

***Tobacco Control: What can be learnt
and applied to nutrition policy?***

**A report commissioned by
Diabetes New Zealand**

November 2004

Acknowledgements

We would like to acknowledge the assistance provided by several agencies and individuals during the development of this report: the World Health Organization, in particular staff from the Manila and Fiji offices (Max de Courten, Gauden Galea), Deakin University (Boyd Swinburn and Mark Lawrence), and Jim Sinner of Ecologic. As well as acknowledging direct contacts, we would be remiss if we did not highlight particular sources of information that we found particularly useful. These included documents and reports produced by Dr Nick Wilson, Jim Strnad Fight the Obesity Epidemic, the World Health Organization and the World Bank. We are also grateful to Sarah Thomson and Diabetes New Zealand for providing the funding for the report.

Matthew Allen, Director

Allen & Clarke Policy and Regulatory Specialists Ltd.

November 2004

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Suggested citation:

Allen & Clarke Policy and Regulatory Specialists Ltd. 2004. *Tobacco Control: What can be learnt and applied to nutrition policy?* A report commissioned by Diabetes New Zealand Inc.

EXECUTIVE SUMMARY

This report presents a brief assessment of tobacco control policy approaches and assesses their potential application to nutrition policy. It is based on a targeted literature review of sources, which prominently deal with the issues being considered.

The report begins by examining the justification for public health interventions. This is undertaken to ascertain whether both tobacco control and food consumption regulation can be said to have the same basis for intervention. From a public health perspective, the health impacts of tobacco use and the consumption of unhealthy food both provide a clear case for intervention.

Within the context of economic theory, intervention is justified when there are external costs or information failure about health risks or the effects of addiction. The presence of these justifications surrounding tobacco use has enabled the introduction of prescriptive and coercive interventions even in the most liberal and deregulated economies. When the matter of food consumption is considered, similar justifications are found. Although the external costs associated with tobacco use and second-hand smoke exposure do not have an equivalent in food consumption, there are financial externalities in respect of the wider community having to contribute to the costs of health treatments arising from the consumption of unhealthy foods.

With several rationales for intervention being shared between the consumption of tobacco and unhealthy foods, a range of mechanisms used for tobacco control could be adopted to influence food consumption. These are considered, as are evaluations of their effectiveness, to identify what may be regarded as best practice. For tobacco control, pricing mechanisms through taxation have been found to be particularly effective although there has been ongoing and unresolved debate over the level at which tobacco taxes should be set. Other mechanisms that have been used include the provision of information, the restriction of access by youth to tobacco products, tobacco industry restrictions on advertising and promotion, smoking bans and restrictions, tobacco product content notification and cessation therapies. Whilst the majority of these, to a greater or lesser extent, have been evaluated as being successful, the primary message that arises from the literature is that their success has been enhanced by the fact that they have been part of a comprehensive programme of tobacco control.

The implications of tobacco control policies for food consumption are considered beginning with an analysis of the differences between tobacco control and healthy food regulation. These differences are significant: food production and the food industry are far more complex than the tobacco industry; the epidemiological link between diet and health is not as well understood as the link between smoking and ill health; tobacco is associated in the public's mind as being a public health issue whereas obesity is often seen as a matter of private responsibility; and there are differing relationships between public health officials and the tobacco and food industries.

These differences influence the type of interventions that can be implemented currently, making it more difficult to adopt prescriptive or coercive actions due to lack of information, the complexity of food issues, lack of public support and the need for industry involvement.

Nevertheless, initial regulatory actions have been taken (largely internationally) which somewhat mirror tobacco control measures. These include 'junk food' taxes, improved labelling, restricting misleading health claims on products, public health media campaigns, school-based interventions and restricting advertising aimed at children. These are initial steps - they only touch on the potential action that can be taken.

The greatest lessons to be learnt from tobacco control policy are that to be effective, interventions need to be part of a comprehensive programme including all aspects that would reduce consumption, implemented in a staged approach as public and political support builds. As such, tobacco control had significant and ongoing financial support from successive governments despite initial public reticence. The driver of this support was research that clearly presented the health impacts from tobacco use. The key is to promote relevant research and to find the optimal mix of interventions which reflects and fits into a country's social, economic, political, cultural and legal realities. As a step towards identifying this optimal mix, the report concludes by identifying the epidemiological components that need to be addressed in dealing with the obesity epidemic. General areas of future action are broadly outlined.

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TERMS OF REFERENCE

The Terms of Reference for this report are presented below:

The project involves a brief assessment of tobacco control policy approaches, and their potential application to nutrition policy.

Allen & Clarke will:

- Assess central government policy approaches, legislative interventions and pricing policies in the tobacco control area for lessons and possible approaches to nutrition; and
- (To a lesser extent) Assess nutrition policy approaches (legislative, pricing, central government policy) used internationally for possible application in New Zealand.

