

Tobacco Control: A Blue Chip Investment in Public Health

*The economic case and a detailed proposal for greater investment in
tobacco control in Australia*



Date: April 2003
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Suggested Citation: VicHealth Centre for Tobacco Control,
Tobacco Control: A Blue Chip Investment in Public Health,
The Cancer Council of Victoria, Melbourne 2001.

Endorsed by:

Action on Smoking and Health Australia
Alcohol and Other Drugs Council of Australia
Australasian Faculty of Public Health Medicine, Royal Australasian College of Physicians
Australian Council on Smoking and Health
Australian Medical Association*
National Asthma Council
National Heart Foundation of Australia
Pharmaceutical Society of Australia
The Cancer Council Australia
The Australian Lung Foundation
The Royal Australian and New Zealand College of Obstetricians and Gynaecologists
Public Health Association of Australia
Thoracic Society of Australia and New Zealand
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Acknowledgement

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* *With the exception of a couple of options recommended for consideration concerning modifications to Medicare*



Preamble

Significant progress has been made in Australia in many areas of tobacco control.

National legislation and legislation in each State and Territory bans most forms of tobacco promotion, and most states have improved enforcement of legislation banning sales to minors [1]. Restrictions on smoking are also becoming more common. Following a stalling of progress in the mid 1990s, the late 1990s saw a significant drop in smoking [2] in response to the combined impact of Australian's hard-hitting National Tobacco Campaign, far-reaching tobacco taxation reforms [3] and increased promotion of nicotine replacement products [4]. The recent introduction of anti-smoking drug Zyban onto the Australian market has been a positive development. Health groups have welcomed recently announced plans to strengthen current health warnings.

Australia's current National Tobacco Strategy includes a comprehensive set of objectives and activities across several programs [5]. It appears to have contributed to a recent increase in State government action on tobacco, and it has funded many interesting research projects that, it is hoped, will guide future action.

The current Federal budget for the Strategy – part of the \$6.1m committed in the 1988–99 Budget to tobacco harm minimisation over the following three years – is clearly inadequate given its scope. There is no budgetary allocation for 2002–03, the final year of the Strategy.

It is now time to start developing tobacco control policy for 2003 and beyond.

This document is intended as a guide and a reference source for those developing and seeking to influence the health policies of Australian political parties. The first four sections of the document, and Sections 8 and 9, provide arguments, evidence and facts and figures that help to make the economic and public policy case for greater spending on tobacco control. You should feel free to use any of these in policy and wider community discussion about the tobacco issue, and in particular in representations to political representatives.¹ The document demonstrates that greater investment in tobacco control in Australia would be particularly beneficial for the business sector, and we would strongly encourage greater engagement with Australian business leaders and those involved in industry policy.

In addition to allocating adequate funds to the tobacco problem, a *National Tobacco Strategy Mark II* must tackle barriers to prevention and to effective treatment of tobacco dependence at the state and national levels. Most crucially it needs to outline specific actions to which specific agencies have committed, and for which they will be held responsible.

The middle sections of this document include concrete, costed ideas for how these barriers could be tackled at a national level, across all sectors of the health care system and beyond. The final section suggests specific actions for consideration and further discussion by all those individuals and organisations that will play a role in developing and implementing tobacco policy in this country over the next five years.



Dr Ron Borland

Director, VicHealth Centre for Tobacco Control

1. Powerpoint versions of each Figure and most of the Tables included in the document will be available shortly for downloading from the VCTC website. Copies of a colour-printed 8-page summary of this document can also be mailed on request.



Contents

Preamble	5
1. Executive Summary	9
1.1 Scope of this paper	9
1.2 Impact of proposal on Federal Budget	10
1.3 Predicted outcomes	11
1.4 Broad recommendations for the Federal Government	15
2. Why should the government intervene in the tobacco market?	17
2.1 The tobacco industry – a clear case of market failure	17
2.2 Current tobacco control policy – unfair and inequitable?	24
2.3 Where to from here	30
3. What works in tobacco control?	33
3.1 What is the evidence for comprehensive programs?	33
3.2 What should be the elements of a comprehensive strategy?	40
3.3 Why not just focus on children?	41
3.4 Will these strategies be effective with people from disadvantaged groups?	45
3.5 What are the best bets for reducing tobacco use?	48
3.6 Which strategies will provide the earliest benefits?	49
4. Are we investing enough on tobacco control in Australia?	51
4.1 Less than justified by the scale of the problem	52
4.2 Less than international benchmarks	53
4.3 Less than levels demonstrated to sustain results	54
4.4 Less than recommended by expert international bodies	55
4.5 Less than that spent by successful Australian marketers	56
4.6 Less than justified by economic analysis	56
5. What are the barriers to successful tobacco control in Australia?	59
5.1 Irrational resource allocation	59
5.2 Gaps and insufficiencies in current funding arrangements	60
5.3 Piecemeal regulation	63
5.4 Flying in the dark	64
6. Where to from here in Australia?	67
6.1 Comprehensive education through media advertising and publicity	67
6.2 Tobacco dependence treatment as part of systematic, universal health care	68
6.3 Overhaul of tobacco regulation	70
6.4 Monitoring and research focused on that which will guide action	71
6.5 Public health in a federation	71
6.6 Putting it all together	71



7.	What exactly should be done?	73
7.1	Policy measures	73
7.2	Education and support programs	75
7.3	Impact on Federal Budgets	78
8.	How can we afford a comprehensive tobacco control strategy? – Options for financing	81
8.1	Measures for raising additional revenue	82
8.2	Impact on Federal Budgets 2002–03 to 2004–05	84
9.	How can we <i>not</i> afford tobacco control? – Predicted returns on investment	87
9.1	Predicted impact – community awareness and smoking prevalence	87
9.2	Impact on the lives of smokers	88
9.3	Impact on health care costs	89
9.4	Impact on businesses	92
9.5	Impact on communities	93
9.6	Conclusions	94
10.	Who needs to do what? – A summary of actions required by government and non-government organisations	95
10.1	Federal Government	95
10.2	State and Territory Governments	98
10.3	Council of Australian Governments	100
10.4	Non-government bodies	101
	References	103
	Attachment 1: International overview of tobacco control efforts	115
	Attachment 2: Rationale, communication objectives and messages for national anti-smoking media education	121
	Attachment 3: Detailed proposal for improving access to and effectiveness of tobacco dependence treatment in Australia	135
	Attachment 4: Tabulation of published research evidence on costs of smoking and anticipated benefits of reduced smoking	149

1. Executive Summary

Every day in Australia around 50 people die, prematurely, because they smoked tobacco products.

Half of the people who die prematurely due to smoking die in middle age, robbing them, their families and society of what ought to have been the most productive and rewarding years of their lives. Apart from the significant demands on the public health care system attributable to tobacco smoking, these deaths impose immense losses on the businesses in which these people worked and the institutions they served. The deaths of middle-aged people invariably cause enormous grief and upheaval for those who depended on them both personally and in material terms.

1.1 Scope of this paper

The first purpose of this paper is to summarise the economic case for government intervention in the tobacco market (Section 2).

The tobacco industry is the starkest imaginable example of market failure.

Consumers are typically initiated in childhood, under-informed about risk and significantly affected by the addictive properties of tobacco products.

It is true that smokers contribute billions of dollars each year in tax revenue, a sum substantially greater than the extra costs imposed by tobacco-related disease on the health care system. Economists have demonstrated, however, that the community (government, businesses and individuals including smokers and their families) would have significantly greater resources available to create and consume wealth if nobody used tobacco. The sums paid by smokers in taxes do not compensate the rest of society for these “negative externalities”. Every sector of society bears part of the cost of the devastation caused by tobacco ... every sector, that is, except the tobacco industry itself. Tobacco companies continue to be among the world’s most profitable business entities.

The economic benefits of reducing tobacco use in Australia would be significant.

As fewer people smoke, health care costs will decline dramatically, with benefits apparent from Year 1 in peri-natal care and for treatment and care of those who are already suffering cardiovascular diseases.

As fewer and fewer working people smoke or are exposed to smoke or expose their children to smoke, absenteeism will decline and the productivity of the workforce will increase. As more and more former smokers live more active and longer lives, they will contribute more fully to the support of their families and their neighbourhoods. They will also purchase more and more goods and services, greatly increasing the wealth of Australian businesses.

As more and more people stop smoking, more and more of the \$7b that smokers currently spend on tobacco products will be shifted from the tobacco industry to more productive areas of the economy.



Some of the major benefits of reduced smoking are summarised in Section 1.3 below.

The second purpose of this paper is to describe specific tobacco control interventions demonstrated through carefully conducted research to be cost-effective in reducing smoking and tobacco-related deaths and disease (Section 3).

Though quit rates are modest, the scale of costs saved by these programs is very large and the amount spent comparatively low, so that tobacco control interventions offer rates of social return that are substantially higher than those of just about any other social policy intervention. Early returns can be secured by focusing on groups among whom smoking cessation will quickly reduce the risk of disease and subsequent health care expenditure.

The third purpose of this paper is to assess whether Australia is currently investing enough in tobacco control (Section 4).

The scale of the problems caused; international benchmarks; recommendations of expert bodies; investment in marketing by successful private and public sector entities; and economic analysis of investment compared with potential returns would all suggest that current tobacco control efforts in Australia are significantly under-funded.

At present in Australia, tobacco control efforts are also being undermined by a piecemeal and half-hearted approach to regulation, and various structural problems hampering the efficient and equitable delivery of what should be universally accessible programs and services. At the same time, disproportionately high subsidies are being provided for tobacco dependence treatments which, while clearly effective, are substantially less cost-effective than mass media education and other mass-reach strategies.

The fourth purpose of this paper is to analyse these problems in detail (Section 5) and to suggest measures to re-orient Australian health care services towards a greater emphasis on prevention of tobacco-related diseases, and a more rational mix of tobacco control strategies (Section 6).

Finally the paper proposes concrete evidence-based policy and program ideas for adoption by the Federal and State and Territory Governments (Section 7). It also provides options that Government could consider for increasing revenue to fund tobacco control at the national, state and local levels, including several measures that would not increase the retail price of cigarettes. Combined with measures to reduce expenditure on tobacco dependence treatments, these could more than offset the federal expenditure initiatives proposed (Section 8).

1.2 Impact of proposal on Federal Budget

The net effect of expenditure and savings measures described in this proposal would be to bring total Federal and State government expenditure on tobacco control to around \$200m per annum or \$10 per capita, around the mid-point of international best-practice recommendations.

While new expenditure measures for the Federal government would total around \$97m per annum, the effect of these would be offset by significant savings from measures to improve tobacco dependence treatment.

Current projected expenditure on tobacco control measures including subsidy of tobacco dependence treatment pharmaceuticals

2002-03	2003-04	2004-05
\$53m	\$51m	\$52m

Total impact of proposed new Federal expenditure initiatives

2002-03	2003-04	2004-05
\$97m	\$97m	\$96m

Estimate of immediate reductions in Pharmaceutical Benefits Scheme and Medicare expenditure

2002-03	2003-04	2004-05
– \$23m	– \$24m	– \$25m

While Federal expenditure would be around \$120m per annum, the net impact of the proposed new initiatives could be further offset by measures that would raise revenue through increased imposts on tobacco company profits.

Indicative (net) amounts that could be raised through revenue measures

2002-03	2003-04	2004-05
\$59m	\$58m	\$56m

Net predicted impact on Federal Budget

2002-03	2003-04	2004-05
\$15m	\$16m	\$15m

While the overall net impact on the Federal Budget would still be around \$15 per annum, reductions at least equivalent to these amounts in federal and state health care expenditure on treating tobacco-related disease could be expected within a minimum of three to five years provided that sufficient resources are directed at assisting pregnant smokers and those smokers at very high risk of suffering a cardiac event.

1.3 Predicted outcomes

The measures described in this proposal would ensure that the most effective available help was accessible to the three million Australian adults who still smoke regularly. They would also ensure that much more was done to prevent children from taking up smoking.

Based on experience in the United States, falls of between three and seven percentage points in population smoking prevalence could be expected following implementation of a sustained six-year education and treatment program of the sort outlined in this proposal.

If the prevalence of smoking in Australia reduced from just over 20% to 15% over the next five years, then, over the following thirty years, we would expect a total of at least 50,000 fewer Australians to die prematurely.



Over the same period, reductions in expenditure on health services alone could be expected to total well over \$1b.

Reductions in smoking would also be followed by wide-ranging and far-reaching benefits for ex-smokers and their families, for businesses outside the tobacco industry and for the community as a whole. These are described at length in Section 9 and are summarised below.

Even under the most conservative assumptions, even considering just the limited number of health and social impacts that economists have so far been able to quantify, a \$10 per capita tobacco control program modelled on international best practice would provide social rates of return higher than those of just about any other social policy.

I. Benefits to smokers who quit and to their families

Early gains

1. Additional money for spending on other goods and services, equivalent to a \$50 per week pay rise, a \$1,450 per annum tax cut or a \$92 per fortnight pension increase.
2. Less asthma and fewer coughs and colds; fewer school and child care absences; subsequent improvements in parents' workplace productivity and children's school performance.
3. Improved fitness; greater pleasure from improved sense of taste and smell.
4. Improved fertility among both men and women.
5. Fewer families suffering:
 - the tragedy of still-birth or sudden infant death
 - the shock of a child or parent dying suddenly during an asthma attack
 - the trauma of a child or elderly relative killed in a house-fire, not uncommonly caused by children playing with lighters, or by dropped cigarettes which fail to extinguish
 - the devastation of an infant or adolescent child dying from or being severely disabled by meningitis.

Continuing returns

6. Increased household savings, quicker transition to home buying and ownership.
7. Fewer children taking up smoking and thus perpetuating health and material inequality.
8. Lower household spending on medical services.
9. Over the next 15 years, at least 14,000 fewer families grieving middle-aged fathers or mothers dying prematurely from heart attack or stroke.
10. Fewer families losing providers at the peak of their income-earning capacity.

Maturing investments

11. Greater generation of wealth; long-term financial support for spouses; greater inheritance for children.
12. Lower spending on medical services.
13. Less incapacitation from: macular degeneration, high-frequency hearing impairment, osteoarthritis and possibly rheumatoid arthritis, and greater enjoyment of activities reliant on sight, hearing or mobility.

14. Fewer men suffering impotence.
15. Over the next 30 years, at least 8,000 fewer middle aged and older parents incapacitated by stroke, and tens of thousands more by emphysema or peripheral vascular disease.
16. At least 10,000 fewer people dying over the next 30 years from cancers of the lung, lip, mouth, pharynx and larynx, oesophagus, stomach, pancreas, vulva, endometrium, penis, bladder and kidney and possibly the cervix.
17. Possible reductions in young women developing breast cancer in the future.

II. Benefits to Australian businesses

Early gains

1. Up to \$7b per year in increased sales of goods and services purchased from businesses outside the tobacco industry by those no longer buying tobacco products.
2. A reduction in absenteeism costs attributable to smoking. Absenteeism due to serious smoking-related diseases was estimated at over \$1b in 1998–9. When the costs of fewer smoking breaks, less sick leave due to fewer respiratory infections in both smokers and non-smoking colleagues and less severe/faster healing back injuries are also included absenteeism was estimated to cost \$1.5b per annum in 1992 (over \$1.7b in 1998–9 prices).
3. Reduced property and Workcover insurance premium costs (fewer fires, fewer claims related to back injury and passive smoking).
4. Reduced risk of litigation by employees and patrons suffering discrimination or illness due to failure of employers and occupiers to provide smoke-free facilities.

Continuing returns

5. Avoidance of lost expertise and performance due to premature death, disease and disability.

Maturing investments

6. Substantially more goods and services purchased by former smokers whose lives have been extended, estimated to have totalled \$4.3b in 1998–9.

III. Benefits to Federal Government

Early gains

1. Reductions in need for pharmacological treatments for elevated blood fats and other cardiovascular diseases (CVD), and consequent reductions in PBS expenditure.
2. Increased taxes paid on profits by companies selling goods and services consumed by smokers no longer purchasing tobacco products (offsetting reduced tobacco taxes paid by smokers and tobacco companies).

Continuing returns

3. Improved management and possible reductions in cost of pharmaceutical subsidies and medical treatment of asthma and diabetes and a range of other chronic diseases made worse by smoking.



Maturing Investments

4. Increased income taxes paid by former smokers whose lives are extended, and increased taxes on profits of companies producing products purchased by former smokers (offsetting pension payments to those who do not die early).

IV. Benefits to State and Territory Governments

Early gains

1. Shorter hospital waiting lists.

Note also that GST not paid on tobacco products would be paid instead on purchase of other goods and services.

Maturing Investments

2. Increased GST paid by those who live longer and consume more goods and services.

V. Benefits to health funders and insurers (federal and state, private and public)

Early gains

1. Immediate or early reductions in costs of
 - perinatal care, up to 20% per annum
 - treatment for fatal and non-fatal heart attacks, stroke and peripheral vascular disease starting as early as one year after reductions in smoking prevalence, totalling almost \$100m per annum
 - emergency care for asthma sufferers
 - treatment of meningitis and influenza, both among smokers and, through reduced opportunities for infection, among non-smokers.

Continuing returns

2. Reduced costs due to reductions in the additional complications and slower bone and wound healing suffered by smokers.

Maturing Investments

3. Reduced costs for treatment of CVD, chronic obstructive lung disease and cancers totalling more than \$1.15b over the next 30 years.
4. Reduced lifetime health care spending.

VI. Benefits to the community

Early gains

1. Increased public enjoyment of smoke-free facilities and of public recreational and natural resources due to reduced litter and bushfires.

2. Reduced tensions between smokers and non-smokers about smoking breaks in the workplace.

Continuing returns

3. Reduced distress and disruption for individuals and institutions who lose colleagues and mentors who die suddenly in middle age.

Maturing investments

4. Increased years of healthy independent life – shorter lifetime periods of disease and disability; reduced burdens on family members and other volunteer carers.
5. Contributions of former smokers who, as retirees and pensioners, are healthy enough to assist with child care and many other voluntary activities.

VII. Benefits to regional Australia

Early gains

1. Improved career opportunities for children in families currently dependent on sales of tobacco crops.
2. Fewer farming families devastated by bushfires started by cigarettes.
3. Increased rural tourism spending by people no longer smoking – weekends away, holidays.

Continuing returns

4. Improvements in demand for rural commodities used (raw materials etc) in products purchased by people no longer buying tobacco products.

Maturing investments

5. Reduced pressures on rural health services.
6. Significant reductions in premature deaths and disability among rural Australians among whom rates of smoking and incidence and mortality from cardiovascular disease and cancer are significantly higher than average.

1.4 Broad recommendations for the Federal Government

In the final section of this paper (Section 10), detailed recommendations for the Federal Government, for State and Territory Governments and for government and non-government organisations are provided for consideration by each of the bodies concerned.

To summarise, it is suggested that the Federal Government should adopt a *whole-of-government* approach to minimising the negative impact of tobacco use on the Australian economy.

1. Firstly, in co-operation with State and Territory Governments it should overhaul current piecemeal and inefficient regulation of tobacco industry manufacturing, marketing and distribution in the light of what recent US litigation has revealed about the addictiveness of tobacco products, and in light of the scale of the harm caused by their use. It should also encourage State and Territory Governments to remove anomalies and sunset exemptions that are currently reducing public protections from environmental tobacco smoke.



2. Secondly, the Government should invest in a sustained education and treatment program that is funded in line with the number of people smoking, the complexity and amount of information to be conveyed, the difficulty of quitting smoking and the scale of the health care and other social costs that can be avoided through reduced tobacco use.

The Government should

- 2.1 Increase, to a commercially realistic level, investment in anti-smoking mass media education campaigns, demonstrated to be crucial to the effectiveness of comprehensive tobacco control policies.
 - 2.2 In partnership with state and territory governments and private health providers and insurers, require promotion of tobacco dependence treatment as a condition of funding of every health service.
 - 2.3 Ensure access to tobacco dependence treatment services regardless of state of residence, and for country as well as city dwellers, and those without easy access to telephones and the Internet.
 - 2.4 Target efforts to promote smoking cessation in the first instance to those most at risk of serious disease, in particular pregnant women and those suffering cardiovascular disease. This will result in early reductions in deaths, disease and health care expenditure.
 - 2.5 Ensure access to appropriate tobacco dependence treatment services for disadvantaged groups known to have very high smoking rates. These include Aboriginal peoples and Torres Strait Islanders, sole parents not in employment, people with psychiatric disabilities and people in correctional facilities.
 - 2.6 Review and rationalise subsidy arrangements for tobacco dependence treatments in order to improve the quality of use of tobacco dependence treatment pharmaceuticals, and to increase the overall effectiveness of tobacco dependence treatment.
 - 2.7 Step up measures to prevent evasion of excise duty, both to prevent tobacco products becoming more affordable to children, and to offset declines in excise revenue that would otherwise occur with the reduced tobacco consumption expected to result from adoption of a comprehensive tobacco control strategy.
3. Thirdly, in recognition that it will be many years before the social costs of smoking are reduced, the government should explore ways of more fully compensating Australian businesses and other tax-payers for the externalities caused by smoking. In the longer term this might involve a restructuring of the tobacco market. In the meantime the government should consider offsetting increased expenditure on tobacco control through one or more of the revenue-raising measures described in this proposal, in particular one of the measures that would reduce tobacco company profit rather than increase taxes paid by smokers.
 4. Fourthly, the government might consider measures to reduce short-term hardships for tobacco growers, and for those tobacco company workers and tobacco retailers that will be adversely affected by an acceleration of the inevitable decline of tobacco use in Australia.
 5. Finally, the Federal Government can help to prevent smoking uptake by ensuring that the States have adequate finance to provide essential social services. Education, family support, recreation and welfare policies and programs can help to prevent educational failure, family breakdown and mental health problems, all of which are strongly predictive of smoking and other drug use.

2. Why should the government intervene in the tobacco market?

Why should governments get involved in life-style choices? Tobacco “is a legal product”. “Surely everyone now knows that smoking is dangerous?” “Don’t the taxes paid by smokers cover the cost of any damage caused?”

2.1 The tobacco industry – a clear case of market failure

From the point of view of political economic theory, there are four factors that justify government intervention in the tobacco market.

1. Most customers are not making a free and informed choice about smoking.
2. Smoking poses significant costs not just on the health care system, but also on businesses, on smokers’ families and on the community as a whole.
3. Hundreds of thousands of Australians are still being exposed to hundreds of geno-toxic, cardio-toxic and irritant by-products of smoke from other people’s cigarettes either involuntarily or without full knowledge of the risks.
4. It would seem impractical in Australia for smokers to seek recourse through the legal system.

2.1.1 Smoking: a free and informed choice?

At the end of the year 2000, just over 20% of Australian adults [6] and around 25% of Australian teenagers [7] smoked at least weekly.

Information asymmetry

Evidence from internal tobacco company documents released as part of settlements by tobacco companies with US state attorneys general² indicates that, for years, company personnel have been aware of the harmful effects of tobacco and the dependence-producing qualities of tobacco-delivered nicotine, but have failed to adequately warn consumers about the risks.

2. An extensive collection of documents provided by an informant from the Brown and Williamson Company has been available on line for some years at the University of California <http://www.library.uscf.edu/tobacco/>. Over 2.1 million Philip Morris, RJ Reynolds, Lorillard, Council of Tobacco Research and US Tobacco Institute documents have been placed in raw form on company websites as part of the Master Settlement agreement between US State attorneys general and US tobacco companies and industry groups. Lorillard Tobacco Company is also establishing an electronic collection. In addition to the collections from the US-based companies, a huge depository of documents from the British American Tobacco Company and its subsidiaries has been established at Guildford in England. ASH UK and a team of researchers from Canada have travelled to Guildford and copied numerous documents. A selection of these, mainly relevant to the Canadian situation, are now available on line from the Health Canada website at <http://www.cctc.ca/nctn/guildford/>. A much larger collection is being held by the provincial government of British Columbia which is currently revising legislation that should enable it to recover health cares costs. These papers have been used extensively by lawyers in class actions against the industry, a small number of which have recently resulted in rulings against US companies in favour of plaintiffs. Details of these cases are summarised at the Tobacco Product Liability Project Website – <http://www.tobacco.neu.edu/>. All are currently the subject of appeal. Many researchers have recently published papers summarising from these documents evidence of very early knowledge about the health effects of smoking (for example, Glantz et al’s *Cigarette Papers* [8]), deliberate attempts to manipulate the addictive properties of tobacco products (e.g. [9]), blatant efforts to market tobacco products to children and cynical efforts to promote ineffective prevention initiatives [10].



While consumers today are aware that tobacco smoking is generally harmful, many still underestimate the extent of the danger relative to other lifestyle risks.

While tobacco companies acknowledge the medical consensus about smoking as a major cause of premature death, most smokers are unable to name more than a handful of the numerous diseases caused by smoking [11] and few are able to accurately estimate their changes of dying in middle age [12].

While tobacco companies continue to use packaging and point-of-sale displays that recall the breezy imagery of decades of advertising intended to promote smoking as relaxing and fun, hundreds of thousands of Australians suffer conditions caused or made worse by smoking, including fertility problems [13], impotence [14], sight and hearing impairment [15–17], diabetes [18–20], and arthritis [21–24], all of which greatly decrease their ability to enjoy the simplest pleasures of life.

Addiction an anathema to freedom of choice

The addictive nature of the product³ further increases the effects of imbalances of information between provider and consumer.

Addiction by its very nature distorts thinking processes, giving prominence to thoughts which justify continuing the addictive habit, and minimising or, where possible, excluding consideration of reasons for ceasing it.

Scientific research has revealed that tobacco-delivered nicotine alters the dopamine and other brain neurotransmitter systems. Some of these changes appear to remain long after use ceases – the so-called “changed-brain syndrome”.

More than 90% of smokers want to stop, and almost 80% of Australian smokers have tried in the past to quit but have been unsuccessful [11]. On any single attempt to quit, unaided, more than 95% of smokers will fail [27].

An adult choice, or an error of youth?

More than 90% of Australians who currently smoke took up the habit as teenagers [28]: most of the tobacco industry’s new customers each year, as for the last 30 years, are young people, many as young as 14, 13 and 12 years of age [29, 30].

While tobacco companies spend hundreds of thousands of dollars on “soft-sell” strategies purporting to discourage children from what is alluringly described as an “adult” habit [10], hundreds of millions of dollars of future streams of income for the industry are assured as more than 50,000 Australian schoolchildren each year continue to take up smoking [31].

There is now evidence that young people are becoming dependent on tobacco-delivered nicotine, and are being harmed by smoking, before they even reach the age of 18.

Adolescent nicotine exposure produces immediate and long-lasting changes in central nor-adrenaline and dopamine brain pathways [32]. Scientists now believe that young brains are even more sensitive to nicotine than the brains of older people, and that young people may be more prone to becoming dependent on tobacco-delivered nicotine [33, 34]. The vast majority of these new smokers show signs of dependence on tobacco-delivered nicotine before they reach the age at which they may legally vote, drive, or purchase alcohol or tobacco products.

3. As with other drugs such as cocaine, heroin and alcohol, nicotine can produce psychoactive effects, mood alterations, strong reinforcing effects, physical dependence and tolerance. Based on these criteria for drug dependence developed by the World Health Organisation [25], the US Surgeon General has concluded that nicotine as delivered by tobacco smoking is addictive [26].

The earlier that young people start smoking and the more they smoke over their life-time, the more likely they are to suffer from smoking-related disease. Tobacco affects the body with every puff of smoke, and illness is not so much a matter of risk as a matter of time. The seeds of emphysema, cancer and heart disease are all sown from the very early stages of use, with recent evidence of circulatory damage to young smokers [35]. Planas et al recently found that men who started smoking at younger than 16 years of age were more than twice as likely to suffer from peripheral artery disease – leading to gangrene – than men who started smoking later, regardless of total exposure [36]. It has also been suggested that exposure to tobacco smoke during puberty and other critical periods of development of breast tissue may increase the likelihood of breast cancer [37].

2.1.2 Significant “externalities”

Tobacco use imposes significant costs or “externalities” on business entities and people beyond those who voluntarily choose to use tobacco products.

The non-voluntary and social costs of smoking are vast, totalling at least \$21b in 1998–9 [38].

Table 1 summarises findings of Collins and Lapsley’s estimate of those social costs that they were able to quantify for 1998–9.

Table 1. Tangible and intangible costs in 1998–9 of past and present tobacco abuse (at current prices, \$m)

Tangible costs	
Total paid production costs (labour in workforce)	2,519.5
Total unpaid production costs (labour in the household)	6,880.0
Less consumption benefits	– 4,336.2
Total net (labour) costs	5,063.4
Total health care costs	1,094.9
Fires	26.3
Resources use in addictive consumption	1,402.1
Total tangible costs	7,586.7
Intangible costs	
Value of life lost by deceased persons	13,476.3
Total intangible costs	13,476.3
Total tangible and intangible costs	21,063.0

Source: Collins and Lapsley, 2002 Table 25, p58, Table 26, and Table 27, p 59.

Much of the discussion about the social costs of tobacco centres on health care expenditure. Often overlooked are the costs to smokers and their families, costs to businesses, and the costs to public infrastructure and neighbourhoods.



Table 2 summarises Collins and Lapsley’s estimate of the tangible costs borne by each sector of society in 1998–9.

Table 2. Incidence of tangible social costs in 1998–9 associated with past and present tobacco abuse (current prices, \$m)

	Borne by individuals	Borne by business	Borne by government	Total
Paid production costs (workforce labour)	0.0	2,063.5	456.0	2,519.5
Unpaid production (household labour) costs	6,880.0	0.0	0.0	6,880.0
Health care costs (incl pharmaceuticals)	145.3	69.9	879.6	1,094.9
Fire	7.0	13.6	5.7	26.3
Resources used in addictive consumption	0.0	1,402.1	0.0	1,402.1
Total	7,032.4	3,549.1	1,341.3	11,922.8

Source: Collins and Lapsley, 2002 Table 5.32, p62.

What is behind each of these numbers?

Costs to government and other health care insurers

Collins and Lapsley have warned that \$1,094.9 must be a significant underestimate of health care costs attributable to smoking.

The researchers were unable to obtain accurate estimates of the tobacco-attributable costs of ambulance services, domiciliary care and services by allied health professionals. Though some pharmaceutical costs could be estimated (in particular, those prescribed for tobacco-attributable conditions identified by Ridolfo et al [39] which were included in the highest volume Pharmaceutical Benefits Scheme (PBS) drugs) many could not, including over-the-counter drugs, those in lower volumes on the PBS or those whose price is less than the PBS co-payment.

Leistikow and Martin point out that estimates such as Collins and Lapsley’s have been based on the costs of treating only those diseases for which attributable fractions exist: they have not addressed the cost of treating illness and disability caused by the many illnesses that are known to be adversely affected by smoking, such as URTIs or influenza, but for which attributable fractions have not (or cannot) be calculated [40].

The hospital costs estimated by Collins and Lapsley reflect the actual hospital costs of each tobacco attributable condition. However, recent research has demonstrated, that treating smokers is likely to cost more than treating non-smokers. In addition to making greater use of hospital emergency departments and other treatment services [41,42], smokers heal less quickly [43], and are more frequently admitted to intensive care post-operatively [44].

The direct medical costs of a complicated birth for a smoker are estimated to be 66% higher for a smoker than for a non-smoker, a reflection of the greater severity of complications and the more intensive care required [45]. In their longitudinal study of smoking and hospital use, using the Busselton study in Western Australia, English et al found that smoking is a major contributor to hospital use in Australia [46].

Further, Collins and Lapsley note that the estimation of \$26.3m in social costs attributable to fires caused by smoking, including the \$5.7m borne by government, is a conservative estimate only. Valuations for public property damage, such as national parks, loss of animals and amenity during bush regeneration could not be included in the estimation.

Costs to smokers and their families

Addicted smokers who spend their money on tobacco products could be buying other goods and services that would provide much greater immediate and long-term benefit to themselves and to their families. Collins and Lapsley estimated that the costs of addictive consumption, or non-voluntary spending⁴ net of government taxes totalled over \$1.4b in 1998–9. In the year 2000, Australian smokers diverted more than \$7b of their incomes on purchasing a product that 75% of them wish they were not using [47, 48].

Not all the health care costs incurred by smokers are covered by the public purse. Treating smoking-related diseases is estimated to have cost smokers and their families \$145.3m (over and above the public health costs) in 1998–9 [49]^{5,6}. These costs impose particularly onerous burdens on the 40% of smokers who are unemployed or on very low incomes [50].

It is not just a question of length of life. Quality-of-life studies indicated that life-long smokers have greatly reduced quality-of-life before they die at younger ages [51]. Non-smokers live longer with more disability-free years.

Individuals and their families also bear the costs of fires caused by smoking in the form of injuries, deaths, hospital costs and uninsured property damage, estimated at \$7m in 1998–9 [38].

And these are just the tangible costs.

While it is possible to quantify spending forgone, health care costs, the value of earnings of a person who dies prematurely, and even changes in quality of life, much more difficult to estimate is the devastation of losing a child, a partner, a parent, a friend or a colleague, upon whom one depends for emotional support and stability.⁷

While tobacco company executives attempt to bolster the respectability of their companies through donations to high-profile organisations doing “good works” for youth and their families, each year thousands of young Australians are economically, emotionally and socially devastated by the loss of a parent dying from a tobacco-related disease. In 2001 alone, at least 5,400 young Australians are likely to lose a middle-aged father and 1,770 are likely to lose a middle-aged mother due to tobacco smoking.⁸

Costs to business

Tobacco use has an impact on the productivity of the paid workforce through a reduction in the size of the available workforce as a result of premature death or premature retirement. Secondly, smokers who become seriously ill require significant time off work for hospital and medical treatment. Finally, tobacco-induced illnesses reduce productivity on-the-job. Collins and Lapsley estimate that absenteeism for treatment for very serious diseases such as cancer, heart disease, chronic obstructive lung disease, and pneumonia would have imposed tangible social costs alone of over \$1 billion in 1998–9. The cost to Australian businesses of production losses in the paid workforce due to past and present tobacco use was estimated to be over \$2b in 1998–9. Less dramatic but also costly for businesses is the extra

4. Based on spending by smokers smoking more than 10 cigarettes a day, well above the level of smoking where smokers start to display characteristics in line with the WHO criteria for establishing addiction, refer Collins and Lapsley 1996, p21.

5. Refer Table 32 on page 62 of Collins and Lapsley 2002.

6. Note that these are net costs – the authors deduct out the “savings” made by people dying prematurely – see Table 17 on p49 (covers total health care costs).

7. Depression, for instance, has been reported as occurring in increased rates when associated with major bereavement (Jacobs et al 1989), with some reports as high as 32 percent at six months and 27 percent at 12 months after loss” [52, 53].

8. Calculation based on tobacco-attributable deaths in those 35 to 64 years in 1998 [39], allowing for a total fertility rate of 1.78 in 1997 [54].



absenteeism due to the additional respiratory illnesses and chronic illnesses suffered by smokers. Based on a study of Telecom employees where the annual costs of smoking-related absenteeism were estimated to total \$16.5m per annum, Hocking et al estimated that smoking-related illnesses would have cost Australian businesses, in total, more than \$1.5b in 1992 (over \$1.7b in 1998–9 prices; Australian Bureau of Statistics Consumer Price Index) [55].

People who die early cannot spend money on goods and services. This consumption forgone, estimated by Collins and Lapsley to total at least \$4.3b in 1998–9, represents a further loss to business.

Tobacco companies marketing in Australia as elsewhere go to some length to alert politicians to the number of people employed in cigarette manufacturing plants and in selling tobacco products. However reductions in tobacco company workforce in recent years have been due to mechanisation and company mergers rather than declining tobacco consumption. The vast majority of retail outlets selling tobacco are staffed by only one person at a time, a staffing level that is difficult to reduce: even a very sharp decline in tobacco consumption would be unlikely to have any impact on employment levels in the tobacco industry.

In any case, it is not as if the money that former smokers used to spend on cigarettes would be lost from the business sector.⁹

The goods and services that smokers could be purchasing if they did not smoke also represent lost sales to businesses outside the tobacco industry, including many Australian-owned businesses, and businesses where increased sales would result in increased employment opportunities for Australians. As indicated above, these sales were estimated to total at least \$7b in 1999–2000 [47].

