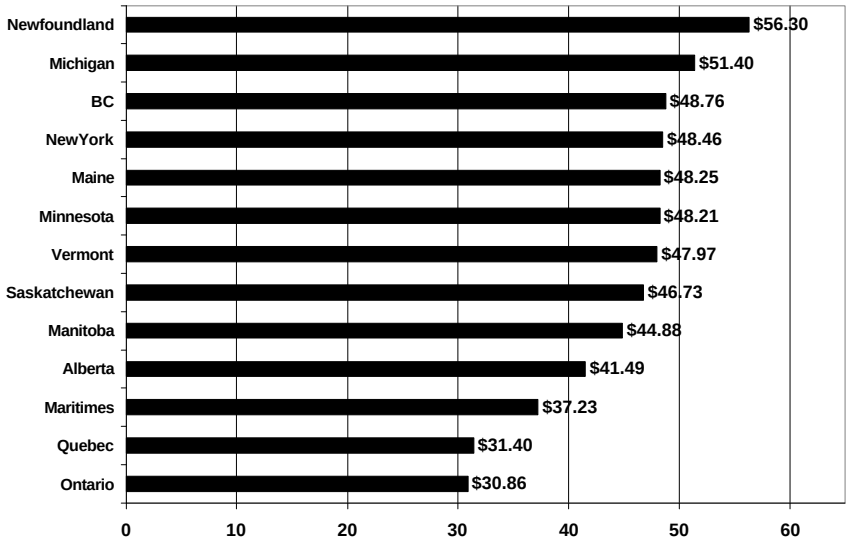
Fig. 3: Cigarette Prices in Four Canadian Provinces
Price Per Pack of 25, 1990-1999



Source: Statistics Canada Catalogue No. #62-010

- In February 1994, the federal, Quebec and Ontario governments reduced tobacco taxes in response to the smuggling of tobacco products. The federal excise duty was reduced by $5 per carton across Canada, and by an additional $5, for each $5 reduction in provincial tobacco excise taxes. In Ontario, the provincial tobacco tax is, as a matter of policy, linked to the federal tax, but this does not preclude Ontario from making tax increases independently. The tax increase announced in November 1999 does not change Ontario's distinction of having the cheapest cigarettes in Canada. Indeed, cigarettes in Ontario are cheaper than anywhere in the United States.

Fig. 4: Average Prices of Cigarettes in Canadian Provinces and U.S. Border States, 1999
Per Carton of 200 Cigarettes ($ Cdn)

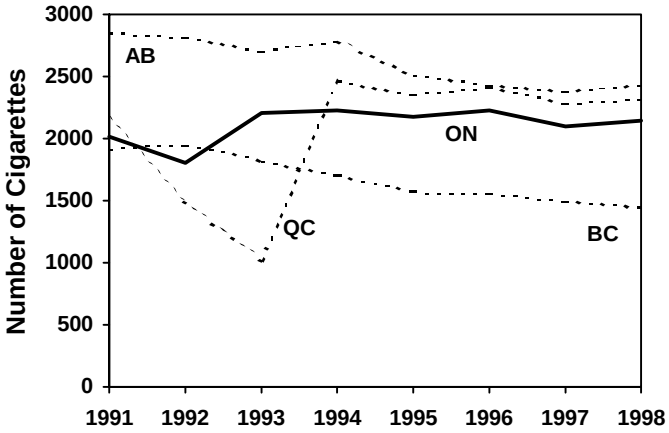


Source: Smoking and Health Action Foundation, September 1999

3.2 Sales

- Cigarette sales in Ontario have been fairly consistent since 1993, with a modest decline in 1997. There was an increase during the period of cigarette smuggling (1992/1993). Sales per capita continue to remain higher than they were in 1991.
- In Quebec, there was a dramatic increase in sales, coincident with the halving of prices in early 1994 and the consequent decline in smuggling. This jump was not seen in Ontario. Some of the increase in sales in Quebec is likely an effect of reduced smuggling.
- In both Alberta and British Columbia where prices were not lowered in 1994, there has been a steady downward trend in sales.

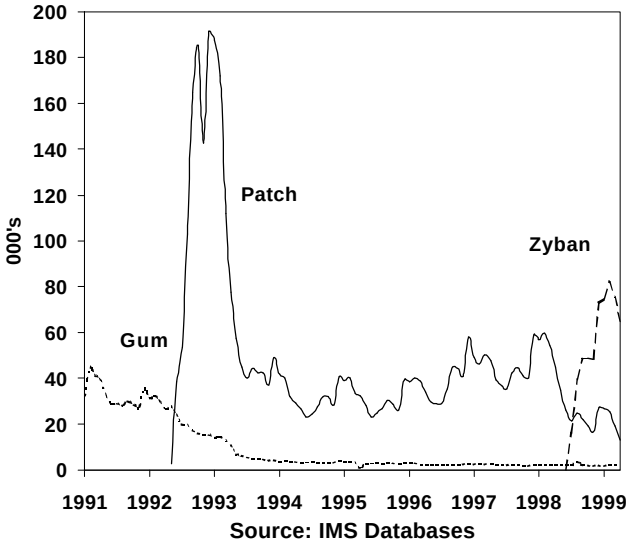
Fig. 5: Per Capita Sales of Cigarettes in Four Canadian Provinces [excludes smuggled cigarettes] 1991-1998



Source: Statistics Canada Catalogue #32-022, 1990-1998

- Zyban (buproprion hydrochloride), an antidepressant drug found to be effective in helping smokers quit, was introduced in August 1998. Prescription sales increased dramatically the first few months, as they did when the patch was first introduced in 1992. Today, nicotine gum and patch are available over-the-counter, but Zyban requires a prescription.
- Sales of nicotine patch, gum, and Zyban combined have increased four-fold since 1995, reaching a peak of $22 million in April 1999. This dramatic growth is due solely to the introduction of Zyban.

Fig. 6: Monthly Prescriptions for Nicotine Patch, Gum and Zyban in Canada, 1991-1999

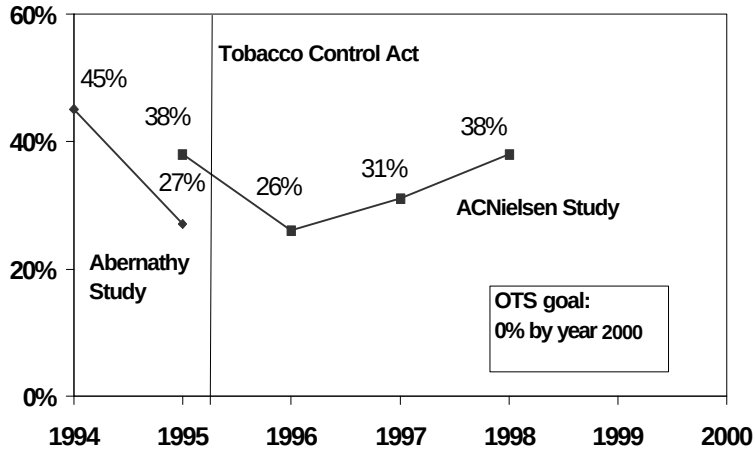


Source: IMS Databases

3.3 Cigarette Sales to Minors: Retailer Compliance

- Studies by ACNielsen show an increase since 1996 in the proportion of retailers in Ontario who agreed to sell cigarettes to minors, from 26% to 38% (ACNielsen, 1995-1998).
- In these studies, minors made a *deliberate attempt* to purchase a pack of name brand cigarettes, but refused the transaction if retailers agreed to sell.
- In 1994, at the time of the passage of the *Tobacco Control Act*, Abernathy (1994, 1996) found that 45% of retailers agreed to sell cigarettes to minors. This dropped to 27% in 1995.

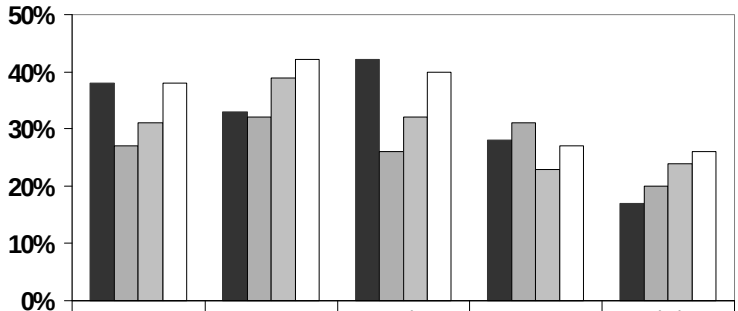
Fig. 7: Retailers Who Agreed to Sell Cigarettes to Minors, Ontario 1994-1998



Source: Abernathy 1994, 1996; ACNielsen 1995-1998

- Overall, the proportion of Ontario retailers who agreed to sell cigarettes to minors decreased from 1995 to 1996. But since 1996, there has been an *increase* in all types of establishments surveyed, with the exception of supermarkets.
- Since 1996, minors have been able to obtain cigarettes most readily in gas stations; independent convenience stores, too, continue to be a ready source of cigarettes.

Fig. 8: Retailers Who Agreed to Sell Cigarettes to Minors, by Type of Operation, Ontario 1995-1998



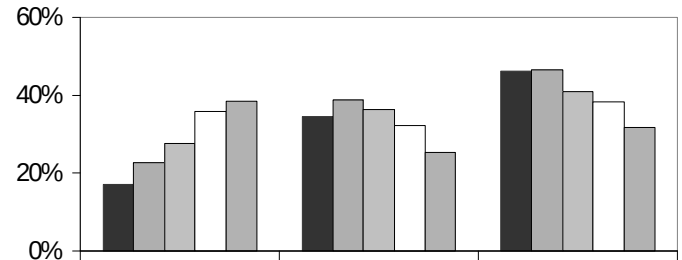
	All stores	Gas stations	Ind. convenience	Supermarkets	Chain convenience
1995	38%	33%	42%	28%	17%
1996	27%	32%	26%	31%	20%
1997	31%	39%	32%	23%	24%
1998	38%	42%	40%	27%	26%

Source: ACNielsen 1995-1998

3.3 Cigarette Sales to Minors: Purchasing Cigarettes

- Current data from students in Southwestern Ontario indicate that friends and other people continue to be important means for underaged smokers to obtain cigarettes.
- As they get older, underaged smokers are more likely to purchase cigarettes on their own. Compared to 18-year-old smokers, those aged 14 and under were less than half as likely (17% versus 39%) to usually buy cigarettes themselves.
- Younger smokers relied more on friends and others to obtain cigarettes.

Fig. 9: How Underaged Smokers Usually Obtain Cigarettes, by Age, Southwestern Ontario 1999

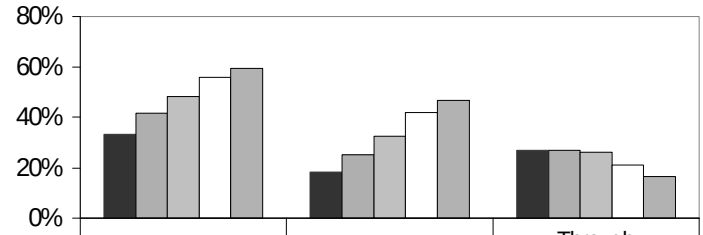


	They buy them	Other buys them	Get from friends
<=14	17%	35%	46%
15	23%	39%	47%
16	28%	36%	41%
17	36%	32%	38%
18	39%	26%	32%

Note: Respondents may give more than one answer.
Source: Health Behaviour Research Group, University of Waterloo (WSPP4)

- Currently, convenience stores are the most common outlets through which underaged smokers purchase cigarettes. As smokers get older, these outlets become even more important.
- Gas stations are the second most common outlets through which older (16-18 year old) underaged smokers buy cigarettes.
- These reports from underaged smokers are consistent with the observational studies of retailers (previous page) across Ontario.
- Friends and others are the second most common means through which younger (15 years and under) underaged smokers buy cigarettes.

Fig. 10: Where Underaged Smokers Buy Cigarettes, by Age, Southwestern Ontario 1999



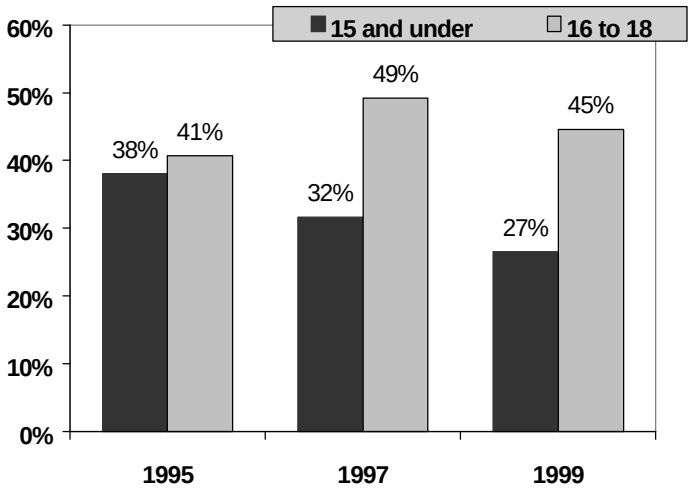
	Convenience stores	Gas stations	Through friends/others
<=14	33%	18%	27%
15	42%	25%	27%
16	48%	32%	26%
17	56%	42%	21%
18	59%	47%	16%

Notes: Respondents may give more than one answer. Only the top three answers are shown.
Source: Health Behaviour Research Group, University of Waterloo (WSPP4)

3.3 Cigarette Sales to Minors: Requests for Proof of Age

- In 1999, only a minority (38%) of underaged student smokers in Ontario reported being asked for photo ID when attempting to buy cigarettes in the month preceding the survey. This is a slight decrease from 1997 and 1995 levels (45% and 40%, respectively).
- Smokers in the younger age group (15 and under) appear *less* likely to be asked for photo ID than those aged 16-18 years (note, however, that younger smokers may be refused outright without being carded). This discrepancy has increased since 1995, despite more visible signs in stores about the minimum age requirement for being sold cigarettes.

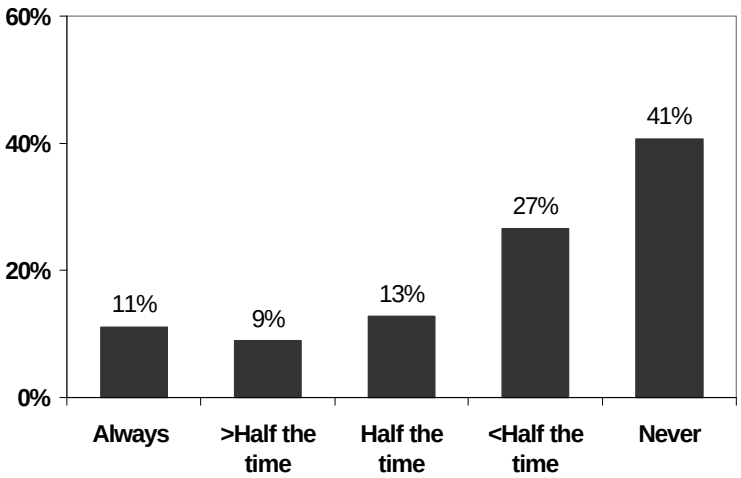
Fig. 11: Underaged Student Smokers Asked for Photo ID When Attempting to Buy Cigarettes in Past Month, by Age Group, Ontario 1995-1999



Source: Ontario Student Drug Use Survey, CAMH

- Currently, only one-fifth of underaged smokers in Southwestern Ontario report vendors asked their age more than half the time when they bought cigarettes in the past month.
- Four in ten underaged smokers report *never* being asked their age. These findings did not differ by age (data not shown), despite the fact that the study included children age 14 and younger.
- These findings differ slightly from Ontario estimates (Fig. 11), and may be partly explained by differences in study population, methodology, and question wording.

Fig. 12: How Often Underaged Student Smokers Were Asked Age When Buying Cigarettes in Past Month, Southwestern Ontario 1999

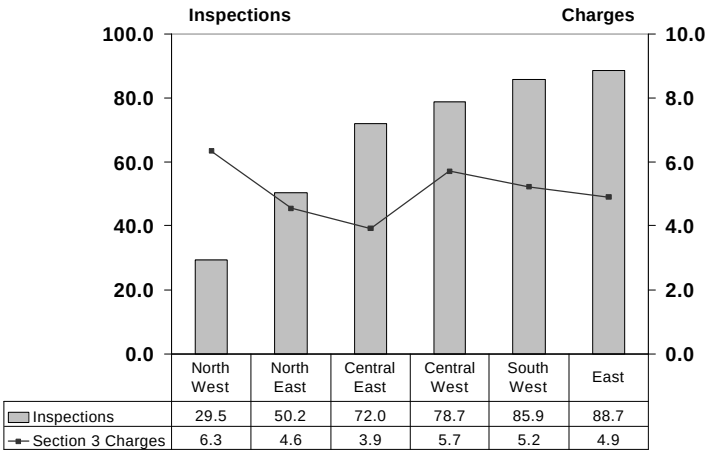


Source: Health Behaviour Research Group, University of Waterloo (WSPP4)

3.3 Cigarette Sales to Minors: Enforcement

- Health units record the number of inspections and Section 3 charges. The following are based on mean numbers across health units in each region.
- In 1998, the mean number of inspections per 100 vendors by region ranged from 29.5 in the North West to 88.7 in the East. The mean number of charges per 100 vendors by region ranged from 3.9 in Central East to 6.3 in the North West.
- North West, which had the lowest mean number of inspections, yielded the highest mean number of charges.
- Note, however, that not all violations result in charges.

