

The Federal Tobacco Control Strategy

**Estimating the economic
value of reducing smoking
rates in Canada to 18% --
... and the cost of failing to
achieve the 12% goal.**

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S ummary

In its 10 year run, from 2001 to 2011, the Federal Tobacco Control Strategy contributed to a reduction in smoking rates in Canada from tobacco smoking from 24% in 2000 to an estimated 17% in 2011 (exact rates in 2011 will not be known until mid-2012). This represents about 1.2 million fewer smokers in 2011 than in 2000.

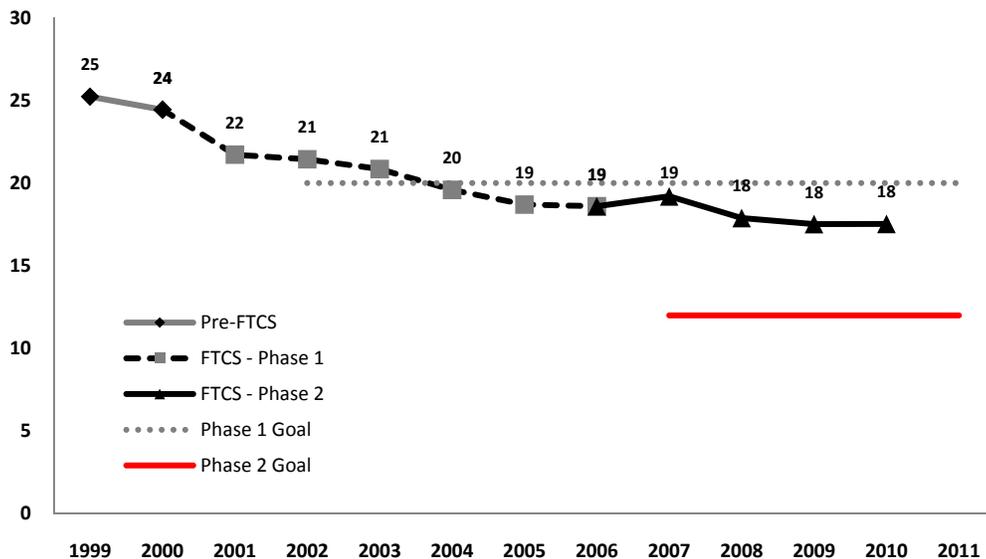
Using estimates of economic value of quitting smoking prepared for Health Canada, we estimate that the reduction of smoking has benefited the Canadian economy by about \$505 billion dollars. Had the goal of 12% prevalence been reached, the benefits would have been \$590 billion higher.

The Federal Tobacco Control Strategy aimed to reduce smoking prevalence in Canada to 12% by March 31, 2011, but only achieved a reduction to 17%.

The Federal Tobacco Control Strategy is a horizontal initiative of the federal government to provide a “comprehensive, fully-integrated and multi-faceted approach to tobacco control”.¹ It was launched in 2001 with a 5 year budget of over \$500 million², and a goal of reducing smoking prevalence to 20% by 2011 (from the 1999 level of 25%).

At the end of the first 5-year phase of the strategy, in the spring of 2006, smoking prevalence had already fallen to 19%. The review of the strategy at its mid-point was completed in 2007, and new goals were set with the goal to reduce overall prevalence to 12% by 2011.³ The budget for the remaining 4 years of the strategy was \$361 million.⁴

Relationship of actual smoking prevalence with Federal Tobacco Control Strategy Goals: 1999-2011



Source: Canadian Tobacco Use Monitoring Survey, 1999-2010
2011 rate projected (see next section)

There are more than 1 million fewer smokers than at the beginning of the federal tobacco strategy ten years ago.

Almost all of that reduction occurred in the first 5 years of the strategy.

From 2000 to the end of the first phase of the FTCS (2006-07), there was a drop of 5 percentage points in the current smoking prevalence rate, resulting in a decrease of about 1 million smokers.

Progress in the second half of the strategy (2006-07 to 2010-11) appears to be much smaller. Because data for 2011 will not be available until mid-2012, assessment must be made on the basis of estimates of prevalence in March 2011. Assuming that the population growth and smoking trends continue in the same path for 2011 as they did for 2007-2010, we can project that current smoking prevalence in 2011 will be about 17%, and that there will be 4.8 million smokers, of whom 3.65 million will be daily smokers. This is a reduction of 1.6% since 2006, or 123,000 smokers.