Methodology

Allen & Clarke will:

- Apply in-house expertise in tobacco policy to reviewing international best practice initiatives applied to tobacco control for possible initiatives that could be applied to nutrition policy (including giving consideration to WHO Guidelines and publications, Victorian Blue Chip documentation, New Zealand and overseas experiences, etc);
- Consider the risks and timing issues associated with applying tobacco policy approaches to nutrition;
- Review existing reports, including those held by the Diabetes New Zealand (DNZ) and forthcoming reports commissioned by either DNZ or Fight the Obesity Epidemic (FOE) or jointly between the two organisations, for useful information to inform the above, as follows:
 - The reports by Dr Nick Wilson and George Thomson assessing tobacco control initiatives applied in New Zealand
 - The WHO Draft Global Strategy on Diet, Physical Activity and Health, and background papers
 - The Prevention of Obesity and Type 2 diabetes, the POD report, Diabetes New Zealand (DNZ) and FOE
 - Legislative Intervention to address Obesity in Overseas Jurisdictions a report for Diabetes New Zealand and FOE, looking at the International literature relating to nutrition law, such as advertising bans on food
 - Cutting the Fat: How a fat tax can help fight obesity, DNZ and FOE.

- Approach the WHO regarding advice on forthcoming initiatives and innovative approaches to nutrition policy internationally;
- Approach Deakin University regarding their consideration of legislation to support the achievement of healthy diets;
- Approach regional experts for Diabetes Strategies, for similar advice;
- Consider options for controls on advertising of consumer products (eg tobacco, alcohol, therapeutic products), and their applicability to nutrition; and
- Consider the benefits and risks of partnerships with industry groups to promote public health outcomes.

Output and Limitations

This is a limited review. It will not involve a comprehensive literature review or extensive interviews with external stakeholders.

The final piece of work will be a brief and succinct paper (estimated 15-20 pages), referenced, setting out challenges for the New Zealand public health sector focussing on nutrition, and will emphasise opportunities and risks learnt from the tobacco control policy area.

The final report will be designed as a scoping paper flagging issues for further consideration and analysis. While the paper will be referenced to identify sources of assertions, it will not be, and will not present itself as, a comprehensive review of the subject matter.

1. JUSTIFICATION FOR INTERVENTION

For over 100 years, governments in various countries have been increasingly active in developing interventions to encourage people to stop or not take up smoking (Thomson, 1992). By contrast, consideration of interventions associated with the consumption of unhealthy food has really only been underway in the last decade. This section of the report considers the justifications that have been put forward for the introduction of restrictions on tobacco use and considers the extent to which such justifications are transferable to the consumption of unhealthy foods.

1.1 Justifications for Tobacco Control

From a public health perspective, the introduction of restrictions to limit and, where possible, end tobacco use were firmly grounded in the health impacts that were increasingly proven to result from consumption. The first response in the 1950s was the running of public media campaigns as well as education programmes in schools that warned of the health effects that arose from smoking. Over the next few decades, as the growing epidemiological evidence demonstrated the breadth of the health impacts from tobacco use, direct interventions became stronger, involving advertising restrictions, the introduction of warning labels, the banning of industry sponsorship, increases in tobacco taxes and the banning of smoking in workplaces and public spaces.

Aside from the public health justification that centres on the negative health impacts from tobacco use, economic theory has been applied to support strong and direct government action even in the most liberal or unregulated economies (Strnad, 2003) According to economic theory, the notion of consumer sovereignty envisages that privately-determined consumption choices will most efficiently allocate society's limited resources. If smokers consumed tobacco with full information about its health consequences and addictive potential, and bore all the costs and benefits of their choice, then there is no justification, on the grounds of inefficiency, for governments to interfere. Commentators have determined, however, that the market for tobacco has been made economically inefficient by three sets of market failures and that these justify public intervention (Jha, Paccaud & Nguyen, 2000). These failures are as follow:

- There is an **information failure about the health risks of smoking**. This not only relates to whether consumers know about the risks of smoking but also whether they appreciate the scale of those risks and whether they have the ability to apply these risks to themselves. Available research evidence has suggested that often this is not the case. The costs that arise from this information failure include high death and disability rates for smokers and the public costs of health treatment.
- A second **information failure relates to the addictive potential of tobacco** and results in the same costs of death, disability and treatment from smokers underestimating risks of addiction and the difficulties of trying to break the addiction.
- The **external costs of smoking** make up the third market failure especially costs imposed on non-smokers resulting from the health effects of passive smoking as well as non-smokers having to contribute to the health costs of smokers.

1.2 Justifications to Reduce the Consumption of Unhealthy Foods

It is useful to consider whether there are similar justifications for using such interventions as those which exist for tobacco.