Fig. 13: Mean Number of Inspections and Section 3 Charges per 100 Vendors Across Health Units, by Region, Ontario 1998



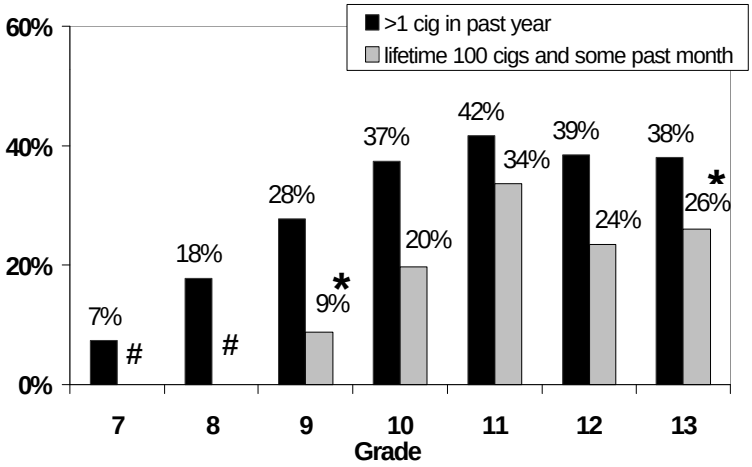
	North West	North East	Central East	Central West	South West	East
Inspections	29.5	50.2	72.0	78.7	85.9	88.7
Section 3 Charges	6.3	4.6	3.9	5.7	5.2	4.9

Unpublished data, Abernathy and Lacchetti, 1999b

3.4 Youth Smoking: Prevalence

- Based on school surveys, current smoking rates among youth are highest in grade 11, regardless of whether the current smoker definition is based on past year cigarette use or past month+lifetime 100 cigarettes. This may be due to the fact that high school drop-outs usually occur by age 17.
- Smoking *increases significantly* from grades 7 to 13 when based on past year use. It *increases significantly* from grades 9 to 13 when based on past month +lifetime 100 cigarettes use.
- Smoking rates based on past year use are always higher than the past month+lifetime 100 cigarettes definition, as the former includes beginners.

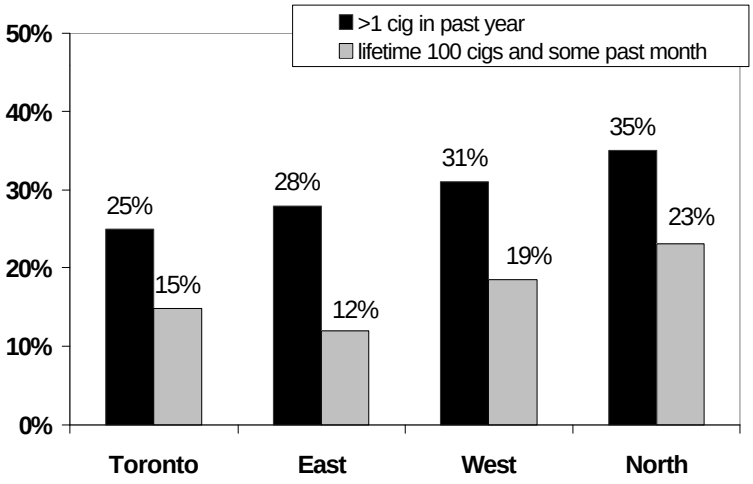
Fig. 14: Student Smoking Using Two Definitions, by Grade, Ontario 1999



* Small cell size. Interpret data with caution.
\# Data suppressed due to extremely small cell size.
Source: Ontario Student Drug Use Survey, CAMH

- Smoking rates among students are highest in Northern Ontario, regardless of how smoking is defined.
- Rates do not differ significantly by region when based on the past year definition of current smoker.
- Rates in Eastern Ontario are significantly lower than Northern Ontario when based on the past month+lifetime 100 cigarette definition.
- Boards of Education by region are listed in the Technical Report of the Ontario Student Drug Use Survey (Adlaf et al., 1999b).

Fig. 15: Student Smoking Using Two Definitions, by Region, Grades 7-13, Ontario 1999

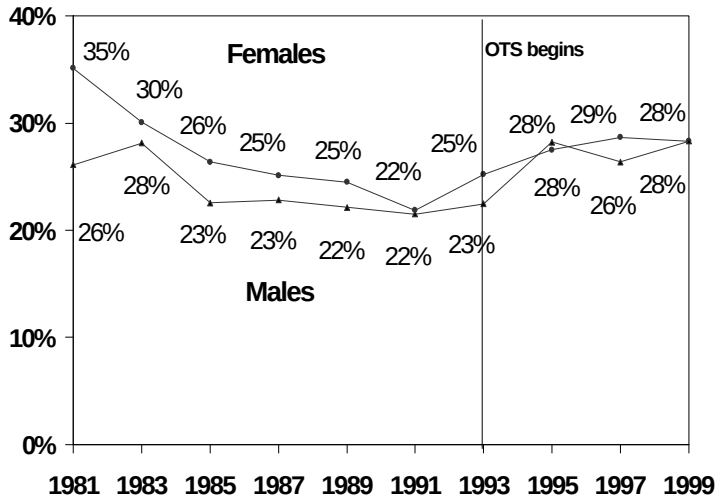


Source: Ontario Student Drug Use Survey, CAMH

3.4 Youth Smoking: Prevalence

- In 1999, 28% (±3.8) of Ontario students in Grades 7, 9, 11 and 13 report smoking more than one cigarette in the past year. The annual prevalence of smoking *decreased* significantly from 1981 to 1991 and *increased* significantly from 1991 to 1999 (Table 4-2, Appendix 4).
- There has been no significant sex difference in smoking prevalence since 1981. In three of the past five survey years, rates for young males and females were identical.

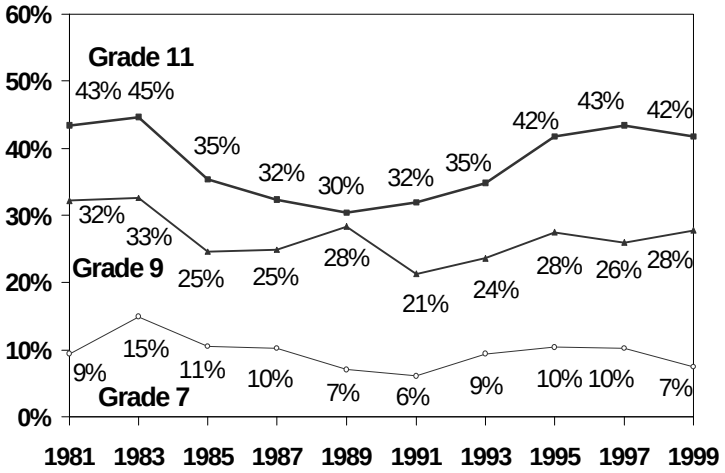
Fig. 16: Students Using More Than One Cigarette in Past Year, by Sex, Grades 7, 9, 11, 13, Ontario 1981-1999



Source: Ontario Student Drug Use Survey, CAMH

- Cigarette use in the past year *decreased* significantly in all grades from 1981 to 1991.
- Substantial increases have occurred since 1991 in all grades, but use among grade 7 students may be starting to decline.

Fig. 17: Students Using More Than One Cigarette in Past Year, by Grade, Ontario 1981-1999

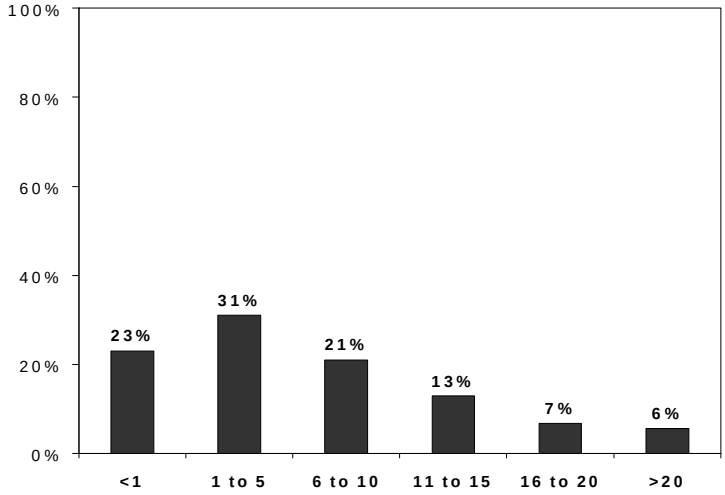


Source: Ontario Student Drug Use Survey, CAMH

3.4 Youth Smoking: Level of Use

- Of students who reported using more than one cigarette in the past year, three quarters smoked 10 or fewer cigarettes per day. Note, however, that this estimate also includes students who smoked on a non-daily basis.
- There is some evidence of increased cigarette use with higher grades. Over 90% of cigarette users in grade 7 reported smoking up to 10 cigarettes per day, compared to about 70% in grades 11, 12, and 13 (data not shown).
- More male than female cigarette users smoke more than 15 cigarettes per day (12% versus 4%) (data not shown).

Fig. 18: Number of Cigarettes Smoked Daily,
Students Using More than One Cigarette
in Past Year, Grades 7-13, Ontario 1999

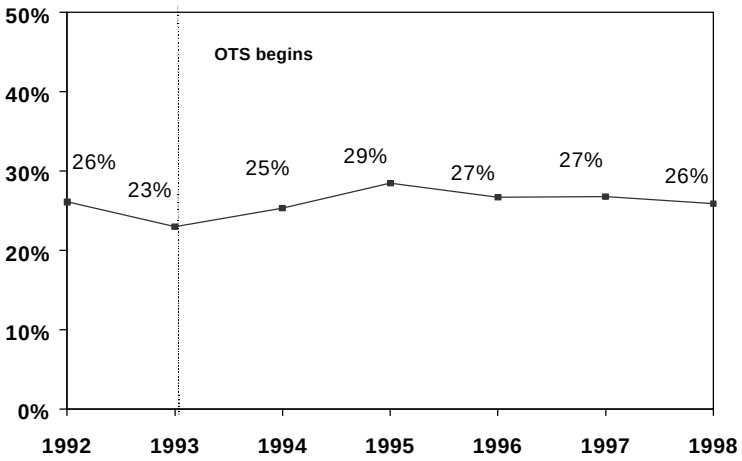


Source: Ontario Student Drug Use Survey, CAMH

3.5 Adult Smoking: Prevalence

- 26 (±2)% of Ontario adults currently smoke on a daily or occasional basis. This rate has not changed significantly since 1992 (Table 4-3, Appendix 4).

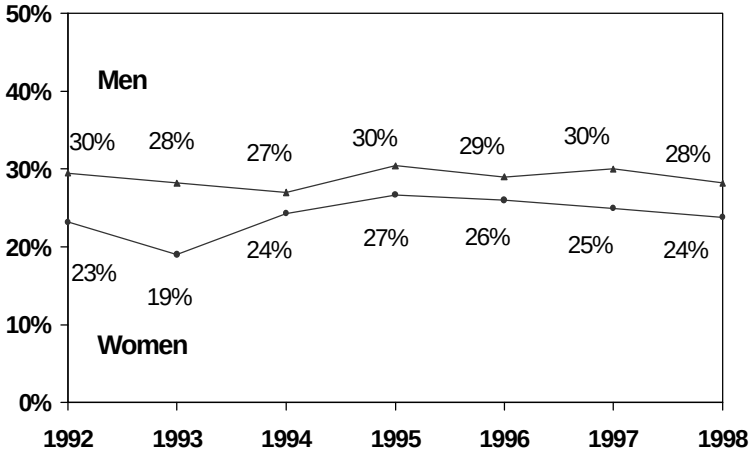
Fig. 19: Trends in Current Cigarette Smoking, Age 18+, Ontario 1992-1998



Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey 1992-1995; Ontario Drug Monitor 1996-1998

- 28(±3)% of Ontario men currently smoke on a daily or occasional basis. This rate has not changed significantly since 1992 (Table 4-3, Appendix 4).
- 24(±2)% of Ontario women smoke on a daily or occasional basis. This rate decreased (although not significantly) from 1992 to 1993, then increased significantly from 1993 to 1995, following the large tobacco tax rollback in 1994. Rates have not decreased significantly since 1995.
- Smoking rates have been consistently higher among men than women, but the difference was statistically significant only in 1993.

Fig. 20: Trends in Current Cigarette Smoking, by Sex, Age 18+, Ontario 1992-1998

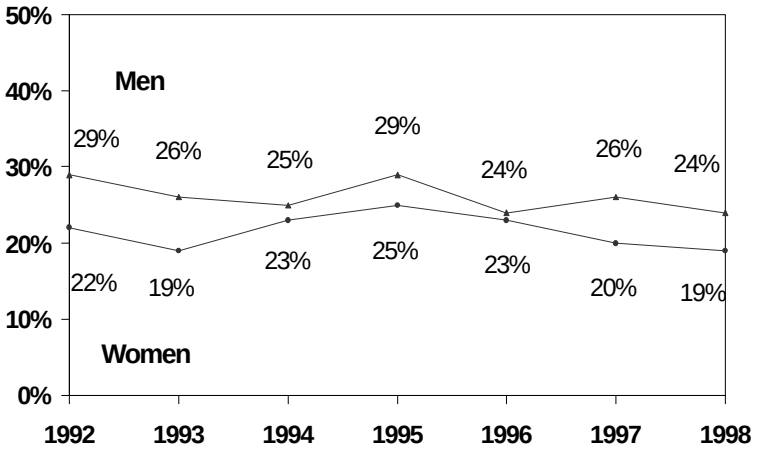


Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey 1992-1995; Ontario Drug Monitor 1996-1998

3.5 Adult Smoking: Prevalence

- 21(±2)% of Ontario adults currently smoke every day. This represents a significant decrease since 1995 when 27% of adults smoked, but is not significantly lower than the 1992 rate of 25%. (Table 4-4, Appendix 4).
- 24(±3)% of Ontario men and 19(±3)% of Ontario women currently smoke every day.
- Differences by sex are not significant.

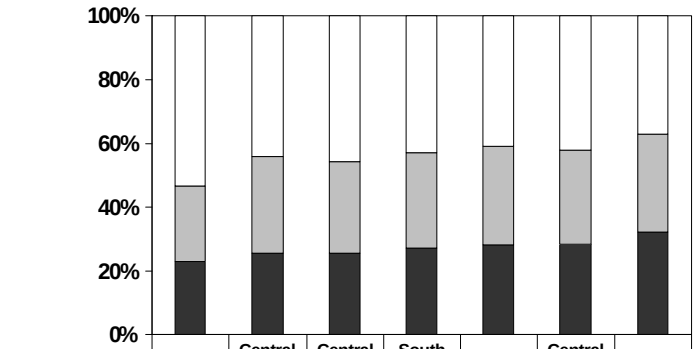
Fig. 21: Daily Cigarette Smoking, by Sex, Age 18+, Ontario 1992-1998



Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey 1992-1995; Ontario Drug Monitor 1996-1998

- In Ontario in 1996/1997, the highest proportion of current smokers was in Northern Ontario (32%) and the lowest proportion in Toronto (23%).
- The highest proportion of never smokers was found in Toronto (53%) and the lowest in Northern Ontario (37%).
- Quit ratios (the proportion of ever smokers who are former smokers) ranged from 49% in Northern Ontario to 55% in Central East.

Fig. 22: Smoking Status, by Health Planning Region,
Age 18+, Ontario 1996/1997



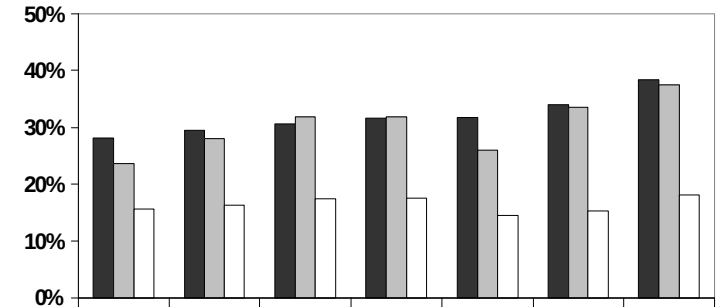
	Toronto	Central East	Central West	South West	East	Central South	North
Never smoker	53%	44%	46%	43%	41%	42%	37%
Former smoker	24%	30%	29%	30%	31%	30%	31%
Current smoker	23%	25%	26%	27%	28%	28%	32%

Based on Ontario health planning regions (Ontario Ministry of Health, 1999)
Source: National Population Health Survey, Statistics Canada.

3.5 Adult Smoking: Prevalence

- In 1996/1997, smoking rates among adults in all age groups were highest in Northern Ontario (18-34: 38%; 35-54: 37%; 55+: 18%).
- In all regions, the oldest age group was least likely to smoke. The youngest age group (18-34) was more likely to smoke than the upper age groups in Toronto and the Central West region.

Fig. 23: Current Cigarette Smoking, by Region and Age, Ontario, 1996/1997



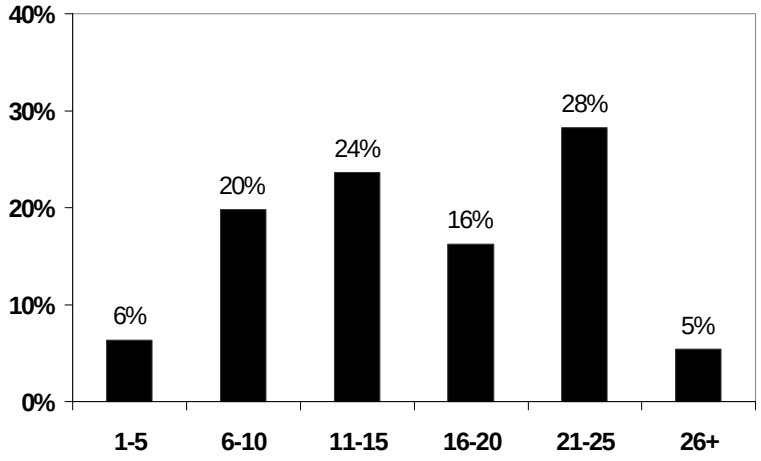
	Toronto	Central East	South West	East	Central West	Central South	North
18-34	28%	29%	31%	32%	32%	34%	38%
35-54	24%	28%	32%	32%	26%	34%	37%
55+	16%	16%	17%	18%	15%	15%	18%

Based on Ontario health planning regions (Ontario Ministry of Health, 1999)
Source: National Population Health Survey, Statistics Canada.