Annual progress in reducing the prevalence of current smoking in the first phase of the FTCS was two and a half times greater than progress in second phase (-3.98% compared with -1.44%). Annual progress in reducing the prevalence of daily smoking was three and a half times greater (-4.69% compared with -1.25%).

Had the government achieved its goal of reducing smoking prevalence to 12% in 2011, there would be 3,394,200 smokers (based on an anticipated population of Canadians over 15 years of age in 2011 of 28.3 million*).

Based on our estimates of smoking prevalence for 2011, the government is 1,400,000 smokers short of its goal.

* Extrapolated from annual increase of about 300,000

Canadian Tobacco Use Monitoring Survey results, 1999-2010, and estimates for 2011

Prior to FTCS

	1999	2000
Canadians aged 15+	24,260,000	24,580,000
Current smokers	6,121,982	6,007,562
Prevalence of current smoking	25	24.4
Daily smokers	5,071,670	4,858,494
Prevalence of daily smoking	21.0	19.8
Former smokers	6,145,392	6,388,737
Prevalence of former smoking	25.3	26
Never smokers	11,992,942	12,183,429
Prevalence of never smoking	49.4	49.6

Phase 1 of FTCS (2001 – 2006)

	2001	2002	2003	2004	2005	2006	Av. Δ
Canadians aged 15+	24,916,000	25,251,000	25,563,000	25,925,000	26,140,000	26,527,000	1.3%
Current smokers	5,411,822	5,414,334	5,332,325	5,079,767	4,889,511	4,934,022	-30%
Prevalence of current smoking	21.7	21.4	20.8	19.6	18.70	18.6	-40%
Daily smokers	4,490,971	4,439,400	4,249,953	3,882,671	3,913,394	3,768,952	-37%
Prevalence of daily smoking	18.0	17.6	15.7	15.0	15.0	14.2	-47%
Former smokers	5,938,840	6,323,401	6,760,132	6,614,485	7,246,097	7,193,451	+21%
Prevalence of former smoking	23.8	25.0	26.4	25.5	27.7	27.1	+07%
Never smokers	13,565,377	13,513,350	13,470,921	14,230,782	14,004,074	14,397,696	+3%
Prevalence of never smoking	54.4	53.5	52.7	54.9	53.6	54.3	+16%

Phase 2 of FTCS (2007 – 2011)

	2007	2008	2009	2010	Av. Δ	EST 2011*
Canadians aged 15+	26,903,000	27,282,000	27,679,000	27,982,000	1.4%	28,341,667
Current smokers	5,165,376	4,883,408	4,851,274	4,905,613	-0.1%	4,811,023
Prevalence of current smoking	19.2	17.9	17.5	17.5	-1.4%	17.0
Daily smokers	4,127,622	3,670,767	3,755,131	3,777,653	0.1%	3,652,162
Prevalence of daily smoking	15.3	13.5	13.6	13.5	-1.2%	13.0
Former smokers	7,546,060	7,820,586	7,414,912	7,297,802	+0.4	7,205,608
Prevalence of former smoking	28.0	28.7	26.8	26.0	-1	25.4
Never smokers	14,180,811	14,580,534	15,412,567	15,778,767	+2.4%	16,329,058
Prevalence of never smoking	52.7	53.4	55.7	56.4	1%	57.6

*Figures for 2011 are projected based on 2007-2011 trends

Source: Canadian Tobacco Use Monitoring Survey.

[Data for 2010 is from the first six month 'wave' of the two-wave annual cycle; all other is annual data.]

The federal tobacco control strategy has contributed to an economic benefit to Canada of \$505 billion.

Had the second half of the strategy achieved its goal, the benefits would have been \$590 billion higher.[†]

Health Canada recently commissioned an analysis of the costs of tobacco control interventions with the benefits of reducing smoking. This report, “Economic Evaluation of Health Canada’s Proposal to Amend the Tobacco Product Information Regulations” was prepared by Industrial Economics Incorporated and finalized in December 2009.⁵

This analysis established the value of avoiding health care costs and the value of avoiding premature death, and concluded that the savings to the economy resulting for the average quitter related to averted health care costs was \$8,533, and related to reducing the risk of premature death was \$413,000. These figures are expressed in present value (i.e. the value today of future savings).

