OTS Progress and Implications, 2003-04

Ontario Tobacco Research Unit

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PREFACE

This report is the final instalment of the annual four-part series on monitoring and evaluation initiated by the Ontario Tobacco Research Unit (OTRU) two years ago. *OTS Progress and Implications* discusses the evidence presented in the three earlier numbers in this series. The full series consists of:

Number 1: ***Tobacco Control Highlights: Ontario and Beyond*** – an overview of recent developments, providing context for what is happening in Ontario;

Number 2: ***OTS Project Evaluations: A Coordinated Review*** – a largely qualitative summary of accomplishments by OTS projects funded in 2003/04;

Number 3: ***Indicators of OTS Progress*** – a presentation of quantitative data from a variety of surveys and other sources measuring recent progress in tobacco-control in Ontario; and

Number 4: ***OTS Progress and Implications*** – a discussion of the results and implications of the findings in the previous three reports.

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EXECUTIVE SUMMARY

The Ontario Tobacco Strategy (OTS): Progress and Strategic Considerations

- A tripling of the OTS budget was announced in the latter part of 2004, putting Ontario back into a leadership role in Canada in terms of funding for tobacco-control. For the five years starting in 1999, funding had fallen 18.5% in real per-capita terms due to inflation and population growth.
- In 2003/04, social norm change and cessation were the major emphases (40% and 31% of province-wide OTS project funds, respectively). Prevention and protection accounted for 18% and 9% of project spending. Only 4% was for activities related to industry denormalization.
- The most prominent *strategy* was public education, at 44% of project spending, followed by infrastructure development, at 33%. Assistance to smokers accounted for 23%.
- Public education figures as a key strategic component in all four of the newly developed OTS logic models. These messages need to be articulated and a strategy developed to deliver them, taking account of the current *Mass Media Campaign*.
- Tobacco taxes increased significantly in Ontario in the last two years, but still remain the second lowest in Canada. Tax breaks remain in place for loose tobacco.
- There has been no progress in Ontario on litigation to recover health-care costs or lost tobacco tax revenue, despite some good examples in other provinces.
- Tobacco-industry denormalization figures in the logic models as a key strategic component with many short-term outcomes, but the organization of this remains uncertain. A coordinating role needs to be established for putting denormalization into practice.
- OTRU's monitoring of key indicators shows particular progress in protection and prevention since 1994, but *population-level effects directly attributable to the OTS projects are still difficult to discern.*
- OTRU estimates that a 10% drop in Ontario in smoking prevalence in the next five years would save 785 lives, almost 41,000 hospital-days, and $468 million in health care costs. This is twice the rate of decline recently experienced.

Increasing Protection: Progress and Implications

- Overall, non-smokers are reasonably well protected in public places and workplaces in Ontario. In 2002-04, bylaw campaigns in 32 municipalities or counties were supported directly by community grants and/or assistance from the *Ontario Tobacco-free Network* and *Media Network*.
- There is progress in smoke-free workplaces, but it is uneven and too slow to reach the target of 100% of workers by 2005 set by Mandatory Health Programs and Services Guidelines (MHPSG). Blue-collar workers and residents of smaller communities do not have the same level of protection as other citizens. This situation will be positively affected by proposed province-wide legislation.
- Support for greater restrictions on public smoking is modest and growing only slowly. Knowledge of the health effects of second-hand smoke (SHS) is at the core of informed support, yet knowledge is very limited.
- In response to any new initiatives to generate support for more awareness and action on second-hand smoke, there will undoubtedly be resistance from the tobacco industry. Early consideration should be given to projects that expose the industry's role in propagating myths regarding second-hand smoke.

Increasing Prevention: Progress and Implications

- In 2003, the prevalence of smoking by Ontario students reached its lowest level since 1977.
- In 2003, 10% of Ontario teens age 15-17 and 15% of those age 18-19 were current smokers. Smoking by the younger group was not statistically different from their age peers in the rest of Canada (14%). Smoking by 18-19 year-olds in Ontario was lower than the rest of Canada (26%), although small sample sizes demand caution in this interpretation.
- There is still substantial selling to underage smokers: 24% of Ontario retailers were willing to sell cigarettes to underage youth in 2003. *Not to Kids* – a collaboration among 18 health units including the major cities in the province – was the sole project dedicated to the issue of sales to minors (although compliance is a concern of the Public Health Units).
- Approximately 16% of OTS project funds were devoted to prevention and other youth-oriented programs in 2003/04. *Lungs are for Life* and *Ontario Lung Association Youth Initiatives* were the principal prevention projects.
- Given the modest reach and as-yet unknown efficacy of much of the youth-oriented program activity, policy measures are critical. Raising tobacco taxes and banning smoking in public places have 100% reach.
- MHPSG targets for youth smoking would be useful. There should be separate targets for 15-17 and 18-19 year-olds due to the variation within the age group 15-19 years.
- The OTS Logic Model identifies several projects needed for prevention: projects to reduce industry marketing to children and youth; and projects to increase the awareness of public and policy-makers of the determinants of smoking initiation, such as tobacco industry marketing, price, and social environments.

Increasing Cessation: Progress and Implications

- There were 2.1 million current smokers in Ontario in 2003. Smoking continued to be concentrated among men, blue-collar workers, adults with only high school or less education, and residents of the North.
- The prevalence of both current smoking (23%) and daily smoking (18%) in 2003 was unchanged from 2002. This interrupts a downward trend that began in 1995. Progress through 2002 had suggested that the MHPSG goal of 15% prevalence for daily smoking would be reached by 2005, but that is now uncertain.
- Per-capita consumption of cigarettes in 2003 declined almost 5% from the year earlier, and the average daily consumption of daily smokers was down slightly. While adult smoking has declined significantly in Ontario, the province has not kept up with the pace of decline in the rest of Canada.
- Forty-one percent of current smokers were aware of the toll-free *Smokers' Helpline*. Awareness was up significantly from 2002, and 8,010 calls were made in 2003/04, including 4,578 from new callers. The quit rate was 7.4% after six months. However, both calls and the quit rate were down from a year earlier, and the proportion of Ontario smokers intending to quit has not changed since 2001.
- The *Clinical Tobacco Intervention* trained 921 health care practitioners in cessation counselling. *Leave the Pack Behind* contacted almost 41,000 students.
- The Cessation Logic Model identifies several short-term outcomes missing from the current OTS:
    - Projects to increase public awareness of (a) the health benefits of quitting, (b) the adverse effects of smoking during pregnancy and child-rearing, and (c) deceptive tobacco-industry marketing practices;
    - Projects to increase awareness among the public and policy-makers of policies that promote cessation;
    - Cessation initiatives aimed at low SES and other high-risk populations.

INTRODUCTION

Framework for this Report

This report is organized around the three objectives of the Ontario Tobacco Strategy (OTS) adopted by the OTS Steering Committee in 2003/04.[1] Each of these objectives is intended to contribute to the overall goal of the Ontario Tobacco Strategy, which is to eliminate tobacco-related illness and death in Ontario:

- Protection: to eliminate Ontarians' involuntary exposure to environmental tobacco smoke
- Prevention: to prevent smoking initiation and habitual use among children, youth, and young adults
- Cessation: to reduce smoking in Ontario.

The report considers evidence presented in more detail elsewhere, particularly in Numbers 2 and 3 of Volume 10 of OTRU's annual Monitoring and Evaluation series. A section of this report devoted to each objective uses key indicators to summarize the current status and highlight project achievements. Progress is interpreted with reference to the targets of the Mandatory Health Programs and Services Guidelines (MHPSG), where applicable.[2] Although these guidelines are currently under review, they still provide a useful benchmark for gauging progress. There are also comparisons with progress in other provinces, and with California, which has the best-developed tobacco-control program in North America, if not the world.

