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TOBACCO CONTROL IN AUSTRALIA: VICTIMS OF OUR PAST SUCCESS?

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GUEST EDITORIAL

Australia has arguably the lowest smoking prevalence attributable to tobacco control of any nation (Table 1).[1] Two Asian nations (Singapore and the Chinese territory of Hong Kong) have lower overall smoking prevalence, when the rates for both men and women are combined, but this reflects deeply-embedded cultural proscriptions against smoking by women (for example, only 3.5 per cent of Singaporean women smoke) in addition to the success of tobacco control measures there. Swedish men (17.4 per cent) smoke less than Australian men (21.1 per cent) but this is because of the prevalence of the use of snus (chewing tobacco) among Swedish males.[2]

TABLE 1

SMOKING PREVALENCE IN SELECTED COUNTRIES AND TERRITORIES, 2003

Country or Territory	Adult men %	Adult women %	Overall adult %	Male youth %	Female youth %	Overall youth %
Australia	21.1	18.0	19.6	14.1	16.2	15.2
Canada	23.9	19.6	21.8	16.2	20.9	18.6
USA	25.7	21.0	23.4	26.0	20.1	23.1
UK	28.0	26.0	27.0	24.0	28.0	26.0
Sweden	17.4	20.4	18.9	26.0	25.0	25.5
Norway	31.0	32.0	31.5	31.0	34.0	32.5
New Zealand	25.1	24.8	25.0	16.3	22.0	19.2
Singapore	24.2	3.5	13.9	13.4	8.8	11.1
Hong Kong	25.2	4.4	14.8	17.0	13.0	15.0
Malaysia	49.2	3.5	26.4	25.1	0.6	12.9

Source: Shafey O, Dolwick S, Guindon GE. *Tobacco Control Country Profiles 2003*.[1]

Our track record in tobacco control is second to none. Tobacco industry documents repeatedly acknowledge this with statements like: 'Australia has one of the best organised, best financed, most politically savvy and well connected anti-smoking movements in the world. They are aggressive and

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have been able to use the levers of power very effectively to propose and pass draconian legislation …The implications of Australian anti-smoking activity are significant outside Australia because Australia serves as a seedbed for anti-smoking programs around the world.'[3]

Currently, we do not have the world's strongest health warnings on cigarette packs but we will join Brazil, Canada, Singapore, and Thailand in introducing uncompromising pictorial pack warnings in the next two years.[4] Our retail prices, adjusted for purchasing power, are the third highest in the world behind Hong Kong and New Zealand.[5] The local tobacco industry acknowledges that Australia and Canada have the 'darkest' markets in the world in terms of advertising and marketing restrictions.[6] In contrast to its former high profile campaigning ability in every advertising medium, the local industry has been reduced to promoting whispering campaigns about the virtues of its products.[7]

In restricting smoking and providing smoke-free public spaces, Australia lags behind several countries and states such as Ireland, California, and New York, which have banned smoking throughout the hospitality industry. However, Australia would certainly be listed in any 'Top Five' list of countries where the people's right to breathe air unpolluted by tobacco smoke is protected. Our public awareness campaigns, such as *Every Cigarette Is Doing You Damage*,[8] have been exported to many nations, and we have a global reputation for advocacy.[9]

The above summary suggests that, by world standards, Australia is doing well in tobacco control. Yet to speak of this as a success story requires us to ask whether one in five Australians continuing to smoke every day,[10] and over 19,000 deaths each year attributable to tobacco use,[10] can be termed a successful outcome. Nineteen-thousand deaths is higher than all combined annual deaths from breast, skin, and cervical cancers, road deaths, suicide, AIDS, alcohol , and illicit drugs.[10]

Tobacco control in Australia has reached an important crossroad. Many of the traditional platforms of comprehensive tobacco control have been implemented, and today there are concerning signs that governments have lost sight of the importance of tobacco control. Official statements such as 'Tobacco smoking is the single largest preventable cause of premature death and disease in Australia' are cited in policy documents,[11] but are supported by program budgets that are small compared to those allocated to programs such as drug and alcohol, suicide, breast cancer, and road injury prevention.[12] For example, in the federal budget for 2004 just $2.2 million was allocated to tobacco control, although the health portfolio budget statement did not separately identify the amount allocated to tobacco. In 2001, investment by federal and state governments in tobacco control totalled $25 million. By contrast, the estimated excise tax from tobacco that will be collected in 2005 by the federal government is $5.2 billion.

Prime Minister John Howard said on Adelaide radio on 22 July 1999: 'But the only way you could further reduce smoking in this country is probably by making it illegal.'[13] This statement is not supported by the evidence. For example, the records of California and Massachusetts, which at different stages in the 1990s had well-funded comprehensive tobacco control programs, show that suitably-funded programs can reduce tobacco consumption. In California, after the commencement of a well-funded campaign in 1993, per capita cigarette consumption declined 52 per cent faster than previously (from 9.7 packs per person per month at the beginning of the program to 6.5 packs per person per month), and the decline in tobacco consumption has been significantly greater in California than in the rest of the United States ($P<.001$).[14] In Massachusetts, from 1992 tobacco consumption has shown a consistent decline of more than four per cent per annum, whereas in comparison states consumption has levelled off, decreasing by less than one per cent a year. The prevalence of adult smoking in Massachusetts has declined annually by 0.43 per cent (95% CI; 0.21–0.66 per cent) compared with an increase of 0.03 per cent (-0.06–0.12 per cent) in comparison states ($P<0.001$).[15]

Australia's non-government agencies have proposed that $96 million spent in 2004–05, including a $44 million public awareness campaign, could significantly boost the continuing fall in tobacco use in the community.[10] An additional tax impost of one cent on a pack of cigarettes would raise an additional $240 million each year, which is more than enough to fund a tobacco awareness campaign. Lobbying campaigns have been conducted to promote this 'blue chip' investment in disease prevention for the last few years without success.

So why is tobacco control so unfashionable with governments? Several factors appear to coalesce, in explaining the gap between the acknowledgement that tobacco control should be a health priority and government inaction. First, the erroneous impression that tobacco control has been 'done' is hard to shift in the eyes of some. Second, tobacco use causes chronic disease rather than acute and unexpected episodes of illness. The common attitude that smokers 'have themselves to blame' means that the 'rule of rescue' is not easily invoked as a political imperative for governments to act decisively in tobacco control as it is in other disease conditions.[16] Consequently, delays in addressing chronic diseases such as those caused by smoking are unlikely to cause outrage among the public.

Visionary policy advocates within government, who are prepared to champion the importance of investment in chronic disease control, are vital in securing the resources required to match the rhetoric of concern with suitably-funded programs that can 'make smoking history'. This issue of the *NSW Public Health Bulletin* presents a series of articles relevant to tobacco control in New South Wales.

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CURRENT TOBACCO SMOKING BY THE NSW POPULATION AND THE CONSEQUENCES FOR HEALTH

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BACKGROUND

The risk factor responsible for the greatest disease burden in Australia is tobacco smoking, which accounts for approximately 12 per cent of the total burden of disease in males and seven per cent in females.[1] Tobacco smoking contributes to higher drug-related morbidity and mortality than both alcohol and illicit drug use combined.[2] It is the leading preventable cause of morbidity and mortality, particularly from: cardiovascular disease; cancers of the lung, larynx and mouth; and chronic obstructive pulmonary disease. It is estimated that approximately half of all long-term smokers will die from smoking-related causes.[3] Smoking while pregnant contributes to an increased risk of having a low birthweight baby. Exposure to environmental tobacco smoke is known to be a risk factor for lung cancer and cardiovascular disease in adults, and for sudden infant death syndrome, asthma, and lower respiratory disease in children.[4]

This article presents recent Australian and NSW data that describe current tobacco use by the NSW population and provides a context for the other articles in this issue of the *NSW Public Health Bulletin* that focus on tobacco control in New South Wales.

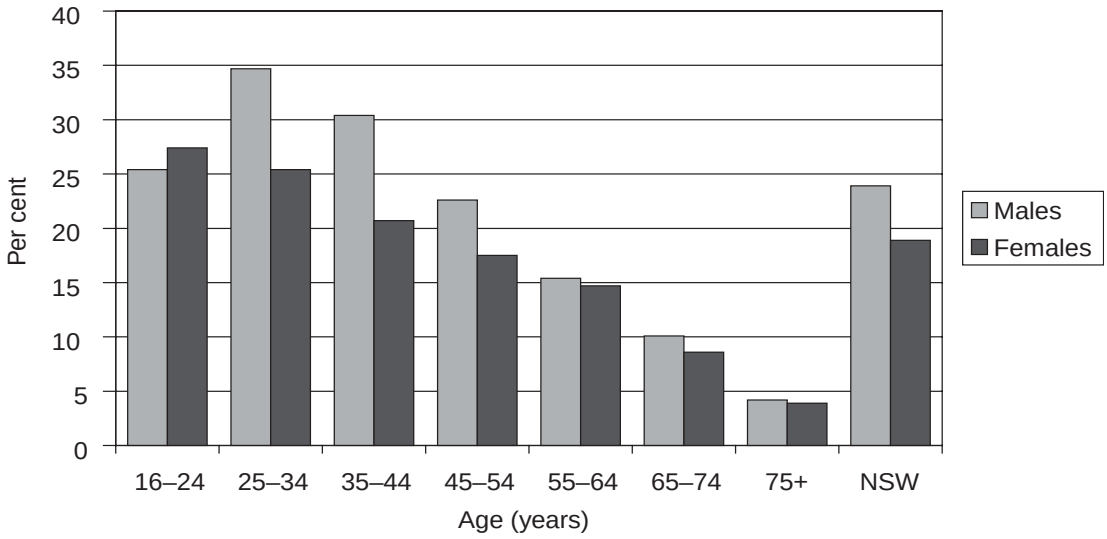
CURRENT SMOKING PREVALENCE

Reported prevalence rates for smoking vary according to a variety of factors associated with the design of surveys, including the data collection method used, questions asked, sample size, and the age of the sample population. A recent study discussed the causes of these perceived discrepancies in the prevalence of smoking between two Australian national surveys:[5] the National Health Survey identifies 'current smokers', including 'daily' plus 'other' and reported a prevalence of 24.3 per cent.[5] The National Drug Strategy Household Survey identifies 'daily', 'weekly', and 'less than weekly', and reported the prevalence of daily smoking to be 19.5 per cent.[5] After standardising methods and ages, Siahpush reported that the best estimate of smoking prevalence to be almost identical in both surveys at 24.3 per cent and 24.2 per cent respectively.[5]

Smoking prevalence in Australia is among the lowest of all countries participating in the Organization for Economic Cooperation and Development.[6] The 2001 National Drug Strategy Household Survey compared smoking prevalence among people aged over 14 years between all Australian states and territories,[2] and found that NSW had the lowest prevalence of smoking in Australia, with 18.1 per cent of the population smoking daily, and a further 3.4 per cent smoking weekly or less often, giving a total of 21.5 per cent who smoked. Overall,

FIGURE 1

PERCENTAGE OF ALL MEN AND WOMEN AGED OVER 16 YEARS WHO ARE CURRENT SMOKERS BY AGE GROUP, NSW, 2002



Source: New South Wales Adult Health Survey 2002. Centre for Epidemiology and Research, NSW Department of Health.[15]

in NSW, more males smoked every day (19.1 per cent) than females (17.2 per cent); however, among those aged 14–19 years the situation was reversed with females (14.9 per cent) more likely than males (11.2 per cent) to smoke on a daily basis. More than half of the respondents (52.8 per cent) had never smoked—defined as never having smoked more than 100 cigarettes in their lifetime—with females (57 per cent) more likely than males (48.5 per cent) to describe themselves as never having smoked.

The New South Wales Health Survey definition of 'current smoking' includes those who smoke daily and those who smoke occasionally.[7] In 2002, 21.4 per cent of the NSW population aged 16 years and over reported that they were current smokers, with 16.3 per cent smoking daily, and a further 5.1 per cent who smoked occasionally (Figure 1).[7] Significantly more males (23.9 per cent) than females (18.9 per cent) reported that they currently smoke. Rates of current smoking were highest among younger people, with 27.4 per cent of females aged 16–24 years and 34.7 per cent of males aged 25–34 years being current smokers. Smoking prevalence declined with age, with 9.3 per cent of people aged 65–74 years and four per cent of those aged over 75 years being current smokers.[7]

Current smoking prevalence has declined significantly in NSW, in the five-year period between 1997 (24 per cent) and 2002 (21.4 per cent).[7] However, there is significant geographic and socioeconomic variation in the populations who smoke. In 2002, residents of rural area health services (23.5 per cent) were more likely to be current smokers than residents of urban area health services (20.8 per cent). Respondents from the least disadvantaged socioeconomic quintile (14.0 per cent) and residents of the Northern Sydney Area Health Service (14.2 per cent) reported significantly lower rates of current smoking, compared to the overall population of NSW (21.4 per cent). People in the second most disadvantaged quintile and residents of the Far Western Area Health Service reported higher rates of smoking (24.7 per cent and 26.9 per cent respectively).[7]

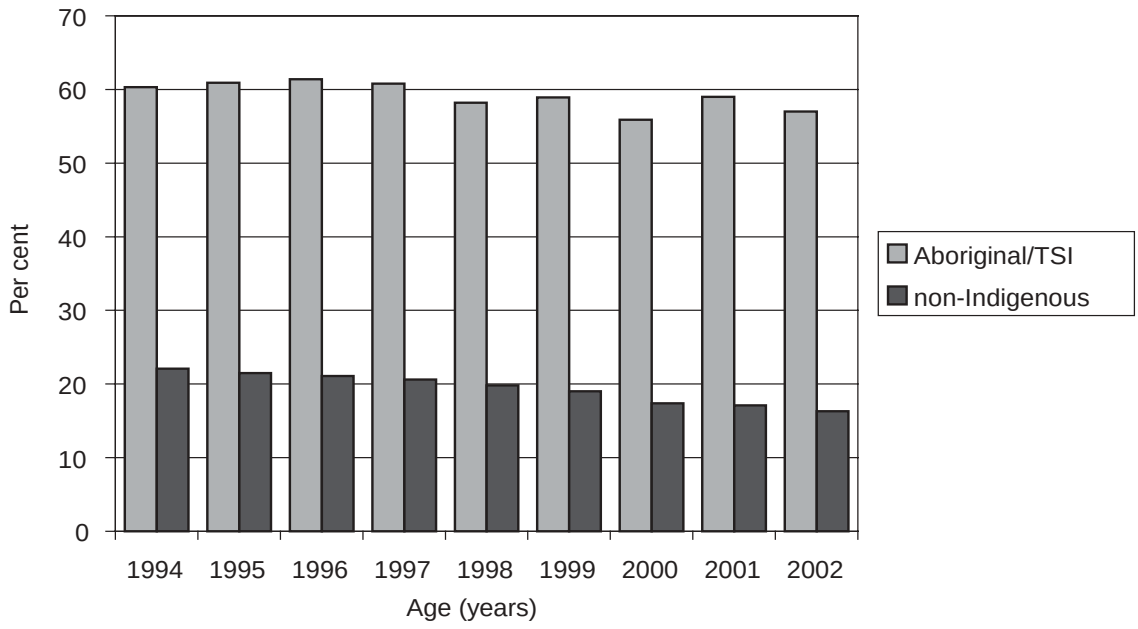
Although in global terms NSW has one of the lowest overall prevalence rates of current smoking, one in five people in NSW are smokers and are at risk of serious health consequences as a result. This risk extends to those who are exposed to environmental tobacco smoke. The prevalence rates for some demographic groups are much higher than for the NSW population as a whole as described below.

