Reasons for Investing in Tobacco Control

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Introduction

The material in this document was part of a larger paper produced in late 2002 to inform the discussion around the development of the Ministry's five-year plan for tobacco control. To obtain details on the current Ministry policy, readers are directed to the final version of the Ministry's five-year plan for tobacco control.

Reason 1: Deaths and illness caused by smoking

Deaths in adults: An estimated 4300 to 4700 New Zealanders die prematurely each year as a consequence of tobacco use (depending on the method used – MoH 2002). Cardiovascular disease and various cancers are the major causes of death. Nearly half of these deaths for each sex occurred in middle age (35-69 years). Tobacco use has a particularly adverse impact on Mäori health with an estimated 31% of Mäori deaths being attributable to tobacco use (Laugesen and Clements 1998). An estimated 14-15% more Mäori would survive middle age if no Mäori smoked after age 35 years.

Deaths in children: When the fetus is exposed to maternal smoking there is an increased risk of late fetal and perinatal death. This is the estimated cause of 5-6% of the perinatal deaths in the United States (USDHHS 1989; USDHHS 1990). Exposure to SHS is also a major factor in the risk of cot death (sudden infant death syndrome – SIDS). New Zealand data suggest that at least 50% of deaths from SIDS are attributable to smoking (Mitchell et al 1997). Some of the deaths in the current meningococcal disease epidemic are also likely to be due to the increase risk associated with smoking and from being in a household with smokers according to New Zealand studies (Baker et al 2000; Simmons et al 2001). Children also die in

housefires started by smoking or associated paraphernalia (eg, lighters and matches) (Runyan et al 1992; Ballard et al 1992). Due to the higher smoking rates among Mäori (especially amongst pregnant women) many of these adverse effects contribute to the gap between Mäori and non-Mäori health outcomes.

Illness and suffering in adult smokers: There is good evidence that adult smokers are at increased risk of nearly 40 different diseases (Doll 1998). These diseases various cancers (IARC 2002a), heart disease, stroke, emphysema, chronic bronchitis and the adverse outcomes of diabetes. There is also evidence that suggests that conditions such as depression, infertility and impotence can be caused by smoking.

Illness and suffering in infants and children: There is good evidence that 17-26% of low-birth-weight births, and 7-10% of preterm deliveries are due to smoking (USDHHS 1989; USDHHS 1990). Low-birth-weight can lead to mild mental retardation (ie, a life-long impairment). Other conditions caused by SHS exposure include: respiratory infections (50% to 100% increased risk), asthma (50% increased risk) and otitis media (glue ear) amongst children (based on Australian and United States data) (DiFranza and Lew 1996; Li et al 1999). Asthma caused by exposure of the fetus to tobacco smoke, can be a life-long condition. Overall, the exposure to SHS is likely to be causing hundreds of additional hospitalisations of New Zealand children each year (Woodward and Laugesen 2001).

Illness and death in non-smokers: IARC has stated that there is *sufficient evidence* that exposure to SHS causes lung cancer in humans (IARC 2002b). A number of major reviews have also reported that exposure to SHS is associated with heart disease in adults (WHO 1999) or is causal of heart disease in adults (California EPA 1997; SCTH 1998). Major reviews have also reported that there is a causal association between SHS exposure and the risk of respiratory illness (USEPA 1992; California EPA 1997; SCTH 1998). A causal association between SHS exposure and increased severity of asthma episodes and symptoms has also been reported by major reviews (USDHHS 1986; USEPA 1992; SCTH 1998). Lower socio-economic groups have higher levels of SHS exposure in New Zealand (Whitlock et al 1998).

Reason 2: Harm to the economy and costs to the health sector

Harm to the workforce and the economy: Smoking impacts on workforce productivity and the economy by causing premature deaths among workers, causing absenteeism from tobacco-related illness, being a risk factor for accidents, contributing to employment instability, adding to insurance costs, causing fire damage, and increasing ventilation and for cleaning costs (Sacks and Nelson 1994; Ryan et al 1996; Parrott et al 2000; Klesges et al 2001). One study attributes smokers with a 29% increased chance of workplace accidents, and a 40% increased chance of injury (Ryan et al 1992). In New Zealand smoking impairs workforce productivity in the following ways:

- Smokers have higher absenteeism rates due to tobacco-related illness in themselves and their children (Batenburg and Reinken 1990). One estimate for the lost productivity in New Zealand from smoking-related morbidity is $90 million in 1990 (Easton 1997).

- Death, while still employed in middle age is more likely among smokers. The cost of the reduced labour force from smoking has been estimated at $400 million in 1990 (Easton 1997).
- The productivity of smokers is generally impaired due to the need for regular smoking breaks and due to higher illness rates among those still attending work (eg, minor respiratory infections). One estimate based on New Zealand data suggests a cost of $45 million per year (Easton 1997).