In each section of this report dealing with an OTS objective, we consider the *public health impact* of project achievements, with attention to the two factors that contribute to impact – project reach and efficacy.[3] Each section concludes by considering the implications of the evidence for (a) programs and policy and (b) research and evaluation.

Tobacco-Control in Ontario, 2003/04

Table 4-1 summarizes the status of tobacco-control for the year ending March 2004, and contrasts this with the situation in 1999, when an expert panel reported to an earlier Minister of Health and Long-term Care.[4] The first column shows the long-term objectives for each of protection, prevention, and cessation; the remaining columns report several indicators relevant to these objectives.

Where there are comparable indicators for 1999 and 2004, it is clear that there has been some very considerable progress over this period, notably a:

- 57% decline in smoking in homes with young children, from 23% to 10% of homes
- 53% drop in daily smoking by older teens, from 19% to 9% of teens
- 22% decline in overall per-capita consumption of cigarettes, from 2,087 to 1,631 per capita.

However, it is also clear that much remains to be done to reach some MHPSG targets, progress has often been less than in other provinces over the same period, and many critical components of a comprehensive strategy remain to be put in place. The following sections discuss these points in more detail.

Table 4 - 1: Indicators of Progress on Tobacco-Control

OTS Objective[a]	Status At The Start Of The OTS Renewal (1999-2000)[b]	Status In 2003-04[c] (Proportional Changes From Baseline)
Protection:		
• To eliminate SHS exposure in public places and work places including bars, restaurants, casinos, bingo halls • To reduce SHS exposure in homes • To reduce SHS exposure in vehicles	• 70% of those working outside the home report complete restrictions on smoking at work[d] • Some municipalities have effective restrictions on smoking in public places • Regular smoking is reported in 23% of homes with children under 12[e] • Most schools are smoke-free[b]	• 81% of those working outside the home report complete restrictions on smoking at work (+16%)[d] • Municipalities accounting for 80% of the provincial population have effective restrictions on smoking in public places, including restaurants[f] • Regular smoking is reported in 10% of homes with children under 12 (-57%)[e] • Most schools are smoke-free; some smoking occurs on school grounds
Prevention:		
• To reduce initiation and addiction among children, youth, and young adults • To eliminate tobacco industry marketing that targets children and youth • To reduce tobacco industry marketing that targets young adults (age 18-24)	• 21% of students in grades 7-12 are daily smokers[g] • 19% of 15-19 year-olds are daily smokers[e] • 27% of 20-24 year-olds are daily smokers[e] • 21% of retailers are willing to sell to minors[h] • 83% of underage smokers are asked for ID[h]	• 13% of students in grades 7-12 are daily smokers in 2003 (-38%)[g] • 9% of 15-19 year-olds are daily smokers (-53%)[e] • 22% of 20-24 year-olds are daily smokers (-19%)[e] • 25% of retailers are willing to sell to minors (+19%)[h] • 72% of underage smokers are asked for ID (-13%) (2003)[h]
Cessation:		
• To reduce the average cigarette consumption of smokers • To increase the number of quit attempts among smokers • To increase reach of cessation initiatives, especially to low SES and other high-risk populations • Increase policy incentives to quit	• 19.4 billion cigarettes and equivalents are sold (2087 per capita)[i] • 28% of men and 23% of women aged 18+ are current smokers[d] • 17.6 cigarettes are smoked per day (daily smokers), barely changed since 1992[d] • 16% to 23% of pregnant women smoke regularly[b]	• 16.2 billion cigarettes and equivalents (-16%), or 1631 per capita (-22%) are sold[i] • 25% of men and 20% of women aged 18+ are current smokers[d] (-11% and -13%, respectively) • 16.3 cigarettes are smoked per day by daily smokers (-7%)[i] • 14% of women age 20-44 and pregnant within past 5 yr smoke daily (2001)[i]

[a] The long-term OTS objectives adopted by the OTS Steering Committee in early 2004 (Appendix A, Vol. 10, No. 2). Not all objectives have relevant indicator data.
[b] Adapted from the report of the MHPSG and the Sixth Monitoring Report of the Ontario Tobacco Research Unit (OTRU, 2000).
[c] Based on data in OTRU's Monitoring and Evaluation Series Vol. 10, No. 3.
[d] Centre for Addiction and Mental Health, *Ontario Drug Monitor/CAMH Monitor*
[e] Health Canada, *Canadian Tobacco Use Monitoring Survey (CTUMS)*
[f] Ontario Tobacco-free Network (www.theotn.org)
[g] Centre for Addiction and Mental Health, *Ontario Student Drug Use Survey*
[h] AC Nielsen Retailer compliance studies, 1999[5] and 2003[6]
[i] Health Canada, Cigarette sales figures complied from manufacturers' reports
[j] Statistics Canada, *Canadian Community Health Survey (CCHS)*

Table 4-2 summarizes the status of major tobacco-control activities under the aegis of the Ontario Tobacco Strategy for the year ending March 2004. It covers all the province-wide projects, the multi-centre community projects, and other measures such as tobacco taxation.[k] It does not cover the provisions of the *Tobacco Control Act* such as restrictions on sales to minors and their enforcement.

Also summarized in Table 4-2 are the principal components of the OTS logic models for protection, prevention, and cessation[l] for which there were no projects or other significant activities in 2003/04. These gaps are discussed further below.

Table 4-3 describes the allocation of province-level project funds across the three OTS objectives, in addition to changing social norms and countering industry influences. This summary shows that the focus – 39% of the total funding for province-level projects – was clearly on using public education to change social norms about smoking and tobacco-control, i.e., the *Mass Media Campaign.* That more than one third of funds should go to a single project underlines the importance of its success. That the *Mass Media Campaign* does not fit readily under the OTS goals of protection, prevention, or cessation also raises questions about its role in the Strategy. This is discussed further below.

[k] See Vol 10, No. 2 for more details on the projects funded under the OTS in 2003/04, including Appendix B (Province-wide Projects) and Appendix C (Community-based Projects).
[l] See Vol 10, No. 2, Appendix A for the logic models.

Table 4 - 2: Principal Ontario Tobacco Strategy Activities in Ontario in 2003/04

OTS Goal	In place	Notably absent or underdeveloped
Protection: To eliminate involuntary exposure to environmental tobacco smoke	• Campaigns in 32 municipalities or counties seek to enact or strengthen clean-air bylaws, many assisted by *Media Network* and *Ontario Tobacco-free Network* • Clean-air provisions on some college and university campuses stimulated by *Leave the Pack Behind*	• Projects to increase public awareness of the health risks of SHS • Projects directed to reducing SHS in homes, vehicles, other private spaces, including projects to increase support for voluntary bans on smoking in homes and private vehicles • Projects to expose the tobacco industry's role in propagating myths regarding SHS
Prevention: To prevent smoking initiation and addiction among children, youth, and young adults	• Federal-provincial tax rises $5.00 per carton ($2.50 in each of Nov '03 and May '04) → average price of $66.23. • *Lungs are for Life* – revamped K-12 curriculum – is disseminated widely • *Not to Kids*, focusing on social sources of cigarettes, is in 12 health units with a population of 7 million • *Youth Vortal*, *TeenNet* and *Youth Initiatives* reach out to youth, raise awareness, develop skills, share knowledge	• Increased enforcement of laws limiting youth access to tobacco • Cooperation between the Ministries of Education and Health to ensure ongoing delivery of effective prevention programming in Gr 6-8 • Projects directed at: o Reducing industry marketing to children and youth o Increasing awareness among children, youth, young adults, parents, and policy-makers of the determinants of smoking initiation, such as tobacco industry marketing, price, and social environments
Cessation: To reduce smoking in Ontario	• Toll-free telephone *Smokers' Helpline* is operating and supplemented by local small-group cessation programs • Youth-focused cessation initiatives exist on post-secondary campuses and through the internet • *Mass Media Campaign* seeks to develop support for tobacco-control. • *Clinical Tobacco Intervention* and *Aboriginal Tobacco Strategy* develop needed infrastructure • Average price is $66.23/carton of 200 cigarettes	• Projects to increase the proportion of smokers contemplating/preparing/attempting to quit • Cessation initiatives aimed at youth, low SES and other high-risk populations • Projects to increase awareness among the public and policy-makers of policies that promote cessation. • Projects to increase public awareness of: o The health benefits of quitting o The adverse effects of smoking during pregnancy and child-rearing o Deceptive tobacco-industry marketing practices

Note: Column 1 uses the OTS goals from the logic models developed for the OTS Steering Committee in early 2004. Column 3 is based on the OTS logic models (Appendix A, Vol. 10, No. 2).