People from culturally and linguistically diverse backgrounds

In the 1997 and 1998 NSW Health Surveys, smoking patterns among overseas-born respondents varied between men and women. The highest rates of smoking were reported by men born in Vietnam, Laos, or Cambodia (43.6 per cent); Lebanon (42.3 per cent); and New Zealand (37.1 per cent). For women, the highest rates were reported by respondents from New Zealand (36.2 per cent) followed by those born in the Former Yugoslav Republic (28.7 per cent), and Lebanon (27.4 per cent). Women born in Vietnam, Laos, or Cambodia (1.3 per cent) reported much lower rates than other women in NSW.[7]

FIGURE 2

COMPARISON OF THE PREVALENCE OF SMOKING IN INDIGENOUS AND NON-INDIGENOUS PREGNANT WOMEN BY YEAR, NSW, 1994–2002



Source: NSW Midwives Data Collection (HOIST). Centre for Epidemiology and Research, NSW Department of Health.[10]

Aboriginal and Torres Strait Islander people

The 2001 National Drug Strategy Household Survey, found that the prevalence of current smoking (including 'daily' and 'occasional') among Aboriginal and Torres Strait Islander people was 50 per cent, more than double that of non-indigenous Australians (23 per cent).[6] The prevalence of daily smoking among Aboriginal and Torres Strait Islander women (47 per cent) was more than two-and-a-half times the rate for non-indigenous women (18 per cent). For Aboriginal and Torres Strait Islander men the daily smoking rate was 43 per cent, double that of non-indigenous men (21 per cent).

Secondary school students

Of NSW secondary school students aged 12–17 years who participated in the Australian Secondary School Alcohol and Drug Survey in 2002, the majority (80 per cent) described themselves as non-smokers.[8,9] Compared to the previous survey in 1999, there was a significant decrease in the number of students describing themselves as a 'recent' smoker (defined as reporting smoking on at least one day in the week prior to the survey), from 17 per cent to 12 per cent among boys and from 19 per cent to 15 per cent in girls. This trend was observed in both sexes across all age groups except for 12 year old girls, where there was a slight increase. The highest prevalence was among 17 year olds, with 22.8 per cent of males and 25.6 per cent of females reporting that they had smoked recently. Overall, between the 1999 and 2002 surveys there was a decline in those reporting recent smoking from 18 per cent to 13 per cent.[8,9]

The trend of those reporting having ever smoked has fallen consistently from the 1980s. In 1984, 57 per cent of students surveyed reported having ever smoked and in 2002, the proportion had fallen to 42 per cent. Overall, nine per cent of respondents smoked on three or more days in the previous week and four per cent smoked daily.

Smoking in pregnancy

The proportion of NSW mothers reporting that they smoked during their pregnancy declined from 22.1 per cent in 1994 to 16.3 per cent in 2002.[10] For the same period, the rate of smoking during pregnancy among NSW Aboriginal and Torres Strait Islander women was consistently three times that of all pregnant women in NSW and demonstrated a slower rate of decline, from 60.3 per cent in 1994 to 58.0 per cent in 2002 (Figure 2).

MORTALITY

In NSW in 2000, tobacco smoking caused an estimated 6,578 deaths (4,322 males and 2,256 females). This represents 18.5 per cent of all male deaths and 10.3 per cent of all female deaths respectively. Between 1989 and 2000, there was a 34 per cent decline in the age-adjusted rate of deaths attributable to smoking in NSW, from 129 to 86 per 100,000 population. There are significant differences between the death rates for men and women.

In 1989, smoking killed 216 men and 67 women per 100,000 population; by 2000, the rate had decreased to 132 men and 50 women per 100,000 population. Over this time, the death rate attributable to smoking declined by approximately 39 per cent for men and 26 per cent for women.[11] Aboriginal and Torres Strait Islander peoples are at greater risk of requiring hospitalisation and/or dying from diseases that are attributable to smoking than are non-indigenous Australians.[12]

MORBIDITY

In 1999–2000, almost 54,000 NSW hospital separations were attributable to tobacco smoking, with 35,277 hospitalisations among males and 18,531 among females. This represents four per cent of all hospitalisations for males and 1.8 per cent for females. Between 1989–1990 and 1999–2000 the age-adjusted rate for tobacco-related hospitalisation for females increased by approximately 18 per cent, from 425 to 502 per 100,000 population. For males there was approximately a four per cent increase over the same period, from 1,020 to 1,057 per 100,000 population.[11]

It was recently estimated that hospitalisations attributable to tobacco smoking in NSW in 1999–2000 incurred hospital costs of almost $180 million, or approximately $500,000 per day.[13]

SECOND-HAND SMOKE

A recent estimate of the social costs of drug abuse found that there were 224 deaths in Australia in 1998–99 attributable to 'involuntary smoking', including exposure to environmental tobacco smoke, smoking in pregnancy, and smoking-related fires. Of these, 103 deaths occurred among those aged 0–14 years and 122 among those aged 15 years and over. Second-hand smoking was responsible for almost 78,000 bed days and $47.6 million in hospital costs in Australia in 1998–99.[14]

SMOKE-FREE HOUSEHOLDS

Respondents to the New South Wales Adult Health Survey 2002 were asked whether people were allowed to smoke inside their home. There was a 15 per cent increase in the proportion of respondents who reported that their home was smoke-free between 1997 (69.8 per cent) and 2002 (81.0 per cent). Overall, less than 20 per cent of respondents stated that they allow smoking in their home either 'occasionally' (9.8 per cent) or 'frequently' (9.2 per cent). There was both geographic and socioeconomic variation in the prevalence of smoke-free homes. Residents of the Northern Sydney Area Health Service (88.7 per cent) and those in the least disadvantaged socioeconomic quintile (88.5 per cent) were more likely to report that their home was smoke-free than those living in the Far Western Area Health Service (73.4 per cent) and those in the most disadvantaged quintile (74.4 per cent).[15]

PERCEPTIONS OF THE CURRENT SMOKING PREVALENCE RATE

Respondents to the New South Wales Adult Health Survey 2002 were asked to estimate the percentage of the population who are smokers. Around three-quarters (74.2 per cent) of respondents overestimated smoking prevalence suggesting that 30 per cent or more of the population are smokers and more than one third of respondents, (38.5 per cent) perceived that at least half of the population smoke.[15]

INTENTION TO QUIT SMOKING

The New South Wales Adult Health Survey 2002 found that, of those people described as current smokers, one-third planned to quit smoking within the next six months (32.9 per cent), a further 12.7 per cent planned to quit smoking within the next month, and 5.8 per cent had recently quit smoking.[15]

DISCUSSION

The World Health Organization describes tobacco smoking as a 'chronic relapsing disease' and estimates that by the year 2030 tobacco-related mortality will reach 10 million deaths per year globally, and that around 500 million people who are alive today will die from smoking.[16] The World Bank suggests that efforts to reduce adult smoking (that is, increasing cessation) are likely to have a greater effect on mortality in the medium term than preventing the 'take-up' of tobacco smoking among young adults, and recommends addressing the balance between treatment and prevention.[17]

As smoking prevalence declines in the general population there is an international debate among tobacco researchers regarding the characteristics of the remaining population of smokers.[18,19] As fewer and fewer people smoke, there may be a group of highly nicotine dependent smokers remaining who will find it very difficult to quit and may need more intensive support services and pharmacotherapies. Helping these smokers to quit will be a major challenge for the health system. This is further complicated by the association between high nicotine dependence and, alcohol and other drug dependence, depression and other psychiatric conditions.[18]

The article in this issue of the Bulletin by Mitchell and Hailstone describes the range of activities undertaken through the *NSW Tobacco Action Plan 2001–2004* to reduce the prevalence of smoking.

To achieve further reductions in the smoking prevalence rate in New South Wales, there is a continuing need for a comprehensive tobacco control program. The NSW Department of Health's current tobacco control program integrates evidence-based public education programs, legislation, and cessation policy, and fosters partnerships with individuals, non-government organisations, and medical associations with a strong commitment to tobacco control.

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THE SOCIAL COSTS OF SMOKING IN AUSTRALIA

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BACKGROUND

The implementation of effective policies that reduce the prevalence of smoking has substantial economic benefit for Australia. This article describes how methods for estimating the social costs of smoking were developed and how these methods have been applied to the Australian population and to measure the effect of interventions to reduce smoking prevalence in some states.

For many years, the major dispute between the tobacco industry and the public health community was over the issue of whether smoking caused morbidity and premature mortality, or whether there was simply a statistical association without a causal connection. In the face of the type of evidence comprehensively surveyed in several recent international and Australian meta-analyses, and particularly in the light of admissions about causality contained in now public internal tobacco industry documents, the industry has been forced to concede defeat on this front.

As a reaction, the industry has shifted the main thrust of its defence to economic arguments, asserting for example that:

- smokers make fully-informed, rational decisions to smoke, and so have decided that the benefits to them of smoking outweigh any costs that they may bear as a consequence of their tobacco consumption;
- any smoking-attributable costs that may be borne by the community are outweighed by community benefits, such as the pleasure that smokers enjoy and the tobacco tax revenue received by governments;
- the tobacco industry confers great benefits on the community, because it generates substantial employment in the manufacture and distribution of cigarettes.

These assertions may appear to be plausible and yet, when subject to the rigours of economic analysis, are usually shown to be false.

An important basis for economic discussion of the effect of smoking is information on its economic costs to the community as a whole. This information is required to demonstrate the size of the policy problem; without it, it is difficult to estimate the potential economic returns to public anti-smoking policies or to evaluate individual anti-smoking policies or programs.

For more than a decade, we have been engaged in research on the social costs in Australia of smoking as well as those for the use of alcohol and illicit drugs. The quality and coverage of these estimates have improved as the quality of the data has improved and the estimation methodology has been refined. This refinement has benefited from the international exchange of ideas with economists engaged in producing cost studies in other countries, culminating in the publication by the World Health Organization of international guidelines for estimating the costs of substance abuse.[1] We have also benefited from developments in Australian epidemiological research, which represents a fundamental data requirement for this type of study.

Since 1991, we have produced for the National Drug Strategy a series of three monographs describing the social costs of drug abuse in Australia, disaggregating the costs by type of drug. These reports are:

- *Estimating the economic costs of drug abuse*,[2] which was the first attempt in Australia to produce comprehensive estimates of the social costs of drug abuse, and one of the first world-wide. The social costs of drug abuse were estimated for the calendar year 1988. The research was based on epidemiological work undertaken at the University of Western Australia that quantified drug-attributable mortality and morbidity.[3]
- *The social costs of drug abuse in Australia in 1988 and 1992*,[4] which presented social cost estimates for 1992 on the basis of a new meta-analysis from the University of Western Australia,[5] newly available casemix health care cost data and other improved data. The report also presented revised estimates for 1988 on a basis consistent with the new 1992 estimates. Thus it was possible to gain an indication of how the social costs of drug abuse (including tobacco) were changing over time.
- *Counting the cost: estimates of the social costs of drug abuse in Australia in 1998–99*,[6] which presented new estimates for the financial year 1998–99 on the basis of a revised meta-analysis produced by the Australian Institute of Health and Welfare,[7] and improved data from other areas. The range of smoking-attributable costs estimated was extended to include involuntary smoking, workplace absenteeism, pharmaceuticals, and fires. Because of the increased range of the estimates, the 1998–99 figures are not directly comparable to earlier estimates.

INTERPRETING SOCIAL COST ESTIMATES

The smoking costs estimated in these studies are social costs (often called external costs), as opposed to private costs. For costs to be defined as private costs two important conditions must be simultaneously satisfied:

- smokers must themselves bear the full costs of smoking that they generate, including most importantly health and productivity costs;
- smokers must be fully informed about the effects and costs of their smoking, and they must have made rational decisions to smoke in the light of the full information available to them.

Since it is most unlikely in the Australian context that these two conditions are simultaneously satisfied, virtually all the costs imposed by smokers, even on themselves, can be considered to be social costs.

These types of studies concentrate on estimation of social, rather than private, costs and benefits because it is the social measures that provide the basis for public policy. If individual decisions to smoke were made rationally on a fully informed basis, and if the individual smokers themselves bore all the costs that their smoking caused, then their decisions could be assumed to accord with their own self-interest with no one else being affected. In these unlikely circumstances, government intervention could not improve the lot of the smokers or of anyone else. However, if these conditions are not satisfied, that is, if social costs exist, government intervention has the potential to improve the welfare of the community as a whole.

METHOD

Two broad techniques are available to estimate the social costs of drug abuse: the 'human capital' approach and the 'demographic' approach. The key difference between the two is the way in which the costs of premature mortality are treated. In the human capital approach, the lost value of a deceased worker's production is represented by the discounted present value of the future time stream of lost production. The demographic approach uses a comparison of the actual population with the hypothetical alternative population that would have existed had there been no drug abuse. Thus, the human capital approach produces an estimate of the present and future costs due to drug-related mortality in the current year, while the demographic approach estimates the present costs of drug-related mortality in past and present years.[1]

Our social cost estimates are based on the demographic method which, it can be argued, provides results that are easier to understand than those estimated by the human capital method. The current size and structure (disaggregated by age and sex) of the Australian population are compared with those that would have existed in a theoretically-counterfactual situation in which there had been no smoking in the previous 40 years. It then becomes possible to compare the two populations for such characteristics as labour force size and structure, and the demand for health care, and so to estimate the social costs borne in the year under review as a result of past and present smoking. This type of analysis requires not only epidemiological information but also demographic analysis, and is most efficiently conducted by teams that include a range of skills rather than by economists working alone. It cannot be effectively conducted without substantial economic input, although regrettably there are various examples in the literature where this has been attempted. The economic issues in this type of research should not be underestimated, as is clearly demonstrated in the International Guidelines.[1]

We have extended the range of these types of studies to incorporate estimates of:

- Avoidable costs—the proportion of aggregate social costs that might be prevented over time by appropriate anti-smoking policies;
- Budgetary costs—the effect of smoking on government budgets rather than on the community as a whole;
- Incidence of social costs—the disaggregation of the costs between various community sectors (individuals, business and government).

RESULTS

Table 1 summarises the most recent estimates of the social costs of smoking in Australia for the financial year 1998–99.

Some further results were:

- a high proportion of the health effects of involuntary smoking was borne by the young or the unborn;
- of the total costs estimated for all forms of drug abuse (excluding abuse of pharmaceuticals) in Australia in 1998–99, smoking is by far the largest contributor, accounting for 61 per cent of the total. Alcohol accounted for 22 per cent and illicit drugs accounted for 17 per cent;
- the avoidable costs of smoking represented 45 per cent of total costs;

TABLE 1

ESTIMATE OF THE SOCIAL COST OF SMOKING FOR THE FINANCIAL YEAR, AUSTRALIA, 1998–99

	$ million	$ million
Tangible costs		
Lost production (net)	5,064	
Health care	1,095	
Fires *	26	
Resources used in cigarette production	1,402	
Total tangible costs		**7,587**
Intangible costs		
Value of loss of life	13,476	
Total intangible costs		**13,476**
Total costs		**21,063**

* Not included under lost production or health care.

Source: Collins and Lapsley, 2002.[6]

- of the total tangible costs of smoking 59 per cent were borne by individuals, 30 per cent were borne by business, and only 11 per cent were borne by governments. By their nature, all intangible costs (pain and suffering and loss of life) are borne by individuals:
- smoking increased federal and state government outlays by $885 million but increased tax revenues by $3,647 million (taking into account some revenue losses). Thus, governments gain a substantial economic benefit from smoking while the community as a whole bears very high economic costs greatly exceeding revenue from tobacco taxes.