- **Public Health Justifications:** It is increasingly being recognised that the consumption of unhealthy foods are more contributory than tobacco consumption in accounting for the mortality and morbidity trends of western high-income societies.¹ Therefore, a public health justification exists for intervention at a population-based level.
- **Information Failure about Health Risks** As with tobacco consumption, there are two principal reasons why food consumers tend to be inadequately informed. Firstly, the market, far from providing information, has actually hidden or distorted it (Jah et al, 2000). Secondly, the comparatively long delay between the consumption of unhealthy food and the onset of associated diseases obscures from consumers the link that exists between the two (Jah et al, 2000). Evidence also shows that consumers, particularly the young, underestimate the disease risks that they are taking by establishing particular eating habits. Despite the availability of information about foods both due to labelling rules that require a nutritional breakdown and due to the ready availability of nutrition books and media programmes, the processing all of this information is often complex to interpret and is therefore costly to the consumer (Strnad, 2003). With food consumption more so than for tobacco, preference patterns are formed at a very early age, and children are particularly limited in their ability to process the information and make appropriate decisions.
- **Information Failure about Addiction:** Unlike the wide acceptance of nicotine addiction in relation to tobacco use, there are a number of various definitions of addiction, both scientific and popular, when it comes to food consumption. Psychological addiction effectively relates to habit formation: taste reinforced by repetition. As such, this can apply to any product or practices including the consumption of unhealthy foods (Strnad, 2003). For certain foods, even if there might be no biologically-based foundations for addiction, psychological processes associated with the hedonic effects of consuming these foods can seem to consumers as if there are near-biological addictions (Strnad, 2003). As to the question of whether physical addiction is also a factor, there has been some debate without a clear outcome as of yet (Strnad, 2003). Overall, however, it is unclear whether foods raise the same kind of “addiction” pattern as tobacco use (Strnad, 2003). Further research and consideration of information failure is required.
- **External Costs:** For tobacco, the most recognised external costs are those arising from the direct physical health costs for non-smokers who are exposed to second-hand smoke. This cost does not readily transfer across to the consumption of unhealthy foods. On the other hand, costs associated with financial externalities are applicable. Primarily these costs are those imposed by one set of consumers but at

¹ Approximately 30% of deaths were attributed to the joint effect of dietary factors, including 6% to inadequate vegetable and fruit consumption. Tobacco consumption was responsible for 18% of all deaths (combining active and passive smoking). MoH, p.vii

least partly financed by non-consumers. In countries where there is an element of publicly financed healthcare, this primarily relates to medical costs (Jha et al, 2000).

2. TOBACCO USE INTERVENTIONS

With several rationales for intervention being shared between the consumption of tobacco and unhealthy foods, a range of possible mechanisms of tobacco control could be adopted to influence food consumption. This section of the report will look at the mechanisms used in tobacco regulation and will consider how effective they have been, with a view to identifying what is regarded as best practice. Tobacco regulation over the years has effectively aimed to dramatically reduce if not end tobacco use. It has also sought to protect non-users from the effects of use through a number of mechanisms.

2.1. Pricing Regimes

With tobacco, pricing interventions aim to reduce smoking initiation as well as increase smoking cessation. A basic law of economics states that as the price of a commodity rises, the quantity demanded of that product will fall. There is strong scientific evidence that increasing the price of tobacco products through taxation reduces the prevalence of tobacco use and levels of consumption among both adolescents and young adults (Wilson, 2003). It is also effective in reducing consumption across the population, in increasing smoking cessation and in reducing the numbers of ex-smokers who relapse (Wilson, 2003; World Bank, 1999) Real and permanent price increases will also provide sufficient incentive to consumers to overcome the impacts of nicotine addiction when attempting to give up tobacco use (World Bank, 1999).

There has been much debate on the level at which tobacco taxes should be set. Estimating the costs of the negative externalities resulting from cigarette smoking and other tobacco use has been a highly controversial subject focusing primarily on the financial externalities associated with the impact of tobacco use on the costs of healthcare and the costs associated with the health and other consequences of exposure to environmental tobacco smoke (ETS) (World Bank, 1999). Difficulties have been encountered in determining an optimal level but in general the tax increases that have occurred have not been at a level needed to cover the costs from tobacco use.

2.2 Provision of information

In most high-income countries over the past three decades, a long-term downward trend in smoking prevalence has occurred over the same period that there has been a long-term upward trend in people's levels of knowledge about the harmful effects of smoking (World Bank, 1999). Extensive evidence is available that in high-income countries, the provision of information to adult consumers about the addictive nature of tobacco use and its link to fatal and disabling diseases can reduce their consumption of cigarettes. The evidence also shows that the impact appears to vary across different demographic and social groups (World Bank, 1999). There is also a noticeable trend of diminishing returns. In general, the impact of knowledge on the dangers of smoking is greatest when general awareness of the health risks of smoking are low. As knowledge increases, the information becomes less effective although information 'shocks' about new problems can continue to bring noticeable impacts. Over time, however, even these have decreasing effects (World Bank, 1999). There are three key areas regarding the provision of information:

