

WHAT WORKS TO REDUCE ALCOHOL-RELATED HARM AND WHY AREN'T THE POLICIES MORE POPULAR?

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Abstract

There is a considerable body of research evidence documenting effective policies that reduce the harm a community incurs from alcohol. These effective policies include influencing accessibility to alcohol (including the price the consumer pays), drink-driving enforcement and marketing practices. Using evidence-based review as a template, an analysis of alcohol policy in New Zealand illustrates areas where New Zealand has failed to implement effective policy and some areas in which New Zealand compares favourably with overseas. An analysis of the policy-making process illustrates contestation within the policy arena similar to that commonly found in comparable jurisdictions. We conclude that increases in alcohol consumption in recent years, and in particular the high levels of consumption by younger drinkers, is an outcome of the policy decisions taken in New Zealand since the late 1980s.

BACKGROUND

In developed countries such as New Zealand, alcohol ranks third of 20 risk factors in its overall impact on disease, disability and death, according to the WHO Global Burden of Disease study (World Health Organization 2002). In addition to costs to the health sector there are substantial costs to the Police, Justice, Corrections and Social Development sectors, and there are also effects on productivity. Uptake of effective policies to alleviate this burden is therefore important.

New Zealand had in place a National Alcohol Strategy covering 2000–2003, which included targets set for consumption levels and self-reported harm (Alcohol Advisory Council and Ministry of Health 2001). These targets were based on survey data collected in 1995. When the measures were repeated in the National Alcohol Survey carried out in 2000, some of the measures, particularly those pertaining to the drinking of younger people, were trending in the wrong direction (Habgood et al. 2001). The next set of relevant data will become available next year in the National Alcohol Survey carried out by SHORE and Whariki on behalf of Public Health Intelligence of the Ministry of Health.

There is now a considerable amount of research evidence that documents policies likely to be effective in reducing alcohol-related harm. Generally, these are policies that alter the environment in which choices are made, such as limiting physical and economic accessibility to alcoholic beverages, strengthening drink-driving legislation and restricting the marketing of alcohol.

Many of these environmental policies are actively opposed by alcohol industry bodies. Industry-friendly policies are very different. Consistent with a policy approach most likely to maximise profits, they aim to ensure products are readily available and affordable. The strategies they promote centre around educating the individual drinker to make responsible decisions – an approach that fares least well in evidence-based ratings of policy effectiveness.

The ensuing policy debate is often played out in the media – where issues are “defined, solutions suggested and credibility of various commentators on current issues established” (Babor et al. 2003:247) – with significant influence on the policy outcome. The following analysis of some key events in alcohol policy making since the late 1980s in New Zealand draws on published and unpublished documents, including reports, submissions to government and coverage of the issues in the media, and illustrates this kind of debate.

This paper uses a framework for the effectiveness of alcohol policies established by an international project involving 15 scientists (Babor et al. 2003) utilising a systematic review approach. The project reviewed effectiveness in reducing alcohol consumption and harm at the population level, and assessed the breadth of the research support and the likely costs of implementing the policies. The effectiveness ratings indicated for specific interventions in this publication are broadly consistent with a previous international collaborative review (Edwards et al. 1994) and a recent review of evidence commissioned to inform the prevention agenda in Australia (Loxley et al. 2004). The Babor et al. (2003) framework is used to gauge how New Zealand rates in its implementation of evidence-based policy to reduce alcohol-related harm.

PRICING AND TAXATION

The effect of prices on consumption and consequent harm is one of the most extensively investigated alcohol-control measures (Osterberg 1995), with evidence overwhelmingly leading to the conclusion that alcohol prices have an effect on the level of alcohol consumption (Babor et al. 2003, Chisholm et al. 2004, Loxley et al. 2004). Heavy or problem drinkers appear to be no exception to this rule, and young drinkers appear to be especially sensitive to price increases (Chaloupka et al. 2002, Coate and Grossman 1988). Their revenue-generating ability also makes higher levels of taxation an attractive policy.

Table 1 Pricing and Taxation Policy Assessment

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Pricing and taxation	+++	+++	low

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:264.

Babor and colleagues (2003:264) give this policy the highest effectiveness rating and find it to be based on a wide breadth of research support. Its cost to implement is low, making taxation a key umbrella policy for most if not all jurisdictions (see Table 1).