Costs to other individuals

Smokers who die early or become incapacitated due to smoking no longer contribute to the unpaid economy, which greatly increases costs and time spent by other individuals on tasks such as housework, home repairs and caring for children, the elderly, the mentally ill and physically and mentally disabled. The value of unpaid contributions not made by smokers who die early was estimated to total at least \$6.8b in 1998–9.

Smoking significantly reduces the overall welfare of individuals, families, communities and society generally.

2.1.3 Widespread involuntary or non-informed exposure among both smokers and non-smokers

Involuntary smoking includes people who inhale environmental tobacco smoke, or who are affected by tobacco smoke through other means, primarily through mother to child transmission in utero. Of those who die or suffer illnesses as a result of involuntary smoking, children less than 15 years of age, are overwhelmingly the victims. In 1998–9, 224 people died as a result of involuntary smoking, of these 103 were children under the age of 15 [38, 39].

An estimated 1,500,000 Australian children live in homes where people still smoke indoors [50]. More than one in four of these children suffer from asthma, and for many of these, tobacco smoke could trigger a life-threatening attack [59].

9. For a full discussion of the difference between costs to businesses and transfers within the business sector see analysis by the World Bank [56] and others, for instance [57, 58].

Exposure of children to environmental tobacco smoke (ETS) increases the frequency and severity of respiratory infections [60–62] and therefore must be a significant contributor to school absences and consequent reductions in parental workplace productivity. Greater school absences among low-income children contribute to educational failure and the perpetuation of inequality across generations [63].

Researchers warning of a possible link between exposure to environmental tobacco smoke during periods of development of breast tissue and later development of breast cancer believe that the risk is posed by passive as well as active smoking among teenage girls [37].

People who work in or patronise bars and gambling rooms in most Australian states are being exposed to high levels of cardio- and geno-toxic tobacco by-products that cannot practicably be removed with air-conditioning.¹⁰ Many of these chemicals are banned for industrial use.

In some Australian states, clients with psychiatric, intellectual or physical disabilities are living in supported accommodation or hostels where smoking is still permitted.

Even relatively short-term exposure poses significant risks for many of the one in ten adults who suffer asthma [60] and for the many thousands of people who suffer from heart disease, both diagnosed and undiagnosed [61, 65].

One very recent study has demonstrated reduced coronary flow velocity reserve and endothelial dysfunction of the coronary circulation following short-term exposure to tobacco smoke among young, healthy non-smokers [66].

Another recent study has found a strong relationship between pregnant women's exposure to ETS and low birth-weight, even among women with quite low levels of exposure [67].

Very few workers and patrons of venues and facilities still allowing smoking would be aware of the full range of carcinogens to which they are being exposed. Neither would they appreciate the risks to cardiovascular health and foetal health.

Non-smokers are not the only ones for whom exposure to cigarette smoke toxins is non-voluntary.

Smokers are routinely exposed to very high levels of chemicals that they would not dream of ingesting in any other context. Experts believe that many of these chemicals are delivered to smokers at levels higher than they need to be, and that exposure could be greatly reduced with the adoption of simple technological changes in cigarette manufacturing [68].

Total health costs imposed on society from the effects of involuntary smoking have been estimated at \$47.6m in 1998–9. Children under 15 were those most primarily affected, requiring 75,311 hospital bed-days for treatment caused by involuntary smoking, at an estimated cost of \$45.2m [38].

2.1.4 Tobacco companies: a failure in corporate ethics

Internal tobacco industry documents provide overwhelming evidence that, for many years, tobacco companies not only failed to warn consumers about the health risks, but also quite purposefully and systematically set out to create controversy and doubt about the health effects of tobacco smoke, and the addictiveness of tobacco-delivered nicotine.

Despite evidence of misconduct, many factors conspire to create enormous barriers for any sick or dying smoker or their dependants seeking recourse for damages through the Australian legal system.

10. Tornado-like levels of air-current would be required to ensure that customers and staff are not exposed to side-stream smoke from those smoking nearby [64].



These include:

- the financial might of the companies enabling them to outspend and outlive plaintiffs
- the scale and potentially prohibitive cost of tobacco injury litigation, given that decades of conduct may well be relevant in many cases
- the long latency period for disease, making issues of causation more complex than in an immediate harm case
- that much of the evidence relevant to tobacco litigation may no longer be in existence¹¹
- limitations under Australian law on the conditions under which class actions can be pursued¹²
- that large punitive damages awards are not a feature of the Australian legal system, unlike in the US, making tobacco litigation in this country less attractive, and placing the tobacco industry under a significantly lower level of financial threat
- the statutory prohibition against contingency fee arrangements in Australia, making it less appealing in Australia than in the US for law firms to take on the financial risks of tobacco litigation

2.2 Current tobacco control policy – unfair and inequitable?

The World Bank has concluded that increasing tobacco taxes is the single most effective thing that governments can do to reduce tobacco consumption, with strongest health benefits among those on low incomes [56]. Regressive effects of taxation may be minimised, the Bank recommends, by programs that assist low-income smokers to quit.

Australia has high tobacco taxes by world standards [69,70], a factor no doubt contributing to its comparatively low smoking prevalence [71]. Funding for tobacco control in Australia, however, is extremely limited considering the number of families touched by the tragedy of a smoking-related death and compared with the levels of expenditure on prevention initiatives for other public health problems and the total revenue from taxes paid by smokers.

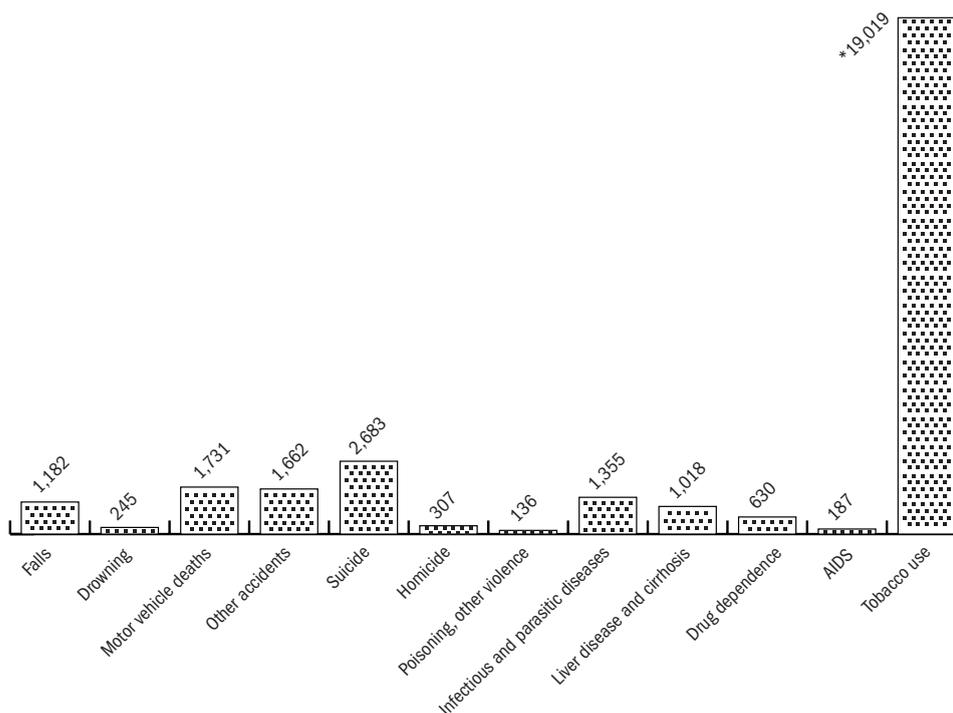
11. See *McCabe v British American Tobacco Australia Services Limited* [2002] VSC 73 (22 March 2002) and *British American Tobacco Australia Services Limited v Cowell* (as representing the estate of Rolah Ann McCabe, deceased) [2002] VSCA 197 (6 December 2002). Both at first instance before Justice Eames and on appeal to the Court of Appeal, it was clear that BAT had destroyed thousands of documents, though there were differing views on what ought to follow from the destruction of these documents.

12. See *Philip Morris (Australia) Ltd v Nixon* (2000) 170 ALR 487, in which a majority of the Full Court of the Federal Court of Australia held that it was inappropriate for a case against the tobacco industry to proceed as a class action.

2.2.1 Numbers of families afflicted

More people die from smoking than from illicit drug abuse, motor vehicle accidents, suicides, homicides, drowning, shark attacks, falls, electrocution, in fact all other external causes of death combined – see **Figure 1**.

Figure 1. Number of people who died in 1998 due to smoking compared with other causes



Sources:

Australian Bureau of Statistics. *Causes of Death 1998*, Catalogue no 3303.0, November 1999. AIDS excluded from “infectious and parasitic diseases” category; Ridolfo, B and Stevenson, C. *The quantification of drug-caused morbidity and mortality in Australia, 1998 edition*, AIHW, 2001.*

2.2.2 Investment in anti-smoking education compared with other public health programs

Despite the availability of effective tobacco dependence treatments, at present smokers have much more limited access to counselling and other assistance than do people who are dependent on illicit drugs or who suffer from other chronic relapsing disorders such as diabetes or asthma.

Compared with other public health and safety initiatives, expenditure on tobacco control is low. Taking into account the number of deaths caused by smoking it is extremely low.

There is also very different access to smoking cessation and other tobacco control programs and services depending on which state you live in, whether you live in the country or the city, and whether you have easy access to a telephone or the Internet.



Table 3. Analysis of recent Federal Budget Measures: Commitments to public health programs 1994/5 to 2004–5, compared with deaths from associated causes in 1998

	Average committed per year for years covered, \$m	People dying from this problem in 1998 ⁹	\$s spent per person dying
Accident prevention			
<i>Preventing falls, 1999–00 to 2002–03⁵</i>	\$1.650	1,182	\$1,396
Black spot road safety program, 1996–97 to 2001–02 ^{2,5}	\$38.100	1,731	\$22,010
AIDS control, 1996–97 to 1998–99 ²	\$49.500	187	\$264,706
Cancer screening, support			
Breast Cancer initiatives excl treatment, 1994–95 to 1997–98 ¹	\$51.633	2,544	\$20,296
Cervical Screening incentives for GPs 2001–02 to 2005–06 ⁸	\$17.975	269	\$66,822
	\$59.560	630 ¹⁰	\$94,540
Alcohol			
Alcohol education and Rehabilitation Foundation, 2001–02 to 2005–06 ⁸	\$29.675	4,492	\$6,606
Mental health			
Fighting suicide, 1998–99 to 2002–03 ⁸	\$9.800	2,683	\$3,653
Chronic disease management			
<i>Integrated National Diabetes Programme⁸</i>	\$12.450	2,751	\$4,526
Proactive GP management of asthma ⁸	\$12.125	777	\$15,605
Tobacco: Tobacco Harm Minimisation⁵	\$2.033	19,019 ¹¹	\$107

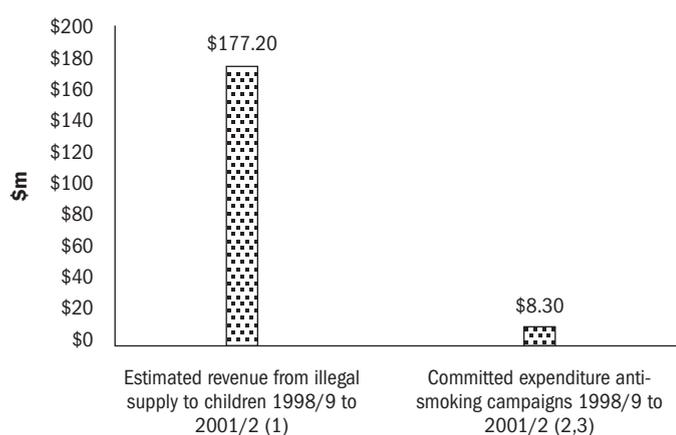
Sources:

1. Willis R. *Budget Statements 1994–95* Budget Paper No 1. Canberra: AGPS 1994 p 3.63.
2. Lawrence C. *Human Services and Health Portfolio Budget Statement 1995–96*, Budget Related Paper No 4.9, Canberra: AGPS 1995;
3. Wooldridge M. *Health and Family Service Portfolio Budget Statement*, Budget related Paper no 1.8, Canberra: AGPS 1996.
4. Wooldridge M. *Budget 1997–98, Health and Family Service Portfolio Budget Statement*, Budget related Paper no 1.8, Canberra: AGPS 1997.
5. Costello P. *Budget Measures 1998–99* Budget Paper No 2. Health and Family Services Budget measures. Canberra: AGPS 1998.
6. Costello P. *Budget Measures 1999–00* Budget Paper No 2. Canberra: AGPS 1999, and Department of Health and Aged Care. Fact Sheet 4. Tough on Drugs, Budget 1999–2000, May 1999.
7. Costello P. *Budget Measures 2000–01* Budget Paper No 2. Part 2 Expense measure. Health and Aged Care Budget measures Canberra, May 2000.
8. Costello P. *The Commonwealth Budget 2001–2202* Budget Paper No 2: Part 2. Expense Measures. Health and Aged Care Budget measures. Canberra, May 2001.
9. ABS. *Causes of Death Australia, 1998*. Catalogue 3303.0, Australian Bureau of Statistics, 1999.
10. Mathers C, Vos T and Stevenson C. *The Burden of Disease and Injury in Australia*. AIHW cat no PHE 17, Australian Institute of Health and Welfare, Canberra, November 1999.
11. Ridolfo B and Stevenson C. *Quantification of Drug-caused Mortality and Morbidity in Australia, 1998, 2001*, Canberra: Australian Institute of Health and Welfare. P. 98.

2.2.3 Expenditure compared with revenue from illicit supply

In all Australian states it is illegal to supply tobacco products to children less than 18 years of age. Despite this, surveys indicate that in 1999 just under 269,000 Australian school children smoked a total of more than 351 million cigarettes [72]. Between 1998/99 and 2001/02, the Federal Government received more than \$177m in excise from cigarettes supplied illegally to children, more than 20 times the amount it committed to anti-smoking initiatives over the same period – \$8.3m (Federal Budget papers, 1998).

Figure 2. Projected federal tobacco excise revenue from school children compared to federal commitment to anti-smoking campaigns, total 1998/9 to 2001/2, \$m



Sources:

1. Tax revenue from illegal supply calculated using data from the 1996 *Secondary School Alcohol and Smoking Survey*, using the model of cigarette prices taxes and consumption developed by the Anti-Cancer Council of Victoria; *Australian Retail Tobacconist May 1998*; excise as specified in the *Excise Tariff Amendment Acts No.s 3 and 5*.
2. Personal communication, DHFS.
3. Costello P. *Budget Measures 1998–99*, Budget Paper No 2. Canberra: AGPS 1998, p 1–42. Department of Health and Family Services *Public Health Facts Sheet No 1 Investment in Preventive Public Health Measures*, May 1998.

2.2.4 Expenditure on services for smokers compared with tax revenue they contribute

Revenue from smokers versus expenditure on tobacco control

Australian smokers currently contribute around \$4.6 b per annum in government taxes on tobacco products [73], around \$240 per capita. Barely half of one percent of this amount is devoted to anti-smoking education (around \$25m per annum, Federal and State).¹³

Federal Government expenditure on anti-smoking education and treatment initiatives is expected to total currently around \$62m in the current financial year – see **Table 4** below. Taking into account the recently introduced subsidies for the anti-smoking drug Zyban, expenditure on smoking cessation services is less than 2% of the revenue contributed by smokers. By contrast, for instance, as we understand it, road funding represents 14% of petrol excise revenue – 4.95c for every 35 cents per litre of excise duty paid.

13. Refer to Section 5 for further details.



The 74-fold difference between revenue and spending is striking and suggests that there is considerable scope to return more of the money raised from smokers to improved services to aid cessation and prevent uptake.

Table 4. Federal tobacco excise revenue from smokers, compared with Budget commitments on recent and planned anti-smoking campaigns and strategies

Years	Actual and expected federal excise revenue on cigarettes, \$m	Expenditure on anti-smoking, \$m	Factor by which federal revenue from cigarettes exceeds commitment to anti-smoking education
1996–97	\$1,625 ¹	\$4.25 ⁴	380 x more
1997–98	\$1,655 ²	\$4.25 ⁴	390 x more
1998–99	\$1,615 ²	\$2.99 ⁴	540 x more
1999–2000	\$1,740 ³	\$5.21 ⁴	359 x more
2000–01 ¹⁴	\$4,610 ⁶	\$4.16 ⁴	1,108 x more
2001–02	\$4,605 ⁶	\$2.40 ⁵	1,919 x more
2001–02	Commitment including estimated subsidies for Zyban	\$62.40 ⁷	74 x more

Sources:

1. Fahey J. *The Commonwealth Public Account 1997–98*, Budget Paper No 4. Canberra: AGPS 1997, Table 4, p 5–9.
2. Costello P. *Budget Strategy and Outlook*, Budget Paper No 1. Canberra: AGPS 1998, Table 3, p 5–8.
3. Costello P. *Budget Measures 1999–00* Budget Paper No 2. Canberra: AGPS 1999, Table 3.
4. Personal communication, Department of Health and Family Services.
5. Amount committed in 1999–2000 Budget, Costello P. *Budget Measures 1998–99*, Budget paper No 2. Canberra: AGPS 1998, p 1–42. Department of Health and Family Services Public Health Facts Sheet No 1 Investment in Preventive Public Health Measures, May 1998.
6. Costello P. *The Commonwealth Budget 2001–2002* Budget Paper No 1. Budget Strategy and Outlook: Statement 5: Revenue, Part II: Estimates of Revenue, Table 6 Indirect Tax p6. 2001. Canberra, May 2001.
7. Estimate based on authority approvals, scripts filled, average percentage of smokers with pensioners compared to employed status, and current PBS and Medicare subsidy levels.

Revenue from smoking versus extra services consumed

It is possible that discussion of the social costs of smoking may be reinforcing notions that smokers are already “costing” tax-payers dearly in terms of additional health care service utilisation, and that they are therefore not “deserving” of further public support by way of prevention services. If this is so, then it is an insidious form of rationing that is not applied to users of other addictive drugs, or to victims of other diseases or accidents that may at least in part be preventable through lifestyle modification.

Among smokers, a more cynical view commonly expressed is that governments do not wish to do too much to help them for fear that tobacco taxation revenue would be reduced [74].

Consultants commissioned by tobacco companies frequently make the point that, in addition to providing tobacco tax revenue, smokers dying early reduce government health and welfare expenditure [75].¹⁵

14. Under the government’s *New Tax System* announced in August 1998, from 2000–01 all the revenue from tobacco taxes remains with the Federal government [3].

15. For a full discussion of the difference between the impact of tobacco on government revenue, and the impact of tobacco on total social costs, see Collins and Lapsley’s analysis of social costs of drug abuse in Australia [76].

It should be noted that economists do not regard welfare payments as social costs but rather as transfers. Welfare payments do affect government budgets year to year, but they do not consume real resources: they merely transfer resources from one section of the community to another.

The impact of smoking on welfare expenditure is complex, with effects operating both ways depending of the age and employment status of the person who dies or becomes disabled, and the age and employment status of that person's dependants.¹⁶

It is true that a smoker who dies early will receive fewer pension payments over the course of his or her post-working life than a non-smoker who does not die early. However, suffering or dying from a smoking-related disease also greatly affects a person's ability to save and self-fund his or her retirement. One US study has recently estimated, for instance, that survivor insurance costs for children who have lost a father or mother due to smoking totalled around US\$1.4b in 1994 [77].

Collins and Lapsley have not attempted to estimate the impact of smoking on government welfare spending in Australia.

In contrast to welfare spending, health care expenditure not only affects government spending, but also results in a real reduction of resources available to the community for other purposes. In fact, Collins and Lapsley's estimate of health care costs does net out the effect of "savings" made from premature deaths of smokers that may otherwise have incurred health care costs in 1998-9 – refer **Table 5**.

Table 5. Health care costs and savings in 1998-9 resulting from past and present tobacco abuse (current dollars, \$m)

	1998-9 Costs	1998-9 Savings from premature deaths	1998-9 Net costs
Medical	490.3	280.9	209.4
Hospital	718.4	409.8	308.6
Nursing home	792.9	412.0	381.0
Pharmaceuticals	248.1	52.1	195.9
Para-professionals, domiciliary care, ambulance costs	Unknown	Unknown	Unknown
Total known health care costs	2,249.7	1,154.8	1,094.9

Source: Collins and Lapsley, 2002 Table 17, p49.

The taxes paid by smokers may not fully compensate the business sector and the rest of the community for the net direct and indirect costs of the diseases caused by smoking. However, at \$4.6b per annum, they **do** easily cover the immediate costs of the extra health care services that smokers consume.

Minimal investment in smoking prevention initiatives and education programs threatens to undermine the legitimacy of the Government's tobacco tax policy. The disparities described above may also be reinforcing popular notions that the current Government is "greedy and uncaring".

On all of the above grounds, it is clearly time to give smokers a "fairer go".

Tobacco smokers may not be the only group who need a "fairer go".

16. See Collins and Lapsley, 1996, Table 4.1 p 77.



None of the measures discussed in this paper would eliminate tobacco consumption overnight. However, government policies such as the dismantling of tariffs, changes in tobacco taxes and ACCC-approved mergers/takeovers of all three previously operating Australian tobacco companies by their global parents, have each contributed to major reductions in profitability for Australian tobacco farmers. The Government might therefore also consider rural re-adjustment assistance to encourage Australian tobacco farmers to retire from the industry, or to help their dependants to establish viable ventures with alternative crops.¹⁷

2.3 Where to from here

Governments of all political persuasions accept responsibility for preventing and correcting market failure.

What would this entail in the case of the tobacco market in Australia?

2.3.1 Towards freer and more informed choices about smoking

Public health specialists agree that it is probably not possible to reduce the addictiveness of tobacco products without causing additional harm to current smokers [68]. To ensure that as many consumers as possible are making as free and as informed a choice about smoking as is possible will therefore require a different approach.

First, it is crucial that products are not under any circumstances promoted or sold to young people, so that they do not become addicted to tobacco before they are adults. There should also be no commercial inducement for any person to take up or resume smoking, to smoke more, or to delay the decision to quit.

Second, the entire population should be fully and effectively warned about all the risks to health and quality of life posed by smoking and exposure to ETS.

Third, anyone wishing to quit should be given all practical assistance to do so.

Fourth, no person should be exposed to ETS at work, at play or in any public facility.

These measures alone however will not be sufficient however:

- because some children will still obtain tobacco from other minors and from adults willing to break the law;
- because many children will still be exposed to smoke from cigarettes smoked by their parents and other adults in domestic situations;
- because many people have an imperfect understanding of risk and only a hazy understanding of the physiological processes that cause cancer and other diseases;
- because addiction impairs judgement about smoking and quitting; and
- because many people are simply unable to stop, with success rates only modestly improved with existing treatments for tobacco dependence.

Who should bear the costs for treating diseases among those for whom smoking is still not voluntary?

17. A package of such measures has recently been proposed for US farming communities by a President's Commission on Improving Economic Opportunity in Communities Dependent on Tobacco Production while Protecting Public Health [78].

2.3.2 Shifting costs to those responsible

While more than 90% of smokers wish to quit, between 75 to 90% of smokers will fail even very serious attempts to stop. It is difficult to argue, then, that smokers are voluntarily assuming the risks of smoking.

Executives working in tobacco companies, by contrast, voluntarily choose to manufacture and sell tobacco products, now accepted to be both addictive and lethal. And shareholders voluntarily choose to invest in these companies.

While shareholders and executives in tobacco companies continue to enjoy the dividends of several hundred million dollars' profits each year [79], the rest of society bears billions of dollars in costs associated with increased health care expenditure and reduced productivity both in the workforce and among those people who are not paid, but whose work keeps the rest of the population fed, clothed and cared for.

Estimated aggregate social costs of tobacco abuse do not show on which community group the initial burden of abuse costs falls. To show where these initial costs fall, international guidelines recommend that incidence estimates be undertaken [80]. Collins and Lapsley have estimated the initial burden of costs borne by Australian individuals and businesses, for 1998–9, at over \$10b¹⁸ a figure well in excess of \$4.6b currently paid by smokers in tobacco taxes [38].

It would not seem unreasonable to require tobacco company shareholders to make a contribution to compensating the rest of the community for negative externalities generated by smoking.

2.3.3 Ensuring compliance with Australian law

The notion that tobacco is a “legal product” is a logical and legal nonsense. It is conduct not products that may be legal or unlawful.

The legality of past and present conduct of companies in manufacturing and selling tobacco products is something that needs to be carefully explored.¹⁹

2.3.4 A government-wide response

At the moment, tobacco control is regarded as a small component of the National Drug Strategy which is under the auspices of the Ministerial Council on Drug Strategy which comprises health and police ministers.

It is appreciated as important by health ministers, is of limited interest to those in the police portfolios and appears to be of almost no interest to other members of the government.

Rather than being regarded as an investment that would help to contain uncapped medical and pharmaceutical expenditure, budget allocations for tobacco control appear to be set according to what fraction of the public health component of the Health allocation can be devoted to drugs, and what allocation is left once resource-intensive school education programs and treatment services are funded for illicit drug users.

However, tobacco is far more than even just a health issue.

18. Net savings for resources not consumed by the decreased not subtracted from this figure.

19. This is a key interest of the VicHealth Centre for Tobacco Control.



The decline in sales of tobacco will have important implications for many small Australian retailers. Tobacco excise is going to be a declining source of government revenue. Tobacco consumers are receiving far less information and protection than consumers of other goods and services. Troubling questions are being raised about the legality of tobacco industry conduct. Reducing tobacco use would substantially increase wealth across the whole economy.

Correcting failure in the tobacco market will require a *whole-of-government* approach, including policy changes across several portfolios, co-ordinated action from several government authorities, and collaboration with State and Territory governments.

The next few sections of this document describe the scale and nature of the programs that are needed, the evidence that they will work, what they will cost and how barriers to implementation in Australia can be tackled.

3. What works in tobacco control?

The Californian Tobacco Program (CTP) in its initial phase was the most comprehensive in the world. It has been in place for more than ten years, well before tobacco control programs in other US States [80,81]. The CTP reduced tobacco consumption in California by substantially more than in the rest of the US [81,82]. Recent data indicates reductions in both heart disease [84] and lung cancer [85] in California significantly greater than those seen in the rest of the country. It is estimated that for every dollar spent on the Californian Tobacco Program between 1990 and 1998, over US\$3.60 has been saved in health care expenditure costs avoided [86]. The American Lung Association estimates that more than 300,000 Americans who died prematurely would be alive today, had all states followed the Californian program [87].

A comprehensive tobacco control program similarly could save many lives and greatly reduce the social and personal costs of smoking in Australia.

3.1 What is the evidence for comprehensive programs?

Numerous authoritative, independent bodies have systematically reviewed the evidence on the impact of tobacco control interventions. These include the World Bank [56,88]; the World Health Organisation [89], the Cochrane Collaboration²⁰; the UK Association for Public Health [95]; the US Centers for Disease Control [81,86,96]; the National Cancer Institute of the US National Institutes of Health [97], the National Cancer Policy Board of the US Institute of Medicine and National Research Council [98] and the US Surgeon General [99,100]. All agree that realistically funded, comprehensive tobacco control programs that include anti-smoking advertising as a major component, **do** reduce tobacco consumption both among adult and teenage smokers.

Comparison of population smoking over time and between states with varying intensity of campaign effort provides very strong evidence for the effectiveness of comprehensive tobacco control programs.

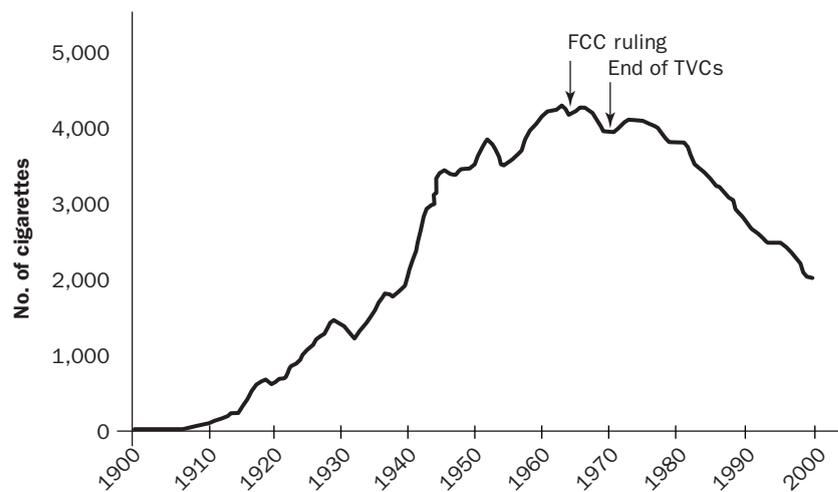
3.1.1 Historical evidence

In the United States between 1967 and 1970, anti-smoking television advertisements were broadcast in very large numbers as a result of a ruling by the Federal Commerce Commission that required the commercials as part of a fairness doctrine to balance years of tobacco advertising [101,102]. Corresponding with this very prominent media advertising, cessation rates increased sharply across both genders, all age groups and all ethnic groups [103]. When cigarettes advertisements were removed from the broadcast media from 1971, the anti-smoking commercials disappeared and cessation rates declined [104].

20. This international initiative involves panels of expert scientists summarising the evidence from controlled scientific studies using the most rigorous known statistical techniques for meta-analyses [90–94].



Figure 3. Per capita cigarette consumption in the United States, 1900 to 2000



Source: United States Department of Agriculture.

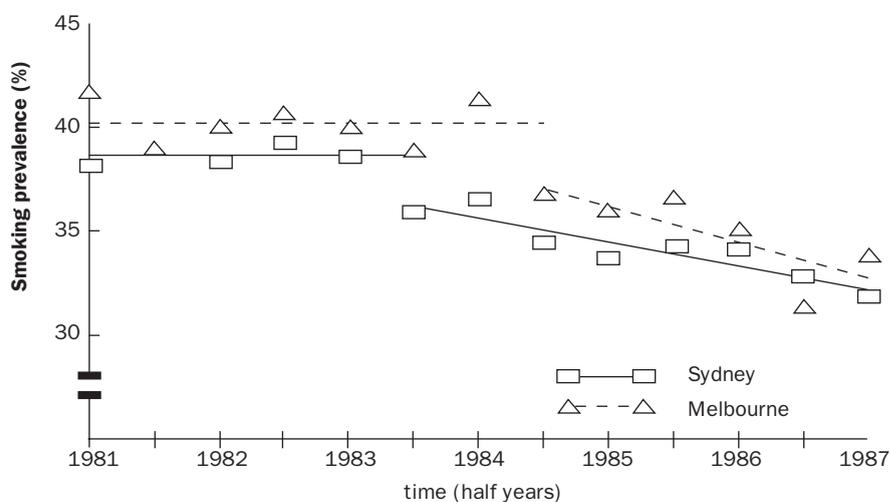
3.1.2 Evidence from Australia

Compelling evidence of the effects of anti-smoking campaigns also comes from ongoing evaluation of campaigns in Australia.

Before and after effects

In NSW, the *Quit for Life* Campaign was launched in 1983. Adult smoking prevalence, which had been steady for some years previously, dropped abruptly and significantly in Sydney. Prevalence in Melbourne in 1983 did not change but fell sharply the following year after the Victorian *Quit* Campaign was launched [105]. Falls in prevalence were higher in men than in women but were equal across socio-economic groups [105].

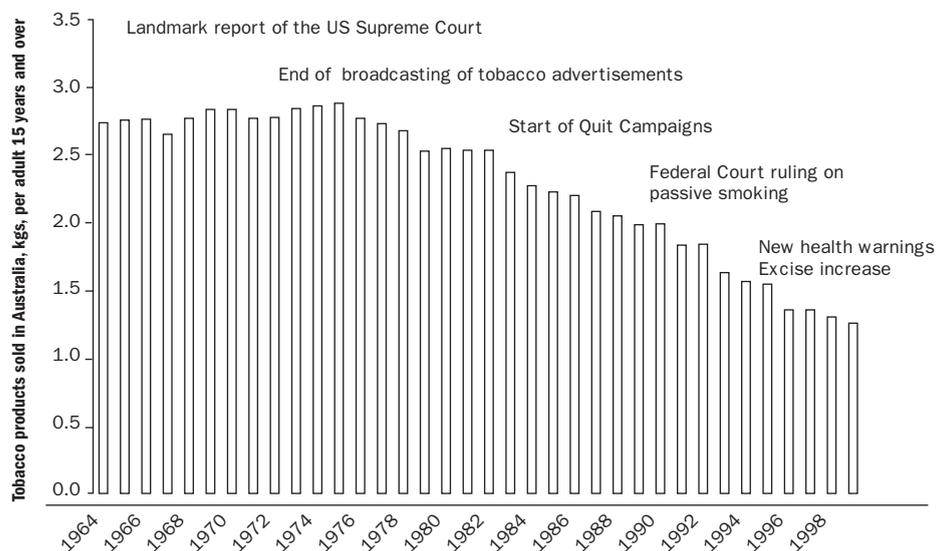
Figure 4. Age-standardised smoking prevalence, males, Sydney and Melbourne, before and after launch of Quit Campaigns



Source: Pierce, Macaskill and Hill, 1990 [105].

Following the introduction of Quit Campaigns in most Australian states between 1983 and 1986, apparent consumption of tobacco products also declined sharply.

Figure 5. Estimated per capita consumption of tobacco products in Australia



Source: Customs and excise receipts, ABS [106].

More money, more decline

In the mid 1980s, expenditure on anti-smoking education in several Australian states was probably the highest in the world.

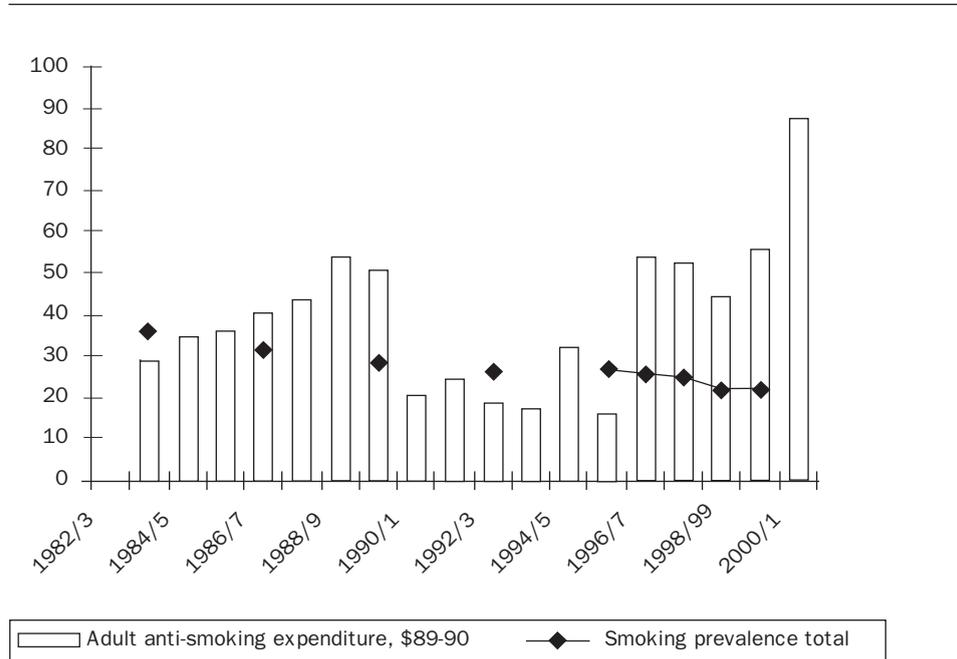
Expenditure in the late 1980s and early 1990s increased in several Australian states with the advent of health promotion foundations and hypothecated funding, however, it then dropped off.

The pattern of expenditure was almost precisely mirrored by the pattern of decline in smoking prevalence. Declines in smoking prevalence in Australia were steepest in the periods between 1988 and 1992 and 1997 to 1999 when funding was at its highest. During the mid-1990s when anti-smoking expenditure was reduced, smoking prevalence levelled off.

This correlation can be observed in both adults [107] and teenagers [108].