- **Mass media counter-advertising campaigns:** The use of negative counter-advertising, disseminated by governments and health promotion agencies, has consistently been found to reduce overall consumption, according to research (World Bank, 1999). It is generally agreed that although mass media campaigns are important, it is difficult to determine the exact contribution they make when compared with other interventions used as part of a combined intervention approach (Wilson, 2003).
- **School-based education relating to smoking:** School antismoking programmes are widespread, particularly in the high-income countries. There have been varying results as to the extent that school-based programmes appear to reduce both incidence and prevalence (Wilson, 2003). It has been found that programmes oriented towards social reinforcement and social norms have the most positive and significant impact in encouraging non-smoking behaviour (Kenkel & Chen, 2000). The general view in respect of school-based education is that these programmes can initially reduce the uptake of smoking but this impact is only temporary due to the fact that the adolescent responses to information about long-term health consequences differ from adult responses (World Bank, 1999). Continuing reinforcing messages against tobacco use being delivered by several interventions are needed to maintain the effect of school-based programmes.
- **Health Warning Labels:** Among more informed populations, smoking prevalence is unlikely to fall much lower as a result of cigarette pack warning labels (World Bank, 1999). Nevertheless, as advertising restrictions have increased, the cigarette pack itself has become the primary marketing medium for the industry. To counter the role of cigarette packaging as advertising, several countries such as Australia, Canada, and Poland have introduced a new generation of labels that are larger, more prominent and contain hard-hitting pictorials. Evaluations to date have suggested that the introduction of such labels has been effective (World Bank, 1999).

2.3 Restricting youth access

Laws restricting sales to youth are most effective when administered in a comprehensive manner with other related restrictions including the banning of vending-machine sales in areas where children are found, banning sales of single cigarettes, limiting self-service, requiring vendor licensing, and imposing graduated fines on retailers who violate the law (Woollery, Asma & Sharp, 2000). One of the greatest difficulties has been to gain a high level of merchant compliance. Even where compliance has been at a high level, and sales of tobacco products to youths has been reduced, there is no evidence that these restrictions were associated with a decrease in smoking prevalence among young people who usually have various other ways of obtaining tobacco products (Wilson, 2003).

2.4 Tobacco industry restrictions

Regulations exist to prohibit tobacco sponsorship and advertising and place restrictions on product displays in retail venues. The decline in tobacco use is consistent with these interventions having some benefit in terms of restricting promotion and denormalising smoking (Wilson, 2003). The effectiveness of bans on advertising depends on the way

they have been introduced. Bans on advertising and promotion prove effective, but only if they are comprehensive, covering all media and all uses of brand names and logos (World Bank, 1999).

2.5 Smoking bans and restrictions

Strong scientific evidence exists that smoking bans and restrictions reduce exposure to second-hand smoke in the workplace and have an effect on overall tobacco consumption and cessation (Wilson, 2003). Smoking restrictions at work and in public places also generate a good awareness of the health consequences of exposure to environmental tobacco smoke (World Bank, 1999).

2.6 Tobacco Product Content

The disclosure of the contents of tobacco products aims to obtain information that can be used to monitor the risks associated with tobacco use and to provide information for consumers (Allen and Clarke, 2003b). Nevertheless, evidence indicates there persists widespread misperception about health effects, partly due to cigarette packaging and labelling and the use of product terms such as “low tar” and “low nicotine” (World Bank, 1999). There are several policy options being developed for regulating descriptors on ‘low-yield’ cigarettes including prohibition and the inclusion of product warnings specific to ‘low-yield’ products (Allen and Clarke, 2003b).

2.7 Cessation and Replacement Therapies

There is strong scientific evidence for the effectiveness of multicomponent health care system interventions that assist smokers to quit (Wilson, 2003). Potential government support in this area includes subsidies to make products and services to beat nicotine addiction more accessible by reducing patient out-of-pocket costs for effective smoking cessation treatments, subsidised counselling, and increased use of, and access to, nicotine replacement therapy.

3. IMPLICATIONS FOR FOOD CONSUMPTION REGULATION

Having examined strategies used in tobacco regulation and commented on their effectiveness, the implications of their application to reducing the consumption of unhealthy food can be considered.

3.1 Differences between Tobacco Control and Healthy Food Regulation

It is important to note that whilst tobacco control and healthy food regulation share several justifications for intervention, there are significant differences between the two areas of regulation. These factors need to be considered as they have a major impact on the types of interventions that can be brought to bear and that will be effective.

