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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) in 2002. *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 2002-2003;

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.

ACKNOWLEDGEMENTS

One of OTRU's roles in the renewed Ontario Tobacco Strategy (OTS) is to coordinate and assist with self-evaluations of OTS projects and to provide the Ministry of Health and Long-Term Care (MOHLTC) with information for making decisions about the future of the OTS. Evaluation of the OTS is conducted under the guidance of the OTRU Monitoring & Evaluation Working Group, chaired by Tom Stephens with staff support from Shawn O'Connor and Lori Diemert.

This report was prepared by Tom Stephens and benefited from reviews of an earlier version by many OTRU colleagues. Lori Diemert provided figures and data while Sonja Johnston supplied production assistance.

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EXECUTIVE SUMMARY

The Ontario Tobacco Strategy: Progress and Strategic Considerations

- Funding for the OTS totalled $19 million in 2002-03, or $1.59 per capita.
- Cessation and social norm change were the major emphases (33% and 31% of project funds, respectively). Protection and prevention accounted for 18% and 13% of project spending. Only 5% was for activities related to industry denormalization.
- The most prominent *strategy* was public education, at 41% of project spending, followed by infrastructure development, at 28%. Assistance to smokers and regulation accounted for 26% and 6%, respectively.
- Per capita funding has not changed in absolute dollar amounts since renewal in 1999. From 1999 to 2003, the population of the province grew while inflation reduced the value of the dollar. The funding at the start of the renewal of $1.71 per capita in 1999 dollars is now worth $1.41 in 1999 terms – a reduction of 18.5% in constant dollars.
- While Ontario was the leader in per capita funding of tobacco control in 1999, this is no longer the case. Ontario lagged behind the rest of Canada in 2002-03, where funding averaged $1.93 – 21% higher than in Ontario.
- Tobacco taxes have increased substantially in Ontario in the last two years, but still remain the lowest in Canada. In December 2003, the price of cigarettes finally surpassed that of 1991 (in nominal dollars), the last year before prices began to decline.
- OTRU estimates that a 10% drop in smoking prevalence in the next 5 years – about twice the rate of decline recently experienced – would save 785 lives, almost 41,000 hospital-days, and $468 million in health care costs over this period. To achieve this would cost more than the current level of OTS funding, but, when increased taxes are added to the health care savings, the fiscal benefit would exceed this cost by *35 times*.

Increasing Smoke-free Spaces: Progress and Implications

- Nonsmokers are generally well protected in public places and workplaces in Ontario, but progress has been slower than it could be, if California is taken as the model and provincial legislation is considered as the alternative.
- Progress in protection from ETS has been greatest in homes and municipalities. There is progress toward the Mandatory Health Programs and Services Guidelines (MHPSG) objective for smoke-free homes, but not for workplaces.
- Support for greater restrictions on public smoking is modest and growing only slowly. Knowledge of the health effects of ETS is at the core of informed support, yet knowledge is very limited.
- About one fifth of total project budgets ($1.64 million), was devoted to protection in 2002-03. Bylaw campaigns in 32 municipalities or counties were supported directly by community grants and/or assistance from the Ontario Tobacco-Free Network (OTN) and Media Network.
- The MHPSG target for 100% smoke-free workplaces in 2005 will not be achieved before 2014 with the current measures. Only province-wide legislation has the potential to bring timely and meaningful protection to Ontario's work force.
- The MHPSG target of 100% smoke-free public places by 2005 will also not be reached without provincial legislation.
- While there is progress toward the MHPSG objective for more smoke-free homes, it is time to set a quantitative target for this area.

Reducing Adult Smoking: Progress and Implications

- There were 1.9 million current smokers in 2002 (23% of Ontarians age 18+). Smoking continued to be concentrated among men, young adults aged 18-29, blue collar workers, adults with only high school or less education, and residents of the North. A little over 200,000 women (14%) smoked while pregnant.
- Adult smoking continues to drop steadily in Ontario, although the province has not quite kept up with the pace of decline in daily smoking in the rest of Canada. The MHSPG goal of 15% prevalence for daily smoking should be reached by 2005. However, consumption by daily smokers (17.2 cigarettes/day) has not changed since 1992.
- Compared to most of the rest of Canada, Ontario has a lower rate of adult smoking, but also lower intentions to quit and a stronger preference for "light/mild" cigarettes. The rate of smoking during pregnancy and the likelihood of doctors advising patients to quit are similar to the national averages.
- $3.0 million, one third of total project budgets in 2002-03, was devoted directly to reducing adult smoking through cessation. *Smokers' Helpline* received over 7,000 inquiries from new callers, and reported a quit rate of 10% six months after their telephone counselling.
- There would be substantial fiscal benefit in reducing smoking through a genuinely comprehensive control program funded at internationally recommended levels. Cessation could be promoted through a population approach, tobacco tax increases, and province-wide legislation to ban smoking in the workplace and public places.

Reducing Teen Smoking and Eliminating Sales to Minors: Progress and Implications

- In 2003, the prevalence of smoking by Ontario students reached its lowest level since 1977. This decline was true of students in each of grades 7, 9, and 11. There were declines in smoking in *all* grades from 1999 to 2003. Smoking by grade 11 students fell by half during this period.
- In 2003, 18% of Ontario teens age 15-19 were current smokers. This was significantly less than the average of 22% in other provinces.
- Most underage smokers usually get their cigarettes from stores, not friends, and usually these are small grocery/corner stores. One quarter of Ontario cigarette retailers were willing to sell to underage youth in Ontario in 2002. Compliance with the law was much worse than in 2001 and the decline was due entirely to independent convenience stores.
- Approximately $1.1 million (13% of OTS project funds) was devoted to prevention and other youth-oriented programs in 2002-03, but few of these projects were directed exclusively at reducing teen smoking. *Lungs are for Life* and the Ontario Lung Association's *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 would have 100% reach and very high efficacy, as would banning smoking in public places. There also needs to be more effort to curb sales to minors, with a focus on independent corner stores.