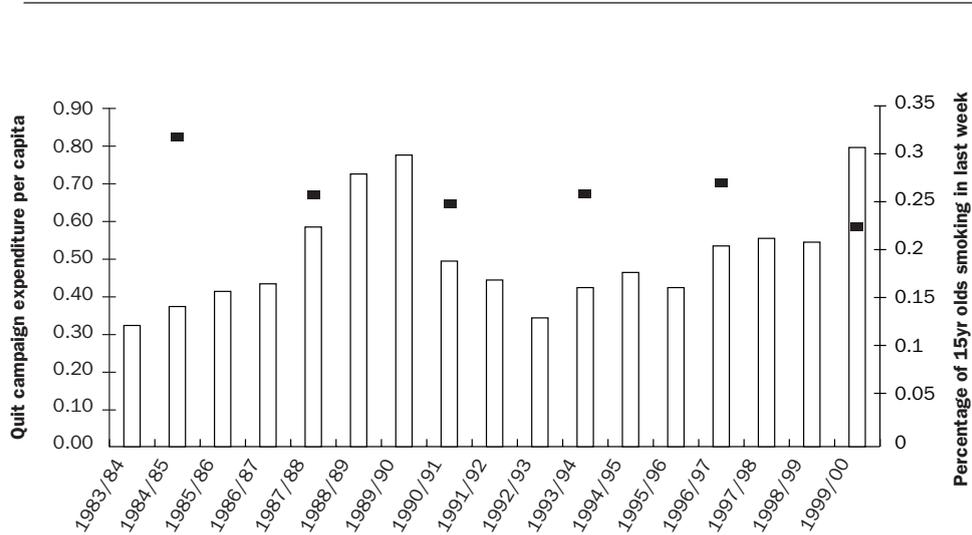


Figure 6. Adult anti-smoking expenditure and smoking prevalence, 1982/3 to 1999/00, standard \$89/90 per capita



Source: Hill, White and Scollo, *MJA*, 1998 [107]; Scollo, M. Centre for Behavioural Research in Cancer, unpublished data [108].

Figure 7. Anti-smoking expenditure and children's smoking prevalence in Australia, 1983/4 to 1996/7



Sources:

Hill, White et al. Secondary School Smoking and Alcohol Surveys [29].

Scollo M. Contributions to tobacco control State and Federal Government and non-government organisations, 2001, Unpublished data.

Perhaps the most dramatic demonstration of the impact of mass media campaigns was the recent Australian National Tobacco Campaign [109]. The Campaign was launched in April 1997, representing a significant increase in national tobacco counter-advertising over the previous five years. Despite the campaign being small by the standards of commercial and political advertisers, the results were dramatic. Smoking prevalence, which had stalled in the previous five years, dropped by 1.7 percentage points, including a record drop of 1.4% after the first seven-month phase of the campaign [109].

Table 6. Smoking prevalence before and after the National Tobacco Campaign

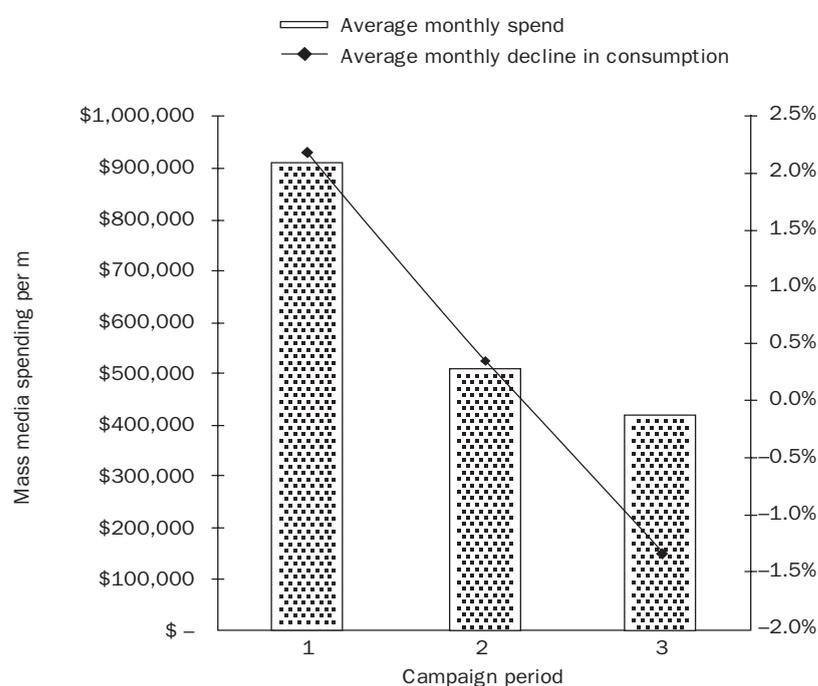
	Prevalence	OR	95% CI
Benchmark, 4/97	23.5	1	
Follow-up 1, 11/97	22.1	0.93	0.88 to 0.98
Follow-up 2, 11/98	21.8	0.89	0.84 to 0.95

p <.001

Source: Hill, Borland, Carroll et al, 2000 [109].

Tobacco industry sales data [110] and government excise receipts also show a clear decline in tobacco consumption, with reductions concentrated in the first phase of the campaign when average monthly expenditure and Target Audience Rating Points (TARPs) were twice as high as in the second phase.²¹

Figure 8 National Tobacco Campaign, media spending and reduction in excised cigarettes for each campaign period



Source: Wakefield, Freeman and Scollo in press.

21. Tobacco company executives have attempted to argue that the levelling off of falls in sales in the second stage of the campaign is proof of lack of impact. It merely, of course, reflects the lower intensity of the second phase of the campaign. One wonders why companies would bother to lobby governments against running such campaigns if they believed that increased spending would not have a major impact on sales.

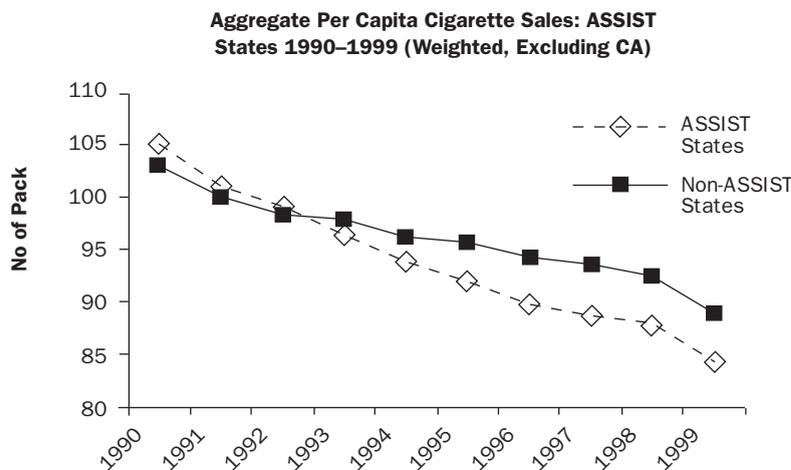


3.1.3 Evidence from recent US studies

Controlled trials

Over the 1990s, the National Cancer Institute of the US National Institutes of Health funded a very large trial, the Adult Stop Smoking Intervention (ASSIST) Study, which examined the impact of early, modestly funded state-based tobacco control programs. Consumption in states participating in ASSIST showed a 7% aggregate reduction compared with the non-ASSIST states [110].

Figure 9. Per capita cigarette sales: ASSIST versus non-ASSIST states, 1990–1999



Source: Farelly, Pechacek and Chaloupka [112].

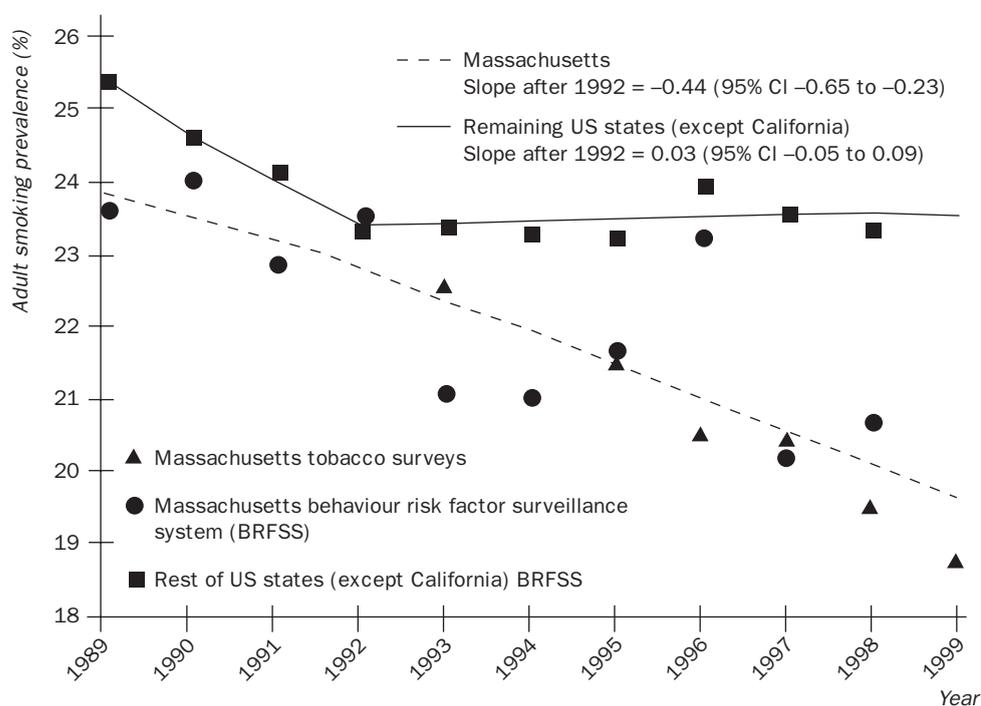
Comprehensive state-wide tobacco control programs

Following the introduction of large mass media-led campaigns in several US states in the early 1990s, tobacco consumption fell substantially in these states compared to states that had not introduced such campaigns.

The Californian Campaign began in 1990 [113] and, until the Massachusetts Campaign was launched late in 1993, was the largest and most aggressive program in the nation. Following introduction of the Campaign there was an unprecedented and unparalleled decline in tobacco consumption in California, over 50% faster than the national average [83].

A recent evaluation of the impact of the Massachusetts campaign between 1993 and 1999 published in the *British Medical Journal* showed a 25% decline in adult smoking prevalence compared to no detectable change in the rest of the US, excluding California [114]. Similar results were found from a study comparing Massachusetts to 41 other US states. The results show that by 1999 prevalence in Massachusetts had declined to 19.4% compared to 23.3% in the other 41 states [115].

Figure 10. Adult prevalence in Massachusetts compared with other US states



Source: Biener et al, BMJ, 2000.

Similar reductions have now been observed in Oregon [116] and Arizona [117, 118] which have also recently introduced major campaigns funded by settlements with tobacco companies [119].

3.1.4 How robust are these findings?

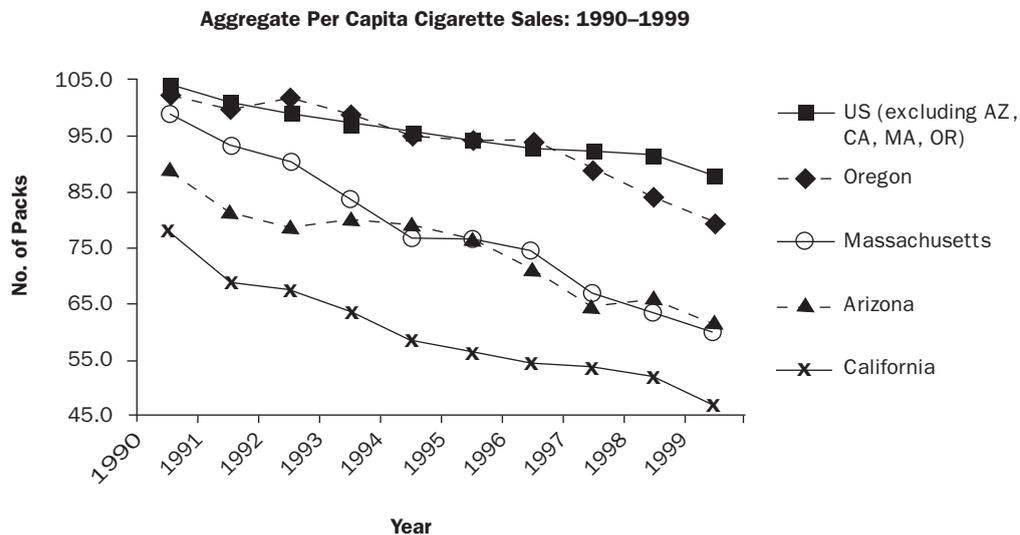
Analysis of price changes indicate that price is only one contributor to reduced consumption in states such as California, Arizona and Oregon [120]. In Massachusetts despite a tax increase, prices did not change at all due to increased industry discounting [121].

The relative impact of these campaigns strongly suggests that high-impact mass media advertising has been the major contributor to campaign success [105, 122–124]. The average yearly per capita spending on mass media in California had declined to US 50 cents per capita by 1995. In Massachusetts by contrast, per capita media expenditure has remained high, at \$2.42 in 1995. Smoking prevalence and consumption continued to fall steeply in Massachusetts [114] but levelled off somewhat in California.

Farelly, Pechacek and Chaloupka have recently performed a careful economic analysis of the impact of tobacco control program expenditure on cigarette sales across various US states, controlling for tax levels, smuggling, income and high school drop out rates. They are finding clear evidence that increased expenditure leads to reductions in cigarettes sales. The elasticity is low, meaning that expenditure needs to be increased quite significantly in order for sales to decline. Results appear to be strongest approximately a year after expenditure. The elasticity of lagged tobacco control expenditure appears to be strongest in states with higher initial tobacco consumption [112].



Figure 11. Changes in per capita cigarette sales in state with large, comprehensive tobacco control campaigns versus the rest of the US



Source: Farelly, Pechacek and Chaloupka 2001 [112].

These results also accord with surveys of people who have quit. These people overwhelmingly agree that campaigns have influenced their decisions, and predominantly name media as the main source of their awareness of campaigns [83, 125].

The evidence on the impact of anti-smoking campaigns fulfils all of the following accepted scientific criteria for establishing causality:

1. Plausibility of the connection, with changes in behaviour demonstrated to follow changes in awareness [125]
2. A temporal relationship between intervention and effect, with falls in smoking closely following introduction of campaigns
3. A “dose response” – the more comprehensive the program, the greater the falls [81, 83, 107, 111]
4. Consistency of the response across time and jurisdictions [98].

3.2 What should be the elements of a comprehensive strategy?

An independent Task Force on Community Preventive Services with support from the US Department of Health and Human Services has very recently conducted a systematic review of 166 studies evaluating links between tobacco control interventions and improved health outcomes [96]. The Task Force has identified seven of the twelve strategies evaluated, where evidence is sufficient to recommend adoption at a community or health-system level. The “strongly recommended” and “recommended” strategies are listed below, along with those strategies for which evidence is not yet sufficient.

Table 7. US Community Preventive Services Task Force findings on effectiveness of tobacco control strategies

Interventions to reduce tobacco use initiation

Strongly Recommended

1. Increase the excise tax on cigarettes to increase the unit price of tobacco products.
2. Inform (young people) through high intensity counter-advertising campaigns.

Interventions to reduce tobacco use

Strongly Recommended

1. Increase the excise tax on cigarettes to increase the unit price of tobacco products.
2. Inform (adult smokers) through high intensity counter-advertising campaigns.
3. Multi-component cessation interventions that include patient education materials, reactive telephone support and proactive telephone counselling including provider-maintained contact.
4. Education and prompting of health care providers to identify, advise and assist tobacco-using patients.

Recommended

5. Provider reminder systems for medical practitioners (stand alone).
6. Reduction of patient co-payments for effective cessation therapies.

Insufficient evidence

TV "how to quit" programs
Quit Competitions
Information to providers that they "should counsel to quit"
Provider feedback on delivery of cessation advice

Interventions to reduce exposure to environmental tobacco smoke (ETS)

Strongly Recommended

Bans or limits on tobacco smoking in workplaces and public areas.

Insufficient evidence

Provision of information to persons about reducing ETS exposure in the home.

Source: Independent Task Force on Community Preventive Services, 2001.

3.3 Why not just focus on children?

The tobacco industry tries to position smoking as an adult choice. Intervention, it argues, should be limited to efforts to stop children smoking. As argued in Section 2.1 however, it is not only children who are currently failing to make free and informed choices about smoking. And smoking does not suddenly become acceptably safe the moment one turns 18.

There are several reasons for a broader focus.

1. School-based educational programs have generally proved to be ineffective.
2. A focus on cessation will bring much faster returns
3. In any case children are positively affected by campaigns aimed at the whole community.



3.3.1 Drug education in schools of limited value

Studies indicate that anti-smoking education programs in schools, on their own and in the limited form in which they are invariably applied outside of initial pilot programs, are generally ineffective [100,125]. “Even programs that have initially reduced uptake of smoking appear to have only a temporary effect; they can somewhat delay initiation of smoking but not prevent it” Jha and Chaloupka, 1999, p 49 [127].

The most recent review by the US Surgeon General indicated that the *LifeSkills* Program developed by Dr Gilbert Botvin is the only drug education program for which long-term changes in smoking have been verified [100], but the cost of programs of this intensity is considerable in terms of both training and curriculum time [100].

The impact of drug education in schools is undermined by a number of factors. These include:

1. More frequent absences and truancy by those more likely to smoke [128,129]
2. The role of smoking as both cause and effect of alienation from school values [130]
3. The inability of teachers to frame learning tasks in a way that is suitable for existing smokers
4. Inconsistency between school-based messages about smoking inside and outside the classroom
5. Inconsistent messages from outside the school itself, including the continuing promotion of tobacco in venues that children frequent, and the apparent ease with which many children still appear to be able to purchase cigarettes [131].

3.3.2 Earlier impact from a focus on cessation

Tobacco dependence treatments aimed at adults are both efficacious and cost-effective.

Over the past ten years there has been an explosion of research into health system interventions to encourage more quit attempts and to increase success rates of those who do attempt to quit.

Evidence from numerous, tightly-designed studies has been carefully reviewed by several expert bodies in the UK and the US. See the report of the UK NHS Centre for Reviews and Dissemination [132] the Technology Assessment Guidance by the National Institute of Clinical Excellence [133], the recent Smoking Cessation Guidelines produced by the Health Education Authority, published by the British Thoracic Society and endorsed by all major public health agencies and Royal colleges [134] and a systematic review of the clinical effectiveness of bupropion and nicotine replacement therapy for smoking cessation undertaken by the Universities of York and Birmingham [135]. From the United States, see the report of the Tobacco Use and Dependence Guideline Panel, a consortium of seven federal government and non-profit organisations including the Agency for Healthcare Research and Quality (which produced the previous version of these guidelines – refer ACHPR Guidelines, 1996 [99], the National Cancer Institute, the National Heart, Lung and Blood Institute, the National Institute on Drug Abuse and the Robert Wood Johnson Foundation [136].

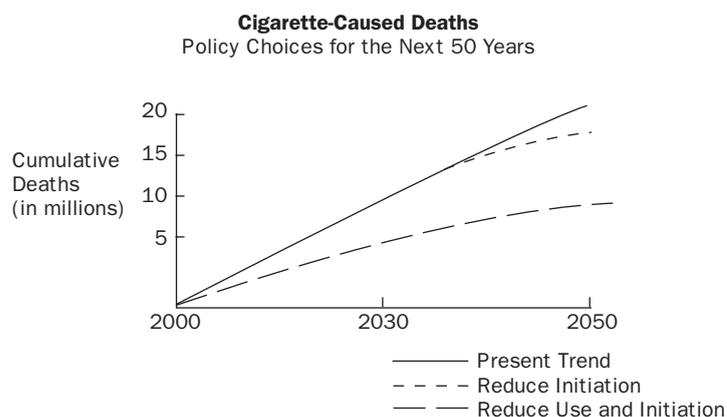
Based on this careful analysis of a now extensive evidence base, we can have confidence that:

- encouragement to quit from health care professionals **does** make a difference;
- pharmacotherapies **do** increase success rates [90,135]; and
- more intensive behavioural interventions **do** (equally and independently) improve success rates, both alone and in combination with pharmacotherapies [93].

Stopping smoking before middle age prevents more than 90% of the major health risks attributable to smoking [126,137].

Mortality from tobacco use over the next fifty years will be affected much more by the number of adults who quit than by the number of adults who start [138,139]. Policies that increase smoking cessation rates among adults, rather than policies focused largely on youth prevention, will be more likely to have immediate results in reducing illness and death [140].

Figure 12. Comparative impact of cessation and prevention strategies



Source: Adapted from Slade, J Personal communication, and Henningfield, 2000 [141].

3.3.3 Strategies aimed at the whole community also effective with teenage smokers

Smoking is influenced by social modelling and imagery created by years of tobacco company advertising and Hollywood movies. Programs to help adults to quit, restrictions on smoking in public places, and efforts to restrict access to and affordability of tobacco products and to outlaw commercial inducements to smoke have all been demonstrated to reduce smoking in children.

Direct effects

Children are much less likely to take up smoking if their schools, homes and recreational venues are smoke-free [142].

Striking reductions in youth smoking have been achieved in the US state of Florida, where aggressive anti-smoking advertisements highlighting tobacco company duplicity have been the centrepiece of a major statewide tobacco control program [143].

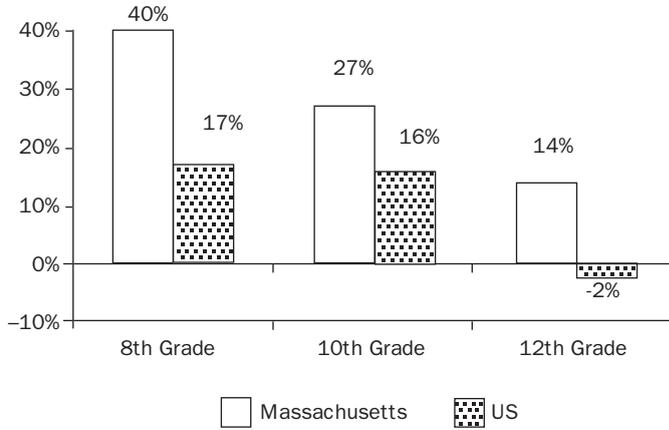
However falls in tobacco consumption among teenagers have also been much greater in states with comprehensive tobacco control programs than in the rest of the United States [144–146].

It is interesting to note in **Figure 13** that the reductions have been greatest in the youngest children. Based on comparative data across a number of US states, Wakefield et al. have recently concluded that anti-smoking advertising may have its most powerful effects in pre-adolescence or early adolescence by preventing the commencement of smoking [147]. The researchers find that these effects can be dampened by the presence of tobacco marketing, and enhanced by anti-smoking media coverage [148].

An evaluation of the impact of the Australian National Tobacco Campaign indicated a very positive impact with young people, even though advertisements have not been targeted directly at young people. More than 86% of non-smoking young people indicated it would make them less likely to take up smoking. Among those already smoking, 68% (compared with 50% of adults) indicated that they were more likely to give up smoking as a result of the campaign [149].



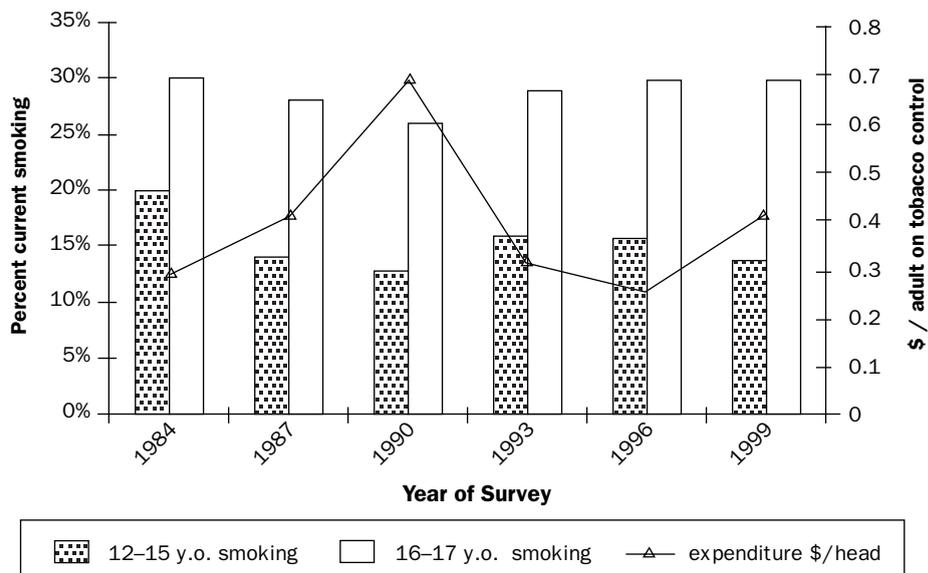
Figure 13. Percent Decline in Current Cigarette Use, Massachusetts versus US, 1996–1999



Source: Siegel, M. and L. Biener, The impact of an antismoking media campaign on progression to established smoking: results of a longitudinal youth study. *American Journal of Public Health*, 2000. 90 (3): pp. 380–6.

Results from three yearly survey of smoking rates in Australia similarly suggest that these positive impacts may already be translating into lower smoking rates, particularly among younger age groups. As can be seen in **Figure 14**, youth smoking rose sharply in Australia when tobacco control expenditure decreased, and fell again with increased funding from 1997.

Figure 14. Smoking prevalence among Australian secondary students compared with anti-smoking expenditure



Source: White V, Centre for Behavioural Research in Cancer, based on published [29], and unpublished data.

Indirect effects

Apart from the direct effect of such campaigns on young people, it is likely that reducing tobacco use in adults would have indirect effects on tobacco use among children as well.

Children of parents who smoke have a much higher likelihood of being regular smokers than children of parents who do not.

Table 8. Parents' smoking habits and secondary school student use of tobacco, ages 12 to 17

Parents smoking Use of tobacco	None	One	Both
Ever	54%	65%	75%
In the last month	22%	30%	41%
In the last week	17%	25%	36%

Source: Hill, White and Letcher. Australian Secondary School Survey of Alcohol and Tobacco 1999, unpublished data.

Farkas et al have demonstrated that children whose parents quit smoking before their children take up smoking are much less likely to take up smoking, compared to children of parents who continue to smoke [150].

Children of parents who smoke have a much higher likelihood of using illicit drugs than those whose parents do not smoke. It is possible that strategies that prevent young people from taking up smoking would also discourage uptake of other drugs as well.

Table 9. Parent's smoking habits and student use of cannabis and other illicit substances

Parents smoking Use of marijuana	None	One	Both
Ever	25%	31%	42%
In the last year	21%	26%	36%
In the last month	10%	15%	22%
Use of other substances			
Ever	9%	12%	17%
In the last year	7%	8%	13%
In the last month	3%	4%	7%

Substances: cocaine, heroin, hallucinogens, ecstasy amphetamines.

Source: Hill White and Letcher, op cit.

3.4 Will these strategies be effective with people from disadvantaged groups?

Smoking is a major cause of health inequality.

In 1991, Australians from the lowest income groups were at least twice as likely as people from the highest income groups to die prematurely of coronary heart disease or stroke [151]. Death rates from lung cancer, bronchitis, emphysema and asthma are all significantly higher among low socio-economic status (SES) groups [152, 153].



There is a clear relationship between SES and smoking, with young blue-collar men, unemployed people, divorced or separated parents, Aborigines and men born in Asian, Mediterranean and Baltic countries being among the highest smoking groups [50].

Table 10. Correlates of tobacco use, Australia, 1998

Characteristics	Proportion of population 14 years and over who smoke
Education	
Tertiary	11.9
No qualification	26.1
Occupational status	
White collar	14.5
Blue collar	28.6
Marital status	
Married	19.6
Divorced/separated	33.5
Geography	
Urban	21.2
Rural	25.8
Social influences	
At least 50% of friends use	45.6
Less than 50% of friends use	10.7

Source: National Drug Strategy Household Survey: State and Territory Results, AIHW, 2000 [154].

UK researchers have estimated that around two-thirds of the gradient of differences in premature mortality between different classes is attributable to smoking [155,156].

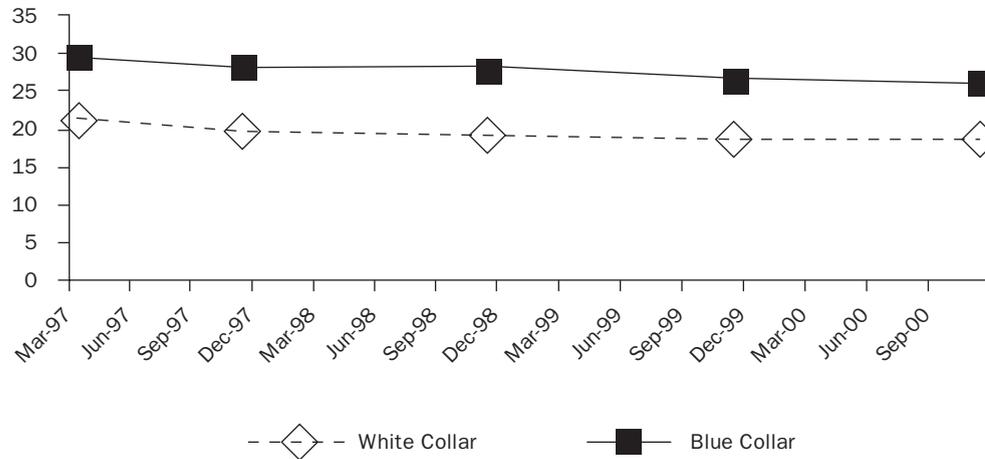
The causes of differences in smoking rates appear to be largely social in nature. Smoking in blue-collar environments is much more socially acceptable among this group than in the rest of society. People who report that a majority of friends and family members smoke are more than twice as likely to ever have been smokers [154]. People who work and socialise in environments that allow smoking are much more likely to still be smokers than are people who work and socialise in environments where smoking has been banned.

Unlike the situation in many other countries, in Australia since the advent of mass media education campaigns smoking prevalence has reduced almost equally among higher and lower socio-economic groups.

Mass media campaigns appear to have had a beneficial effect in reaching people more likely to watch commercial television than read broadsheet reports of scientific studies.

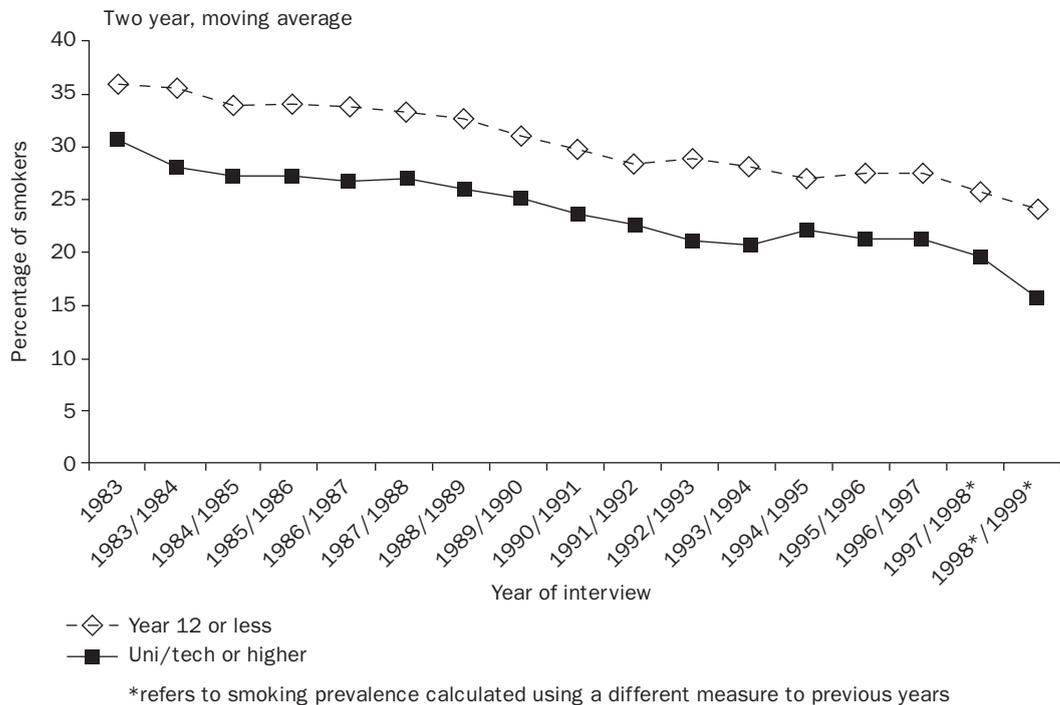
The results of the surveys on the impact of the National Tobacco Campaign and ongoing evaluation of Victorian and South Australian Smoking and Health Programs indicate that the positive effects of mass media campaigns apply to males and to females, to older and to younger smokers and to all levels of educational attainment and occupational status [2,12,105].

Figure 15. Smoking prevalence in Australia, by SES group, since inception of the Australian National Tobacco Campaign



Source: National Tobacco Campaign survey monitoring [2, 157].

Figure 16. Smoking prevalence in Victoria, by education level



Source: Victorian Smoking and Health Program, Submission to the Victorian Health Promotion Foundation, 2001, based on data collected by the Centre for Behavioural Research in Cancer in annual household surveys from 1983.



3.5 What are the best bets for reducing tobacco use?

Of the strategies listed in Section 3.2 above and endorsed by all of the expert bodies listed in Section 3.1, three are virtually cost-free for government: cigarette price increases, workplace smoking restrictions and advertising bans. All three are straightforward to apply across the whole population and are highly effective in reducing population smoking.

Tax increases that substantially increase the retail price of cigarettes do reduce cigarette consumption and also reduce the number of years people remain as smokers [158].

Apart from protecting non-smokers, introduction of smoking restrictions significantly reduces tobacco consumption, and increases the rate at which smokers attempt to quit. Once in place, restrictions increase the success rate of people attempting to quit [159]. Bans also reduce uptake of smoking by young people [142,159]. Bans have been demonstrated to have no negative impact on industries apart from the tobacco industry [160–178].

Bans on tobacco advertising also reduce tobacco consumption, smoking prevalence and smoking uptake, provided that bans extend to all forms of media [96,179,180].

After these strategies, mass media education is the most efficient means known for prompting quit attempts, and the most cost-effective way of reducing smoking uptake and increasing smoking cessation [56,95].

Media coverage of the tobacco issue has played a major role in raising awareness about the health effects of smoking and the duplicity of the tobacco industry [181,182]. Media advertising is also necessary to take the tobacco issue beyond the broadsheets and serious news and current affairs programs and into prime time commercial television. Media advertising also helps to build public support and reinforce the effects of tax increases, smoking restrictions and advertising bans.

However media on its own is also not enough.

Unfortunately, given the highly addictive nature of tobacco-delivered nicotine, almost 95% of people making a quit attempt fail to give up smoking. Success rates can be doubled with use of existing pharmacotherapies [91], and would increase by almost the same factor again with behavioural counselling [134,136]. Promotion of both pharmacological and non-pharmacological treatments needs to form part of a comprehensive tobacco control strategy.

The United States National Institutes of Health last year published a monograph of proceedings of a meeting of experts considering the question of what works to influence cessation in the general population [183]. Members of the expert group unanimously endorsed the above strategies as both practical and effective at the population level. The following table summarises the current and potential additional impact on smoking cessation of each of these “best bet” measures in the US context.

Table 11. Current and potential impact of population-based smoking cessation interventions

	Efficacy of measure (odds ratio)	Current effect	Potential extra smokers quitting (>3 months)	Conditions required for potential effect
Comprehensive tobacco control programs	1.32	57,426	508,111	All US states adopted programs at scale of California and Massachusetts
A significant increase in the price of cigarettes	.91		222,298	Cost of cigarettes increased 20%
Universal adoption of smoke-free workplace bans	1.34	119,826	221,493	Remaining 30% of workplaces went smoke-free
Optimal health care intervention			756,000	At least 90% of patients were advised to quit and at least 45% were provided with optimal counselling
Improved quality of use of tobacco dependence medications		150,000	500,000	Use of counselling and support for all users of medication

Source: National Cancer Institute, Population-Based Smoking Cessation [138].

As pointed out by long-time tobacco control advocate Stephen Woodward in his address in the closing plenary of Australia's First National Tobacco Conference held recently in Adelaide, none of these measures is "rocket science". The research basis for these interventions is already much larger than that of just about any other area of public health, medicine, indeed public policy.

Implementation of the first three measures require simple acts of political will, to increase budgets and pass legislation.