CONCLUSION

The authors are currently engaged in a research study for the NSW Department of Health to estimate the social costs of smoking in NSW, and the social benefits of reducing the prevalence of smoking in NSW. We have also undertaken studies for two other states of the benefits of anti-smoking policies. These studies are:

- *The social costs of tobacco in Victoria and the social benefits of Quit Victoria*,[8] an estimate of the benefits of expenditures on *Quit* Victoria, which indicated that they had yielded a very high social rate of return in Victoria;
- *The social costs of tobacco in Western Australia and the social benefits of reducing Western Australian smoking prevalence*,[9] which estimated that the social benefits of achieving the objective of the Western Australian Target 15 campaign to reduce smoking prevalence to 15 per cent would be greater by a very considerable margin than the resources currently expended on anti-smoking programs in that State.

These results, together with our calculations of avoidable smoking costs, show that the implementation of effective policies to reduce smoking can have great economic benefits for Australia.

The publication *Counting the cost: Estimates of the social costs of drug abuse in Australia in 1998–99* is available online from www.health.gov.au/pubhlth/publicat/document/mono49.pdf.

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A REPORT ON THE NSW TOBACCO ACTION PLAN 2001–2004

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BACKGROUND

The NSW Department of Health's commitment to reducing tobacco-related harm in New South Wales is best articulated in its *NSW Tobacco Action Plan 2001–2004*.[1] In accord with the National Tobacco Strategy 1999–2003,[2] priorities under this plan include: reducing smoking prevalence; limiting the uptake of smoking by non-smokers; reducing the exposure to the general population to tobacco smoke; and, over the longer term, decreasing the prevalence of disease and deaths caused by smoking. In order to address these priorities, the *NSW Tobacco Action Plan 2001–2004* (Tobacco Action Plan) focuses on policies and legislative programs to restrict access to tobacco products; provision of support services to assist those wanting to quit smoking; and adoption of strategies to reduce exposure to tobacco smoke in indoor places both public and private.

Currently, the plan is more than half way through implementation and the significant gains in the promotion of smoke-free environments, and formative work in the provision of a broader range of cessation services to the community, mean that the plan is well on track to achieve its aims and objectives. This article describes a number of these achievements, and the challenges that remain.

CONTROL OF ENVIRONMENTAL TOBACCO SMOKE

Arguably the most significant contribution of the Tobacco Action Plan has been implementing strategies to further reduce community exposure to environmental tobacco smoke. Legislation has played a significant role with the introduction of the *Smoke-free Environment Act* in September 2000, and in subsequent initiatives between government and the hospitality industry to extend non-smoking areas in licensed premises. While progress to a total ban in licensed premises may not have been as rapid as that witnessed in countries such as Ireland and New Zealand,[3,4] the NSW Government has made a commitment to phase out smoking indoors in licensed premises by 2007.[5]

Public opinion supports this move; a recent community survey found that 92 per cent of respondents support some form of smoking restriction in licensed clubs, 90 per cent support partial smoking restriction in hotels, and 66.8 per cent of respondents support a total ban on smoking in pubs and clubs.[6] This is consistent with the findings of a survey commissioned by NSW Health, which indicated 66.8 per cent support for a total ban in gaming areas, 58.9 per cent for a total ban in registered clubs, and 54.3 per cent support for a total ban in pubs and bars and nightclubs.[7]

Reducing children's exposure to the harmful effects of environmental tobacco smoke has also been a priority under the current Tobacco Action Plan. In 2001, a campaign was launched to communicate to parents and carers who smoke, the simple message that both the car and home should be smoke-free zones. Evaluation of the first phase of this campaign, which was conducted between September and November 2002, showed that among the target group there was a 10.1 per cent increase in smoke-free cars and a 21.5 per cent increase in smoke-free homes.[8]

Reducing the number of patients, staff and visitors exposed to environmental tobacco smoke, when in contact with NSW Health facilities, has also been an area of significant policy work in the last three years. With over 100,000 staff members who work either in or with NSW Health, and with over 1,300 health facilities across the state, development of the NSW Health Smoke-free Workplace policy has involved significant consultation and negotiation with the area health services, unions, and representative bodies. This policy is currently at stage three of its implementation, which means that smoking is only allowed in outdoor designated smoking areas. Progression by area health services to stage four—smoke free campuses—is being undertaken.

ENFORCING TOBACCO LEGISLATION

Apart from the *Smoke-free Environment Act*, there are several sections in the *NSW Public Health Act 1991* that relate directly to limitations on the sale and promotion of tobacco products in the community. Regional public health units are responsible for testing compliance with these laws, and while NSW has been considered a national leader in developing strategies to monitor compliance, these efforts have been even further enhanced under the current Tobacco Action Plan. Strategies have included a more systematic approach to monitoring requirements, improved support for environmental health officers to attend training, development of a policy and procedure manual, and provision of additional educational material for tobacco retailers and their employees. As a result, statewide compliance rates have remained relatively high; for example, for the 2003–04 period there was 86 per cent compliance with sales to minors legislation and 82 per cent compliance with advertising restrictions.[9]

Prosecution is also an important tool in promoting compliance with legislation and while onus rests principally with educating retailers and proprietors of their obligations, NSW Health does instigate legal action if continual breaches are identified. Between July 2000 and December 2003 there have been 66 successful

prosecutions: two for advertising breaches; five for failure to display health warnings; one for a breach of the *Smoke-free Environment Act*; and 58 for offences under sales to minors legislation. Perhaps the most widely reported of these was the successful prosecution of Phillip Morris and Wavesnet, a web-based event promoter, for offences contrary to section 61 B(1) of the *NSW Public Health Act 1991*, for displaying a tobacco advertisement in a public place. Both Phillip Morris and Wavesnet pleaded guilty to their charges and were convicted and fined accordingly. This ruling is the first time a tobacco firm has ever been successfully prosecuted in Australia for breaching advertising laws.

ASSISTANCE TO HELP PEOPLE QUIT SMOKING

Enhancing support services to assist people to quit smoking has been an area of intensive area of work under the Tobacco Action Plan. In mid-2002, funding of the NSW *Quitline* was substantially increased to provide a 'best practice' telephone counselling service, incorporating a callback option of up to six calls during a person's attempt to quit, provision of written material within 24 hours of all calls, and referral to relevant health agencies and/or health professionals.

To complement this service, particularly for smokers who might prefer a more anonymous form of advice, a web-based smoking program called *Quit-online* has been developed and is currently being tested among staff in all area health services across the State. Depending on the results of an evaluation due in July 2005, *Quit-online* will ultimately be offered to the general public.

Development of resources in the area of cessation has also included the production and dissemination of the highly-popular *Quit Stories* video. This video features personal accounts from 13 staff of NSW Health who have quit smoking, including why they gave up smoking and the strategies they have used to remain a non-smoker. A second video explaining the use and benefits of Nicotine Replacement Therapy, released under the NSW Health Smart series, was recently launched as part of World No Tobacco Day activities.

Increasing the range and number of health professionals with the skills to assist people to quit has also been an important focus. The aim of this strategy has been to provide more front line health workers with skills in brief intervention counselling and with knowledge to appropriately care for nicotine dependent clients and patients. In 2002 a resource entitled *Guide for the management of nicotine dependent inpatients* was developed to assist health workers effectively treat nicotine dependent patients admitted to NSW Health facilities.[10] This resource has been widely disseminated and has since been adapted for use interstate. Competency standards for the provision of smoking cessation have also been developed and included in the Australian National Training Authority's training package in population health, which is expected to be endorsed in 2004. Training materials are currently being developed to implement these competency standards, which will form the basis of an accreditation scheme in smoking cessation practice for health professionals in NSW.

Providing resources to population groups where smoking prevalence is high has also received attention. At a forum held in Sydney in 2002, it was determined that the first priority to address smoking among Aboriginal and Torres Strait Islander people in NSW was to increase the capacity and skills of health workers to deliver best practice interventions for smoking cessation. An Aboriginal advisory committee was established and the first task of this committee has been to provide assistance and direction in the development of a cessation training manual for Aboriginal health workers and those who work predominantly with Aboriginal communities throughout NSW. The resources that are being developed for this project include a facilitator's training manual, a video demonstrating brief motivational interviewing, overheads, a slide presentation, a workers' handbook and desk tool, and pamphlets and promotional material for clients. The resources will be completed and distributed to all relevant organisations in NSW in late 2004. It is then anticipated that a 'train-the-trainer' module will be developed to build the capacity of Aboriginal health workers to deliver training, enhancing the sustainability of the project, and ensuring that each Aboriginal medical service or other health service working with Aboriginal people has a worker who can train and support other staff.

Services to culturally- and linguistically-diverse communities have involved the piloting of a five-week *Quitline* service as part of World No Tobacco Day activities in 2001 and 2002. In 2001, this service was offered to the Arabic and Chinese speaking communities, and in 2002 it was extended to the Vietnamese and Turkish speaking communities. Implementation of the service consisted of a training program for bilingual telephone counsellors, an electronic and print media campaign, and comprehensive evaluation. In both years the majority of callers were male, aged between 36–45 years of age and of Chinese origin. Piloting these services provided insights into how to structure an ongoing service for these communities and these are currently being incorporated into the multicultural phone lines soon to be offered through the NSW *Quitline*.

AWARENESS AND EDUCATION

Since 1998, smoking rates in NSW have steadily declined, as described in the article by Mitchell and Sanders in this issue of the Bulletin. Current NSW figures show that over the last three years, among those over the age of 16 years, smoking prevalence rates have fallen from 23.7 per cent to 21.4 per cent.[11] Campaign and educational activities, both at the national and state levels, have contributed to this and there has been a concerted effort to target available

resources towards population groups where smoking levels are high.

Youth 12–17 years of age have also been a priority, and strategies to reach this group have included a junior high school program known as *Smoking: Don't be a Sucker*; annual sponsorship of the Rock Eisteddfod Challenge; cinema advertising of *Every Cigarette Is Doing You Damage*, revoiced by a popular young television personality; participation in the National Youth Tobacco-free Day; and support of the Commonwealth initiative *Smoke Free Fashion*.

THE VALUE OF PARTNERSHIPS AND ADVOCACY

Achievements in tobacco control are only reached in partnership with strong allies. In NSW these include dedicated individuals as well as non-government organisations and medical associations. In recognition of the contribution these stakeholders make to tobacco control, a specific aim of the Tobacco Action Plan has been to strengthen the capacity of health workers at a local level to engage and participate in tobacco control activities. The principal strategy adopted to achieve this has been through the establishment of the NSW Tobacco Control Network. With over 50 members from around the state, this forum provides an avenue for consultation on tobacco issues; an opportunity to collaborate and coordinate on the development of regional tobacco action plans; and scope to promote best practice through information sharing, professional development and better utilisation of existing resources. This network convenes twice a year, and once a year a workshop is held covering an issue of topical interest in tobacco control. An email list-server keeps members in contact and briefed of ongoing tobacco control issues.

Other strategies to broaden ownership and responsibility for tobacco control issues have included the establishment of a Tobacco Legislative Compliance Group made up of the directors of public health and environmental health officers, who advise the Chief Health Officer on strategic and practical directions for the enforcement of tobacco legislation. The Smoke-free Workplace Policy Advisory group provides direction on the implementation of smoke-free policy in health campuses across the state, and the Aboriginal and Torres Strait Islander Tobacco Prevention Project Steering committee oversees and advises on the development and implementation of strategies to address tobacco-related harm among Aboriginal and Torres Strait Islander people in NSW. These networks and working groups have been a powerful force in strengthening and extending the strategic directions of the Tobacco Action Plan, and have also ensured that momentum on key issues such as smoke-free environments and compliance with tobacco legislation is sustained.

CONCLUSION

Implementation of the *NSW Tobacco Action Plan 2001–2004* has shown that the strategic use of policies and interventions can make a difference. Actions arising from this plan have made a significant contribution towards the reduction of smoking in indoor areas; raised awareness about the importance of tailoring strategies to assist smokers to quit; and broadened the constituency for tobacco control among health workers and others. Challenges remain, however; particularly for improving the way we address the needs of specific groups in the population where smoking rates remain high (see Box). Scope exists to develop more innovative social marketing strategies, especially as the use of alternate forms of media such as the internet and text messaging take hold. Legislative options for further reform include a total ban on smoking in all workplaces, tighter controls on non-traditional advertising, and greater regulation of the display and purchase of tobacco products at point-of-sale. Discussing strategies to address these issues will be the starting point for development of the *NSW Tobacco Action Plan 2005–2008*, which will be commenced later in this year.

NSW TOBACCO ACTION PLAN 2001–2004: KEY CHALLENGES AHEAD

- Broaden NSW smoke-free legislation to cover all indoor workplaces in NSW.
- Amend existing NSW tobacco control legislation to: ban 'mobile' tobacco sellers from family and youth events; require tobacco products to be stored out of sight (information about the types and prices of tobacco products available by means of regulated signage); review definitions of tobacco promotion to ensure it covers more subliminal forms of tobacco advertising, such as internet promotions and product placement in film and television.
- Continue to enhance support for those wishing to quit smoking by ensuring appropriate access to high quality information and services.
- Increase expenditure on social marketing campaigns to complement gains already being achieved through regulation and legislation. These strategies will need to be cognisant of the diversity of advertising and communication avenues now on offer through new and emerging technology.

Copies of the *NSW Tobacco Action Plan 2005–2008* can be obtained from the NSW Department of Health website at **www.health.nsw.gov.au/pubs/t/pdf/tobac_plan.pdf**.

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MANAGING NICOTINE DEPENDENCE IN NSW HOSPITAL PATIENTS

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BACKGROUND

In recognition of the adverse consequences of tobacco use on patient health,[1] the financial burden of smoking on the health care system,[2] and the role of health services in the treatment of tobacco users (to enable their cessation of smoking), the NSW Department of Health has implemented a number of smoking cessation initiatives in recent years. Among these are the 1999 NSW Smoke-free Workplace Policy, which requires all area health service facilities and campuses to become smoke-free,[3] and the development and release of the *Guide for the Management of Nicotine Dependent Inpatients* in 2002.[4] This article describes the implications of the NSW Smoke-free Workplace Policy on hospitals and discusses the development and utility of the Guide in the context of the ongoing challenge of improving care for inpatients who are dependent on nicotine.

THE PROVISION OF SUPPORT TO SMOKERS BY HOSPITAL STAFF

There is little research in Australia that has investigated tobacco use by patients during their hospitalisation and the support provided by hospital staff to assist patients to abstain from smoking. Evidence suggests that while approximately 20–35 per cent of hospital patients are smokers,[5,6] the provision of support for smokers within Australian hospitals is limited. A small cohort study by Feeney et al. of 60 inpatients who were smokers from medical or surgical wards found that 20 per cent of these patients reported that they had been offered assistance with quitting tobacco smoking by medical staff.[7] Further, a larger study of over 300 direct care nurses from six hospitals in NSW indicated that while the majority of staff felt that providing smoking cessation advice and assistance to patients was part of their clinical role, they lacked knowledge of effective cessation strategies.[8] The study found that only 21 per cent of staff felt competent to discuss cessation with patients. Following the introduction of the NSW Smoke-free Workplace Policy, the only published research evaluating tobacco use and the provision of smoking cessation support within NSW hospitals is a study by Boomer and Rissel.[9] This study recruited self-reported smokers during attendance at pre-admission clinics at two large hospitals within the Central Sydney Area Health Service. Sixty-eight smokers were followed up after discharge. Reported assistance with smoking abstinence ranged from 17–38 per cent between

hospitals. While 19 per cent reported smoking while they were hospitalised, none of the 68 patients were offered Nicotine Replacement Therapy during their hospital stay.