Reducing Overall Tobacco Consumption: Progress and Implications

- Overall tobacco use in Ontario declined 8% in 2002 from a year earlier. Since 1994, per capita consumption in Ontario has declined 22%. Nevertheless, consumption remains 11% higher than in the rest of Canada and is not declining as quickly: the average decline from 2001 to 2002 was 12% in the rest of Canada vs. 8% in Ontario. In Québec and Alberta, the drop in consumption was double that of Ontario.
- The annual drop in the rate of smoking by Ontario adults averages one percentage point. This is very similar to that of California, when they had an active tobacco control effort from 1988 to 1995. When California cut tobacco control funding in 1995, their declines stopped and there has been no change in adult smoking since then. A sustained tobacco control effort is clearly essential.

INTRODUCTION

Framework for this Report

This report is organized around the six objectives of the Ontario Tobacco Strategy:

1. To make all schools, workplaces, and public places smoke-free
2. To reduce adult smoking
3. To eliminate smoking by pregnant women
4. To eliminate sales to minors
5. To reduce teen smoking, and
6. To reduce overall tobacco sales (expressed here as "to reduce overall tobacco use").

The report considers evidence presented in more detail elsewhere, particularly in Nos. 2 and 3 of Volume 9 of OTRU's annual *Monitoring and Evaluation* series. A section 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 MHPSG[1] and there are frequent comparisons to progress in California, which has the best-developed tobacco control program in North America, if not the world.

There is also a focus on the *public health impact* of project achievements, with attention to the two factors that contribute to impact – project reach and efficacy.[2]

Each section concludes by considering the implications of the evidence for (a) programs and policy and (b) research and evaluation.

Overview of the Strategy

Table 1 summarizes the status of OTS projects in 2002-03 and shows the extent to which funding was directed to each of protection, prevention, cessation, social norm change, and tobacco industry denormalization. Project funds (excluding administration, evaluation, public health unit activity, and partner agency support) were allocated to these five areas on the basis of OTRU's perception of program activity.

Cessation and social norm change were the major foci in 2002-03 (33% and 31% of project funds, respectively). Protection and prevention accounted for 18% and 13% of project spending, respectively. Only 5% was for activities clearly related to industry denormalization.

The most prominent *strategy* was public education, at 41% of project spending, followed by infrastructure development, at 28%. Assistance to smokers and regulation accounted for 26% and 6%, respectively, of the $9.1 million spent on OTS projects in the past year.

Table 1: OTS Project Budgets, by Tobacco Control Goals and Strategy, 2002-03[a,b]

	OTS Goals					
Main Strategy Project	Protection $	Prevention $	Cessation $	Industry Denormali-zation $	Social Norm Change $	TOTAL $ %
Public Education						$3,747,850 41%
Mass Media Campaign	600,000				2,400,000	3,000,000
Not to Kids		83,000			167,850	250,850
TeenNet		83,333	83,333	83,333		250,000
York Region Chinese/Italian Awareness Campaign	18,578	18,578	61,224		148,620	247,000
Assistance to Smokers						$ 2,320,000 26%
Aon Workplace Cessation			200,000			200,000
Leave the Pack Behind	38,850	38,850	233,350	38,850		350,000
Quit Smoking Contest			400,000			400,000
Telephone Helpline for Smokers			1,370,000			1,370,000
Regulation						$ 502,150 6%
6 community-based projects to establish/ strengthen bylaws	502,150					502,150
Infrastructure Development						$ 2,505,000 28%
Aboriginal Tobacco Strategy		83,333	83,333		83,333	250,000
Best Practices Identification	50,000	50,000	50,000		50,000	200,000
Clinical Tobacco Intervention			400,000			400,000
Lungs are for Life		400,000				400,000
Media Network	84,000	84,000	28,000	84,000		280,000
Ontario Tobacco-Free Network	350,000	58,333	58,333	58,333		525,000
Youth Initiatives		175,000		175,000		350,000
Youth Vortal		60,000	20,000	20,000		100,000
TOTAL $ %	1,643,578 18%	1,134,427 13%	2,987,583 33%	459,516 5%	2,849,383 31%	9,075,000 100%

[a] Project budgets have been allocated to OTS goals consistent with their level of effort as shown in Vol 9, No. 2, Table 5. Strategy management and evaluation are not included in the table.
[b] The budget figures show MOHLTC allotments only. Not included here are contributions in kind and cash from some member agencies and other partners and sources such as Health Canada. Amounts shown for the community projects are one half of their two-year budgets.

PROGRESS TOWARD SMOKE-FREE SPACES

Status in 2002-03

- There was solid growth in the proportion of the population protected by smoke-free bylaws for restaurants and bars (No. 3, Table 3). Moreover, *support* for such bylaws has doubled, or nearly so, since 1998, although absolute levels are still modest: fewer than half of adults support smoke-free restaurants and only one fifth are in favour of smoke-free bars (No. 3, Fig. 8).
- There has been a slow and fairly steady increase in protection from ETS in the workplace, but more than one third of workers still report some exposure at work (No. 3, Fig. 10). About half the working population supports 100% smoke-free workplaces, a figure that is essentially the same as in 1999 (47% in 1999[3] vs. 51% in 2002 [No. 3, p. 17]).
- Regular exposure to ETS at home continues to decline, and was reported in 17% of Ontario households in 2002 (No. 3, Fig. 12).
- Nine percent of pregnant women were exposed to ETS during their most recent pregnancy because their partner smoked at home (No. 3, p. 17).
- Two of three Ontario adults would support a law prohibiting smoking in cars when children are present (No. 3, p. 18).
- Ontario adults are generally poorly informed about the health hazards of ETS, with the exception of lung cancer (No. 3, Fig. 13).

Project Highlights in 2002-03

- $1.64 million, about one fifth of total project budgets, was devoted to protection in 2002-03 (Table 1).
- Bylaw campaigns in 32 municipalities or counties were supported directly by community grants and/or assistance from the OTN and Media Network.
- Portions of the *Mass Media Campaign* were relevant to the protection goal. Complemented by local supplements, the province-wide campaign sought to develop support for restrictions and understanding of the dangers of second-hand smoke.