Improvements in health system interventions are harder to achieve but can be greatly assisted through targeted educational and promotional initiatives and use of financial levers.

3.6 Which strategies will provide the earliest benefits?

The returns from tobacco control are not just long-term.

Quitting smoking can be as effective as taking medication in reducing the risk of an adverse or fatal cardiac event in people with underlying cardiovascular risk factors [184]. Within a period as short as two years, quitting effectively reduces deaths and hospitalisations even in those with very serious cardiovascular problems, such as left ventricular dysfunction [185]. Lightwood and Glantz have recently shown that hospitalisations and treatment costs for fatal and non-fatal heart attacks, stroke and peripheral vascular disease start to reduce as early as one year after reductions in smoking prevalence [186].²² This translates very quickly to significant reductions in public hospital waiting times.²³

22. Naidoo et al have similarly estimated strokes and myocardial infarctions that are preventable in the UK [187].

23. By 2010, the reduction in demand for percutaneous transluminal coronary angioplasty, for instance, would be equivalent to 10% of the current waiting list for this procedure.



English and Holman have estimated that women who smoke are almost 50% more likely to suffer an ectopic pregnancy, almost 40% more likely to suffer spontaneous abortion, more than 60% more likely to suffer antepartum haemorrhaging, and are almost twice as likely to suffer premature rupture of membranes. Babies born to women who smoke are more than twice as likely to be premature and of low birthweight [188]. Lightwood et al. have demonstrated short-term benefits of smoking cessation in terms of reduced expenditure on perinatal care, with benefits, once again, starting to accrue immediately after cessation [189].

Similarly targeted initiatives in Australia, for those at high-risk for cardiovascular disease and for pregnant smokers, would reduce health care expenditure significantly, including in the short term.

Expenditure on tobacco control should be regarded as a blue chip investment in reducing future health care expenditure, with cessation programs providing the greatest immediate returns, and measures to prevent uptake providing much greater but much more delayed reductions in health care and other public and private expenditures.

4. Are we investing enough on tobacco control in Australia?

While there has been some improvement in some areas in recent years, the total tobacco control effort in Australia is still grossly under funded by international and Australian public sector standards.

State Government in South Australia, Western Australia, New South Wales, Victoria and Queensland have recently increased financial commitments to anti-smoking education considerably, so that the total national investment is now close to \$25m AUD,²⁴ or just over AUD\$1.30 per capita.²⁵

Table 12. Total anti-smoking expenditure in Australia, 1984 to 2000–01

Year ending 30 June	Total expenditure \$AUD m	Total per capita (AUD)\$	Total per capita, in constant \$89–90
1984	\$3.2	0.21	0.32
1985	\$4.0	0.25	0.37
1986	\$4.8	0.30	0.41
1987	\$5.7	0.35	0.43
1988	\$8.3	0.50	0.58
1989	\$11.3	0.67	0.72
1990	\$13.2	0.77	0.77
1991	\$8.9	0.51	0.49
1992	\$8.3	0.47	0.44
1993	\$6.5	0.37	0.34
1994	\$8.4	0.47	0.42
1995	\$9.5	0.52	0.46
1996	\$9.1	0.50	0.42
1997	\$11.9	0.64	0.53
1998	\$12.4	0.66	0.55
1999	\$12.5	0.65	0.54
2000	\$19.0	1.00	0.79
2001 allocation – prelim	\$ 25.0	1.30	1.03

Source: Australia, data published in health promotion foundation annual reports, excluding funding to sports and arts groups, and financial data provided to the Centre for Behavioural Research in Cancer by health departments, cancer councils and heart foundations.

Expenditure last financial year represents a return, in real terms, to expenditure levels of the late 1980s. However, media production and advertising, paper and other crucial costs have increased by much more than the inflation rate over this period, thus greatly reducing the purchasing power of health promotion agencies.

Tobacco control expenditure in Australia overall is still well below what one might expect given the scale of the problem. It is well below international benchmarks; it is lower than the levels spent in jurisdictions that have successfully reduced smoking. It is lower than the amounts spent by commercial advertisers. Finally it is lower than the levels justified by economic analysis.

24. Figures in this document are in Australian dollars unless otherwise indicated. An exchange rate of 0.5 has been used where figures have been converted from US dollars. This may slightly underestimate the purchasing power of the Australian dollar. However, note that many of the recommendations based on US funding levels were calculated in early 1999.

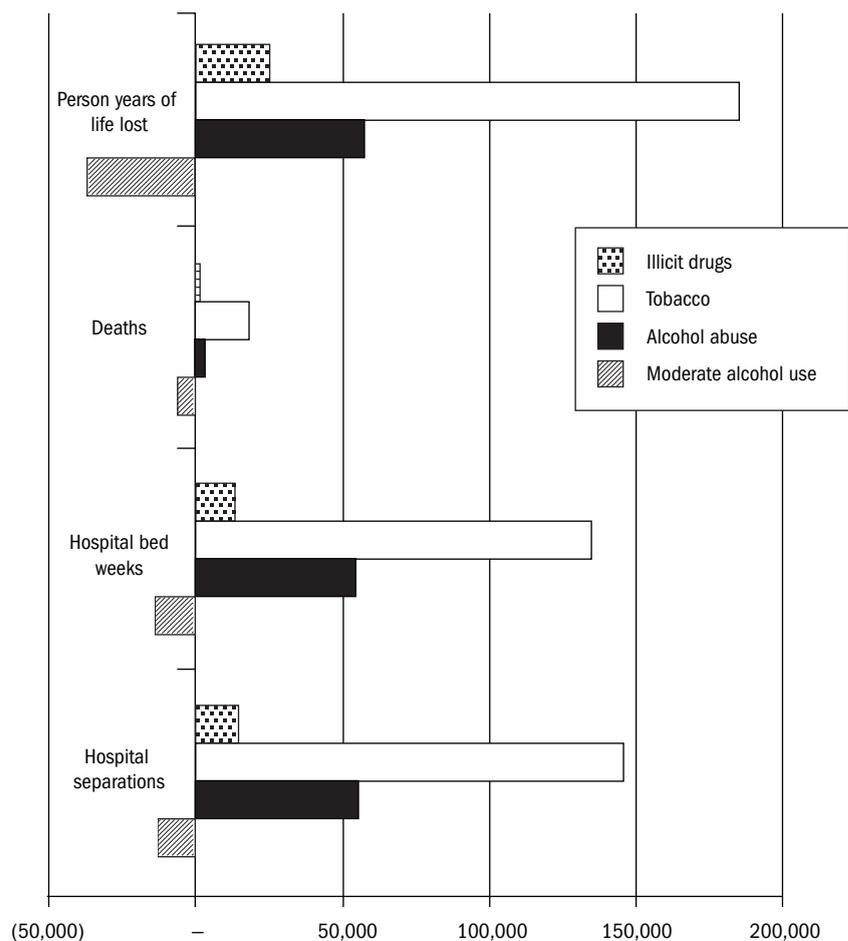
25. In addition to expenditure by State governments, this figure includes expenditure by the Federal government and by non-government organisations.



4.1 Less than justified by the scale of the problem

More than 13% of premature death and almost 14% of premature life years lost are attributable to tobacco. Tobacco use is the responsible for almost ten-percent of the years of disability-free life lost by Australians, significantly overshadowing alcohol, obesity, diet, high blood pressure and high blood cholesterol, occupational hazards, illicit drugs and unsafe sex as a cause of disease [153].²⁶

Figure 17: Estimated impact of tobacco, alcohol and illicit drugs on deaths, person years of life lost and hospital utilisation, 1998



Source: Ridolfo and Stephenson, 2001 [39].

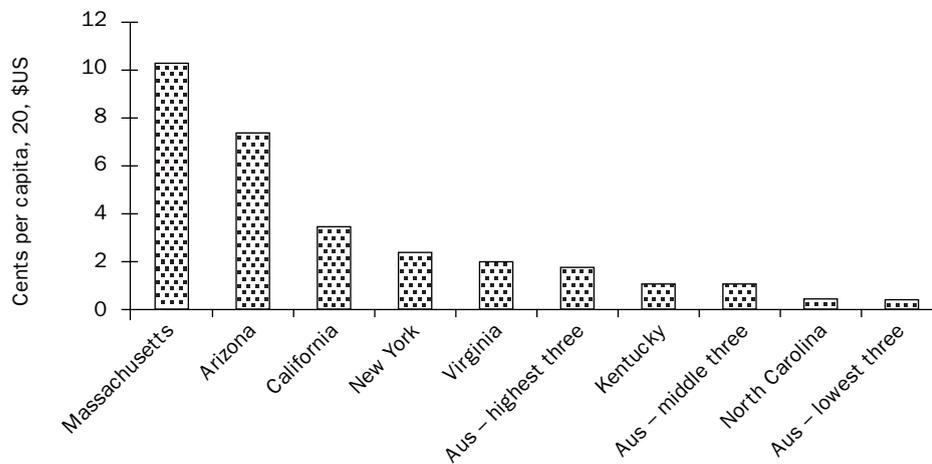
26. Physical inactivity causes a further 7% of disease. Reduced fitness due to smoking is a further contributor to physical inactivity.

4.2 Less than international benchmarks

While at the forefront of tobacco control efforts in the mid-to late-1980s, Australia has now fallen well behind other countries [190].

Tobacco control in the US is funded from a mixture of hypothecated taxes and funds from tobacco companies resulting from settlements from legal actions initiated by state attorneys general. Expenditure varies from US10c per capita in Pennsylvania, to US\$21 per head in Ohio. Only five of the 52 states are currently spending less, per capita, than Australian Government combined. Even Governments in States such as Kentucky, Virginia and – where tobacco is a major agricultural product – spend more than Australian Governments (US\$0.90, US\$1.98 and US\$4.05 per capita respectively).

Figure 18. Expenditure in selected US versus Australian states, year 2000–01, \$US

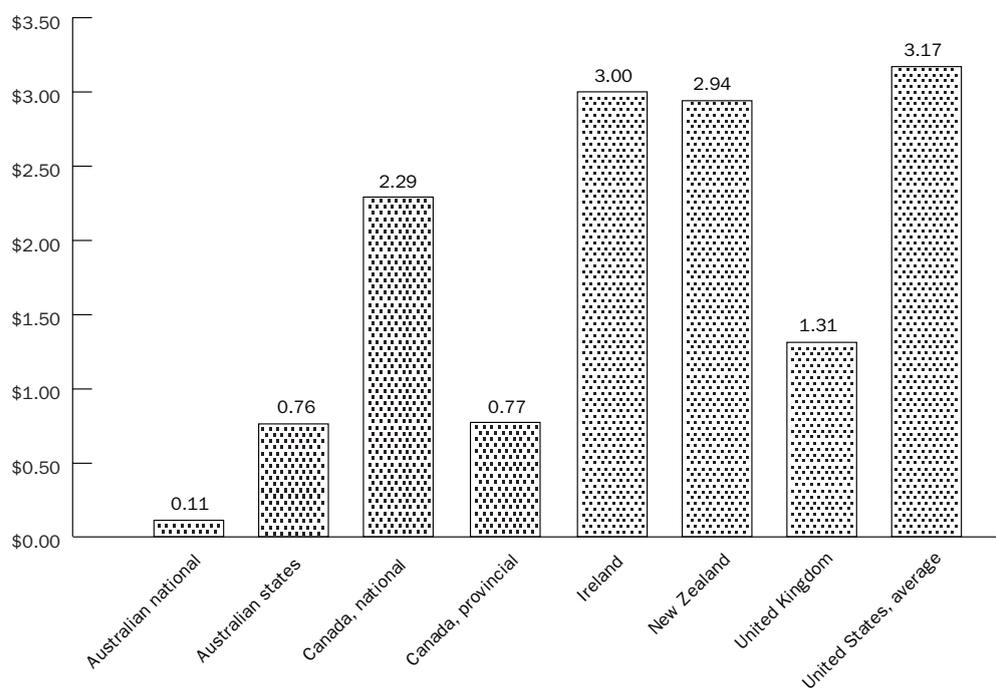


Source: Investment in Tobacco Control, State Highlights US Centres for Disease Control, 2001 [86], M Scollo, 2001 [108].

Per capita expenditure in the UK, Canada, Ireland and New Zealand is also considerably higher than in Australia.



Figure 19. Per capita commitments to tobacco control in English-speaking countries, \$US, fiscal year 2001



Source: Australian data as per Table 5; Canada, Health, Finance and Solicitor General's joint announcement, April 5, 2001. Ireland, Media release, Irish Minister for Health [191], UK White Paper, Smoking Kills [192] US, CDC, *Investment in Tobacco Control, State Highlights*, 2001 [86]. Canadian figures do not include several major increases in allocations announced in April 2001 provincial budgets. US figures exclude national expenditure by national and local NGOs, for instance the American and state cancer councils, heart foundations and lung associations. For all countries, figures exclude insurance coverage for pharmacological treatments.

Refer **Attachment 1** for an overview of efforts internationally.

4.3 Less than levels demonstrated to sustain results

As described in Section 3.1 above, international experience demonstrates that reductions in smoking have been sustained only where funding, in particular funding for mass media education, is high and sustained over time.

The effect of anti-smoking education on smoking behaviour is obviously more like a spring than a screw [107]. It's not enough to run an isolated campaign for a single year. Pressure must be exerted continuously, otherwise people's interest and commitment to quitting slackens off, and uptake and relapse spring up again. In California, for instance, adult smoking prevalence has levelled off over the past few years corresponding with a substantial reduction in activity since 1995 [193]. In Massachusetts, by contrast, the highest continuous spending US state since 1992, the reduction in adult prevalence has been substantial and sustained relative to the rest of the country [114]. Refer Figure 10, Section 3.1.3.

Internationally renowned health economists, Farrelly, Pechacek and Chaloupka, conducted a careful econometric analysis of the relationship between anti-smoking expenditure and aggregate cigarette sales across all US states. They found that the expenditure elasticity of demand is quite low, meaning that very large increases in funding are required before consumption reduces substantially. Interestingly, they find that large programs are more efficient, dollar-for-dollar, in reducing expenditure than smaller programs [112]. This is very much in accordance with the perceptions of experienced campaign managers [194]. Where funding is limited, considerable costs are incurred in getting staff “up to speed” with the relevant research and program history, and much of the available budget goes into developing educational materials. Where funding is more realistic and more sustained, staff can be retained and campaigns can be quickly developed and rolled out over large areas.

4.4 *Less than recommended by expert international bodies*

The US Centers for Disease Control in 1999 published a series of guidelines entitled Best Practices for Comprehensive Tobacco Control Programs [81], using the extensive experience from state tobacco control programs over the previous ten years, to recommend program elements and spending levels for US States planning expenditure of tobacco settlement monies on comprehensive tobacco control programs.

The Centers indicate that approximate annual costs to implement comprehensive programs range from US \$7 to \$20 per capita in smaller states (populations less than 3 million); US \$6 to \$17 per capita in medium-sized states (population 3 to 7 million); to US \$5 to \$16 per capita in larger states (population more than 7 million).

Based on the CDC assessment, Australian Governments should be spending between AUD\$10 and AUD\$30 per person each year on tobacco control, including between AUD\$38m and AUD\$115m per annum on mass media campaigns. The recommended media budget is very much in line with the promotional budgets of major Australian corporations.

Table 13a. Current expenditure versus CDC recommendations, AUD\$m

Component	Current spending, \$m	%	CDC Rec lower	CDC Rec, \$m	%	CDC Rec upper, \$m
Community programs	1.13	1%	34.9	57.8	12%	80.7
Chronic disease programs		0%	1.1	1.4	0.3%	1.6
School programs	1.24	1%	27.5	35.0	7%	42.5
Enforcement	6.52	7%	18.3	27.3	6%	36.3
Statewide programs	5.14	6%	19.6	36.1	8%	52.6
Counter marketing	11.8	13%	38.9	77.8	17%	116.7
Cessation programs	60.0 est	68%	38.9	111.0	24%	158.8
Total	85.84	98%	179.3	346.4	74%	489.1
Surveillance and Evaluation	0.58	1%	17.9	34.6	7%	48.9
Administration and management	1.37	2%	46.3	89.2	19%	132.2
Total	87.79	100%	243.5	470.3	100%	670.2

Source: CDC Best Practice Guidelines, 1999.



4.5 Less than that spent by successful Australian marketers

Marketing budgets for major Australian corporations are generally around \$60m to \$70m per annum. This would appear to represent a commercially realistic figure for advertising and public education in Australia.

Table 14. Budgets of major Australian advertisers

Corporation	Advertising budget in 1999
Telstra	\$130–135m
McDonalds	\$60–65m
Village Warner	\$60–65 m
Ford	\$55–60m
Unilever	\$78–80m
Government GST Campaign	\$370m approx
Victorian Transport Accident	\$3.50 per person, would be equivalent to \$56m on a Commission national basis

Source: Advertising Industry Annual Client Lists, 2000.

4.6 Less than justified by economic analysis

The results of economic evaluation of tobacco control efforts to date would also suggest that tobacco control in Australia is grossly under funded. As economists David Collins and Helen Lapsley recently commented:

It is extremely difficult to conceive of any other public expenditures, outside the area of public health, which would yield social rates of return of the same order of magnitude. [195], p 5.

It has recently been estimated that the first \$8.95m stage of the National Tobacco Campaign will result in reduced health care expenditures totalling around \$39m in present value terms²⁷ [196]. Of all the possible cancer prevention and screening programs currently feasible for implementation in Australia, the Cancer Strategies Working Group of the National Health Priorities Committee has identified mass media campaigns to reduce smoking prevalence as the “best buy” or most cost-effective strategy, reducing not just overall cancer mortality in Australia but morbidity and mortality from a multitude of other diseases as well [188].

In their economic evaluation of the impact to date of Quit Victoria study authors Collins and Lapsley present the results of a cost–benefit analysis [195]. The economic evaluation is undertaken on the basis of a range of assumptions and the sensitivity of the results to changes in these assumptions is tested. On the most plausible assumption set they find “that:

27. Carter and Scollo assumed a five percent discount rate and appropriate lags for reduced disease outcomes and health care costs resulting from reduced incidence of lung cancer, cardiovascular disease, and COLD disease totalling \$24m [196]. These estimates were later confirmed in a trial of program budgeting and marginal analysis for the Cancer Strategies Group of the National Health Priorities Committee which, analysing a wider range of cancer and other diseases, computed cost offsets of \$39m [197].

- *The net present value (that is, benefits less costs) of the Quit Victoria program over its life is estimated to be \$911 million in 1999 prices;*
- *The ratio of benefits to costs of the program is 15.8 to 1;*
- *The internal rate of return of the program is 37.9 percent.” p 5*

The report concludes

“even on the most conservative set of assumptions, expenditures on Quit Victoria yield extremely high rates of return;” and that “the case for continued public expenditure support for Quit Victoria is extremely strong. Given the very high calculated rate of return on Quit Victoria expenditures, it would appear that current level of expenditure is far too low” p 5–6.

In a more recent report on the social costs of tobacco in Western Australia, Collins and Lapsley examine the question of how much expenditure would be justified in achieving a target smoking prevalence of 15%. They propose a hypothetical benchmark: that public health expenditure should be required to yield a real rate of social return of at least 10%. Based on that benchmark, under the most conservative assumptions, they conclude that a campaign of up to \$41m per annum would be justified, around ten times the expenditure in 1999 in that State. On more plausible assumptions about reductions in social costs, up to \$87m per annum would be justified in Western Australia, around ten times the level, per capita, currently being spent in Australia [184].



5. What are the barriers to successful tobacco control in Australia?

There are four major structural problems that are reducing efficiency of tobacco control policies and which would at present hamper the effective implementation of education programs and health care interventions at a national level.

1. Tobacco dependence treatment is insufficiently integrated into the health care system. This contributes to irrational allocation of resources between funding programs.
2. While many excellent programs and projects operate at the state and local level, there are significant gaps in the provision of programs and services across the country.
3. Regulation of tobacco manufacturing and sale and tobacco use is piecemeal and much less efficient than it could be. There are currently no regulatory mechanisms that would enable governments to mandate reductions in product toxicity or addictive potential.
4. There are many gaps in available data about tobacco company activity and extent of use of tobacco products. These gaps are hampering our ability to monitor the industry and our own progress in tobacco control.

5.1 Irrational resource allocation

Health care and health development in Australia are funded through a myriad of State and federal funding programs. There have been numerous attempts at a policy level to integrate prevention into health care. These include:

- The establishment of National Health Priority Areas and establishment of a National Health Priority Action Council
- Broad-banding of public health funding into Public Health Outcome Funding Agreements [198]
- The establishment of a National Public Health Partnership (NPHP), a General Practice Advisory Council (GPAC) and a Joint Advisory Group on General Practice and Population Health [199]
- The General Practice Reform Agenda, which includes funding of divisions and establishment of Practice Incentive Payments to enhance the quality of care, including preventive activities

At the coalface of health service delivery, however, practice changes only very slowly and anomalies abound.

5.1.1 General practice

Only a minority of smokers and recent ex-smokers can recall their GP ever advising them to quit [200]. And yet this may be the single most cost-effective thing that doctors could do to save patient lives [201], and reduce health care costs [202, 203].

Some doctors are prepared to provide smoking cessation, but this is an expensive option for the health care system. In any case, few doctors would have time for such counselling, particularly in low income and rural areas where the patient-to-doctor ratio has increased substantially more than in capital cities in Australia in recent times [203].



Doctors routinely refer patients for diagnostic services. Simple administrative mechanisms such as provision of specimen jars and electronically-generated and pre-printed forms facilitate this behaviour in doctors, arguably increasing unnecessary costs to the health care system. Similar mechanisms for referral to the Australian national Quitline and other highly cost-effective smoking cessation services have not been established.

5.1.2 Obstetric care

Many obstetric interventions are of marginal value. Much obstetric practice appears to be driven more by litigation risk than by potential public health gain. Although not widely used, smoking cessation is probably the most cost-effective obstetric intervention that has ever been evaluated [94]. Most obstetricians and midwives would define the objective of their job as “maximising the quality of the birth outcome”. And quitting smoking is the single most important thing that the patient-professional team could do to ensure that objective was achieved [205]. But the way obstetric care is currently structured in this country, smoking cessation counselling is seen as “someone else’s job”.

5.1.3 Screening, primary, secondary and tertiary care in cancer and cardiovascular disease

Health systems costs exceeded \$1.9b for cancer [206] and \$3.7b for heart disease in 1993/94 [207]. At least one-fifth of these costs could have been avoided had smoking been eliminated when it was first discovered to have been dangerous in the 1950s [208–210].

In Australia, as elsewhere since 1993, there has been a colossal increase in spending on drugs to treat high blood fat levels, a risk factor for heart disease that could be prevented or greatly reduced by smoking cessation. Spending on statins in Australia was more than \$473m in 1989–00, up \$110m from the previous year. This was the biggest single increase in expenditure of any drug class [211]. Smoking cessation treatments such as NRT have been estimated to be around 17 times more cost effective than statin use per year of life saved; however, in Australia, expenditure on tobacco control was not even half of 1.0% of the expenditure on statins.

5.1.4 Psychiatric health care and drug treatment services

An extensive (albeit inadequate) network operates throughout Australia that provides housing and medical treatment services to people with psychiatric disabilities or illnesses. Another extensive (though also inadequate) network exists to treat people using illicit drugs. Smoking rates among illicit drug users, people in correctional facilities [212] and people with serious psychiatric illnesses are significantly higher than in the general population, particularly among younger people [213–216]. Many staff working in these services have a professional background and skills that would qualify them to provide smoking cessation counselling, but very few do.

5.2 Gaps and insufficiencies in current funding arrangements

Tobacco control in Australia, as in many areas of public policy, is funded through a mish-mash of education and research programs at Federal and State levels. This results in many gaps in coverage and quality of educational efforts and services.

5.2.1 Mass media education

Some states provide much more extensive education campaigns than others.

Media advertising budgets vary widely. A number of states have extensive experience in the development, production and evaluation of media advertisements. Others have very little experience.

There are good cooperative arrangements in place for joint production of materials and sharing of information, but there is insufficient funding for education in all states.

Dedicated tobacco control advocacy groups are active in NSW and WA but not in the rest of the country. Research has indicated that media coverage about the smoking issue has been very important in encouraging adult smokers to quit [217], but hundreds of advocacy opportunities are missed each week in Australia because health charities devote insufficient time to organising the necessary media publicity.

5.2.2 Tobacco dependence treatment – pharmaceutical and non-pharmaceutical treatments and specialist services

Pharmaceuticals

There are currently two pharmaceuticals that are both practical and effective in treating dependence on tobacco-delivered nicotine. The anti-depressant bupropion was registered for sale in Australia in 2000 under the registered trade-name Zyban. In February 2001 Zyban was listed on the Pharmaceutical Benefits Schedule and as a result of this, sales have increased markedly since that time [218]. Total annual additional PBS and related Medicare costs could turn out to be as high as \$90m, over five times the expenditure on anti-smoking education nationally. And yet international evidence suggests that mass media education may be as much as ten times more cost-effective than tobacco dependence treatment.

A further problem is the skewing of treatment choice away from other pharmacological and non-pharmacological therapies that are safer and of similar efficacy to bupropion and could be used as a complement or an alternative. Nicotine replacement therapies are almost as effective as bupropion and have a lower risk profile. However, these are not subsidised and sales have fallen off dramatically [219]. There are many people for whom Zyban is contraindicated, including many disadvantaged groups who find it difficult to afford NRT.

Non-pharmaceutical treatments

Intensive non-pharmaceutical treatments for tobacco dependence are equally as effective as pharmaceutical treatments in increasing a person's chances of quitting smoking [220,221]. The effect of drugs does not depend on counselling, but the counselling treatment provides an additional benefit. Behavioural therapies may also have a "sleeper" effect that does not occur with drug therapies. The person learns about their habit and, even if they fail, the insights they gain and the coping strategies they learn will be useful in their next attempt. Self-management and coping skills learned in quitting smoking also apply to a range of other health behaviours. However non-pharmaceutical treatments are rarely subsidised.



Specialist cessation services

Unlike the UK and the US, there are almost no face-to-face specialist tobacco dependence treatment services operating in Australia. Given the much lower population density and numbers in Australia, this model is probably not viable as the predominant means of service delivery in this country.²⁸

Australia does have a publicly-funded Quitline operating in each state to which doctors may refer any patient, however very few doctors know about it or use it.

Hours of operation of the Quit-line and the level of assistance provided vary greatly between States.

In Victoria and South Australia, smokers ringing the Quitline are offered extended counselling sessions under a protocol where the counsellor calls the quitter to check on progress and offer encouragement. The program has been demonstrated to significantly increase long-term abstinence, helping to reduce relapse and to prompt repeat attempts in those who do relapse [221]. It is not available to callers in other states.

5.2.3 Education and assistance for “hard to reach” groups

Culturally and linguistically diverse communities

Most people living in Australia would have sufficient proficiency in English to understand mass media advertisements and headline cigarette pack warnings. Many people born overseas and whose first language is not English, however, would have difficulty reading printed Quit booklets and interacting with smoking cessation services. In some communities, there are people who are not literate even in their first language.

Most states have resources available on request for people in at least the major language groups. However, efforts to promote the availability of these resources, or to provide face-to-face or telephone assistance, have been extremely limited and non-existent in some states for some language groups. This is inequitable and a particular concern for those communities where rates of smoking are high.

People without telephones

The Government has imposed universal service obligations on telecommunication carriers, and there are provisions to subsidise telephone access to low-income households. At 97%, Australia has one of the highest rates of telephonic connection in the world. Nevertheless, there are more than 300,000 households in Australia that do not have telephone connection. This includes very disadvantaged people and people without private transport and living in areas with deficient public transport. Smoking cessation services are clearly not accessible to these people.

At a minimum, any Australian smoker ought to be able to obtain information, in their preferred language, about smoking and how to quit, and, at least once or twice a year, be able to speak in their preferred language to someone trained to advise on smoking cessation.

28. In Australia patients are not “tied” to particular GP practices like they are in the UK. GPs are a major source of referral to smokers’ clinics in the UK. These clinics would almost certainly be unviable without the patient throughput generated by GP referrals.

5.2.4 Smoking prevention education

Developing high quality resources for teachers and students is very time-consuming and distributing these to thousand of schools is an expensive exercise. Ideally materials would be developed nationally and be made available in electronic format.

However, drug education in schools is a State responsibility and is approached differently in every jurisdiction. Not all States and Territories include tobacco in school-based drug education programs. In any case most of the factors that impinge on drug use occur **outside** the classroom, indeed **outside the school**.

5.3 Piecemeal regulation

The history of tobacco regulation in Australia has comprised a series of concessions to public health demands rather than a serious, coherent attempt to reduce the harm caused by smoking. Jurisdictions that legislated early tend to have less comprehensive legislation than those that legislated later,²⁹ and there are many inconsistencies between States. Thus in Australia we see:³⁰

- the restriction, but not elimination either of tobacco promotion or of the trademarks, brand names and packaging that continue to capitalise on historical promotion;
- the mandating of limited health warnings and product information – but the failure to require full or comprehensive disclosure about either constituents or potential physiological impact;
- the restriction of sales to children – but the continued sale, display and, in some states, promotion of products in venues they frequent;
- the licensing of tobacco retailers in some jurisdictions, but not in others;
- the imposition of taxes on tobacco products, and considerable investment in outlawing the sale of unprocessed tobacco – but no measures in place to prevent other forms of excise evasion that have long been common overseas;
- the gradually widening of restrictions on places where people can smoke – but the continued allowance of unrestricted smoking in many public facilities, most notably in small workplaces in Victoria, South Australia and the Northern Territory and, in many states, in facilities for patients suffering mental illness, teenagers in emergency housing and patients in nursing homes.

These anomalies and loopholes are greatly reducing the efficacy of legislation in reducing inducements on children to smoke and protecting non-smokers from the effects of toxic tobacco by-products.

Efforts to stop children from purchasing tobacco products seem to be particularly ineffective, with inconsistent application of laws and very large costs for government trying to achieve compliance.

29. With the notable exception of WA which has regularly reviewed and upgraded its Tobacco Act.

30. For a full discussion of historical regulation of tobacco see MCDS, 1999.



International experts agree that cigarettes presently on the market are much more dangerous and addictive than they need be [222]. Disease and deaths due to smoking could be reduced by modifications to the product, provided that gains are not undermined by increased use of tobacco products due to perceptions of reduced risk. In Australia at present, Trade Practice Act regulations require tobacco companies to report on toxic contents as measured by a testing system that has been discredited by the very body that developed it [223]. There are no requirements to report on specific additives, design features and toxic outputs. In the US there are several cigarette brands on the market which manufacturers claim may be less harmful than the standard products. In Australia, there currently is no testing infrastructure and no criteria for assessing scientific evidence for health claims. There are no guidelines or regulations in place for the wording, placement and form of any information about risk reduction that may be placed on the pack. There are no mechanisms to monitor population impact.

5.4 Flying in the dark

The Government needs timely and relevant information about tobacco company and population behaviour in order to assess progress in meeting tobacco control goals. Research to guide policy and programs is also crucial.

There are many gaps, however, in the information that is currently available.

5.4.1 Industry marketing activities

Advertising industry sources reveal that, in 1999–2000, the marketing budget for Imperial Tobacco, the smallest of the three companies operating in Australia, was more than \$10m [224]. If marketing budgets are in line with market shares of the three companies operating in Australia, this would translate to total “below the line” marketing of \$60m per annum. Government officials who believe they have banned all forms of promotion need to know how this money is being spent.

5.4.2 Tobacco consumption indicators

The Australian Tax Office and Australian Bureau of Statistics maintain statistics on the number of cigarettes excised in Australia. This provides a reasonable estimate of cigarettes consumed, though it provides no indication as to the types of cigarettes sold, nor relative per capita sales in various states and regions. Data on roll-your-own and pipe tobacco is currently not publicly available because the companies selling the product have not given permission for its release. Thus there are no accurate data on the extent of total consumption in Australia.

5.4.3 Monitoring of smoking behaviour

Comprehensive monitoring of tobacco use with an accompanying program of research and program evaluation is critical if we are to know where we are, if we are to assess the efficacy of programs and if we are to develop new and better strategies.

Currently, monitoring of tobacco use is in a state of flux. The 1998 data point in the Hill et al. series of regular surveys of adult smoking prevalence [107,225], was compromised by method changes in the surveying organisation. The National Drug Strategy surveys have not been regular and the National Health Surveys are too infrequent, although that may be changing.

As with smoking education programs, high quality monitoring research infrastructure, in place in some states but not in others, requires standardisation Australia wide.

Increased funding of evaluation would greatly enhance the capacity of these organisations to provide reports timely enough to influence the policy process.

5.4.4 Research to guide action

Compared to the United States and Canada, there is a dearth of research in tobacco control in Australia. In addition, some of the research that is currently being funded has little relevance to the policies and programs that would bring the most significant returns on tobacco control investment.



6. Where to from here in Australia?

A comprehensive strategy to reduce tobacco-related harm must include tax and supply policies to reduce the accessibility of products to children; education and treatment programs; and measures to reduce smokers' and non-smokers exposure to tobacco toxins. Education efforts need to be properly resourced and treatment needs to be properly integrated into the Australian health system. If resources are limited priority must be given to pregnant smokers and to those where quitting could prevent an imminent fatal event such as an asthma attack, heart attack or stroke. Ideally resources would also be invested to prevent uptake and substantially reduce future health and other social costs. Finally, tobacco control efforts need to be based on up-to-date and timely information about tobacco product characteristics, smoking behaviour and tobacco industry practices.

6.1 Comprehensive education through media advertising and publicity

Tobacco smoking is an issue that affects all of us:

- the infants of smoking parents
- children facing pressures to experiment with smoking
- established smokers
- ex-smokers who remain for many months at risk of relapsing and for many years at risk of resuming smoking
- non-smokers concerned about exposure to environmental tobacco smoke.

Smokers are represented in every single demographic group in the community – men and women, every age group, every social class, every ethnic group in every region in every state.

To fully appreciate the potential impact of smoking on their health and quality of life, people must come to grips with a great deal of medical and scientific information. To successfully give up smoking they need to know what psychological strategies and pharmacological treatments are most effective, and where to get help.

Anti-smoking education takes place against the backdrop of both the addictiveness of the product and the long-standing and still pervasive promotion of smoking, particularly in youth culture.

Properly explaining the consequences of early death or prolonged disability to young people who have never had a doubt about their own mortality is particularly challenging.

Anti-smoking advertising and other media education will have to be compelling **enough** to enable people to:

- deconstruct the glamour and the normalisation of smoking created by years of advertising and pro-smoking media imagery
- let go of the various rationalisations that prevent action
- persist through the difficulties of quitting an addictive product/habit.

As in the United States, many people in Australia are not proficient in English. Many people who smoke are educationally disadvantaged.

To reach all the people who have to be reached, and to ensure they understand everything they need to understand will require a comprehensive, multi-faceted media education program, with sufficient advertising time/space purchased in a wide range of media.



6.2 Tobacco dependence treatment as part of systematic, universal health care

Treatment of tobacco dependence ought to be integrated into standard Australian health care services at every level and in every sector. With universal access to health care and universal health insurance for medical and pharmaceutical treatment, financing arrangements are a powerful way of driving change in health care practice in Australia. In addition, building tobacco dependence treatment into treatment guidelines would also help to ensure that tobacco dependence treatment is included in service protocols and funding contracts and becomes an essential component of systematic care.

6.2.1 Federal-state financing

Given the impact on future health care costs, and provided that it also was making a substantial investment in national tobacco control initiatives, it would not be unreasonable for the Federal Government to require State and Territory Governments to address tobacco use as part of a condition of financing under Medicare agreements. State Government could in turn require state health agencies to routinely identify and warn patients and refer them for tobacco dependence treatment.

6.2.2 More rational treatment protocols

There are many opportunities for embedding less costly forms of tobacco dependence prevention and treatment in mainstream health services and programs. These include recording of smoking status, brief advice to quit, referral to publicly funded Quitlines and other smoking cessation services, and follow-up of referred patients.