Table 4 - 3: Allocation of Province-Wide Project Funds,* by OTS Goals and Main Strategy Employed, 2003-04

Main Strategy	Tobacco-Control Goals					
	Protection	Prevention	Cessation	Countering Industry Influences	Changing Social Norms	All Goals
Public Education	1.4%	3.8%	0.3%	0.3%	38.6%	44.4%
Assistance to Smokers	0.9%	0.5%	20.6%	0.9%	--	22.9%
Infrastructure Development	7.1%	12.0%	10.0%	2.3%	1.5%	32.9%
All Strategies	9.4%	16.3%	30.9%	3.5%	40.1%	100%

* Adapted from Table 2-5, Vol. 10, No. 2

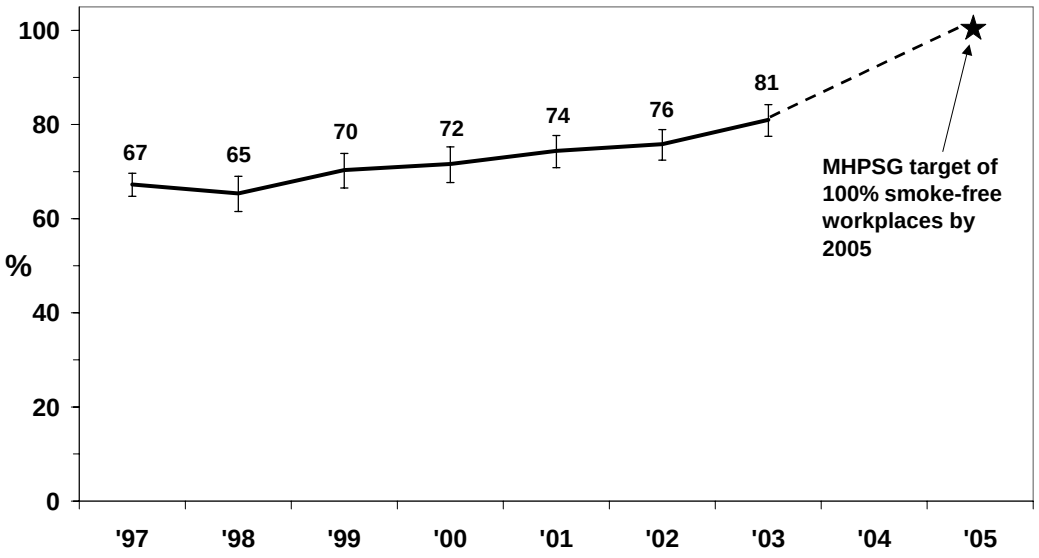
PROGRESS TOWARD PROTECTION GOAL

In 2003/04, there was probably more activity and progress in the protection area than in either prevention or cessation. Support for, and implementation of, smoke-free spaces continued to grow, but there remained considerable variation according to location.

Status in 2003/04

- By the end of March 2004, 80% of Ontarians lived in a municipality with 100% smoke-free restaurants; 40% had smoke-free bars. These are significant improvements over 2003 (Table 3-2, Vol. 10, No. 3). However, significant proportions of these smoke-free spaces included designated smoking rooms (DSRs), where the protection is less effective than a complete ban.
- Almost half of Ontario adults support complete bans on smoking in restaurants, while one quarter favour a ban on smoking in bars (Fig. 3-27, Vol. 10, No. 3).
- In 2003, 81% of Ontario workers were protected by total smoking bans in the workplace. This is a substantial improvement from 67% in 1997 (Fig. 4-1). Nevertheless, 30% of all workers reported some workplace exposure to SHS in 2003, and only 65% of trade/farm workers reported protections in place at work.

Figure 4 - 1: Total Smoking Bans at Work, Adult Workers Aged 18+, Ontario 1997-2003 and 2005 MHPSG Target



Source: Centre for Addiction and Mental Health Monitor

- In 2003, 55% of Ontario adults supported total smoking bans at work, and another 33% were in favour of Designated Smoking Rooms (DSRs). (CAMH Monitor data, cited in Vol. 10, No. 3).
- In 2003, there was regular smoking inside 11% of Ontario households with children 0-14 years of age. This is a major improvement over 1999, when exposure was approximately double this rate. Nevertheless, 130,000 Ontario children were routinely exposed to SHS in their homes in 2003; 5% of recently pregnant women were regularly exposed to SHS at home. (CTUMS 2003 data, cited in Vol. 10, No. 3).

Project Highlights in 2003/04

- Approximately $1,750,000 was devoted to protection in 2003/04: $750,000 for the cumulative portions of several province-level projects (Table 2-5, Vol. 10, No. 2), and $1.0 million for six community-based projects (Appendix C, Vol. 10, No. 2). As a proportion of province-level projects, protection claimed a little under 10% of the total (Table 4-3).
- Bylaw campaigns were the predominant form of activity toward the protection goal: such projects were supported directly by community grants and/or assistance from the *Ontario Tobacco-free Network* (*OTN*) and the *Media Network* in 32 municipalities or counties in 2003/04 (Appendices B and C, Vol. 10, No. 2).
- The *OTN* supported 75 tobacco-free coalitions, 37 health units, and 100 other affiliated organizations with skills development and materials. The Network's Local Project Funding Process facilitated smoke-free bylaw development, media campaigns, smoke-free poster contests, *Breathing Space* programs, and smoke-free vehicle campaigns. The Bylaw Funding Support process supported the passage of 100% smoke-free bylaws (Appendix B, Vol. 10, No. 2).
- The *Ontario Lung Association* aired six 30-second "Clear the Air" campaign advertisements on television across northern Ontario for 13 weeks beginning in January 2004. Aided recall was 69%. Over 90% of young people surveyed felt the advertisements were credible, and that the advertisements made them think about the effects of second-hand smoke. Among young smokers, substantial proportions agreed that the advertisements had made them think about not smoking around non-smokers and that they had reduced their smoking around non-smokers as a result (Appendix C, Vol. 10, No. 2).
- In collaboration with the *OTN* and the *Ontario Campaign for Action on Tobacco*, the *Media Network* used an Request For Proposal process to identify 11 communities needing assistance with media activities in support of local bylaw campaigns. The Network provided funds, expertise, materials, and coordination (Appendix B, Vol. 10, No. 2).

Discussion

Public Health Impact

- **Reach.** The proportion of the Ontario population reached by protection-oriented OTS projects in 2003/04 was substantial, if we consider the 32 municipalities with bylaw-related projects. As noted above, these were all community-level initiatives, and were concluded by March 2004. *At the province level*, the reach of protection-oriented projects was again minimal in the past year, although the *OTN* and *Media Network* achieved considerable reach with health intermediaries. Overall, it has to be said that the ongoing population reach of OTS projects to limit exposure to second-hand smoke has been very modest. At this time, the only clear prospect for change in this regard is the introduction of legislation to ensure smoke-free work places and public spaces.
- **Efficacy.** The development and strengthening of smoke-free bylaws has undoubtedly been the major achievement for the OTS in the protection field (Tables 4-1, 4-2). The *OTN* and *Media Network* continued to provide vital assistance to the communities engaged in this effort. *LTPB* continues to promote smoke-free areas on campuses. There is evidence that the *Media Campaign* may be contributing to the growing support for 100% smoke-free restaurants and bars (Appendix B, Vol. 10, No. 2).