Discussion

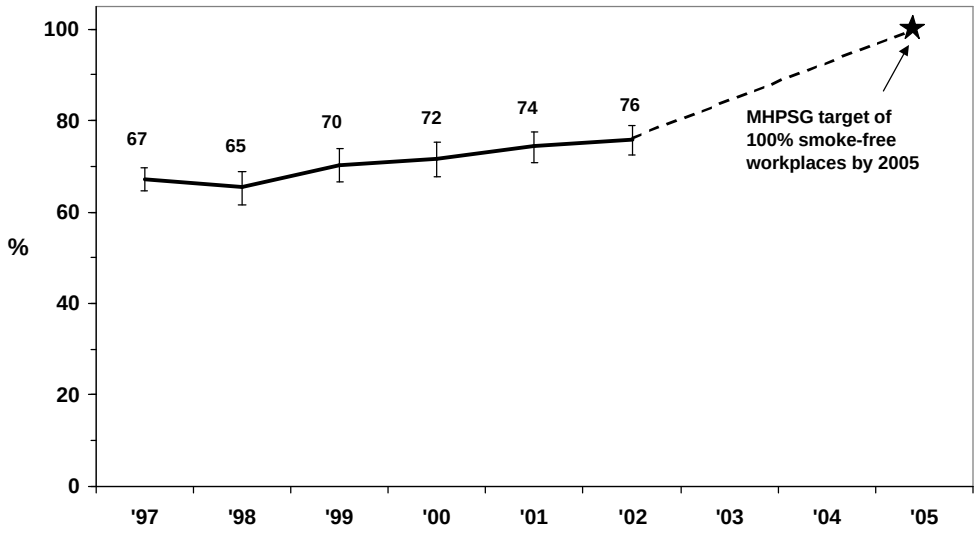
Progress

- Nonsmokers are generally well protected in public places and workplaces in Ontario, but progress has been slower than it could be, if California is taken as the model[4] or provincial legislation is considered as the alternative.
- Progress in protection from ETS has been greatest in homes and municipalities, and slowest in the workplace. In Canada, Ontario is second only to British Columbia with respect to smoke-free homes and workplaces.
- There is progress toward the MHPSG objective for smoke-free homes, but not for workplaces. Although three quarters of workers are protected from ETS, growth of the protected population has recently averaged only about two percentage points annually (Fig. 1).[c]
- Knowledge of the health effects of ETS is surprisingly limited, yet knowledge is at the core of informed support.
- Support for greater restrictions on public smoking is modest and growing only slowly. Generally worded questions, as reported by the *Media Campaign* (No. 2, Table 7), suggest more support for 100% smoke-free public places than when bars and restaurants are specified. However, experience in the cities that have

[c] The MHPSG objective for smoke-free homes is not quantified, thus the direction toward this objective can be judged, but not the rate of progress.

implemented – or attempted to establish – smoke-free bars and restaurants indicates that this is where the resistance arises (often with the support of the tobacco industry). However, support for such restrictions can grow after bylaws are implemented,[5] presumably as the population begins to experience the benefits of clean air.

Figure 1: Total Smoking Bans at Work, Adult Workers Aged 18+, Ontario 1997-2002 and 2005 MHPSG Target



Source: Centre for Addiction and Mental Health Monitor.

Public Health Impact

- Reach. The proportion of the Ontario population reached by *province-wide* OTS projects focused on ETS is minimal, but there are many communities involved in protection-related projects (Table 1) and they account for a substantial proportion of the Ontario population.
- Efficacy. The OTN and Media Network have provided important support to local communities seeking to develop or strengthen smoke-free bylaws (No. 2, pp. 51-54). *Leave the Pack Behind* (*LTPB*) continues to make progress establishing smoke-free areas on campuses (No. 2, pp. 37-39). Despite growing support for 100% smoke-free restaurants and bars, there is no convincing evidence yet that these changing attitudes can be attributed to the *Media Campaign* (No. 2, pp. 25-27) or any other specific influence. Moreover, Ontario remains only average within Canada in this aspect of public opinion (No. 3, Fig. 9).

Implications

For Programs and Policies

- While there is progress toward the MHPSG objective for more smoke-free homes, it is time to set a quantitative target for this area, as exists for other tobacco-related objectives. A clear target will provide both an incentive to action and a basis for assessing progress.
- To accelerate the positive trend in smoke-free homes, expanded support for projects focused on smoke-free homes is needed. At present, this is almost totally neglected.
- The MHPSG target for 100% smoke-free workplaces in 2005 will not be achieved before 2014 with the current measures (Fig. 1). Only province-wide legislation, as promised in the recent Speech from the Throne, has the potential to bring timely and meaningful protection to Ontario's work force (Table 2).

Table 2: 100% Smoke-Free Places - Status, Plans and Potential, Ontario

	2003	2006, with current commitments/progress	2006, with promised provincial legislation
Bars (population protected)	40%	87%*	100%
Restaurants (population protected)	79%	90%*	100%
Other Workplaces (workers protected, 2002)	76%	88%**	100%

Data sources: Vol. 9, No. 3, Table 3 and Fig. 10.
* after phased-in enactment of bylaws currently adopted.
** assuming continued growth at the rate shown in Fig. 1.

- The MHPSG target of 100% smoke-free *public places* by 2005 will also not be reached without provincial legislation.
- Public support is critical for any regulatory or legislative measures to limit ETS, and since it is generally modest – and awareness that ETS is a major health hazard is also low – a public education effort is needed in this area. This could be linked to the low awareness of the hazards associated with using "light" cigarettes (see "Reducing Adult Smoking," and "Reducing Youth Smoking," below). Ontario media campaigns have addressed this issue only minimally, although the hazards of ETS are currently receiving some attention from the federal media campaign.
- Given the size, dispersion and diversity of the provincial population, province-wide legislation is the fairest and most cost-effective means to achieving the smoke-free objective of the OTS. Meeting this objective is especially important since prevalence and amounts smoked are also reduced where there is progress on protection.[4,6]
- Province-wide legislation in Ontario would be a major advance but would not be unprecedented. Jurisdictions that will have 100% smoke-free restaurants and bars by the end of 2004 are: the Northwest Territories, Nunavut, Manitoba, California, New York, Maine, Connecticut, Delaware, Ireland, Norway, and New Zealand.

