

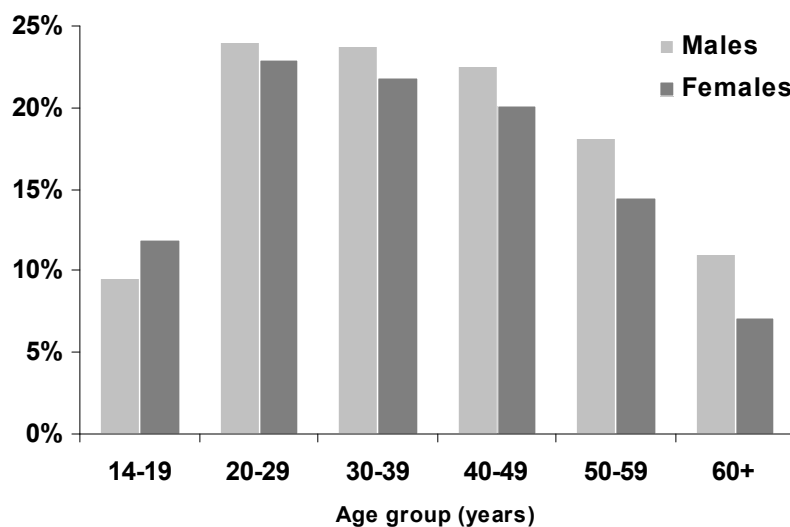
Health Promotion Strategic Planning: Tobacco Expert Working Group Background Paper

1. Rationale for Tobacco Control

1.1 Smoking Prevalence

The most recent estimate for the prevalence of smoking in Australian suggests that 17.4% aged 14 years and over smoke tobacco on a daily basis, including 18.6% of males and 16.3% of females (Australian Institute of Health and Welfare, 2005a). These are the lowest smoking prevalence figures since records began in 1945 and also the lowest prevalence rate of any country within the Organisation for Economic Co-operation and Development (OECD). The highest prevalence of smoking is found among 20–29 year olds, including 24.0% of males and 22.9% of females (Australian Institute of Health and Welfare, 2005a).

Figure 1: Australian Smoking Prevalence Rates by Sex and Age-group, 2004



West Australians aged 14 years and over have the lowest smoking prevalence rate of any state or territory in Australia at 15.5% (17% of males and 14% of females). There remain 300,000 West Australians who continue to smoke daily or occasionally (Australian Institute of Health and Welfare, 2005b). Approximately 9,200 students aged 12–15 years also smoked at least once per week (Quit WA, Department of Health, Centre for Behavioural Research in Cancer, & The Cancer Council Victoria, 2004).

1.2 Health Problems Associated with Smoking

Tobacco smoking harms almost every organ in the body. It is a major contributing factor for coronary heart disease, stroke, chronic obstructive pulmonary disease, respiratory disease, and a variety of cancers, including lung, laryngeal, oral cavity and pharynx, oesophagus, stomach, cervical, kidney, bladder, breast, pancreas and colon (U.S. Department of Health and Human Services, 2004).

Tobacco smoking causes more premature death and illness in Australia than either physical inactivity or high blood pressure, and of all health risk factors, is responsible for the greatest disease burden: around 12% of the total burden in males and 7% in females (Australian Institute of Health and Welfare, 2005a). It is estimated to account for 17% of all new cases of cancer in males and 8% of new cases in females (Mathers, Vos, & Stevenson, 1999).

Half of all long-term smokers will die prematurely due to their habit, and half of these in middle age (Peto, 1994). Smokers are three-times more likely than non-smokers to die in middle age (Doll, Peto, Boreham, & Sutherland, 2004) and are four-times more likely than non-smokers to die of a heart attack before the age of forty (Mahonen et al., 2004). Even light smokers who only consume between one to four cigarettes per day triple their long-term risk of dying of cardiovascular disease or lung cancer (Bjartveit & Tverdal, 2005).

Long-term smokers are also at elevated risk of living with debilitating disease—on average they suffer from a reduced quality of life for a greater number of years than non-smokers resulting from chronic obstructive lung disease and stroke, loss of vision, impotence and infertility (Bronnum-Hansen & Juel, 2001; Tengs & Osgood, 2001; Trummer, Habermann, Haas, & Pummer, 2002; World Health Organisation, 2005).

There is clear evidence to suggest that exposure to second-hand smoke causes lung cancer and cardiovascular disease in non-smokers (U.S. Department of Health and Human Services, 2006). Adult exposure to second-hand smoke results in immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer over the longer term.

Non-smokers exposed to second-hand smoke in their workplace are at a 50–60% increased risk of cardiovascular disease compared to non-smokers working in smoke-free environments (U.S. Department of Health and Human Services, 2006; Whincup et al., 2004). Annually in Australia, exposure to second-hand smoke is estimated to cause 46,500 cases of asthma and 16,300 cases of lower respiratory tract illness in children (National Health and Medical Research Council, 1997).

The proportion of Australian women who smoke during pregnancy and give birth to low birth weight children is over twice that of mothers who do not smoke during pregnancy (10.4% vs. 5.1%). Premature births (before 37 weeks gestation) are also 60% more likely in women who smoke during pregnancy compared to those that do not (Laws, Grayson, & Sullivan, 2006).

Ectopic pregnancy and miscarriage are also associated with smoking during pregnancy. Children born to mothers who smoke are also at greater risk of Sudden Infant Death Syndrome (SIDS), respiratory problems such as onset and worsening of asthma, decreased lung function, croup, bronchitis and pneumonia, middle ear infections, and shorter stature (Laws et al., 2006; National Health and Medical Research Council, 1997).

1.3 Tobacco Mortality Burden

In Australia, tobacco smoking is the second leading risk factor for burden of disease at 7.9% (behind overweight at 8.6%), killing more than 15,000 people each year (Australian Institute of Health and Welfare, 2006a).

Between 1983 and 2001 an estimated 29,044 deaths in Western Australia were attributable to tobacco (Unwin, Codde, & Bartu, 2003). The declining smoking prevalence rate in the State has been credited with a marked reduction in deaths from lung cancer, cardiovascular disease and respiratory diseases (Australian Institute of Health and Welfare, 2006b; Unwin et al., 2003).