3.5 Adult Smoking: Level of Use

- Two-thirds of daily smokers smoke 20 or fewer cigarettes per day. Half report smoking 15 or fewer.
- However, 20 and 25 cigarettes are the single most commonly reported amounts smoked daily (data not shown). Four in ten smokers report using these amounts per day, reflecting the typical "pack-a-day" smoking behaviour.

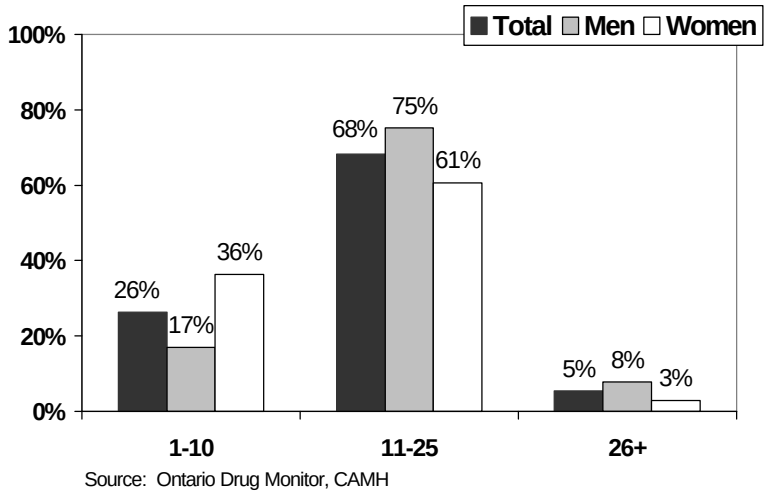
Fig. 24: Number of Cigarettes Smoked Daily, Daily Smokers, Age 18+, Ontario 1998



Source: Ontario Drug Monitor, CAMH

- The large majority (68%) of daily smokers smoke 11-25 cigarettes per day.
- Men are more likely to smoke heavily than women (8% versus 3%).
- Women daily smokers are twice as likely as men (36% versus 17%) to smoke 1-10 cigarettes per day.

Fig. 25: Number of Cigarettes Smoked Daily, by Sex, Daily Smokers, Age 18+, Ontario 1998

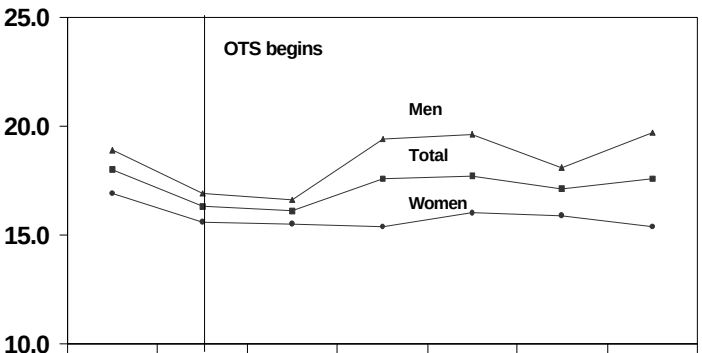


Source: Ontario Drug Monitor, CAMH

3.5 Adult Smoking: Level of Use

- The average number of cigarettes smoked daily by men *increased significantly* from 1994 to 1998 (Table 4-5, Appendix 4).
- There have been no significant changes for female daily smokers from 1992-1998.
- In 1998, men who smoked daily smoked an average of 19.7 cigarettes per day. Women smoked 15.4 per day. The average number of cigarettes smoked by daily smokers was 17.6.

Fig. 26: Mean Number of Cigarettes Smoked Daily, by Sex, Daily Smokers, Age 18+, Ontario 1992-1998

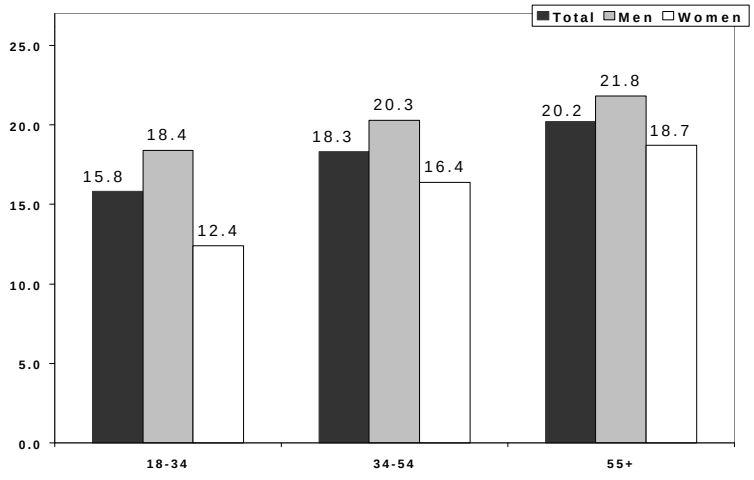


	1992	1993	1994	1995	1996	1997	1998
Men	18.9	16.9	16.6	19.4	19.6	18.1	19.7
Women	16.9	15.6	15.5	15.4	16.0	15.9	15.4
Total	18.0	16.3	16.1	17.6	17.7	17.1	17.6

Source: CAMH surveys: Ontario Adult Drug Use Survey 1991; Ontario Alcohol and Other Drug Opinion Survey 1992-95; Ontario Drug Monitor 1996-98

- The average number of cigarettes smoked daily increases with age for both men and women.
- Daily smokers aged 55+ smoke a *significantly higher* average number of cigarettes compared to those aged 18-34 (20.2 versus 15.8).
- The middle age group (35-54) smokes 18.3 cigarettes daily, on average.
- Men aged 18-34 smoke 50% more cigarettes per day than women in that age group. This sex difference decreases with age.

Fig. 27: Mean Number of Cigarettes Smoked Daily, by Age and Sex, Daily Smokers, Ontario 1998

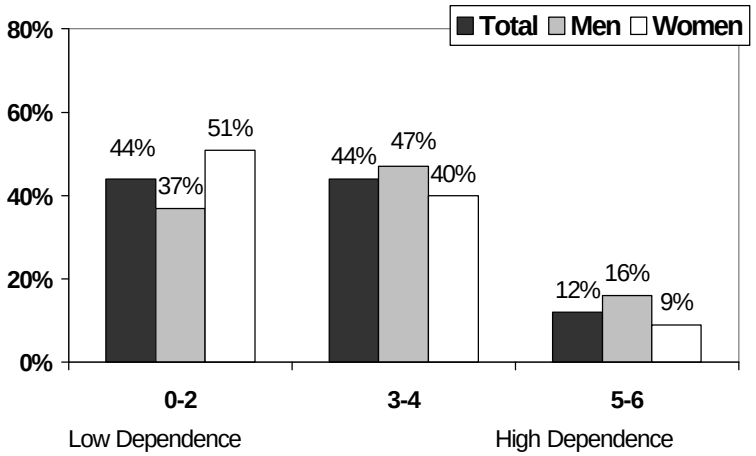


Source: Ontario Drug Monitor, CAMH

3.5 Adult Smoking: Dependence

- The Heaviness of Smoking Index (HSI) is a scale based on time to first cigarette each morning and number of cigarettes per day. A score of 0-2 indicates low dependence, while high scores (5-6) indicate high dependence (Heatherton et al., 1989).
- Over half (56%) of daily smokers are moderately or highly dependent. The 12% who are highly dependent are "hard-core" smokers, a typically hard-to-reach population for cessation efforts.
- Over 60% of male daily smokers are moderately or highly dependent, compared to half (49%) of female daily smokers.

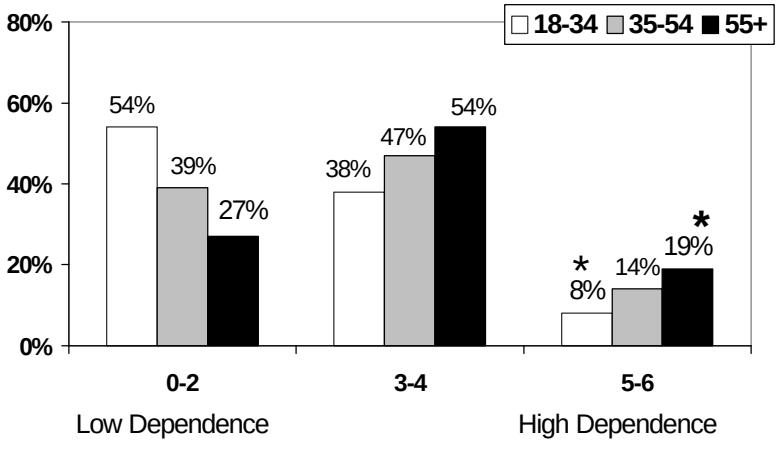
Fig. 28: Heaviness of Smoking Index, by Sex, Daily Smokers, Ontario 1997/1998



Source: Ontario Drug Monitor 1997/1998 (pooled), CAMH

- Older smokers appear to be more dependent than younger smokers, just as older smokers are more likely to smoke more cigarettes per day (Fig. 27). Almost half (46%) of smokers aged 18-34 are moderately or highly dependent, compared to 61% and 73% of each of the 35-54 and 55+ age groups, respectively.
- Younger smokers, then, may be more responsive to cessation efforts, since low dependence is associated with a high potential for success in quitting (Kozlowski et al., 1994).

Fig. 29: Heaviness of Smoking Index, by Age, Daily Smokers, Ontario, 1997/1998



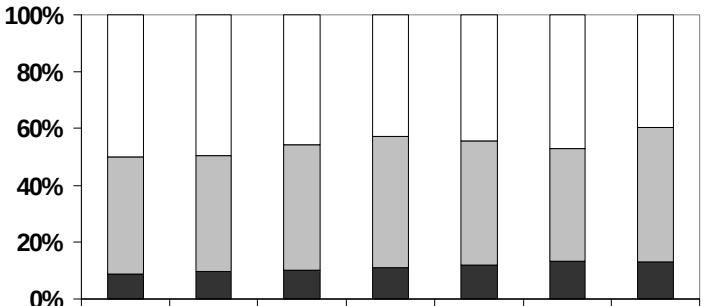
* Small cell sizes. Interpret findings with caution.

Source: Ontario Drug Monitor 1997/1998 (pooled), CAMH

3.5 Adult Smoking: Dependence

- The proportion of daily smokers with moderate or high dependence was highest in Northern Ontario (60%) and lowest in Central West and Toronto (50% and 51%, respectively).
- There were very little differences across regions in the proportion of daily smokers who are highly dependent.

Fig. 30: Heaviness of Smoking Index, by Health Planning Region, Daily Smokers, Age 18+, Ontario 1996/1997



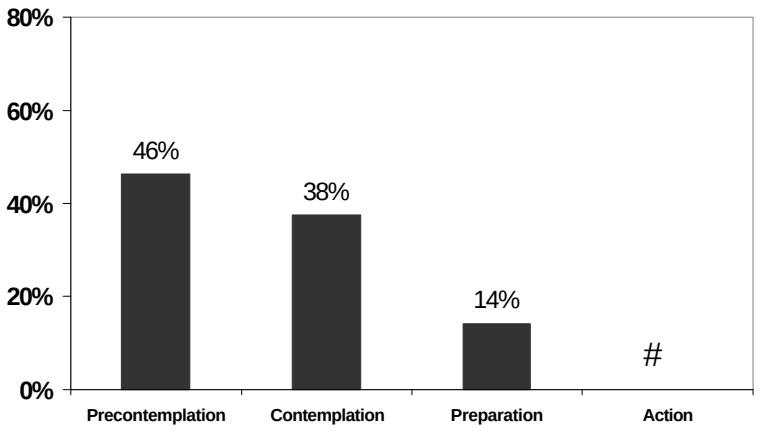
	Central West	Toronto	Central South	East	South West	Central East	North
0-2	50%	50%	46%	43%	45%	47%	40%
3-4	41%	41%	44%	46%	43%	39%	47%
5-6	9%	10%	10%	11%	12%	13%	13%

Based on Ontario health planning regions (Ontario Ministry of Health, 1999)
Source: National Population Health Survey, Statistics Canada

3.5 Adult Smoking: Readiness to Quit

- Smokers may go through four stages of change in the process of stopping smoking (see Appendix 2 for more background on the stages of change) (Prochaska et al., 1993).
- A majority of smokers (52%) are at least thinking about quitting in the next six months, and more than one quarter of these are actually preparing to quit in the next month.
- The distribution of stage of change does not differ by age or sex (data not shown).

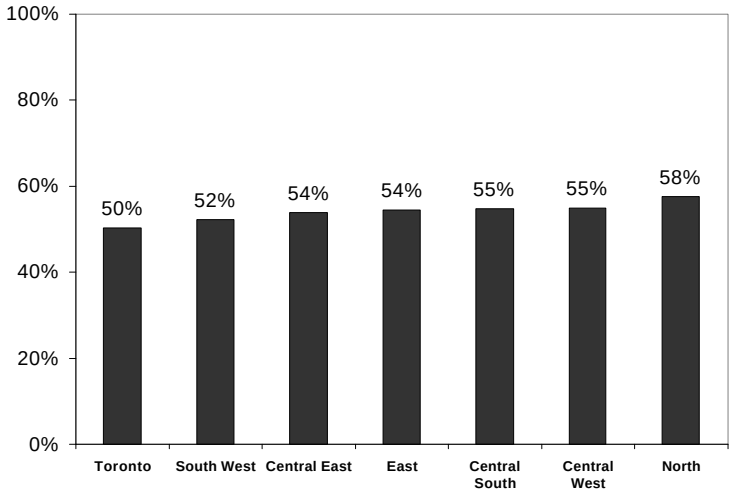
Fig. 31: Current Smokers, by Stage of Change, Age 18+, Ontario 1998



Note: # Data suppressed due to extremely small cell size.
Source: Ontario Drug Monitor, CAMH

- In 1996/1997, at least half of daily smokers in each of the seven health planning regions were *considering* quitting in the next 6 months.
- The proportion of daily smokers considering quitting in the next 6 months was highest in Northern Ontario, where tobacco prevalence and dependence are also highest (Figs. 23, 30).

Fig. 32: Daily Smokers Considering Quitting in the Next 6 Months, by Health Planning Region, Age 18+, Ontario 1996/1997

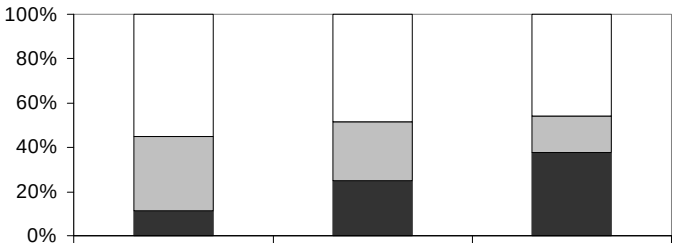


Based on Ontario health planning regions (Ontario Ministry of Health, 1999)
Source: National Population Health Survey, Statistics Canada

3.5 Adult Smoking: Quitting

- The proportion of former smokers in the oldest age group (55+) is significantly higher than the youngest age group (18-34).
- Similarly, the proportion of ever smokers (current + former smokers) is significantly higher in the oldest age group (55+) than the youngest age group (18-34).
- This is not surprising, given that older individuals have had more opportunity to quit compared to younger persons.

Fig. 33: Smoking Status, by Age, Age 18+, Ontario 1998

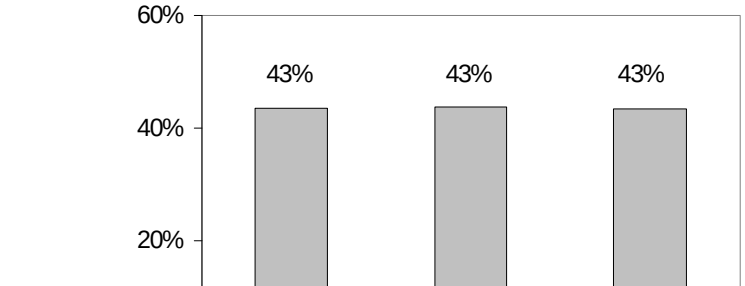


	18-34	35-54	55+
Never	55%	49%	46%
Current	33%	27%	17%
Former	12%	25%	38%

Source: Ontario Drug Monitor, CAMH

- Given the difficulty of remaining abstinent, only those who have abstained for more than a year can be fairly regarded as former smokers. The proportion of ever smokers who quit is known as the quit ratio.
- 43% of all ever smokers quit >1 year ago; 8% of ever smokers quit 1-5 years ago, and 35% quit >5 years ago.
- The proportions of ever smokers who quit >1 year ago, 1-5 years ago, or >5 years ago do not differ significantly by sex.
- Differences in quit ratios, however, are seen by age (data not shown). Quit ratios are higher for older age groups.

Fig. 34: Quit Ratios (Former/Ever) for Former Smokers Who Quit >1 Year Ago, by Sex and Time Quit, Age 18+, Ontario 1998



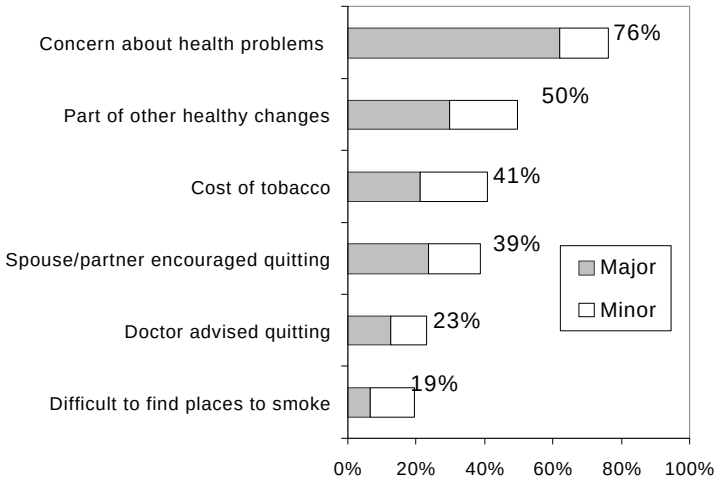
	Total	Men	Women
Quit >5 yrs ago	35%	36%	34%
Quit 1-5 yrs ago	8%	7%	9%

Source: Ontario Drug Monitor, CAMH

3.5 Adult Smoking: Quitting

- In 1996, health was the primary reason for quitting reported by former smokers.
- A substantial proportion of former smokers also indicated that the cost of tobacco and encouragement from others to quit were reasons for their quitting.
- These reports do not necessarily reflect on current tobacco control policies, however, because they may come from smokers who quit many years ago, under different policy environments.