For Research and Evaluation

- Data are needed to compare the attitudes of the 65% of Ontarians who recall the messages of the *Media Campaign* with the 35% who do not recall them. This comparison would help demonstrate the incremental impact of this campaign among the host of other ongoing influences on attitudes and knowledge.
- We need a better understanding of the nature of workplace ETS exposure and the reasons why it is not declining as total workplace smoking bans increase.
- 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.
- There needs to be continual monitoring of progress on bylaw coverage[d] and bylaw-related activities[e]; and Health Canada needs to be urged to collect data on the national picture more frequently than every five years and publish its reports in a more timely fashion.[f]

[d] As is being done by the Ontario Tobacco-Free Network (see http://www.theotn.org/GoForGold.htm).
[e] The survey of PHUs by the Association of Public Health Agencies and Cancer Care Ontario in July 2003 is a good example.
[f] Their most recent report[7] updates a report on 1996 bylaws. Published in December 2003, it describes bylaw status in 2001. Such reports provide archival data useful for research, but are too infrequent and late for monitoring purposes.

PROGRESS REDUCING ADULT SMOKING, INCLUDING BY PREGNANT WOMEN

Status in 2002-03

- There were 1.9 million current smokers in Ontario in 2002. A little over 200,000 women smoked while pregnant.
- In 2002, 23% of Ontario adults were current smokers and 18% smoked daily (No. 3, Figs. 14, 18). This continues downward trends that began in 1995. However, consumption by daily smokers (17.2 cigarettes/day) has not changed since 1992 (No. 3, p.26).
- Men were significantly more likely than women to be current smokers (by 30%) and daily smokers (by 25%), and their average daily consumption was higher by 2.9 cigarettes daily, or 19%. These gender differences hold across most age groups and have been true for many years (based on No. 3, Figs. 14, 18, and p. 25).
- Among those Ontario women age 20-44 who gave birth between 1996 and 2001, 14% smoked during their most recent pregnancy (No. 3, p 22).
- In 2002, smoking continued to be concentrated among young adults aged 18-29, blue collar workers, adults with only high school or less education, and residents of the North (No. 3, Figs. 15-17).
- Almost three quarters of Ontario smokers used "light/mild" cigarettes in 2002, and many did so – erroneously – for presumed health benefits (No. 3, Fig. 23).
- In 2002, over half (55%) of adult smokers intended to quit smoking within six months. One half of these reported intending to quit within 30 days (No. 3, Fig. 24). The extent of these intentions was unchanged from 2001.
- The *Quitline* and local cessation programs were known to one in four to one in five current smokers in 2002, unchanged from 2001. Awareness levels were highest in the North and lowest in Toronto (No. 3, Fig. 26 and 27).
- Just under half of current smokers who had visited a doctor in 2002 received advice to quit smoking (No. 3, Fig. 25).
- Compared to most of the rest of Canada, Ontario had a lower rate of adult smoking, but lower intentions to quit and a stronger preference for "light/mild" cigarettes. The rate of smoking during pregnancy and the likelihood of doctors advising patients to quit were similar to the national averages.

Project Highlights in 2002-03

- $3.0 million, one third of total project budgets in 2002-03, was devoted directly to reducing adult smoking through cessation (Table 1).[g]
- The province-wide, toll-free *Smokers' Helpline* received over 7,000 inquiries from new callers, and reported a quit rate of 10% six months after their telephone counselling.
- More than 15,000 smokers registered for the *Quit & Win* contest, up more than 52% from two years earlier. Registrations accounted for about 0.8% of all Ontario smokers.
- The *Clinical Tobacco Intervention* trained 1,250 physicians, pharmacists, dentists and their staff, sent out more than 1,800 education kits to health care practitioners, and logged over 5,100 website visits.
- There were no OTS projects dealing with smoking during pregnancy.

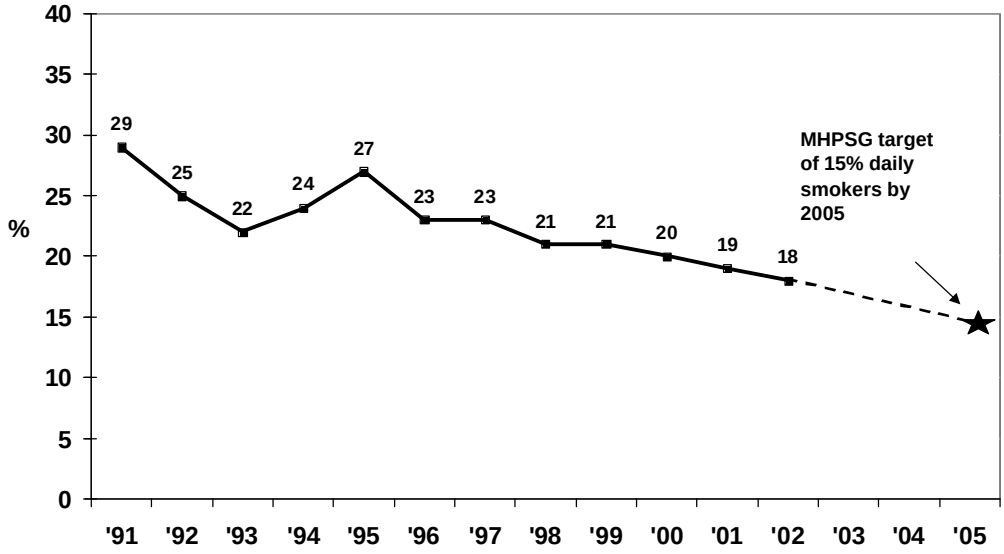
[g] While cessation is the most direct approach to the goal of reducing adult smoking, protection measures are also relevant, as they reduce the opportunity for smoking and encourage quitting. Similarly, changes in social norms about smoking and attitudes toward the tobacco industry support behaviour change and contribute to cessation in subtle but important ways. Successful prevention measures also reduce adult smoking in time.