Progress

- Overall, non-smokers are reasonably well protected in public places and workplaces in Ontario, but protection is uneven and progress in some areas has been slow. Blue-collar workers and residents of smaller communities do not have the same level of protection as other citizens.
- Progress in protection in homes with young children appears to be very impressive, and the exposure of pregnant women is reportedly low. Some caution may be advisable here, however, as this conclusion depends entirely on survey data where the possibility of bias is high due to providing a socially desirable response.

- There is progress in smoke-free workplaces, but it is too slow to reach the MHPSG target of 100% of workers by 2005 (Fig. 4-1). While four-fifths of workers report complete bans at work, growth of the protected population has recently averaged only two percentage points annually. Moreover, many workers report exposure in nominally smoke-free workplaces.
- There is good progress toward the MHPSG objective for smoke-free homes (Table 4-1), but since this objective is not quantified, the *rate* of progress toward this objective cannot be judged.
- In 2002, knowledge of the health effects of SHS was surprisingly limited (Fig. 13, Vol. 9, No. 3), yet knowledge is at the core of informed support. There are no new data on this indicator for 2004, but there is no reason to assume that knowledge has increased substantially since the last time it was measured.
- Support for complete bans on smoking in restaurants and bars has grown substantially since 1998, while opinion favouring DSRs has remained flat (Fig. 3-27, Vol. 10, No. 3). However, Ontario remains only average within Canada on this issue (Fig. 3-28, Vol. 10, No. 3), and support for a complete ban is not yet a majority view.

Implications

For Policies and Programs

- The MHPSG target of 100% smoke-free workplaces in 2005 will not be achieved with the current measures (Fig. 4-1). Only province-wide legislation has the potential to bring timely and meaningful protection to Ontario's work force.
- Similarly, the MHPSG target of 100% smoke-free *public places* by 2005 will also not be reached without provincial legislation.
- Judging by the extent of exposure to second-hand smoke at work when voluntary restrictions are in place, enforcement of the new legislation will be an important consideration. Equally important will be public support for the new legislation, based on a clear understanding of the health dangers of second-hand smoke and the ineffective nature of DSRs. A public education campaign with clear messages focused on this theme is needed. While the current *Mass Media Campaign* touches on this theme, its messages about the dangers of second-hand smoke are only indirect. The need for such awareness is part of the Protection Logic Model (Appendix A, Vol. 10, No. 2); the absence of an appropriate campaign is noted in Table 4-2.
- It is time to set a quantitative target for progress toward the MHPSG objective for more smoke-free homes, as exists for other tobacco-related objectives. At the same time, there should be an objective established with respect to smoke-free cars. Clear targets will provide both an incentive to action and a basis for assessing progress.
- To accelerate the positive trend in smoke-free homes, expanded efforts are needed, as noted in Table 4-2. At present, this area is almost totally neglected.[m] While the voluntary approach to smoke-free homes and cars has worked in the absence of an explicit campaign (except for cigarette package warnings), it is not clear how much further such an approach can go. Although there is apparent reluctance to legislate on this matter, public support for legislation is fairly high,[n] indicating that strong non-legislative measures would be well accepted.
- It is well established that smoke-free work places have a positive effect on smokers as well as non-smokers, by encouraging cessation or at least reduction in amount smoked.[7,8,9] It thus makes sense that the introduction of province-wide smoke-free legislation be accompanied by an enhanced cessation program in Ontario. This is discussed further under Cessation.

[m] Any new Ontario initiative in this area should take account of the status and plans of *Breathing Space: Community Partners for Smoke-free Homes,* funded by Health Canada.

[n] In 2003, there was more support for a law that prohibits parents smoking inside the home if children are living there (63%) than there was for banning smoking in restaurants (46%) (Fig. 3-27 and CAMH Monitor data cited in No. 3, Vol 10).

- Judging by experience with municipalities that have introduced bans on public smoking, compliance with the new provincial legislation will be good but not perfect. Enforcement will be necessary, especially in the early stages, and this should be planned now.
- In response to any new initiatives to generate support for more awareness and action on second-hand smoke, there will undoubtedly be resistance by the tobacco industry. Early consideration should be given to projects to expose the industry's role in propagating myths regarding second-hand smoke.

For Research and Evaluation

- It would be worthwhile to have more data comparing the attitudes of the 72% of Ontarians who recall the messages of the *Media Campaign* with the 28% who do not recall them (Appendix B, Vol. 10, No. 2). This comparison would help demonstrate the incremental impact of this campaign. As suggested above, this campaign is unique in the OTS for its scope and ambition. It is critical to understand how to maximize its positive impact – and whether a separate campaign is needed to educate the pubic about the health risks of second-hand smoke and DSRs.
- We need a better understanding of the true nature of workplace SHS exposure and the reasons why it is not declining as total workplace smoking bans increase. In almost all settings, the compliance/enforcement picture is not clear.
- Similarly, it is important to assess whether social desirability is affecting survey reports of smoking at home, in cars with children, and around pregnant women. The Youth Smoking Survey may provide an opportunity to assess the accuracy of reporting on the first two of these.
- There are no recent data on smoking in schools. It would be worthwhile to have an update on compliance, enforcement, and support for smoke-free schools in the province.
- Plans need to be put in place for ongoing monitoring of compliance with the new legislation providing smoke-free workplaces and public places.

PROGRESS TOWARD PREVENTION GOAL

While there has never been a great deal of OTS activity directed at prevention or even at youth generally, smoking by young Ontarians continues to decline. This reflects trends among the general population (see next section) and thus, indirectly, the beneficial spillover of tobacco-control policies such as tobacco taxation and public-smoking bans aimed at the general population of smokers.

Status in 2003/04

- In 2003, over half (57%) of Ontario students in grades 7-12 reported never smoking a whole cigarette. Most of the balance (32%) had tried smoking and had consumed fewer than 100 cigarettes (Fig. 3-1, Vol. 10, No. 3).
- In 2003, 10% of Ontario teens age 15-17 and 15% of those age 18-19 were current smokers. Smoking by the younger group was not statistically different from their age peers in the rest of Canada (14%). Smoking by 18-19 year-olds in Ontario was lower than the rest of Canada (26%), although small sample sizes demand caution in this interpretation (CTUMS data, original analysis).
- In 2003, 27 % of Ontarians age 20-24 were current smokers (Fig. 3-3, Vol. 10, No. 3).
- In 2003, more than half (54%) of underage Ontario youth (age 15 - 18 years) usually obtained their cigarettes from retail stores (CTUMS data cited in Vol. 10, No. 3). In the same year, one quarter (24%) of retailers in Ontario were willing to sell cigarettes to underage youth (Fig. 3-8, Vol. 10, No. 3).
- In 2003, 86% of Ontario adults believed that stores convicted of selling tobacco to youth under the age of 19 should lose their tobacco license. Further, 81% of adults in Ontario felt that friends or family members who supply tobacco to underage youth should be fined (CTUMS data cited in Vol. 10, No. 3).
- In 2003, almost two-thirds (62%) of Ontario adults believed that tobacco companies should not be allowed to display products on or near store counters (CAMH Monitor 2003 data, cited in Vol. 10, No. 3).
- The tax on cigarettes was increased twice in 2003/04, and a carton of 200 cigarettes cost $66.23 in May 2004 (Fig. 1-2, Vol. 10, No. 1).