- **Products and Industry Context:** The first difference relates to the nature of the products being consumed and the industry which produces them. Tobacco use is concentrated into only a few types of products all having a basis of tobacco. On the other hand, food and food products (including those considered unhealthy) number in their thousands and vary greatly in content. With tobacco, a few firms manufacture most of the products. Generally, it is a high profit market. The industry surrounding food production, distribution and sales is more diverse. With food, there are thousands of producers ranging from small operators to large concerns. Overall, the industry operates at a low margin of profit. There are also many associated operations connected with food that are part of the production and distribution system: for example, the hospitality industry.
- **Epidemiology:** The relationship between tobacco use and ill health is based on decades of solid epidemiological evidence (Kenkel & Chen, 2000). A strong consensus has built up over time in respect of the health risks associated with tobacco use. For food consumption, however, the problem of describing and quantifying risk is magnified many times over as the link between diet and health is not as well understood as the link between smoking and ill health due to the consumption of many different food types, the impact of physical activity levels (Yach, Hawkes, Epping-Jordan et al, 2004), the differences in the genetic and ethnic makeup of populations and the timing of the food consumption and health outcomes (Strnad, 2003). It has been argued that certain regulatory interventions used for tobacco control, especially those at the more coercive end of the scale, can not be justified until specific foods or dietary practices have been clearly linked to obesity. Making these linkages through research therefore remains a high priority in the promotion of healthy eating regulation (Mercer, Green, Rosenthal et al, 2003).
- **Public Health versus Private Responsibility:** There has been an acceptance that the control of tobacco use is a public health issue because of the clear links between tobacco use and ill health, the long-understood highly addictive nature of nicotine and the links recently made on the impact of environmental tobacco smoke on non-smokers. As a result, a comprehensive tobacco control policy has developed over the years including the use of very coercive action including total bans and strong regulatory interventions. Until recently, obesity interventions were aimed at delivery of services for individuals usually within the primary health care (medical advice,

counselling) or commercial sector (weight loss programmes) rather than using a population-based approach (Yach et al, 2004). Obesity was largely seen as resulting from an individual's lack of self control. The individual, not the environment in which they lived, was seen as the source of responsibility (Mercer et al, 2003). The focus of responsibility for obesity on the individual was further enhanced by the fact that food consumption by an individual does not harm anyone else (Mercer et al, 2003). The belief of private responsibility impacts on possible types of interventions to reduce the consumption of unhealthy food as the belief in personal freedoms strongly persist. This may be only a temporary situation, however, which will change as childhood obesity rates soar and health impacts are more clearly understood and experienced by the public.

- **Relationships with Industry:** It has been revealed by the release of in-house documents that tobacco companies developed strategies to reject, conceal and ignore the health risks of their products. As a result, there have been few areas of cooperation between public health officials and the tobacco industry. Compared with this, food companies are generally seen by commentators as having an important part to play in taking steps to lessen the dangers of their products or to provide healthier, alternate lines of product. Any consideration of ways to achieve health gains from food consumption usually envisages interaction with the food industry at all levels including research (Mercer et al, 2003). It is pointed out that past experience in relation to addressing micronutrient deficiencies in diet and the reduction of saturated fats in products has depended on collaboration between the public health sector and the industry (Yach et al, 2004). As a result, until recently (Daynard, 2003), the emphasis on proposed interventions has tended to shy away from some of the more coercive elements that have been used in tobacco control. The WHO's Global Strategy on Diet, Physical Activity and Health is framed in terms of stating positive goals and an approach more orientated to the use of incentives and broad-based partnerships and alliances compared with the binding international legislative approach required to achieve successful tobacco control (Daynard, 2003).

3.2 Interventions to Promote Healthy Food Consumption

Although it has been suggested that there might be little to distinguish optimal food control from tobacco control policies (Daynard, 2003), the differences noted above give a different texture to the nature of interventions that might be used to promote healthy food consumption. Considering the complexity of the food industry, the current public perception of private responsibility and the belief held by many of the need to ensure that the food industry plays a major role, it is unlikely that strong and coercive regulatory interventions will be adopted in the near future (at least without direct steps being taken to address the limitations listed above).

Nevertheless, there is a growing evaluation of which aspects of tobacco control are transferable in the effort to discourage unhealthy food consumption.

3.2.1 Pricing Regimes

Governments can influence prices through taxation, subsidies or direct pricing in a way that encourages healthy eating and lifelong physical activity. Some countries are already using fiscal measures to promote availability of, and access to, various foods (WHO, 2003). Pricing strategies have been used through the removal of taxes or the subsidisation of certain foods to promote increased sales of lower-fat products (WHO, 2003). The other pricing approach is through taxation. In the area of food, the possibilities include: the introduction of specific taxes on saturated fats, free sugars and even ruminant livestock.

To date, specific taxes have been introduced in some jurisdictions in respect of snack foods and soft drinks, but these have only been moderate. These 'junk food taxes' have widespread support politically and publicly although this support is conditional on the revenue raised being used to fund health education programmes on better eating (Strnad, 2003). The taxes usually take the form of either a fixed tax per volume of product or a percentage of sales price. Arkansas, for example, has a two cent per can tax which raises around \$40 million a year whilst California has a 7.25 per cent sales tax on soft drinks that raises around \$218 million dollars annually. Virginia has a small excise tax on wholesalers and distributors based on their total sales of carbonated drinks. The tax amounts to between 0.05 and 0.066 per cent of gross receipts. Tennessee has a tax of 1.9 per cent of gross receipts from soft drinks and soft drink ingredients paid by manufacturers and bottlers (Diabetes New Zealand, 2003).