GUIDE FOR THE MANAGEMENT OF NICOTINE DEPENDENT INPATIENTS

Development

Clinical guidelines have been found to be an important step in changing clinical practice,[10] and are appropriate to assist with the delivery of smoking cessation advice to patients. Within the context of the NSW Smoke-free Workplace Policy, NSW Health developed the *Guide for the Management of Nicotine Dependent Inpatients*.[4] The Guide synthesised the literature describing best practice into a practical, evidence-based framework to enable hospital-based health professionals to manage inpatient nicotine dependence and to encourage permanent smoking cessation. Table 1 outlines the strategies employed during the development of the Guide to enhance local ownership, ensure that the Guide was professionally credible, and to facilitate its implementation. These strategies have been found to be effective,[11] and are similar to those used during the development of other international 'best practice' guidelines.[12,13] The Guide was officially launched and disseminated to the chief executive officers of the area health services in 2002.

Recommendations

A summary of the recommended steps in the management of nicotine dependent patients is presented in Table 2. The Guide specifies that patients who smoke are identified, informed of the Smoke-free Workplace Policy, and advised of their options for managing their nicotine withdrawal during their stay in hospital.[4] The primary strategy presented to manage nicotine dependence is through the prescription of Nicotine Replacement Therapy. Nicotine Replacement Therapy relieves the withdrawal symptoms associated with cessation,[14] and has been consistently found to double the long-term quit rates of patients.[12,15] Patients who are able to abstain from smoking and do not experience withdrawal symptoms during their hospital stay are known to be more likely to remain abstinent after discharge,[16] emphasising the

TABLE 1

STRATEGIES EMPLOYED DURING THE DEVELOPMENT OF THE GUIDE FOR THE MANAGEMENT OF NICOTINE DEPENDENT INPATIENTS

- Formation of a 10 member advisory group with expert representation from various relevant health department disciplines and non-government organisations.
- Review of existing scientific literature and clinical practice guidelines.
- Qualitative research with two area health services.
- Dissemination of preliminary versions of the Guide to experts, professional bodies and each area health service for comment, support and endorsement.
- Revise Guide content in response to feedback.

Source: Tobacco and Health Branch, NSW Department of Health.

TABLE 2

RECOMMENDED STEPS IN THE MANAGEMENT OF NICOTINE DEPENDENT INPATIENTS

Recommended steps	Recommended actions
1. Identify tobacco users on admission	• Ex-smokers: Encourage continued abstinence • Daily or occasional smokers: Follow steps 2–9.
2. Manage inpatient nicotine withdrawal	• Inform patient of the NSW Health Smoke-free Workplace Policy • Specify treatment contraindications if they leave the ward–facility to smoke • Discuss options for the management of nicotine dependence: abstinence; abstinence plus Nicotine Replacement Therapy if not contraindicated; smoking offsite or in a designated area.
3. Prescribe Nicotine Replacement Therapy	• Arrange prescription of Nicotine Replacement Therapy • Record: Nicotine Replacement Therapy type and dose on medications chart; 'nicotine dependent' in patient notes.
4. Monitor patient withdrawal symptoms	• Review Nicotine Replacement Therapy dose and/or product if patient experiences withdrawal symptoms.
5. Discharge	• Encourage future quit attempt for patients who plan to resume smoking after discharge • For patients who do not plan to smoke after discharge: arrange three-day post discharge NRT; include treatment summary in discharge plan; advise patient seek support from general practitioner or pharmacist or *Quitline*.

Source: *Guide for the management of nicotine dependent patients*. Sydney: NSW Department of Health, 2002.[4]

importance of successful inpatient management. In recognition of the potential for relapse during the post discharge period,[17,18] for patients interested in quitting, the Guide recommends that hospital staff provide patients with: a three-day supply of Nicotine Replacement Therapy; encourage the patient to seek support after their discharge; and inlcude a summary of their treatment in the discharge plan.[4]

Benefits of implementation

The implementation of the Guide has a number of potential benefits for hospitals. Successful treatment of nicotine withdrawal will reduce the need for hospitalised smokers to leave the site to smoke when a facility or campus is completely smoke-free. The provision of treatment for nicotine dependence as detailed in the Guide can also be expected to contribute to reductions in the prevalence of tobacco use among the population and, potentially, reductions in the utilisation of health services.[2,12] The provision of smoking cessation interventions is cost-effective and the net benefit–cost ratio of programs to reduce tobacco consumption is estimated to be 50:1.[27] Patients who quit smoking have improved immune functioning, a reduced risk of complications, and are less likely to be re-admitted.[6,19,20] Finally, implementation of the Guide in hospitals will provide a healthier environment for staff, patients, and visitors, and delivers a clear message to the community regarding the health consequences of smoking.

Challenges for improving treatment of nicotine dependence in NSW hospitals

Despite the dissemination of the Guide, hospitals are likely to face ongoing challenges in improving the care offered to nicotine dependent patients.[21] Change in clinical practice is best achieved through the use of strategies that are tailored to overcome barriers within the local setting.[22] Consequently, while providing specific recommen-dations, the Guide is generic and encourages local adaptation. Recent reviews of the literature also suggest that achieving effective clinical practice will require the use of a combination of strategies including staff training, environmental supports such as prompts or reminders and performance targets, and feedback.[23,24,25] Hospital-wide improvements to the management of nicotine dependence should also have high level support and endorsement and must be institutionalised in order to be sustainable.[12,26]

Currently in NSW, area health services implement smoking cessation strategies from within existing resources. To facilitate the Guide's implementation, the NSW Department of Health has funded, through its Health Promotion Demonstration Research Scheme, a project that will evaluate the success of an intervention to encourage adoption of the recommendations in the Guide by two hospitals, one each in the Hunter and Mid West Area Health Services. The NSW Department of Health will also provide area health services with ongoing support to enhance delivery of smoking cessation within the NSW health system. Recently-developed national competency standards for population health include two elective units of competency in evidence-based best practice in the delivery of smoking cessation. In 2004, the Tobacco and Health Branch will work with area health services and *Quitline* staff to develop a program of training and accreditation for health professionals in nicotine dependence and smoking cessation. The training will be delivered through a combination of face-to-face training courses; online resources; and training materials including a handbook, video, and fact sheets.

Given the limited available evidence, a need has been established for more comprehensive research into the management of nicotine dependent patients in NSW and Australian hospitals. At the time of the release of the Guide, a large cross-sectional survey was undertaken of senior managers from publicly-funded NSW hospitals with inpatient facilities. The survey required managers to report, via questionnaire, current practices within their hospital that support the appropriate management of inpatients who are smokers. Results from the study are currently being finalised and are expected to be available in 2004. In addition to the survey, a follow-up statewide survey is being considered to assess compliance with the Guide by hospitals.

CONCLUSION

While change in clinical practice is difficult to achieve, particularly within the hospital setting, the *Guide for the Management of Nicotine Dependent Inpatients* is a valuable and practical resource for hospitals in the management of tobacco users in a smoke-free environment. Successful implementation of the Guide will not only reduce the distress of inpatients who are smokers but is likely to contribute to population health outcomes through long-term smoking cessation.

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LITIGATION AND ITS CURRENT ROLE IN TOBACCO REGULATION IN AUSTRALIA

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INTRODUCTION

Litigation plays an important role in tobacco control, both in Australia and overseas. Though it is often portrayed as being about no more than a battle between a plaintiff and a defendant over money, litigation in fact performs a major regulatory function.

While litigation can take many forms—such as a damages claim by a private individual, a criminal prosecution by the state, or enforcement of legislation by a statutory agency such as the Australian Competition and Consumer Commission—a court will only find for a plaintiff if a defendant is found to have acted unlawfully or breached a legal obligation.

Successful legal action brings the defendant to account, and provides the opportunity for remedy, whether in the form of compensation to a person who has suffered, punishment of the wrongdoer, or the granting of injunctions (such as an order that a person or corporation refrain from certain conduct or that it undertake corrective action to set its wrongdoing right). Ultimately, it is litigation, or the threat of litigation, that compels individuals and corporations to comply with their legal obligations. This article summarises the current state of tobacco litigation in Australia as of January 2004.

ENVIRONMENTAL TOBACCO SMOKE LITIGATION

Litigation over the harm caused by environmental tobacco smoke has been an important catalyst in the move towards smoke-free venues. Successful cases include an action against the Tobacco Institute of Australia for misleading and deceptive conduct by the publication of an advertisement about environmental tobacco smoke,[1] and claims by individuals against employers and occupiers of public venues in negligence (that is, breaches of duty of care): under occupiers' liability legislation; under anti-discrimination legislation; for breach of contract; and under workers compensation legislation.[2] News and other coverage of these cases has been significant in publicising the dangers of environmental tobacco smoke, in reminding employers and occupiers of public venues of their obligations to provide safe and healthy workplaces and venues, and in bringing powerful insurance considerations into play for employers and occupiers of public venues.

THE McCABE CASE

In Australia, litigation against the tobacco industry over the harm suffered by smokers is still in its infancy. The best-known case, *McCabe v. British American Tobacco Australia*, which has received international attention through its revelations of document destruction by British American Tobacco Australia, is currently before the Supreme Court of Victoria.[3]

The plaintiff in the McCabe case, Rolah McCabe, was a 51 year-old woman dying of lung cancer. She sued British American Tobacco Australia for negligence, alleging that it had—while knowing that cigarettes were addictive and harmful to health: targeted children in its advertising; taken no reasonable steps to reduce or eliminate the risks of addiction and disease; and ignored or publicly disparaged research results that demonstrated the harms of smoking.

In March 2002, the trial judge, Justice Eames, struck out British American Tobacco Australia's defence to the action and ordered judgment for Ms McCabe, after finding that the process of document discovery was subverted by the defendant and its solicitor with the deliberate intention of denying a fair trial to the plaintiff.[3] According to Justice Eames, this subversion involved: the deliberate destruction of thousands of relevant documents to keep them from prospective plaintiffs such as Ms McCabe; misleading the court about what had become of the missing documents; and the ongoing 'warehousing' of documents to keep them from the court. Justice Eames sent the case to trial before a jury solely on the issue of quantum of damages. The jury awarded Ms McCabe $700,000.

In December 2002, a few months after Ms McCabe's death, the Victorian Court of Appeal overturned Justice Eames' decision and sent the case back to trial. The Court of Appeal overturned a number of Justice Eames' findings of fact, including those about the purpose of British American Tobacco Australia's document destruction policies and practices.[3] There was no dispute before the Court of Appeal that British American Tobacco Australia had destroyed thousands of documents at a time when it anticipated litigation of the sort brought by Ms McCabe, but the Court of Appeal established a new legal test to determine the significance of the destruction. On 3 October 2003, the High Court of Australia refused Ms McCabe's estate special leave to appeal against the decision of the Victorian Court of Appeal. It also refused the applications of the New South Wales and Victorian Attorneys-General to intervene in the High Court application. This means that the case is now back before

the Victorian Supreme Court for hearing. If they choose to proceed with the case, Ms McCabe's family can either pursue the negligence action with a full hearing of the issues, or make another 'strike out' application based on document destruction. However they choose to proceed, the family faces a substantial order for costs as a result of the decision of the Victorian Court of Appeal.

The McCabe case has had major implications. The NSW Government has addressed issues of lawyers' involvement in document destruction in the *NSW Legal Profession Regulation 2002*.[4] The Victorian Attorney-General is investigating whether legislation is required to deal with circumstances of the kind revealed in the McCabe case, in light of the effect that document destruction can have on the administration of justice. In addition, the United States Department of Justice has incorporated the revelation of document destruction into its litigation against the tobacco industry within the United States. It has asked Mr David Schechter, a former President of British American Tobacco (United States), questions under oath about document destruction.[5] It is presently seeking to have Mr Nicholas Cannar, a former lawyer for British American Tobacco and now a Sydney resident, answer questions about British American Tobacco's international document destruction policies and practices. The United States Department of Justice's application to require Mr Cannar to answer questions was granted by the Supreme Court of New South Wales in October 2003.[6] If the United States Department of Justice continues to pursue the document destruction issues in its litigation, it is likely that more of the document destruction story will unravel, with consequences for future personal injury cases both in Australia and overseas.

In addition to the consequences for civil litigation, there is also the potential for criminal charges for offences such as attempting to pervert the course of justice.

THE CAUVIN CASE

Another case currently underway against the tobacco industry in Australia is *Cauvin v. Philip Morris Limited and Others* in the Supreme Court of New South Wales. The plaintiff, Myriam Cauvin, is a 41 year-old woman who contracted emphysema and required lung transplant surgery. Ms Cauvin has sued Philip Morris and British American Tobacco for misleading and deceptive and unconscionable conduct under the *Commonwealth Trade Practices Act 1974* and the *NSW Fair Trading Act 1987*.

Ms Cauvin is not only seeking compensation. She is also seeking: that certain documents be disclosed to public health or regulatory authorities; that corrective statements to be made concerning the health risks and addictiveness of smoking; funding of public education and smoking cessation programs; and establishment of a fund to provide compensation to other people who are likely to suffer as a result of the tobacco industry's conduct, including the cost of medical treatment.

Ms Cauvin claims that Philip Morris and British American Tobacco engaged in: conduct to promote the benefits and pleasures of smoking and deny or minimise the risks of addiction and disease, including the advertising, marketing and promotion of cigarettes as enhancing the life and enjoyment of consumers; promoting certain brands of cigarettes, such as light, mild, and low-tar, as less harmful than others; making public statements denying the existence of reliable evidence concerning the health risks and addictiveness of smoking; lobbying the federal and state governments to desist from taking actions likely to be effective in reducing smoking related disease; and intentionally concealing knowledge of the association between smoking and nicotine addiction and smoking and disease.[7]

CONCLUSION

Because of differences between the legal systems of Australia and the United States, Australia is unlikely to see litigation against the tobacco industry on the scale brought in the United States. Nonetheless, litigation will continue to be an important strategy to reduce the harm caused by smoking. This should not be surprising. Every day, in courtrooms around the world, individuals or corporations who have acted unlawfully or failed to discharge their legal obligations are brought to account for their conduct. The process of bringing them to account allows society to obtain appropriate remedies, and plays an important role in influencing, changing, and ending conduct that causes harm. In the case of tobacco, public health and justice considerations can come together in the courtroom, with results that significantly further the interests of both.

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PROMOTING TOBACCO TO THE YOUNG IN THE AGE OF ADVERTISING BANS

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Most forms of tobacco advertising have been banned in Australia since the enactment of the *Tobacco Advertising Prohibition Act 1992*. The tobacco industry has often sought to undermine the intent of the Act.[1] This article describes a number of non-traditional promotional strategies adopted by the tobacco industry, to target the young in recent years, and suggests possible responses to counter these strategies.

BACKGROUND

With around one-fifth of the adult population smoking daily,[2] and around one-third of 17 year-old students describing themselves as current smokers,[3] tobacco use remains a serious public health problem in Australia.

Publicly, the tobacco industry proclaims opposition to youth smoking. Tobacco company websites contain many announcements that children should not smoke.[4,5,6] However, the public release of millions of pages of previously internal tobacco industry documents, via whistle-blowers and the 1998 Master Settlement Agreement in the United States, has shown that the industry, with full knowledge that 80 per cent of smokers start as children or adolescents,[7] has long considered the recruitment of under 18 year-olds as critical to its future viability.[8] The industry documents also show that since the 1980s the tobacco industry has considered young adults to be of great commercial interest.[9] In 1989, Philip Morris International went so far as to refer to 18–25 year-olds as the company's 'key target group'.[9] As argued by Katz et al., there is still opportunity to influence young adults to begin or continue smoking after the age of 18.[10] Further, as Cummings et al. suggest, 'teens aspire to be older and more mature than they are', so recruiting young adults 'to smoke your cigarette brand is perhaps the best way to try to communicate that your brand is the in-brand'.[8] Consequently, the industry began to rely extensively on bars and nightclubs as one of its strategies for targeting the young adult market.[10] Tobacco-related sales promotions in bars and nightclubs have been common in Australia in recent years.[11]

Following are examples of non-traditional tobacco promotions that target these younger segments of the market.