Project Highlights in 2003/04

- Approximately $1.8 million, or 18% of OTS project funds, were devoted to prevention in 2003/04. This comprised $1.2 million for province-wide projects (Table 2-5, Vol. 10, No. 2) and $0.6 million for *Not to Kids* (Appendix C, Vol.10, No. 2).
- *Not to Kids* was a collaboration among 18 health units including the major cities in the province (Appendix C, Vol. 10, No. 2). It was the only project to directly address the issue of eliminating sales to minors.
- *Lungs are for Life* and *OLA Youth Initiatives* were again the principal prevention projects at the province level; *TeenNet* and the *Media Network* also reported a significant prevention component (Table 2-4, Vol. 10, No. 2).
- Measures other than prevention programs contribute to meeting the prevention objective. In particular, regulations to promote clean air also change norms about public smoking and reduce the opportunities to smoke, and tobacco tax increases discourage smoking by youth even more effectively than by adults.

Discussion

Public Health Impact

- **Reach.** There are 1.5 million youth age 10-19 in Ontario, and the reach of OTS prevention programs is modest, at 5-10% of their respective target groups (Table 2-5, Vol. 10, No. 2). The principal exception is *Lungs Are for Life*, which has distributed the new curriculum to an estimated 50% of teachers and public

health professionals working with K-12 students in Ontario. Despite a large increase in distribution of the curriculum in the past year, the number of youth exposed to it has not been documented. The reach of tobacco tax increases, like many policy measures, is 100%. The contrast with the reach of programs is dramatic and noteworthy.

- **Efficacy.** The results of *TeenNet's* Smoking Zine are generally positive and the effect on prevention is fairly impressive for a one-session intervention. Awareness of the OLA's youth-focused, peer-to-peer media campaign is high where it has been aired, and there is some encouraging evidence of attitude change that results. Similarly, response to the cinema ads of *Not to Kids* has been positive. The preventive efficacy of *Lungs Are for Life* remains to be demonstrated. The efficacy of cigarette price increases in discouraging both uptake and continued smoking is well documented, as is the beneficial effect of smoke-free spaces on smokers' behaviour, at least among adults.[10]

Progress

- The rate of smoking by 15-19 year-olds is half the level that it was five years earlier (11% in 2003 vs. 23% in 1999). This decline has been greater in Ontario than in the rest of Canada (Fig. 3-3, Vol. 10, No. 3).
- The prevalence of smoking by Ontario *students* in 2003 was lower than at any time since student surveys began in 1977 (Fig. 28, Vol. 9, No. 3). This trend compares well with California (Table 4-4).[o]

Table 4 - 4: Recent Declines in Student Smoking, by Grade, Ontario and California

	Ontario		California	
Grade	% change, 1997-2003	Average annual change	% change, 1996-2002	Average annual change
7	-51%	-8.5%		
8			-63%	-10.5%
9	-29%	-4.8%		
10			-32%	-5.3%
11	-43%	-7.2%		
12			-19% (2000-2002)	-6.3%

Sources: Ontario – based on Vol. 9, No. 3, Fig. 28.
California: California Department of Health. Tobacco Control Division website.[11]

- Smoking by Ontario youth age 20-24 has also declined since 1999, from 34% to 27% (Fig. 3-3, Vol. 10, No. 3). The rate of smoking by these young adults in Ontario is not different from their age peers elsewhere in Canada (Fig. 3-2, Vol. 10, No. 3), and the recent decline has been only slightly greater (Fig. 3-3, Vol. 10, No. 3).
- In general, retailer compliance in 2003 did not improve over 2002 (Fig. 3-8, Vol. 10, No. 3). However, there was an improvement on the part of independent convenience stores, which had been the major non-compliers in 2002 (Fig. 3-9, Vol. 10, No. 3).
- Despite two increases in tobacco taxes during 2003/04, Ontario's price for cigarettes remained more than $10 below the average for the rest of Canada and approximately $20 lower than in the Northwest Territories, Manitoba, and Saskatchewan (Fig. 1-2, Vol. 10, No. 1).[p]

[o] Comparisons here are complicated by differences in: grade levels and years for which data are available, the baseline rates for each group, and how the time period under study fits into the respective tobacco-control program. No other US jurisdiction has recent data that would allow for such comparisons.
[p] The increase of $1.25/carton in January 2005 did not do much to redress this imbalance, but as the third increase by the present government in approximately 18 months, it does serve to institutionalize the notion of regular price hikes.

Implications

For Policies and Programs

- There are more than 1.5 million teens and near-teens (age 10-19) in Ontario. While they constitute 12.5% of the total population, they will be 100% of all future smokers for the tobacco industry. This is why the tobacco companies spent $300 million nationwide on promotion in 2002 (Vol. 9, No. 1) despite federal restrictions. Ontario's share of this industry effort would be approximately $100-120 million, or *60 times* the amount spent on prevention under the OTS. While it is clear that cessation strategies are the most efficient means to reduce smoking-related morbidity and health care costs in the *short term*,[12] the OTS Steering Committee and MOHLTC would do well to consider whether $1.8 million or 18% of the OTS budget is adequate for addressing the prevention objective of the Strategy.
- There are no MHPSG targets for youth smoking and they would be useful to have. Because of the changes that take place within the 15-19 year-old group, there should probably be separate targets established for age 15-17 and 18-19 year-olds.
- Given the modest reach and uncertain efficacy of much of the current youth-oriented program activity, policy measures take on even greater importance. In particular, raising tobacco taxes to, first, the national average and, later, to the highest level in Canada (Fig. 1-2, Vol. 10, No. 1) needs to become a policy priority. Such a measure would have 100% reach and very high efficacy, i.e., the public health impact would be considerable.[13] As part of such a move, the Ontario government should eliminate the price advantage that is enjoyed by tobacco sticks – taxed at 50% of the rate for manufactured cigarettes – regardless of how the federal government treats this issue.[14]
- The province could implement two other policy measures that would have 100% reach and potentially considerable efficacy: (a) ban retail displays in tobacco outlets frequented by minors, and (b) prohibit the misleading descriptors "light" and "mild" on cigarette packages. The first of these measures has been proposed by the government and will be debated in early 2005. Action on the second would be welcome, considering that Ontario youth have the greatest preference for "light/mild" cigarettes in the country (Fig. 3-5, Vol. 10, No. 3).
- The population currently in universities and colleges in Ontario is fairly small (approximately 100,000) and the current smoking prevalence of *university graduates* is low (14%), suggesting that this may not be a priority target group. However, U.S national data show the prevalence of smoking among 18-25 year-olds is *increasing* and that there is a significant amount of smoking initiation among post-secondary students.[15] Since U.S. trends often appear in Canada after a brief delay, and given the increased promotion of tobacco on campuses, it makes sense to maintain some tobacco-control programs focused on this group – such as *Leave the Pack Behind*.
- There are no OTS programs focused on the 20-24 year-old age group (except those who are students). As prevention aimed at younger Ontarians is intensified, it will be important to consider what reinforcing efforts there should be among 20-24 year-olds.
- The OTS Prevention Logic Model identifies several potential projects needed for prevention. Those that are largely missing in Ontario (Table 4-2) are projects to reduce industry marketing to children and youth; efforts to increase awareness of the risks associated with tobacco use among children, youth and young adults; and projects to increase awareness among children, youth, young adults, parents, and policy-makers of the determinants of smoking initiation such as tobacco industry marketing, price, and social environment. Cooperation between the Ministries of Education and Health is needed to ensure delivery of high-quality prevention programming in all Ontario schools, especially in Grades 6-8.

For Research and Evaluation

- Continued monitoring is needed to compare teen smoking in Ontario with the rest of Canada. In particular, it is important to confirm the recent trends in smoking by teens, since much of the apparent decline took place between 2002 and 2003.