Fig. 35: Former Smokers' Major and Minor Reasons for Quitting, Age 18+, Ontario 1996

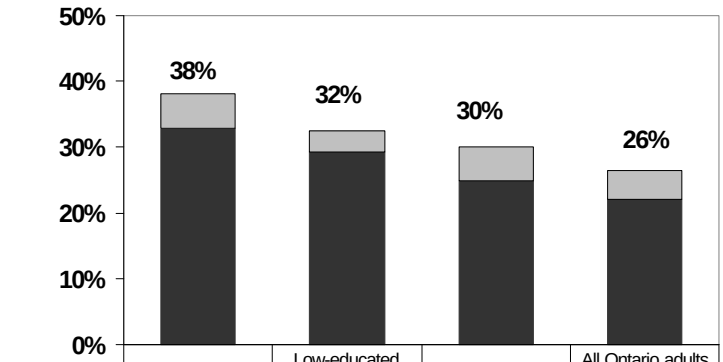


Source: Qualitative and Quantitative Study, Ontario Tobacco Research Unit

3.6 Smoking by Other Target Groups: Blue-Collar Workers, Low-Educated Adults, and Non-Student Youth

- In 1996/1997, blue-collar workers (adults working in trades/farming occupations) had the highest current smoking rates (38%) of all target groups.
- Low-educated adults (age 20+ with no high school diploma) had smoking rates of 32%.
- Non-student youth (age 12-19 and not in school) had smoking rates of 30% (this is much lower than previously published studies e.g., Flay et al., 1989).
- Over 80% of smokers in each of these groups smoked daily.
- All these target groups had higher smoking rates than all Ontario adults combined (26%).

Fig. 36: Current Smoking, by Selected Target Groups, Ontario 1996/1997

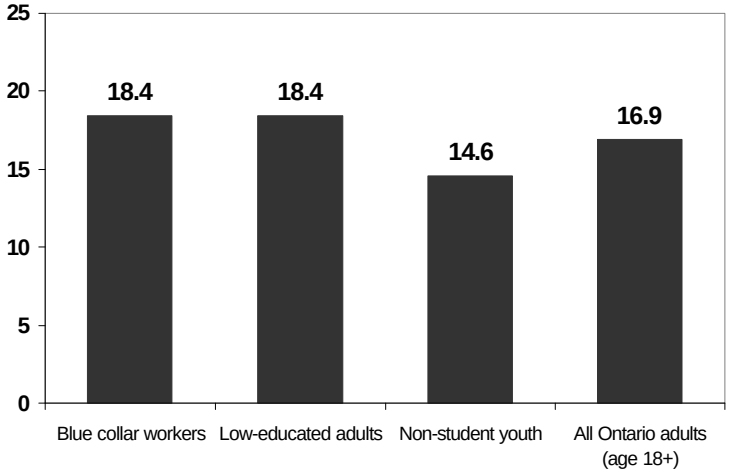


	Blue collar workers	Low-educated adults	Non-student youth	All Ontario adults (age 18+)
Occasional	5%	3%	5%	4%
Daily	33%	29%	25%	22%

Source: National Population Health Survey 1996/1997, Statistics Canada

- Blue-collar workers and low-educated adults who smoked daily smoked an average of 18.4 cigarettes per day. This is slightly above the average of Ontario adults (16.9).
- Non-student youth who smoke daily consume, on average, 3 cigarettes fewer than Ontario adults who smoke daily.
- These groups have been identified by the OTS as target groups due to their historically high rates of tobacco use.

Fig. 37: Mean Number of Cigarettes Smoked Daily, by Selected Target Groups, Daily Smokers, Ontario 1996/1997



Source: National Population Health Survey 1996/1997, Statistics Canada

3.6 Smoking by Other Target Groups: Pregnant Women

Table D: Smoking by Pregnant Women, Various Geographic Regions, 1990-1997

Source	Population (Year)	Indicator	Prevalence Estimate
(1)	Ontario (1990)	Current smoking (daily or occasional) among women of childbearing age	16%
(2)	Ottawa (1992)	Daily or occasional smoking among post-partum women	19%
(3)	Toronto (1994)	Daily smoking among women in last half of pregnancy	16%
(4)	Canada (1994)	Regular smoking (every day, or almost every day) during last pregnancy, if in last 5 years	19%
(5)	Ottawa (1997)	Daily smoking (confirmed by cotinine screen) among pregnant women	23%
(6)	Canada (1996/1997) Ontario (1996/1997)	Smoked during last pregnancy, if in last 2-3 years, among women of childbearing age *who have ever smoked*	37% 32%

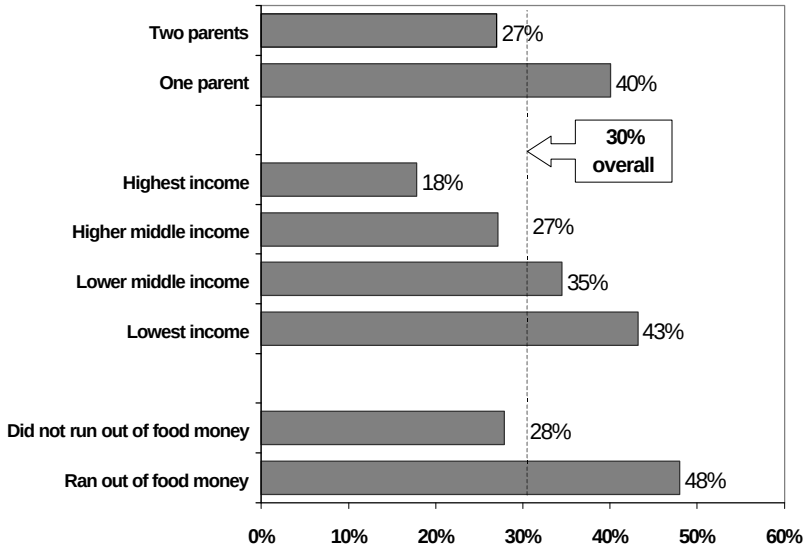
Sources: (1) Edwards et al., 1996; (2) Stewart et al., 1995; (3) Stewart & Streiner, 1995; (4) Statistics Canada 1995; (5) Perkins et al., 1997; (6) National Population Health Survey 1996/1997, Statistics Canada

- The Ontario Tobacco Strategy (OTS) aims to eliminate smoking among pregnant women by the year 2000.
- The estimates above show that 16%-23% of pregnant women smoke, although these figures are based on differing indicators and different geographic regions. The most recent estimate for Ontario reports smoking among 32% of Ontario women of childbearing age (age 15-49) *who had ever smoked and had given birth since 1994/1995*. These women smoked an average of 8.5 cigarettes daily during their pregnancy, and the vast majority (87%) smoked on a daily basis at the time of the survey.
- Ontario still lacks good population-based surveillance data to describe maternal smoking.
- The goal of obtaining better surveillance data is the focus of a new OTRU initiative. A discussion paper is being developed on this topic, and it will be the focus of a provincial workshop in the year 2000.

3.7 Exposure to Environmental Tobacco Smoke (ETS): At Home

- Overall, 30% of Ontario children under 12 years live with a smoker who regularly smokes at home. This is only slightly below the Canadian average of 33% (Stephens, 1999).
- Compared to two-parent households, ETS exposure is more likely among children living with one parent.
- The likelihood of ETS exposure for children is related to economic disadvantage: it increases as household income decreases and is more common in households that ran out of money for food in the past year. (One-parent families are also more likely than two-parent households to be low income.)

Fig. 38: Children Aged 0-11 Living with Smoker Who Regularly Smokes at Home, by Household Characteristics, Ontario 1996/1997



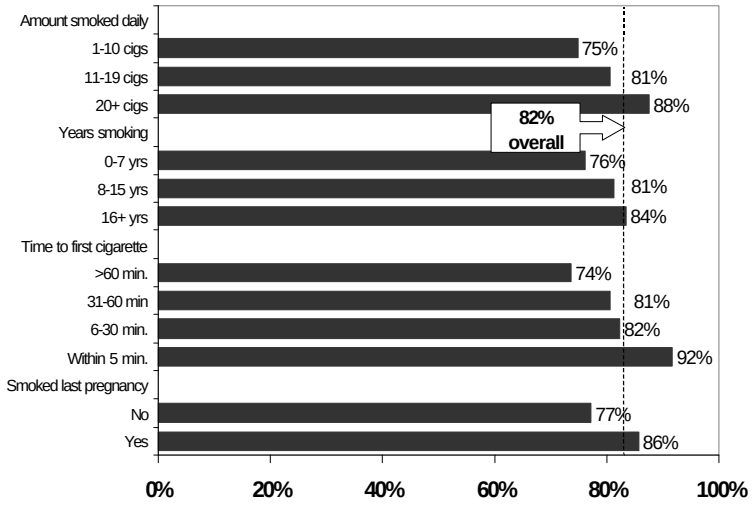
Source: National Population Health Survey, Statistics Canada; special tabulations.

- Part of the explanation for these socioeconomic differences is that smokers are more likely to be found in poor and single-parent homes (Stephens, 1999).
- Exposure to ETS is also more likely for children when the smoker has little education and does not believe that ETS can cause illness (data not shown).

3.7 Exposure to Environmental Tobacco Smoke (ETS): At Home

- Overall, 82% of children under 12 live with a daily smoker who regularly smokes at home.

Fig. 39: Children Aged 0-11 Living With a Daily Smoker Who Regularly Smokes at Home, by Nature of Adult Smoking, Ontario 1996/1997



Source: National Population Health Survey, Statistics Canada; special tabulations.

- The chances of any ETS exposure are directly related to the amount of daily smoking by the smoker in the household, to the number of years smoked, and, inversely, to the delay before the first cigarette of the day. In other words, the more addicted the smoker, the more likely he or she is to smoke regularly in these households.

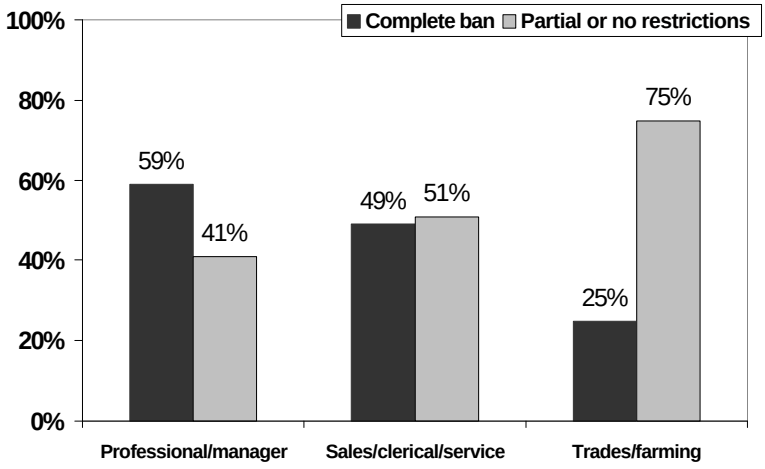
- When the child lives with a daily smoker who is female, children are more likely to be exposed to ETS if the mother says she smoked during her last pregnancy. Again, this behaviour could be interpreted as an indicator of tobacco dependence.

- These findings suggest that the *dose* of exposure increases along with the *likelihood* of exposure for some children living with highly dependent smokers.

3.7 Exposure to Environmental Tobacco Smoke (ETS): At Work

- 43% of working, daily smokers in Ontario report a complete ban on smoking at work, while 47% report only partial or no restrictions.
- A majority of daily smokers working in professional or managerial occupations (59%) and about half of daily smokers working in sales, clerical, or service occupations (49%) are in workplaces where smoking is completely banned.
- Only one quarter of daily smokers working in trades or farming occupations are in working environments where smoking is completely banned.

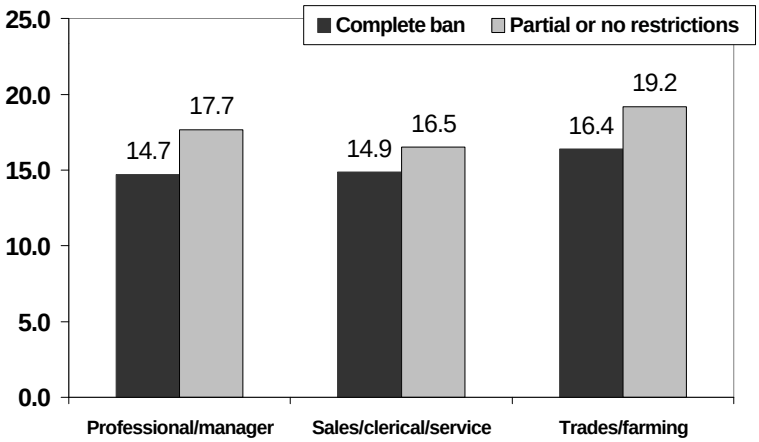
Fig. 40: Smoking Restrictions at Work, by Occupation, Daily Smokers, Age 15+, Ontario 1996/1997



Source: National Population Health Survey, Statistics Canada

- There is a clear association between the extent of restrictions that smokers face at work and the number of cigarettes smoked daily.
- Regardless of occupation group, daily smokers smoke more cigarettes per day when they work in environments where there are only partial or no restrictions on smoking.
- Where there are complete bans on smoking at work, daily smokers consume 2-3 fewer cigarettes per day than where restrictions are more relaxed or non-existent. This is some benefit for these smokers, in addition to the protection from ETS afforded their co-workers.

Fig. 41: Mean Number of Cigarettes Smoked Daily, by Occupation and Smoking Restrictions at Work, Daily Smokers, Age 15+, Ontario 1996/1997

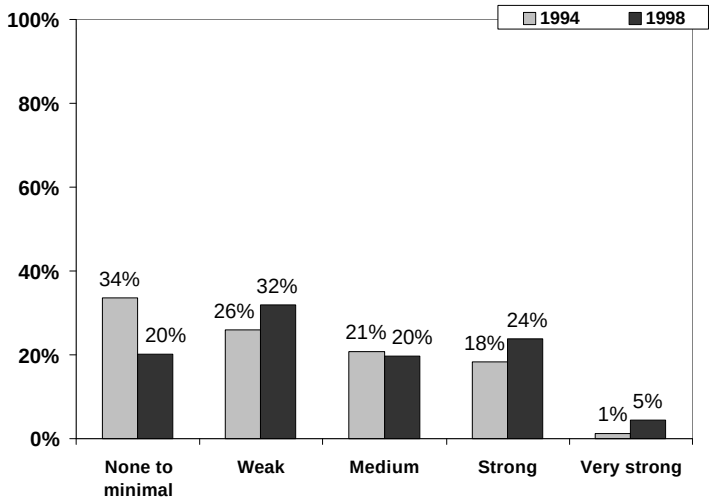


Source: National Population Health Survey, Statistics Canada

3.7 Exposure to Environmental Tobacco Smoke (ETS): In Public Places

- In 1998 compared to 1994, there has been an overall shift toward the presence of stronger bylaws restricting smoking in public places in Ontario.
- The proportion of the Ontario population covered by strong to very strong bylaws increased from 19% to 29% from 1994 to 1998. The proportion covered by weak to nonexistent bylaws decreased from 60% in 1994 to 52% in 1998.
- Level of regulation was coded using the Asbridge-O'Grady Index (Asbridge et al., 1997).

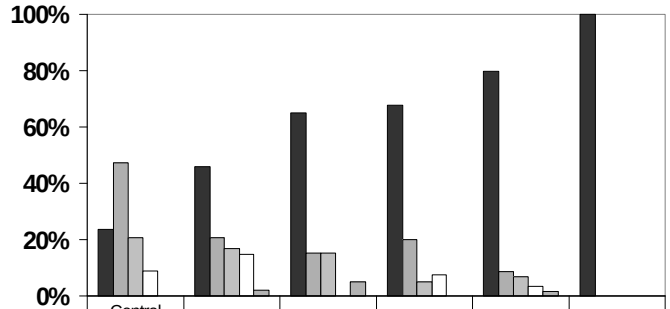
Fig. 42: Ontario Population, by Level of Smoking Restriction Bylaws
1994 Versus 1998



Unpublished data, Abernathy and Lacchetti, 1999a

- In 1998, the proportion of Ontario municipalities covered by strong to very strong smoking restriction bylaws ranged from 0% in North Western Ontario to 17% in Central Eastern Ontario.
- The proportion covered by weak to nonexistent bylaws ranged from 67% in Central Eastern Ontario to 100% in North Western Ontario.
- New municipal no-smoking bylaws have been passed in 1999, and developments are ongoing. These changes will be reflected in future reports.

Fig. 43: Municipalities, by Level of Smoking Restriction Bylaws, by Region
Ontario 1998



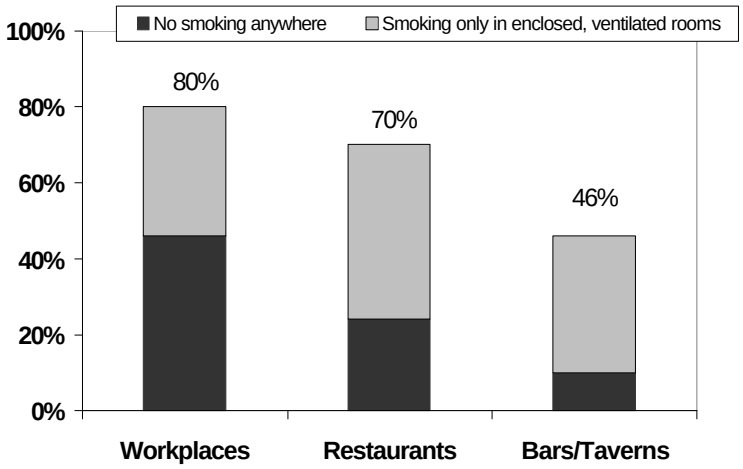
	Central West	Central East	North East	East	South West	North West
None to minimal	24%	46%	65%	68%	80%	100%
Weak	47%	21%	15%	20%	9%	0%
Medium	21%	17%	15%	5%	7%	0%
Strong	9%	15%	0%	8%	3%	0%
Very Strong	0%	2%	5%	0%	2%	0%

Unpublished data, Abernathy and Lacchetti, 1999a

3.8 Public Attitudes Toward Tobacco Control

- A large majority of the public supports, at minimum, smoking only in enclosed, ventilated areas in workplaces and restaurants (80% and 70%, respectively). Almost half (46%) of Ontario adults support this measure, at minimum, in bars and taverns.
- Almost half (46%) of Ontario adults support a *total* ban on smoking in workplaces. One-quarter (24%) support a *total* ban in restaurants. Only 10% support a *total* smoking ban in bars and taverns. *Total* bans protect both staff and patrons in these establishments.