NON-TRADITIONAL TOBACCO PROMOTIONS

Forging links with fashion

In 2000 and 2001, Philip Morris sponsored the now infamous 'Glisten' series of internet-promoted fashion events in Australia. These events targeted young women and displayed advertisements for a Philip Morris brand. The events included contests for student fashion designers, co-judged by high profile designers. Though entry was supposedly restricted to the over 18 year-olds, a media reporter posing as a 17 year-old girl obtained a free invitation to a 'Glisten' party by accessing a website, Wavesnet, established by the then Philip Morris advertising agency.[12] The promotion was the subject of a successful NSW Department of Health prosecution of Philip Morris and the website for breaches of the *NSW Public Health Act 1991*.

Tobacco promotions in bars and nightclubs have also served the fashion-tobacco nexus.[11] Could there be any better endorsement for tobacco use among the young than for smoking to be seen as a key element in fashion 'cool'?

Publications

Despite the prohibition on tobacco advertising in the print media, tobacco promotion continues through this medium. Action on Smoking and Health (ASH) has requested that the Commonwealth Department of Health and Ageing investigate potential breaches under the *Tobacco Advertising Prohibition Act 1992* by two publications in 2003, one featuring a cover shot of an actor smoking a cigarette, and another containing a model lighting a cigarette with two clearly identifiable cigarette packets at her side with an accompanying caption 'Curiously Strong Allure'.[13]

Music festivals

During the summer of 2002–2003, the curiosity-generating technique of 'buzz marketing' was employed to promote tobacco at youth-oriented music festivals throughout Australia. For example, the Big Day Out program guide contained a cryptic double-page advertisement for something called Discovery World Air (DWA). The advertisement, captioned Length Matters, featured a youth eating a hot dog and wearing a DWA cap and shirt. However, if patrons went to the DWA booth at the festival they found two glamorous young women selling a brand of cigarettes for a tobacco company.[14] DWA booths also appeared at other major youth-oriented music events that summer, including Homebake and Livid.

Reeling them in: Smoking in film

Film is arguably the most influential medium among the young. There is strong evidence that seeing smoking in film encourages children to smoke. One study found that non-smoking teenagers whose favourite film stars smoked on screen are up to 16 times more likely to view smoking favourably.[15] Film producers and actors have been paid large sums to feature or use tobacco in popular films, especially those films likely to be seen by 'new smokers' (that is, young people). The tobacco industry has long recognised the power of such product placement. As

quoted in one particular document from a tobacco company archive: 'Film is better than any commercial that has been run on television or in any magazine because the audience is totally unaware of any sponsor involvement'.[16]

In the United States, despite a 1989 tobacco industry commitment to a voluntary ban on product placement in films, the frequency of placement has increased. Surveys show more smoking in films in 2000 than in the 1960s, featuring in nine out of 10 Hollywood films.[17] In the 13 top-grossing films of 1999–2000 screened in Australia, which are popular among teenagers:

- 62 per cent had at least one scene containing tobacco smoking;
- there was an average of four tobacco smoking scenes per film;
- there was a high percentage of visual smoking incidents connecting tobacco smoking with at least one positive attribute such as enjoyment, attractiveness, glamour, or power.[18]

COUNTERING NON-TRADITIONAL TOBACCO PROMOTION

'Like the Black Knight who fights on limbless in *Monty Python and the Holy Grail*, the cigarette industry never gives in.'[11] The apparent determination of the tobacco industry to undermine the spirit of legislation against tobacco promotion suggests policy-makers should adopt similar determination.

A strengthening of the *Tobacco Advertising Prohibition Act* is one approach strongly advocated within the health community. Ideally, the Act could be amended to prohibit the indirect non-traditional advertising described in this article.

One way of countering the effectiveness of tobacco promotions in NSW would be to amend the *Smoke-free Environment Act 2000* to remove exemptions applying to nightclubs and hotels. Tobacco promotions would be of little value in these venues if smoking was not allowed.

NSW does not currently have a system of licensing tobacco retailers. A system that prohibited mobile tobacco selling might contribute to the elimination of a range of non-traditional promotions disguised as sales rather than promotion.

Numerous strategies for countering the promotion of tobacco in film have been much debated within the tobacco control community. Two such strategies are the:

- application of Film and Television Classification Board Guidelines to give restricted classification to films deemed to promote smoking;
- screening of strong anti-tobacco advertisements before movies that promote smoking.

Opponents of the film classification option have argued that these classifications can play into the hands of the purveyors of the 'forbidden fruit' message. On the other hand, classification would allow parents concerned about smoking in film to make informed choices about the movies their children see. Also, film producers may baulk at including smoking if their otherwise G-rated movie is revised to PG, M or R, because these classifications could have serious effects on receipts at the box office.

Using the criterion of proven efficacy, however, the strategy most likely to reduce the influence of pro-smoking messages in film is the placement of strong anti-tobacco advertisements prior to the screening of such films.[19,20] This strategy can turn on-screen smoking from 'forbidden fruit' to 'tainted fruit' in the eyes of young viewers.[19]

CONCLUSION

The tobacco industry's current promotional strategies demonstrate its indifference to the spirit of the *Tobacco Advertising Prohibition Act* and similar legislation. If the industry is sincere in its claim that it does not want young people to smoke, it would not engage in these activities.

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THE 2004 UNITED STATES SURGEON GENERAL'S REPORT: *THE HEALTH CONSEQUENCES OF SMOKING*

The Surgeon General of the United States, Richard Carmona, recently launched the 28th Surgeon General's Report on Smoking and Health: *The Health Consequences of Smoking*.[1] The first Surgeon General's Report was published in 1964. These reports have been instrumental in providing evidence-based information regarding all aspects of tobacco-related harm to the global tobacco control community. Previous topics have included evidence relating to involuntary smoking (1986); nicotine addiction (1988); the health benefits of smoking cessation (1990); preventing tobacco use among young people (1994); and women and smoking (1980 and 2001).

The report *The Health Consequences of Smoking* concludes that smoking harms almost every organ in the body, causes many diseases, and reduces the health of smokers in general. It also confirms that quitting smoking has immediate as well as long-term benefits, by reducing risks for diseases caused by smoking and improving health in general. It states that for every premature death caused each year by smoking there are at least 20 smokers with a serious smoking-related illness.

Through a comprehensive literature review, the report has identified a substantial number of diseases caused by smoking that were not previously considered to be causally associated with smoking. These include abdominal aortic aneurysm, acute myeloid leukemia, cervical cancer, kidney cancer, pancreatic cancer, stomach cancer, periodontitis, pneumonia, and cataract.

The report describes the mechanisms by which smoking tobacco causes disease. Toxic ingredients in cigarette smoke travel throughout the body, causing damage in several different ways. Wherever blood travels in the body, the toxins from tobacco smoke also travel. Nicotine reaches the brain within 10 seconds after inhalation and has been found in every part of the body, including breast milk. Carbon monoxide binds to haemoglobin in red blood cells, reducing the load of oxygen that affected cells can carry. Carcinogens in tobacco smoke damage the genes that control the growth of cells, causing them to grow abnormally or to reproduce too rapidly. The carcinogen benzo(a)pyrene binds to cells in the airways and major organs of smokers.

Smoking affects the functioning of the immune system and increases the risk of respiratory and other infections. Tobacco smoke causes oxidative stress that mutates DNA, promotes atherosclerosis, and leads to chronic lung injury. Oxidative stress is thought to be the general mechanism behind the ageing process, which contributes to the development of cancer, cardiovascular disease, and chronic obstructive pulmonary disease.

The report *The Health Consequences of Smoking*, and all previous reports on smoking and health made by the United States Surgeon General, are available from the Centers for Disease Control website at **www.cdc.gov/tobacco/sgr/index.htm**. This website also contains several other documents drawn from the content of the 2004 report, including nine fact sheets, an interactive database of key articles, an interactive animation of health effects of smoking, a video link, and a booklet for consumers.

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THE IMPACT OF LOW-TAR CIGARETTES

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It seemed like a change for the best at the time. The change involved a progressive decrease, from the 1960s onwards, in the tar yield from cigarettes. The tar yield was readily measured using smoking machines. A firm basis existed for anticipating that a reduced yield of tar from cigarettes would result in a reduced incidence of lung cancer in people smoking them. So health authorities, including Cancer Councils in Australia, monitored the tar yield of cigarettes on the local market. In 1976, Wynder and Hoffman recorded that the average tar content of cigarettes in the United States fell from 31 to 24 mg per cigarette during the period 1958–1969.[1] However the prediction that smoking cigarettes with a reduced tar yield would result in a lower rate of lung cancer has not occurred. What went wrong? This article examines the development of 'low tar cigarettes', the physiology of nicotine dependence, the carcinogenic compounds contained in tobacco smoke and how these factors combine to ensure that smoking 'low tar cigarettes' does not result in a reduced risk of lung cancer.

REDUCING THE TAR PRODUCED BY A CIGARETTE

The mean tar yield, as measured by smoking machine, of cigarettes sold in Australia, the United States, and other developed countries has fallen since 1960. Initially, this was due to the introduction of filter cigarettes. A filter will reduce the tar yield as recorded by a smoking machine and will also reduce the amount of tar reaching a smoker. However, subsequent to the introduction of filters, other modifications to cigarette design to reduce tar yield have been made.

To justify labelling a cigarette as 'low tar' all that is required is that the tar yield is lower than that recorded using an unmodified cigarette. The product may be then labelled 'light' or 'mild'. In the United States, since the 1970s, particular cigarette brands have been aggressively promoted on the basis of their low (machine-measured) tar; indeed, there were 'tar wars'. One way to reduce the concentration of tar reaching a smoking machine is to place tiny holes in the cigarette paper just before the filter.

Smoking is addictive because nicotine is inhaled. The nicotine yield from a cigarette, again as measured by a smoking machine, is correlated with the tar yield. It is now clear that individuals experiencing reduced nicotine intake, compensate either consciously or subconsciously by adopting certain behaviours such as smoking more cigarettes, or inhaling more frequently, or inhaling more deeply. Also, a smoker's fingers may obstruct the ventilation holes. The result is that the amount of tar reaching the smoker may be unchanged.

Hence the tar content of cigarettes refers only to the yield of tar recorded by a smoking machine. A 'low tar cigarette' is *not* a cigarette that results in an individual smoking receiving lesser amounts of tar than would have been the case had some other cigarette been smoked, though this may be the consumer's understanding or intention. In order to make this matter clear, the lengthy term 'cigarettes with low machine-measured yields of tar and nicotine' is now used.[2] In this article the term 'low tar cigarette' will be used to mean a cigarette with a low machine-measured yield of tar.

DOES TAR MATTER?

Lung and other cancers caused by the inhalation of tobacco smoke are attributable to two classes of chemical carcinogen: polycyclic aromatic hydrocarbons and the nitroso derivatives of nicotine and related compounds.[3] Polycyclic aromatic hydrocarbons were initially recognised as the carcinogenic compounds in soot and tar, and are generated in the course of burning tobacco. These compounds are carcinogenic in experimental animals, causing a variety of cancers including lung cancer, and are present in the 'tar' component of tobacco smoke. For many years, polycyclic aromatic hydrocarbons were considered the primary carcinogens in tobacco smoke.

The nitroso derivatives of nicotine were investigated later. Nitroso derivatives of nicotine and nornicotine are present in tobacco; they are not formed as a result of combustion and account for cancer caused by chewing tobacco. These compounds cause lung cancer in experimental animals.

Hence the carcinogenic activity of tobacco smoke was initially identified with tar. Once the means were found to reduce tar yields, the opportunity was open to produce and market 'low tar cigarettes'. Against the background of low rates of cessation among young adults (specifically before the days of Nicotine Replacement Therapy), the development of 'low tar cigarettes' seemed a step in the right direction on the optimistic assumption that if the smoker must smoke then 'bad is better than worse' and 'low tar cigarettes will kill a smoker more slowly than high tar cigarettes'.

This optimism was misplaced. Two types of data provide the basis for this conclusion. First, there are physiological indicators of exposure. Blood and urinary levels of nicotine and related metabolites demonstrate that smokers of 'low tar cigarettes' do not experience a lesser dose of carcinogen. Second, consistent with exposure data, smoking 'low tar cigarettes' does not result in a reduced risk of lung cancer.

THE EXPOSURE CONSEQUENCES OF SMOKING LOW TAR CIGARETTES

The effect of compensatory smoking behaviours has been reviewed in a monograph produced by the National Cancer Institute of the United States.[2] Studies of subjects who smoked 'low tar cigarettes' support the idea that smokers regulate their intake of nicotine to sustain their addiction. Studies based on spontaneous brand switching to 'low tar cigarettes' suggest that there is no reduction in smoke intake per cigarette, and that any reductions that are seen in brand switchers depend on whether those individuals also reduce their cigarette consumption. Studies of smokers showed a weak relationship between machine-measured nicotine yield and the concentration of smokers' nicotine, carbon monoxide, or other physiological indicators.

The scenario concerning 'low tar cigarettes' suggests an 'all or nothing' maxim when it comes to the notion of modifying a smoker's exposure to tobacco-derived carcinogens. That is, there is no interim option between maintaining the habit and cessation. Even when complexities of different tar yields are set aside, the apparently reasonable presumption of reduced carcinogen exposure as a result of decreased cigarette consumption is not certain. Hecht et al. addressed the question of whether a reduction in the number of cigarettes smoked per day would decrease the carcinogen dose as indicated by urinary levels of nicotine-related metabolites.[4] They recorded statistically-significant reductions in such levels caused by reductions in smoking; however, the reductions were generally modest and sometimes transient, less than 30 of 102 subjects achieved a 50 per cent decrease, and this required a reduction of 70 per cent or more in the number of cigarettes smoked.

In short, there were superficial indications that reduced levels in exposure to tobacco-derived carcinogens might be achieved by turning to 'low tar cigarettes', or even by smoking fewer cigarettes. In practice, neither of these options result in the sought-after reduction in carcinogen exposure because of other considerations, including compensatory smoking behaviours.

THE DISEASE CONSEQUENCE OF SMOKING LOW TAR CIGARETTES

Having established that usage of 'low tar cigarettes' does not achieve a commensurate reduction in carcinogen intake, public health policy must address the fallacies inherent in the marketing of 'low tar cigarettes'. Of course, changes to the marketing of cigarettes has never been accomplished on the basis of reasonable inference. Hence, we must proceed to a separate level of enquiry to answer the question: is the usage of 'low tar cigarettes' associated with reduced incidence of attributable disease, specifically lung cancer?

Results from a recent study now indicate that the inferences made from exposure data have been realised. Harris et al. compared the risk of lung cancer in smokers of medium tar cigarettes with the risk in those who smoke low tar or very low tar cigarettes.[5] Compared to men who smoked medium tar cigarettes, there was no difference in the risk of lung cancer among men who smoked low tar or very low tar cigarettes. The same was seen for women. This study also found that current smokers, regardless of the tar level of their current brand of cigarettes, had substantially greater risks of lung cancer than those people who had never smoked or those who had quit smoking.

THE CAUSATION OF ADENOCARCINOMA OF THE LUNG BY LOW TAR CIGARETTES

In 1991, Devesa, Shaw and Blot initiated a registry-based study of lung cancer histology prompted by reports of a disproportionate increase in the incidence of adenocarcinoma of the lung: a scenario that they confirmed in white males that was possibly emerging in white women and also among both men and women of colour.[6] The phenomenon is well established. Thun et al. prefaced their study with the observation that adenocarcinoma of the lung, once considered minimally related to cigarette smoking, has become the most common type of lung cancer in the United States, and concluded that the change seems more consistently related to changes in smoking behaviour and cigarette design than with diagnostic advances.[7]

The generalisation that smoking causes lung cancer is not normally qualified by reference to the principal histological subtypes of lung cancer: adenocarcinoma, squamous cell carcinoma, and small cell carcinoma.[8] In brief, squamous cell carcinoma arises most frequently in the bronchi and is associated with squamous metaplasia (that is, loss of differentiated character by cells otherwise growing in sheets); adenocarcinoma tends to be peripheral in origin (arising close to the end of the bronchial tree) while small cell carcinoma is associated with a central endobrochial location.