Failing to reach the goal of 12% smoking prevalence has resulted in 1,400,000 fewer quit smokers than planned, at a cost to the economy of \$12 billion in health care costs and \$578 billion in premature mortality.

Economic benefit of averted health care costs and premature death resulting from Canadian smokers quitting.

	Health Care Costs Avoided	Premature Deaths Avoided	Total
Benefit of each smoker who quits	\$8,533	\$413,000	\$421,533
Value of Success: 1.1 million smokers who quit during FCTS	\$10,239,600,000	\$495,600,000,000	\$505,839,600,000
Lost opportunity 1.4 million smokers expected to quit under FCTS but who did not	\$11,946,200,000	\$578,200,000,000	\$590,146,200,000

[†] This estimate is based on the average prevalence and cost estimates. For the purpose of simplicity we have not shown the range that would be represented within the 95% confidence intervals of the smoking prevalence rate.

The methodology used by Health Canada's research

To estimate the economic benefits of averted health care costs, Industrial Economics:

- Estimated the direct (i.e. medical expenses) and indirect (i.e. lost wages) costs of illness that would be averted by a smoker quitting.
- Established the "present value" of the future savings of health care costs. Present value is the standard method for adjusting future payments into a current value, adjusting for interest and other 'time values' of money.
- Used a higher than typical discount rate (8%), which provided a conservatively low estimate of the value of savings.
- Calculated benefits on the 'average' age of quitting of 40 years of age.
- **Concluded a savings to the economy resulting from averted health care costs of \$8,533 for an average smoker who quit.**

To estimate the value of premature deaths avoided, Industrial Economics:

- Attributed a value to life based on studies of human willingness to pay to reduce risk of death. They used the value of a statistical life (VSL of \$6.5 million).
- Used the VSL to estimate the value of prolonged life for smokers who quit.
- Used standard estimates of the increased life-span of smokers who quit at varying ages, and weighted their estimate based on the distribution of Canadian smokers by age.
- Established the present value of the future benefits of prolonged life. The 8% discount rate used to calculate present value produces a conservatively low value.
- **Concluded that the value of reducing the risk of premature death for an average Canadian who quits is \$413,000.**

The estimates are 'conservative'.

The estimates provided err on the side of understating the benefits of quitting because:

- a discount rate of 8% is used to derive the present value. This is a higher rate (i.e. produces lower values) than frequently used.
- the estimates reflect the health care savings of reducing the risk of disease and premature death for 'former smokers', and not 'never smokers,' for whom the health risks are even lower.

If separate estimates were made for the increased proportion of never smokers in the Canadian economy (from 54% to 58% of the population), the estimated savings would be higher.

Spending on the Federal Tobacco Control Strategy was about one-thousandth of the economic benefit realized.

It is difficult to say with certainty how much Health Canada or other government departments have spent on tobacco control since 2001, as varying and competing measures are used by government to track such expenditures.[‡]

We estimate that Health Canada's average annual expenditures on tobacco control during the first phase of the strategy were less than \$50 million between 2001 and 2011 (about half the budget originally planned).

The FTCS is a government-wide 'Horizontal Initiative,' for which Health Canada is the lead agency and the major recipient of funding. The total amount budgeted for the 10 year strategy was about \$837 million (\$476 in the first 5 years, and \$361 in the subsequent period).

Actual expenditures in the first 5 years fell far short of the budgeted amount, and figures for the second half are not yet available.

"The original Health Canada budget allocation of \$421,508 has been affected by several cuts since the FTCS began. The reductions went towards funding other departmental and government priorities, i.e. \$47 [million] to CEPA [Canadian Environmental Protection Act], \$32.5 [million] held back as part of the Government Advertising Plan and \$3 [million], starting in 2005-06, reallocated as part of the Expenditure Review Exercise"

Health Canada.
FTCS Summative Evaluation of the
First 5 Years, p. 38. March 2007

[‡] Figures on the budget and expenditures for the strategy vary greatly in the key budgetary documents (i.e. Departmental Reports on Plans and Priorities, Departmental Performance Reports, Horizontal Initiatives Reports, etc). Data from these reports is shown in a table below.