Fig. 44: Public Support for Smoking Restrictions in Public Places, Age 18+, Ontario 1998



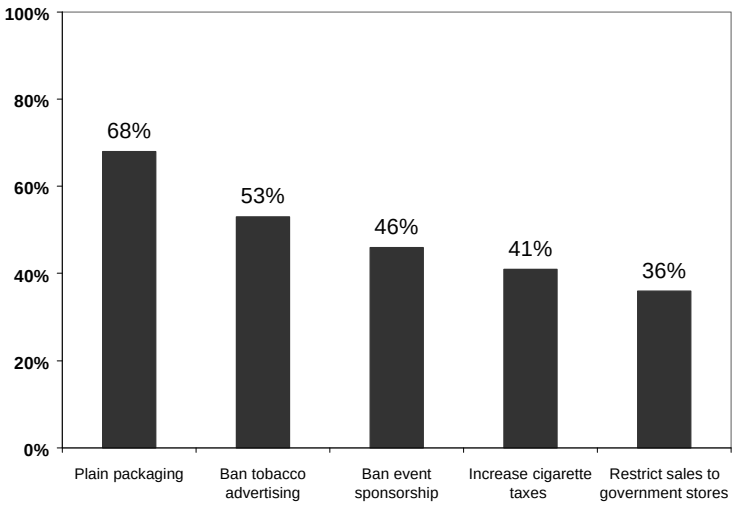
Source: Ontario Drug Monitor, CAMH

- Table 4-6 in Appendix 4 displays levels of support for smoking restrictions or bans in the three sites analyzed by smoking status, age, and sex.
- Across all sites, smokers express more support for separately ventilated areas than total bans, and in workplaces and bars, support restricted smoking to about the same extent as non-smokers. There is little difference between former smokers and never smokers in attitudes toward these measures (Table 4-6, Appendix 4).
- Levels of support are similar across age groups, with the exception of smoking bans in workplaces, for which adults in the oldest age group express the least support.
- Levels of support are either slightly higher or similar among women compared to men.

3.8 Public Attitudes Toward Tobacco Control

- A majority of the Ontario public supports plain packaging of cigarettes (68%) and a government ban on all tobacco advertising (53%).
- Substantial public support also exists for a ban on sporting and cultural event sponsorship by cigarette companies (46%).
- More than 40% support higher cigarette taxes (41%) and more than one-third (36%) feel that tobacco should be sold only in government-owned stores (similar to the way alcohol is sold).

Fig. 45: Public Support for Various Tobacco Control Policies, Age 18+, Ontario 1998



Source: Ontario Drug Monitor, CAMH

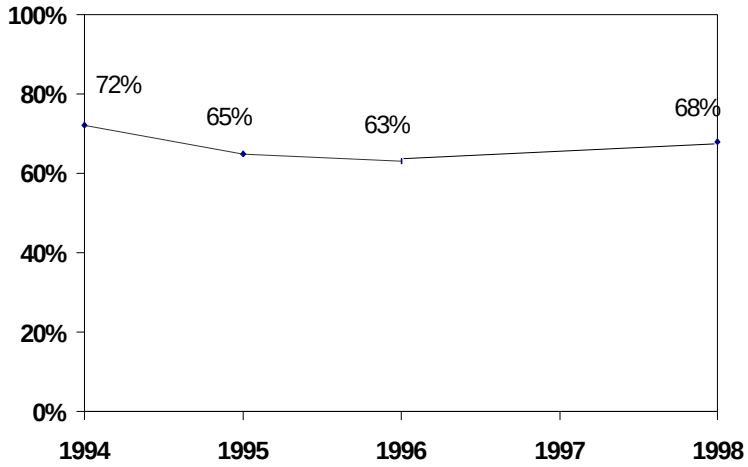
- Table 4-7 in Appendix 4 show levels of support for these tobacco control policies by smoking status, age, and sex.
- Support for these tobacco control policies is generally higher among nonsmokers than smokers. A majority of nonsmokers support every tobacco policy, with the exception of restricting sales to government-operated stores. In contrast, plain packaging is the only tobacco policy *of the policies examined in this study* supported by a majority of current smokers.[3] Levels of support among former smokers lie between the levels of support among current and never smokers for all tobacco policies, except for plain packaging (Table 4-7, Appendix 4).
- There are no clear trends in support across age groups.
- Support for all these tobacco control policies is higher among women than men, with the exception of increased cigarette taxes, which received similar levels of support from both men and women.

[3]In a 1996 study, a majority of smokers and nonsmokers in Ontario expressed support for measures that penalize stores for selling cigarettes to minors (Ashley et al., in press).

3.8 Public Attitudes Toward Tobacco Control

- For the past five years, a majority of the Ontario public (63%-72%) has supported plain packaging of cigarettes as a way of discouraging smoking among children.
- There has been little change in this level of support since 1994.

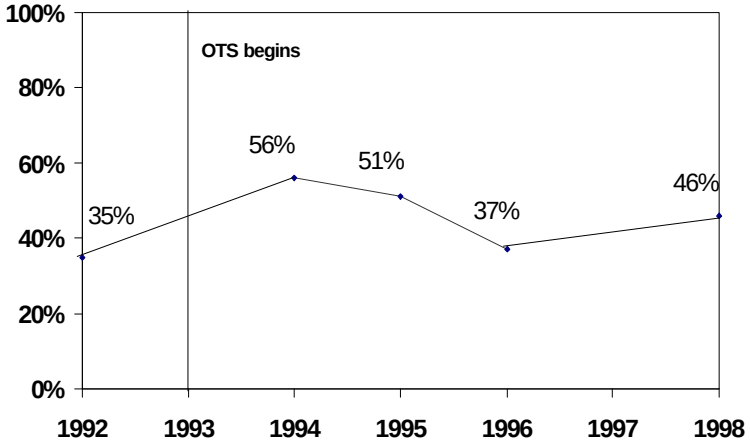
Fig. 46: Public Support for Plain Packaging of Cigarettes, Age 18+, Ontario 1994-1998



Note: Question not asked in 1997.
Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey 1994-1995; Ontario Drug Monitor 1996-1998

- Support for a ban on sporting and cultural event sponsorship by cigarette companies has varied from 35% to 56% over the past seven years.
- Support appears to be increasing since 1996, but further monitoring is needed to confirm this trend.
- Trends in public support for other tobacco policies are not presented because data are unavailable or question wording is inconsistent from year to year.

Fig. 47: Public Support for a Ban on Event Sponsorship by Cigarette Companies, Age 18+, Ontario 1992-1998



Note: Question not asked in 1993 and 1997.
Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey 1992-1995; Ontario Drug Monitor 1996,1998

CHAPTER 4. IMPLICATIONS FOR THE OTS

This chapter describes the major implications for the OTS of the trends and findings described in Chapters 1 to 3 of this report. For this purpose, we consider the broad goals of the OTS – prevention, protection, and cessation – and the mandate of OTRU – monitoring, evaluation, and research.

4.1 Implications for Prevention

A major goal of the Ontario Tobacco Strategy is to prevent non-smokers, particularly children and adolescents, from starting to use tobacco. This focus on preserving the health of young people made – and makes – good sense theoretically and practically. Primary prevention of what could become an expensive, damaging, and life-long addiction is good social and economic policy. Tragically, trends since 1995 indicate clearly that new tobacco use is not being effectively prevented in Ontario.

Since the introduction of the OTS in 1993, there has been no improvement in the rates of smoking by young Ontarians of either sex. Indeed, smoking has actually increased since 1991 among young males and Grade 11 students of both sexes (Figs. 16, 17). Smoking rates among students in Grades 7-13 are now where they were in the early 1980s, before a decade of decline in Ontario and other provinces.

IMPLICATION FOR PREVENTION GOAL:

It is clear that the OTS objective of 10% of 12-19 year-olds smoking will not be met by 2000, and will be achieved by 2005 only with great effort.

This conclusion is inescapable regardless of which definition of "smoking" is used. Previous monitoring reports defined smoking as using more than one cigarette during the past 12 months (to be consistent with the use of other substances being probed as part of the same student survey). This year, we used additional questions to define smoking more strictly: any use in the past month and more than 100 cigarettes in a lifetime (Mills et al., 1994) – to distinguish beginners. Even with this stricter definition, in most cases, student smoking rates would have to be cut *at least in half* in the next five years in order to reach the target (Figs. 14, 15). However, as noted, these rates have either stayed level or increased in the past five years by the 12-month-use definition.

Given the reported focus on prevention and on youth of most OTS partners (Tables B, C), how can this situation exist?

While a full-blown evaluation of the OTS is not feasible with present data, the following findings clearly illustrate that the supply of cigarettes is highly accessible for young Ontarians, perhaps more so than ever:

- Cigarettes are cheaper in Ontario than in any other province or neighbouring state (Fig. 4);
- The price of cigarettes has recovered only about 15% of the large price drop that occurred in 1994 when the federal and provincial governments drastically cut cigarette taxes (Fig. 3);
- More tobacco retailers are ignoring the *Tobacco Control Act* and selling to minors (Fig. 7);

- Since 1995, merchants are asking *fewer* smokers under age 15 for photo ID when they attempt to buy cigarettes (Fig. 11);

- Cigarettes have become much more accessible for minors in both gas stations and chain convenience stores since 1995; gas stations and independent convenience stores remain significant offenders (Fig. 8).

Why should the supply situation be so favorable to young smokers, given the *Tobacco Control Act* (*TCA*) and the increasingly prominent signs in retail stores reminding customers about the sales-to-minors restrictions? Consider…

- Inspections and Section 3 charges of retailers under the *TCA* for sales to minors are highly variable across the province (Fig. 13) and, likely, also within regions.

Of course, these findings are not strict cause-and-effect relationships and there may be some other explanation for all these simultaneous trends. It is not clear what that might be, however.

Some of the recommendations of the Minister's Expert Panel (1999) bear repeating here:[3]

- ***"…Ontario tobacco prices should be raised and maintained at levels at least comparable to surrounding jurisdictions"***

- ***"Provincial sales-to-minors regulations should be strengthened by larger and stronger point-of-sale health warnings signage, and by eliminating all point-of-sale tobacco product advertising"***

- ***"The [TCA] should be strengthened by increasing enforcement resources, increasing fines for non-compliance, and by requiring the posting of a prominent sign at convicted retail premises after first convictions, together with a prescribed notice in local newspapers paid for by the retailer"***

- ***"The [TCA] should be amended to make it easier to prosecute vendors, and should be streamlined and clarified in order to prevent senior courts from diluting its intent"***

- ***"Tobacco products should be placed out of sight of customers behind counters at point-of-sale"***

While the supply situation is reasonably well documented, we know far less about the "demand" side of the equation. It is clear that the demand for cigarettes starts young and increases quickly, 12-month use doubling from Grade 7 to 8 and again from Grade 8 to 10 (Fig. 14). More strictly defined use, which excludes beginners, increases *almost four-fold* in the two years from Grade 9 to 11 (Fig. 14).

Although education is the traditional means to reduce demand, we have no recent data for the province on level of use of effective school-based prevention programs, nor on perceived barriers to implementing effective programs at the elementary or secondary level.

[3] For present purposes, we include only those Panel recommendations that relate to evidence presented earlier in this report, and for which there has been no substantive Ministerial initiative in response to the Panel.

IMPLICATION FOR PREVENTION GOAL:

Considering the young age at which smoking begins and the rapid rate at which it increases, effective school-based programs should begin well before Grade 8 and be reinforced throughout secondary school.

4.2 Implications for Protection

The protection of non-smokers from the cigarette smoke of others is, like prevention, smart economic and social policy, considering the well-documented harm of ETS.

While Ontario fares somewhat better than other provinces with respect to exposure to ETS and public smoking, much remains to be done to reach the OTS goal of protection.

IMPLICATION FOR PROTECTION GOAL:

The 1997 Mandatory Health Programs and Services Guidelines call for 100% of public places and workplaces to be smoke-free by 2005. It seems highly unlikely that this goal will be met without dramatic developments.

- The proportion of the Ontario population covered by strong to very strong by-laws increased from 19% to 29% from 1994 to 1998 (Fig. 42).

- Based on a 1998 study, regional groupings of municipal by-laws to restrict public smoking were generally rated weak to non-existent (Fig. 43). Strong by-laws, however, have been passed in 1999. The Toronto No Smoking By-law, in particular, will have an impact on a considerable proportion of the Ontario population.

- Substantial proportions of workers who smoke do not face meaningful restrictions at work (Fig. 40). Smokers in smoke-free worksites tend to smoke fewer cigarettes per day (Fig. 41).

- This situation persists despite the fact that a large majority of the Ontario public supports, at minimum, smoking only in enclosed, ventilated areas in workplaces and restaurants (80% and 70%, respectively), and almost half (46%) support this restriction, at minimum, in bars and taverns (Fig. 44).

Extended restrictions would not only protect non-smokers (both staff and patrons), but they would also contribute to prevention and cessation goals. In the absence of such protection, litigation by hospitality industry workers could result, as has happened with flight attendants.

Restrictions would reduce the numbers of places where individuals could congregate to smoke and decrease the visibility of indoor smoking, thus changing perceptions of smoking norms. Restrictions would also encourage smokers to reduce the amount they consume daily (Fig. 41), an important step toward cessation, and would help prevent relapse among smokers who have quit.

Again, it is worth repeating the recommendations of the Expert Panel:

- ***Require that indoor public places be smoke-free, with immediate implementation in youth recreation facilities***

- ***Incrementally ban smoking in all indoor workplaces except where smoking areas are separately enclosed and separately ventilated to the exterior,***

beginning at once with offices and industrial worksites

While the establishment and enforcement of such restrictions has been seen in Ontario as a municipal responsibility, this is not the only mechanism available. In British Columbia, for example, the province has used its authority under the *Workers' Compensation Act* to establish smoke-free worksites province-wide. In Ontario, there is also a provincial statute to govern workplace smoking.

Such a move in Ontario would not only be efficient, it would also address the OTS target group of blue-collar and low-educated individuals. This latter group is not only more likely than the population as a whole to be smokers (Fig. 36), but they are also relatively ignored by OTS partners (Table C).

IMPLICATION FOR PROTECTION GOAL:

The OTS and the 1997 Guidelines call for an increase in smoke-free homes in the province by 2010. Since no target level has been established, and since good trend data are lacking, it is not possible to say how likely this increase is to be achieved. The provincial government should set a target for smoke-free homes.

It is clear that too many Ontario children – almost one in three (Fig. 38) – live with a smoker who regularly smokes at home. Moreover, many of these children come from homes that are disadvantaged in various ways (Fig. 38) and, moreover, live with a heavy, dependent smoker (Fig. 39) who is likely to be unaware of the dangers of ETS.

This situation could be addressed by the Expert Panel's recommendation:

- ***Mount intensive mass media-based and community-based public education programs***

Such a campaign could use the authority of the Ministry of Health to counter the tobacco industry's efforts to confuse the public about the evidence on the health effects of ETS. A Ministry campaign would reinforce, not simply duplicate, health messages from OTS partners and the federal government.

4.3 Implications for Cessation

Cessation would be an important OTS goal even if there were no new smokers. In the face of failing to meet the prevention goals, cessation becomes ever more important.

IMPLICATION FOR CESSATION GOAL:

Reducing the proportion of adults who smoke daily to 15% by 2005, from the current level of 21% , is possible, but it will require a major effort.

The magnitude of this effort is illustrated by some findings about Ontario smokers, which also give some cause for hope:

- about one fifth of all former smokers quit one to five years ago (Fig. 34);
- more than half of adult daily smokers are at least moderately dependent, but only a small proportion are highly dependent (Fig. 28);
- just over half are contemplating quitting or are actively preparing to quit (Fig. 31), although most are just contemplating it;
- young smokers age 18-34 are least dependent (Fig. 29) and thus most susceptible to cessation efforts.

Changes in the population patterns of smoking suggest a possible consolidation of the smoking population into a "hard-core" group, particularly among males:

- A reduction since 1995 in the prevalence of total *daily* smokers (Fig. 21), but…
- Little change since 1994 in the per-capita sales of cigarettes (Fig. 5); and…
- An *increase* since 1994 in the average amount smoked by male smokers (Fig. 26);
- No change in the amount smoked by women.

If such a shift toward more dependent smokers is taking place, the challenge for cessation programs will be greater than ever.

IMPLICATION FOR CESSATION GOAL:

Cessation programs may have more success with younger smokers, if effectively delivered to them. However, there is no single program proven effective in helping adolescent smokers to quit. Developing such a program should be a priority.

Thus, as part of the comprehensive cessation system announced by the Minister of Health, there is a need for additional supports, including, according to her Expert Panel:

- ***"A toll-free number…on every package of tobacco products sold in the province to provide direct access to cessation services"***
- ***media-based public education on cessation***
- ***physicians, pharmacists, dentists, and other health care providers in Ontario trained to enable them to systematically and effectively motivate and help smokers to quit.***

IMPLICATION FOR CESSATION GOAL:

Worksite restrictions are associated with reduced smoking by workers and would serve the goals of cessation as well as protection. Health messages and social support are also important to quitting (Fig. 35).