Between 1998 and 2002 smoking was the single largest preventable cause of death in Western Australia, with 7,739 premature deaths attributed to smoking, averaging 1,548 deaths per year and accounting for 14% of all deaths (Holman, Codde, & Unwin, 2004). Five conditions accounted for 85% of these deaths, including:

- lung cancer (30%);
- ischaemic heart disease (23%);
- chronic obstructive pulmonary disease (19%);
- stroke (8%); and
- atherosclerosis (5%).

Males lost an average of 9.1 Person Years of Life Lost (PYLL) per 1000 compared to 3.4 PYLL per 1000 amongst females. Indigenous people also lost twice as many years per 1000 population as non-Indigenous people (Unwin et al., 2003).

1.4 Health Care and Societal Costs

In Western Australia smoking is currently responsible for over 14,000 hospital admissions and more than 84,000 bed days per year, equating to approximately \$60 million in hospitalisation costs (Unwin et al., 2003). This cost is relatively minor in comparison to the estimated societal costs: in 1998 smoking cost Western Australia approximately \$1.6 billion per year, when taking into account: loss of life; reduced quality of life; loss of productivity in the workforce and household sector; loss due to smoking-caused fires; as well as hospitalisation costs (Collins & Lapsley, 2004). This would be equivalent to approximately \$1.97 billion in 2006.

2. Groups at High Risk

1.5 Australians of Socioeconomic Disadvantage

Australians from the lowest socioeconomic status (SES) quintile are over twice as likely to smoke on a daily basis compared to those from the highest SES quintile. In the lowest SES quintile 33% of men and 28% of women smoke, compared to 16% of men and 11% of women in the highest quintile (Australian Bureau of Statistics, 2006c). Reductions in smoking prevalence among lower SES Australians has closely mirrored reductions in higher SES strata; the main differences in prevalence appear to be the result of higher smoking commencement rates for those in the lower SES strata (Borland & Bamford, 2004).

Smoking is the largest single contributor to the disparity in health status between more and less advantaged groups in Australia (National Public Health Partnership, 2001). Smoking prevalence reflects a strong social gradient, increasing as level of SES disadvantage increases (Turrell, Oldenburg, McGuffog, & Dent, 1999). Income, education level and occupation type (e.g. blue vs. white collar) are all markers of disparities in smoking prevalence (Turrell, Stanley, de Looper, & Oldenburg, 2006).

A pronounced social gradient is also evident in tobacco-related morbidity and mortality (Australian Institute of Health and Welfare, 2002; Turrell et al., 2006). Tobacco use explains much of the higher mortality rates from coronary heart disease, stroke, and chronic respiratory conditions observed among lower socioeconomic groups (Australian Institute of Health and Welfare, 2002). Households in the lowest quintile of social advantage bear the greatest burden of illness and costs due to tobacco (Ministerial Council on Drug Strategy, 2004).

Economically, smoking impacts disproportionately on those in the lowest SES quintile, who spend an average of 18.6% of their income on tobacco compared to an average of only 3.2% of incomes from the highest quintile of smoking households (Junor, Collins, & Lapsley, 2004).

1.6 Youth

The 2002 Australian School Students Alcohol and Drug (ASSAD) survey suggests that 44% of West Australian students aged 12–17 years had smoked at least part of a cigarette in their lifetime, equivalent to 64,100 individuals. In addition, 26% had smoked at least part of a cigarette in the last year, 14% in the last month and 10% in the last week. In 2002 smoking prevalence in secondary school students was observed to fall for the first time since 1987 (Quit WA et al., 2004).

More than 90% of Australian adult smokers begin as teenagers: on average, adult male smokers have their first cigarette at the age of 15.2 years and females at 16.5 years. The younger people are when they start smoking, the more likely they are to smoke heavily, become more dependent on nicotine and to be at increased risk of illness or death caused by smoking (McDermott, Russell, & Dobson, 2002; White & Hayman, 2004).

Favourable parental attitudes towards tobacco and ease of access to tobacco are two of the most important predictors of adolescent smoking use and uptake. Other important risk factors are peer influences, family functioning and school

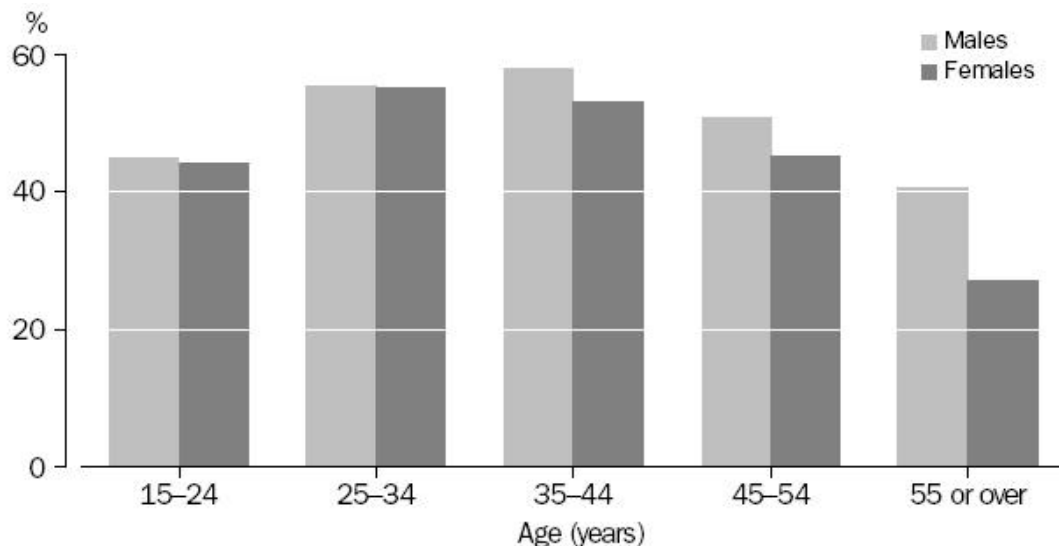
performance. Youth with multiple risk factors and few protective factors are particularly vulnerable (Derzon & Lipsey, 1999).

In terms of involuntary exposure to second-hand tobacco smoke, 37% of Australian children aged 0–14 years live under the same roof as at least one regular adult smoker including 10% who live in households where there is at least one regular smoker who smokes indoors (Australian Bureau of Statistics, 2006c).