A wider taxation regime, akin to that used in tobacco control, has been suggested, involving the taxation of unhealthy foods. In some cases it is proposed to tax foods according to their fat content. Unlike junk-food taxes, this level of taxation aims to influence behaviour and alter consumption patterns to meet public health goals (Strnad, 2003). A major difference between food and tobacco which impacts on the feasibility of adopting this type of taxation regime is the variety of unhealthy food sources, the complexity of different food types and the varying effects on health. This situation causes a number of implementation problems, one of which arises when particular classes of foods are taxed to the exclusion of others or at different rates as to do this requires a workable definition of each food class (Strnad, 2003).

Another difficulty that has been considered with food taxes, is the optimal level needed to bring changes in the consumption of unhealthy foods. Research suggests that a significant intervention is required for change and that incremental small tax increases would have little effect. On the other hand, heavy taxes would be too blunt an instrument falling equally on those for whom, whilst consuming unhealthy foods, did so in moderation (Strnad, 2003). There has also been an ongoing concern that taxes on processed foods of low nutrient value could disproportionately impact on low-income families (Yach et al, 2004). The level of support for such taxes is doubtful. The proportion of the population that would favour or benefit from taxes on chocolate, saturated fat or other items may be very low compared to the large proportion of smokers who claim they want to quit (Strnad, 2003). On the other hand, recent surveys in both the United States and New Zealand have indicated support for 'fat taxes' at some level (Diabetes New Zealand, 2004).

It is generally viewed that pricing policies for food are more complex than those for tobacco. Some commentators have acknowledged that little is known about the price elasticity of those foods that might be targeted and have recommended that further research be conducted on this and generally on the question of whether taxation of certain foods will promote healthy food consumption (Yach et al, 2004).

3.2.2 Provision of information

Education campaigns in relation to diet and nutrition have been in place for several decades. It is acknowledged that these need to continue and contain the methods and techniques considered to work best in respect of health promotion. Health promotion in respect of healthy eating faces a more complex and difficult environment than with tobacco control where the message is simple: this product is harmful - stop using it. For food health promotion, complexities include the lack of clear epidemiological evidence on where and how harm results, deciding which foods or food content should be targeted and the need to promote a more complex message of seeking to alter rather than stop behaviour. It is considered that education campaigns should continue to be site-based (workplaces, schools, clubs) as well as general public advertising, but these campaigns need to be based on sound, best practice interventions as recognised in health promotion (Yach et al, 2004).

Another form of information used in tobacco control has been health warnings on the dangers of consuming the product. The use of health warnings on food items has also been considered by commentators, but such consideration gets tied up with the concern of whether this is too prescriptive in light of the uncertainties that exist surrounding the introduction of interventions against unhealthy foods (Diabetes New Zealand, 2003).

Work conducted on best practices in the area of drug education reveals the importance of programmes being based on sound research and evidence, the need for realistic and clearly defined objectives, that programmes be relevant to the needs of young people, that they be responsive to cultural factors and that training for families be an integral part of the process (Allen and Clarke, 2003a). Evaluation of the impact of health promotion information on tobacco use has shown that whatever method is used it is not effective if presented in the absence of other interventions. A similar result has been found in respect of diet and physical activity (Yach et al, 2004).

3.2.3 Restricting youth access

Schools are considered to be an ideal setting for interventions to promote healthy eating for children as they provide numerous opportunities for eating and engaging in physical activity (Mercer et al, 2003). Steps already have been taken in this direction. The United States federal government subsidises certain school lunch and breakfast programmes. California has enacted legislation that specifies nutritional requirements for foods sold in morning or afternoon breaks at elementary schools. Other states have recently proposed similar provisions but these have not yet been made into law (Diabetes New Zealand, 2004). The most effective strategies are those that make it easy to help students adopt healthy eating behaviour whilst providing mechanisms that address social influences (Mercer et al, 2003).

There has been much activity overseas that has focused on restricting children's access to unhealthy foods, especially within school environments. Those policies introduced have aimed to support healthy diets at school and limit the availability of products high in salt, sugar and fats (WHO, 2003). Also suggested is the banning of vending machines and implementing regulations controlling the quality of food in a one kilometre radius from school (Diabetes New Zealand, 2003). The experience of tobacco regulation suggests that the supply-side approach of restricting children's access to tobacco products is the least successful tobacco control strategy. However, with respect to nutrition supply control interventions in the school environment, it is noted that school students are a relatively captive audience. If faced with only a healthy selection of foods for lunch and snacks, they have no choice but to consume those products. It is unlikely that many students, faced only with healthy nutritional choices at a school cafeteria will elect to instead eat lunch after school. At least in the short term, therefore, food consumption patterns are influenced in a positive way. How such an intervention would translate into longer term eating patterns is unclear and bears further study.