Federal Tobacco Control Strategy. Original Budgets, Phase 1 and 2 (\$millions)

	Health Canada	RCMP	CBSA & Revenue Canada	Public Safety	Justice Canada/ Public Prosecution	Total
Phase 1 (2001-2006) ⁶	\$421.5	\$7.5	\$27.7, \$7.7	\$3.1	\$9.2	\$476
Phase 2 (2007-2011), including extension year (2006-2007) ⁷	\$284.2	\$8.6	\$54	\$3.0	\$11.2	\$361

Federal Tobacco Control Strategy Budgeted and actual expenditures for Health Canada, 2001 to 2011

	Planned in 2001	Actually spent	Diff	Provided in HC Budget	Actually Spent	Diff
Phase 1						
2001-2002	\$54,483,400(A)	\$49,033,800(A)	-10%			
2002-2003	\$84,333,300(A)	\$55,830,000(A)	-34%	\$65,513,803 (B)	\$61,152,974(B)	-7%
2003-2004	\$84,255,300(A)	\$54,025,000(A)	-36%	\$57,398,389(B)	\$59,049,895(B)	+3%
2004-2005	\$99,218,200(A)	\$40,325,600(A)	-59%	\$53,970,446(B)	\$40,325,615(B)	-25%
2005-2006	\$99,218,200(A)	\$40,442,200(A)	-59%	\$49,576,335(B)	\$40,442,200(B)	-18%
5 year total	\$421,508,400	\$239,656,600	-43%			
Phase 2						
2006-2007				\$46,167,788(B)	\$41,942,201(B)	-9%
2007-2008	\$56,800,000(E)	\$55,100,000(E)	-3%	\$48,318,796(B)	\$35,147,517(B)	-27%
2008-2009	\$78,900,000(E)	\$67,600,000(E)	-14%	\$59,900,000(D)	\$50,000,000(F)	-17%
2009-2010	\$52,880,000(E)	\$49,510,000(E)	-6%	n/a	n/a	
2010-2011	\$42,700,000(E)	n/a		n/a	n/a	
5 year total	\$287,340,000*	n/a				

* Total as stated in Horizontal Initiatives Database appears to reflect 5 year average 2006-2007, although the initiative was not approved until mid 2007-2008.

Sources:

- A. Health Canada. Summative Evaluation of FTCS.⁸
- B. Health Canada. Management Audit.⁹
- C. Health Canada. Department Performance Report.^{10 11 12 13}
- D. Treasury Board of Canada. Reports on Plans and Priorities Health Canada.^{14 15 16 17 18}
- E. Treasury Board, Horizontal Initiatives Database.¹⁹
- F. Health Canada report to the Conference of Parties²⁰
- G. Health Canada Report on Planning and Priorities.²¹

**Federal Tobacco Control Strategy
Budgeted and actual expenditures for all departments 2001 to 2011**

	Budgeted (A)	Actual(A)	Difference
Phase 1			
2001-2002	\$65,144,80	\$59,695,200	-8%
2002-2003	\$93,551,200	\$65,097,900	-30%
2003-2004	\$93,475,000	\$63,244,900	-32%
2004-2005	\$108,437,900	\$49,545,300	-54%
2005-2006	\$108,437,900	\$49,641,900	-54%
5 year total	\$476,746,000	\$294,945,100	-39%

	Budgeted (B, C)	Actual (B, C)	
Phase 2			
2006-2007	\$66,671,445		
2007-2008	\$72,200,000	\$69,400,000	-4%
2008-2009	\$95,200,000	\$73,080,000	-23%
2009-2010	\$69,100,000	\$60,555,000	-12%
2010-2011	\$58,060,000	n/a	n/a
5 year total	\$361,000,000		

Source:

- A. Health Canada. *Summative Evaluation of FTCS*; ²² total does not reflect sum of years, but are presented as stated in document
- B. Health Canada, *Report on Planning and Priorities, 2006-2007*²³
- C. Treasury Board, *Horizontal Initiative Data Base*^{24 25 26}