1.7 Australian Indigenous People

Indigenous Australians are more than twice as likely as non-indigenous Australians to smoke (Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2005). Various estimates suggest that between 48–52% of Indigenous people aged 15 and over are daily smokers (NHS, 2001; NDSHS, 2004; R36,R11). Similar proportions of men (51%) and women (47%) are daily smokers (ABS, 2006; R17;R36). As can be seen in Figure 2, smoking is most prevalent in the 25–44 year age-group.

Figure 2: Daily smokers, Indigenous persons aged 15 years and over, 2002



Source: ABS (2006) National Aboriginal and Torres Strait Islander Social Survey

Indigenous Australians do not appear to be enjoying the downward trend in smoking prevalence observed within the wider community. Smoking prevalence appears to have remained stable for Indigenous Australians at around 50% since at least 1994 (Australian Bureau of Statistics, 2006b; Australian Bureau of Statistics & Australian Institute of Health and Welfare, 2005). Indigenous people also appear to have few positive role models for tobacco control—a 2002 survey suggested that 59% of NSW Aboriginal Health Workers smoke (Mark, McLeod, Booker, & Ardler, 2005). Lack of knowledge of the negative health effects of smoking does not appear to be a major factor in the higher prevalence of smoking (Briggs, Lindorff, & Ivers, 2003).

1.8 Pregnant Women

Seventeen-percent of Australian women who gave birth in 2003 continued to smoke throughout their pregnancy (Laws et al., 2006). This is a substantial reduction from the estimated 30% of women who smoked during pregnancy during the mid-1980s but is still cause for concern (Laws et al., 2006).

Teenage mothers are nearly four-times more likely to report smoking during pregnancy compared to mothers aged 35 and over (42.1% vs. 10.9%). Indigenous mothers are also over three-times more likely to report smoking during pregnancy than non-Indigenous mothers (52.2% vs. 15.8%) (Laws et al., 2006).

Falling pregnant is a common impetus for women to quit smoking. However half of mothers who quit during pregnancy relapse within six months of giving birth, and 70% relapse within twelve months (McDermott et al., 2002).

A major review of 64 trials concluded that smoking cessation programs in pregnancy reduced significantly the number of women who continue to smoke, and reduced low birth-weight and premature births. To date, smoking relapse prevention interventions for mothers have been largely unsuccessful (Lumley, Oliver, Chamberlain, & Oakley, 2004).

1.9 Regional and Remote West Australians

Regional and Remote Western Australia represents just under one-quarter (22.6%) of the State's population. Its adult smoking prevalence is higher for both males and females (24.7% and 21.4%) than the State averages (22.8% and 17.8%) (Codde, 2006).

Geographical remoteness is a strong predictor of the prevalence of smoking, with 33% of adults living in Remote Australia being current smokers, compared to 28% in Outer Regional Australia, 26% in Inner Regional Australia and 22% in major cities (Australian Bureau of Statistics, 2006c). Pregnant women in Remote Australia are also more than twice as likely to smoke during pregnancy than those from major cities (38% vs. 14%) (Laws et al., 2006).

1.10 Australians with Mental Illnesses

West Australians diagnosed with a mental illness are nearly twice as likely to smoke as the general population. It was estimated in 1997–98 that 43% of those diagnosed with a mental illness were current smokers compared to 24% of the general population, contributing to higher mortality rates from cancer, cardiovascular disease, and respiratory diseases (Coghlan, Lawrence, Holman, & Jablensky, 2001). People with psychotic disorders, such as schizophrenia, have an even greater smoking prevalence rate at 60% (Jorm, 1999).

1.11 Prison Populations

In 2004, 84% of the West Australian adult prisoners and 68% of juveniles identified themselves as smokers (Total Offender Management System, 2005). Most risk factors associated with a higher prevalence of smoking, (e.g., socioeconomic disadvantage, low educational attainment, unemployment, social isolation, interpersonal conflicts, mental illness, substance abuse and being Aboriginal) are all

commonly associated with prison populations, making prisoners particularly vulnerable to smoking (Butler & Miller, 2003; Olson, 2001). Smoking is also currently facilitated within the prison system by the Canteen Operations Guidelines that stipulate consumables (including tobacco) can only be sold at three-percent above wholesale price, effectively providing prison populations with discounted tobacco. Smoking is also currently permitted indoors and exposes non-smoking inmates and prison staff to second-hand smoke.

1.12 Culturally And Linguistically Diverse (CALD) Australians

Nearly one-third (29%) of West Australians were born overseas, contributing to a culturally and linguistically diverse population (Australian Bureau of Statistics, 2006a). As a whole, only 12% of Australians from a non-English speaking background smoke on a daily basis (Australian Institute of Health and Welfare, 2005a). However smoking varies widely in different Australian cultural communities. Male smoking is significantly higher than female smoking in many, reflecting trends in their country of origin. For example, in 1998 when 27% of Australian-born men and 23% of Australian-born women were regular smokers, surveys in Sydney suggested 37% of Vietnamese-born men versus 3% of Vietnamese-born women smoked, and 31% of Greek-born men versus 10% of Greek-born women smoked (Commonwealth of Australia, 1999).

3. Tobacco Control Achievements To Date

1.13 History of Tobacco Control in Western Australia

Tobacco control in Western Australia has a 35 year pedigree, featuring a long succession of hard-fought ‘mini’ victories achieved after sustained political lobbying and opposed at every step by the tobacco industry. The list of victories began in the 1970s with the health warning “Smoking is a health hazard” becoming compulsory on cigarette packets nationwide in 1972, followed in 1974 by trains, buses and ferries in WA becoming smoke-free, and direct cigarette advertising being banned on television and radio in 1975.

In the 1982 the Heart Foundation launched “Give it away for a day” followed by the State Government launching the first Quit campaigns in 1983. Smoking became prohibited on domestic aircraft nationwide in 1986, stronger health warning labels were introduced to cigarette packs in 1987, and the WA Public Service became a smoke-free workplace in 1989.