3.2.4 Industry restrictions

As with the approach to counter advertising and the production of health promotion material, efforts to regulate advertising by the food industry will be more complex than has been the case with the tobacco industry due to multiplicity of product, the scientific grounds for restrictions and the lower level of support for interventions. There have, however, been a number of steps taken internationally in respect of restricting advertising to children. These range from partial bans at certain times of the day to complete bans of certain products (Diabetes New Zealand, 2003). Sweden and Norway have in place bans on television advertising of any kind aimed at children under 12 years old. Canada, Denmark, Austria, Italy and Germany also have some controls over television advertising aimed at children (Diabetes New Zealand, 2003).

Analysis completed for this report has not yet located information evaluating the effectiveness of this approach. Analysis that has been conducted for tobacco strongly indicates that bans on advertising and promotion prove effective, but only if they are comprehensive, covering all media and all uses of brand names and logos. Of the initiatives that have been put in place, opinion has been expressed that they have been undermined by a proliferation of alternative marketing methods aimed at children (Yach et al, 2004).

3.2.5 Product Information

Within food regulation, there have been long-standing provisions over the labelling of products to reveal content and nutritional information. There is acknowledgement, however, of the need for harmonisation of content labelling. Nutrition labelling can be difficult for consumers to understand and reform is required (Yach et al, 2004). Although labels on food have nutrition components, there is currently limited evidence commenting on health impact. Possibilities to address this include the introduction of symbols to signal nutritious foods with a low glycaemic load (Diabetes New Zealand, 2003).

As with tobacco products, there are some food manufacturers who make health and nutrition claims in the labelling and advertising of their products which are unsubstantiated by medical science and which therefore have the potential to mislead consumers (Yach et al, 2004). Internationally and regionally, steps are already in progress to improve regulation in response to this situation. Codex Alimentarius is developing additional guidelines on health and nutrition claims that would allow these claims to be made only when they can be shown to be based on scientific research. The European Commission is similarly creating guidelines (Yach et al, 2004).²

3.2.6 Clinical Interventions

The public health considerations surrounding the promotion of healthy eating do not include the need to deal with an addictive substance as potent as nicotine. On the other hand, there is significant opportunity to develop effective counselling in relation to food consumption and to ensure that these clinical interventions are subsidised. Commentators have observed that much of the existing clinical interventions aim to simply deliver information and advice to passive recipients whereas best practice examples of clinical interventions show the importance of ensuring active participation and a partnership between patients and health workers where shared decision-making and collaborative goal-setting are key features. These types of interventions work whether on a one-to-one basis or in a group setting.

Best practice analysis indicates that clinical interventions need to emphasise skill building to overcome barriers, self monitoring, personalised feedback and links to supportive community groups (Yach et al, 2004). It has been suggested that smoking cessation counselling has been more successful than similar counselling conducted for the treatment of obesity. The reason for this has ultimately been put down to the different socio-political environments in which the two sets of counselling occur. For tobacco, a comprehensive programme of multi-level interventions is in place whereas no such equivalent yet exists for obesity control (Mercer et al, 2003).

3.3 The Need for Comprehensive Action

Within the area of tobacco control, the reduction of tobacco use has been ongoing and significant. Over the decades, the range of interventions that have been introduced have been numerous and aimed at many levels. With the exception of the impact that can be achieved through price regulation, no single component of the comprehensive interventions put in place for tobacco control can account for the significant decline in tobacco consumption that has been recorded. Instead, it is the synergistic effect of all the various components that have been brought into place that is seen as making the difference (Mercer et al, 2003).

Compared with tobacco control, fewer broad-based interventions have targeted obesity and there has not really been effective use of community or environmental strategies other than school-based programmes (Mercer et al, 2003). As reflected in this report, a major debate exists as to how applicable the methods of tobacco control can be to the promotion of

² See also www.fao.org/docrep/005/y2770e/y2770e05.htm for Codex Alimentarius work and europa.eu.int/lex/en/com/pdf/2003/com2003_0424en01.pdf for European Commission work.

health food consumption especially those interventions at the more prescriptive and coercive end of the scale. Commentators have also differed in their view of the need to strive for a treaty approach to interventions such as the WHO Framework Convention on Tobacco Control. Whilst there is the view that such an approach is unwarranted in the area of improving food consumption to achieve health gains (Yach et al, 2004), others suggest that a treaty could be just as feasible due to the fact that similar public health issues are being dealt with (Daynard, 2003).

Comprehensive action has also been proposed in dealing with obesity through the use of the epidemiological triad (host, vector, environment) as a model of analysis. Use of such a framework has achieved a degree of success in controlling several epidemics of infectious and non-infectious causes of death, not only from tobacco use, but also cardiovascular diseases, road crashes, cervical cancer, sudden infant death syndrome, HIV AIDS and melanoma. For all of these epidemics, the successes have been achieved in the face of substantial barriers within individuals, society, the private sector and government. These have included vested commercial interests, addiction, unknown causes, and strong social norms, desires, or taboos (Swinburn, 2002). All these success stories have taken as comprehensive approach to interventions as possible. They have also shared the common features of significant, ongoing funding and political commitment.