IMPLICATION FOR CESSATION GOAL:

A central contact point like a 1-800 quit line must have both adequate services and effective promotion.

4.4 Implications for Monitoring, Evaluation, and Research

As noted above, it is essential to continually monitor factors influencing the supply of cigarettes, such as retailer compliance with sales-to-minors regulations, because recent trends have been toward less, not more, compliance and there are substantial differences among types of store. Similarly, it is important to continue to monitor enforcement of the *TCA*, and to compare tobacco prices in Ontario with neighbouring provinces and states.

IMPLICATION FOR MONITORING:

To better understand progress on prevention, we need to monitor on a regular basis, preferably annually:

- *the price of cigarettes*
- *retailer compliance with the TCA*
- *other factors affecting the supply of cigarettes to youth*
- *youth and adult smoking behaviour, including onset, amount smoked, stages of change, and cessation, including by high-risk youth*
- *public attitudes to tobacco control policy*
- *implementation of smoke-free by-laws*
- *level of use of effective tobacco education programs in schools*
- *extent and nature of mass media campaigns*

While the *supply* of cigarettes is relatively well described, we have very little reliable information on factors that might reduce the *demand* for cigarettes and other forms of tobacco.

We have descriptions of OTS partner activities (Chapter 2), many of which are directed to youth, but we have virtually no information on their actual impact, indicating that better evaluation designs are needed. Some of this evaluation can be expected during 1999/2000, with the expansion of the OTS, but this effort cannot be expected to be conclusive within a year.

We also have little information on school-based prevention programs within Ontario, nor how these now compare with other provinces. It has been seven years since school curricula were assessed nationally (Health Canada, 1994), and seven years is an eternity in the current context of educational reform.

As noted above, it has not yet been possible to conduct a conclusive evaluation of the OTS, that is, to seek clear evidence of the *association* between OTS programs and policies, on the one hand, and either short- or long-term outcomes on the other.

Thus, for example, we suggested above a strong coincidence in the ready supply of cigarettes in Ontario and the increasing or stubbornly high rates of smoking. However, more detailed and different kinds of data are needed to bring this to a more definitive conclusion.

Since it is not possible with social interventions such as the OTS to have unambiguous control groups, the next best option may be to analyze exposure to different *degrees* of intervention – stricter vs. looser *TCA* enforcement, more vs. less retailer access, better vs. worse school-based programs, and so on. For this purpose, it would be invaluable to have a better idea of both policies and outcomes at the *community level*, that is, at a sufficiently detailed level that the natural variations in OTS elements can be associated with variations in smoking behaviour.[4] Two developments will make this type of evaluation more feasible in the future:

- The routine reporting by Public Health Units of a wide range of indicators relevant to tobacco control, starting in 1999;

- Statistics Canada's initiation of the Canadian Community Health Survey (CCHS) in 2000, which will provide biennial data on smoking behaviour – at the level of the Health Unit.

[4] Such an approach has been used to compare the natural variations across Canada in the price of cigarettes, health education expenditures, and restrictions on public smoking. This analysis reveals that all three policies are related to who smokes and how much they smoke (Stephens et al., 1999).

IMPLICATION FOR MONITORING & RESEARCH:

The 1999 Canadian Tobacco Use Monitoring Survey (CTUMS) will provide useful in-depth information on smoking, particularly by youth. We need such a national survey for ongoing comparisons between Ontario and the other provinces. We also need the regular monitoring of tobacco-related attitudes and knowledge that CTUMS can provide.

However, even these important innovations will not provide all the desired data. In particular, there will be a large gap between the program variables described in the public health unit reporting and the outcome variables in the CCHS. These include, for example, accessibility to tobacco for youth. Additional studies, or expansion of the coverage of the CCHS, will be needed to complete the picture.

IMPLICATION FOR MONITORING:

With respect to protection, there needs to be regular monitoring using consistent questions of:

- *exposure to ETS at home*
- *exposure to ETS at work*
- *the extent and nature of restrictions on smoking at work*
- *smoking by pregnant women*

At present, we have indicators for some of these important OTS elements, but they are not sufficiently routine in their collection or question wording. For example, the NPHS in 1996/1997 collected data on smoking during pregnancy only from ever-smokers (Table D), and asked only workers who smoke daily about restrictions on smoking while at the workplace. Neither finding can be compared with earlier surveys.

IMPLICATION FOR MONITORING:

For cessation purposes, we need:

- *updated information on the supply and activity of physicians, pharmacists, and other health professionals who can help motivate and guide their patients and clients toward effective cessation*[5]
- *better information on the reasons and context for relapsing*
- *better information on smokers' access and barriers to cessation services*

In conclusion, we can say that we now have a good deal of data including several time series that raise doubts about reaching many OTS goals. We also have a large amount of data about the *process* of tobacco control efforts, as well as evidence of short-term impacts and even longer-term outcomes that can be used to plan more effective tobacco control. Examples would include reduced youth access to cigarettes through better retailer compliance and higher prices.

Overall, however, it is clear that stronger evaluation designs are needed in order to acquire better evidence about program impacts.

IMPLICATION FOR EVALUATION:

We need more conclusive evidence linking the activities of OTS partners with progress toward OTS goals.

Five years of monitoring progress toward the goals of the Ontario Tobacco Strategy reveal mixed success: declining smoking among adults, but increased smoking by youth; increased protection against environmental tobacco smoke in many

[5] It has been five years since a large survey of smokers were asked if their physicians had ever advised them to quit (Statistics Canada, 1995).

public settings, but more ready access to cigarettes for minors; fairly widespread interest in quitting on the part of adult smokers, but an increase in the average amount smoked daily by men. Clearly, much has been accomplished since the initiation of the OTS, but much remains to be done. The renewal of the Strategy in September 1999, with an additional $10 million in funding, is a clear indication that much more will be done. Next year's report will provide an initial assessment of the outcome of the renewed OTS.

REFERENCES:

Abernathy T. *A Follow-Up Study to the Legal Impacts Baseline Study of 1994*. Toronto: Ontario Ministry of Health; 1996. Report.

Abernathy T. *Results of a Study to Collect Baseline Data Related to the Ontario Tobacco Control Act*. Toronto: Ontario Ministry of Health; 1994. Report.

Abernathy T, Lacchetti C. *Ontario Municipal Smoking Bylaw Study 1998*. Unpublished data, 1999a.

Abernathy T, Lacchetti C. *Tobacco Control Act 1998 Enforcement Study*. Unpublished data, 1999b.

ACNielsen. *Measurement of Retailer Compliance with Respect to the Tobacco Act & Provincial Tobacco Sales-To-Minors Legislation. Final Report Wave 2*. Ottawa: Health Canada, Health Protection Branch, Office of Tobacco Control; 1998. Report.

ACNielsen. *Measurement of Retailer Compliance with Respect to the Tobacco Act & Provincial Tobacco Sales-To-Minors Legislation. Final Results Wave I*. Ottawa: Health Canada, Health Protection Branch, Office of Tobacco Control; 1997. Report.

ACNielsen. *Measurement of Retailer Compliance with Respect of the Tobacco Control Act of Ontario. Findings for: Province of Ontario, Final Report, November 1996*. Toronto: Ontario Ministry of Health; 1996. Report.

ACNielsen. *Report of Findings: Measurement of Retailer Compliance with Respect to Tobacco Sales-to-Minors Legislation & Restrictions on Tobacco Advertising. Wave I Results - Final Report, December 1995*. Ottawa: Health Canada, Health Protection Branch, Office for Tobacco Control; 1995. Report.

Adlaf EM, Ivis FJ, Paglia A, Ialomiteanu A. *Ontario Drug Monitor 1998: Technical Guide*. CAMH Research Document Series No. 3. Toronto: Centre for Addiction and Mental Health, 1999a.

Adlaf EM, Paglia A, Ivis FJ. *Drug Use Among Ontario Students, 1977-1999: Findings from OSDUS* (CAMH Research Document No. 5). Toronto: Centre for Addiction and Mental Health, 1999b.

Asbridge M, O'Grady B, Abernathy T. *Municipal No-Smoking Laws in Ontario: An Exploration and Analysis of the Role of Legislation in Protecting the Health of Non-Smokers*. Toronto: Ontario Tobacco Research Unit, 1997. Working Papers, No. 29, (November):1-21.

Ashley MJ, Cohen J, Bull S, Ferrence RG, Poland B, Pederson LL, Gao J. Knowledge about tobacco and attitudes toward tobacco control: How different are smokers and nonsmokers? *Cancer Prevention and Control* (in press).

Ashley MJ, Cohen J, Bull S, Poland B, Gao J, Stockton L, Pederson L, Ferrence R. *Smoking in Ontario: Analysis of Data from the 'Q & Q'Study.* Toronto: Health Canada, Ontario Ministry of Health, Ontario Tobacco Research Unit, Centre for Health Promotion, University of Toronto; 1997. Report.

Edwards N, Sims-Jones N, Hotz S. *Pre and Postnatal Smoking: A Review of the Literature*. Ottawa: Ottawa Community Health Research Unit, University of Ottawa, 1996. CHRU Publication No. M96-2.

Ellison L, Morrison HI, de Groh M, Villeneuve PJ. Health consequences of smoking among Canadian smokers: An Update. Short Report. *Chronic Diseases in Canada* 1999;20(1):36-39.

Ellison LF, Mao Y, Gibbons L. Projected smoking-attributable mortality in Canada, 1991-2000. *Chronic Diseases in Canada* 1995;16:84-89.

Expert Panel. *Actions Will Speak Louder Than Words: Getting Serious About Tobacco Control in Ontario.* A report to the Minister of Health from her Expert Panel on the Renewal of the Ontario Tobacco Strategy. February 1999.

Flay, BR, Koepke, D, Thomson, SJ, Santi, S, Best, JA, Brown, KS. Six-year follow-up of the First Waterloo School Smoking Prevention Trial. *American Journal of Public Health* 1989;79(10):1371-1376.

Health Canada. *School Smoking Prevention Programs: A National Survey*. Ottawa: Minister of Supply and Services Canada, 1994.

Heatherton TF, Kozlowski LT, Frecker RC, Rickert WS, Robinson J. Measuring the heaviness of smoking using self-reported time to the first cigarette of the day and number of cigarettes smoked per day. *British Journal of Addiction* 1989; 84:791-800.

Ialomiteanu A, Bondy SJ. *The Ontario Alcohol and Other Drug Opinion Survey (OADOS) 1992-1995 User's Guide*. Toronto: Addiction Research Foundation, Social and Evaluation Research Department, 1996.

Kozlowski LT, Porter CQ, Orleans CT, Pope MA, Heatherton T. Predicting smoking cessation with self-reported measures of nicotine dependence: FTQ, FTND, and HSI. *Drug Alcohol Dependence* 1994;34:211-216.

Mills, C., Stephens, T., Wilkins, K. Summary report of the Workshop on Data for Monitoring Tobacco Use. *Chronic Diseases in Canada* 1994; 15: 105-110.

Ontario Ministry of Health. *Ontario Health Survey 1996-1997 Derived Variable Document*. Toronto: Ontario Ministry of Health, 1999.

Perkins S, Belcher J, Livesey J. A Canadian tertiary care centre study of maternal and umbilical cord cotinine levels as markers of smoking during pregnancy: Relationship to neonatal effects. *Canadian Journal of Public Health* 1997;88(4): 232-7.

Prochaska JO, DiClemente CC, Velicer WF, Rossi JS. Standardized, individualized, interactive, and personalized self-help programs for smoking cessation. *Health Psychology* 1993;12(5):399-405.

Shamley M. *Towards Health Outcomes. Goals 2 and 4: Objectives and Targets.* Toronto: Premier's Council on Health Strategy, 1991.

Single E, Robson L, Rehm J, Xi X. Morbidity and mortality attributable to alcohol, tobacco, and illicit drug use in Canada. *American Journal of Public Health* 1999a;89:385-390.

Single E, Truong MV, Adlaf E, Ialomiteanu A. *Canadian Profile: Alcohol, Tobacco and Other Drugs, 1999. Canadian Council for Substance Abuse*. Toronto: Centre for Addiction and Mental Health, 1999b.

Statistics Canada. *Survey on Smoking in Canada (1994): Microdata User's Guide*. Ottawa: Ministry of Supply and Services, 1995.

Stephens T. *Smoking in Canadian Homes*. Toronto: Ontario Tobacco Research Unit; 1999. Report.

Stephens T, Pederson LL, Koval, JJ. *Why Tobacco Control Must Be Comprehensive: Data at Last!* Presentation to the annual meeting of the Ontario Public Health Association, Toronto, November 1999.

Stewart P, Potter J, Dulberg C, Niday P, Nimrod C, Tawagi G. Change in smoking prevalence among pregnant women 1982-93. *Canadian Journal of Public Health* 1995; 86(1): 37-41.

Stewart D, Streiner D. Cigarette smoking during pregnancy. *Canadian Journal of Psychiatry* 1995; 40(10): 603-7.

World Bank. *Directions in Development: Curbing the Epidemic: Governments and the Economics of Tobacco Control.* Geneva, Switzerland: The World Bank; 1999. Report.

Xie X, Rehm J, Single E, Robson L. *The Economic Costs of Alcohol, Tobacco and Illicit Drug Abuse in Ontario: 1992.* Research Document Series No. 127. Toronto: Addiction Research Foundation; 1996.

APPENDIX 1: OTS GOALS AND OBJECTIVES

In 1992, the Ontario government established objectives and a set of goals for the Ontario Tobacco Strategy (OTS) for 1995, and for the year 2000.

The OTS has three overall objectives: prevention, protection, and cessation. Specifically, these focus on:

- preventing non-smokers, particularly children and adolescents, from starting to use tobacco;
- protecting the population from exposure to environmental tobacco smoke; and
- support for smoking cessation initiatives.

The goals are:

By 1995

- Make all schools, workplaces and public places smoke-free.

- Eliminate tobacco sales to minors.

By 2000

- Reduce tobacco sales by 50 percent.

- Reduce the proportion of 12 to 19 year-olds who smoke to 10 percent.

- Reduce the proportion of women 20 and over who smoke to 15 percent.

- Reduce the proportion of men 20 and over who smoke to 15 percent.

- Eliminate the use of tobacco products by pregnant women.

APPENDIX 2: METHODS

1. APPROACH TO MONITORING

Monitoring Process

This Report, like the four previous ones in this series, is intended to *monitor* progress toward the goals of the Ontario Tobacco Strategy. It is not intended as a formal evaluation of the Strategy. This Report summarizes information that reflects on progress toward the objectives, by describing (a) related *activities*, (b) short-term *impacts* of those activities, and (c) trends in longer-term *outcomes*, such as reduced smoking. A formal evaluation, on the other hand, would *link* activities, impacts, and outcomes through better data and would require a more formal analysis than is possible with this Monitoring Report. Nevertheless, we believe this Report offers some useful insights into the progress of the Ontario Tobacco Strategy.

Both qualitative and quantitative information were used for this Report. Qualitative information appears mainly in Chapter 2 on Strategy Activities, and was obtained from government and non-government sources, especially the partners active in the OTS. Further detail on the methods used to gather information about resource centre and community activities is provided below.

Quantitative data appear mainly in Chapter 3, and are used to describe trends in short-term impacts (e.g., sales of manufactured cigarettes) and longer-term outcomes (e.g., youth smoking rates) that should be affected by the Strategy=s activities. The survey sources for these data are also described below.

Reporting Period

The reporting period for this Report is April 1998 through March 1999. The information in Chapter 2 is based mainly on this time period. In Chapter 3, however, sometimes information outside this period is included because the data are the most recent and are readily available. For example, regional smoking patterns in Ontario were obtained from the National Population Health Survey 1996-1997 because of its large sample size and the ability to analyze data according to the new health planning regions in Ontario.

2. TOBACCO-RELATED DEVELOPMENTS IN CANADA AND BEYOND

Reports on Federal, National, and Provincial and Industry Activities

A letter was developed and mailed to OTRU affiliates and NSTRU members. These letters asked for a listing and brief description of major developments affecting tobacco control between April 1, 1998 and March 31, 1999. Specifically, initiatives to do with health, revenue, agriculture, and justice were highlighted. Responses were mailed or faxed back.

Reports on International Activities

A letter was developed and mailed to individuals abroad known to OTRU. We asked for a 15-minute telephone interview in which major developments in international tobacco control could be discussed. We were interested in initiatives to do with health, revenue, agriculture and justice that might affect tobacco control.

3. AGENCY ACTIVITIES

A questionnaire was developed to systematically gather information on the tobacco-related activities of 10 agencies. This questionnaire was developed in 1998 with input from the Ministry of Health and COMMIT, and minor refinements were made to it this year. It was sent to a key senior contact person at each of the agencies.

The questionnaire contained five items in total. Questions #1-3 asked for summaries of the organization's tobacco-related activities, either in progress or complete, for the April 1, 1998 - March 31, 1999 fiscal period. Several categories were used for question one:

- information resources
- direct services
- networking and collaborative activities
- policy change initiatives
- other OTS activities

Other questions asked the respondent to estimate the proportion of effort devoted to each of the OTS objectives of prevention, protection and cessation for all OTS-related activity in 1998/1999. Another question asked the extent to which each of the given priority groups were intended to be long-term beneficiaries of the agency's 1998/1999 tobacco reduction activities. A final open-ended question asked the respondent to provide some thoughts on the directions of the agency over the past five years and the intended directions for the agency over the next year and beyond.

When necessary, other sources were consulted in order to gain a fuller understanding of the agency's tobacco-related activities: websites, annual and activity reports, pamphlets, and other contact persons within the organization.

One telephone interview was conducted in lieu of the questionnaire.

4. CANADIAN TOBACCO SALES

The major Canadian tobacco companies report monthly domestic and export tobacco sales to Statistics Canada (Statistics Canada Catalogue #32-022, 1990-1998). Data used here were obtained from Health Canada under the *Access to Information Act*.