- To better understand prevention, better monitoring data are needed on the factors affecting uptake. We do not know how many youth receive effective tobacco-control education, how many charges were laid for smoking on school property, and how much of the public health department budgets were devoted to prevention activities.
- In the same spirit, it is important to continue to monitor smoking among 20-24 year-olds in Ontario, and to be alert for on-campus promotion of tobacco products and post-secondary initiation of smoking.
- The preference of Ontario teens for "light/mild" cigarettes is the highest in the country (as it is for adult smokers). The reasons for this and the implications for early addiction and later quitting need to be examined.
- There is sufficient variation in youth smoking rates across Canada's provinces that it may be feasible to systematically compare tobacco-control measures to ascertain what works. The recent declines in student smoking and the relatively favourable ranking of Ontario youth versus other provinces occurred against a backdrop of relatively low tobacco prices, low retailer compliance, and modest prevention programming. But also in the background are declining rates of smoking by Ontario adults and diminishing opportunities to smoke in public. A major research question, which also has profound policy implications, is whether smoking among Ontario youth is most effectively addressed by prevention programming, or whether measures aimed successfully at adults also have a beneficial spillover among youth.

PROGRESS TOWARD CESSATION GOAL

Efforts directed at the OTS cessation objective account for a substantial proportion of the OTS effort, yet the evidence for reduced adult smoking is mixed. This suggests how difficult it is becoming to counter established smoking in Ontario and, in particular, how challenging it is to reach committed smokers with cessation supports.

- In 2003, 23% of Ontario adults were current smokers and 18% smoked daily. (Figs. 3-11, 3-15, Vol. 10, No. 3). There were 2.1 million current smokers in 2003.
- Per-capita sale of domestic cigarettes was 1,631 in 2003, a 4.7% decline from the year earlier (Table 1-1, Vol. 10, No. 1). The average daily consumption of daily smokers was 16.3 cigarettes, apparently down slightly from 2002 (Fig. 3-18, Vol. 10, No. 3), but not to a statistically significant degree.
- Men were 25% more likely than women to be daily smokers and, on average, they smoked 4.3 more cigarettes per day. There was no gender difference in *current* smoking rates.
- In 2003, smoking varied widely within the province. Current smoking was significantly higher in the North (prevalence of 31%) than in the Central West, Central South and East regions (Fig. 3-12, Vol. 10, No. 3).
- Smoking continued to be concentrated among blue-collar workers and adults with high school or less education (Fig. 3-14, Vol. 10, No. 3).
- Three quarters of Ontario smokers used "light/mild" cigarettes in 2003 (Fig. 3-20, Vol. 10, No. 3), and many did so – erroneously – for health reasons. One quarter of these smokers believed "light/mild" cigarettes reduced the amount of tar inhaled, and one fifth believed they reduced the health risk of smoking (CTUMS 2003, data cited in Vol. 10, No. 3).
- In 2003, half (49%) of adult smokers intended to quit smoking within six months and a quarter (22%) had a 30-day deadline (Fig. 3-21, Vol. 10, No. 3).
- Among *former* smokers, only 10% reported needing more than one attempt before quitting for good.
- Forty-one percent of current smokers were aware of the toll-free *Smokers' Helpline*, which was more than double the number aware of local quit programs (Fig. 3-25, Vol. 10, No. 3).
- Just over half (55%) of current smokers who visited a doctor in 2003 received advice to quit smoking (Fig. 3-22, Vol. 10, No. 3).

Project Highlights in 2003/04

- $2.3 million, one third of province-wide project budgets in 2003/04, was devoted to cessation (Table 4-3). Only one small cessation project was funded under the Community Grants Program (Appendix C, Vol. 10, No. 2).
- The province-wide, toll-free *Smokers' Helpline* accounted for almost two-thirds of province-wide project money for cessation. The balance was for the cessation portion of *Leave the Pack Behind* and infrastructure projects, notably the *Clinical Tobacco Initiative*. *TeenNet* and the *Aboriginal Tobacco Strategy* also had significant cessation components (Table 2-4, Vol. 10, No. 2).
- The *Smokers' Helpline* received 8,010 calls in 2003/04, including 4,578 from new callers. They reported a quit rate of 7.4% six months after the telephone counselling and a decline in amount smoked by those who were still smoking.
- The *Clinical Tobacco Intervention* held 23 training events in 2003/04 for 921 physicians, pharmacists, dentists and their staff. This project distributed almost 1,700 education kits to health care practitioners, sent out large amounts of other print resources, and logged over 6,700 website visits.
- *Leave the Pack Behind*, which devoted half of its efforts to cessation on campus (Table 2-4, Vol. 10, No. 2), contacted almost 41,000 students face-to-face through 352 staffed display booths, 25 residence workshops, and 69 classroom presentations on 13 university and college campuses.

Discussion

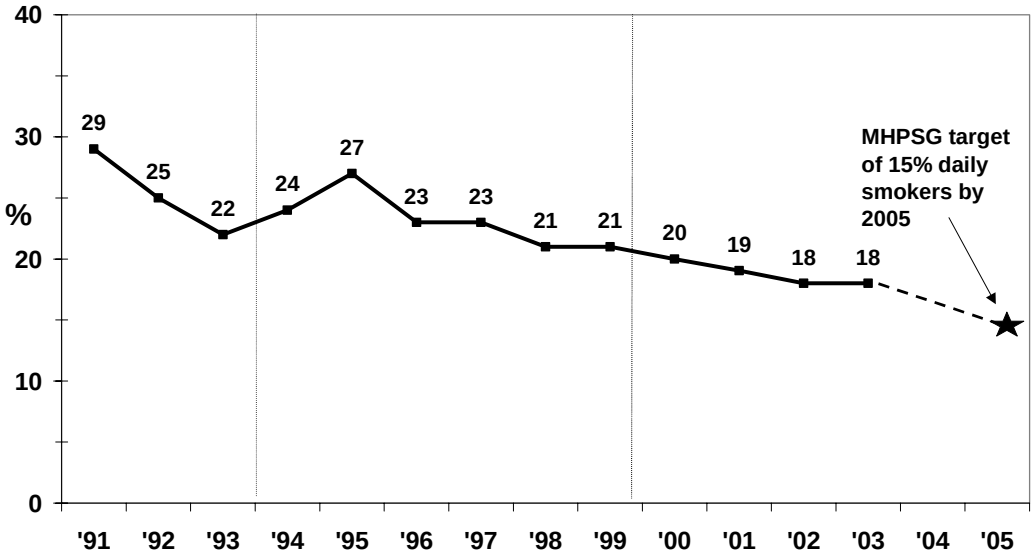
Public Health Impact

- **Reach.**[q] The *Smokers' Helpline* reached 0.16% of Ontario smokers in 2003/04. At this rate, it will clearly take a very long time before the quit line has a significant impact on population smoking rates, regardless of efficacy. *Leave the Pack Behind* was identified by 62% of a sample of post-secondary students as a source of support for quitting, and an estimated 23% of all smokers on participating campuses were exposed to project activities. Since January 2000, more than 4,100 health care professionals (including support staff) have attended a *CTI* training event, about 11% of all physicians, dentists, pharmacists and staff.
- **Efficacy.** In 2003/04, the *Smokers' Helpline* achieved a rate of cessation of 7% at six months. This compares favourably to the 5% that would otherwise be expected. *Leave the Pack Behind* achieved at least a 7% quit rate at three months.

Progress

- The prevalence of both current smoking (23%) and daily smoking (18%) in 2003 were unchanged from 2002. This interrupts a downward trend that began in 1995. Progress through 2002 had suggested that the MHPSG goal of 15% prevalence for daily smoking would be reached by 2005, but that is now less certain (Fig. 4-2).

Figure 4 - 2: Daily Cigarette Smoking, Age 18+, Ontario, 1991-2003 and 2005 MHPSG Target



Source: Centre for Addiction and Mental Health Monitor.

- Daily smoking in Ontario has declined 13% since 1999, and 27% since 1995 (Fig. 4-2). Although Ontario has the second lowest rate of daily smoking of any province (Fig. 3-17, Vol. 10, No. 3), the pace of recent decline in the rest of Canada has been faster and the other provinces are catching up to Ontario's level.
- There was a 4.7% drop in per-capita sales in Ontario from 2002 to 2003. This is commendable – but the decline in the rest of the country was 6.6% (Table 1-1, Vol. 10, No. 1).