Incentives for this kind of practice could be introduced to complement recent measures to increase GP screening and treatment of mental health, asthma and diabetes. These might include:

- funding to Quitlines to provide call-back counselling along the lines of the programs in Victoria and South Australia
- promotion of the Quitline, with mechanisms for GPs to refer patients and be advised if contact has been made, for instance Quitline referral modules on electronic prescribing packages
- funding to each of the relevant organisations representing medical professionals to develop appropriate protocols to ensure routine identification, referral and where appropriate treatment of smokers
- a Medicare Benefits Schedule Item³¹ that specifically covers assessment of the smokers readiness to quit, advice that they should quit, and referral to the Quitline or another service, and a follow-up consultation
- as in the recently announced mental health budget initiative, another Medicare Benefits Schedule Item allowing GPs to provide smoking cessation counselling provided they are appropriately trained³²

31. The Australian Medical Association does not support the idea of specific Medicare items for specific purposes. It believes that doctors would more effectively refer and treat patients if standard fees were structured to allow adequate time for patient consultation.

32. As above

- properly implementing the authority condition for the Zyban subsidy, so that the pharmacist sells it at the subsidised rate only when the person brings along proof that s/he is enrolled in a “comprehensive treatment package”
- consideration of a subsidy for NRT, perhaps an NRT Voucher Scheme similar to that in operation in New Zealand, for those using the Quitline, getting intensive counselling from their GP or doing other comprehensive programs
- awarding Practice Incentive Payments for GP practices that establish good systems for routine detection, brief advice and referral of all patients who smoke, and extra points available to practices that undertake proactive recruitment to tobacco dependence treatment services.³³

6.2.4 Tobacco dependence treatment as standard care in services for disadvantaged Australians

There are groups within our society so disadvantaged and so marginalised that special efforts are warranted to improve their health status. These include many Aboriginal and Torres Straits Islander communities, the long-term unemployed, the homeless, illicit drug users and people with severe psychiatric disabilities. Advice to quit and referral to cessation services should be part of routine treatment or care in publicly-funded services for such groups.

The categories of disadvantage often talked about by public health researchers are very broad: they do not provide guidance to those attempting to run educational programs or to improve access to services. At least as far as access to treatment services is concerned, it is much more helpful to think about where people are, and how they can be reached using existing government health and other assistance programs.

The most disadvantaged groups include:

- people using indigenous health services
- sole parents attending community health centres, maternal and child health centres near public housing estates, both high-rise and broad-acre
- people with psychiatric disabilities in supported accommodation or psychiatric hospitals
- people attending drug treatment agencies
- homeless people using shelters and other support services
- people in contact with medical services in correctional facilities.

Given the enormous burden of disease caused by tobacco within each of these populations, contracts with specialist health care agencies servicing these groups should require, as a condition of funding, that tobacco dependence treatment be offered to every client.

Protecting Australia’s public health care infrastructure is in itself an important strategy to prevent the further erosion of health status of these groups. Integration of tobacco dependence treatment into primary and secondary care would help to maintain the integrity of both Medicare and the Pharmaceutical Benefits Scheme.

The adoption of smoking bans in pubs and small workplaces will also help to change social attitudes to smoking in blue-collar environments.

33. As above.



6.2.5 Priority to areas where there will be early returns

Efforts to systematise referral to smoking cessation services should commence with those health professionals who deal with pregnant women and those professionals likely to see patients where quitting is likely to greatly reduce premature mortality and future streams of treatment costs, that is, those already being treated for cardiovascular disease, diabetes, chronic obstructive lung disease (COLD) and asthma.

6.2.6 Smoking prevention strategies in and beyond the classroom

Smoking restrictions and mass media campaigns have both been demonstrated to reduce teenage smoking.

State government should strongly encourage and where possible require all schools to ensure that all school facilities including school grounds, and all school functions including offsite excursions, are smoke-free. One of the roles of school nurses should be to identify children smoking and to refer them to suitable programs.

Quit Campaigns should collaborate to develop and promote an Australian Internet-based intervention program for students already smoking.

Quit Campaigns should also collaborate to develop, maintain and promote Internet sites containing activity ideas for classroom teachers across all subject areas. These activities should be developed with input from subject specialists so that they are of high educational quality and help both to achieve subject-specific learning objectives and convey information useful in discouraging smoking.

At a more fundamental level, smoking prevention efforts in Australia could be enhanced by

1. Greater resources directed both inside and outside schools to programs demonstrated to prevent educational failure in every school child and
2. More thoughtful policies and practices in schools to ensure a sense of belonging and self-worth among all members of the school community

The Federal Government can assist by contributing funding to national collaborations, and by providing services and programs most efficiently provided at a national level (for instance an Internet site for teenage smokers).

It can also assist through fiscal policies that will ensure that States have adequate funding for educational, family support, recreation and welfare policies and programs that prevent educational failure, family breakdown and mental health problems, all of which are strongly associated with uptake of smoking and other drugs and with the intergenerational perpetuation of social disadvantage.

6.3 Overhaul of tobacco regulation

With the prospect of reduced risk tobacco products on the horizon, a more appropriate structure for the regulation of the tobacco market in Australia needs to be developed as a matter of urgency.³⁴

In the meantime, tobacco control legislation in each jurisdiction needs to be reviewed and tightened to ensure that efficiency of tobacco control efforts are not being undermined by inconsistent coverage and industry exploitation of loopholes. Policy areas that need to be reviewed are outlined in Section 7.1 below, and detailed recommendations are provided in Sections 10.1 and 10.2.

34. Tobacco regulation is the subject of another VCTC paper currently in preparation.

6.4 Monitoring and research focused on that which will guide action

In the United States, tobacco companies are required to provide extremely detailed information about cigarette prices and how promotional budgets are spent [226]. The results of annual return to the Federal Trade Commission are tabled in Congress and are publicly available from the FTC website [227].

A similar level of disclosure should be required of Australian tobacco companies.

To assist health departments with the design and monitoring of local programs, companies should also report regularly on sales to each Government Health Department region in Australia. This would include reports on sales by each outlet type, for each brand, including details on pack size and tar level.

Public health funding bodies could greatly enhance the research effort by quarantining a minimum pool of funds for tobacco control research and giving priority in funding to proposals in line with the Priority-driven Research Agenda developed by the major health NGOs in collaboration with policy experts [228].

6.5 Public health in a federation

Public administration in Australia is complicated by lack of clarity in the split in responsibility between the Federal and State and Territory Governments.

The following principles may minimise duplication in tobacco control efforts between the Federal Government and State and Territory Governments.

1. Both the Federal Government and State and Territory Governments should invest in tobacco control on both consumer protection and public health grounds. Around 80% of the net health-system costs attributable to tobacco use are incurred by government, of this the Federal Government incurs approximately 85% (refer Collins and Lapsley 2002 [38]). It is the Federal Government that receives almost all the revenue from taxes on tobacco products. It would therefore seem appropriate that the Federal Government fund at least 75% of tobacco control activities.
2. The Federal Government should fund tasks and services that are most efficiently provided nationally; States should fund tasks and services that are best done locally.
3. Funding contracts for health care provision should incorporate and reinforce shared targets for tobacco control and smoking cessation at every level in the health system.
4. The Federal Government and State and Territory Governments should contract each task or service to the body or bodies best placed by virtue of scale, location and expertise. This may involve state-based government or non-government organisations providing services outside their jurisdiction on a fee-for-service basis.

6.6 Putting it all together

How much is required for a comprehensive Australian tobacco control program?

Expenditure levels recommended by expert bodies in the US provide a useful starting point but are not sufficient.

Australia has some advantages over the US that allow more efficient delivery of treatment. Australia's national medical and pharmaceutical insurance schemes allows delivery of health care at a much lower cost, and the centralised nature of these schemes could be used much more effectively to institutionalise system-wide changes.



In the US, collaboration between 49 states is not feasible. An important advantage in Australia is the smaller number of states – collaboration between six States and two Territories, while hard work, is at least possible.

Table 13b contrasts current levels of expenditure with levels of expenditure for each of the components of a comprehensive tobacco control program as recommended by the US Centers for Disease Control (CDC). The fourth column sets out levels of expenditure recommended by Australian experts allowing for improved efficiencies and the economies of scale and more modest costs in Australia afforded by having:

- A publicly funded Quitline
- A large component of advertising produced and screening negotiated on a national basis
- More coordinated surveillance and evaluation arrangements
- Less expenditure on basic scientific research; less investigator-driven research; concentration on a strategic research agenda.

These recommended levels are based on costings of the program plans set out in the next section, and described more fully in **Attachments 2** and **3**.

Table 13b. Current expenditure, CDC and VCTC recommendations, AUD\$m

Component	Current spending, \$m	%	CDC mid-range Rec, \$m	%	VCTC Rec, \$m	%	VCTC rec per capita \$m
Community programs	1.13	1%	57.79	12%	23.25	12%	1.20
Chronic disease programs	0	0%	1.35	0.30%	1.15	1%	0.06
School programs	1.24	1%	35.04	7%	1.65	1%	0.08
Enforcement	6.52	7%	27.32	6%	12.25	6%	0.66
Statewide programs	5.14	6%	36.09	8%	13.07	7%	0.71
Counter marketing	11.8	13%	77.78	17%	64.00	33%	3.29
Cessation programs	60.0 est	68%	111.04	24%	59.35	31%	3.05
Total	85.84	98%	346.40	74%	174.69	90%	8.98
Surveillance and Evaluation	0.58	1%	34.64	7%	8.0	4%	0.41
Administration and management	1.37	2%	89.24	19%	11.8	6%	0.61
Total	87.79	100%	470.27	100%	194.5	100%	10.00

Source: CDC Best Practice Guidelines, 1999.

7. What exactly should be done?

7.1 Policy measures

Policy 1 Ensure cigarettes do not become affordable to children

1. Continue six-monthly indexation of tobacco excise and customs duty.
2. Bi-annually increase duty in line with AWE and estimates of children's average weekly disposable pocket money.
3. Prevent evasion of customs and excise duty (see Section 8.1).

Policy 2 Ensure complete and effective disclosure by tobacco companies to consumers

1. Through investigation and litigation, expose history of industry misconduct and seek orders to prevent continuing and future misconduct.
2. Through information on and in packs, on the Internet, and at point-of-sale, strengthen tobacco product labelling regulations to require disclosure and effective communication about:

- ingredients, including additives
- average and maximum toxic output of tobacco products when smoked;

and timely release of any information about products or product use that may be relevant to:

- potential acute and long-term biological impact of toxic outputs
- overall addictive potential and
- overall health risks.

3. Ensure complete disclosure by tobacco companies about marketing activities and sales.

Policy 3 Regulate the manufacture and supply of tobacco products

Mandate industry-wide reductions in toxic output and investigate the potential for reductions in the addictive potential of tobacco products to reduce population harm.

Policy 4 Reduce involuntary exposure to toxic tobacco by-products

State and Territory Governments should extend legislation preventing involuntary exposure to ETS in workplaces, indoors in all public places and outdoors in areas such as restricted-seating, near air-conditioning intakes, and near doorways.

The Federal Government could support these efforts by facilitating efforts to share knowledge from both Australia and overseas about regulatory drafting and enforcement.



Policy 5 Reduce commercial inducements for uptake of smoking, particularly by children

1. Extend protections for children from tobacco marketing to include transmission of overseas sporting events sponsored by tobacco companies, and promotion and/or sale of tobacco products through electronic media such as websites and chat-rooms.
2. Require an end to use of trademarks package designs that recall past tobacco product advertising and which greatly reduce the efficiency of current legislation banning tobacco promotion.
3. Encourage State and Territory Governments to protect young people from retail promotion, including advertising at point-of-sale and purchase inducement, direct marketing and promotional personnel at dance parties and other youth-oriented events.
4. Encourage States and Territories to significantly reduce supply of cigarettes to children, with enforcement efforts covered by revenue from retail licence fees.

Policy 6 Support broader social policies likely to reduce demand for tobacco

Apart from pursuing fiscal policies that ensure States have adequate funding for educational, family support, recreation and welfare policies, and for programs that prevent educational failure and family breakdown and that promote mental health, the Federal Government should ensure that policy measures to prevent tobacco use are included in all federal and state drug policy strategies.

Policy 7 Use financial levers to re-orient the health care system towards greater investment in prevention – more rational resource allocation

The Federal Government can shape health care through its power to set conditions for subsidies of pharmaceuticals, and its power to set conditions attached to State financing and agency funding. To force the pace towards greater investment in prevention of tobacco-related diseases the Federal Government could consider the following measures:

1. Specifically **include** referral and follow-up of smokers to specialist tobacco dependence treatment services **on the Medicare schedule**³⁵, as has recently been done for treatment and referral of patients with diabetes, asthma or mental health problems. Also assess the potential public health benefits of including an item to allow GPs to provide smoking cessation counselling, providing they have been trained.
2. **Limit subsidies** for pharmaceutical treatments for conditions preventable by quitting smoking until smoking cessation counselling has been attempted.
3. Make adoption of tobacco control policies and investment in tobacco cessation a **condition of financing** at both the **State** and **agency** levels.
4. Include reduction of tobacco use as a **priority in all relevant national health strategies, indeed make reducing tobacco-related harm itself a national health priority.**

35. The Australian Medical Association does not support the idea of specific Medicare items for specific purposes. It believes that doctors would more effectively refer and treat patients if standard fees were structured to allow more adequate time for patient consultation.

7.2 Education and support programs

Program 1 Provide commercially realistic levels of funding for public media education.

The education effort needs to be aimed at all smokers and potential smokers, targeting those not reached by mainstream media.

Target groups for the education program, for both **rural** and **urban** dwellers, in **all States and Territories**, would include but may well not be limited to

1. established smokers, of all ages,³⁶ of all SES groups,³⁷ at all stages of the quitting process
 - pre-contemplation
 - contemplation
 - action and
 - maintenance

in order to both prompt attempts and prevent relapse both in those making a **first quit attempt** and those who have tried to **quit many times** before
2. **young non-smokers** vulnerable to uptake of smoking
3. young people who are currently **experimenting** with smoking
4. **young people** who are already **regularly smoking**
5. people who are not proficient in English
6. Aboriginal peoples and Torres Strait Islanders
7. people who do not have access to telephones or the Internet
8. **health professionals** including doctors, nurses, health sector managers and administrators
9. expectant and current parents
10. people (or parents of young people) suffering particular chronic disease conditions made worse by smoking or exposure to ETS (specifically people with asthma, diabetes, cardiovascular disease and chronic obstructive pulmonary disease)
11. members of the public concerned about exposure to ETS or inducements to children to take up smoking.

The key communication objective³⁸ of the education program would be to ensure that smokers and potential smokers fully understand and appreciate the consequences of smoking. This would include but may not be limited to:

-
36. Almost 70% of all smokers are aged between 18 and 45 years [50]. However, it is among smokers 45 to 64 years that the earliest reductions in premature deaths will be avoided [137]. Therefore smokers of all ages must be targeted.
 37. While smoking rates among lower blue-collar groups are double smoking rates among upper white collar groups (28.6 compared to 14.5% [154]), around 35% of all smokers are in lower white collar groups [50]. Advertising and other media education therefore needs to reach a very wide range of demographic groups.
 38. A further objective would be to encourage smokers to comply with public smoking restrictions and voluntarily refrain from smoking around others. Campaigns in this area should cover:
 - the nature of Environmental Tobacco Smoke
 - the special risks for those with asthma and heart disease, including undiagnosed heart disease
 - feedback from non-smokers about how unpleasant they find ETS
 - strategies to protect children in domestic situations.



- the risks associated with smoking
- the personal devastation caused to the families and friends of those who die from smoking-related diseases
- the disability caused by smoking-related diseases, and the impact this would have on quality of life
- the addictiveness of tobacco
- the existence of alternative strategies for achieving the benefits perceived to be provided by smoking
- the help that is available.

Such campaigns must be

- compelling
- frequent and
- credible enough not to be dismissed by smokers.

See **Attachment 2** for further details of the scope of the kind of information that might be conveyed and the kind of media materials that would be required. The media to be used would include but may not be limited to

- mass media including TV, radio, print (general, youth and women's magazines), cinema and outdoor advertising
- "new media" including the Internet, interactive TV and SMS messaging
- ethnic media (TV, radio and print)
- ATSI media
- medical media (including *GP* magazines)
- other specialist media
- grants to local service providers to promote services
- point-of-sale advertisements in pharmacies, in outlets where tobacco is sold, and in other selected retail outlets
- promotional items in selected social venues where smoking is currently prominent, for instance in hotels and night-clubs – toilet doors, coasters, post cards, etc
- package inserts and pack warnings (costs to be covered by tobacco companies).

Program 2 Fund a comprehensive evidence-based tobacco dependence treatment program

A national evidence-based tobacco-dependence treatment program should maximise use of existing public health and health care infra-structure and ensure access to services regardless of location or whether you have access to the Internet or can speak English.

It would include support in the following seven areas.

1. Support for state Quitlines and national Quit internet-based services to ensure universal access to support at a range of intensities, from minimal "once off" advice, to intensive counselling tailored to the individual.

2. Promotion of Quitlines and other cessation services to all health professionals, and funding of initiatives that will ensure as “standard care” by *all* health professionals in *all* health settings at least minimal treatment of all smokers including:
 - recording of smoking status
 - brief advice to quit
 - prescription of bupropion (Zyban) or recommendation of NRT for all suitable patients
 - provision of self-help materials
 - referral to Quitters’ Help-Lines.
3. Improved access to treatments including measures to:
 - reduce inappropriate prescribing of Zyban
 - increase use of NRT and non-pharmacological treatments.

A detailed proposal for improving the effectiveness of the tobacco dependence treatment effort in Australia is provided in **Attachment 2**.
4. Additional support for people whose smoking poses high immediate risk, such as
 - expectant and new parents
 - people who have just had a heart attack
 - people suffering chronic diseases such as asthma, emphysema or diabetes.
5. Custom-designed services for young people.
6. National initiatives to promote and provide at least minimal services to people not proficient in English.
7. Assistance to people whose high smoking rates and extreme social disadvantage warrant special efforts, such as
 - Aboriginal peoples and Torres Strait Islanders
 - public housing tenants and unemployed people, low-income people in small rural towns
 - people with psychiatric disabilities, in institutions or supported accommodation
 - people in correctional facilities.

Program 3 Ongoing research and evaluation

The federal government should fund a suitably skilled agency to conduct a dedicated ongoing survey of smoking attitudes, intentions and behaviour with aggregation to provide prevalence estimates for any given period.

Sample sizes should be large enough to provide state estimates that would be reliable with two years’ accumulation of data.

Also required are research studies and more in depth evaluations as part of each strategy component.



7.3 Impact on Federal Budgets

The expenditure required for each of the above programs would be in addition to recurrent expenditure already committed to tobacco control policies for administration of Government Tobacco Policy Units and Quit Campaigns and for drug prevention programs. New appropriations required from the Federal Budget are summarised in **Table 15**.³⁹ (Options for financing are included in Section 8.1, and information on net impact in Section 8.3).

Table 15. Summary of recommended new Federal Budget initiatives

	2002-03	2003-04	2004-05
Policy and regulation	\$8	\$8	\$8
Media education			
Adult smokers	22.8	24.8	24.8
Young people	7.6	7.6	7.6
Non-English speaking and other "hard to reach" groups	2.7	2.7	2.7
Pregnant women and other "fast return" groups	1.3	1.3	1.3
Other, agency commissions, evaluation	7.4	7.4	7.4
Total media education	\$41.7	\$43.7	\$43.7
Tobacco dependence treatment			
Telephone and other counselling services	11.5	9.4	9.2
Professional mobilisation and high medical need groups	6.8	7.0	5.3
New subsidies for treatments	17.3	16.6	16.8
Extra help hard to reach groups	6.7	7.7	8.0
Total TDT	\$42.2	\$40.6	\$39.2
Research and evaluation	\$5.0	\$5.0	\$5.0
Total	\$96.9m	\$97.3m	\$95.9m

Including current spending on regulatory enforcement and educational programs and projected expenditure on tobacco dependence treatments such as Zyban, funding of these measures would bring total annual expenditure on tobacco control in Australia to around \$190m per annum – refer **Table 16**. At AUD\$10 per head (US\$5 per head), this is at the bottom of the range of funding recommended by the US Centers for Disease Control.

39. The author is happy to provide assistance with calculation of required new Budget initiatives for each State.

Table 16. Total budget for a comprehensive national tobacco control strategy

	2002-03			2002-04			2004-05					
	Federal	State	Total	Program component as % of total	Federal	State	Total	Program component as % of total	Federal	State	Total	Program component as % of total
Policy and regulatory enforcement, administration	10.0	12.0	22.0	11%	10.0	12.0	22.0	11%	10.0	12.0	22.0	11%
Program 1 – Media education												
Adult smokers	24.8	12.5	37.3	19%	24.8	12.5	37.3	19%	24.8	12.5	37.3	19%
Young people	7.6	3.1	10.7	6%	7.6	3.1	10.7	6%	7.6	3.1	10.7	6%
Hard to reach groups	2.7	0.8	3.4	2%	2.7	0.8	3.4	2%	2.7	0.8	3.4	2%
Pregnant women and other high return groups	1.3	0.1	1.3	1%	1.3	0.1	1.3	1%	1.3	0.1	1.3	1%
Media commission, evaluation	7.4	3.9	11.4	6%	7.4	3.9	11.4	6%	7.4	3.9	11.4	6%
Total	43.7	20.3	64.0	33%	43.7	20.3	64.0	33%	43.7	20.3	64.0	33%
Program 2 – Tobacco Dependence Treatment												
Telephone and other counselling services	11.5	19.0	30.5	16%	9.4	19.5	28.9	15%	9.2	20.0	29.2	15%
Professional education and mobilisation; high medical need groups	6.8	1.0	7.8	4%	7.0	1.0	8.0	4%	5.3	1.0	6.3	3%
Subsidies for treatment	50.4	1.0	51.4	27%	51.0	1.0	52.0	27%	52.3	1.5	53.8	28%
Help for hard to reach groups	6.7	2.0	8.7	4%	7.7	2.0	9.7	5%	8.0	2.0	10.0	5%
Total	75.2	23.0	98.2	51%	75.0	23.5	98.5	51%	74.8	24.0	98.8	57%
Program 3 – Research, Monitoring, Evaluation												
Total	134.0	58.3	192.3	70%	133.7	58.8	192.5	69%	133.5	59.8	193.3	69%



8. How can we afford a comprehensive tobacco control strategy? – Options for financing

Around 23 billion cigarettes are purchased each year by Australian smokers [73]. The sheer volume of cigarettes consumed offers the possibility for raising significant sums of money at very little cost per cigarette, and very little cost to the individual smoker. A one-cent-per-cigarette levy, for instance, would raise \$240m and cost the average smoker less than 20 cents per day.

However, as indicated in Section 2.2 above, Australian smokers are already paying significant taxes that are high in comparison to the services they receive. Many would argue that funding for tobacco control should be increased without further increases in the cost of tobacco products to smokers.⁴⁰

Table 17 sets out revenue that could be obtained over the next five years for various levels of hypothecation of tobacco tax revenue at current tax rates. The revenue estimates allow for a 25% reduction in smoking prevalence (from around 20% to around 15% between 2000 and 2006), a 20% reduction in the number of people smoking, and a 10% reduction in per capita consumption by existing smokers, reducing overall tobacco consumption by about 30%.

Table 17. Revenue that could be devoted to tobacco control with various levels of hypothecation, \$m

Year ending June	Tax per stick	Est. packets (25) to be sold, millions	Est. total excise total revenue, \$m	1%	2%	3%	4%	5%
1999	18.9c	1,116	\$5,270					
2000	18.9c	1,052	\$5,039	50	101	151	202	252
2001	19.5c	946	\$4,610	46	92	138	184	230
2002	20.5c	900	\$4,605	46	92	138	184	230
2003	20.7c	856	\$4,422	44	88	133	177	221
2004	20.9c	814	\$4,246	42	85	127	170	212
2005	21.1c	771	\$4,063	41	81	122	163	203
2006	21.3c	734	\$3,905	39	78	117	156	195

The following sections outline additional ideas that the Government could consider for increasing revenue for tobacco products *without* increasing the tax burden of smokers.⁴¹ These include efforts to prevent evasion of tobacco excise duty, and measures to raise revenue from tobacco company profits. The idea of recovering costs of medical treatment directly from tobacco companies is another very interesting possibility. This is currently being considered by state attorneys general and is not covered in this document.

40. That is, further increases beyond those necessary to ensure that the product does not become more affordable – namely CPI and AWE adjustments.

41. At least a further \$500 m could be raised through increases in excise duty that did increase retail cigarette prices.



8.1 Measures for raising additional revenue

8.1.1 Investment in prevention of tobacco tax evasion

Until August 1997, many cigarettes purchased in Australia appear to have been sold without payment of state franchise fees. The replacement of state fees with a higher national excise duty cut off the possibility of evasion of state fees, however, since late 1997 use of unprocessed tobacco in Australia appears to have steadily increased. Recent moves by the Australian Tax Office to outlaw the sale of this produce, commonly referred to as “chop chop”, appear finally to be having an effect, with monthly tobacco excise collections stabilising last year despite recent declines in reported smoking prevalence and cigarette consumption.

However, “chop chop” may not be the only threat to government revenue derived from excise and customs duty on tobacco products.

In the UK and parts of Europe between one quarter and one third of tobacco products exported are smuggled, with evidence of tobacco company knowledge of supply of company stock to criminal gangs [229]⁴². There have also been recent reports of cigarette smuggling in Australia [231, 232]. Apart from the law and order concerns, tobacco smuggling undermines tobacco taxation policy, lowering average retail prices, weakening price signals and making cigarettes more affordable particularly to young people.

Efforts to prevent evasion of customs and excise duty in Australia should include:

- continuation of efforts to prevent the illicit growing and sale of unprocessed tobacco (“chop chop”)
- industry-financed “intelligent packaging” of tobacco products – duty paid tax markings and bar codes to allow electronic tracking from production through the supply chain
- abolition of duty-free status for cigarettes sold to tourists and returning Australian travellers
- taxing of tobacco exports, with tax rebatable on provision of evidence of payment of overseas duties
- allocation of additional funding to the Australian Customs Service and Australian Tax Office for additional surveillance and for mounting cases and preparing prosecutions
- an increase in penalties for evasion
- publicity about penalties and prosecutions.

	2002-03	2003-04	2004-05
Implementation costs, measures 5 and 7	\$8m	\$8m	\$8m
Additional revenue			
– duty free est.	\$25m	\$25m	\$25m
In combination these measures would prevent the likely massive future erosion of revenue levels.			

42. British American Tobacco is currently under investigation by the UK Department of Trade and Industry. The European Commission – backed by the governments of Spain, Germany, France and Italy has brought a major racketeering case against Philip Morris and RJ Reynolds. The governors of Columbia and the governments of Canada and Ecuador have brought racketeering charges actions against American tobacco companies and BAT [230].

8.1.2 Surcharge on profits of tobacco companies

Tobacco companies in Australia are extremely profitable operations. The latest annual report of British American Tobacco Australasia (BATA) for instance, reveals retained profits of more than \$125m and payments of \$114.3m in dividends to investors.

Company tax in Australia has recently reduced from 36% in 1999/2000 and 34% in 2000/2001 to 30% in 2001/2002 [233]. In recognition of the considerable social costs of smoking in Australia the Government could, as the federal government has recently done in Canada [234], impose a surcharge on the profits of tobacco companies operating in Australia. In Canada, this surcharge takes the company tax payable by tobacco companies from 40 to 50%, effective from April 2001.

Based on a surcharge of 10% in Australia, and assuming that BATA profits in 2000 would be representative of industry profits in the years 2002–03 to 2004–05, it is estimated that a total of more than \$80m could be raised over this three-year period, providing legislation was drafted in such a way as to prevent avoidance of tax through transfer of profits to controlling companies based in other countries.

	2002–03	2003–04	2004–05
Implementation costs	Negligible	Negligible	Negligible
Additional revenue	\$32.4m	\$30.8m	\$29.1m

8.1.3 Licence fees to manufacture or import tobacco products

The Government could impose licence fees on all companies wishing to manufacture or import tobacco products to Australia. These could be either transferable or, as in British Columbia in Canada, non-transferable to consumers, and could be set to raise virtually any amount of revenue the Government wished to raise. Fees could be set dependent on the previous year's market share, and set to total the total funding required.

Below are the fees that would be payable by BATA were total industry fees to be set high enough to raise one quarter to one half of the cost of the tobacco control strategy described above.

	2002–03	2003–04	2004–05
Implementation costs	Negligible	Negligible	Negligible
Fees that would apply to BATA ... to raise total of	\$s, and % of profits	\$s, and % of profits	\$s, and % of profits
\$50m	\$21.75m 15%	\$21.75m 16%	\$21.75m 17%
\$75m	\$32.63m 23%	\$32.63m 24%	\$32.63m 26%
\$100m	\$43.50m 31%	\$43.50m 33%	\$43.50m 34%



8.1.4 Levies on tobacco sales to cover the cost of rural readjustment in the tobacco industry

As with the recent dairy industry readjustment scheme, a levy of around 20 cents per packet could be placed on all cigarettes sold. This would raise more than enough to finance a buy-out of Australian tobacco growers.

	2002–03	2003–04	2004–05
Implementation costs	Negligible	Negligible	Negligible
Additional revenue	\$214m	\$203m	\$193m

With steadily declining numbers of people smoking, it is inconceivable that tobacco farming will be a viable proposition for the grandchildren of all the current tobacco growing families. A buy-out scheme would help to ensure a more viable future both for those families that choose to get out of the industry and those that choose to remain.

A buy-out scheme would reduce the number of farms and reduce the area covered by farms, reducing the costs of surveillance to detect illicit growing. This would be of benefit both to legitimate growers and to retailers who comply with laws prohibiting sale of untaxed tobacco.

The Government might also one day consider a similar mechanism to fund a buy-out of small tobacco retailers who no longer wished to sell tobacco products,⁴³ and training allowances for unskilled workers in tobacco manufacturing plants who want to move to other industries.

8.2 Impact on Federal Budgets 2002–03 to 2004–05

Taking into account expenditure proposals, expenditure savings and revenue estimates, the net impact on the Federal Budget is set out below. The net impact on each State Budget can be developed on request.

8.2.1 Total new expenditure measures

	2002–03	2003–04	2004–05
	\$96.9m	\$97.3m	\$95.9m

43. Such a scheme might provide adjustment grants dependent on the length of time involved in tobacco retailing, extent of reliance on profits from tobacco products and prospects for income without tobacco sales. Payments could be structured to provide incentives for earlier in preference to later exit from the industry.

8.2.2 Estimate of immediate reductions in Pharmaceutical Benefits Scheme and Medicare expenditure

	2002-03	2003-04	2004-05
Tightening of procedures	– \$7.3m	– \$7.6m	– \$7.8 m
Tightening of procedures plus introduction of NRT subsidy	– \$15.6m	– \$16.17m	– \$16.74m

8.2.3 Amounts that could be raised through revenue measures⁴⁴

	2002-03	2003-04	2004-05
Abolition, duty free sales	\$26m	\$26m	\$26m
Surcharge, 10% on tobacco company profits	\$32m	\$31m	\$30m
OR	or	or	or
Fees on manufacturers and importers	\$50m	\$50m	\$50m
Total net amounts	\$58m	\$57m	\$56m
OR	or	or	or
	\$77m	\$76m	\$76m

8.2.4 Total net impact on Federal Budgets

	2002-03	2003-04	2004-05
	\$15m	\$16m	\$15m
	or	or	or
	– \$3m	– \$3m	– \$6m

44. Includes only those measures that could be raised without causing increases in the price of cigarettes.



9. How can we not afford tobacco control? – Predicted returns on investment

9.1 Predicted impact – community awareness and smoking prevalence

Over a number of years, once fully implemented, the measures described in this proposal would greatly reduce the number of young people taking up smoking. They would also increase the number of current smokers in Australia able to make a more informed choice about whether or not they wished to continue to smoke. All current smokers would also have access to tobacco dependence treatments.

It is not known, however, precisely what the overall impact on smoking prevalence would be. It is therefore also not known how quickly reductions would be achieved, and how long education efforts would need to extend.

Based on the experience of comprehensive programs in the US [235], falls of at least three percentage points in population smoking prevalence could be expected following implementation of the three-year program outlined in this proposal. It is hoped that even greater falls would occur in Australia given the superior restrictions on tobacco promotion, higher tobacco prices and universal medical insurance coverage for tobacco dependence treatment in this country.

At present in Australia just over 20%, or just under three million Australian adults currently smoke at least weekly [6]. Table 18 sets out the additional people who would quit smoking over the next five years, at various target prevalence levels for 2006.⁴⁵

Table 18. Extra Australians to quit smoking, at various target prevalence levels

Target prevalence levels: 2006	19%	17%	15%	13%	11%
Number of fewer people smoking ⁴⁶	245,300	533,900	822,500	1,111,000	1,400,000

Source: Scollo and Carter, 2001.

The benefits to smokers and their families, to businesses and to government associated with reductions of this magnitude in smoking prevalence would be enormous. An exhaustive list of such benefits, together with supporting published material, is provided in **Attachment 4**. Some of the major benefits are detailed below.

45. It is assumed that the tobacco control policies recommended for implementation over the next three years would prevent upswings in prevalence beyond 2006, but that further reductions in prevalence would require continued funding of educational and treatment programs.

46. Estimates are based on population figures for 2000. With population growth, numbers would be larger.



9.2 Impact on the lives of smokers

Early gains

The most immediate impact of this proposal on the lives of smokers would be a financial one.

Giving up smoking is like getting an immediate pay rise. For a low-income, 20-per day smoker, quitting smoking would be equivalent to a \$50 per week increase in the statutory minimum wage. For a sole supporting parent or aged pensioner, it would be worth the equivalent of a \$92 per fortnight increase in their pension. For a smoking couple on average incomes, quitting would deliver a tax cut of \$2,900 and free up \$4,800 of after-tax income.

Reduced smoking by parents would result in fewer families suffering the trauma of caring for a premature baby, fewer infants suffering growth retardation, fewer children with middle ear and respiratory infections, less school absenteeism, and, possibly, improved academic performance and less educational failure.

Even more important, however, would be the chance to spare the life-wrecking grief of losing a child.

In the short-term this proposal would result in fewer families suffering the tragedy of infants dying stillborn, dying of Sudden Infant Death Syndrome, or dying in house-fires started by cigarettes or matches. It may also result in fewer adolescent children dying from or being severely disabled by meningitis. Fewer families, also, would be stunned by the sudden and unexpected death of a child or parent during a severe asthma attack.

Among people already suffering from heart disease, fewer would suffer fatal heart attacks.

Continuing returns

In the medium-term, the additional money at the disposal of many families would translate into faster savings, faster transition to home ownership and greatly increased financial independence.

The children of parents who give up smoking are much less likely to take up smoking than the children of parents who continue to smoke [235]. As a young family moves into the stage where children become adolescents, reduced smoking by parents will result in lower uptake of smoking among their offspring.

Most importantly, in the medium-term we would expect to see fewer families suffering the grief and loss of financial support associated with middle-aged people dying prematurely from heart attacks, peripheral vascular and other cardiovascular diseases. We would also see fewer middle-aged women and men suffering strokes with resulting life-long disablement.

Table 19. Numbers of deaths prevented from heart disease and stroke, five to fifteen years after achievement of various target prevalence levels.

Target prevalence levels: 2006	19%	17%	15%	13%	11%
Numbers of people prevented from dying prematurely from CVD	4,500	9,750	15,000	20,300	25,500
Number of people prevented from suffering a stroke	2,600	5,650	8,700	11,800	14,800

Source: Scollo and Carter, 2001.

Maturing investments

Over a lifetime, money not spent on cigarettes would translate into greatly increased accumulation of wealth, greater economic independence in retirement, and better provision for dependants.

Reduction in smoking prevalence would result in long term declines in numerous diseases that greatly affect quality of life, for instance osteoarthritis, macular degeneration, hearing loss, impotence, asthma and diabetes. This would translate into greater enjoyment by older people of activities reliant on sight, hearing and mobility.

Eliminating smoking will not only extend life and increase the number of years lived without disability, but will also compress disability into a shorter period [237].

Over the next 30 years, adoption of this package would result in many hundreds of thousands fewer people suffering disabling chronic obstructive pulmonary disease and at least 6,000 fewer people dying from this condition. At least 10,000 fewer people would die prematurely from lung cancer and the other cancers attributable to smoking including cancer of the lip, mouth, pharynx and larynx, oesophagus, stomach, pancreas, vulva, endometrium, penis, bladder and kidney and possibly the cervix.