By 1990 Western Australia was recognised as a world leader in tobacco control and in that year Perth hosted the World Tobacco Control conference. The Western Australian *Tobacco Control Act 1990* came into effect in 1991. The legislation established *Healthway* to allow for the smooth phase-out of tobacco sponsorship of sporting and cultural events. The legislation also ensured remaining forms of direct tobacco advertising were banned in the mass media including on billboards, in newspapers and in magazines. The distribution of free samples of cigarettes was also banned, and point-of-sale advertising became restricted. In 1991 WA schools also became smoke-free and in 1992 smoking became prohibited in taxis. After the introduction of the *Tobacco Control Act 1990* tobacco control suffered a five-year period of relative government complacency heralding a halt in the downward trend of smoking prevalence.

By 1996 this fact was recognised and the *Occupational Safety and Health Regulations* were introduced to prohibit smoking in all enclosed workplaces. Nicotine Replacement Therapy (NRT) was removed from the prescription list and became available over-the-counter in 1997, associated with a large amount of advertising. The National Tobacco Campaign was also launched in 1997 and introduced a new series of hard-hitting and effective Quit advertisements that ran until 2003.

In 1999 smoking was banned in enclosed public places where food is served followed by an eventual smoking ban indoors at hotels and nightclubs in 2006. In 2006 graphic health warnings were also introduced nationwide on cigarette packs. The *Tobacco Products Control Act 2006* was also passed, heralding a licensing system for tobacco retailers and wholesalers to enable easier enforcement of age and advertising restrictions by the Department of Health. Further curtailment of point-of-sale advertising and a ban on the manufacture or selling of smokeless tobacco were also legislated as part of the Act.

1.14 Savings Realised by Tobacco Control

The \$176 million expended by Australian governments on tobacco control campaigns since the 1970s is estimated to have resulted in direct government savings of \$344 million to date. The indirect savings associated with avoided deaths and related declines in illness and disability due to a reduction in tobacco consumption are estimated to be approximately \$8.6 billion. For this reason, tobacco control has been described as a 'blue-chip investment' returning a direct saving of \$2 for every dollar expended, and indirectly as much as \$50 per dollar expended (Applied Economics, 2003).

In Australia in 1998 it was estimated that 17,400 premature deaths had been averted in that year alone from reduced tobacco consumption since the 1970s onward. This included 6,900 fewer deaths from coronary heart disease, 4,000 fewer deaths from lung cancer, 3,600 fewer deaths from chronic obstructive pulmonary disease and bronchitis, and 2,900 deaths from strokes and other cancers averted. The societal gains in 1998 from the longevity gains, improved health status gains and health care cost reductions was valued at \$12.3 billion (Applied Economics, 2003).

1.15 Future Potential Savings

If a reduction in smoking prevalence throughout Australia was achieved of one-percent per annum over a five-year period, it would result in approximately 4,000 less acute myocardial infarctions and stroke hospitalisations, saving \$61.6 million (Hurley, 2005).

In 2004 it was estimated that if Western Australia had reduced the prevalence of smoking to 15% by 2010 then the social benefits would equate to \$370 million dollars (Collins & Lapsley, 2004). Given that this target has almost been reached by 2006, these benefits are likely to be realised all the sooner.

If Western Australia was to achieve a smoking prevalence of 10% by the year 2010, it has been calculated that 1,290 premature deaths would be averted, 20,258 hospital admissions saved, \$83.7 million saved in health care costs, and \$733 million gained in social benefits (Collins & Lapsley, 2004).

4. Current Tobacco Control Activity

1.16 Current Tobacco Control Legislation

The West Australian *Tobacco Products Control Act 2006* prohibits:

- ◆ the sale of tobacco products without a licence;
- ◆ the sale of tobacco products to, or purchase on behalf of anyone under the age of 18 years;
- ◆ the sale of tobacco by hawking (mobile vendors such as Jiffy Vans still allowed);
- ◆ the distribution of free samples of tobacco, and give-away competitions associated with tobacco products;
- ◆ the manufacture or selling of smokeless tobacco, other than nasal snuff;
- ◆ tobacco advertisements displayed or broadcast in public places;
- ◆ sponsorships related to the promotion of tobacco products, smoking, or a tobacco company;
- ◆ point-of-sale displays in a retail outlet greater than one square metre in area;
- ◆ vending machines located anywhere other than licensed premises or mine amenity canteens; and
- ◆ sale of confectionary and other products designed to resemble tobacco products.

The *Occupational Safety and Health Regulations 1996* prohibit smoking in enclosed workplaces and the *Tobacco Products Control Regulations 2006* prohibit smoking in all forms of public transport and in enclosed public places such as shopping centres, theatres, restaurants and licensed venues, and non-legislative state Government policy prohibits smoking within five metres of a State Government building entrance and ten metres from air-conditioning vents.

The *Commonwealth Tobacco Advertising Prohibition Act 1992* that applies to Western Australia prohibits all advertising of tobacco via publishing, broadcasts or sponsorship, requires mandatory graphic health warnings on all retail packages of tobacco products various other Commonwealth Legislation prohibits smoking on airlines, interstate coaches and trains.

1.17 A Snapshot of Current Tobacco Control Activity in WA

1.17.1 Policy

The Tobacco Control Branch (TCB) (formerly known as Quit WA) of the Department of Health (DoH) is responsible for:

- State-wide tobacco control policy development, coordination and strategic planning;
- Administration and monitoring of legislative tobacco control measures;
- Monitoring and collating evaluation of the performance of tobacco control programs;

- Aligning the State health strategic plan and the tobacco control workforce plan to build capacity with key stakeholders and health professionals regarding tobacco control interventions; and
- Coordination of the Regional Tobacco Control Network, involving capacity building of DOH health promotion officers state-wide via skills training and information sharing around current, new and emerging tobacco control issues.

1.17.2 Advocacy

A number of non-government organisations have an active roll in tobacco control advocacy within the State. The major advocates are the Australian Council on Smoking and Health (ACOSH), The Cancer Council WA, the National Heart Foundation WA, and the Australian Medical Association. These organisations make opportunistic media commentary on topical and emerging health issues related to smoking, thereby building constituent support and involvement in advocacy on tobacco issues.

1.17.3 Public Education Campaigns

The *Make Smoking History* campaign is currently the State's main mass-media campaign, targeting cessation messages to 18–54 year old smokers. A minimum of two major mass-media advertising waves are broadcast per year. Television advertising constitutes the mainstay of the campaign, with advertisements being developed locally and also sourced from other states. The television advertising is frequently complemented with radio and billboard advertising. The Cancer Council Western Australia runs the campaign, supported by Healthway and the DoH.