Discussion

Progress

- Adult smoking continues to decline steadily in Ontario, whether measured as current or daily smoking. If recent trends continue, the MHPSG goal of 15% prevalence for daily smoking will be reached by 2005 (Figure 2).

Figure 2: Daily Cigarette Smoking, Age 18+, Ontario, 1991-2002 and 2005 MHPSG Target



Source: Centre for Addiction and Mental Health Monitor.

- Daily smoking has declined 13% since 1999, and 27% since 1995. This is a little behind the pace of decline in the rest of Canada – 15% in the more recent of these two periods and 29% over the longer period.[h]
- The annual drop in the rate of smoking by Ontario adults averages one percentage point, depending on the time period examined. In California, adult smoking dropped 0.9 percentage points annually from the approval of their tobacco control effort 1988 until 1995. From 1995 to 2002, when program funding was cut back substantially, there was no net change in adult smoking prevalence in California.[8]
- Among young adults (age 20-24) in Ontario, smoking declined 18% over the three years from 1999 to 2002 (No. 3, Fig. 23). In contrast, smoking among California youth age 18-24 declined 6% during this same period.
- It is not yet possible to comment on progress reducing smoking among pregnant women as relevant survey data have just started to become available.

Public Health Impact

- Reach. The principal programmatic strategy for reducing adult smoking is the funding of province-wide cessation services. These are complemented by community-based cessation services offered primarily through the Public Health Units, as required under the Mandatory Health Programs and Services Guidelines. Province-wide programs reach out directly to smokers in the general population (*Smokers' Helpline*, *Quit & Win Contest*) and on postsecondary campuses (*Leave the Pack Behind*), while the *Clinical Tobacco Intervention* seeks indirectly to reduce adult smoking by increasing the capacity of health professionals to be

[h] Age 18+, using CTUMS for 2002[9] and 1999 and NPHS for 1994/95.[10]

effective cessation counsellors. The proportion of the target populations reportedly reached by these programs last year varies from 1% of the general population of smokers to 54% of the on-campus population (No. 2, Table 6).[i] In light of the challenges of reaching substantial proportions of smokers in the general population, there is added importance for policy measures such as increasing tobacco taxes and province-wide smoke-free legislation. By definition, nearly all smokers are reached by increased prices through higher taxes and, as documented in the previous section, a substantial proportion are also touched by clean-air provisions that reduce their opportunities to smoke.

- Efficacy. The *Smokers' Helpline* doubles the rate of cessation among those who call, compared to what would otherwise be expected, from 5% to 10%. But its relatively modest reach means that the project produces roughly 1,000 new ex-smokers yearly[j] – valuable but not enough by itself to make up for the new smokers who arrive on the scene each year. This is due more to modest reach than low efficacy. *Leave the Pack Behind* reports success with its post-secondary clientele who wish to quit (No. 2, Table 6 and pp. 37-39), but its efforts are no longer directed solely at cessation.[k] Finally, although the *Clinical Tobacco Intervention* trains more and more health care professionals each year, Ontario smokers who visit their doctor are no more likely to be advised to quit than Canadians in provinces with no such program (No. 3, Fig. 25).

Implications

For Programs and Policies

- Despite the apparently modest impact of cessation services funded under the OTS, there is undeniable progress toward the MHPSG target of 15% daily smokers by 2005. Importantly, this progress has been consistent and fairly substantial each year since 1999. While it is not possible to attribute specific portions of this change to specific programs or policies, there is likely some synergy among the various population strategies in place.
- Serious consideration should be given to setting a new target for adult smoking, one that will motivate extra effort and will not "automatically" be reached. Such a goal should specify *current* rather than *daily* smoking, to take account of the ever-increasing shift of smokers from daily to occasional.
- It is noteworthy that there is progress in reducing adult smoking without a single project aimed at any one or combination of the groups with the highest prevalence of smoking: men of all ages, especially age 18-29, and blue-collar workers.[l] One can only speculate how attention focussed on these groups would contribute to reducing the overall rate of smoking in Ontario.
- The health consequences of smoking[11] argue for stepped-up cessation efforts in the province. New analyses make it abundantly clear that there would be considerable fiscal benefit for the government in reducing smoking through a genuinely comprehensive program of tobacco control funded at internationally recommended levels.[12] Moreover, there should be a priority on early cessation.[13] A population approach to cessation[14] should be an integral part of such an effort.
- The absence of targeted cessation projects argues for the importance of province-wide legislation to ban smoking in the workplace, and for increasing tobacco taxes – first toward the Canadian average and then to the level of Saskatchewan and the Northwest Territories (Fig. 3). Both clean-air regulations and increased tobacco prices are well established as incentives to quit smoking.

[i] 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.