The following table shows the numbers of lives that could be saved, over the next thirty years, for a range of possible reductions in smoking prevalence, from the current level of approximately 20%.

Table 20. Reductions in premature deaths over the next 30 years, for target prevalence levels

Target prevalence levels: 2006	19%	17%	15%	13%	11%
Lives saved	16,800	36,000	55,400	74,700	94,000

Source: Scollo and Carter, 2001.

9.3 Impact on health care costs

When people quit smoking they greatly reduce their chances of developing a range of health problems in later life. The fewer years the person smokes, the less their chances of dying prematurely. The greater the time since they have quit smoking, the greater the reduction in their risk of disease relative to people who keep smoking.

The current population incidence rates for cancer, cardiovascular disease and other diseases caused by smoking are determined by population age structure and historical patterns in smoking and quitting and other risk factors. Using the relative risks of illness for smokers, ex-smokers and current smokers in the current Australian population [188], Carter and Scollo have estimated the extent to which population incidence of various smoking-related diseases would decrease at various target smoking prevalence levels [238].

Early gains

Reducing the number of women who smoke while pregnant would significantly and immediately reduce the costs of “high-tech” care for premature babies and babies born with respiratory problems. **Table 21** sets out the reductions in costs for care of premature, low birth-weight babies that could be achieved if the prevalence of smoking reduced substantially from the current 27%.



Table 21. Reduction in total costs of perinatal care for premature, low-birth-weight babies, for various target pregnancy prevalence rates

Target prevalence levels: 2006	23%	17%	12%	6%	1%
Reductions in perinatal expenditure	3.8%	8.3%	12.7%	17.2%	21.7 %

Source: Scollo and Carter, 2001

Another early gain from smoking cessation would be a decrease in the number of people who need treatment for elevated blood fats. Statins are currently the biggest contributor to the Pharmaceutical Benefits Schedule, costing taxpayers more than \$473m in 1999-2000, up \$110m over the previous financial year. Ebrahim and colleagues have estimated that if smokers initially were provided with cessation counselling and then screening, more than half of those who quit would need no further treatment [239]. Quitting smoking can be as effective as taking medication in reducing risk of an adverse or fatal cardiac event in those with underlying cardiovascular risk factors [184]. Quitting smoking, within as short a time as two years, effectively reduces deaths and hospitalisations even in those with very serious cardiovascular problems such as left ventricular dysfunction [185].

Continuing returns

Within the one to fifteen years of achieving target prevalence rates, there would be significant reductions in the incidence, numbers of hospitalisations, and the costs of treating cardiovascular disease. **Table 22** shows the reductions that would be expected for each major cardiovascular condition affected by smoking, both within the short term (1 to 10 years), and in the medium term (more than ten years) after achievement of target prevalence levels.

Table 22. Impact of target prevalence reductions on annual incidence, hospital episodes and treatment costs for cardiovascular diseases – % reduction 1 to 10 years, and after 10 years

	19%	17%	15%	13%	11%
CHD	0.5	1.0	1.6	2.1	2.7
	0.6	1.3	1.9	2.6	3.3
Stroke	0.4	0.9	1.3	1.8	2.3
	0.5	1.1	1.6	2.2	2.8
PVD	0.8	1.7	2.6	3.5	4.5
	1.7	3.6	5.6	7.6	9.5
Heart failure	1.7	3.7	5.7	7.5	9.8
	2.2	4.7	7.2	9.7	12.3
Cardiac dysrhythmia	1.7	3.7	5.7	7.5	9.8
	2.2	4.7	7.2	9.7	12.3
Pulmonary circulation disease	1.0	2.2	3.4	4.6	5.8
	2.9	6.3	9.7	13.1	16.5

Source: Scollo and Carter, 2001.

The costs of treating cardiovascular disease in Australia are substantial, totalling more than \$3.7b in 1993/94 [207]. The percentage reductions listed above would translate to substantial annual reductions in treatment costs for each of these conditions, freeing up resources for improved treatment and reduced waiting times, or allocation of resources outside the health sector.

Table 23. Annual savings in cardiovascular disease costs, from year 10

	19%	17%	15%	13%	11%
CHD	\$4m	\$9m	\$14m	\$18m	\$23m
Stroke	\$3m	\$6m	\$10m	\$14m	\$17m
PVD	\$3m	\$7m	\$11m	\$15m	\$19m
Heart failure	\$8m	\$17m	\$26m	\$34m	\$44m
Cardiac dysrhythmia	\$3m	\$7m	\$11m	\$14m	\$19m
Total CVD	\$29m	\$63m	\$98m	\$131m	\$166m

Source: Scollo and Carter, 2001.

Table 24 totals the net present value of savings in the cost of treating cardiovascular disease over the full fifteen years after the achievement of a range of prevalence reductions.

Table 24. Net present value of savings in treatment of cardiovascular disease one to fifteen years after achievement of various target prevalence levels.

	19%	17%	15%	13%	11%
	\$182m	\$396m	\$610m	\$824m	\$1b

Source: Scollo and Carter, 2001, assuming a 2.5% discount rate.

Maturing investments

Table 25 summarises the net present value of savings in the costs of treating all the major diseases caused by smoking over the full thirty years after achieving target prevalence levels.

Table 25. Net present value of savings in treatment of cancer, chronic obstructive pulmonary disease and cardiovascular disease one to thirty years after achievement of various target prevalence levels.

	19%	17%	15%	13%	11%
	\$350m	\$750m	\$1.15b	\$1.6m	\$2.0b

Source: Scollo and Carter, 2001, assuming a 2.5% discount rate.

Note that these estimates relate only to reductions in the cost of treating the three major diseases caused by smoking. Not included are the costs associated with treatment of at least a dozen more conditions made worse by smoking – see Attachment 4 for details.



The reductions in these health care costs are very great and would result in substantial savings, even taking into account the cost of implementing this proposal, and even assuming there would be no further reductions in smoking prevalence beyond the level achieved in 2006. The estimated cost-effectiveness of the comprehensive national tobacco control program set out in this proposal is set out in **Table 26**.

Table 26. Cost effectiveness of proposed comprehensive national tobacco control program in reducing health care expenditure, assuming a reduction to 15% prevalence by 2006

Number of quitters	822,000
Costs of program, 2000 to 2006	\$914m
Cost savings, 30 years (NPV)	\$1,155m
Net health care savings (NPV)	\$241m
Net savings per quitter	\$293

Source: Scollo and Carter, 2001

As argued by Australian economists, Collins and Lapsley, health care costs are only one small component of the social costs that would be reduced following a reduction in smoking prevalence.

9.4 Impact on businesses

Adoption of this proposal would be particularly beneficial for the private sector.

Early gains

The adoption of smoke-free workplace policies would reduce property insurance premiums due to reduced risks of building fires and bushfires. Passive smoking-related Workcover claims would also be reduced. Workcover insurance premium costs would be lower with fewer passive-smoking related claims and lower treatment costs for back and other injuries due to superior recovery and healing in non-smokers.

Employers would also eliminate the risk of litigation by customers and workers injured or discriminated against by failure to provide a smoke-free workplace or service.

Significant improvements in productivity would occur for employees who smoke who must stop work to take smoking breaks outside.

Most significantly however, is the effect on many Australian businesses when smokers, no longer spending their money on cigarettes, instead spend it on other goods and services. Many of the businesses benefiting from this switch in expenditure would have much greater employment-generating capacity than tobacco manufacturing and retailing businesses.

Continuing returns

There would be immediate and continuing reductions in smoking-related absenteeism estimated to be costing Australian businesses more than \$1.5b per annum.

Maturing investments

The hundreds of thousands of people who would live longer and more active lives because they gave up smoking would both earn and spend significantly more over their lifetime, thus greatly increasing the size of the market for many Australian businesses.

9.5 Impact on communities

Early gains

The initiatives listed in this proposal would result in many immediate improvements in the lives of people other than smokers. These include:

- reduced work stress for people working with smokers who take frequent smoking breaks
- improved amenity, reduced dry cleaning costs, reduced respiratory irritation and illness for people dining out, attending entertainment venues and public recreational facilities
- increased enjoyment of public recreational and natural resources due to reduced litter and bushfires at beaches, rivers, urban parks, national parks and state forests.

For rural communities the benefits include:

- adjustment assistance to families currently depending on sales of tobacco crops
- fewer families devastated by the loss of properties caused by bushfires started by cigarettes
- increased spending in tourist areas, with people no longer smoking spending more on local holidays and weekends away
- improved demand for rural commodities used to manufacture products purchased more often by people no longer buying tobacco products.

Continuing returns

A reduction in smoking prevalence would reduce the personal distress and the loss of expertise to businesses, public institutions and voluntary bodies that occurs when a middle-aged colleague or mentor dies suddenly from a tobacco-related disease.

Maturing investments

In the longer term, despite living longer, people who give up smoking will have shorter periods of disability. This reduces the burden on family members and other volunteer carers. It also enables retired people to contribute more fully to the care of grandchildren and other family members, and to undertake important voluntary work in the community more generally.



9.6 Conclusions

This long list of potential returns from investment in tobacco control shows how substantially reduced smoking would improve quality of life in our community. Reducing smoking would not only significantly reduce current levels of illness, but would also vastly enhance the future health of children and young people.

Even under the most conservative assumption about how much prevalence would be reduced, even considering just that limited number of health and social impacts that economists have so far been able to quantify, a \$10 per capita tobacco control program modelled on international best practice would provide extremely high social rates of return.

This proposal represents one of the most cost-effective public sector expenditure plans ever likely to be presented to parliamentarians.

No government with a commitment to value for money, no government wishing to see the economy grow and support private sector development, no government concerned about equity, can any longer afford to avoid providing adequate resources for tobacco control.

10. Who needs to do what? – A summary of actions required by government and non-government organisations

10.1 Federal Government

Health Minister and other Federal Cabinet members

- F1. Endorse each of the policy measures listed in Section 7.1 above, make necessary amendments to the Tobacco Advertising Prohibition Act, and include in the 2002 Budget a commitment of \$97m for each of the next three years to fund each of the new program initiatives listed in Section 7.2 and costed in Section 7.3.
- F2. Consider proposals for comprehensive reform of tobacco manufacturing and marketing, and assess each of the options described in this document for funding long-term tobacco control efforts.

Australian Competition and Consumer Commission

- F3. Through comprehensive enforcement action, expose history of industry misconduct and obtain orders to prevent or reduce loss or damage likely to be suffered from industry misconduct.
- F4. Through information on and in packs, on websites, and at point-of-sale, strengthen tobacco product labelling regulations to require disclosure and effective communication about:
- ingredients, including additives
 - average and maximum toxic output of tobacco products when smoked
 - and timely release of any information about products or product use that may be relevant to:
 - potential acute and long term biological impact of toxic outputs overall addictive potential and
 - overall health risks.
- F5. Ensure complete disclosure by tobacco companies about marketing activities and sales.

Australian Taxation Office

- F6. Continue efforts, and investigate further **measures**,⁴⁷ **to reduce evasion of tobacco excise and customs duty**, thereby preventing increases in tobacco product affordability. **Invest a minimum 0.05%** of tobacco excise and customs revenue in revenue protection initiatives.

47. Consider imposition of licence fees on each farmer growing tobacco and each company producing, importing and wholesaling tobacco products in order to establish stock tracking mechanisms and other customs and excise **revenue protection measures**. As with the British Columbia Tobacco Fee Act, legislation could specify that fees not be passed on to consumers.



Department of Health and Aged Care

Aboriginal and Torres Strait Islander Health

F7. Fund a National Strategy to reduce smoking in Aboriginal and Torres Strait Islander communities.

Health Access and Financing

F8. Draft amendments to the Medicare Schedule to include specific schedule items for identification and referral of smokers and, if approved, counselling of smokers where GPs have undertaken suitable training.

Health Services

F9. Use Practice Incentives Program payments to encourage GPs to:

- develop systems to routinely record and update smoking status
- refer patients to the Quitline or to local services
- proactively follow-up patients referred to such services, particularly pregnant women and patients at high-risk of stroke, heart attack or peripheral vascular disease
- recruit patients who smoke to local services.

Population Health/Health Financing

F10. To encourage greater use of NRT consider **funding a voucher scheme** so that clients having telephone counselling or other behavioural programs to quit can be provided with a voucher to purchase, at a reduced price, additional NRT from pharmacies, with deeper discounts for those with health care cards.

Population Health

F11. Consider establishing a levy on each tobacco dependence treatment (TDT) product prescribed or sold, for initiatives to “grow” the total market for TDT products. Use TDT levy revenue to help fund national direct marketing programs to encourage and prompt health professionals to refer to specialist smoking cessation counselling services.

F12. Fund, to commercially realistic levels, year-long, high-intensity consumer education campaigns to encourage cessation, discourage uptake and to encourage responsible smoking around others. These education campaigns would include materials aimed at all sections of the community, and would support each of the structural changes in smoking restrictions and treatment protocols that follow.

F13. Fund state-based cessation services to provide proactive telephone counselling in exchange for

- agreement by States to provide core reactive telephone counselling services and
- reactive and proactive counselling that adheres to agreed performance standards developed by a multi-sectoral, multi-disciplinary committee.

- F14. Fund the Royal Australian College of General Practitioners and other learned colleges of specialists such as the Society of Cardiologists, the Royal College of Obstetricians and Gynaecologists, the College of Physicians, the College of Midwives and other appropriate professional bodies to develop with multi-sectoral, multi-disciplinary input, clinical guidelines for the treatment of all smokers and for smokers in high-risk groups. Also fund these organisations to undertake other initiatives that will help to institutionalise as part of routine care, identification, referral and treatment of patients who smoke.
- F15. Fund and evaluate the impact of up to five committed smoking cessation counsellors to work in suitable medical or health care agencies servicing patients with both a high-risk of premature mortality, and with limited access to national telephone and internet-based services (for instance, in community health centres adjacent to public housing estates).
- F16. Include in the next round of Public Health Outcome Funding Agreements with the States, a requirement for regulatory action on tobacco, a quarantined level of funding for tobacco control initiatives, and a guarantee to match State Government tobacco control spending beyond the minimum level.
- F17. Include in contracts with federally-funded drug treatment agencies, a requirement to offer tobacco dependence treatment to all patients.

Drugs and Poisons Scheduling Committee

- F18. Change scheduling of NRT to allow Quit Campaigns and other cessation services to provide clients with NRT products that are currently scheduled S2. This would allow health care professionals and Quit Campaigns and other health care counselling services to provide a week's free NRT to very disadvantaged smokers.

Health Insurance Commission

- F19. Audit prescription patterns for Zyban and organise publicity and feedback to prescribers to ensure that the requirement (participation in a comprehensive program) is being met. Consider pricing levels in light of the audit and given unexpectedly high sales.⁴⁸
- F20. Require pharmacists to note evidence of participation in comprehensive treatment program prior to filling prescriptions.

Pharmaceutical Benefits Advisory Committee

- F21. Consider changing the indication and authority for PBS subsidy of statins so that low-risk patients are provided this only after smoking cessation has been attempted.

National Health and Medical Research Council

- F22. Fund research and monitoring to facilitate continuous improvement in the tobacco control effort in Australia. Require a minimum of 30% of Public Health Evaluation and Research and Drug Strategy Research grants to be provided for tobacco control research rated as highly policy relevant.⁴⁹

48. Refer PBAC recommendations, September 2000: <http://www.health.gov.au/hfs/haf/docs/pbacrecsept.htm>

49. See Scollo and Chapman (eds) Tobacco Control in Australia: a Priority-driven research agenda [240].



Department of Agriculture, Fisheries and Forestry, Australia

- F23. If approved, establish a levy on each cigarette sold to buy out (or retrain and re-establish new generation) tobacco farmers who wish to leave the tobacco-growing industry.

Treasury

- F24. Provide detailed advice to the Government on the revenue raising proposals canvassed in this document.

10.2 State and Territory Governments

State and Territory Ministers for Health and Cabinet colleagues

- S1. Amend state and territory tobacco legislation to bring to an end any remaining forms of promotion of tobacco products, including but not limited to point-of-sale advertising and product displays, competitions, giveaways, direct mail and promotional personnel at dance parties and other youth-oriented events.
- S2. Include in 2002 State Budgets amounts necessary to cover each of the new initiatives listed in Section 7.2 above.
- S3. Amend legislation to impose licence fees on all tobacco retailers and wholesalers to cover the costs of regulation at the wholesale and retail level.
- S4. Consider a \$1-per-pack deposit on cigarette packets that could be redeemed by adults at recycling depots with return of package and butts, the net revenue from which could be used for litter control initiatives.
- S5. Victoria, Northern Territory and South Australian Governments should extend current legislation restricting smoking, to all workplaces, and to all indoor public spaces. All jurisdictions should follow the Tasmanian lead and extend legislation to restricted seating areas, and near air-conditioning inlets and doorways. All jurisdictions should sunset exemptions for bars and gambling venues.

State and Territory Health Departments

- SH6. Continue to fund Quit Campaigns to conduct statewide publicity and education on the health effects of smoking, and to implement professional training and those aspects of professional and local agency resourcing best done on a state basis; continue to fund state-based provision of smoking cessation counselling.
- SH7. Include in all future funding contracts with all health care services⁵⁰ a requirement to routinely monitor smoking status, and to refer patients who smoke to smoking cessation services. Include in all future funding contracts with Quit Campaigns⁵¹ a requirement to assist public hospitals to incorporate smoking status assessment and referral procedures into routine care.

50. Including: acute care, rehabilitation and maternity hospitals; maternal and child health, community, mental health and domiciliary care services; and regional health care authorities.

51. Or fund other suitable agencies to assist.

- SH8. In all future funding contracts with health care agencies, provide incentives to providers to invest in smoking cessation counselling and other tobacco control initiatives appropriate to the agency's clients. Include in all future funding contracts with Quit Campaigns a requirement to provide training in smoking cessation counselling to health professionals in State-funded health services.
- SH9. In all future funding contracts with psychiatric and drug treatment agencies, provide incentives to providers to invest in smoking cessation counselling and other tobacco control initiatives appropriate to the agency's clients. Include in all future funding contracts with Quit Campaigns a requirement to provide training in smoking cessation counselling to health professionals in State-funded health services.
- SH10. Require and fund (as opposed to merely enabling) appropriate authorities (e.g. local councils) to enforce legislative restrictions on tobacco retailing, ETS exposure and other tobacco regulations at the local level.

State Education Departments

- SE11. Include measures to reduce smoking in state-based drug use harm minimisation strategies, including drug education in schools.
- SE12. Ensure that smoking by any person is not permitted on all school premises, including in outdoor areas, and on all school excursions and camps and at all school functions.
- SE13. In collaboration with Quit Campaigns, ensure that students who smoke are made aware of internet-based programs that provided cessation assistance tailored to young people.

State Quit Campaigns

- Q1. Pool resources to monitor scientific, medical and behavioural research that could be used to generate media coverage. Ensure sufficient staff in each state are spending sufficient time working with local journalists to maximise media coverage about tobacco-related harm.
- Q2. Continue efforts to pool telephone-based counselling services at a regional level (to ensure extended hours coverage without greatly increasing STD charges).
- Q3. Establish referral mechanisms with all State-funded public hospitals and health care services, commencing with maternity hospitals, major public hospitals, and maternal and child health services.
- Q4. Work with the National Heart Foundation to establish appropriate procedures in each state for training cardiac rehabilitation staff in smoking cessation counselling.
- Q5. Work with subject associations and curriculum developers to ensure that information about tobacco and tobacco control is integrated or promoted in materials used in public, Catholic, and independent schools in a wide range of subject areas.
- Q6. Work with personnel in all educational and medical faculties to ensure smoking is covered in undergraduate training for all relevant health and education professionals.



10.3 Council of Australian Governments

Council of Australian Health Ministers

COAG1. Develop principles and mechanisms for articulating commitments by both the Federal and State and Territory Governments to comprehensive tobacco control policies, for inclusion in the next round of Medicare agreements.

COAG2. Include in the next round of Medicare Agreements a commitment by both the Federal and State and Territory Governments to invest appropriately in tobacco control including measures to:

- institutionalise tobacco-dependence treatment through the health care system (see F11, F15, F16, S3, S4, S5 below) and
- establish and enforce regulations to prevent inducements to children to smoke, access to tobacco products by children, and non-voluntary/non-informed exposure to toxic tobacco by-products, in all workplaces and all enclosed public areas (see S1 and S6 to 9).

COAG3. Include in the national Cardiovascular Disease Strategy, explicit recognition of smoking cessation as a cost-effective means of reducing premature CVD mortality and the class differential in CVD deaths.⁵² Include, in the Strategy, measures to ensure routine tobacco dependence treatment for all CVD patients, and for all those with any other risk factor for CVD.

COAG4. Also include such measures in the Asthma, Diabetes, Injury Prevention, Illicit Drugs and other Drug Harm Minimisation Strategies and in women's, children's and Indigenous Health Strategies. Measures to prevent uptake by children should encourage parental quitting and adoption of smoke-free policies in domestic environments.

Ministerial Council on Drug Strategy

COAG5. Review current legislation covering tobacco and other recreational products containing nicotine and recommend an appropriate legislative framework that will most effectively allow governments to reduce tobacco harm in the longer term.

Standing Committee of Attorneys General

COAG6. Investigate feasibility of litigation against or prosecution of tobacco companies for both past and ongoing unlawful conduct in Australia, with a view to holding each company accountable for the harm caused by such conduct, and confiscating any proceeds derived through the commission of criminal offences.

52. Tobacco is already prominent in the National Cancer Strategy.

10.4 Non-government bodies

Professional bodies (all relevant learned colleges, peak bodies, medical and health professional tertiary programs, continuing education program providers and regulators and multi-disciplinary committees)

- HP1. Develop and promote for GPs and for each clinical specialty among doctors, nurses, physiotherapists, dentists and other health professionals, clinical guidelines to:
- promote **asking about** smoking **status** and **referral** as a minimum standard of care, with “failure to make/lost contact” information to be provided to referring professionals of obstetric and cardiac patients, of those patients with asthma⁵³ or chronic obstructive pulmonary disease and for any patient admitted for emergency care due to a smoking-related condition
 - **offer** tobacco dependence **treatment** (appropriate to each patient) to all patients who smoke who are admitted for acute health care, pre-natal outpatient care and birthing services, rehabilitation, psychiatric care and drug treatment.
- HP2. Provide training in smoking cessation counselling to health professionals both in basic training and through continuing education programs.

Cancer, heart and other health charities

- CH1. Devote a significantly increased proportion of prevention education budgets for at least the next five years, to policy development and advocacy in tobacco control.

Pharmaceutical companies

- PC1. Cooperate with the development of a code of practice that sets guidelines to ensure that TDT marketing maximises public health benefit.
- PC2. Sponsor each of the major electronic prescribing software providers to include prompts to doctors to ask about smoking, refer to the Quitline and provide patient information on quitting and use of TDTs.
- PC3. Produce free sample-size packs of nicotine replacement therapies to enable doctors, smoking cessation counsellors and other professionals to provide one week’s supply of NRT free to very low-income patients.

53. And parents of patients with asthma



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Attachment 1: Overview of international tobacco control efforts

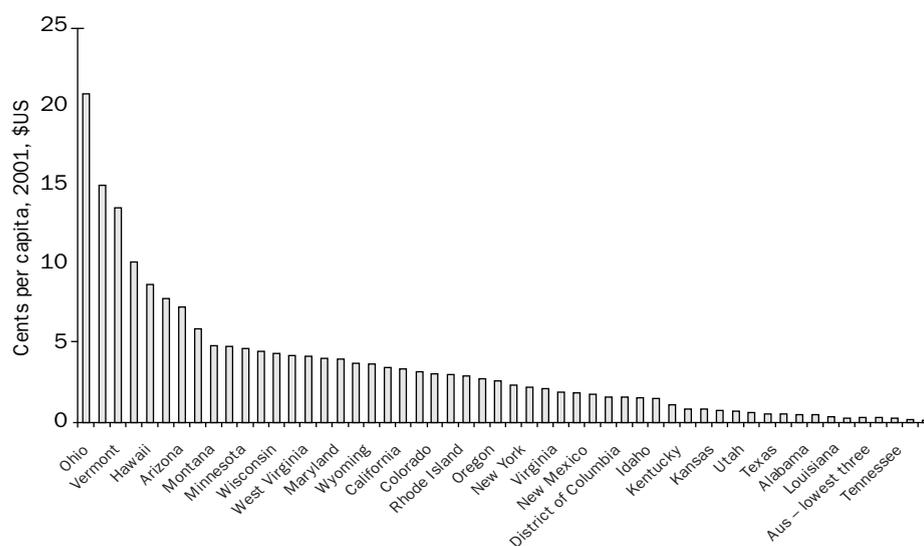
Most English-speaking countries have substantially increased funding of tobacco control over the past few years.

A1.1 United States

Funded by settlements between US Attorneys General and US tobacco companies, Federal and state governments such as Florida are now spending substantial sums on tobacco counter-advertising campaigns [1]. This is in addition to hypothecated tax revenue in Massachusetts, California, Arizona, Alaska, Maryland, Michigan, Oregon and Utah [1], and extensive programs funded by research grants from government organisations such as the National Cancer Institute as well as commercial organisations such as pharmaceutical companies and philanthropic organisations such as the Robert Wood Johnson Foundation.

Funding for tobacco control on a per capita basis exceeds Australian tobacco control expenditure in almost all US States.

Figure A1.1 Per capita tobacco control expenditure in Australia compared to US States, 1999–2000



Source: US CDC: Investment in Tobacco Control, State Highlights, 2000.

Despite the recent boosts in funding, US public health authorities believe that tobacco control is under-financed in most US jurisdictions. Funding for tobacco control in 1999–2000 exceeded the minimum amount recommended by the US Centers for Disease Control in only seven US states: Arizona, Indiana, Maine, Massachusetts, Mississippi, Ohio and Vermont.



The US Tobacco Use and Dependence Guideline Panel last year recommended that US insurers and purchasers include, as a reimbursed benefit, the counselling and pharmacotherapies it had identified as effective aids to cessation. Coinciding with the launch of the Panel's Clinical Practice, the former US President Bill Clinton announced additional Medicaid funding contingent on US states subsidising nicotine replacement therapies for low-income patients [2].

A1.2 United Kingdom

The UK Labour Government's White Paper, *Smoking Kills*, published in December 1998 [3] introduced a comprehensive strategy that committed the Government to: ban tobacco advertising; to prevent tobacco smuggling¹ (209 million pounds over three years); to launch a major education campaign (50 million pounds over three years); and to undertake policy research (2.5 million pounds).

As reiterated recently by the UK Secretary of State for Health, [6], helping smokers to quit is a key strategy in the UK Labour Government's plans to modernise the National Health Services [7].

The modernisation plan establishes targets for 1.5 million smokers to have given up smoking by 2010, and for the prevalence of women smoking during pregnancy to be reduced from 23% in 1995 to 15% in 2010.

Substantial funds have been devoted to these cessation targets [8], including special allocations to assist disadvantaged groups [9]. Around 60 million pounds is allocated over the three years 1999–2000 to 2001–02 for cessation services. These include a smokers' Quitline, initiatives to promote greater opportunistic interventions by health professionals and funding to regional health authorities to develop a small number of smoking cessation specialist services to assist pregnant women and heavily dependent smokers. In the first year, 10 million pounds was provided to very high need areas, the so-called Health Action Zones. The UK Government has set a target for reduction of smoking rates among manual labourers from 32% in 1998 to 26% by 2010 [10].

The anti-smoking drug, bupropion, was included on the National Health Service in June 2000. In March 2001, all nicotine replacement therapies (NRTs) became available through the National Health Service at subsidised prices. Some forms of NRT will also be available, unsubsidised, for sale in supermarkets and other (lockable) retail outlets. The National Institute of Clinical Excellence will shortly release guidelines providing guidance to GPs on cost-effective prescribing of the two agents.

Action on Smoking and Health (ASH) UK, together with the Cancer Research Fund, the Royal College of Physicians and other major health agencies and learned colleges have supported the Government's overall strategy, noting that smoking cessation in primary care should be regarded as an essential and economically rational component of NHS modernisation. They call for the following measures that would greatly improve the efficiency of the NHS:

1. Inclusion of routine smoking cessation interventions in contracts with primary care agencies, with regular health authority audits to verify compliance.
2. Mandatory inclusion of smoking cessation in the health authorities' Health Improvement Programs.
3. Avoidance of inefficiency in uncapped expenditure for treatment of heart disease risk factors avoidable by greater promotion of cessation.

1. This undermines tax policies aiming to make tobacco less affordable to children. Between one-quarter and one-third of all cigarettes sold in the UK are sold without duty being paid. Some are sold by small operators selling cigarettes bootlegged from countries with lower tax rates. The vast majority are believed to be cigarettes on which no duty has been paid. Cigarettes are exported from various countries then distributed illegally by criminal organisations [4, 5].

4. Capacity for Specialist Smoking Cessation services to prescribe both bupropion and NRT as “dependent prescribers”.
5. Subsidy of therapies contingent on continuation of quit attempts, along the lines of the so-called abstinence contingent (ACT) model [11, 12].

A1.3 Canada

The Canadian Senate is currently (June 2001) considering a national Bill to hypothecate substantial funding for tobacco control [13]. Senator Colin Kenny’s private member’s bill would impose a 19c tax increase on a package of cigarettes. This would be expected to raise around \$CA360 m annually, half of which would be devoted to mass media education, and half to municipalities. Interestingly, two out of the three major tobacco manufacturers have come out in support of the Bill, promoting in full-page newspaper advertisements the potential of the Bill to greatly reduce youth smoking.

Meanwhile the Canadian Government has announced a package of measures, effective 6 April 2001, to minimise tobacco tax evasion in Canada, and to secure funding for tobacco control. These include:

1. An increase in excise tax rates in Ontario, Quebec, Prince Edward Island, New Brunswick and Nova Scotia in order to equalise taxes between the provinces and increase the price of all products.
2. A reduction in the exemption from tax of exports of tobacco products from 2.5% to 1.5% of a manufacturer’s production of tobacco products in the previous calendar year.
3. A two-tiered tax on exports of tobacco products, so that sales above the 1.5% threshold would be taxed at \$7 per 200 sticks (and \$6 per 200 gms). Tax payments could be refunded where companies provided evidence of payment of import duties in foreign countries.
4. A tax on tobacco products for sale in duty-free shops. The amendments impose excise duty and a new excise tax both on products delivered to duty-free shops in Canada, or exported for delivery to foreign duty-free shops.
5. A tax on tobacco products delivered as ships’ stores.
6. Duty on travellers’ tobacco products.
7. A tobacco manufacturers’ surtax, increasing the tax on tobacco corporations’ profits from 40% to 50%.
8. Miscellaneous amendments concerning management of products in bonding warehouses and new tax stamping requirements.

The Canadian Government has also announced that it will invest over \$480m (including \$58m in existing funding) in Health Canada’s *Tobacco Control Strategy* over the next five years, almost five times the investment that was made in the previous initiative, which is now winding down.

The funding will be allocated to key areas of tobacco control that have been proven effective both in Canada and other jurisdictions. It will bolster existing Health Canada programs, while directing \$210m to mass media campaigns implemented in partnership with health-and- advocacy non-government organisations.

Experience has shown that successful approaches to tobacco control need to be comprehensive, integrated and sustained, and that high-profile, ongoing mass media campaigns are the anchor. The new strategy encompasses all of these elements as well as clear, achievable targets and evaluation methods.



Ten-Year Measurable Targets

To gauge the success of the strategy, the Canadian Government has set out clear, measurable targets, and will report to the public on the progress being made. These targets are:

- Reduce the number of people who smoke from 25% to 20% of the population.
- Decrease the number of cigarettes sold by 30%.
- Increase retailer compliance with tobacco sales to youth laws from 69% to 80%.

Changes in these areas will be measured through monitoring activities such as the *Canadian Tobacco Use Monitoring Survey* conducted for Health Canada by Statistics Canada to provide continual data on tobacco use in Canada. Retailer compliance surveys and data gathered from the tobacco industry under stringent new federal reporting requirements will also be used. A progress report on activities will be issued in 2002, and a further report will be issued in 2005 based on the evaluation of the strategy.

Components of the Strategy

Strategies that have worked well in jurisdictions such as California, Massachusetts, and British Columbia, show that a combination of various types of tobacco control efforts, supported by strong and sustained media campaigns, do reduce smoking rates. Successful tobacco control programs target all ages.

Sustained Mass Media Campaigns

Approximately 40 percent of annual funding will be allotted to mass media campaigns targeted at Canadians of all age groups, with a special emphasis on youth and other high-risk populations. They will be carried out in partnership with stakeholders including national health and tobacco control organisations. The mass media campaigns will strengthen and support all other tobacco control efforts carried out by Health Canada.

Enhanced Health Canada Tobacco Control Activities

The Tobacco Control Strategy builds upon the activities and directions of recent years through four mutually reinforcing components: protection, prevention, cessation and harm reduction.

Protection

- Compliance with Health Canada legislation is a priority, particularly to ensure that the 40,000 tobacco retailers in Canada do not sell tobacco to youth.
- As in the past, with initiatives such as the new tobacco health warning messages, research will provide evidence and support for all programs and any new regulations.
- Expertise will be provided to municipalities and others to assist in the adoption of non-smoking rules and by-laws.
- The Canadian Government will continue to defend the Tobacco Act and its position in tobacco-related litigation.

Prevention

- Prevention very much focuses on youth. Resources and activities will be developed to engage youth in developing effective programs and strategies for their peers.
- Health Canada will provide health policy assistance to the Department of Finance in developing effective tax strategies. Taxation is an important element of tobacco control, as it has clearly been shown to reduce consumption, particularly among youth.

- The Canadian strategy calls for building upon existing web-based and printed resources to inform health care professionals, teachers and others working with youth.
- Partnerships are critical to the implementation of an integrated program. The Canadian Government will work with the provinces, territories and NGOs to build on existing networks, and to enhance the ability of communities to act on this issue.

Cessation

- In the area of cessation, steps will be taken to address the need for national standards, including clinical practice guidelines and tools that engage health professionals in the promotion of smoking cessation.
- The strategy aims to enhance public access to programs, resources and information on best practices.

Harm Reduction

- Despite the best efforts to reduce smoking among Canadians, there are some who will continue to smoke. Health Canada will continue to exercise its responsibility to regulate products in such a way as to reduce the risk from tobacco use. They will work in collaboration with the United States and other countries to ensure that any changes to the product would have only positive health impacts on the smoker or those exposed to the smoke.

First Nations and Inuit

The Canadian strategy involves a First Nations and Inuit initiative, which is intended to influence behaviors and attitudes related to smoking, help build the capacity of communities to address the health issues around tobacco use, and improve retailer compliance on reserve [through increased education]. Consultations will begin immediately with representatives of First Nations and Inuit associations to determine how best to address the unique challenges tobacco use presents to their communities.

Tobacco dependence treatment products

In Canada provincial government commonly provide insurance for the cost of pharmaceuticals. So far only Quebec is covering the cost of tobacco dependence treatments, including both nicotine replacement products and Zyban.

A1.4 New Zealand

The New Zealand Government has recently made a substantial investment in tobacco control, increasing expenditure on anti-smoking campaigns to over NZ \$28m, equivalent to more than AUD\$6 per capita per annum. For a population of around four million people, around \$1m per annum is provided to the Quitline to provide a call-back counselling service based on the one developed in Victoria, Australia. An allocation of \$5m has been set aside for Maori cessation, and \$6.18m per annum for a Nicotine Replacement Exchange Card Scheme.² Around \$500,000 of this amount has been allocated to Quitline for rental of larger premises and employment of extra counsellors. The Exchange Card allows people who are receiving Quitline call-back counselling to purchase four weeks supply of NRT for \$10, previously costing around \$145 [14]. If people proceed with their quit attempt they are allowed a further four weeks supply. The scheme also allows for pharmacists to be paid a \$6.50 dispensing fee. The scheme is about to be

2. Full details on the scheme available on request.



extended to doctors and other health care professionals. They will be allowed to provide the Exchange Card if they provide at least three counselling sessions. Some of the Independent Practice Associations (IPAs), which each comprise around 500 GPs, are employing IPA specialist nurse counsellors to counsel on their behalf.