The *Smarter Than Smoking* project also runs a mass-media campaign within the State aimed at reducing smoking prevalence among 10–15 year-olds and to educate them about the dangers of smoking. The project involves television advertising and cultural activity sponsorships, complemented by school-based education programs and resources, youth-orientated publications, a website and merchandise. The National Heart Foundation WA runs the project supported by Healthway.

1.17.4 Cessation Activities

A number of services to assist smokers to quit are provided throughout the State, including:

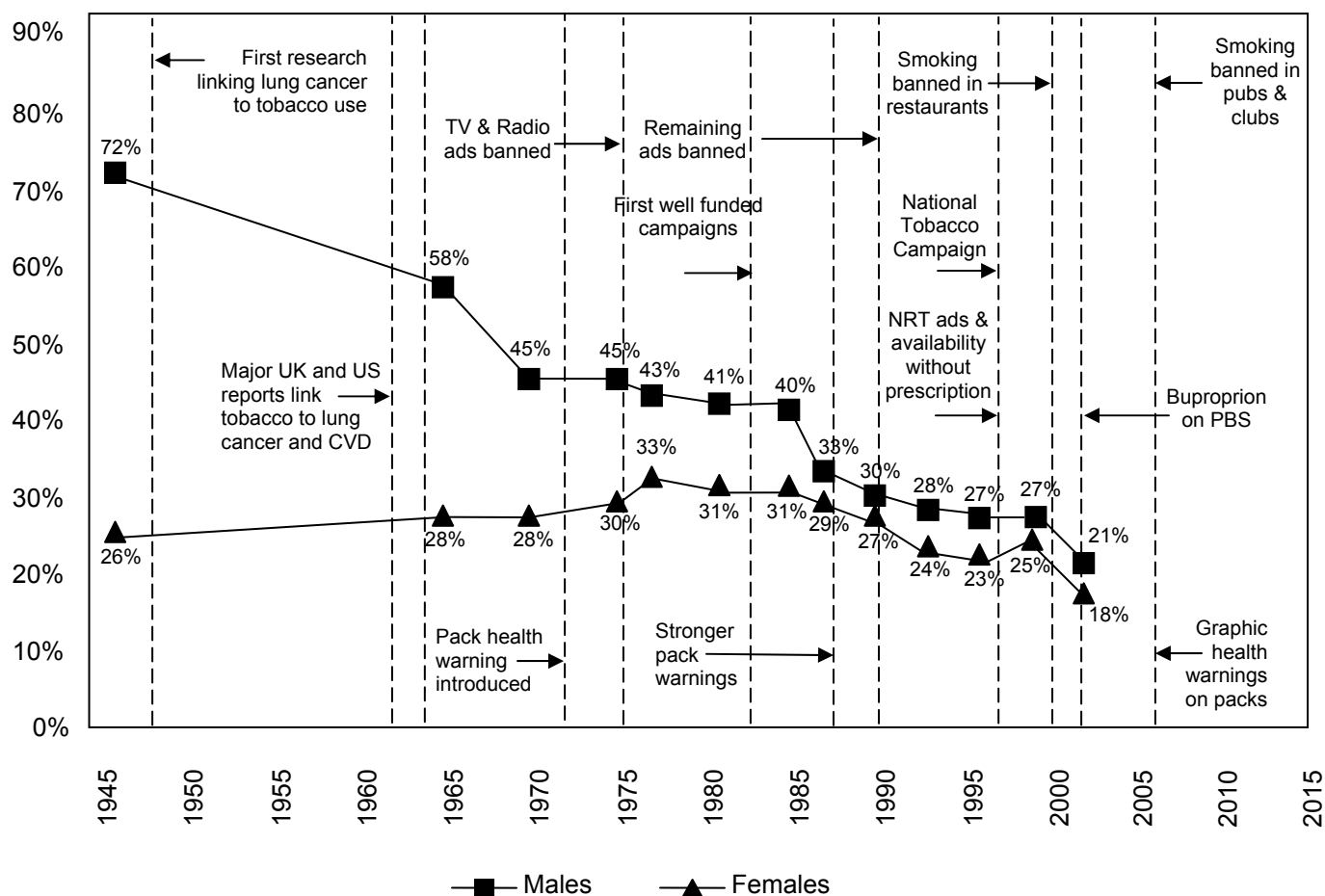
- the *Quitline* smoking cessation telephone counselling service, complemented by an online cessation program, online general practitioner education and production and distribution of cessation self help material available in 22 languages, coordinated and funded by the TCB;
- The *Fresh Start* program provided by The Cancer Council WA that offers eight-week group-support cessation courses for smokers. The program also provides facilitator training to allow for wider dissemination of the *Fresh Start* course throughout the State, and brief intervention training for a range of health professionals and related workers;

- The *Say No To Smokes* project that aims to raise awareness among Indigenous people of the health effects of smoking and supports the introduction of community programs that will assist in reducing the level of smoking. The project provides a kit containing fact sheets, booklets, pamphlets, posters, and other resources designed to inform Indigenous people about the risks of smoking to health, relationships, and family; and
- The *Newborns Asthma and Parental Smoking* (NAPS) Project is targeted at smoking cessation for parents, and is administered by the Asthma Foundation WA.

5. Evidence for Effective Tobacco Control Interventions

The impact of major tobacco control interventions is mapped against Australian smoking prevalence rates in Figure 3 below.

Figure 3: History of Australian Tobacco Smoking Prevalence Rates and Major Tobacco Control Measures



Overall there continues to be a steady decline in the prevalence of Australian men and women who smoke, but this has been interspersed with periods of little decline from the early 1970s to mid 1980s, and during a second period for much of the 1990s. It is difficult to assess the precise impact on smoking prevalence of any specific intervention as many were implemented contemporaneously; Chapman describes it as like attempting to “unravel gossamer with boxing gloves” (Chapman, 1993). For instance when NRT became available over-the-counter in 1997 it was associated with aggressive advertising. This coincided with the launch of the hard-hitting and high-intensity *National Tobacco Campaign*. It is difficult to assess the impact of each intervention separately and any attempt to do so also risks underestimating their combined synergistic impacts (Miller & Wood, 2001).