Change in the relative incidence of adenocarcinoma is not restricted to the United States. In the Netherlands, the proportion of adenocarcinoma among men has been increasing since 1975 while survival has been decreasing; neither change is evident in women.[9] Of course, as is the case everywhere, the overwhelming majority of people diagnosed with lung cancer in the Netherlands are smokers. The Dutch investigators, noting various suggestions in the literature, postulate a role for the use of filter cigarettes, which were first introduced in the Netherlands in the 1960s. Thus reduced availability of nicotine, and compensatory 'deeper' inhalation may be credibly associated with increased amounts of polycyclic hydrocarbons and nitrosated nicotine derivatives

reaching the outer lung. It must be cautioned that simply because a hypothesis is intuitively attractive does not mean it is established.[10] However, public health action concerning the marketing and usage of low tar cigarettes need not wait upon the resolution of these mechanistic issues.

CONCLUSION

Low tar cigarettes don't work. Smoking them does not reduce the risk of lung cancer, and no basis exists for these cigarettes being recommended. On the contrary, smokers buying light or mild cigarettes have been misled and deceived if they buy these cigarettes in the hope of reducing their risk of lung cancer. This conclusion may be reached on the basis of exposure of smokers to carcinogens in tobacco smoke, and does not require documentation of the risk of disease among smokers of differing tobacco products. The case is made for a change in market practice, labelling, and the provision of health warnings.

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TOBACCO AND HEALTH FACT*SHEET*

LIGHT CIGARETTES

Many smokers believe that by switching to low tar, low nicotine, 'light' or 'mild' cigarettes they are smoking a less harmful cigarette.[1] Switching from a high tar to a low tar cigarette does not make smoking safer. The word 'light' in light cigarettes is basically a marketing strategy used by tobacco companies to address smokers' health concerns and make cigarettes appear safer.[2]

Information on cigarette packs about the amount of tar or nicotine is misleading. Some 'full-strength' brands have a declared yield of up to 16 milligrams (mg) of tar, while very low tar cigarettes may declare a yield as low as one mg of tar. However, when cigarettes are manufactured, a 'smoking' machine measures the tar and nicotine content of a cigarette. In most light cigarettes the tobacco is exactly the same as that in regular cigarettes, but ventilation holes are placed in the filter to draw in up to 80 per cent air when the cigarette is tested on a machine. Smokers under real smoking conditions do not smoke cigarettes in the same way that machines do.[2]

Nicotine is powerfully addictive and the smoker's brain seeks to ensure a desired level of nicotine is maintained in the blood. Smokers consequently adapt their smoking behaviour to ensure they inhale enough smoke to achieve a satisfactory nicotine 'hit'. When a smoker cuts down the number of cigarettes they smoke, or uses light cigarettes, they're likely to 'compensate' by taking more or deeper puffs, smoking the cigarette further down to the butt, smoking more cigarettes, holding the smoke in their lungs for a longer time, or by unwittingly blocking ventilation holes in the filter of light cigarettes with fingers, saliva or lips having experienced greater 'satisfaction' when doing so. By increasing their intake of nicotine, smokers also take in more tar.[2,3]

Compensatory smoking means that the inhaled smoke, tar and other cancer-causing chemicals may travel deeper into the smoker's airways and this practice may be associated with an increase in some forms of lung cancer.[2,,3] The risk of lung cancer is not reduced when people smoke medium, low, or very low tar cigarettes.[3] Tobacco company marketing has historically promoted lower tar cigarettes as an alternative to quitting in the context of health warnings about smoking. [4] Indeed, one prominent tobacco industry website states 'lower tar cigarettes should be seriously considered as having a role in reducing risks'.[5] It is a concern for health professionals that some smokers may believe they are reducing their risk of health problems by switching to 'light' cigarettes or by 'cutting down' and therefore may be less likely to make an attempt to quit smoking.[1]

It should be remembered that there is no such thing as a 'safe' cigarette or 'safe' smoking. Every cigarette is doing you damage. Even so called 'light' ones. The best thing a smoker can do for their health is to quit smoking for good.

If you would like to quit smoking contact the *Quitline* on 131 848, speak with your doctor or pharmacist, or visit the website **www.quitnow.info.au**.

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The Tobacco and Health Branch of the NSW Department of Health is developing a series of fact sheets for both consumers and health professionals on frequently asked questions regarding tobacco and health issues.

These fact sheets will be printed in future issues of the *NSW Public Health Bulletin* and a can also be accessed through the NSW Department of Health's website at **www.health.nsw.gov.au/public-health/health-promotion/tobacco/facts/index.html**.

Further fact sheets on tobacco and health issues are are available from the Centers for Disease Control website at **www.cdc.gov/tobacco/sgr/index.htm**.

NSW HEALTH
Working as a Team

CONTINUOUS NSW HEALTH SURVEY: QUARTERLY REPORT ON HEALTH STATUS, HEALTH BEHAVIOURS, AND RISK FACTORS

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Centre for Epidemiology and Research
NSW Department of Health

This is the second of a series of quarterly reports on the surveillance of the health status, health behaviours, and risk factors of the people of NSW, which will be produced from the Continuous NSW Health Survey. The first quarterly report covered the period March to December 2002. Ten indicators have been selected for inclusion in the quarterly report. These have been chosen either because they are of ongoing interest or because seasonal variation is possible (Figure 1). The Continuous NSW Health Survey is conducted by the Centre for Epidemiology and Research, through the Department of Health's computer-assisted telephone interviewing facility. The data described in this report are based on the respondents described in Table 1. Although prevalence estimates only are shown in the graphs, 95 per cent confidence intervals have been calculated and these are available on request from the NSW Health Survey Program.

SELF-RATED HEALTH

Self-rated health is believed to principally reflect physical problems and, to a lesser extent, health behaviours and mental health problems. Longitudinal studies have shown that self-rated health is a strong and independent predictor of subsequent illness and premature death.[1] In 2003, 80.8 per cent of NSW residents aged 16 years and over reported their health as being either 'excellent', 'very good', or 'good'. There was no significant difference in self-rated health between males (81.9 per cent) and female (79.8 per cent).

MOST PEOPLE CAN BE TRUSTED

Trust involves a willingness to take risks in a social context. This willingness is based on a confidence that others will respond as expected and will act in mutually supportive ways—or at least will not attend harm. In 2003, 69.6 per cent of NSW residents either 'agreed' or 'strongly agreed' that most people can be trusted. A significantly higher proportion of males (71.5 per cent) than females (67.9 per cent) agreed that most people can be trusted. For females, the proportion was significantly higher in 2003 than in 2002 (62.0 per cent).

ALCOHOL RISK DRINKING

Risk-drinking behaviour includes one or more of the following: consuming alcohol every day; consuming on average more than four (if male) or two (if female) standard drinks; or consuming more than six (if male) or four (if female) standard drinks on any one occasion or day.[2] In 2003, 35.7 per cent of residents reported undertaking risk-drinking behaviours. A significantly higher proportion of males (41.3 per cent) than females (30.3 per cent) reported risk-drinking behaviour.

CURRENT SMOKER

Current smoking includes 'daily' and 'occasional' smoking. In 2003, 22.5 per cent of respondents reported current smoking. A significantly higher proportion of males (25.0 per cent) than females (20.0 per cent) reported current smoking.

RECOMMENDED VEGETABLE INTAKE

The recommended daily intake of vegetables is four serves for females over 12 years of age, and for males 12–18 years of age and over 60 years of age. Five serves are

TABLE 1

RESPONDENTS AGED 16 YEARS AND OVER BY COLLECTION QUARTER

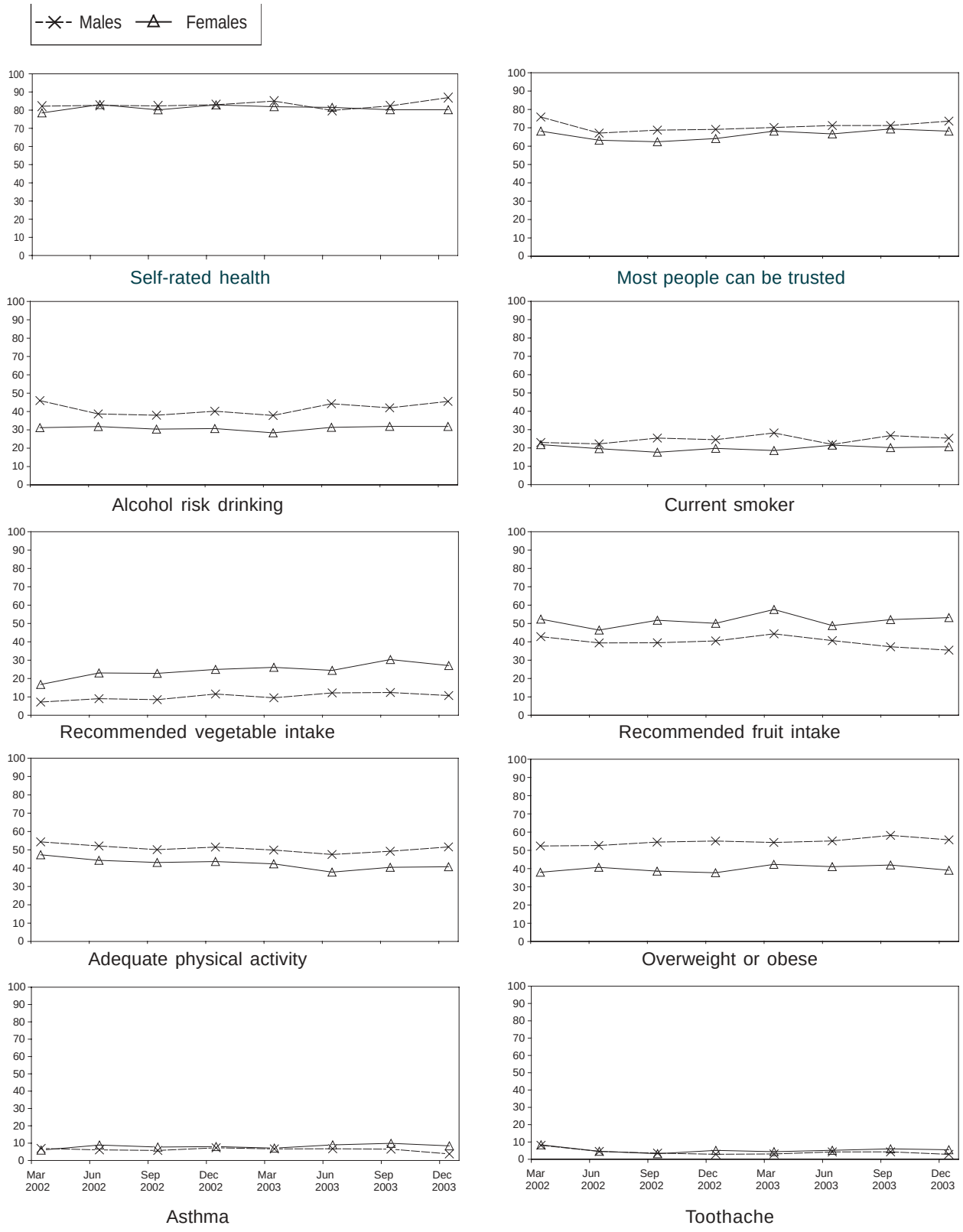
Quarter	Males	Females	Persons
February–March 2002	386	609	995
April–June 2002	1444	1993	3437
July–September 2002	1768	2345	4113
October–December 2002	1645	2266	3911
February–March 2003 *	1245	1903	3148
April–June 2003	1574	2191	3765
July–September 2003	1674	2317	3991
October–December 2003	803	1189	1992

* Data are not collected in January.

Source: NSW Health Survey Program, Centre for Epidemiology and Research, NSW Department of Health.

FIGURE 1

QUARTERLY REPORT OF SELECTED INDICATORS, CONTINUOUS NSW HEALTH SURVEY, MARCH 2002 TO DECEMBER 2003



Source: NSW Health Survey Program, Centre for Epidemiology and Research, NSW Department of Health.

recommended for males aged 19–60 years.[3] In 2003, 19.3 per cent of people consumed the recommended quantities of vegetables. A significantly higher proportion of females (26.7 per cent) than males (11.8 per cent) ate the recommended amount of vegetables. This is significantly higher than the proportion of females (22.9 per cent) and males (9.2 per cent) that consumed recommended quantities in 2002.

RECOMMENDED FRUIT INTAKE

The recommended daily fruit intake is three serves for people 12–18 years of age and two serves for people 19 years of age and over.[3] In 2003, 45.8 per cent of NSW residents consumed the recommended amount of fruit. A significantly greater proportion of females (52.4 per cent) than males (39.0 per cent) ate the recommended quantities of fruit.

ADEQUATE PHYSICAL ACTIVITY

To maintain health it is currently recommended that moderate intensity exercise is carried out on all or most days of the week for at least 30 minutes per day. 'Adequate' physical activity is defined as a total of 150 minutes per week over five separate occasions.[4] In 2003, 45.0 per cent of people undertook adequate physical activity. Significantly more males (49.5 per cent) than females (40.6 per cent) reported undertaking adequate physical activity.

OVERWEIGHT OR OBESE

Self-reported height and weight were used to estimate body mass index (BMI), which was used to classify respondents into body weight categories. A BMI of 25 to less than 30 is classified as overweight, and a BMI of equal to or greater than 30 as obese. In 2003, 48.3 per cent of people were classified as overweight or obese. Significantly more males (55.6 per cent) than females (41.0 per cent) were overweight or obese.

ASTHMA

In 2003, 11.0 per cent of people reported having current asthma. A significantly greater proportion of females (12.7 per cent) than males (9.2 per cent) reported having asthma. In 2003, 7.4 per cent of people reported having asthma symptoms or seeking management for asthma in the last four weeks**.**

TOOTHACHE

In 2003, 4.8 per cent of people had a toothache 'often' or 'very often' in the last four weeks. There was no significant difference in toothache rates between males (4.2 per cent) and females (5.4 per cent).

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CONTESTING FREEDOMS IN HEALTHCARE: THE 10TH CONFERENCE OF THE AUSTRALASIAN BIOETHICS ASSOCIATION, NOVEMBER 2004

The 10th Conference of the Australasian Bioethics Association, incorporating the 9th Conference of the Australian Institute of Health Law and Ethics, will be held on 12–14 November 2004 at the University of NSW. The theme of the Conference is *Contesting Freedoms in Healthcare: Policy, Practice, and Ethics*. The Conference program includes orations and public lectures by:

- Beth Wilson: 'Does shaming, naming and blaming improve the quality of our health services? Adversarial versus conciliatory approaches to investigating health complaints';
- Miles Little: 'Expressing freedom and taking liberties: The paradoxes of aberrant science';
- Max Charlesworth: 'Ethics and the Bioethics Project';
- Deborah Diniz: 'Reproductive rights and academic freedom: A view from the South'.

Further information about the 10th Conference of the Australasian Bioethics Association, *Contesting Freedoms in Healthcare* can be obtained from the website **www.australasian-bioethics.org.au/conference**.

The 7th World Congress of Bioethics is being held in parallel, on 9–12 November. Further information about that Congress can be found at **www.bioethicsworldcongress.com**.