Data on tobacco sales have certain limitations. These data are based on sales to wholesalers and do not necessarily reflect retail sales to consumers. For example, wholesalers may stockpile tobacco in anticipation of a tax increase. While smuggling of Canadian cigarettes exported to the U.S. has been largely eradicated, interprovincial smuggling between low tax and high tax provinces still occurs. Some tobacco recorded as sold in Ontario is smuggled to Manitoba and other western provinces. Note that both stockpiling and smuggling would lead to an overestimate of total consumption in the province, followed, in the former case, by an artificial drop in consumption.

5. SURVEY DATA

Estimation of Smoking Behaviours

Sample surveys are designed to provide an estimate of the Atrue@ value of a particular characteristic in the population, such as the percentage of Ontario adults who report using cigarettes. All adults in the province are not surveyed, however, so that the Atrue@ population percentage is unknown and is estimated from the sample. Some sampling error will be associated with this estimate. Confidence intervals provide a range around percentage values that indicate the interval within which the true population percentage lies. In this report, 95% confidence intervals are used. This means there is a 95% chance that the given confidence interval will contain the true value of the quantity being estimated.

Tests of Significance

Formal tests of statistical significance have not always been performed. One should therefore interpret trends that arise from comparisons with caution.

Where 95% confidence intervals are provided, as in the tables in Appendix 2, they can be used by the reader to test the significance of the differences between independent samples (e.g., year-to-year comparisons). If individual 95% confidence intervals do not overlap for two independent groups (e.g., males and females), then the corresponding significance level (p-value) for testing the equality of the two groups would be less than 0.05. Thus, for example, if the *lower* limit of an estimate for males does not overlap the *upper* limit of an estimate for females, the estimates can be interpreted as being significantly different from a statistical perspective using this somewhat conservative test (whether these differences are significant from a *practical* standpoint is for the reader to judge.)

A Word of Caution

This report groups together current data from various surveys and sources. Direct comparison of results from different surveys may not always be appropriate, as the surveys have employed different sampling schemes, question wording and questionnaire formats. In addition, the population of interest and purpose of study can vary between surveys and research organizations. *Please exercise caution when comparing results of different surveys.*

ACNielsen *Tobacco Compliance Survey* (ACNielsen, 1995, 1996-1998)

Research teams made up of two Nielsen observers, one a minor, 15 to 17 years of age, and the other an adult over 19 years of age were sent into a randomly selected sample of retailer establishments (N=5,036) in 25 cities and towns across Canada in 1995. In 1996, 4,950 stores, selected randomly and independently of the sample used in 1995, were visited over a four-week period from August 12 to September 6, 1996, exactly one year after the first measurements were collected. Data for 1997 were collected between August 18 and September 25, 1997 (N=5,013). Data for 1998 were collected between July 13 and September 14, 1998 (N=5,023).

The minors in this study attempted to buy a name brand cigarette, but were given clear instructions about how to back out of any attempted sale. In no instances was a purchase actually made.

The senior member of the research team was responsible for supervising the younger partner and for carrying out a visual inspection of the retailer=s place of business for the purpose of observing and recording compliance with the posting of mandatory signs under the *Tobacco Act* or similar provincial legislation. These people were also responsible for collecting information on in-store tobacco advertising and promotions.

The methodology for the most recent 1998 is identical to that of the 1997 survey. The methodology of the 1997 survey closely resembles that of the 1995 and 1996 surveys, except for an increase in the proportion of 17 year old shoppers. It was found in the past that it was easier for older teens to purchase cigarettes. To make the test more difficult, Health Canada requested that the proportion of stores visited by 17 year olds be increased to 50%, compared to 25% and 19% in 1995 and 1996 respectively.

***National Population Health Survey,* Statistics Canada, 1996/1997**

Smoking-related data are from the personal interview portion of the second cycle of the National Population Health Survey (NPHS), conducted by Statistics Canada from June 1996 to August 1997. Overall, the survey visited over 20,000 households that also participated in the first cycle two years earlier, for a total of 16,000 respondents who provided full information; an additional 66,000 respondents (who were not part of the longitudinal panel) were also surveyed to provide detailed cross-sectional data on the in-depth health questions. The findings for the smoking-related topics are based on Ontario=s share of the full sample of 82,000 respondents age 12 and older (this is an important qualification, since most surveys start at age 15 or 18.) Ontario=s sample was over 39,000. This over-sample was intended to provide an update to the 1990 Ontario Health Survey. The geographical composition of the regional strata used in this Report is displayed in Table 2-1.

***Ontario Alcohol and Other Drug Opinion Survey* (OADOS) 1992-1995, CAMH (formerly the Addiction Research Foundation)** (Ialomiteanu and Bondy, 1996)

The Ontario Alcohol and Other Drug Opinion Surveys (OADOS) were conducted yearly from 1992 to 1995 by CAMH. These surveys examined the use of alcohol, tobacco and other drugs as well as attitudes toward tobacco control policies. They involved a telephone interview survey of Ontario residents designed to represent the population, aged 18 and older, living in private residences and speaking either English or French.

The sample sizes for the 1992, 1993, and 1995 surveys were roughly 1,000, while the 1994 sample was approximately 2,000. Response rates were 63%, 65%, 63%, and 63% respectively.

Ontario Drug Monitor **(ODM) 1998, CAMH** (Adlaf et al., 1999a)

In 1996, CAMH replaced the OADOS series of surveys with the Ontario Drug Monitor (ODM). The ODM is an aggregation of independent monthly surveys conducted by the Institute for Social Research at York University. In 1998, 12 independent monthly surveys were conducted (January - December). A final sample of 2,509 respondents participated, representing an effective response rate of 69%.

A two-stage probability design is used. Each month, a sampling frame is obtained of all active area codes and exchanges in Ontario. Within each regional stratum (strata based on telephone exchanges), a random sample of telephone numbers is chosen with equal probability of selection. Within selected households, one respondent aged 18 or older, who can complete the interview in English or French, is selected according to which household member has the most recent birthday.

Ontario Municipal Smoking By-Law Study (Abernathy and Lacchetti, 1999a)

The 1994 *TCA*, in addition to regulating the use and sale of tobacco products, enables municipalities to regulate tobacco use in public places through the enactment of more stringent local by-laws. The methodology of the 1998 Study was similar to that of the 1994 Study, with the exception of different region groupings (Table 2.2) and minor changes to the Asbridge-O'Grady Index, the Index used to code the by-laws into different levels of regulation (Asbridge et al., 1997). Data were obtained through a compilation of municipal by-laws within Ontario that were provided to the investigators by the public health units.

Ontario Student Drug Use Survey 1981-1999, **CAMH** (Adlaf et al., 1999b)

The *Ontario Student Drug Use Survey* has been conducted every two years since 1977 by CAMH (Adlaf et al., 1999b). It is the longest ongoing study of adolescent drug use in Canada. The survey monitors the use of alcohol, tobacco and other drugs among Ontario students. For each of the 12 surveys, the target population is composed of all students enrolled in the public or Catholic regular school systems. Thus, it excludes those 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 (about 7% of Ontario students).

Each survey is based on a random probability design. Surveys from 1981 to 1997 had a sample design that employed a single-stage (board cluster) stratified by grade (grades 7, 9, 11, and 13) and region (North, West, East, and Toronto), which resulted in the selection of more school boards and schools.

The 1977 and 1979 surveys employed different stratification than subsequent years and are therefore excluded from this report.

In 1999, the OSDUS employed a two-stage (school first, then class clusters) sample design stratified by region (same regions used in previous surveys). The 1999 design differed from earlier surveys in three important ways:

- all students in grades 7 though 13 (OAC) were surveyed

- schools, rather than school boards, were the primary sampling unit
- students in Northern Ontario were oversampled

As in previous surveys, the sampling frame was based on the Ontario Ministry of Education and Training's 1999 MIDENT file, which provided the information on student enrollment figures.

Students from 38 school boards participated in the 1999 survey. In total, data from 111 schools, consisting of 285 classes, comprised the final sample. The overall participation rate of students was 77%, which corresponds to an unweighted sample of 4,894 students (766 in grade 7; 798 in grade 8; 905 in grade 9; 638 in grade 10; 750 in grade 11; 590 in grade 12; and 447 in grade 13). The final sample of 4,894 students represents approximately 923,000 Ontario students in grades 7 through 13 (Adlaf et al., 1999b).

***Qualitative & Quantitative Study*, Ontario Tobacco Research Unit, 1996** (Ashley et al., 1997)

Smoking, Smoking Cessation, Tobacco Control and Programming: A Qualitative and Quantitative Study (AThe Q & Q Study@) was conducted in the spring and early summer of 1996 by the Ontario Tobacco Research Unit, Centre for Health Promotion, University of Toronto. It is a population-based survey of Ontario residents, 18 years of age and older, conducted using random-digit dialing and a computer-assisted telephone interview. A qualitative component involved focus groups and in-depth interviews with a subsample of survey respondents from the Metropolitan Toronto area. The survey objectives were to describe the current situation in Ontario with respect to knowledge of health effects of active and passive smoking, attitudes toward restrictions on smoking, reasons for quitting and relapse, smokers= attitudes and behaviours concerning light and mild cigarettes, reasons for smoking, and public perspectives on tobacco control legislation.

The quantitative component used a two-stage probability design to select survey respondents. In the first stage, households were selected by randomly selecting telephone numbers and in the second stage, respondents were randomly selected from all eligible adults in the household, using the most recent birthday method.

The survey was completed at the Institute for Social Research, York University, between April 23rd and June 25th 1996, yielding a total of 1,764 telephone interviews and a response rate of 68%.

***Tobacco Control Act* Enforcement Study** (Abernathy and Lacchetti, 1999b)

The 1994 Ontario *Tobacco Control Act* (*TCA*) dictates fines and other penalties for individuals who smoke in prohibited places, for merchants who sell tobacco products to adolescents, and for those who violate sign requirements. Enforcement of the *Act* resides with local departments of health. Data from the *TCA* Enforcement Study that are presented in this report were obtained through the individual health units by the Public Health Branch of the Ministry of Health through the *Ministry Performance Indicator Questionnaire - Chronic Disease Prevention Indicators*.

Waterloo Smoking Prevention Projects - Study 4 (WSPP4) **1996 – 2001,** *Health Behaviour Research Group, University of Waterloo*

The Health Behaviour Research Group (formerly the Waterloo Smoking Projects) at the University of Waterloo has completed four randomized trials of the effectiveness of social influences smoking prevention

curricula in elementary schools. The WSPP4 Study was undertaken with funding from the Heart and Stroke Foundation, beginning in 1996. Twenty-four secondary schools in three school boards in Southern Ontario were randomized (in pairs) to either a technical assistance condition or a control (usual practice) condition. Whole school surveys in the Fall of 1996 were used for the purposes of matching schools for randomization and for planning activities. Fall surveys are conducted in the intervention schools each year in those schools that wish to use the information as a planning tool. Evaluation surveys, again of the whole school, were conducted in the Spring of 1997, 1998 and 1999, and will be repeated annually to the end of the five year study. Unlike previous WSPP studies, there is no longitudinal tracking of students; so while responses from individual schools can be monitored across time, it is not possible to link responses from different time points to individual students.

General Definitions

Prevalence of smoking: Proportion of cigarette smokers in the target population.

Quit ratio (former/ever): Ratio of number of former smokers to the number of ever smokers (current + former). Also the proportion of ever smokers (current + former) who are former smokers. When specified, the numerator portion of the ratio may only include former smokers who quit >1 year ago, as those who quit within a year have a high likelihood of relapsing to smoking.

The specific definitions used in the surveys discussed in this report are given below. In some cases, more than one type of smoker definition can be obtained from the survey.

Ontario Alcohol and Other Drug Opinion Survey, Addiction Research Foundation, 1992-1995

Current smoker: Answered YES to Aat the present time do you smoke cigarettes?@
Daily smoker: At the present time, smokes cigarettes every day.

***Ontario Drug Monitor*, Centre for Addiction and Mental Health, 1996-1998**

Smoking status estimates from the ODM were calculated using the flowchart in Fig. 48 in order to establish a more consistent methodology for deriving the smoking status variable. This led to no or minor changes to previously released ODM estimates in previous Monitoring Reports. At the overall level, estimates changed by 1% at the most. For example, the proportion of adult men who smoked in Ontario in 1997 changed from 29% to 30% using this derivation flowchart.

***Ontario Student Drug Use Survey*, Centre for Addiction and Mental Health, 1981-1999**

Tobacco use (definition #1, as marked in Chapter 3): Use of more than one cigarette in the past 12 months.

Tobacco use (definition #2, as marked in Chapter 3): More than 100 cigarettes in lifetime and some during the last month.

Waterloo Smoking Prevention Project, University of Waterloo, 1997

Smoker: Use of more than one cigarette in the past 12 months.

Heaviness of Smoking Index (HSI)
(Heatherton et al., 1989)
The index is based on points given for the time to first cigarette (TAC) and number of cigarettes per day (CPD).

TAC is scored:

<=5 minutes - 3 points
6-30 minutes - 2 points
31-60 minutes - 1 point
>60 minutes - 0 points

CPD is scored:

1-10 - 0 points
11-20 - 1 point
21-30 - 2 points
>=31 - 3 points

Low scores (0-2) indicate low dependence on nicotine while scores ranging from 5-6 indicate high dependence.

NPHS 1996/1997

Current smoker: Daily and nondaily smokers based on answer to Aat the present time, do you smoke cigarettes daily, occasionally or not at all?@

6. CLASSIFICATION OF CURRENT SMOKERS ACCORDING TO STAGE OF CHANGE

The process of quitting smoking can be viewed as a progression through five stages of change (Prochaska et al., 1993). Fig. 31 shows only four stages because it is based on smokers, i.e., former smokers in maintenance are not shown.

Precontemplation
- individuals who are not seriously thinking of quitting in the next 6 months

Contemplation
- individuals are seriously thinking about quitting in the next 6 months

Preparation
- individuals intend to quit in the next month and seriously tried to quit in the past year

Action
- individuals quit smoking in the past 6 months

Maintenance
- individuals have been abstinent for more than 6 months

7. TABLES AND FIGURES (Appendix 2)

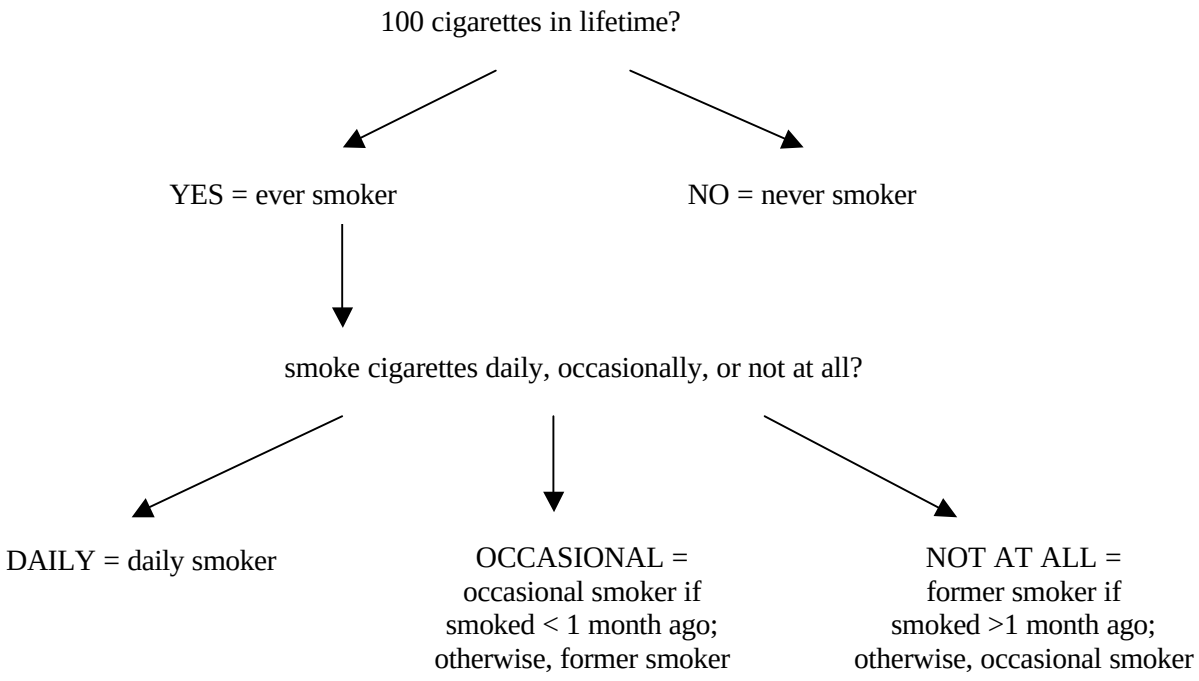
Table 2-1: Ontario Health Survey (OHS) Planning Regions (Ontario Ministry of Health, 1999)

OHS Planning Region	Counties (23 Local Areas)
South West	Essex Kent, Lambton Elgin, Oxford, Middlesex Bruce, Grey, Perth, Huron
Central South	Niagara Hamilton-Wentworth Brant, Haldimand-Norfolk
Central West	Halton Peel Wellington, Dufferin Waterloo
Toronto	
Central East	Northumberland, Victoria, Haliburton, Peterborough Durham York Simcoe
Eastern Region	Ottawa-Carleton Renfrew, Prescott & Russell, Stormont, Dundas & Glengarry Lanark/Leeds/Grenville, Hastings, Prince Edward, Frontenac, Lennox & Addington
North	Algoma, Cochrane Manitoulin, Sudbury (R.M.), Sudbury (T.D.) Muskoka, Parry Sound, Nipissing, Timiskaming Thunder Bay, Kenora, Rainy River

Table 2-2: Ontario Region Grouping for the 1998 Ontario Municipal Smoking By-Law Study (Abernathy and Lacchetti, 1999a)

Ontario Region	Public Health Unit
South West	Bruce-Grey-Owen Sound
	Chatham-Kent
	Elgin-St. Thomas
	Huron
	Lambton
	Middlesex-London
	Oxford
	Perth
	Windsor-Essex
Central West	Brant
	Haldimand-Norfolk
	Halton
	Hamilton-Wentworth
	Niagara
	Waterloo
	Wellington-Dufferin-Guelph
Central East	Durham
	Haliburton, Kawartha, Pine Ridge
	Peel
	Peterborough
	Simcoe
	Toronto
	York
East	Eastern Ontario
	Hastings-Prince Edward
	Kingston, Frontenac, Lennox & Addington
	Leeds, Grenville, Lanark
	Ottawa-Carleton
	Renfrew
North East	Algoma
	Muskoka-Parry Sound
	North Bay
	Porcupine
	Sudbury
	Timiskaming
North West	Northwestern
	Thunder Bay

Fig. 48: Derivation of Smoking Status in the Ontario Drug Monitor 1996-1998



APPENDIX 3: BACKGROUND ON OTS PARTNERS

Ontario Campaign for Action on Tobacco

- **Website:**

www.ocat.org

- **Background**

The Ontario Campaign for Action on Tobacco (OCAT), founded in 1992, is an advocacy network of agencies including the Ontario Medical Association, the Canadian Cancer Society - Ontario Division, the Ontario Lung Association, the Heart and Stroke Foundation of Ontario, the Non-Smoker's Rights Association, and Cancer Care Ontario. Its first campaign was in 1993 in support of provincial tobacco control legislation to prohibit sales of cigarettes to minors, eliminate cigarette sales from pharmacies and vending machines, and make public places smoke-free throughout Ontario. With the exception of smoke-free public places, all of these objectives were achieved with the passage of Ontario's *Tobacco Control Act* in November 1994.