Best practice guidelines suggest comprehensive tobacco control programs that incorporate multiple interventions are best at producing substantial reductions in

tobacco use (Centers for Disease Control and Prevention, 1999). This is demonstrated in Figure 3 when examining sudden drops evident in smoking prevalence coinciding with the introduction of the first comprehensive tobacco control campaigns in the mid 1980s and the *National Tobacco Campaign* from 1997–2003, associated with the deregulation of NRT.

Despite the difficulty in determining the impact of individual interventions, there is evidence to support a number of tobacco control interventions.

1.18 Regulation of Price Through Tobacco Excise

Evidence rating: Strong

Reducing the availability of tobacco via tax excise appears to be one of the most effective ways to reduce smoking prevalence (Jha & Chaloupna, 1999). There is strong scientific evidence that demonstrates increasing tobacco excise is an effective method of reducing smoking uptake and consumption among adolescents and young adults. It has also been found to increase cessation adults. A 10% increase in the price of tobacco products is estimated to translate into a 4% decrease in smoking prevalence rates in adults and 6% in children (Hopkins et al., 2001; Jamrozik, 2004). However, to be effective, price increases must be sustained, or the impact will be eroded by inflation.

1.19 Regulation of Smoking Restrictions

Evidence rating: Strong

Regulating the place of tobacco use aims to restrict the social reinforcement of smoking with others in public places, to reduce the social acceptability of smoking, and to protect non-smokers from the dangers of second-hand smoke. There is strong community support for the current restrictions (Walsh & Tzelepis, 2003). There is also strong scientific evidence to suggest that smoking bans and restrictions reduce exposure to second-hand smoke in the workplace. Regulating the place of tobacco use appears to affect tobacco consumption and cessation, but evidence on prevalence is less consistent (Hopkins et al., 2001). Studies of workplaces with total bans on smoking show that smokers in these workplaces reduce the amount they smoke each day and have an increased chance of successfully quitting (Fichtenberg & Glantz, 2002).

1.20 Regulation of tobacco promotion

Evidence rating: Strong [if comprehensive]

A study of 22 high-income countries based on data from 1970 to 1992 concluded that comprehensive bans on cigarette advertising and promotion can reduce consumption, but partial bans have little or no effect (Jha & Chaloupna, 1999).

Econometric studies in high-income countries have found that comprehensive bans on promotion reduce demand for tobacco by around seven-percent (Centers for Disease Control and Prevention, 1999). In Australia, tobacco promotion still occurs at point-of-sale and on the cigarette packet. Research cited in the National Tobacco Strategy suggests that advertising at point-of-sale and through the packet increases

positive feelings about cigarette brands (Ministerial Council on Drug Strategy, 2004).

1.21 Regulation at point-of-sale

Evidence rating: Strong [when enforced]

The intent of regulations on the supply of tobacco is to ensure that tobacco products are available to adults who use them, but are not highly visible or sold to children. Research suggests that laws banning the sale of cigarettes to minors are effective only when accompanied by substantial penalties and enforcement (Ministerial Council on Drug Strategy, 2004). Stronger sale restrictions appear to lead to reductions in the use of cigarettes by young people. For instance in 1987, 57% of 12–17 year old Australian children reported buying their own cigarettes, declining to 22% by 2005. However, this effect has been dampened somewhat by a corresponding increase in reports of young people obtaining cigarettes by having someone else purchase them from 3% in 1987 to 16% in 2005 (White & Hayman, 2006).

1.22 Regulation of tobacco packaging

Evidence rating: Strong

Health warnings on tobacco products have been compulsory in Australia since 1973, with stronger and larger text-based warnings being introduced in 1985 and 1995, and colour graphic health warnings being introduced in March 2006. The aim of the warnings is to deter people from starting to smoke motivate or to quit smoking by providing information about health risks of smoking and the benefits of quitting, and directing smokers to cessation assistance.

A major Australian study examining the effectiveness of text-based cigarette packet health warnings found that 16% of those smokers who quit reported health warnings on packets contributed to their decision. Although not found to be a sole motivating factor to quit smoking, packet health warnings contribute to a growing environment of smoking unacceptability and are a contributory factor to cessation (Applied Economics, 2003). An assessment of graphic health warnings in Canada indicated that graphic health warnings have a greater effect than text-based warnings, with 58% of Canadian smokers reporting reactions of disgust and 44% reporting fear as a result of the warnings, and those with negative reactions being approximately twice as likely to make a quit attempt (Hammond, Fong, McDonald, Brown, & Cameron, 2004; Hammond, Fong, McDonald, Cameron, & Brown, 2003).

1.23 Regulation of tobacco products

Evidence rating: Strong

The National Tobacco Strategy 2004–2009 proposes the development of a policy to coordinate the regulation of tobacco products and products designed to replace tobacco, which will combine to reduce overall harm to the population (Ministerial Council on Drug Strategy, 2004). Potential changes to tobacco products include formulations that reduce fire risk, the compulsory introduction of which are accredited with 30% reductions in cigarette-related fire deaths in in New York and Massachusetts (Alpert, Carpenter, Connolly, Rees, & Wayne, 2005)

1.24 Mass Media Campaigns

Evidence rating: Strong

Mass media campaigns work by making smokers sufficiently uncomfortable about their smoking so as to trigger a quit attempt. They also work by altering social norms resulting in an environment more conducive to individuals seeking help to quit. There is strong scientific evidence to suggest that high-intensity mass media campaigns reduce smoking initiation and prevalence in adolescents and increase smoking cessation and reduce consumption in adults (Hopkins et al., 2001). There is also strong evidence to suggest that comprehensive and multifaceted approaches that combine mass media campaigns with other tobacco control interventions achieve real and sustained reductions in smoking prevalence (Centers for Disease Control and Prevention, 1999; Jha & Chaloupna, 1999; Warner, 1997). The *National Tobacco Campaign* (1997–2003) was credited with a 3–4% drop in smoking prevalence rates in Australia (Wakefield, Freeman, & et al., 1999).

For any given total expenditure on smoking cessation interventions, mass media tobacco control campaigns cause many more smokers to quit than one-on-one interventions. For mass media campaigns the estimated cost per smoker who quits is \$100, compared to \$800 for minimal clinician advice, \$2,090 for nicotine replacement therapy plus telephone counselling, and \$3,750 for bupropion plus face-to-face counselling (Segal, Mortimer, & Dalziel, 2005).