COMMUNICABLE DISEASES REPORT, NSW, FOR MARCH AND APRIL 2004

For information on communicable diseases in New South Wales that is updated regularly, visit the website **www.health.nsw.gov.au** and click on **Infectious Diseases.**

TRENDS

Tables 2 and 3 and Figure 1 show reports of communicable disease received through to the end of April 2004 in NSW.

Notifications of **arboviruses** peaked in March, most of which were due to infection with Ross River virus, mainly from the rural north of the state. Notifications of **pertussis** continued to decline through autumn, after peaking in November 2003. No cases of **measles** were reported in April in NSW.

To the end of April, 40 cases of **meningococcal disease** have been reported in NSW, including one death (due to serogroup C disease). For the same period last year, 45 cases were reported, including one death.

Notifications of **cryptosporidiosis** are slowly declining after peaking in January. While no single source of infection has been identified, some cases may have been acquired from close contact with other infectious cases (including cases at childcare settings) and from swimming in contaminated swimming pools. Guidelines for the prevention of cryptosporidiosis in these settings are available from your local public health unit or from **www.health.nsw.gov.au/public-health/ehb/general/pools/publicpools.html**.

TWO CLUSTERS OF MEASLES LINKED TO OVERSEAS TRAVEL

In March, a mother and young child who reside in the Northern Rivers Area Health Service returned to Australia after acquiring measles while travelling in India. Their infection was investigated by staff from the Northern Rivers Public Health Unit (NRPHU), who assessed the child to have been in the highly infectious phase while returning home. The mother reported that she and the child had never received measles vaccine. Contacts at risk of infection in Australia included susceptible people who shared two flights to Brisbane, others at the airport, and the other patients and staff at the medical clinic attended by the child. In response, NSW Health issued a media release warning other travellers to be alert for signs of measles, and the airline company agreed to contact passengers on the flight to alert them of the risk of infection. The NRPHU traced other social and health care contacts of the cases and offered immunisation or immunoglobulin to those susceptible to infection.

Later in the month, South Eastern Sydney Public Health Unit (SESPHU) investigated the case of a young man who developed measles after returning from Japan. Before the onset of his rash, he attended a concert at a local club. The SESPHU traced close contacts at risk of infection, and issued local alerts to other patrons through the media and a sign at the club. Two weeks later, three secondary cases in young adults who had attended the same concert were reported by clinicians. The SESPHU found that these subsequent cases in turn had had large numbers of contacts while infectious, including guests at a wedding, participants in a multi-day bike race, work and social contacts, and other patients sharing medical waiting rooms. Large numbers of people were also potentially exposed via public transport and other public venues. A general media alert was issued.

Due mainly to high levels of immunisation in NSW, measles is now uncommon but intermittent outbreaks associated with overseas travellers still occur. Measles is highly infectious via airborne droplets and can be acquired just by being in the same room with an infected person. Measles infection can lead to serious complications including pneumonia and encephalitis.

Measles may one day be eliminated through high levels of community immunisation. While great strides have been made in recent years in improving the rates of childhood immunisation, these incidents highlight the need to target people aged in their 20s and 30s, overseas travellers, and health care workers, for measles vaccination. All children should be routinely vaccinated against measles at ages 12 months and 4 years. Everyone else born in or after 1966, without documentation of immunity, should have had two doses of measles vaccine. Patients suspected of having possible measles infection should be rapidly isolated from other patients.

TWO CLUSTERS OF LEGIONNAIRES' DISEASE

In March, two clusters of Legionnaires' disease were identified, and here we report on the characteristics of the clusters and the resulting public health actions.

Legionnaires' disease is a form of pneumonia, caused by infection with various species of *Legionella* bacteria. In NSW, the species *L. pneumophila* is the most common cause of Legionnaires' disease, followed by *L. longbeachae*. Symptoms of the disease include: fever, chills, cough, muscle aches, headache, tiredness, loss of appetite, and diarrhoea. People who have underlying disease, or are older, or who smoke, are more susceptible to infection. The mortality rate is around 10–15 per cent. The incubation period varies from 2–10 days and is typically 5–6 days. The disease is not spread from person to person.

Legionella pneumophila infection

In March 2004, investigations by the South Eastern Sydney Public Health Unit (SESPHU) identified a possible linked cluster of six cases of Legionnaires' disease caused by *L. pneumophila*.

The onset of illness for these people ranged from late January to early March. They were aged between 23 and 65 years and four were male. Five reported movements in one small area of Oxford Street during their possible exposure period. Four had also visited various other areas of the Central Business District (CBD) of Sydney. Another person with Legionnaires' disease due to *Legionella pneumophila* who was hospitalised in the Hunter Area Health Service was also found to have stayed in the Sydney CBD for two days in this period.

L. pneumophila is the most common cause of Legionnaires' disease in NSW (55 per cent of reported cases between 1991–2000, or between 16 and 80 cases per year). *L. pneumophila* infections have been associated with inhalation of aerolised water containing the organism, often from contaminated cooling towers or occasionally domestic water supplies and spa pools.

The SESPHU alerted local hospital and general practitioners, and worked with the City of Sydney Council to assess the routine disinfection processes of nearby cooling towers and of a large fountain. No source of the outbreak was identified. The City of Sydney Council wrote to the operators of the approximately 1,800 cooling towers in the CBD to reinforce the need for careful assessment and disinfection of cooling towers. To identify any further related cases, all NSW public health units were advised of the cluster and requested to contact their local hospitals and laboratories for other possible cases of Legionnaires' disease and question any suspected cases about their movements in the 10 days before onset of illness. NSW Health issued a statewide media release to alert the public and building operators.

By the end of March a further two, possibly linked, cases were identified, both with onset of illness in early March. There were no reports of new linked cases acquired after the public health action was taken.

Legionnaires' disease is difficult to diagnose on clinical grounds. Clinicians caring for patients with community-acquired pneumonia should consider Legionnaires' disease in the differential diagnosis. Infection with *L. pneumophila* serogroup 1 (the serogroup most commonly associated with point-source outbreaks) can be most readily diagnosed using urinary antigen testing. This and other forms of Legionnaires' disease are confirmed by acute and convalescent serology, or identification of the organism in sputum. Cases should be reported to the local public health unit for investigation of the possible source of infection. Staff of the public health unit will carefully question patients about their movements during the incubation period (the 2–10 days before onset of illness) to identify the location of potential sources of infection. It is vital that building managers ensure that any cooling towers are maintained to minimise the risk of contamination with *Legionella* bacteria.

In April, a further 12 cases of *L. pneumophila* infection with onset in April were reported in NSW, including five in the South Eastern Sydney Area Health Service. Another case with unconfirmed infection was also reported from South Eastern Sydney. Of these six South Eastern Sydney cases, onset of illness ranged between 12–18 April, ages ranged from 38–71 years, five were smokers, and two reported underlying lung disease.

The South Eastern Sydney Public Health Unit has investigated possible common exposures among these six patients, but none have been found. Only one of the six patients reported visiting the lower part of Oxford Street (10 days before onset of illness).

Clusters of *L. pneumophila* infection have previously been linked to aerosols from contaminated cooling towers. The South Eastern Sydney Public Health Unit and City of Sydney Council have been searching for evidence of contaminated cooling towers in eastern Sydney. While the majority of cooling towers have been well maintained, two in the Kings Cross area tested positive for *Legionella* bacteria. Only two of the cases reported visiting that part of the city, and while there is no proof that these towers were the source of their infection, both towers underwent disinfection as a precaution.

Legionella longbeachae infection

From January to March 2004, four cases of Legionnaires' disease due to *Legionella longbeachae* infection were reported in the Illawarra and a fifth case was reported in Sydney. The cases were all aged over 60 years and three were men. Two of these individuals died. Four of the five cases reported using potting mix before onset of their illness. *L. longbeachae* infection has previously been linked to gardening, particularly the use of potting mixes.

In response to this cluster of cases, NSW Health released a media alert to again warn the public of the risk of Legionnaires' disease associated with gardening and the use of potting mix. Reducing exposure to potting mix dust by following manufacturers instructions printed on the potting mix bags is vital in preventing infection from *Legionella* bacteria. People should avoid breathing in potting mix dust, wear gloves and a mask, and wash their hands immediately after handling potting mix or soil, especially before eating or drinking.

Clusters of legionnaires disease more commonly occur in autumn (see **www.health.nsw.gov.au/public-health/phb/oct01html/epireview.html**) and the evidence to date

suggests that those in the April *L. pneumophila* cluster are likely to be sporadic and unrelated.

PERTUSSIS IN A NURSERY

In mid-March, a health care worker who worked at a Sydney hospital was diagnosed with pertussis (whooping cough). The worker reported that flu-like symptoms had begun three weeks before, followed two days later by a cough. The diagnosis of pertussis was confirmed by positive IgA serology. The worker had not received a pertussis-containing vaccine as an adult.

Pertussis is a bacterial infection spread from person-to-person via respiratory droplets. Secondary attack rates in susceptible family members are high. Symptoms begin with a runny nose and a cough that can develop into the classic whooping cough syndrome, with bouts of coughing, followed by an inspiratory whoop, and vomiting. However, symptoms often are not classic, and many adults will only complain of a cough that will not go away. The real danger lies in cases among infants who may require hospital care and will occasionally die from complications such as pneumonia or encephalopathy. Immunisation of children and adults who deal with small children is the mainstay of prevention. The spreading of pertussis can be reduced by identifying and treating infectious cases, and by preventive treatment for their vulnerable close contacts such as newborn babies.

The local public health unit investigated the case to determine whether the infection had spread to other staff or patients in their work area at the hospital. While coughing (but not feeling 'unwell') the worker had worked in a special care nursery and an antenatal clinic.

The public health unit convened an urgent teleconference of a panel involving public health, infectious disease, and paediatric expertise, to determine the best methods for minimising further spread. The panel recommended that parents of the neonates cared for by the worker should be counselled about the risk of pertussis and that the neonates should be offered preventive antibiotics.

Hospital staff contacted parents of the neonates who were identified as having been exposed to the worker and invited them to attend a clinic the next day for counselling and the provision of antibiotics, if indicated. In total, the parents of 20 neonates were counselled. Of these, 16 attended the clinic where the neonates received antibiotics and two were reviewed by other clinicians. The remaining two neonates were exposed more than three weeks before, were asymptomatic on follow-up, and so did not require preventive treatment. No further cases of pertussis were identified.

A review of antenatal patient files indicated the worker did not have significant contact with pregnant women who were of greater than 36 weeks gestation, and thus no further follow-up was required.

While no secondary cases were identified, pertussis is highly infectious, and neonates can have serious complications from the infection. This case highlights the importance of workers in health care and other settings in close contact with young infants being immunised against pertussis, and being aware of the need to have any coughing illness investigated immediately.

SALMONELLA TYPHIMURIUM OUTBREAK IN NSW

Since the beginning of 2004, NSW Health has been investigating a statewide outbreak of *Salmonella* Typhimurium phage type 12 (STM 12). STM 12 is usually uncommon in NSW with only small numbers of cases reported in the last two years. By the end of April 2004, 126 patients were notified in NSW. Of these, 60 per cent of cases were male and 83 per cent were less than 30 years of age, including 59 per cent under 10 years of age. Public health staff interviewed over 40 of the patients in a search for possible common exposures, but no clear source was identified. Staff from the Hunter OzFoodNet site began a statewide case control study in an attempt to define risk factors for infection in this outbreak.

VIRAL GASTROENTERITIS AT A SPORT CAMP

A large outbreak of viral gastroenteritis affected over 40 attendees of a hockey camp in the Mid Western Area Health Service. Outbreaks of viral gastroenteritis, often caused by Norovirus infection, are not uncommon in people staying in camps, cruise ships, or aged-care facilities. Reducing person-to-person spread of Norovirus is essential for controlling such outbreaks. People who have symptoms of gastroenteritis should wash their hands thoroughly with soap and running water, and not prepare food or drink or care for patients or others until at least 48 hours after complete recovery. People with symptoms should stay home from work and school.

SEVERE ACUTE RESPIRATORY SYNDROME

A cluster of nine cases of severe acute respiratory syndrome (SARS) was reported from Northern China in April. The first two cases to become ill ('primary' cases) had worked at a Beijing laboratory where the SARS virus was held. SARS subsequently spread through second and third generations of their contacts. The second generation included two people: a nurse caring for one of the primary cases, and the mother of that primary case. The third generation included five people: three of the nurse's close family members who cared for her while she was ill, and two others who were in the same room as the nurse while she was ill. For more information, see **www.who.int/csr/sars/en/index.html**.

In response, Chinese authorities initiated control measures that included the close monitoring of nearly 1,000 contacts of these cases. At the time of writing (12 May), two incubation periods have now passed since the last of these cases was isolated, and so the further spread of SARS from this cluster is unlikely.

This cluster represents the third and fourth incidents in which laboratory workers have been infected with SARS since the end of the SARS pandemic in mid-2003. The previous infections occurred at laboratories in Singapore and Taiwan. A separate cluster of four unrelated cases was reported from Guangdong province in Southern China in December 2003 and January 2004. The cause of that cluster remains unclear but it is possible that the infections may have been acquired from animals.

These cases highlight the need for clinicians and public health workers to remain vigilant for outbreaks of emerging infectious disease such as SARS. Details on SARS control guidelines can be found at the NSW Health website's Infectious Diseases link, under SARS, at **www.health.nsw.gov.au/public-health/alerts/sars/index.html#surv**.

HIV NOTIFICATIONS IN NSW IN 2003

The latest analysis of HIV notifications shows that 412 NSW residents were diagnosed with HIV for the first time in 2003 (Table 1). This is a six per cent increase in cases over 2002 (387 diagnoses) and a 22 per cent increase over 2001 (337 diagnoses). Among the 412 cases, 90 per cent were males, 69 per cent reported male-to male sex as a primary risk factor, and 40 per cent were 30–39 years of age.

As a subset of these notifications, newly-acquired HIV infections (defined here as a negative or indeterminate test within the 12 months prior to the diagnosis, or seroconversion illness at the time of diagnosis) for 2003 showed a 17 per cent increase over 2002, with 144 newly-acquired cases reported in 2003 (compared to 123 cases in 2002 and 98 cases in 2001). Males (95 per cent), male-to-male sexual exposure (85 per cent), and people 30–39 years of age (44 per cent) also dominate notifications of newly acquired HIV infection.