Over 70,000 calls were received in the first six weeks of operation of the scheme, but by early in 2001 calls were averaging 15,000 per month. Around 5,000 people a month are currently proceeding to receive and fill the vouchers. Preliminary evaluation of the program to date indicates that, of those callers to the line offered the exchange card in its first month of operation, around 19% were abstinent at three months. It should be noted that there were many operational problems in the first month, including delays in receipt of follow-up calls.

A1.5 Ireland

Ireland is another country which has recently substantially increased investment in tobacco control, with expenditure on non-pharmacological strategies totalling more than 20 million Irish pounds per annum [15], or approximately AUD\$46m, for a population of under four million people.

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Attachment 2: Rationale, communication objectives and messages for national anti-smoking media education

A2.1 Background

What would it take to ensure that as many Australians as possible were fully informed about the negative consequences of tobacco smoking? Anti-smoking campaigns need to assist all Australians to:

1. make an informed choice about smoking
2. access effective help to quit and
3. protect their dependents from exposure to environmental tobacco smoke (ETS) and inducements to take up smoking.

To achieve this people need to understand:

- all of the major health risks associated with smoking
- the addictiveness of tobacco-delivered nicotine
- the tactics that have been employed by tobacco companies to glamourise and normalise smoking and to minimise or divert attention from health risks
- the relative harmfulness of reduced-risk products
- the benefits of quitting
- behavioural strategies that maximise success in quitting
- pharmaceutical treatments that maximise success in quitting (to be paid for by pharmaceutical companies)
- resources and services available to people wanting to quit
- the dangers of exposure to ETS and strategies to avoid involuntary exposure to ETS
- procedures to report apparent breaches of tobacco control manufacture, marketing or retail regulations.

What kind of marketing effort would be required to ensure that all of the relevant target groups were reached within, say, six years or two terms of government?



A2.2 Target groups

Target groups for the education program would include, for both rural and urban dwellers, in all States and Territories:

1. established smokers, of all ages,³ of all SES groups,⁴ at each of the stages that smokers have been demonstrated to go through during the quitting process [4]:
 - pre-contemplation,
 - contemplation,
 - preparation
 - action and
 - maintenance aiming both to prompt action and prevent relapse and including
 - those leading up to a first quit attempt and
 - those who have tried to quit many times before
2. young people currently experimenting with smoking
3. young people who are already regularly smoking, at various stages of smoking uptake
4. those not proficient in English
5. indigenous Australians
6. people who do not have access to telephones or the Internet
7. health professionals including doctors, nurses, health sector managers and administrators
8. intending, expectant and current parents
9. people suffering particular chronic diseases or conditions made worse by smoking or exposure to ETS (specifically adults with asthma; children with asthma and their parents; people with diabetes, cardiovascular disease and chronic obstructive pulmonary disease)
10. members of the public concerned about exposure to ETS
11. members of the public concerned about inducements to children to take up smoking.

A2.3 Communication objectives

An anti-smoking media education program must be

- comprehensive and coherent
- compelling
- pervasive
- credible.

3. Almost 70% of all smokers are aged between 18 and 45 years; around 28% of all smokers are aged 25 to 34 years. [1] However, it is among smokers 35 to 64 years that the earliest reductions in premature deaths will be avoided [2]. Therefore smokers of all ages need to be targeted.

4. While smoking rates among blue-collar groups are double smoking rates among white-collar groups (28.6 % compared to 14.5% [3]), around 35% of all smokers are in lower income white-collar groups [1]. Advertising and other media education must be designed to reach a very wide range of demographic groups.

The program must be supported by both public and private sectors to ensure that the appropriate package of assistance is available when smokers are ready to use it.

1. Comprehensive and coherent

To be fully informed about smoking is more than just knowing that it causes lung cancer. To believe and understand all of the associated risks, and to appreciate the consequences of suffering a smoking-related disease, potential and current smokers need a great deal of information, including information of a complex scientific and statistical nature. This includes:

- the mechanisms by which tobacco smoke alters biological processes
- the magnitude of the risks they face
- the nature of all the major risks they face
- the consequences of smoking-induced illnesses on their day-to-day life
- the consequences to people, particularly families, of the disability or early death of a parent, spouse, child or friend.
- the reality that most if not all of the perceived benefits of smoking are transitory and are largely achievable in other, safer ways
- the fact that, while not easy, it is possible to quit successfully and improve the quality of their day to day lives as well as reduce their risk of disease in the longer term.

Advertisements and other media education tools must use clear simple language. Graphic and lifelike rendering of biological effects would be useful in some materials; in others it would be appropriate to use strong emotional arguments, appealing to smokers in a range of life situations.

2. Compelling

Anti-smoking education takes place against the backdrop of both the addictiveness of the product and the long-standing and still pervasive promotion of smoking, particularly in youth culture.

Properly explaining the consequences of early death or prolonged disability and making this relevant to young people who have never had a doubt about their own mortality is particularly challenging.

Anti-smoking advertising and other media education will need to be compelling enough to enable people to:

- deconstruct the glamour of smoking created by years of advertising and pro-smoking media imagery
- let go of the various rationalisations that prevent action to quit
- persist through the difficulties of quitting an addictive product/habit.

In their evaluation of the large number of advertisements used in the US\$6 to \$10 per head per annum tobacco control program in the US state of Massachusetts, Biener and others have found that advertisements eliciting strong negative emotions were by far the most effective [5].

3. Pervasive

Persuading people to attempt to quit is relatively easy. Much more challenging is staying tobacco-free. Advertisements need to be on air all year long, so that people maintain their resolve and resist pressures to relapse. In this way, peoples' initial investment in quitting – both the smoker's investment, and the community's is not wasted.



Pharmaceutical company research indicates that people quit in a cyclical pattern over approximately a 12-week period [6]. Ideally, each type of message would be seen by each smoker at least once throughout their quitting process. This requires advertisements aimed at people in each stage of the quitting process to be on air almost constantly.

4. Credible

It is crucial that all material presented to smokers is **credible** enough for smokers not to dismiss or exempt themselves from it. This requires information to be clearly explained and backed up with consistent messages from credible scientific and medical sources.

A2.4 Specific messages⁵

1. Health risks – for Target groups 1 to 6

Over a three-year period a very large amount of material would need to be covered, including:

1. Substances in tobacco smoke and how these damage the lungs, heart and the genes

There are more than 4,000 chemicals in tobacco smoke, including carbon monoxide, nicotine, formaldehyde, ammonia, and 43 chemicals known to be human carcinogens, that is, cancer causing substances [7].

Carcinogens and carcinogenic metabolites travel beyond the lungs into the bloodstream and damage genes of cells in the lungs and numerous other body organs [8].

Cigarette smoking also contributes to cardiovascular disease in at least three ways, mainly through the effects of carbon monoxide and nicotine: 1. by accelerating heart rate and blood pressure, making the heart work harder for less oxygen, eventually leading to myocardial dysfunction; 2. by aggravating and accelerating the development of atherosclerotic lesions, thereby narrowing arteries and increasing the risk of rupture; and 3. increasing insulin resistance [9].

Smoking interferes with the body's methods of filtering inhaled air. Chemicals such as hydrogen cyanide, ammonia and formaldehyde have a direct deleterious effect on the lung cilia, leading to an accumulation of mucus and toxic agents. Over secretion of mucus, airway thickening and narrowing and damage to the small airways combine to reduce lung function, a condition known as chronic obstructive pulmonary disease [10].

2. The enormity of the risk faced.

Nine out of ten smokers suffer at least the beginnings of Chronic Obstructive Lung Disease (COLD).

One in two smokers die early due to smoking; half in middle age.

3. What it **really** means to have lung cancer, or COLD.

Survival rates for lung cancer is less than one in ten.

Increasingly younger women, including mothers of young children, are dying of lung cancer.

Suffering from COLD is like drowning in slow motion.

5. The following boxes contain preliminary ideas for educational materials. In each case, ideas need to be market-tested to guide framing, emphasis and presentation.

4. The link between smoking and heart disease and stroke.

Smokers are much more likely to have heart attacks, to die before they get treatment and to die young; the emotional and economic consequences for families of losing a parent in their most productive and responsible years.

The incidence of stroke is much higher among smokers, even in young women and men, often resulting in long-term disablement.

Nine out of ten patients with peripheral vascular disease are smokers. This condition often requires amputation of limbs.

5. Some of the very nasty but lesser known risks.

Cancer of the lip, oesophagus, stomach, penis, vulva, anus, bladder.

6. The many very disabling conditions that smoking makes worse or increases the risk of, such as:

Osteoporosis, diabetes, asthma, macular degeneration, hearing loss.

7. Some of the special problems relevant to intending expectant and new parents.

The risk of still-birth, SIDS and growth retardation.

2. Addictiveness of tobacco-delivered nicotine – Target groups 1 to 7

Smokers and potential smokers need to understand:

1. The effect of nicotine on the brain, and in particular on developing brains resulting in long-term, possibly permanent, changes in brain systems.
2. The engineering of tobacco products – to maximise speed and intensity of delivery to the brain.
3. If we have started smoking, what we can do to reduce our chances of becoming addicted.
4. The situational nature of most addiction and what we can do to prevent becoming dependent.

“Avoid the draw-back.”

“Smoke on a schedule rather than when and where you feel you need to.”

“Stop Smoking!”

3. Strategies employed by tobacco companies to glamourise and normalise smoking

Marketing strategies to divert people from thinking about health.

Research and lobby group funding and PR to delay introduction of smoking bans.

Promotion of smoking through Hollywood movies and other aspects of popular culture.

4. Relative harmfulness of reduced-risk products – for Target groups 1 to 7

1. The myth of low tar cigarettes

Ventilation holes.

Deeper inhalation causing cancers that are even harder to treat.



2. Behind the marketing hype of reduced-risk products

The facts about ...

Whatever comes on to the market

... So-called reduced risk cigarettes

... Low-nicotine cigarettes

3. How the industry manipulates tar levels as measured, etc

5. The benefits of quitting – for Target groups 1 to 7

1. The financial benefits of quitting

What you could save – equivalent to a \$50 a week pay rise, and

What you could buy

How much quicker you could get together a deposit for a house or pay off a mortgage

2. The benefits for people who are thinking of starting a family

Improved virility and fertility, greatly lowered risk of growth retardation, premature birth and stillbirth, and lower risk of SIDS

3. The benefits for your children

How much more financial support you could give to your kids; less coughs and colds, better school performance; lower likelihood of kids taking up smoking and, possibly even other drugs as well.

4. The immediate and long-term improvement in quality of life

The return of the pleasures of taste and smell

The increase in energy enjoyed when you replace cigarettes with safer and often more effective strategies for dealing with situations where smoking was used as a prop

6. Behavioural strategies that maximise quitting, for Target groups 1 to 7, encourage use of help and dispell myths which will lead you to doing it in some way when you are not really ready

“Set a quit date and psych yourself up for it; Rubber band onto your cigarette pack.a photo of your kids or a list of the reasons you want to quit”, etc – Probably a set of about ten tips.

7. Pharmacological treatments – for Target groups 1 to 7

1. NRT and Zyban cannot work without the application of personal effort and work more effectively when combined with advice on new ways of dealing with situations.

Using some sort of pharmacotherapy will increase your chance of success. These are safe and effective if used as recommended, as part of comprehensive treatment.

Don't make the mistake of thinking these are a magic bullet. Use them to help you. Don't expect them to do it for you.

8. Resources and services – for Target groups 1 to 7

The Quitline

What it does and does not do, and how to contact it – phone number.

Finding out about other services

Internet addresses.

Neighbourhood services

Local courses and groups.

9. Dangers of ETS – for Target groups 1 to 10

1. What is in ETS?
2. What ETS exposure can do to people both in the short and long term
3. The impossibility of knowing if someone is asthmatic or suffering from undiagnosed heart disease
4. Effective and ineffective strategies for protecting those around you.

Practical tips for reducing the exposure of your children if you have not yet given up (effective [6] – going outside, well away from your children; possibly reasonably effective – standing beside stove, with kitchen door closed, under very strong stove exhaust fan; probably not effective – blowing smoke in opposite direction or above someone's head; smoking near an open window).

10. Reporting procedures – for Target groups 7 to 11

What you should do if you know of retailers selling to children.

What to do if someone smokes in a public place.

A.2.5 Media

Media selection

Media selection needs to be appropriate to:

- the complexity of the message to be conveyed
- the dramatic value of the material and
- the target group.

6. As determined by research.



Media message matrix

Media includes:

- mass media such as TV, radio, print (general, youth and women’s and men’s magazines), cinema and outdoor advertising
- “new media” including internet, websites and chat-rooms, SMS messaging and interactive TV
- media in languages other than English (TV, radio and print)
- Aboriginal and Torres Straight Islander people’s media
- medical media (including General Practice magazines)
- other specialist media including:
 - pregnancy magazines, doctors TV
 - parenting magazines such as *Melbourne Child* (Messages 5.1, 5.3 above)
 - newsletters for sufferers of chronic diseases and websites dedicated to their concerns (Messages 1.6, 2, 4, 5, 6, 7, 8, 9)
 - hospitality industry trade press and websites (Message 9)
 - publications aimed at small business (Message 9)
 - health insurance company member newsletters and websites (Messages 1.1 to 1.6, 2, 4, 5, 6, 7, 8, 9)
 - parent organisation and teacher, and school principal newsletters (Message 3.3)
 - newsletters and websites of the Film Finance Corporation and similar film and arts financing bodies (Message 4).
- grants to local service providers to promote services
- point-of-sale advertisements in pharmacies, in outlets where tobacco is sold, and in other selected retail outlets
- promotional items in selected social venues where smoking is currently prominent, for instance in hotels, night-clubs, public – toilet doors, coasters, post cards etc
- tobacco package inserts and pack warnings (costs to be covered by tobacco companies).

Frequency-exposure

An ongoing, high-reach, high-intensity counter advertising campaign is required:

- On air at least 48 weeks of the year, to reach people at multiple times, at all stages in their quitting process
- With more intensive campaigns during periods when many people make quit attempts, such as at New Year, World No Tobacco Day, at the end of Winter, and for several months afterwards when they tend to relapse.

A2.6 Public relations support

Every day throughout the world, results of studies are published confirming or raising the possibility of some new disease caused by smoking. Other studies provide insights into the processes of smoking uptake and cessation. Media coverage about such research has always been an important means by which the public has become informed about the dangers of smoking. However, the studies are becoming increasingly technical, and are not always drawn to media attention. With just a little additional work to make it relevant to the Australian context, national health groups could provide spokespeople and encourage Australian media to do stories about such research. This and other stories about uptake, cessation and harm reduction research would greatly amplify the impact of paid advertising, both in terms of awareness and credibility.

It is proposed that an Anti-Tobacco Media Liaison person would be employed in each major health organisation (as described in the following 'Budget' section).

The media liaison person would track international research relevant to tobacco and their organisation, undertake communication and education activities with members, donors etc including the specialist media; liaise with experts and investigators engaged in such research in Australia, and promote them to journalists as suitable spokespeople; organise reports launches and events that could be promoted in the media; alert mass media journalists to international research that may be of interest to Australian readers, listeners and viewers.

A2.7 Evaluation

With such a significant investment, it is critical that we maximise benefits and demonstrate to the community the extent to which it achieves the campaign its aims. We propose continuously tracking the campaign with at least two contacts with each survey respondent to allow us to assess the short-term impact of different elements of the campaign. This information will need to be fed back continually into the creative side to ensure that new executions build on successes, and address barriers and issues that emerge. To achieve this will also require ongoing qualitative work with key subgroups for target groups. The research and evaluation team should be involved in all aspects of campaign design and delivery to ensure that the material produced and disseminated is based on the best available evidence and that the campaign is modified to take into account the changes that occur within the community as a result of the campaign.



Message/Medium Matrix

	1. Health risks	2. Addictive TDN	3. De- bunk	4. PERP	5. Quit benefits	6. Quit tips	7. TDTs	8. Services and resources	9. ETS dangers and avoid	10. Report
TV	1 to 6–18 TVCs	1 TVC		2 TVCs	2 TVCs	10 TVCs	1 TVC	8.1 3 TVCs	9.1 to 9.4 3 TVCs	
Radio				X	X	20	X	X	X	X
Cinema	Maybe 3		X							
Outdoor Transport shelters Ambient media	5				X				X	
Print General news Women mags Youth	6									X
New media Internet websites and chat rooms SMS messaging Interactive TV	5	1, 2, 3	X	X	X	X	X	X	X	
Ethnic	X	X		15	30	150	X	X	X	X
ATSI				X	X	X	X	X	X	X
GP media						X	X	X		X
Specialist media	Partic 4 & 6	X	X		X	X	X	X	X	X
Grants to comm orgs for local promotion						X	X	X		X
Point of sale advertising	1 to 6							X		
Promotional items in pubs, clubs									X	
Package inserts, pack warnings	1 to 6	1,2,3								

A2.8 Budget

Creative production

The communication challenge will require advertisements and media material of greater production value than the majority so far produced in Australia on the very limited budgets available.

While the dramatic execution may not be identical, the number, quality and frequency of traffic accident prevention advertising in the state of Victoria provide a guide to the sort of budget that might be required.

Public relations support

Allocations for a Anti-Tobacco Media Liaison person to be employed at the

- Australian Cancer Society – \$90,000
 - the Heart Foundation – \$90,000
 - the Thoracic Society – \$75,000
 - Asthma Australia – \$45,000
 - the SIDS Foundation – \$25,000
 - ASH Australia, to cover all other disease risks and more general issues, and -play a major coordinating role – \$120,000
 - a consortium of the cancer behaviour research centres – \$80,000
 - a consortium of public health/public policy research centres – \$80,000
 - communication, information sharing and annual meetings – \$10,000
- Total: \$615,000

Health organisations would provide on-costs and additional funding towards advocacy.

Cost of media liaison staff for each Quit Campaign

State	Existing (est)	Extra needed
NSW	\$0	\$80,000
Vic	\$70,000	\$10,000
Qld	\$10,000	\$70,000
WA	\$35,000	\$45,000
SA	\$35,000	\$45,000
Tas	\$0	\$60,000
ACT, NT	\$0	\$120,000



Media Screening

A budget of at least \$40m per annum would be required to purchase time/space in appropriate media at levels sufficient to ensure awareness and prompt action among all target groups.

Administration

Marketing director (1) – \$150,000

Adult smoker, Youth and Specialist program “product” managers – \$125,000; \$90,000; \$100,000

Marketing coordinators – 2 @\$40,000 each

PR Director with a personal assistant – \$130,000

Evaluation

The budget for development of resources (advertisements etc) will include funding for qualitative testing. To survey 400 people per week (half of whom are smokers) and to re-interview as many of the smokers as possible again 2–3 weeks later, to assess short-term impacts on smokers with more power will cost around \$825,000 per year, with staff costs and extras would cost about \$1.2m. This would be the centre-piece and allow for most needs. Combined over periods, it will allow study of all major subgroups. However, for smaller and hard-to-reach subgroups, focussed studies will be needed. These include Aboriginal peoples and Torres Strait Islanders, speakers of languages other than English at home, and people without telephones (for instance those in unstable housing and those with major disabilities). A total of \$1.5m would be required for evaluation of media education and related strategies. A further \$1.5m for evaluation of the tobacco control program as a whole is provided in Program 3 – refer to Section 7.3.

Funding sources

Funding sources would include

- the Federal Government – the core program of mass media advertising to achieve messages 1 to 7 (section A2.4 above)
- State and Territory Government – additional health-related advertising (messages 1 to 7), plus advertising to cover messages 8 to 10 (section A2.4 above)
- pharmaceutical companies – direct promotion of pharmaceutical treatments; a levy on sale of pharmaceutical products to cover generic promotion of pharmacological treatment
- health groups – to cover advocacy and media education about the links between smoking and particular diseases
- the tobacco industry – package warnings and inserts.

7. For use over the first three years, with most successful ones to be repeated over the following 6 to 9 years.

	2002-03 to 2004-5			Federal as % of total
	Federal \$M	State \$M	Total \$M	
Ten target groups				
1. Total population education				
Media production including development costs				
36 TVCs over 6 years, ⁷ @ av \$350,000 per TVC	4.2		4.2	
27 radio adverts over next 6 years @\$5,000 each	0.25	0.2	0.45	
Outdoor advertising	0.25		0.25	
Print advertisements, 21	0.1	0.25	0.35	
Media screening – total	20	12	32	
2. Young people experimenting				
Media production				
Cinema	0.35		0.35	
TV advertorials	0.25		0.25	
Media screening – total	1	0.5	1.5	
3. Young adults already smoking				
Media production				
Cinema	0.35		0.35	
Radio and Print advertorials	0.25		0.25	
Promotional items	0.5		0.5	
SMS messaging, Interactive TV				
Media screening – total	4.05	2	6.05	
4. Ethnic media				
Media production				
TV language dubbings	0.25		0.25	
Radio, 18 in 12 languages	0.36		0.36	
Print, 21 in 9 languages	0.32		0.32	
Media screening – total	1.5	0.41	1.91	
5. ATSI media	0.25	0.1	0.35	
6. Grants for local and community media		0.25	0.25	
7. Health professional education	1		1.0	
8. Parent education	0.75	0.075	0.83	
9. Chronic disease sufferers	0.25	0.05	0.30	
10. Concerned public		0.5	0.50	



PR support across all programs	1	2	3.00	
Media commission @ 15%	4.35	1.94	5.29	
Marketing director, managers and admin staff	0.65		0.65	
Media monitoring and impact evaluation	1.5		1.5	
Total	\$43.73	\$20.28	\$64.00	68%

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Attachment 3: Detailed proposal for improving access to and effectiveness of tobacco dependence treatment in Australia

A3.1 Background/need

An individual's chances of success in quitting smoking can be roughly doubled by the use of known tobacco dependence treatments such as face-to-face or intense telephone counselling or use of pharmacotherapies [2,3]. The effects of pharmacological and non-pharmacological treatments are, roughly speaking, equal, independent and additive. Some people succeed using only pharmacological approaches; some people succeed without pharmacotherapy. However, success rates are maximised where treatment is comprehensive. Motivated patients undertaking comprehensive treatment including both behavioural and pharmacological approaches have more than a one in three chance of succeeding [4]. Even people that fail learn a great deal about triggers for relapse and are more likely to succeed in subsequent attempts [5].

There are two major pharmacotherapies that are currently both practical and effective in treating tobacco dependence.

Nicotine replacement therapy (NRT) products are currently marketed in Australia by Pharmacia Upjohn and GlaxoSmithKline Australia (refer Register of Therapeutic Goods). They are available from pharmacies without government subsidies, in the form of gum and transdermal patches. Inhalers are also sold in pharmacies, but scheduled to require pharmacists to advise customers about use [6].

Bupropion hydrochloride is marketed in Australia by GlaxoSmithKline under the trademark *Zyban*, in the form of 150 mg film-coated sustained release tablets. It is available only on prescription, and since 1st February 2001 it has been included on the Pharmaceutical Benefits Schedule [7].

NRT and bupropion appear to be of roughly equal efficacy [2,4,8], with some indications that bupropion hydrochloride might be more efficacious [9]. Clinical guidelines in Britain [4] and in the US [2] indicate that there are no clear criteria for preferring one treatment over the other.⁸ However use of bupropion hydrochloride is associated with a higher risk of severe side effects, and is definitely unsuitable for people taking MAOIs, people with eating disorders, and for people who have a history of seizures. It should also be used only with extreme caution in those who are at risk of seizures due to diabetes, alcohol abuse or particular medications, who have renal or hepatic impairment, who are pregnant or who have psychiatric illnesses [10].

The PBS Schedule indicates that doctors prescribing *Zyban* must obtain Health Insurance Commission approval, and that this is provided "for use within a comprehensive treatment program" (PBS Schedule, February 2001). Glaxo SmithKline have established a *Zyban* Action Plan which is available to users of the product and, as part of that strategy, GSK have contracted the Victorian Smoking and Health Program to provide telephone counselling to those who wish to register. Currently there does not appear to be a requirement for either doctors or pharmacists to verify that patients undertake or complete a "comprehensive treatment program".⁹ The chances of any one quit attempt being successful are greatly reduced where additional counselling does not occur.

8. In the UK, the National Institute of Clinical Excellence is currently developing guidelines for prescribing of the two agents.

9. With respect to the service provided by the VSHP, discussions are planned between GSK and the VSHP to look at extensions to the current service, including a telephone call-back service, proactive referral and provision of feedback to GPs [11].



Prescribing of Zyban to date has been much higher than expected, with authority given for more than 300,000 prescriptions in the first fifteen weeks after listing [12]. There have been some delays in filling stock re-orders and quite a lot of negative publicity about deaths of people while taking Zyban in Australia, the UK and Canada. So far only about 55% of patients prescribed Zyban appear to have filled their prescriptions [7].

Expenditure on pharmaceutical benefits is uncapped in Australia, so the unexpected level of demand for Zyban will result in much higher than expected levels of expenditure for both the Pharmaceutical Benefits Scheme, and Medicare, which covers the cost of the patients consultation with their doctor. If the number of prescriptions falls off over time in a similar pattern to that observed recently in New Zealand with its NRT Voucher Scheme, then combined Medicare/PBS expenditure for Zyban prescriptions could be as high as \$90 m in the 2001–02 financial year. Quitting smoking reduces mortality and treatment costs for dozens of diseases, so the investment in Zyban compares favourably with investment in many other pharmaceutical treatments. However, tobacco dependence treatment is much less cost-effective than many other tobacco control strategies with higher population reach, most notably mass-media campaigns. Reid estimated, for instance, that NRT cost between \$36 and \$300 US per year of life saved compared to mass-media campaigns costing between \$10 to \$20 US per year of life saved [13].) If this estimate of PBS and Medicare expenditure on Zyban proves to be correct, then expenditure on subsidies will be almost ten times higher than the expenditure by state and federal governments (combined) on anti-smoking media and other population-wide anti-smoking education [14].

Apart from the disproportionate investment of government funds in Zyban, a further problem with the current financing arrangements is the inconsistency in the arrangements for Zyban compared with NRT. NRT products are, at worst, probably only slightly less efficacious than bupropion.¹⁰

There are many people, including many profoundly disadvantaged people, for whom bupropion is contra-indicated who currently find it difficult to purchase NRT. It is difficult to see why these people should not have access to NRT at a price comparable to Zyban, and under comparable conditions – that is, where they are also undertaking supportive behavioural counselling.

It has often been argued that NRT is little more expensive than a packet of cigarettes, and that the savings made by stopping smoking should enable purchase of NRT. It is true, for instance, that a three-day pack of nicotine gum, costs only a little more than the current recommended retail price of the leading brands of cigarettes – see Table 1 below.

It should be noted, however, that few low-income people purchase cigarettes at recommended retail prices. Most purchase from discount outlets [15] that sell cigarettes at prices considerably below the RRP [16], and many use tinned or pouch tobacco that is considerably cheaper “per smoke”.

10. All trials of bupropion have so far been conducted among patients receiving intensive counselling. In real-world situations where counselling is more sporadic, it is possible that the effect size will be slightly lower.

Table A3.1. Relative up-front purchase prices of NRT, Zyban and cigarettes in Australia, April 2001

Product	Recommended retail price, @ April 2001	Estimated cost per day to an average user, AUD
Nicorette 2mg 30	\$12.11	\$3.62
Nicorette 2mg 105	\$36.32	\$3.46
Nicorette 4mg 30	\$14.42	\$4.80
Nicorette 4mg 105	\$46.98	\$4.47
Nicorette 5mg Patch 7	\$25.05	\$3.57
Nicorette 10mg Patch 7	\$27.54	\$3.93
Nicorette 15mg Patch 7	\$30.57	\$4.37
Nicorette Inhaler 6	\$7.67	\$11.50 based on 9 per day
Nicorette Inhaler 42	\$44.10	\$9.45
Zyban, 60 tablets	\$21.90 PBS (\$138.57 pre-PBS)	35 cents (down from \$4.60)
Peter Jackson Pack 30s	\$9.95 RRT including GST	\$6.63
Peter Jackson Carton 210 (actual average price)	\$56.75	\$5.40
Longbeach Pack 40s	\$12.75	\$6.38
Longbeach carton 200 (actual average price)	\$54.00	\$5.40

Sources: Pharmacia & Upjohn RRP lists, Australian Retail Tobacconist. Centre for Behavioural Research in Cancer, unpublished data from price monitoring study.

Based on recommended usage of NRT and an average 20 per day smokers.

Smokers know that they have a very high chance of going back to smoking within a couple of days of quitting. Those on extremely low incomes face the prospect of making a \$47 outlay on NRT¹¹ and then, in all likelihood, relapsing to smoking, and having to spend another \$54 on cigarettes over the following ten days. Many will compute the risk of failing – going back to smoking and being \$20 to \$40 over their budget for the week – as being too high.

The whole point of medical insurance is to share these sorts of risks among the whole community, rather than allowing the most disadvantaged groups to curtail their use of life-saving treatments.

The argument “if they can afford to smoke, they can afford treatment” would be completely unacceptable in the treatment of alcohol or illicit drug dependence. It represents an unprecedented and anomalous form of “means testing” for offering medical or pharmaceutical treatment and is discriminatory towards some of the poorest smokers in the community, many of whom are in the most urgent need of treatment for tobacco dependence.

There are several options for making NRT more affordable to low-income Australians. One option would be to place NRT on the Pharmaceutical Benefits Schedule, bringing Australia into line with the UK where the government has recently placed all NRT products on the National Health Service.^{12,13} Another option would be to introduce a separate scheme subsidising NRT.

11. To buy gum in packs of 30 would cost \$33 more over the course of eight weeks, compared with buying it in packs of 105.

12. On the 13 March 2001, the UK government announced that all older style NRT products previously on the NHS blacklist would be available on the NHS along with product items already included.

13. The province of Quebec is also subsidising NRT in Canada.



NRT could be placed on the PBS without changing the current scheduling, thus allowing doctors to write scripts for the product to be sold at normal PBS prices. As with Paracetamol, available both over-the-counter or with a doctor's prescription which makes it cheaper for those on pensions and benefits, customers would still be able to buy NRT OTC. However, all those wanting the product at a subsidised price would have to make a Medicare-funded trip to their doctor. Under these circumstances, few doctors would be expected to provide behavioural counselling, but where they did, the cost to Medicare would be at least \$41.44 per session, based on the current scheduled Medicare fee of \$48.75 for a 20 to 40 minute consultation (Category AI, Item 36). Counselling by pharmacists is also likely to be limited now that most NRT products are scheduled S2.

An alternative would be to introduce a system similar to the one recently established in New Zealand, providing an Exchange Card so that people undertaking combined pharmacological treatment and counselling could receive NRT at low cost. This idea would seem attractive at face value:

1. "NRT plus counselling" treatment is more efficacious than bupropion hydrochloride alone. Contact with a counsellor around and following the quit date greatly increases success rates. Where people do relapse, contact from a counsellor often prompts a further quit attempt [17].
2. NRT has a much lower risk profile.
3. Quit counsellors and other smoking cessation specialists are considerably more experienced than doctors in providing Quit counselling.
4. Telephone counselling is invariably quicker than face-to-face counselling. And Quit counsellors are paid considerably less than GPs.¹⁴

14. Including on costs, it would cost the taxpayer around \$8.50 to pay a quit counsellor for the 15 minutes it takes to make one counselling phone call, compared with \$41.44 for a half-hour consultation with a GP.

Table A3.2. Extra effects of smoking cessation interventions on abstinence for 6 months or longer, among patients receiving levels of support as indicated

Intervention	Target population	Effect size	95% CI
Brief opportunistic advice	Patients who smoke	2%	1% to 3%
Face to face intensive behavioural support from a specialist*	– General	7%	3% to 10%
	– pregnant smokers		5% to 9%
	– smokers admitted to hospital	7%	0% to 8%
		4%	
Proactive telephone counselling*	Smokers wanting help to quit	2%	1% to 4%
<i>Californian/Victorian Tailored proactive counselling, with calls timed to coincide with quit attempts+</i>	<i>Smokers wanting help to quit and receiving one reactive phone call</i>		4% to 8%
		5.5%	
Pharmacotherapies			
Nicotine gum	Moderate to heavy smokers receiving <i>limited</i> behavioural support	5%	4% to 6%
Nicotine gum	Moderate to heavy smokers receiving <i>intensive</i> behavioural support	8%	6% to 10%
Nicotine trans-dermal patch	Moderate to heavy smokers receiving <i>limited</i> behavioural support	5%	4% to 7%
Nicotine trans-dermal patch	Moderate to heavy smokers receiving <i>intensive</i> behavioural support	6%	5% to 8%
Nicotine nasal spray	Moderate to heavy smokers receiving <i>intensive</i> behavioural support	12%	7% to 17%
Nicotine inhalator	Moderate to heavy smokers receiving <i>intensive</i> behavioural support	8%	4% to 12%
Nicotine sublingual tablet	Moderate to heavy smokers receiving <i>intensive</i> behavioural support	8%	1% to 14%
Bupropion	Moderate to heavy smokers receiving <i>intensive</i> support	9%	5% to 14%
Over-the-counter nicotine patch (US meta-analysis, Fiore et al, 2000)	Smokers with mixed level of smoking receiving manufacturers information	5%	1% to 9%

Effect size: Difference in >6 month abstinence rate between intervention and control/placebo in the studies reported; data from Cochrane meta-analyses (Silagy et al, 2000) unless otherwise stated; Limited behavioural support: Refers to brief sessions required primarily for collecting data. Intensive behavioural support: Defined as an initial session of more than 30 minutes, or an initial session of less than 30 minutes plus more than two subsequent visits * Cochrane meta-analysis not available; Source USDHHS meta-analysis [2] + Not included in West, McNeill – Based on recent evaluation of Victorian call-back service.

Source: West, McNeill et al, 2000 Smoking cessation guidelines for health professionals: an Update [4].



It is estimated that the proposal described below would increase the number of additional smokers expected to successfully quit due to tobacco dependence pharmacotherapies between 2002–03 and 2004–05, by between 16,000 and 58,000 **quitters**. It is estimated that such a proposal would cost **between \$65m and \$97m** for a three-year period,¹⁵ but would, in combination with other measures to reduce inappropriate prescribing) also reduce expenditure on Zyban by between **\$48m and \$77m**. These savings would help to justify increased investment in anti-smoking education and other high-reach strategies that could be expected to have additional impacts on smoking prevalence.

A3.2 Evidence

Table A3.2 is adapted from the most recent UK *Smoking Cessation Guidelines for Health Professionals* produced by West, Raw and McNeil and endorsed by the Royal College of Physicians, the Royal College of General Practitioners, The Royal College of Nursing and the Royal College of Midwives, The British Medical Association, the British Thoracic Society and numerous other learned colleges and health charities and health advocacy groups [4] (2000). These Guidelines are based on state-of-the-art meta-analyses produced by the International Cochrane Collaboration [18], and a study on the cost-effectiveness of smoking cessation interventions produced by the University of York [19].

Note that the effect size represents the contribution to success rates on top of the control group in each category. Many of the control groups include only people receiving intensive counselling. The effects of the counselling and pharmacotherapy are probably independent and roughly equal, so that undertaking counselling roughly doubles the patient's chance of succeeding with NRT or Zyban, and adding Zyban or NRT roughly doubles the chances of success of someone undertaking counselling.

A3.3 Program Proposal

The following proposals, in combination, aim to rationalise expenditure on tobacco dependence treatment in Australia in line with evidence about the relative effectiveness of various tobacco dependence treatments and other public health strategies.

3.3.1 As part of an overall public education strategy, promote a more realistic view of the quitting process and the helpfulness of services

1. Fund mass media education campaigns which include promotion of Quitlines, and promotional activities (e.g. generation of media articles and interviews) to encourage greater understanding of the quitting process, and a more realistic view of the limitations of treatment products and the helpfulness of treatment services.
2. Include the Quitline on cigarettes packets (rather than the number of the ghastly recorded smoker's info line).

15. The proposal assumes that the subsidy would be equivalent to the PBS subsidy. It could be shallower, however experience in New Zealand indicated that having prices different to the standard subsidised prices imposed costs for pharmacists needing to adapt accounting and administrative systems.