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ferences

- 1 Treasury Board Secretariat. Horizontal Initiatives Database. Federal Tobacco Control Strategy. 2007-2008.
<http://www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=34>
- 2 "In April of 2001, the Government of Canada stepped up its efforts to ensure that Canada ultimately will be smoke free - with the launch of the Federal Tobacco Control Strategy. The Strategy represents a comprehensive, integrated and sustained approach to tobacco control. It is a multi-agency initiative being carried out in collaboration with other federal government departments, as well as provincial, territorial and non-governmental organizations, researchers, educators, advocates, health professionals, policy makers and service providers. It represents the most significant effort Canada has ever undertaken to fight the tobacco epidemic and it is supported with a substantial investment of more than \$500 million.
Message from the Minister of Health. The Honourable A. Anne McLellan, P.C., M.P. Minister of Health May 31, 2003
2000 - 2002 Report on Tobacco Control – Update
<http://www.hc-sc.gc.ca/hc-ps/pubs/tobac-tabac/report-rapport/minist-eng.php>
- 3 Health Canada. The Federal Tobacco Control Strategy.
<http://www.hc-sc.gc.ca/hc-ps/tobac-tabac/about-apropos/role/federal/strateg-eng.php>
- 4 Treasury Board Secretariat. Horizontal Initiatives Database. Federal Tobacco Control Strategy. 2007-2008.
<http://www.tbs-sct.gc.ca/hidb-bdih/initiative-eng.aspx?Hi=34>
- 5 Industrial Economics, Incorporated Economic Evaluation of Health Canada's Proposal to Amend the Tobacco Product Information Regulations Final Report. December 2009. Regulations Division Office of Regulations and Compliance Controlled Substances and Tobacco Directorate Healthy Environments and Consumer Safety Branch Health Canada.
- 6 Health Canada. Federal Tobacco Control Strategy (FTC) Summative Evaluation of the first five years 2001-2006. March 2007, p. 38.
- 7 Horizontal Initiatives Data Base: Federal Tobacco Control Strategy:
<http://www.tbs-sct.gc.ca/hidb-bdih/plan-eng.aspx?Org=0&Hi=34&PI=42>
- 8 Health Canada. Federal Tobacco Control Strategy (FTC) Summative Evaluation of the first five years 2001-2006. March 2007, p. 38.
- 9 Final Audit Report - Tobacco Control Directorate: Audit of Management Systems and Practices
http://www.hc-sc.gc.ca/ahc-asc/pubs/_audit-verif/2008-12/index-eng.php
- 10 Health Canada. Departmental Performance Report, 2006-2007
<http://www.tbs-sct.gc.ca/dpr-rmr/2006-2007/inst/shc/shc-eng.pdf>
- 11 Health Canada. Report on Plans and Priorities, 2007-2008
http://www.tbs-sct.gc.ca/rpp/2007-2008/hlth-sant/hlth-sant03-eng.asp#2_3_3_2
- 12 Health Canada. Departmental Performance Report, 2008-2009
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- 14 Health Canada. Report on Plans and Priorities , 2006-2007
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 - 15 Health Canada. Report on Plans and Priorities , 2007-2008
http://www.tbs-sct.gc.ca/rpp/2007-2008/hlth-sant/hlth-sant03-eng.asp#2_3_3_2
 - 16 Health Canada. Report on Plans and Priorities , 2008-2009
<http://www.tbs-sct.gc.ca/rpp/2008-2009/inst/shc/shc02-eng.asp#56>
 - 17 Health Canada. Report on Plans and Priorities , 2009-2010
<http://www.tbs-sct.gc.ca/rpp/2009-2010/inst/shc/st-ts05-eng.asp>
 - 18 Health Canada. Report on Plans and Priorities , 2010-2011
<http://www.tbs-sct.gc.ca/rpp/2010-2011/inst/shc/st-ts04-eng.asp>
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<http://www.tbs-sct.gc.ca/hidb-bdih/plan-eng.aspx?Org=0&Hi=34&PI=158>
 - 20 Health Canada. Five year Report to the FCTC Conference of Parties.
http://www.who.int/fctc/reporting/Canada_5y_report_v2_final.pdf
 - 21 Health Canada. Report on Plans and Priorities , 2008-2009
<http://www.tbs-sct.gc.ca/rpp/2008-2009/inst/shc/shc02-eng.asp#56>
 - 22 Health Canada. Federal Tobacco Control Strategy (FTC) Summative Evaluation of the first five years 2001-2006. March 2007, p. 38.
 - 23 Health Canada. Report on Plans and Priorities , 2006-2007. Horizontal Initiatives.
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 - 25 Treasury Board. Horizontal Initiatives Data Base
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 - 26 Treasury Board. Horizontal Initiatives Data Base
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