Taking into account the theoretical benefits of smoking (to those minority of smokers who are not nicotine dependent) as well as all the costs, one study puts the overall social cost of smoking in New Zealand at 3.2% of total human capital and 1.7% of GDP (Easton 1997). The costs, based on a value of a human life at two million dollars, totaled $22.5 billion for the 1990 year (relative to a scenario of no smoking) with tangible costs being $1.2 billion. While there is some debate over what monetary value such analyses should put on human life, this analysis used the most officially recognised value in New Zealand at this time ie, the one based on work by the Land Transport Safety Authority.

Cost burden on the health sector: A recent review reported that "the overwhelming body of evidence in the literature asserts that smoking imposes costs on an annual basis, that it leads to increased medical costs over the life span, and that many of these costs are borne by employers" (Max 2001). In New Zealand, smoking has been estimated to cost the Public Health Service $185 million in 1989 (Phillips et al 1992). But this is most probably an underestimate of the true cost given the more recent estimates for the morbidity and mortality attributable to SHS exposure in New Zealand.

Reason 3: Good evidence for the value of key tobacco control interventions

As detailed in the review work elsewhere on the Ministry's website, the evidence for many major tobacco control interventions is of a high scientific standard. Much of this evidence is based on systematic reviews of the randomised controlled trials (which is generally considered to be the type of study that provides the best quality of evidence). Indeed, for some interventions there are a large number of such trials (eg, over 100 trials on the use of nicotine replacement therapy). Collectively there is possibly more scientific evidence for tobacco control interventions than for any other activity in the whole of public health (with the possible exception of providing immunisations).

Furthermore, as detailed in the review on the Ministry's website, there is evidence that many tobacco control interventions are relatively cost-effective. Some interventions such as tobacco taxation even generate funds that can then be recycled in the form of increased tobacco control spending or as income tax cuts for low-income populations.

Reason 4: Public and professional demand for improved tobacco control

Demand from smokers: There is national survey data showing that a majority of smokers in New Zealand want to quit smoking (35% stating that they "should quit but are not quite ready" and another 22% "thinking about or doing things that will help them quit" (MoH 1999). A recent survey also reported that 86% of the current smokers had attempted to quit at least once (de Zwart and Sellman 2002). The high volume of calls to the national Quitline also attest to this demand from smokers.

Demand from the general population: Public health units around New Zealand regularly get complaints from the public about deficient aspects of tobacco control including exposure to SHS (in restaurants, workplaces, schools and clubs) and also the sale of tobacco to young people. Articles in New Zealand's print media reflect these concerns over such issues as smoking in movies (Philip 1998).

In terms of exposure to SHS a national survey found that just under half of the non-smokers reported that they were "bothered a lot" by cigarette smoke and nearly a further third were "bothered a little" (MoH 1999). Another survey reported that 78% of respondents agreed that "smoking should not be allowed in any workplace where non-smokers have to work" (ASH 1999). Similarly, 97% of respondents favoured some form of smoking restrictions in restaurants, cafés and foodhalls; and 79% some form of restrictions in bars. Also among hospitality sector workers, three-quarters of the respondents in one study wanted some sort of smoking restriction in bars (Jones et al 2001).

Demand from citizen organisations: The Ministry is aware of the demands by organisations that represent Mäori (ATAK), groups representing those with health problems (eg, people with asthma), and citizen action groups (eg, Smokefree Coalition and ASH) for improvements in tobacco control. The strength of these organisations and their demands for further action has been evident in the size of the annual Smokefree Conferences / Auahi Kore Conferences held in recent years (eg, around 200 attendees in 2002). Also some of the relevant NGOs, such as the Cancer Society and the Heart Foundation, have large memberships and significant public profiles.

Demand from the health sector: There are many health sector organisations that support tobacco control under such umbrella groups as the Smokefree Coalition and ATAK (the Mäori Smokefree Coalition). This support also comes from organisations such as the Public Health Association, the New Zealand Medical Association, Doctors for a Smokefree New Zealand, and Dentists for a Smokefree New Zealand.

Demand from other government agencies: There are expectations for improvements in tobacco control from the Ministry of Mäori Development, Te Puni Kokiri (Laugesen and Clements 1998) and from other government agencies with an interest in tobacco control (eg, the Ministry of Youth Affairs, Ministry of Pacific Island Affairs, Ministry of Consumer Affairs, and the Ministry of Women's Affairs). Occupational Safety and Health (of the Department of Labour) also have an interest in eliminating exposure to SHS in the workplace environment. PHARMAC has also

invested in supporting tobacco control initiatives (ie, for the NRT component of the Aukati Kaipaipa programme)

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