3.3.2 Increase funding to State Quitlines

1. Increase funding for nationally coordinated Quitlines so that they are able to provide all Australian smokers who would like it, more extended telephone counselling, including STD-free calls for rural smokers (along the lines of the programs in Victoria and South Australia) (about \$100,000 nationally, for each \$1 m spent on media advertising)

3.3.3 Amend the Medicare schedule to facilitate GP identification of and advice to smokers and referral to non-pharmacological treatment services

Like the package of measures recently announced in relation to mental health, fund a package of measures, across health programs and departmental sections, to ensure that doctors know about and can as quickly and easily as possible refer people to the Quitline and other evidence-based services ... And be paid a bit to do it.

1. Promote the Quitline to GPs and mechanisms to refer patients to it, for instance negotiate to include Quitline referral modules on each of the three most popular electronic prescribing packages
2. Introduce a Medicare Benefits Schedule Item that specifically covers assessment of the smoker's readiness to quit, advice that they should quit, and referral to the Quitline or another service, and discussion of progress at a follow up consultation. This would enable the GP to be paid slightly more for this sort of consultation, in recognition that it does take a few minutes to broach this subject, to explain the relevance to the patient's health, and to make referrals.
3. As in the recently announced Mental Health package, introduce another Medicare Benefits Schedule Item allowing GPs to provide smoking cessation counselling provided they are appropriately trained.
4. Through the Practice Incentive Payments initiative, award points for GP practices that establish good systems for routinising detection, brief advice and referral of all patients who smoke, with extra points available to practices that undertake proactive recruitment to tobacco dependence treatment services.

3.3.4 Fund a scheme that would provide vouchers (exchange cards) for purchase from pharmacies of NRT for smokers who are undertaking smoking cessation counselling.

The Health Insurance Commission could, as the Health Financing Authority did in New Zealand, call for tenders and contract with those pharmaceutical companies offering the cheapest prices for patches in various strengths, and gum in 2mg and 4mg strengths, and also for inhalers.



The Department of Health and Aged Care could, like the Ministry of Health did in New Zealand, contract Australian state Quit Campaigns¹⁶ and other specialist smoking cessation services,^{17,18} to provide the counselling and to issue the Exchange Cards to those eligible and interested in enrolling.

Registration forms could be sent to doctors, pharmacists and the Quitlines to distribute to patients and callers.¹⁹ People would complete the registration forms, indicating their smoking and relevant medical history and previous use of NRT. Quitline staff would then call each person and, after establishing they were still interested in participating, would issue Exchange Cards to eligible clients. People excluded from the scheme would include those who smoke fewer than 15 cigarettes a day, and those that are pregnant or suffering from heart disease, except where they have approval from their obstetrician, cardiologist or physician.

Pharmacists participating in the scheme would be contracted to accept the Exchange Card, check *Centrelink* documentation, provide instructions about use, provide the NRT at the subsidised price and claim the cost of the subsidy back from the Health Insurance Commission, together with a dispensing fee.

3.3.5 Implement measures to reduce any inappropriate prescribing of Zyban, including

1. A survey of patients prescribed Zyban to check the proportion of patients that are undertaking comprehensive treatment programs.
2. An article in the *National Prescriber* journal and GP magazines, on results of study and appropriate treatment of tobacco dependence, including prescribing of Zyban and (recommendation of) NRT
3. Clinical audits on smoking cessation to be offered for education purposes by the National Prescribers' Service, with participation providing points towards Continuing Medical Education and the government's *Practice Incentive Payments* [20].
4. Provision of feedback to prescribers about referred patients who fail to make or maintain contact with counselling services.
5. **Establishment by the Health Insurance Commission of a requirement (as a condition of providing rebates to pharmacists) that pharmacists sight evidence of participation in comprehensive treatment prior to filling the script (at the subsidised price).**

A3.4 Elements/costings

3.4.2 Medicare amendments

Doctors currently advising patients about smoking would already generally be charging for a long consultation. Providing a specific item in the Schedule would probably encourage more doctors to offer

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16. Cancer-Council auspiced Quit Campaigns in Victoria, South Australia, the ACT and NT, the Quit organisation in Tasmania, and contracted drug counselling agencies in NSW, Queensland and WA.
 17. Provided these services used therapies demonstrated to be effective according to criteria established in the Cochrane Review Database, Tobacco Addiction Module [18].
 18. Doctors prepared to sign a contract with the Department agreeing to provide a minimum three counselling sessions would also be authorised to issue Exchange Cards. For some patients, a shared care model would be ideal, with the doctor undertaking the initial counselling, referring the person to the Quitline, receiving case-notes and reviewing the patient's progress at later consultations.
 19. In the first few months of operation, when demand could be expected to be very high, a call centre would issue registration forms. Quit Call Centre and Quitline staff could indicate "there is currently an XX week waiting list" for entry into the scheme but could post-out preparatory material in the meantime.

this sort of assistance. However, longer consultations would tend to reduce the number of patients a doctor sees in a day, so the impact on Medicare would not necessarily be very large. Based on costings for diabetes, mental health and asthma initiatives, but anticipating much greater use of specialist services, and less direct counselling.

Table A3.3. Estimated costs of GP referring patients to Quitlines

	2002-03	2003-04	2004-05
Extra funding for Quitlines etc	4	4	4
Inclusion of Quitline referral modules in electronic prescribing packages; measures to promote Quitlines etc	1.25	1.25	1.25
Addition of specific item for schedule item for assessment and referral of smokers	1	3.5	3.5
Additional item to cover trained doctors providing counselling	.75	.75	.75
Total	\$7m	\$9.5m	\$9.5m

3.4.2 NRT Exchange Scheme

The costs to be covered in an NRT Exchange Card scheme can be estimated taking into account recent overseas experience.

In New Zealand where an Exchange Card Scheme was introduced in November 2000, 70,000 calls were received in the first four weeks, compared to a total of 50,000 calls to the Quitline for the previous 12 months [21]. More than 25,000 Exchange Cards were issued in the first three months of the scheme, with a steady 5,000 calls a week still being received in March 2001 [22]. Staff estimate that the full \$6.18m allocated for the scheme will be fully spent.

The estimates below takes into account the larger population of Australian, but the significantly lower demand that would be likely due to recent PBS listing of Zyban. Attachment 1 includes tables modelling the cost and impact of the scheme under various assumptions about uptake. The critical factors determining the cost of the scheme are the cost at which purchase of the product could be negotiated (and hence the level of subsidy) and the number of counselling calls provided, dependent on the level of demand. To be conservative, costs have been estimated on the assumption that the negotiated purchase price would be around 10% higher than in was in New Zealand. Costs have been modelled assuming per capita uptake of the NRT Voucher as high as 75% and even 90% of per capita demand in New Zealand. Many price-sensitive quitters would, by the time such a scheme was implemented, already have tried Zyban. It is more likely then, that demand would be more like 50% of the demand in New Zealand.

Unlike government expenditure on drugs that are PBS-listed, funding for a scheme such as this could be capped: a waiting list could be established to ensure that counselling and pharmaceutical subsidy costs could be contained within any nominated budget.

Demand for an Australian NRT Exchange Card scheme would almost certainly be highest in the first year, would remain steady in the second year and drop off in the third year as most of the interested smokers had been reached. However, the budget for the first year need only be slightly higher than that for the second if the scheme were to commence only part way through the financial year. If the scheme were to commence in December, post graduate psychology students during their University summer break could be casually employed to help meet the initial demand.



To ensure the smooth introduction of the scheme, the government could appoint a project manager to oversee implementation. That person could get support and advice from a working party including the Health Insurance Commission, the Pharmaceutical Pricing Body, the Pharmacy Guild, the selected pharmaceutical companies, pharmaceutical wholesalers, and Quit Campaigns/*Quitlines*.

Table A3.4. Estimated costs to run an Australian NRT Voucher Scheme

Fixed costs	2002-03	2003-04	2004-05
1. Distribution of 175,000 forms to 25,000 GPs and 4,925 pharmacies with order forms for more	\$299,250	\$15,000	\$15,000
2. Inclusion of registration/referral forms on electronic prescribing packages	\$10,000	\$10,000	\$10,000
3. Fees to Call Centre, to issue 200,000 forms during first two high demand months, and then during Quit Week and New Years @ \$1.50 per call	\$300,000		
4. Rental of dedicated 1 300 number	\$500	\$500	\$500
5. Fulltime Quitline supervisors in both Adelaide and Melbourne, with extra duties allowance for one counsellor on each night shift	\$111,480	\$111,480	\$122,960
6. Consultant pharmacist or pharmacologist on duty or on call each shift	\$120,000	\$120,000	\$120,000
7. National project manager, with admin support	\$125,000	\$125,000	\$125,000
8. Evaluation	\$200,000	\$200,000	\$200,000
Total fixed costs	\$1,166,230	\$581,980	\$593,460

Variable costs, based on demand in Australia being 50% lower per capita than demand in NZ

	2002-03	2003-04	2004-05
1. Required allocations to state Quitlines (and other providers) for			
• Production of registration and exchange cards sufficient to meet demand (110%), at 5c per sheet	\$35,500	\$31,000	\$30,300
• Purchase of additional office furniture for 50 counsellors	\$333,000	\$20,000	\$20,000
• Rental of temporary premises, Dec 2002 to Easter 2003 – Melbourne and Adelaide?	\$50,000		

• Data entry clerks, 5, 4 nights per week, from Dec 2002 to Easter 2003	\$34,000		
• Employment of additional staff, to enable 75 counsellors per shift from 1 December 2002 to 31 March 2003, and then around 50 counsellors per shift for balance of the year and the following two years @ \$25 per hour x 12 hours per day x 360 days per year	\$3,928,600	\$3,021,891	\$2,969,800
• Telephone costs for phoning participating smokers times @ 20c per call for 25% of calls (Melbourne and Adelaide metropolitan), and STD costs for three quarters (country Vic and SA and interstate callers)	\$681,770	\$568,115	\$604,847
– additional mail out costs to each client – voucher, brochure, envelope and mail cost at least twice for each client	\$554,900	\$518,545	\$509,792
2. Subsidy for smokers	\$14,967,600	\$13,986,891	\$13,750,791
3. Dispensing fees for pharmacists	\$1,849,680	\$1,728,487	\$1,699,307
Estimated total costs	\$23,300,000	\$20,457,000	\$20,178,000

A3.5 Immediate benefits of proposals

1. Increase in total number of people using tobacco dependence treatments, demonstrated to double success rates.
2. Increased awareness that tobacco dependence treatment pharmacotherapies are not a “magic bullet”.
3. Substantially greater awareness of the Quitline and other smoking cessation services among health professionals.
4. Increase in use of extended counselling services by NRT users, and in the total number of people using counselling services – also estimated to increase success rates between 75% to 100%.
5. Less incidents of PBS subsidy of Zyban for tokenistic, half-hearted quit attempts.
6. Lower incidence of serious adverse incidents among quitters using tobacco dependence treatments.
7. Reduced overall PBS expenditure which could be directed to anti-smoking media education and other highly cost effective tobacco control initiatives



A3.6 Estimated combined impact on Federal Budget

Introduction of the NRT Exchange Card Scheme and other educational measures listed above could be expected to significantly reduce demand for subsidised Zyban, resulting in large offsetting savings. Attachment 1 models the savings that could be achieved if demand for Zyban were to reduce by 20, 33, 50 or 70%. The following shows the costs and savings to government based on a (conservative) 33% reduction in Zyban use.

Table A3.5. Estimated impact on Federal Budget of Medicare amendments, NRT Exchange Card Scheme and prescriber education on Zyban

	2002-03	2003-04	2004-05
Medicare amendments, publicity of Quitline	+ \$7m	+ 9.25m	+ 9.25m
NRT subsidy scheme	+ \$23.3m	+ \$21.0m	+ \$21.2m
Measures 1-5 to reduce inappropriate prescribing of Zyban	\$0.5m - \$3.5m	\$0.5m - \$3.5m	\$0.5m - \$3.5m
Measure 6	- \$7.3m	- \$7.6m	- \$7.6m
Further reduction in Zyban prescriptions due to improved access to NRT	- \$8.3m	- \$8.6m	- \$8.9m
Total net impact on Federal Budget	+ \$11.7m	+ \$11.05m	+ \$10.95m

A3.7 Predicted impact on numbers of quitters of Proposals

Assumptions

1. Demand (per capita) would be lower than in NZ due to recent placement of Zyban on the PBS.
2. Around 33% of Exchange Card recipients would have purchased NRT OTC anyway, but not received counselling
3. Around 33% of Exchange Card recipients would otherwise have used Zyban (some with counselling, most without).
4. Average incremental effect size of 6% for NRT users
5. Average incremental effect size of 9% for Zyban users
6. Additional incremental increase in quit rate of 5.5% for those receiving phone call-back counselling

Table A3.6. Effects on predicted numbers of quitters²⁰ resulting from introduction of eligibility checks and an NRT Voucher Scheme, compared with status quo “Zyban on PBS”

	2002-03	2003-04	2004-05	Total
Best case: 75% of NZ uptake, 40% reduction in Zyban use	21,396	18,293	18,320	58,009
Most likely case: 50% of NZ per capita uptake, 40% reduction in Zyban use	12,507	10,375	10,334	33,215
Worst case: 33% of NZ uptake, 20% reduction in Zyban use	6,462	4,990	4,903	16,355

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Attachment 4. Summary of anticipated costs and benefits of a comprehensive tobacco control strategy to Australian families, business, governments and the community

I. Benefits to smokers and their families evidence

Early gains

1. Improved access to Tobacco Dependence Treatment (TDT) particularly in rural areas

Evidence

Apart from in SA and Victoria where Quitlines operate call-back services, smokers in rural areas have almost no access to intensive specialist smoking cessation assistance. Severe time pressures on rural GPs restrict their capacity to provide smoking cessation advice. Smokers unable to use Zyban receive no subsidy for tobacco dependence treatments (TDTs).

2. Additional money for spending on other goods and services, equivalent to a \$50 per week pay rise, a \$1,450 per annum tax cut or a \$92 per fortnight pension increase

A pack of Peter Jackson 30s – cost \$9.95 in June 2001. At average 20 cigarettes a day, that totals \$2,312 per year per smoker. “All employees” total average weekly earnings in February 2001 were \$810.00, totally around \$42,120 per annum [1].

3. Less asthma and fewer coughs and colds; fewer school and childcare absences; subsequent improvements in parents' workplace productivity and children's school performance

After adjusting for the age, education level, and employment status of mothers—as well as infants' birth weight, method of delivery, breastfeeding status, and birth order—Chinese investigators found that ETS exposure through the mother in utero was positively associated with higher consultation (adjusted odds ratio [OR]: 1.26; 95% confidence interval [CI]: 1.14, 1.39) and hospitalisation (OR: 1.18; 95% CI: 1.05, 1.31) use in infants with nonsmoking mothers attributable to any illness. In addition, postnatal exposure to ETS at home was linked to higher rates of hospitalisations for any illness compared with nonexposed infants (OR: 1.12; 95% CI: 1.00, 1.25). The OR for higher hospital use in infants exposed to 2 or more smokers at home was 1.30 (95% CI: 1.08, 1.58). The investigators concluded that use of tobacco products by household members, even among nonsmoking mothers, has an enormous adverse impact on the health of children, as well as increases health services use and cost. The present data support the revision of public policy to reflect an evidence-based approach to the promotion of smoking cessation in all household members during and after pregnancy [2].

Children miss a great deal of school due to asthma and respiratory disease suffered more frequently with exposure to ETS [3]. Children's illnesses are a major source of absenteeism for parents. Poor school attendance is a predictor of school failure [4].

4. Improved fitness; greater pleasure from improved sense of taste and smell

Smoking causes long-term but reversible adverse effects on the ability to smell [5], and nicotine is also thought to affect taste preferences and perceptions [6–10].

5. Improved appearance

Current smokers are much more likely to suffer moderate to severe wrinkling (OR 2.72; CI: 1.32-3.21, $p < 0.05$), with microscopic superficial wrinkling noted even in younger smokers (20–39 years) [11].



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| <p>6. Fewer families suffering</p> <ul style="list-style-type: none"> • the tragedy of still-birth or sudden infant death • the shock of a child or parent dying suddenly during an asthma attack • the trauma of a child killed in a house-fire • the devastation of an infant or adolescent child dying from or severely disabled by meningitis | <p>SIDS, low birth weight and birth trauma are all in the top ten leading cause of disease burden for children less than 14 years of age in Australia [12]. Around 15% of SIDS is attributable to passive smoking, assuming half of female smokers with children under two years smoke only outdoors [13].</p> <p>Asthma is the leading cause of disease burden among boys and girls less than 14 years of age in Australia, accounting for almost 20% of disease burden [12]. In 1997–98 passive smoking caused 1,428 hospitalisations among this age group with another 540 hospitalisations for all other age groups [13]. Active smoking impairs the efficacy of short-term cortico-steroid treatment in mild asthma [14].</p> <p>Australian and international figures suggest between 25% and 33% of unintentional house fires which cause death are caused by smoking or associated material (lighters, matches) [15–17].</p> <p>The risk of invasive meningococcal disease in infants is 8 times higher where parents are smokers compared with infants whose parents do not smoke [18].</p> <p>It seems also that paternal cigarette smoking is a potential risk factor for childhood cancers [19].</p> <p>For an estimate of the costs of caring for a sick family member see Leistikow BN, The human and financial costs of smoking, 2000 [20].</p> |
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Continuing returns

1. Increased household savings, quicker transition to home buying and ownership
2. Fewer children taking up smoking and thus perpetuating health and material inequality
3. Lower household spending on medical services
4. Over the next 15 years, at least 14,000 fewer families grieving middle-aged fathers or mothers dying prematurely from heart attack or stroke
5. Fewer families losing providers at the peak of their income-earning capacity

Evidence

Consider effects on cumulative savings and ability to enter into home ownership, and consequent capital gains.

Farkas et al have demonstrated that children whose parents give up smoking are far less likely to take up smoking than children whose parents continue to smoke [21].

Collins and Lapsley estimate that expenditure by smokers and their families on additional health cares attributable to their smoking totalled \$145.3m in 1998–9 [22].

Amongst men and women less than 65 years of age, smoking causes more than 40% of all coronary heart disease deaths (45% in men; 40% in women) [17].

In 2001 alone, at least 5,400 young Australians are likely to lose a middle-aged father and 1,770 are likely to lose a middle-aged mother due to tobacco smoking. Many of the people suffering this terrible loss will be younger than 18 years of age. Calculation based on tobacco-attributable deaths in those 35 to 64 years in 1998 [13], allowing for a total fertility rate of 1.78 in 1997 [23]. A US study has recently estimated that survivor insurance costs for children who have lost a father or mother due to smoking totalled around US\$1.4b in 1994 [24].

Half of all long-term smokers will be killed by tobacco-related illness, and, of these, half will die during productive middle years, losing 20 to 25 years of life. Furthermore, families in lower socioeconomic groups feature predominantly in these statistics [25].

Maturing investments

1. Greater generation of wealth; long-term financial support for spouses; greater inheritance for children
2. Lower spending on medical services
3. Less incapacitation from macular degeneration, high-frequency hearing impairment, osteoarthritis and possibly rheumatoid arthritis, and greater enjoyment of activities reliant on sight, hearing or mobility
4. Fewer men suffering impotence
5. Over the next 30 years, at least 8,000 fewer middle aged and older parents incapacitated by stroke, and tens of thousands fewer suffering from emphysema or peripheral vascular disease

Evidence

Online brokers Charles Schwab Australia have estimated what smokers can save if they quit. A two-pack-a-week smoker would save \$873.60 a year, which, if invested over ten years with 10% interest, could turn into the tidy sum of around \$55,000. (*Personal Investor*, February 2001 p16).

In 1997-98 there were more than 142,000 hospital separations and more than 940,000 hospital patient days attributable to tobacco smoking in Australia [13].

Smoking is a major preventable risk-factor for age-related blindness [26], hearing impairment [27], osteoarthritis [28, 29] and rheumatoid arthritis [30, 31]. A meta-analysis by Ward et al of the epidemiologic literature on smoking as a risk factor for low bone mass concluded that cigarette smoking has a negative effect on bone mass at several major sites of osteoporotic fractures and these effects appear to be dose related [32]. Smoking has also recently been linked to multiple-sclerosis in women [33].

A meta-analysis by Tengs et al indicated that 40% of impotent men were current smokers compared with 28% of men in the general population [34]. Among diabetic men, erectile dysfunction is more common among smokers. Bortolotti et al found that taking into account the effect of age, the odds ratio of erectile dysfunction in comparison with never smokers was 1.4 (95% CI 1.3–1.6) for smokers and 1.5 (95% CI 1.3–1.6) for ex-smokers. Duration and intensity of the smoking habit was associated with increased risk [35]. Smoking reduces success in IVF treatments [36] and it has recently been reported that it reduces the efficacy of the anti-impotence drug, *Viagra* [37].

Among men and women less than 65 years, smoking causes more than 39% of strokes (44% in males; 39% in females) [17]. Tobacco-related chronic obstructive pulmonary disease accounted for 28,268 hospital separations and 237,136 hospital patient days in 1997–98 [13].

Significant differences in life expectancy between smokers and non-smokers

A recent Statistics Canada study which analyses data from the National Population Health Survey, found that smoking not only reduces the number of years that a person may hope to live, it also has a negative impact on their quality of life.

Of every 100 non-smoking men aged 45 in 1995, about 90 will survive to the age of 65, and 55 will still be living at the age of 80. However, of every 100 male smokers aged 45, 80 will survive to the age of 65, and fewer than 30 will still be living at the age of 80. Among women, the percentage of survivors is higher for both smokers and non-smokers. However, the consequences of tobacco use are just as evident. Among women who were aged 45 in 1995, about 70% of non-smokers will survive to the age of 80, compared with only about 40% of those who smoked.

Even at age 65, differences in life expectancy between smokers and non-smokers remain important. Almost six years of life expectancy separate men who smoke from those who do not, and the gap is 8.5 years among women. Tobacco use, therefore, has a major impact on life expectancy, eliminating close to one-quarter of the remaining years that a woman aged 45 could expect to live.



A study by Taylor et al, found that life expectancy of smokers who quite at age 35 exceeded that of continuing smokers by 6.9–8.5 years for men and 6.1–7.7 years for women. Among smokers who quit at age 65, men gained 1.4–2.0 years and women 2.7–3.2 years of life [38].

Disability-free life expectancy

This study also calculated disability-free life expectancy at various ages. Analysis shows that the negative impact of tobacco use is not limited to mortality. Tobacco use also has a negative impact on an individual's quality of life.

For example, a male smoker who was aged 45 in 1995 could expect to live another 18 years without some form of related disability. However, a male non-smoker could expect to live another 25 years, or seven years longer, without disability. Among women, non-smokers could live eight more years without disability than smokers.

In short, 95% of the additional years that a male non-smoker can expect to live over a smoker will be spent without disability. Not only will a smoker, on average, die younger than a non-smoker, as other studies have already shown, but the smoker will also be more likely to be limited or dependent in his or her activities of daily living at a younger age than a non-smoker.

Non-smokers can expect not only to live longer than smokers, and to live longer without disability, but also to spend a smaller percentage of their life with a disability. The lower incidence of disability among the non-smoking population, combined with their increased chance of regaining their independence, means that they will spend a larger proportion of their total life expectancy without disability. This finding is especially remarkable given that the risk of acquiring a disability increases with age and non-smokers enjoy a longer life than smokers.

In 1997-98 there were almost 27,000 hospital separations and over 187,000 hospital patient days attributable to smoking-caused cancers in Australia [13].

Recent evidence suggests that exposure to tobacco smoke (through either active or passive smoking) during periods when breast tissue is developing may increase the risk of developing breast cancer in later life [39].

6. At least 10,000 fewer people dying from cancers of the lung, pharynx, larynx, lips, tongue, stomach, cervix, colon, anus, penis
7. Possible reductions in young women developing breast cancer in the future

II. Benefits to Australian businesses

Early gains

1. Reduced property, motor and Workcover insurance premium costs (fewer fires, fewer back injury and passive-smoking related claims)
2. Reduced risk of litigation by employees suffering discrimination or illness due to failure of employers to provide smoke-free workplaces

Evidence

Stutts and his colleagues have estimated that, in the US, smoking is a significant cause of accidents attributable to driver distraction, almost two thirds as many as are caused by use of mobile phones [40].

Numerous employees who have had their health damaged by passive smoking in the workplace have received compensation payments, mostly, to date, in out-of-court settlements [41]. A recent lawsuit saw a registered Club in NSW sued for more than \$450,000 in damages by a non-smoking barmaid who contracted throat cancer.

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| <p>3. More goods and services (including many more employment generating services) purchased by those no longer buying tobacco</p> | <p>A falling demand for tobacco products results in money that was once spent on cigarettes being spent on other goods and services, generating new jobs, potentially more than offsetting jobs lost from the tobacco industry</p> |
| <p>4. A reduction in the estimated \$1.5b in absenteeism costs attributable to smoking: fewer smoking breaks; less time off work due to serious smoking-related diseases; less sick leave due to fewer respiratory infections in both smokers and non-smoking colleagues; less severe/faster healing back injuries</p> | <p>Robbins et al have found that among male US Army personnel who were smokers, 7.5% of hospitalisations and 14% of lost workdays were due to smoking [42].</p> <p>Businesses incur greater costs from increased absenteeism, decreased productivity of employees smoking in non-break periods, and increased life insurance premiums in smokers compared to non-smokers. This was estimated at \$75 per smoking employee per year in Canada [43].</p> <p>In Australia the probability of a male smoker being absent from work is estimated to be 66% greater than that for a male who has never smoked. For females, the corresponding figure is just 23% [44].</p> <p>Based on a study of Telecom employees, Hocking et al have estimated that smoking-related diseases would be costing Australian businesses more than \$1.5 b per annum [45].</p> <p>Workplace productivity is increased and absenteeism is decreased among former smokers as compared to current smokers [46].</p> |

Continuing returns

1. Avoidance of lost expertise and performance due to premature death, disease and disability

Evidence

Consider for example the loss to journalism, political accountability and public interest resulting from the recent death of prominent journalist Paul Lyneham.

Maturing investments

1. More goods and services purchased by people and families of people who do not die early because they quit smoking

50% of all long-term smokers die prematurely, half in middle age.

When people quit, their excess risk of a heart attack is cut in half **in just one year** [47].

Consider the potential additional lifetime expenditure by one quarter of Australia's 3 million smokers who quit who would otherwise die in their 50s or early sixties due to smoking.



III. Benefits to Federal government

Early gains

1. Reductions in need for pharmacological treatments for elevated blood fats and other cardiovascular disease (CVD), and consequent reductions in PBS expenditure

Statins (drugs to treat elevated blood fats) are the biggest single contributing cost to Australia's Pharmaceutical Benefits Scheme, and the biggest contributor to the increase since the previous financial year [48].

Ebrahim and colleagues in their review on statins concluded that if smokers were assigned to smoking cessation counselling and then further screening, then more than half of those who quit would need no further treatment. Total treatments costs could be reduced from 357m to only 42m pounds [49].

9350 UK pounds per life saved compared with 543 pounds for smoking cessation.

2. Increased taxes paid on profits by companies selling goods and services consumed by smokers no longer purchasing tobacco products (offsetting reduced tobacco taxes paid by smokers)

Continuing returns

1. Improved management and likely reductions of cost of pharmaceutical subsidies and medical treatment of asthma and diabetes and a range of other chronic diseases made worse by smoking

Prospective data from the US Physicians' Health Study support the hypothesis that cigarette smoking is an independent and modifiable determinant of type 2 diabetes mellitus [50], and that both diabetes and smoking are risk factors for cardiovascular disease [51]. Smoking accelerates the onset of diabetes, and quitting reduces delays onset and reduces severity [52].

In 1997-98 there were more than 37,000 hospital separations and more than 158,100 hospital patient days for ischaemic heart disease attributable to smoking (Ridolfo and Stevenson, 2001, p.106-109) [13].

Tobacco related chronic obstructive pulmonary disease accounted for 28,268 hospital separations and 237,136 hospital patient days in 1997-98 (Ridolfo and Stevenson, 2001, p. 106-109) [13].

Maturing Investments

1. Increased income taxes paid by smokers not dying early, and increased taxes on profits of companies producing products purchased by smokers who do not die early (offsetting increased pensions)

Evidence

50% of all long term smokers die prematurely, half in middle age. When people quit, their excess risk of a heart attack is cut in half in just one year [47].

IV. Benefits to State governments

Early gains

1. Shorter hospital waiting lists
2. Note that GST on tobacco products paid instead on purchase of other goods and services

In 1997-98 there were more than 142,000 hospital separations and more than 940,000 hospital patient days attributable to tobacco smoking in Australia [13].

Maturing Investments

1. Increased GST paid by those who live longer and consume more goods and services

V. Benefits to health funders and insurers (Federal and State and Territory, private and public)

Early gains

1. Immediate or early reductions in costs of
 - GP consultations for respiratory illness
 - peri-natal care, up to 20% per annum
 - treatment for fatal and non-fatal heart attacks, stroke and peripheral vascular disease starting as early as one year after reductions in smoking prevalence, totalling almost \$100m per annum

Hoffman et al found that smoking was responsible for 5.7% of respiratory illness-related physician visits in 1996 [53].

Smoking cessation is one of the most cost-effective but least used obstetric interventions [54].

The costs of treatment of cardiovascular disease (CVD) in Australia totalled more than \$3.7b in 1993–94. [48] CVD is the biggest single contributor to health care costs in Australia [55].

Table A4.1. Net present value of savings in treatment of CVD 1–15 years after achievement of various target prevalence levels.

Discount rates	19%	17%	15%	13%	11%
0%	\$279m	\$607m	\$934m	\$1.2b	\$1.6b
2.5%	\$182m	\$396m	\$610m	\$824m	\$1b
5%	\$121m	\$263m	\$404m	\$547m	\$689m
7.5%	\$82m	\$177m	\$272m	\$369m	\$464m
10%	\$56m	\$121m	\$187m	\$252m	\$317m

Source: Carter and Scollo, 2001

Lightwood and Glantz have demonstrated the short-term economic and health benefits of smoking cessation from a reduction in myocardial infarction and stroke. [56]

Naidoo et al. have modelled the short term consequences of smoking cessation in England on the hospitalisation rates for acute myocardial infarction and stroke. [57]

- emergency care for asthma sufferers
- treatment of meningitis and influenza, both among smokers and, through reduced opportunities for infection, among non-smokers



Continuing returns

1. Reduced costs due to reductions in the higher post-operative narcotic requirements, additional complications and slower bone and wound healing suffered by smokers

Evidence

Smokers are more likely to have perioperative events, particularly of a respiratory nature, when compared to non-smokers undergoing general anaesthesia (Swilck et al 1997). See for instance:

- Woodside, J.J., *Female smokers have increased postoperative narcotic requirements*. J Addict Dis, 2000. 19(4): p. 1-10 [58].
- Padubidri AN, et al. Complications of postmastectomy breast reconstructions in smokers, ex-smokers, and nonsmokers, Plast Reconstr Surg. 2001 Feb;107(2):342-9 [59].
- Adams, C. I.; Keating, J. F.; Court-Brown, C. M. Cigarette Smoking and Open Tibial Fractures. Injury-International Journal of the Care of the Injured 32 (1): 61-65, January 2001 [60].
- Moller et al, Postoperative intensive care admittance: The role of tobacco smoking [61].
- Tang et al. Smoking Status and Body Size Increase Carbon Monoxide Concentrations in the Breathing Circuit During Low-Flow Anesthesia, Anesth Analg. 2001 Feb;92(2):542-547 [62].

2. Lower treatment costs for cervical cancer

Researchers studying cervical intraepithelial neoplasia (CIN), a predictor of cervical cancer, have found that smoking status is significantly associated with failure of CIN treatment. Smokers appear to require longer more intensive follow-up [63].

Maturing Investments

1. Reduced costs for treatment of CVD, chronic obstructive lung disease and cancers of the lung, pharynx, larynx, lips, tongue, stomach, cervix, colon, anus, penis, totalling more than \$1.15b over the next 30 years

Russell has analysed hospital admissions data from the NHANES I Epidemiologic Follow-Up Study (NHEFS), a longitudinal study of a representative sample of U.S. adults. Projections based on this data showed that eliminating smoking would reduce annual rates of all-cause hospitalisation among older adults by 8.9% 20 years after baseline. When only 10% of the population at risk stopped smoking or became physically active, a percentage that reflects the effectiveness of current interventions, annual hospitalisation rates at 20 years fell by 0.9% [64].

Treatment of cancer in Australia totalled more than \$1.9b in 1993-94 [65]. Smoking is the single biggest risk avoidable risk factor for cancer.

Compared with never smokers, male smokers of more than 20 cigarettes/day tend to be hospitalised more frequently (odds ratio (OR) 1.31; 95% confidence limits (CL) 0.89-1.93), and make greater use of hospital emergencies (OR 1.51; 95%CL 1.13-2.01; P < 0.01). Compared with never smokers, ex-smokers of both sexes make greater use of health care services (P < 0.01 for most services. Smokers and ex-smokers make greater use of health care services. Control of smoking will reduce the use of such services and the ensuing human and economic costs [66].

Table A4.2 Net present value of savings in treatment of cancer, chronic obstructive pulmonary disease and CVD, 1 to 30 years after achievement of various target prevalence levels.

Discount rates	19%	17%	15%	13%	11%
0%	\$650m	\$1.4b	\$2.16b	\$2.9b	\$3.7b
2.5%	\$350m	\$750m	\$1.15b	\$1.6m	\$2.0b
5%	\$200m	\$420m	\$640m	\$870m	\$1.1b
7.5%	\$120m	\$240m	\$380m	\$510m	\$640m
10%	\$70m	\$150m	\$230m	\$300m	\$390m

Source: Carter and Scollo, 2001

Note that these estimates relate only to reductions in the cost of treating the three major diseases caused by smoking. Not included are the costs associated with treatment of at least a dozen more conditions made worse by smoking.

The reductions in these health care costs are great and would result in substantial savings even taking into account the cost of implementing this proposal, and even assuming there would be no further reductions in smoking prevalence beyond the level achieved in 2006.

VI. Benefits to the community

Early gains

1. Increased public enjoyment of smoke free facilities and of public recreational and natural resources due to reduced litter and bushfires

Evidence

Quit Victoria studies show that 72% of people are slightly bothered or bothered a lot by other people's smoke. More than 50% of people try to avoid places that are smoky, in particular, bars/nightclubs/pubs, restaurants/cafes and the casino [67]. Overseas studies have also shown similar levels of avoidance of smoky venues [68] and a perceived expectation of increased enjoyment and patronage after bans on smoking [69].

Cigarette butts are the most common form of litter in Australia, with over 32 billion butts discarded in Australia each year – if placed end to end they would extend 640 000 kilometres and circle the planet 16 times. This is a serious environmental issue as the butts take up to 15 years to break down [70].

Continuing returns

2. Reduced distress and disruption for individuals and institutions who lose colleagues and mentors who die suddenly in middle age



Maturing investments

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|---|---|
| 3. Increased years of healthy independent life – shorter lifetime periods of disease and disability; reduced burdens on family members and other volunteer carers | Smokers generally accept that quitting would extend their life, but some believe that this would simply increase the number of years that they would live with significant disability. Nusselder et al [71] and more recently Brønnum-Hansen and Juel [72] have demonstrated, however, that quitting smoking not only extends life, but also results in an increase in the number of years without disability. That is, non-smokers on average experience a shorter number of years with disability [71]. |
| 4. Child minding contributions and volunteering activities of retirees and pensioners who do not die prematurely. | Estimated by Collins and Lapsley (2002) to total \$6,880 m in 1998–9. [22] |

VII. Benefits to regional Australia

Early gains

1. Adjustment assistance to those families currently dependent on sales of tobacco crops
2. Increased rural tourism spending by people no longer smoking – weekends away, holidays

Continuing returns

1. Improvements in demand for rural commodities used (raw materials etc) in products purchased by people no longer buying tobacco products

Maturing investments

1. Reduced pressures on health services particularly in rural areas.
2. Significant reductions in premature deaths and disability among rural Australians among whom rates of smoking and of CVD and cancer incidence and mortality are significantly higher

Evidence

About one in three people living in remote areas in Australia report smoking, which is significantly higher than in capital cities or rural areas [73]. Death rates from CVD were higher in rural areas than in urban areas in 1996-98 with male death rates from coronary heart disease slightly higher than urban areas and heart failure death rates higher for both males and females in rural areas [74].

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