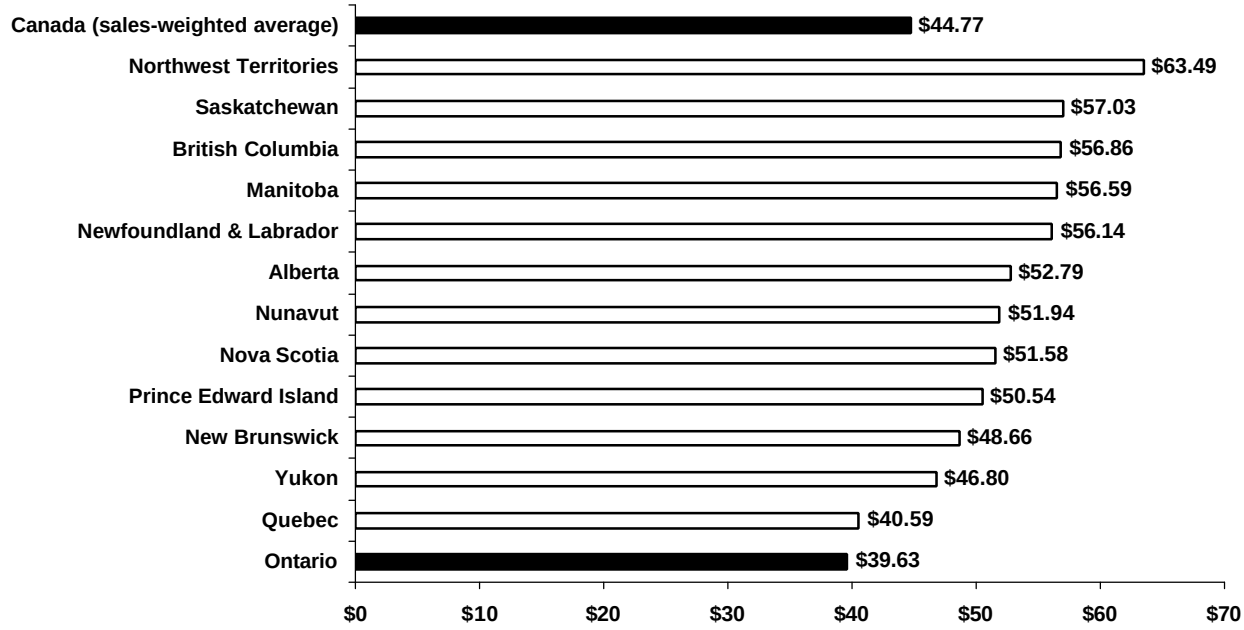
[j] [2.1 million smokers] x [1% reached by the program] x [5% quit rate in excess of the spontaneous rate].

[k] And they probably should not be, as the prevalence of smoking among university graduates is almost the lowest – at 14% – of any group in society (No. 3, Fig. 17). Most data sources indicate that community college graduates are much more likely than university graduates to be smokers, however.

[l] More accurately, there have been no province-wide projects since the OTS renewal. One very small community-based project attempted to address blue-collar workers in 2002-04.

- Within the framework of cessation efforts, there needs to be an educational campaign 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.

Figure 3: Tax Levels, by Province/Territory, December 2003



Note: Total federal and provincial tobacco taxes, including GST, PST and HST per 200 cigarettes
Source: Canadian Coalition Against Tobacco.[15]

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.
- 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. However, patients in Ontario report more such counselling by physicians than by dentists or pharmacists.[9] The reasons for this need elucidation.

PROGRESS REDUCING TEEN SMOKING AND ELIMINATING SALES TO MINORS

Status in 2002-03

- In 2003, the prevalence of smoking by Ontario students reached its lowest level since surveys began in 1977. This decline was true of students in each of grades 7, 9, and 11 (No. 3, Fig. 28).
- From 1999 to 2003, there were declines in smoking by *all* grades, from 7 though 12. The greatest decline during this period was among grade 11 students, whose rate of smoking fell by half (35% in 1999 vs. 18% in 2003) (No. 3, Fig. 28).
- Between 2001 and 2003, lifetime abstinence among students in grades 7-12 rose from 51% to 57%. Abstinence rates increased in each of grades 8, 9, and 10 (No. 3, Figs. 29 and 30).
- In 2003, 18% of Ontario teens age 15-19 were current smokers. This was significantly less than the average of 22% in the other Canadian provinces (No. 3, Fig. 32). Moreover, there was a trend toward declining rates for the period 1999 to 2002 among this age group in Ontario (No. 3, Fig. 33).
- Underage youth smokers in Ontario (age 15-18) usually obtained their cigarettes from retail sources (59% of such smokers). The vast majority of these purchases were from small grocery/corner stores, and most of these smokers made such purchases at least weekly (No. 3, p. 35).
- One quarter of Ontario cigarette retailers were willing to sell to underage youth in Ontario in 2002, a rate that is substantially higher than the 16% reported in 2000 (No. 3, Fig. 36). Thus, while retailer compliance with sale-to-minors legislation was better in Ontario than the rest of Canada in 1999 and 2000, this is no longer the case, and Ontario retailers are now just average in their compliance with the law. This decreasing rate of compliance can be solely attributed to independent convenience stores (No. 3, Fig. 37).

Project Highlights in 2002-03

- Approximately $1.1 million, representing 13% of OTS project monies in 2002-03, was devoted to prevention and other youth-oriented programs. Few of these projects are directed exclusively at reducing teen smoking. For example, *TeenNet* and *Leave the Pack Behind* also address Ontarians in their early 20s.
- *Lungs are for Life* and OLA *Youth Initiatives* were the principal prevention projects; several other infrastructure-development projects had a minor prevention focus (Table 1). Province-wide projects employing public education strategies to promote prevention were *TeenNet* and *Leave the Pack Behind*. Slightly over $300,000 went to industry denormalization in various projects with a focus on youth,[m] while *Not to Kids* attempts to change social norms about sales to minors (Table 1).
- *Not to Kids* was the only project to directly address the issue of eliminating sales to minors, and it was not province-wide.
- As noted above with respect to reducing adult smoking, 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

Progress

- Teen smoking is clearly on the decline in Ontario, and has finally fallen below the previous lows seen in the late 1980s and early 1990s. Recent declines in smoking and increases in abstinence have been particularly steep among students, but there is also a trend toward less smoking among Ontario teens in general,

[m] TeenNet, Leave the Pack Behind, OLA Youth Initiatives, Youth Vortal

whether students or not. This downward trend appears to be slightly more pronounced in Ontario than the rest of Canada, although larger sample sizes are needed to establish this with certainty.

- The recent declines in smoking by Ontario students appear to compare well with those in California (Table 3).[n]

Table 3: 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.[8]

- Progress in eliminating sales to minors contrasts with the declines in smoking: retailer compliance in Ontario is not improving as it is in the rest of Canada, and among independent corner stores, it has gotten much worse since 2000.[o]
- Although there are no MHPSG targets for youth smoking or sales to minors, it is clear that progress in this regard is inadequate.