Council for a Tobacco Free Ontario

- **Website:**

www.opc.on.ca/ctfo

- **Background**

The Council for a Tobacco-Free Ontario (CTFO) contributes to an increased understanding and implementation of effective tobacco control interventions through co-ordination, assistance, and the provision of resource materials to 56 local councils on smoking and health. CTFO is a volunteer-directed, not-for-profit organization, which was originally founded in 1975 by the Canadian Cancer Society - Ontario Division, the Heart and Stroke Foundation of Ontario, the Lung Association, and several other health and professional organizations. The Council supports local council activity for National Non-Smoking Week and World No Tobacco Day, as well as coalition-building activities.

National Clearinghouse on Tobacco and Health

- **Website:**

www.cctc.ca/ncth

- **Background**

The National Clearinghouse on Tobacco and Health (NCTH) is a Canadian resource centre on tobacco and health-related issues. The NCTH identifies, collects, organizes, and disseminates tobacco and health information. It is a program of the Canadian Centre for Tobacco Control, funded by federal, provincial, and territorial governments, and is under the stewardship of the steering committee for the National Strategy to Reduce Tobacco Use in Canada. Although national, a majority of the NCTH clients are from Ontario. The NCTH provides a valuable link between the scientific, medical and health communities, the media, and the general public. Funding for at least another three years has been assured.

Program Training and Consultation Centre

- **Website:**

www.opc.on.ca/ptcc

- **Background**

The Program Training and Consultation Centre (PTCC), first funded in October 1993, provides training and consultation services to agencies involved in community-based tobacco-use reduction strategies. It is a partnership between the Ottawa-Carleton Health Department, RBJ Health Management Associates, and the Centre for Applied Health Research at the University of Waterloo, with offices in Ottawa and Kitchener. PTCC offers a mix of training and consultation services, including provincial and regional workshops, individualized in-depth consultations, follow-up and feedback to communities on program activities, and dissemination of information packages.

Smoking and Health Action Foundation

- **Website:**

www.nsra-adnf.ca

- **Background**

The Smoking and Health Action Foundation (SHAF) plays a primary support role to the Ontario Tobacco Strategy by carrying out research and public education activities that help shape the development of healthy public policy in Ontario. SHAF also acts as an information resource centre on tobacco policy issues and assists in the development of national health policies that impact on the quality of health in Ontario. Areas of focus are ETS, tobacco taxation, economics of the tobacco industry, informed consent (packaging, labeling, warnings), tobacco advertising and sponsorship, alternative nicotine delivery, and monitoring and analyzing current issues such as the recovery of tobacco-caused health care costs (B.C. and U.S.).

Ontario Tobacco Research Unit

- **Website:**

www.arf.org/otru

- **Background**

The Ontario Tobacco Research Unit (OTRU) was established by the Ministry of Health in 1993 to undertake a program of research, development and dissemination of information about effective tobacco control programs and policies. OTRU critically evaluates existing knowledge, summarizes it appropriately, and makes it available in the most useful form. OTRU plays a leading role in monitoring the Ontario Tobacco Strategy. During the period April 1998 - March 1999, OTRU had 7 Principal Investigators, 32 Co-Investigators, 27 Collaborating Investigators, 38 Affiliates, 8 Consultants, 12 Advisory Board Members and 4 full time staff. OTRU's investigators are from across the province and the wider tobacco control community.

Heart Health Resource Centre

- **Website:**

www.web.net/heart

- **Background**

In February 1998, the Ministry of Health and Long Term Care launched a five-year, $17-million heart health program, the largest and most far-reaching cardiovascular disease prevention program in North America. This province-wide program has distributed

funding to thirty-six public health agencies, one community hospital and their community partners to implement community-based heart health programming. The Heart Health Resource Centre (HHRC) is part of this provincial strategy. Created in 1998 with a multi risk factor focus, it has the responsibility of supporting all public health agencies and their community partners as they plan, develop, promote, implement, evaluate and sustain their respective programs. The mandate of the HHRC is to enhance the capacity of public health agencies and their community partners from across the province to implement comprehensive, community-based heart health programs.

Canadian Heart Health Initiative Ontario Project

- **Website:**

www.ahs.uwaterloo.ca/~hbr/chhiop/chhiop.html

- **Background**

The Canadian Heart Health Initiative (CHHI) is a 15-20 year commitment to increase knowledge about heart health. CHHIOP, the Ontario project within CHHI, is a collaborative endeavour with Principal Investigators from the Ontario Ministry of Health, the University of Waterloo and McMaster University. CHHIOP aims at understanding how public health units are addressing cardiovascular disease prevention in their communities; in particular, the modifiable risk factors of tobacco use, nutrition and physical activity.

Centre for Addiction and Mental Health

- **Website:**

www.camh.net

- **Toll-Free Number**:

1-800-INFO-CAMH

- **Background**

The Centre for Addiction and Mental Health (CAMH) represents the merging of the Addiction Research Foundation (ARF), the Donwood Institute, the Clarke Institute of Psychiatry, and the Queen Street Mental Health Centre. The goal of CAMH is to prevent and reduce the harm associated with alcohol, tobacco, and other drugs among Ontarians. The Centre conducts research on all aspects of tobacco use, from basic laboratory work to research on programs and policies. Ongoing work of scientific and program staff with expertise in the tobacco area provides science-based information to programmers and policy-makers across Ontario.

The Canadian Cancer Society - Ontario Division

- **Website:**

www.ontario.cancer.ca

- **Toll-Free Number**

1-800-939-3333

- **Background**

The Canadian Cancer Society - Ontario Division (CCS) is a national, community-based organization of volunteers whose mission is the eradication of cancer and the enhancement of the quality of life of people living with cancer. CCS, in collaboration with the National Cancer Institute of Canada, works toward these goals through research, education, patient services, and advocacy for healthy public policy. The CCS - Ontario Division is a major partner in OCAT and was a major player in the passage of the Ontario *Tobacco Control Act*. At the community level, both the public education components and the public policy activities are delivered by volunteers, either alone or as part of a coalition of agencies.

Heart and Stroke Foundation of Ontario

- **Website:**

www.hsf.on.ca

- **Toll-free Healthline**

1-888-473-4636

- **Background**

The Heart and Stroke Foundation of Ontario (HSFO) is a community-based volunteer organization whose mission is to reduce the risk of premature death and disability from heart disease and stroke by raising funds for health promotion and research. The Foundation was a founding member of the Ontario Campaign for Action on Tobacco (OCAT) and continues to be a major partner in funding OCAT.

The Ontario Lung Association

- **Website:**

www.on.lung.ca

- **Background**

The Ontario Lung Association, a division of the Canadian Lung Association, has 33 community offices throughout Ontario. The Lung Association is Canada's oldest not-for-profit health promotion organization and was first established in 1900 to stop the spread of tuberculosis. Now its mission is the improvement of respiratory health by providing a number of community services and supporting medical research. Since the early 1960s, the Lung Association has taken a leadership role in encouraging individuals to stop smoking.

APPENDIX 4: TABLES

Table 4-1: Deaths Attributable to Tobacco Use by Sex and Major Smoking-Caused Diseases, Ontario 1992

	Males	Females	Total
Cancers	3502	1524	5026
Lung	2777	1237	4014
Oesophageal	172	37	209
Pancreatic	91	58	148
Lip and Oropharyngeal	104	41	145
Bladder	114	29	144
Renal Parenchymal	81	27	108
Laryngeal	97	10	107
Stomach	50	19	69
Lung (Spousal ETS)	8	28	36
Cervical	0	27	27
Other Cancers	8	11	19
Heart and Circulatory Diseases	2776	1355	4131
Ischaemic Heart	1754	673	2427
Arterial Disease	444	263	707
Stroke	395	298	693
Heart Failure, Ill-Defined	92	58	150
Cardiac Dysrhythmia	67	39	106
Pulmonary Circulatory	24	24	48
Respiratory Diseases	1545	770	2315
Chronic Obstructive Pulmonary Disease	1306	650	1956
Pneumonia and Influenza	239	120	359

Source: Xie et al., 1996

Table 4-2: Students Reporting Use of >1 Cigarette During the Past Year, by Sex and Grade, Ontario 1981-1999

Year		1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	
(N)		(3270)	(4737)	(4154)	(4267)	(3915)	(3945)	(3571)	(3870)	(3990)	(2868)	(4894)
		% Reporting >1 Cigarette During the Past Year (95% Confidence Interval)										
											G7,9,11,13	G7-13
Total		30 (27-34)	29 (26-32)	25 (23-27)	24 (23-26)	23 (22-25)	22 (20-23)	24 (21-26)	28 (26-30)	28 (26-29)	28 (25-32)	29 (27-32)
Sex	Male	26 (24-29)	28 (24-32)	23 (20-25)	23 (20-25)	22 (20-24)	22 (20-23)	23 (20-25)	28 (26-31)	26 (24-29)	28 (24-33)	30 (27-33)
	Female	35 (29-41)	30 (27-33)	26 (23-29)	25 (23-27)	25 (21-28)	22 (19-25)	25 (22-29)	28 (25-30)	29 (28-30)	28 (24-33)	29 (26-32)
Grade	7	9 (8-11)	15 (8-21)	11 (7-14)	10 (7-13)	7 (4-10)	6 (5-7)	9 (8-11)	10 (7-14)	10 (8-12)	7 (5-10)	7 (5-10)
	8	—	—	—	—	—	—	—	—	—	—	18 (14-22)
	9	32 (27-38)	33 (31-34)	25 (20-29)	25 (22-28)	28 (26-30)	21 (19-24)	24 (19-29)	28 (26-29)	26 (24-28)	28 (24-33)	28 (24-33)
	10	—	—	—	—	—	—	—	—	—	—	37 (32-43)
	11	43 (38-49)	45 (39-50)	35 (31-39)	32 (29-36)	30 (27-34)	32 (29-34)	35 (29-41)	42 (37-46)	43 (40-47)	42 (35-48)	42 (35-48)
	12	—	—	—	—	—	—	—	—	—	—	39 (33-44)
	13 (OAC)	23 (13-33)	30 (27-33)	29 (26-33)	32 (29-34)	30 (27-34)	31 (29-32)	28 (22-33)	31 (28-34)	31 (29-33)	38 (25-53)	38 (25-53)

Refer to Appendix 2 for survey descriptions.
Source: Adlaf et al., 1999b

Table 4-3: Current Smoking by Age and Sex, Age 18+, Ontario 1992-1998

	1992	1993	1994	1995	1996	1997	1998
	% Smokers (95% Confidence Interval)						
Age 18+							
Total	26 (23-29)	23 (20-26)	25 (23-27)	29 (26-32)	27 (25-29)	27 (25-29)	26 (24-28)
Male	30 (26-34)	28 (24-32)	27 (24-30)	30 (26-34)	29 (26-32)	30 (27-33)	28 (25-31)
Female	23 (19-27)	19 (16-22)	24 (21-27)	27 (23-31)	26 (24-29)	25 (23-28)	24 (21-26)
Ages 18-34							
Total	31 (26-36)	28 (23-33)	34 (30-37)	33 (28-38)	30 (27-34)	35 (31-38)	33 (29-37)
Male	33 (26-40)	31 (24-38)	35 (29-41)	31 (23-39)	31 (26-37)	39 (34-45)	37 (31-43)
Female	28 (21-35)	24 (18-30)	34 (29-39)	35 (27-43)	30 (25-35)	30 (26-35)	29 (24-34)
Ages 35-54							
Total	27 (23-31)	25 (21-29)	23 (20-26)	29 (24-34)	30 (27-33)	28 (25-31)	27 (24-30)
Male	35 (28-42)	30 (23-37)	24 (19-29)	35 (28-42)	32 (28-37)	30 (26-35)	27 (23-32)
Female	22 (16-28)	20 (14-26)	22 (18-26)	23 (16-30)	27 (23-31)	26 (22-30)	26 (23-31)
Age 55+							
Total	14 (9-19)	12 (7-17)	15 (11-19)	19 (13-25)	19 (16-22)	14 (12-17)	17 (14-20)
Male	12 (6-18)	16 (8-24)	18 (12-24)	17 (9-24)	17 (13-23)	14 (11-19)	18 (13-24)
Female	15 (8-22)	9 (4-14)	12 (8-16)	21 (13-29)	20 (16-25)	14 (11-18)	15 (12-20)

Refer to Appendix 2 for definitions of "current" smoking and survey descriptions.
Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey, 1992-1995; Ontario Drug Monitor 1996-1998

Table 4-4: Daily Smoking by Sex, Ontario 1992-1998

	1992	1993	1994	1995	1996	1997	1998
	% Daily Smoker (95% Confidence Interval)						
Age 18+							
Total	25 (22-28)	22 (19-25)	24 (22-26)	27 (24-30)	23 (21-25)	23 (21-25)	21 (20-23)
Male	29 (25-33)	26 (22-30)	25 (22-28)	29 (25-33)	24 (21-26)	26 (23-29)	24 (21-27)
Female	22 (19-25)	19 (16-22)	23 (20-26)	25 (21-29)	23 (20-25)	20 (18-23)	19 (17-22)

Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey, 1992-1995; Ontario Drug Monitor 1996-1998

Table 4-5: Mean Number of Cigarettes Smoked Daily by Sex, Daily Smokers, Ontario 1992-1998

	1992	1993	1994	1995	1996	1997	1998
	Mean # cigarettes smoked daily (95% Confidence Interval)						
Age 18+							
Total	18.0 (16.6-19.5)	16.4 (15.1-17.6)	16.1 (15.1-17.1)	17.6 (16.2-19.0)	17.7 (17.0-18.5)	17.1 (16.2-17.9)	17.6 (16.8-18.5)
Men	19.0 (16.8-21.2)	16.9 (15.2-18.7)	16.7 (15.0-18.3)	19.4 (17.7-21.2)	19.6 (18.5-20.8)	18.1 (16.9-19.2)	19.7 (18.4-20.9)
Women	16.9 (15.1-18.7)	15.6 (13.9-17.3)	15.6 (14.3-16.8)	15.4 (13.3-17.6)	16.0 (15.0-16.9)	15.9 (14.7-17.0)	15.4 (14.4-16.4)

Source: CAMH surveys: Ontario Alcohol and Other Drug Opinion Survey, 1992-1995; Ontario Drug Monitor 1996-1998

Table 4-6: Support for Smoke-Free Public Places, by Smoking Status, Age, and Sex, Age 18+, Ontario 1998

ATTITUDES TOWARD SMOKING IN PUBLIC PLACES	TOTAL	SMOKING STATUS			AGE			SEX	
		Current	Former	Never	18-34	35-54	55+	Men	Women
Workplaces									
• Smoking should NOT be allowed in any section of a workplace	**46**	24	51	55	47	50	38	39	51
• Smoking should be allowed ONLY in enclosed sections that are separately ventilated to the outdoors	**34**	46	29	31	34	33	37	35	34
Restaurants									
• Smoking should NOT be allowed in any section in restaurants	**24**	#	24	33	23	26	22	26	22
• Smoking should be allowed ONLY in enclosed sections that are separately ventilated to the outdoors	**46**	47	43	46	46	47	44	40	51
Bars/Taverns									
• Smoking should NOT be allowed in any section of a bar or tavern	**10**	#	#	16	9*	11	11*	10	11
• Smoking should be allowed ONLY in enclosed sections that are separately ventilated to the outdoors	**36**	25	35	41	32	38	37	33	38

* Small cell size. Interpret data with caution. # Data suppressed because of extremely small cell size.

• Source: Ontario Drug Monitor, CAMH

Table 4-7: Support for Various Tobacco Policies, by Smoking Status, Age, and Sex, Ontario 1998

ATTITUDES TOWARD VARIOUS TOBACCO POLICIES	TOTAL	SMOKING STATUS			AGE			SEX	
		Current	Former	Never	18-34	35-54	55+	Men	Women
Packaging									
• Cigarettes should be sold in plain white packages that show only health warnings, ingredients, and brand name as a way of discouraging smoking around children*	**68**	61	60	74	72	66	66	64	70
Advertising									
• All advertising about tobacco products should be forbidden by law*	**53**	37	52	61	49	54	55	45	59
Sponsorship									
• The government should not allow cigarette companies to sponsor sporting or cultural events*	**46**	27	46	56	43	49	46	39	53
Taxes									
• Taxes on cigarettes should be increased	**41**	12	44	56	40	45	37	40	42
Retail Sales									
• Tobacco products should be sold in government-owned stores similar to the way alcohol is sold in LCBO stores	**36**	21	34	45	42	34	31	33	39

* responses for "strongly agree" and "somewhat agree" are combined

Source: Ontario Drug Monitor, CAMH

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