4. CONCLUDING RECOMMENDATIONS

Tobacco control and obesity control, from the perspectives both of public health and economic theory, share similar justifications for intervention. When considering the nature of interventions, however, a number of differences exist in respect of the two sets of products, the industry that produces them, the state of epidemiological knowledge, public views on responsibility and the role of industry. These differences define the type of interventions that can be implemented and are such that they currently limit prescriptive or coercive action in respect of obesity control. Therefore, when the most dramatic interventions within tobacco control that are deemed to have had much impact are considered, they are not immediately transferable to obesity control. Although some aspects of these tobacco control interventions are being adopted in obesity control responses, they are being done in only a partial implementation. To date, there appears little evidence on the degree of impact these interventions are having.

In considering the way forward, however, it is important to note that although the differences between the consumption of tobacco and of unhealthy food limit the extent of direct transferability of action, they do not overwhelm the justifications for intervention. Instead, it is crucial to find what has been called an “optimal mix” of interventions that will work for obesity control: a mix that reflects and fits into a country’s social, economic, political, cultural and legal realities (Yach, 2004). It is also essential that in looking for this optimal mix of interventions, there is acknowledgement of the stage in history that obesity control is at. Whilst tobacco control interventions collectively appear to provide a comprehensive and interconnected set of interventions to deal with all aspects of fighting the public health issue at stake, the existing situation reflects the fact that these control measures evolved over a 50-year period. Different interventions came into place in response to changing contexts of epidemiological evidence, public opinion, perceptions of the industry and government preparedness for action.

The use of regulatory, policy and programme interventions in response to the obesity epidemic is only in its initial stages. The temptation to apply lessons from areas of well-developed response such as tobacco control is only natural, but interventions can not be brought into effect that lay outside of the context in which they must operate.

Having acknowledged this reality, however, it is nevertheless important to not let the inherent existing difficulties be an excuse for inaction. The history of tobacco control is that government action did not follow public opinion, industry response or beyond-doubt epidemiological evidence. Instead, once the scale and scope of the public health epidemic associated with tobacco use was indicated by evidence to hand, action was taken that led and formulated public opinion and industry action. Many of the interventions that were implemented were undertaken because they instinctively made sense to public health officials and because they sent messages both about the public health problem being faced and the directions that action would eventually need to take.

Current proposed initiatives in obesity control such as the restriction of advertising to children, ‘junk food’ taxation and the banning of unhealthy food from school environments fall into the same category. The introduction of these initiatives into a New Zealand environment based on their application in other international jurisdictions has the potential

to begin the debate of obesity control in the same way as it has overseas, and kick-start the move to a comprehensive, evidence-based approach to obesity intervention.

An overarching lesson learnt from tobacco control and the responses to other public health epidemics has been the need to eventually develop a clear programme of response. Any individual programme components must work together with a synergistic way to achieve the benefits found to occur from a comprehensive control programme (Mercer et al, 2003). For obesity control there is room for more comprehensive and innovative interventions with a strong emphasis on evaluation so that the evidence base for effective interventions can be developed (Swinburn and Egger, 2002).

In considering the elements of a comprehensive control programme it has been noted that in the case of obesity control the epidemiological model of analysis (host, vector, environment) provides a useful framework of interventions:

- Host-based strategies would primarily be educational and these tend to be most effective among people with higher incomes and higher educational attainment.
- The main vectors for a high-energy intake are energy-dense foods and drinks and large portion sizes and, for low energy, expenditure machines and technology that promote physical inactivity. Increasingly 'obesogenic' environments are probably the main driving forces for the obesity epidemic (Swinburn and Egger, 2002).
- There are many environmental strategies that can influence the physical, economic, policy or socio-cultural environments. It has been suggested that children and high risk adults should be the priority population for interventions, and improving the general socio-economic conditions for disadvantaged, marginalised or poor population sectors is also a central strategy for obesity prevention. The key settings for interventions are schools, homes, neighbourhoods, primary health care services and communities. The key macroenvironments for interventions are the transport and infrastructure sector, the media and the food sector (Swinburn, 2003).

Within the context of this set of strategies, the main lessons learned from other public health prevention programmes has led to the identification of a range of steps that need to be taken and which are applicable to the current stage which obesity control has reached. These include:

- taking a more comprehensive approach by increasing the environmental (mainly policy-based) initiatives;
- increasing the 'dose' of interventions through greater investment in programmes;
- exploring opportunities to further influence the energy density of manufactured foods (one of the main vectors for increased energy intake);
- developing and communicating specific, action messages; and

- developing a stronger advocacy voice so that in time there is built up a greater professional, public and political support for action (Swinburn et al, 2002). There is a need to promote strong networks and working relationships between different groups that have an interest in advocating this issue.

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