Public Health Impact

- Reach. The reach of OTS prevention programs is still modest, at 5-10% of their respective target groups (No. 2, Table 6). 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-10 students in Ontario. These adults in turn have reached 284,000 students with the program (No. 2, p. 46). *Not to Kids*, the only project focused on eliminating sales to minors, will document its reach at the end of the current fiscal year (March 2004). Its maximum reach, with 100% success within its boundaries, would be about 6 out of 10 Ontario youth and retailers.
- Efficacy. Although *Lungs Are for Life* is being widely distributed, its efficacy as a school-based prevention curriculum remains to be demonstrated.[p] Evaluation of the program is the focus of the current year's activities. *TeenNet*, the OLA *Youth Initiatives*, and *Not to Kids* are also expected to have more definitive evaluation results in the current year.

[n] 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.
[o] The absence of data for 2001 makes the interpretation of this latest data point more uncertain.
[p] Ironically, the more extensive the reach of LAFL, the more difficult it will be to find control schools with which to compare schools that have implemented the program.

Implications

For Programs and Policies

- There are more than 1.5 million teens and near-teens (age 10-19) in Ontario. While they are now 12.5% of the total population, they are undoubtedly regarded by the tobacco industry as providing 100% of future smokers. This helps to explain why the tobacco companies, despite newly-implemented federal restrictions on sponsorship, spent $300 million nationwide on promotion in 2002 (No. 1, p. 10). Ontario's share of this spending would be approximately $100-120 million, or *50-60 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 would do well to consider whether $1.1 million and 13% of the OTS budget is adequate for addressing the prevention objective of the Strategy. It hardly requires mentioning that effective prevention will make a major contribution to reducing adult smoking. Considering that the highest prevalence of smoking is among young men age 18-22, prevention efforts now may impact adult smoking sooner than most observers would expect.
- Given the modest reach and as-yet unknown efficacy of much of the 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. 3) becomes a priority. Such a measure would have 100% reach and very high efficacy, i.e., the public health impact would be considerable. 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.[15]
- 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, as in Saskatchewan and Manitoba,[q] and (b) prohibit the misleading descriptors 'light' and 'mild' on cigarette packages.
- It is apparent that there needs to be more focus on curbing sales to minors, and that this effort has to concentrate on independent corner stores. If Ontario is serious about eliminating sales to minors, there will have to be a long-term change in public attitudes about providing cigarettes to under-19s, such as *Not to Kids* seeks to instil. In the short run, there is a need for more enforcement of retailers, which may require more resources for the public health units. In the longer term, there needs to be a provincial sales policy that treats cigarettes as the hazardous and addictive product that they are. This should include consideration of restricting sales to controlled outlets.
- 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, US 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.[16] Since US trends often appear in Canada after a brief delay, and given the increased promotion of tobacco on campuses, it makes sense to continually monitor this population in Ontario and to maintain some prevention/cessation programs focused on this group – such as *Leave the Pack Behind*.

For Research and Evaluation

- Continued monitoring is needed to assess the trends of retailer compliance and to compare teen smoking in Ontario with the rest of Canada. Data from A.C. Nielsen for 2003 and the Canadian Community Health Survey for 2002-03 should soon be available for this purpose.
- 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.

[q] Saskatchewan's restrictions were enacted in March 2002, challenged in court by Rothmans, Benson & Hedges, and upheld. They are being appealed again by the industry. Manitoba's legislation was passed in August 2002 (No. 1, p. 13).

- 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 occur 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 Ontario youth smoking is most effectively addressed by prevention programming, or whether measures aimed successfully at adults will also have a beneficial spillover among youth.

PROGRESS REDUCING OVERALL TOBACCO USE

Status in 2002-03

- Overall tobacco use in Ontario declined 8% in 2002 from a year earlier, to 1,711 cigarettes per person age 15 and older (No. 3, Table 1).
- Since 1994, per capita consumption in Ontario has declined 22%.[17]
- A total of 16.4 billion cigarettes were sold in Ontario in 2002.[17] This is the equivalent of more than 68 packs of 20 cigarettes for every adult and child in the province.

Strategy Highlights in 2002-03

- Funding for the OTS totalled $19 million, or $1.59 per capita. This total comprised $4 million for resource centres, $5 million to public health units, and $10 million for the projects in Table 1, plus management and evaluation.[r]
- The Strategy continued to employ a mix of strategies (Table 1), including public education (41% of the total for renewal projects), assistance to smokers (26%), regulating public smoking (6%), and developing infrastructure for future tobacco control (28%).
- Strategy coordination became more apparent as the OTS Steering and Coordinating Committees met several times for the purposes of planning the Strategy and developing mechanisms for managing it better.
- Collaboration among projects was greater than in previous years. Although still limited (No. 2, Table 4), strategic partnerships developed that saw the transfer of skills and funds between projects, usually with the intention of supporting local bylaw initiatives. There was considerable networking between most projects and public health units (No. 2, Table 4).
- For the first time, multi-year funding was approved, with eight community-based projects starting in the spring of 2002 and concluding in March 2004.
- In December 2003, a carton of 200 cigarettes cost an average of $62.37 in Ontario. Of this amount, 64% was taxes of various kinds.[15]

Discussion

Progress

- While cigarette consumption per capita continues to decline in Ontario, it remains 11% higher than in the rest of Canada and is not declining as quickly: the average decline from 2001 to 2002 was 12% in the rest of Canada (vs. 8% in Ontario). In Québec and Alberta, the drop in consumption was double that of Ontario (15-16%; No. 3, Table 1).
- Per capita funding has not changed in absolute dollar amounts ($19 million) since renewal in 1999. From 1999 to 2003, the population of the province grew while inflation reduced the value of the dollar. The funding at the start of the renewal of $1.71 per capita in 1999 dollars is now worth $1.41 in 1999 terms – a reduction of 18.5% in constant dollars. [s]
- While Ontario was the leader in per capita funding of tobacco control in 1999, this is no longer the case. Ontario lagged behind the rest of Canada in 2002-03, where funding averaged $1.93 – 21% higher than in Ontario. Québec, Nova Scotia, Alberta, NWT and Nunavut all support their tobacco control programs more adequately than does Ontario (No. 3, Table 2).