[q] While greater reach will undoubtedly contribute to greater public health impact, comparisons *between* projects of different types are not meant to be taken at face value because of differences in target populations, their ease of access, and even the way in which reach is defined.

- From 1991 through 2000, there was substantial decline in the proportion of current smokers who were daily smokers (Fig. 3-16, Vol. 10, No. 3), which was consistent with the fall in per-capita sales during the same period. Since 2000, however, the proportion of all smokers who smoke daily has remained constant at about 78-79%.
- The proportion of Ontario smokers intending to quit within either six months or 30 days has not changed since 2001.
- In 2003, public awareness of the *Smokers' Helpline* was significantly higher than in 2002 (25% vs. 19%), while awareness of local quit programs did not change (CAMH Monitor data, cited in Vol. 10, No. 3). However, calls to the *Helpline* were down 13% from the year before, and the six-month quit rate dropped from 10.2% to 7.4% (Appendix B, Vol. 10, No. 2).
- There was no increase over 2002 in the proportion of smokers who received advice to quit from their doctor, nor is this proportion (55%) different in Ontario from other provinces (Fig. 3-22, Vol. 10, No. 3).
- Health care professionals newly trained in cessation by the *CTI* dropped 26% from the year before, but website visits were up 31%, and distribution of print resources ("Your Guide to a Smoke-free Future" and Quit Plan Pads) increased substantially.
- In summary, when compared to most of the rest of Canada, Ontario has a lower rate of daily smoking by adults, but lower intentions to quit (Fig. 3-21, Vol. 10, No. 3) and a stronger preference for "light/mild" cigarettes (Fig. 3-20, Vol. 10, No. 3).

Implications

For Policies and Programs

- In California, adult smoking dropped 0.9 percentage points annually from the approval of their tobacco-control effort in 1988 until 1995. From 1995 to 2002 – a period when program funding was cut back substantially – there was no net change in adult smoking prevalence in California.11 In Ontario, the drop in the adult rate of smoking averages about one percentage point annually, depending on the period examined. These case studies not only demonstrate the success of properly funded tobacco-control, but also support the substantial increase in tobacco-control funding announced by the Ontario government in late 2004.
- The health consequences of smoking[16] argue for intensified cessation efforts in the province. A population approach to cessation[17] should be an integral part of such an effort, and there should be a priority on early cessation.[18] Economic analysis demonstrates that the *Smokers' Helpine* produces fiscal benefits that significantly outweigh its costs, and that the cost of more promotion for the *Helpline* would be more than offset by the resultant increases in productivity and improved health.[19]
- The ongoing challenge of reaching substantial proportions of smokers in the general population points to the importance of policy measures such as increasing tobacco taxes and province-wide smoke-free legislation It is essential that the government deliver on its commitments with respect to these measures, which are cost-effective because of their high reach.13
- The higher rates of daily smoking among men and their higher daily consumption are presumably tied to their domination of blue-collar occupations and the lack of smoking restrictions in these locales. The province's proposed legislation to ban smoking in all workplaces is undoubtedly the most effective way to reach this population. Such legislation will also serve to reduce the disparities in smoking rates among the Health Planning Regions.
- Serious consideration should be given to setting a new MHPSG target for adult smoking, one that will motivate extra effort and will not simply be reached by continuing recent trends. Such a goal should specify *current* rather than *daily* smoking, to take account of the sizeable proportion of non-daily smokers and the shift of smokers from daily to occasional.
- Although smokers' awareness of the *Smokers' Helpline* increased to 41%, there was actually a decline in calls to the only province-wide cessation service. This may be due in part to the small proportion of adult smokers who are truly ready to quit, a proportion that is lower than in most other provinces and which

has not changed in many years. This calls for policies and programs directly intended to increase the proportion of smokers contemplating/preparing/attempting to quit. The fact that 90% of smokers require only one serious quit attempt (CTUMS 2003 data cited in Vol. 10, No. 3), and the high level of satisfaction of callers to the *Smokers' Helpline* (Appendix B, Vol. 10, No. 2) suggest that the most important cessation challenge is to persuade smokers to make that first call. Printing the toll-free number on every cigarette package would be a great help. Some other potential positive influences are identified below.

- The Cessation Logic Model (Appendix A, Vol. 10, No. 2) identifies several short-term outcomes, some of which are missing from the current OTS:
    - Projects to increase public awareness of (a) the health benefits of quitting, (b) the adverse effects of smoking during pregnancy and child-rearing, and (c) deceptive tobacco-industry marketing practices;
    - Projects to increase awareness among the public and policy-makers of policies that promote cessation;
    - Cessation initiatives aimed at low SES and other high-risk populations.
- Within the framework of cessation efforts, there is also a need for messages directed at the vast majority of Ontario smokers who choose "light/mild" brands. Many of them do so in the mistaken belief that they are safer and make quitting less pressing.

For Research and Evaluation

- More than half of Ontario smokers plan to quit within the next six months, while only one quarter plan to quit within the next 30 days. Intentions to quit are lower in Ontario than in most other provinces. Research is needed to clarify the determinants behind these levels of motivation – or lack of it – including the role played by the use of "light/mild" cigarettes and beliefs about them, and beliefs about the health benefits and the difficulties of quitting.
- Although Ontario is one of the few provinces with an active program to train physicians (and other health care professionals) in smoking-cessation counselling, patients who smoke are no more likely to receive such advice from their doctors than are patients in other provinces. The reasons for this need elucidation.
- Standard definitions for key constructs such as former smoker need to be adopted by all projects for the sake of comparison and consistency.

PROGRESS TOWARD DEVELOPING THE ONTARIO TOBACCO STRATEGY

This final section deals briefly with some issues and indicators that do not fall neatly under the previous headings of Protection, Prevention, or Cessation.

Strategy Overview in 2003/04

- Funding for the OTS totalled $11.6 million, or $0.96 per capita. This does not include funding for the public health units or resource centres for tobacco-control, figures that are difficult to estimate with accuracy. While Ontario's funding in 2003/04 was well below the national average of $2.97 (Table 1-3, Vol. 10, No. 1), this is now simply an historic footnote, with the large increase of funding announced in the Fall of 2004.
- The Strategy continued to employ a mix of strategies (Table 4-3), including public education (44% of the total funding for province-wide projects), assistance to smokers (23%), and developing infrastructure for future tobacco-control (33%).
- Outside of the three main objectives of Protection, Prevention, and Cessation, a significant amount of money (40%) was allocated to changing social norms (Table 4-3). A comparatively modest 3.5% was spent on countering tobacco-industry influences, or denormalization.
- Strategy leadership became more apparent as the OTS Steering and Coordinating Committees continued to meet several times for the purposes of planning the Strategy. Logic models were developed for each of Protection, Prevention, and Cessation as well as for systemic issues (Appendix A, Vol. 10, No. 2). Development of these models was an intensive exercise that resulted in comprehensive models, detailed objectives, and measurable indicators, all of which were reviewed and endorsed by OTS partners. These models are expected to play a key role in OTS planning, and to have counterparts at the project level starting in 2004/05.
- Cooperation among projects and with other tobacco-control partners was fairly common; coordination and collaboration were slightly less typical, but these more elaborate forms of joint effort still existed to a significant degree. There was considerable networking among projects, and between them and the public health units (Table 2-3, Vol. 10, No. 2).