1.25 Pharmacotherapies

Evidence rating: Strong [for Efficacy]

Sufficient [for Subsidising]

Nicotine replacement therapy (NRT) comes in a variety of forms, including gum, transdermal patches, nasal sprays, inhalers and lozenges and its use approximately doubles a smoker's chances of quitting (Silagy, Lancaster, Stead, Mant, & Fowler, 2004). NRT has been available without medical prescription in Australia since 1997 but its cost is considered prohibitive by some smokers. It is currently recommended for smokers who consume more than ten cigarettes per day (West, McNeill, & Raw, 2000). The other major form of pharmacotherapy available to Australian smokers is the antidepressant bupropion, which negates the pleasurable physiological effects of nicotine absorption. Clinical trials suggest bupropion is an even more effective aid to smoking cessation than NRT (Scharf & Shiffman, 2004). However, Australian smokers currently require a prescription from a medical officer to access bupropion, suggesting universal access may be an issue. There is also sufficient evidence to suggest that reducing costs for out-of-pocket expenses increases use of pharmacotherapies (Centers for Disease Control and Prevention, 1999; Hopkins et al., 2001).

1.26 Self-help interventions

Evidence rating: Weak

The evidence suggests that generic self-help cessation materials alone are of small benefit compared to no intervention, and providing generic self-help materials in addition to advice from a health professional, or in addition to cessation pharmaceuticals does not appear to improve cessation rates (Miller & Wood, 2001).

1.27 Brief Intervention

Evidence rating: Strong

Brief interventions are considered highly cost-effective strategies as they are inexpensive, take little time and can be implemented by a variety of health professionals. Best-practice guidelines suggest that all health professionals, including doctors, nurses, dentists and pharmacists should opportunistically ask patients during routine consultations if they smoke and advise those who do to quit smoking using brief intervention techniques (e.g., The Five 'A's: Ask, Advise, Assess, Assist and Arrange). Such interventions have modest effect sizes but due to their wide reach can make a substantial public health impact (Miller & Wood, 2001).

The best evidence to date encourages a systematic approach to identifying and recording patient tobacco use within the health care system, by maintaining up-to-date records of the smoking status of patients, advising smoking patients to quit at least once per year and recording having done so. It is also suggested that hospital admissions provide a good opportunity to assist smokers to quit as they are in a restricted smoking environment, and are particularly vulnerable and more amenable to suggestions to quit (Munafo, Rigotti, Lancaster, Stead, & Murphy, 2001; West et al., 2000).

1.28 Intensive Interventions

Evidence rating: Strong

There is strong evidence to suggest that individual counselling is more effective in achieving sustained smoking cessation than brief advice, with a dose-response relationship being apparent between the amount of contact a smoker has with a health professional and abstinence rates. However sessions exceeding 90 minutes appear to have no additive benefit (Miller & Wood, 2001). There is also strong evidence that intensive clinical interventions combined with pharmacotherapies result in better abstinence rates than clinical interventions alone (Silagy et al., 2004). There is also strong evidence to suggest that supportive group sessions result in greater abstinence rates than brief interventions. However there is only mixed evidence as to whether individual interventions are superior to group sessions (Miller & Wood, 2001).

1.29 Telephone Support

Evidence rating: Strong

There is strong evidence to suggest that telephone counselling is effective in increasing cessation rates when used as a sole intervention but is better when promoted in conjunction with advertising programs that reach large audiences (Borland & Hill, 1990; Miller & Wood, 2001; Zhu et al., 2002).

1.30 Smoking Cessation For Pregnant Women

Evidence ratings: Strong for pregnancy Weak for post-natal

Best practice guidelines recommend that smoking cessation interventions should be offered to pregnant smokers at the first antenatal visit and throughout the pregnancy and postpartum (Miller & Wood, 2001). There is strong evidence that

smoking cessation programs targeting pregnant women result in a reduction in the proportion of women who continue to smoke, and a reduction in the incidence of low birth weight and premature birth. However there is insufficient evidence to suggest that smoking relapse prevention programs are successful at sustaining women's cessation after pregnancy. Teaching young mothers who smoke alternative strategies to deal with stress appears to be the most effective long-term strategy (Lumley et al., 2004).

1.31 School-based Interventions

Evidence rating: Weak

As most people start smoking before the age of 18 years, school programs to prevent the uptake of smoking are a logical component of a comprehensive tobacco control strategy. Several studies have shown that comprehensive school-based tobacco interventions, which include smoke-free policies, evidence-based curricula, teacher training, parental involvement, and linkage with local and state-wide education campaigns have the best chance of reducing or delaying the uptake of smoking among young people (Centers for Disease Control and Prevention, 1999).

However, there is little evidence that school-based programmes are effective in the long-term in preventing the uptake of smoking. A review by the Cochrane Collaboration identified 23 high quality randomised control trials of school-based programs to prevent children who had never smoked becoming smokers. The interventions included information-giving, social influence approaches, social skills training and community interventions. Although half of the best quality studies in this group found short-term effects on children's smoking behaviour, the highest quality and longest trial (i.e. Hutchinson Smoking Prevention Project) found no long-term effects from 65 lessons over eight years (Thomas & Perera, 2006).

1.32 Indigenous strategies

Evidence rating: Weak

There is currently a lack of evidence surrounding effective Indigenous tobacco control strategies. An audit conducted by the Centre for Excellence in Indigenous Tobacco Control produced a series of recommendations to improve and strengthen Indigenous tobacco control, including increasing Indigenous participation in the research and development of tobacco control strategies, and improving the training of Aboriginal Health Workers and related health professionals in tobacco control (Adams & Briggs, 2005).

1.33 Advocacy

Evidence rating: Strong

Determined advocacy efforts driven by individuals and non-government organisations have led to a number of laws that have led to substantial improvements in public health outcomes, such as the removal of lead from petrol, fluoridation of water supplies and the introduction of seatbelts in cars (Isaacs & Schroeder, 2001). Most of the gains observed in tobacco control to date are also a result of ongoing advocacy but tobacco control

remains an “unfinished crusade” (Isaacs & Schroeder, 2001). Advocacy will continue to be needed to build constituent support for new tobacco policies.