[r] The first two figures are as supplied by the MOHLTC. The activities funded with these amounts are not covered in this report, but undoubtedly make a contribution to the progress reported here.
[s] Population growth accounts for a drop from $1.71 per capita to $1.59, while inflation of 11.1% from 1999 to 2003 reduces this further to $1.41.[20]

- Tobacco taxes have increased substantially in Ontario in the last two years, but still remain the lowest in Canada (Fig. 3). As of December 2003, the price of cigarettes has finally surpassed that of 1991 (in nominal dollars), the last year before prices began to decline (No. 3, Fig. 3).[15]

Public Health Impact

- Cancer Care Ontario estimates 16,500 deaths in 2002 can be attributed directly to tobacco use. This accounts for 21% of all deaths among men and 18% of all deaths among women in 2002.[11]
- Smoking clearly remains the number one preventable cause of disease and death in Ontario:

> "Since 1950, nearly 1/2 million Ontarians have died because of tobacco. This toll is approximately six times greater than the sum of all Ontario deaths attributed to alcohol, drugs, motor vehicle accidents and AIDS over the same period. Currently, 50 Ontarians die each day because of tobacco. This is equivalent to … one fully loaded jumbo jet crashing every 6th day without any survivors."[11]

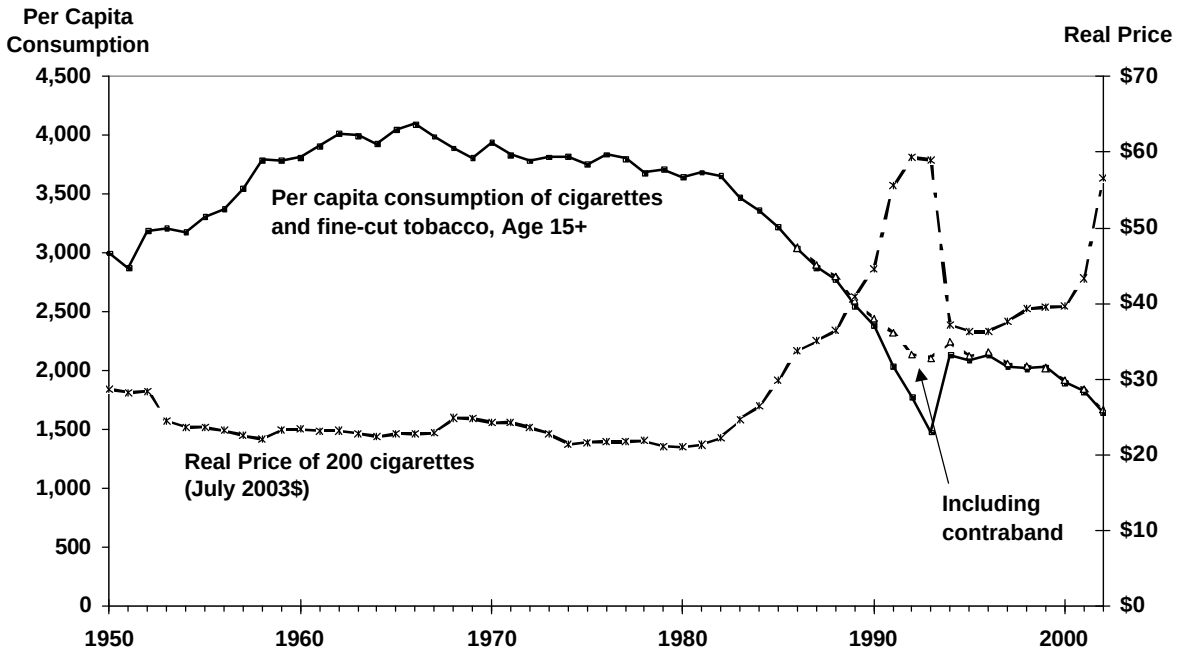
- OTRU estimates that a 10% drop in smoking prevalence in the next 5 years – about twice the rate of decline recently experienced – would save 785 lives, almost 41,000 hospital-days, and $468 million in health care costs over this period. To achieve this would cost more than the current level of OTS funding, but, when increased taxes are added to the health care savings, the fiscal benefit would exceed this cost by *35 times*.[18]

Implications

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

- Per capita funding for tobacco control must be increased. It will pay for itself in reducing health care costs, while also saving lives. Increased funding could come from tobacco taxes, suing the tobacco industry to recover health care costs and revenue lost through smuggling,[19] and diverting revenue from tobacco-support programs.
- Increasing tobacco taxes will generate revenue, promote prevention, and encourage cessation. The price of cigarettes is closely related to tobacco consumption (Fig. 4), more so than any other measure, according to most experts.

Figure 4: Real Price vs. Per Capita Consumption of Cigarettes, Canada, 1950-2002



Source: Canadian Coalition Against Tobacco.[15]

- In addition to increasing the price of cigarettes, the other policy measure with widespread beneficial impact is eliminating public smoking. Discussed above under Progress Toward Smoke-free Spaces, province-wide legislation to ban smoking in work sites and public places also provides an inducement to quit, and, less directly, not to start (or restart). Such legislation should establish 100% smoke-free public places and worksites without exemptions and with clear provision for enforcement. It should be accompanied by measures to make cessation programs more available and accessible.
- Finally, an industry denormalization strategy is needed. It is the major piece missing from the Ontario Tobacco Strategy. Such a strategy could encompass public education about the deceptive practices of the tobacco industry, litigation to recover excess health care costs and revenue foregone due to industry-supported smuggling, and effective measures to regulate retailing, making it clear that cigarettes are not an ordinary consumer product.

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