Discussion

Progress

- Per-capita funding did not change in absolute dollar amounts from renewal in 1999 through March of 2004, while population growth and inflation reduced the real per-capita value of OTS funding by 18.5%. The recently announced increase has not only restored per-capita funding, but has greatly surpassed 1999 levels.
- Tobacco taxes have increased in Ontario in the last two years, but still remain the second lowest in Canada (Fig. 1-2, Vol. 10, No. 1). In May 2004, a carton of cigarettes cost $66, still well below the average of $79 for the rest of the country. The increase of January 2005 did not change Ontario's position vis-à-vis other provinces and the territories.
- There has been no apparent progress in Ontario on litigation to recover health-care costs or lost tobacco tax revenue, despite some good examples in other provinces (Table 1-8, Vol. 10, No. 1). Litigation is one of the strategic components in the system logic model of the OTS (Appendix A, Vol. 10, No. 2).
- Monitoring of progress in tobacco-control has benefited from new data sources, while evaluation of OTS projects has developed somewhat erratically. The quality of evidence from projects still often makes it difficult to attribute gains in tobacco-control to their activities.

Public Health Impact

- Public health impact is the product of both reach and efficacy and, as noted above, a rather small proportion of OTS-funded projects reach the population directly. The major such effort is the *Mass Media Campaign*, yet its message is not always clear (see Appendix B, Vol. 10, No. 2) and its place in the OTS logic models not clear.
- OTRU has estimated that a 10% drop in Ontario in smoking prevalence in the next five years would save 785 lives, almost 41,000 hospital-days, and $468 million in health care costs. This is twice the rate of decline recently experienced. Although achieving this will cost more than the level of OTS funding in 2003/04, the improvements in health that will result will mean increased taxes from greater productivity and health care savings. This fiscal benefit is estimated to exceed the increased cost of funding such a program by *35 times*.[20]

Implications

For the OTS as a whole, the implications of this evidence are clear:

- The level of funding for tobacco-control is no longer a pressing issue in Ontario. The key issue with respect to funding has now shifted to questions about whether the magnitude and suddenness of the increase in late 2004 will overwhelm the infrastructure in place. Compared to 1999, however, the infrastructure is extensive and robust. The key elements of this infrastructure are: better coordination, experienced individuals and organizations, and a comprehensive set of logic models to guide planning and evaluation.
- Since 1994, progress in tobacco-control in Ontario has been impressive, especially in the past five years. OTRU's monitoring of key indicators shows particular progress in protection and prevention, *but population-level effects directly attributable to the OTS projects are still difficult to discern*. This is not particularly surprising, since the majority of projects (if not funds) are directed to building infrastructure. Population-level gains could become much more apparent in the next few years if new initiatives are directed at the population and take advantage of the existing infrastructure.
- Continuing to increase tobacco taxes will generate revenue, promote prevention, and encourage cessation. The three tax increases under the current government, and its stated commitment to raise the price of cigarettes to the Canadian average, suggest that this lesson has been accepted. In this light, the continuing favourable treatment of roll-your-own tobacco is puzzling. The loose-tobacco loophole should be closed.
- Public education is a key strategic component in the OTS system logic model, and many specific messages are identified in the models for Protection, Prevention, and Cessation. The OTS Steering and Coordinating Committees need to identify these messages, develop a coherent approach to delivering them, and work out the role of the current *Mass Media Campaign* in this mix.
- Tobacco-industry denormalization has always been notably absent from the Ontario Tobacco Strategy (with the exception of limited youth activities). One reason for this absence has been disagreement over whether denormalization should be enshrined as an objective on a par with Protection, Prevention, and Cessation. The newly adopted logic models have resolved this issue by including denormalization as a key strategic component and many denormalization activities as short-term outcomes leading to Protection, Prevention, and Cessation. Thus the conceptual role of denormalization has been fixed, but the organization of this remains uncertain. It may be time for a coordinating role to be established by the OTS Steering and Coordinating Committees, e.g., by establishing a sub-committee that works closely with each of the Protection, Prevention, and Cessation sub-committees.
- Developing an evidence-based strategy in the coming years will require better evidence linking project activities with claimed outcomes. New data sources, such as OTRU's longitudinal survey of smokers, better evaluation designs, and improved reporting by funded projects will help provide such guidance for

Strategy planning. A logic model for each project would also be a useful planning and evaluation tool, as they are for the Strategy as a whole.

- OTRU recommends that new agreements between the Ministry and OTS projects ensure that OTRU: (a) reviews evaluation plans prior to project initiation; (b) receives regular project reports in a timely fashion; and (c) has access to project data as required for conclusive project evaluation.

REFERENCES

[1] Ontario Tobacco Strategy Steering Committee. *Designing the Ontario Tobacco Strategy: logic models, goals, objectives and indicators*. Toronto, ON: OTS Steering Committee; September 2004.

[2] Ontario Ministry of Health. *Mandatory health programs and services guidelines*. Toronto, ON: Queen's Printer for Ontario; 1997.

[3] Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: the RE-AIM framework. *American Journal of Public Health*. 1998;89(9):1322-7.

[4] Ashley MJ, Boadway T, Cameron R, et al. *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*. Toronto, ON: Ontario Tobacco Research Unit; 1999.

[5] AC Nielsen. *Measurement of retailer compliance with respect to the Tobacco Act & provincial tobacco sales-to-minors legislation*. Report of Findings: 1999 - Final [ERRATUM: March 16, 2001]. Toronto, ON: AC Nielsen, 2002.

[6] AC Nielsen. *Evaluation of retailers' behaviour towards certain youth access-to-tobacco restrictions*. Final Report of Findings: 2003. Toronto, ON: AC Nielsen, 2003.

[7] Farrelly MC, Evans WN, Sfekas AES. The impact of workplace smoking bans: results from a national survey. *Tobacco Control* 1999;8:272-7.

[8] Fichtenberg CM, Glantz SA. Effect of smoke-free workplaces on smoking behaviors: systematic review. *British Medical Journal* 2002;325:188.

[9] Stephens T. *Workplace restrictions on smoking: are they good for the smoker, too?* Toronto, ON: Ontario Tobacco Research Unit, Research Update; October 2004.

[10] United States Department of Health and Human Services. *Reducing tobacco use: a report of the Surgeon General*. Atlanta, GA: United States Department of Health and Human Services; 2000.

[11] California Department of Health. Tobacco Control Division. Available at: http://www.dhs.cahwnet.gov/tobacco/.

[12] Ontario Medical Association. *Investing in tobacco control: good health policy, good fiscal policy*. Toronto, ON: Ontario Medical Association; December 2003.

[13] Reid D. Tobacco control: overview. *British Medical Bulletin* 1996; 52:108-20.

[14] Canadian Coalition for Action on Tobacco. *A win-win: enhancing public health and public revenue. Recommendations to increase tobacco taxes*. 2004. Available at: http://smoke-free.ca/pdf_1/2004taxreport.pdf.

[15] Choi WS, Harris KJ, Okuyemi K, Ahluwalia JS. Predictors of smoking initiation among college-bound high school students. *Annals of Behavioral Medicine*. 2003; 26(1):69-74.

[16] Holowaty E, Cheong SC, Di Cori S et al. *Tobacco or health in Ontario*. Toronto, ON: Cancer Care Ontario; 2002.

[17] McDonald PW. *A recommended population strategy to help Canadian tobacco users*. Toronto, ON: Ontario Tobacco Research Unit, Special Report Series; September 2003.

[18] Zhang B, Ferrence R, Cohen J, et al. *Smoking cessation and lung cancer mortality in a cohort of middle-aged Canadian women*. Toronto, ON: Ontario Tobacco Research Unit, Working Paper Series No. 78; December 2003.

[19] Stephens T, Campbell S, Ghent A. *A cost-benefit analysis of smokers' helplines*. Proceedings of the Public Health: the Best Health Investment Conference; 2004 Nov 23-4; Toronto, ON. Ontario Public Health Association.

[20] Ontario Tobacco Research Unit. *The fiscal impact of a comprehensive tobacco control program in Ontario*. Toronto, ON: Ontario Tobacco Research Unit, Special Report Series; December 2003.