Table 1: Overview of Evidence for Variation Tobacco Control Interventions

Intervention type	Evidence of Effectiveness
<u>Regulation</u>	
Tobacco Tax Excise Increases	Strong
Smoking Restrictions	Strong
Tobacco Promotion Restrictions	
- <i>comprehensive</i>	Strong
- <i>partial</i>	Weak
Place of sale	Strong [if enforced]
Tobacco Packaging	Strong
Regulation of Tobacco Products	Strong
<u>Public Education</u>	
Mass-media Campaigns	Strong
School-based Interventions	Weak
<u>Advocacy</u>	Strong
<u>Pharmacotherapies</u>	
Nicotine Replacement Therapies	Strong
Bupropion	Strong
<u>Cessation Interventions</u>	
Self-help	Weak
Brief Intervention	Strong
Intensive Intervention	Strong
Telephone Counselling	Strong
Pregnant Women	
- <i>short-term</i>	Strong
- <i>long-term</i>	Weak
Indigenous Populations	Weak

6. Broad Aims of Tobacco Control

[to be inserted]

7. Priority Issues

- There is currently no consistent health industry approach to support smokers to quit. Brief intervention principles are applied variably allowing many patients who smoke to ‘fall through the cracks’. Comprehensive smoke-free policies on health campuses are also inconsistently applied, undermining the exemplar role of health professionals.
- Indigenous smoking prevalence rates are fifty years behind the general population with current tobacco control measures appearing to have failed entirely. Moreover there appears to be no success stories at present to enact upon.
- Future potential smoke-free restrictions include in prisons, mental health institutions, private motor vehicles with non-smoking passengers (especially children), and inside private homes in which children reside.
- The tobacco industry is now repackaging itself as a responsible corporate citizen, acknowledging the detrimental health affects of smoking but pledging to continue to lawfully provide for those unable to quit and those who make an “informed decision” to smoke. Such efforts will require ongoing tobacco control vigilance and countering.
- There is a current movement within Australia to make mandatory Reduced Ignition Propensity (RIP) cigarettes that self-extinguish when not drawn upon thereby considerably reducing fire risks.

8. Recommended Approaches of International, National and State Strategies

A number of policy frameworks are relevant to tobacco control in Western Australia, from international, national and state sources. The recommendations from various appropriate documents are outlined hereafter.

1.34 World Health Organisation Framework Convention on Tobacco Control (FCTC) (ratified by Australia on 27 October 2004)

Recommendations

1. Price and taxation measures to reduce demand for tobacco;
2. Protection from exposure to tobacco smoke;
3. Regulation of the contents of tobacco products;
4. Regulation of tobacco product disclosures;
5. Regulation of the packaging and labelling of tobacco products;
6. Education, communication, training and public awareness;
7. Regulation of tobacco advertising, promotion and sponsorship; and
8. Demand reduction measures concerning tobacco dependence and cessation.

Actions (Abdullah & Husten, 2004)

1. Increase taxation on tobacco products;
2. Expand smoke-free policies in public places;
3. Strengthen warning labels;
4. Target health professionals and teachers for smoking cessation; and
5. Integrate brief intervention smoking cessation counselling into all aspects of healthcare services.

1.35 Australian National Tobacco Strategy 2004–2009 (ratified November 2004)

Recommendations

1. further regulation of tobacco;
2. promotion of *Quit* and *Smoke-free* messages;
3. cessation services and treatment;
4. community support and education;
5. addressing social, economic and cultural determinants of health;
6. tailoring initiatives to disadvantages groups;
7. research, evaluation and surveillance; and
8. workforce development.

1.36 West Australian Tobacco Action Plan 2006–2010 (draft)

Recommendations

1. *Further regulation* of:
 - a. tobacco products;

- b. promotion of tobacco products;
 - c. place of sale of tobacco products;
 - d. place of use of tobacco;
 - e. packaging of tobacco; and
 - f. tobacco taxation.
2. *Community Education* ranging from state-wide mass media campaigns to community-based programs:
 - a. promoting prevention, cessation and smoke-free environment messages; and
 - b. building local, state and national capacity for tobacco control.
 3. *Cessation Services* including:
 - a. behavioural and support services;
 - b. pharmacotherapies; and
 - c. counselling and referrals to services by health professionals.
 4. *Research and Evaluation* including:
 - a. Research to develop new methodologies for tobacco control;
 - b. Evaluation of the effectiveness of current tobacco control activities;
 - c. Monitoring of smoking behaviours, attitudes and prevalence;
 - d. Analysis and dissemination of research findings; and
 - e. Monitoring and evaluation of the WA TAP 2006-2010.

1.37 West Australian Aboriginal and Torres Strait Islander Health Promotion Plan 2005–2008 (draft?)

Recommendations

1. Train staff to deliver brief intervention in smoking cessation.
2. Funding contracts to contain a smoke-free workplace clause.
3. Support Aboriginal communities to develop or review smoke-free policies for in-door public places;
4. Support the continued development of the *Say No To Smokes* program;
5. Develop and disseminate Aboriginal specific tobacco control resources;
6. Develop complementary media strategies for Aboriginal people to accompany tobacco control campaigns;
7. Support the Aboriginal Community-Controlled Health Service (ACCHS) to pilot subsidised nicotine replacement therapy in conjunction with supervision and behavioural support;
8. Support the development of school-based tobacco education materials for Aboriginal children;
9. Support the trial of peer and community education materials and activities for young Aboriginal children.

1.38 West Australian Youth Health Strategy (draft October 2006)

Recommendations

1. Enforcement of laws regarding sales of tobacco to minors;
2. Improved school-based education of the harms associated with smoking;
3. Social marketing strategies aimed at parents and youth; and
4. Comprehensive school-based policies, such as restrictions on students, teachers and visitors smoking in or near schools; and
5. remediation programs for students who get caught smoking.

1.39 The Cancer Council Australia National Cancer Prevention Strategy (2004)

Recommendations

1. Fund tobacco control to a level commensurate with the size of the problem;
2. Eliminate all promotion and marketing of tobacco;
3. Further real increases in the price of tobacco;
4. Keep community well informed about the harms of tobacco;
5. Establish a regulatory framework for the production, marketing, sale and distribution of tobacco;
6. Hold tobacco companies accountable for unlawful conduct;
7. Eliminate smoking in all enclosed public spaces and workplaces;
8. Provide universal access to tobacco dependence treatment; and
9. Develop a holistic government approach to tobacco control.

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