TABLE 1

NEW HIV NOTIFICATIONS IN PEOPLE WHO WERE NSW RESIDENTS AT THE TIME OF DIAGNOSIS, YEAR OF DIAGNOSIS AND CASE CHARACTERISTICS, 1981–2003

	1981–1997		1998		1999		2000		2001		2002		2003		1981–2003	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%	*N*	%
Gender																
Female	520	4.7	40	9.9	28	7.5	28	8.0	31	9.2	30	7.8	32	7.8	709	5.4
Male	10198	93.0	359	89.1	346	92.3	312	89.1	304	90.2	346	89.4	369	89.6	12234	92.5
Transgender	20	0.2	1	0.2	1	0.3	0	0.0	0	0.0	3	0.8	0	0.0	25	0.2
Not stated	230	2.1	3	0.7	0	0.0	10	2.9	2	0.6	8	2.1	11	2.7	264	2.0
Age (years)																
0–2	22	0.2	2	0.5	1	0.3	2	0.6	0	0.0	1	0.3	0	0.0	28	0.2
3–12	36	0.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.5	38	0.3
13–19	188	1.7	6	1.5	5	1.3	2	0.6	3	0.9	1	0.3	3	0.7	208	1.6
20–29	3619	33.0	94	23.3	88	23.5	70	20.0	83	24.6	87	22.5	95	23.1	4136	31.3
30–39	4139	37.7	166	41.2	160	42.7	147	42.0	143	42.4	178	46.0	165	40.0	5098	38.5
40–49	2020	18.4	94	23.3	75	20.0	76	21.7	73	21.7	84	21.7	87	21.1	2509	19.0
50–59	636	5.8	31	7.7	35	9.3	37	10.6	20	5.9	24	6.2	45	10.9	828	6.3
60+	229	2.1	10	2.5	9	2.4	7	2.0	9	2.7	12	3.1	15	3.6	291	2.2
Not reported	79	0.7	0	0.0	2	0.5	9	2.6	6	1.8	0	0.0	0	0.0	96	0.7
Exposure																
Male homosexual–bisexual	6472	59.0	246	61.0	246	65.6	230	65.7	211	62.6	245	63.3	278	67.5	7928	59.9
Male homosexual–bisexual and IDU	256	2.3	16	4.0	14	3.7	8	2.3	18	5.3	12	3.1	8	1.9	332	2.5
Injecting drug use	354	3.2	9	2.2	12	3.2	20	5.7	18	5.3	8	2.1	12	2.9	433	3.3
Heterosexual	591	5.4	89	22.1	57	15.2	59	16.9	56	16.6	56	14.5	63	15.3	971	7.3
Haemophilia–Coagulation	113	1.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	113	0.9
Blood-tissue Recipient	121	1.1	0	0.0	1	0.3	0	0.0	0	0.0	0	0.0	0	0.0	122	0.9
Vertical	31	0.3	2	0.5	1	0.3	2	0.6	0	0.0	1	0.3	2	0.5	39	0.3
Undetermined	3023	27.6	41	10.2	42	11.2	23	6.6	24	7.1	48	12.4	44	10.7	3245	24.5
Not Stated	7	0.1	0	0.0	2	0.5	8	2.3	10	3.0	17	4.4	5	1.2	49	0.4
Residence																
Greater Sydney**	5559	50.7	327	81.1	314	83.7	298	85.1	297	88.1	329	85.0	317	76.9	7441	56.2
Rural	648	5.9	44	10.9	36	9.6	44	12.6	37	11.0	39	10.1	61	14.8	909	6.9
Unknown	4761	43.4	32	7.9	25	6.7	8	2.3	3	0.9	19	4.9	34	8.3	4882	36.9
Total	**10968**	**100.0**	**403**	**100.0**	**375**	**100.0**	**350**	**100.0**	**337**	**100.0**	**387**	**100.0**	**412**	**100.0**	**13232**	**100.0**

Note: Excludes notifications where a previous diagnosis occurred outside NSW.

Source: NSW HIV–AIDS database, Communicable Diseases Branch, NSW Department of Health. Recent HIV data may contain duplicates.

** Greater Sydney area health services include Central Sydney, North Sydney, Western Sydney, Wentworth, South West Sydney, and South East Sydney.

FIGURE 1

REPORTS OF SELECTED COMMUNICABLE DISEASES, NSW, JANUARY 1998 TO APRIL 2004, BY MONTH OF ONSET

Preliminary data: case counts in recent months may increase because of reporting delays.
Laboratory-confirmed cases only, except for measles, meningococcal disease and pertussis
BFV = Barmah Forest virus infections, RRV = Ross River virus infections
lab+ = laboratory confirmed
Men Gp C and Gp B = meningococcal disease due to serogroup C and serogroup B infection, other/unk = other or unknown serogroups. NB Multiple series in graphs are stacked.

NSW population	
Male	50%
<5	7%
5–24	28%
25–64	52%
65+	13%
Rural*	42%

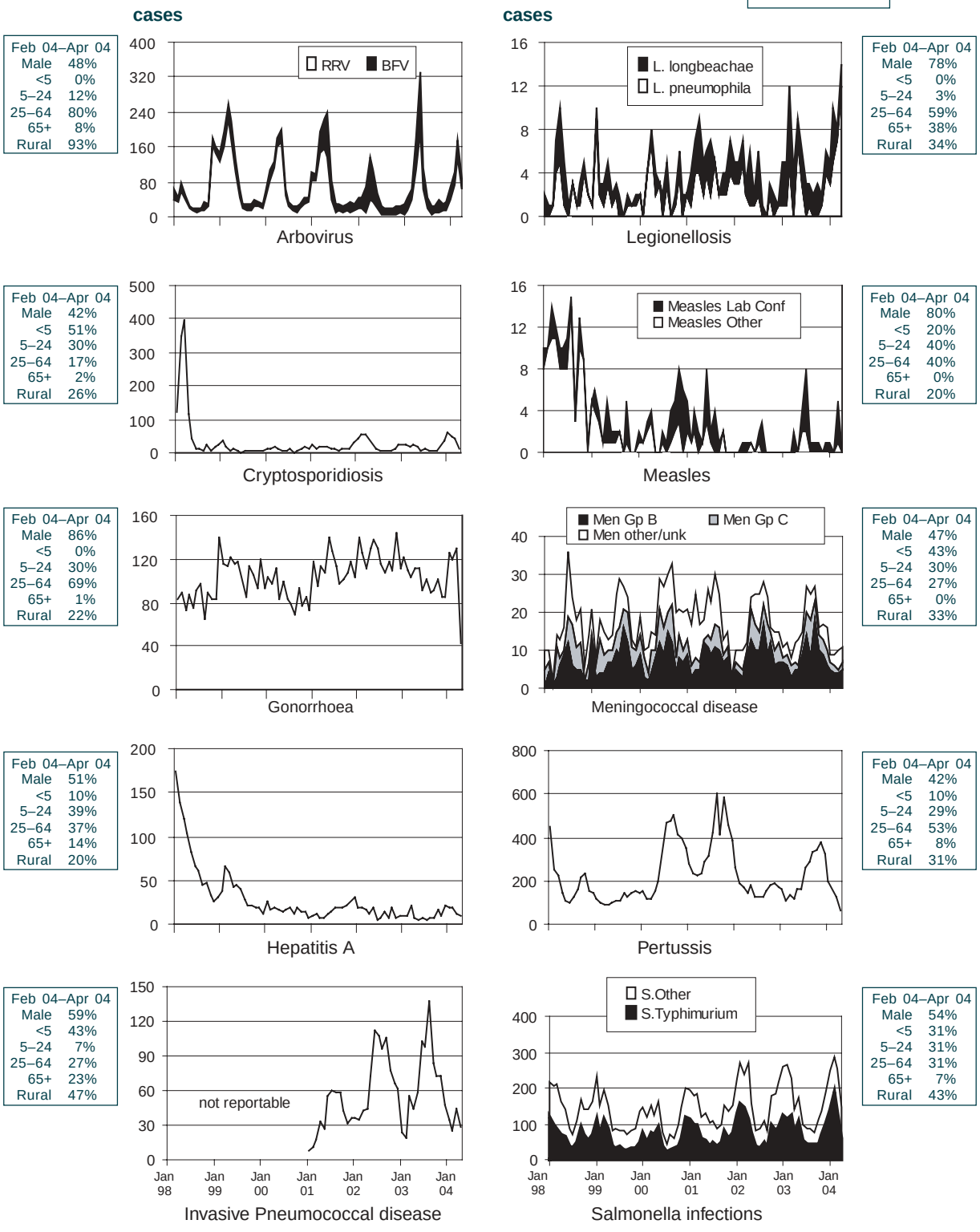

TABLE 2 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN MARCH 2004 BY AREA HEALTH SERVICES

Condition	Area Health Service																		Total	
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS	for March†	To date†
Blood-borne and sexually transmitted																				
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	94	108	88	19	15	35	86	35	171	15	38	27	10	29	14	33	22	-	846	2,432
Gonorrhoea*	23	10	6	1	2	1	4	3	58	-	-	2	1	2	1	1	3	-	121	346
Hepatitis B - acute viral*	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	3	14
Hepatitis B - other*	41	18	-	1	18	1	5	2	43	2	2	1	5	-	3	-	2	-	144	568
Hepatitis C - acute viral*	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	3	7
Hepatitis C - other*	50	33	24	15	35	32	46	38	79	15	26	16	10	17	14	14	18	-	487	1,618
Hepatitis D - unspecified*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Syphilis	18	11	8	1	8	2	3	3	34	2	-	1	1	4	2	1	2	-	104	321
Vector-borne																				
Barmah Forest virus*	-	1	-	-	-	-	2	1	-	4	10	1	-	-	-	2	-	-	21	79
Ross River virus*	-	3	1	2	1	1	8	2	2	7	11	37	13	5	2	13	1	-	109	176
Arboviral infection (Other)*	-	2	1	-	-	-	-	-	1	-	-	1	-	-	1	-	2	-	8	15
Malaria*	-	1	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	4	17
Zoonoses																				
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leptospirosis*	-	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	3	7
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	13
Q fever*	-	-	-	-	1	1	-	-	-	4	2	4	5	1	1	-	2	-	21	52
Respiratory and other																				
Blood lead level*	1	-	-	2	1	3	5	2	4	2	1	3	1	-	15	1	1	-	42	74
Influenza*	-	1	1	-	3	1	-	-	6	2	3	-	-	1	-	-	1	-	20	44
Invasive pneumococcal infection*	4	4	7	1	4	5	7	2	7	-	2	-	-	1	1	1	2	-	48	132
Legionella longbeachae infection*	-	-	-	-	-	-	-	3	-	-	1	-	-	1	-	-	-	-	5	8
Legionella pneumophila infection*	-	2	2	-	-	-	1	-	4	-	-	-	-	-	-	-	-	-	9	12
Legionnaires- disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Meningococcal infection (invasive)*	1	2	-	-	1	-	1	-	1	-	-	-	-	-	-	1	-	-	7	27
Tuberculosis	1	2	6	2	-	1	2	1	6	-	-	-	-	-	-	-	-	-	21	74
Vaccine-preventable																				
Adverse event after immunisation**	-	-	3	-	-	1	3	-	3	-	3	-	3	3	-	6	-	-	25	52
H. *Influenzae b* infection (invasive)*	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
Measles	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	-	-	5	7
Mumps*	1	-	-	-	-	-	-	1	2	-	-	-	1	-	-	-	-	-	5	15
Pertussis	19	21	24	6	20	5	13	7	26	1	5	-	2	1	-	7	3	-	160	651
Rubella*	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	2	5
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteric																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis*	3	2	2	3	7	-	2	-	18	-	-	-	1	5	-	2	1	-	47	158
Giardiasis*	3	23	15	6	8	8	16	5	21	-	-	6	4	9	2	3	3	-	132	358
Haemolytic uraemic syndrome	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Hepatitis A*	3	1	2	1	2	1	-	-	-	-	1	-	-	1	1	-	-	-	13	60
Hepatitis E*	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3
Listeriosis*	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	7
Salmonellosis*	22	26	29	25	27	15	24	6	24	15	14	12	4	6	4	10	4	-	267	771
Shigellosis*	3	-	2	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	7	28
Typhoid and paratyphoid*	-	-	3	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	4	18
Verotoxin producing *E. coli**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

* lab-confirmed cases only + includes cases with unknown postcode * * HIV and AIDS data are reported separately in the *NSW Public Health Bulletin* each quarter

** AEFIs notified by the school vaccination teams during the National Meningococcal C Program are not included in these figures. These notifications are reviewed regularly by a panel of experts and the results will be published quarterly in the *NSW Public Health Bulletin* in 2004

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MAC = Macquarie Area
MWA = Mid Western Area
FWA = Far West Area
GMA = Greater Murray Area
SA = Southern Area
CHS = Corrections Health Service

TABLE 3 REPORTS OF NOTIFIABLE CONDITIONS RECEIVED IN APRIL 2004 BY AREA HEALTH SERVICES

Condition	Area Health Service																	Total	
	CSA	NSA	WSA	WEN	SWS	CCA	HUN	ILL	SES	NRA	MNC	NEA	MAC	MWA	FWA	GMA	SA	CHS	for April†	To date†
Blood-borne and sexually transmitted																				
Chancroid*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlamydia (genital)*	29	81	65	12	54	29	70	26	96	29	36	26	14	29	8	22	13	-	646	3,147
Gonorrhoea*	19	3	6	2	2	3	5	4	32	5	9	1	2	4	1	-	-	-	101	458
Hepatitis B - acute viral*	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	3	18
Hepatitis B - other*	19	28	-	10	88	7	6	-	41	-	1	2	4	3	2	2	2	-	216	849
Hepatitis C - acute viral*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
Hepatitis C - other*	24	26	44	12	55	20	32	26	42	16	27	14	3	6	7	8	12	-	376	2,120
Hepatitis D - unspecified*	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	2	4
Syphilis	17	10	6	-	18	2	2	2	37	2	1	-	2	-	3	-	1	-	103	436
Vector-borne																				
Barmah Forest virus*	-	-	-	-	-	1	4	-	-	18	16	4	1	-	1	1	2	-	48	131
Ross River virus*	1	4	4	2	1	3	14	1	-	25	24	21	6	3	4	2	3	-	118	312
Arboviral infection (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15
Malaria*	-	1	1	1	-	-	-	-	1	-	-	-	-	-	-	2	-	-	6	25
Zoonoses																				
Anthrax*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brucellosis*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Leptospirosis*	-	-	-	-	-	-	2	-	-	-	-	1	-	-	-	-	-	-	3	10
Lyssavirus*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Psittacosis*	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	2	16
Q fever*	-	-	1	-	-	-	-	-	-	3	-	4	3	-	2	1	3	-	17	69
Respiratory and other																				
Blood lead level*	-	-	-	1	1	-	-	-	-	-	-	1	4	2	-	-	-	-	9	85
Influenza*	-	3	1	1	3	1	-	-	8	1	-	-	-	-	-	-	-	-	18	62
Invasive pneumococcal infection*	-	4	5	-	4	8	10	2	3	-	1	-	2	1	-	1	1	-	42	174
Legionella longbeachae infection*	-	-	1	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	4	11
Legionella pneumophila infection*	-	3	-	1	2	-	-	2	5	-	-	-	-	1	-	-	-	-	14	27
Legionnaires- disease (Other)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Leprosy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Meningococcal infection (invasive)*	1	1	1	1	2	-	2	1	4	-	-	-	-	-	-	-	-	-	13	41
Tuberculosis	5	2	6	-	1	3	1	-	6	-	1	-	-	-	-	-	-	-	25	110
Vaccine-preventable																				
Adverse event after immunisation**	-	3	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	6	60
H. *Influenzae b* infection (invasive)*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Measles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7
Mumps*	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	4	19
Pertussis	19	23	14	3	34	1	17	6	26	2	2	6	7	2	1	1	3	-	167	826
Rubella*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
Tetanus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enteric																				
Botulism	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Cholera*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cryptosporidiosis*	6	2	4	2	2	-	-	-	10	-	6	1	-	1	-	1	-	-	35	193
Giardiasis*	13	18	14	7	11	6	2	3	14	-	2	3	3	3	1	4	2	-	106	470
Haemolytic uraemic syndrome	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
Hepatitis A*	1	1	5	-	1	-	-	-	3	-	1	2	-	-	-	-	1	-	15	75
Hepatitis E*	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	4
Listeriosis*	-	2	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	4	11
Salmonellosis*	14	33	20	5	26	17	12	6	27	21	9	16	7	3	4	8	6	-	238	1,023
Shigellosis*	-	-	-	-	-	-	-	-	2	2	-	-	-	1	-	-	-	-	5	33
Typhoid and paratyphoid*	-	-	1	-	1	-	-	-	3	-	1	-	-	-	-	-	-	-	6	24
Verotoxin producing *E. coli**	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	2

* lab-confirmed cases only + includes cases with unknown postcode * * HIV and AIDS data are reported separately in the *NSW Public Health Bulletin* each quarter

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