New Zealand Experience

In New Zealand, alcohol excise tax has been primarily justified by the health and welfare costs of alcohol products. Since 1989 the tax rates have been linked to the Consumer Price Index, and there is an additional separate levy to fund alcohol harm prevention, research and treatment. New Zealand compares favourably with many similar countries that do not have such a levy, many of which are not indexed to inflation and have experienced a drop in the real price of alcoholic beverages over the last decades (Babor et al. 2003).

New Zealand compares less favourably, however, with nations that have significantly higher excise tax rates for alcohol. For example, tax on beer as a percentage of retail price (10%) is lower than that of several comparable countries including the Netherlands (20%), Ireland (20%), Denmark (34%) and Australia (24%) (World Health Organization 2004).

Another less positive aspect of the policy is New Zealand's use of a banded excise tax system rather than one based directly on ethanol content of beverages. This creates opportunities for manufacturers to produce cheap, high-alcohol products in order to get the best tax advantage. Not surprisingly, excise tax on alcohol is one of the policy areas most vigorously opposed by industry groups, who continue to lobby for its complete abolition. Excise tax, said Nicki Stewart, Chief Executive of the Beer Wines and Spirits Council, is a "burden on the alcoholic beverage industry" (Stewart 2001).

The 1990s in New Zealand was a time of liberalisation of alcohol policies in keeping with a general pro-market ideology (Boston et al. 1999). There was extensive lobbying by alcohol industry representatives in New Zealand, and political statements suggested their efforts were bearing fruit. The Prime Minister at the time, Jim Bolger, promised that excise tax would decline, leaving only Goods and Services Tax (GST) (Hubbard 1996), which had been introduced in the mid-1980s. Treasury undertook a

“zero-sum” review of alcohol taxation (Hall 1996), concluding that the weight of evidence indicated that it should not be reduced.

Illustrating the typical process in the “war of ideas” carried out in the policy arena (George 1997), an industry lobby group, the Beer Wine and Spirits Council, commissioned an “independent” review of Hall’s paper which criticised these “doubtful analyses” (Tasman 2001, reported in Beer Wine and Spirits Council et al. 2001). Further, in their submission to a national tax review in 2001, combined industry groups argued that excise tax has “no sound economic and social rationale” and recommended that its progressive phasing out be examined. Instead, consistent with an approach that focuses on the individual drinker, they favoured “policies that target misuse” (Beer Wine and Spirits Council et al. 2001).

The 2001 national tax review concluded that excise taxes were difficult to justify on either tax efficiency or tax equity grounds. They recommended that “as a matter of tax principle” the general revenue component of excise taxes should be replaced by an increase in GST (Tax Review Team 2001). This was followed in 2002 by a further Treasury paper which supported the case for a specific tax for alcohol, contending that the tax is “well-targeted” and should at least cover the total externality of alcohol consumption, which is likely to be significantly more than the revenue currently collected (Barker 2002). In support of this, a report commissioned by the Alcohol Advisory Council of New Zealand (ALAC) assessed that the revenue generated from the alcohol excise tax in New Zealand (approximately \$500 million) does not cover the public health costs of alcohol-related harm, let alone the enormous social costs, and recommended that the excise tax be increased to at least cover external costs (Easton 2002).

The most recent taxation policy change addressed the issue of New Zealand’s banded excise tax system. In May 2003 an amendment was made to the Customs and Excise Act which increased the price of the cheap “light spirits” that had been linked to binge drinking by young people. This was strongly opposed by industry groups and opposition Members of Parliament, who labelled it a “tax grab”.

Future Policy Directions

While New Zealand national policy has stayed firm on taxation policy to date, history suggests the possibility of future threats to excise tax from industry lobbying. A new potential issue relates to the proliferation of trade treaties which, when they include alcohol, have been found throughout the world to lead, as part of the harmonisation process, to a reduction in taxation levels (Babor et al. 2003). The European Commission, for example, issued infringement proceedings against Sweden for its tax disparities between beer and wine which were said to discriminate against wine from other

member states, forcing Sweden to comply by lowering taxes in 2001 (Ministry of Health and Social Affairs [Stockholm] 2002).¹

Improvements to New Zealand’s tax policy could move further towards tax being levied on ethanol content, possibly retaining a differential for spirits in order to maintain the price of spirits, as well as incorporating an overall increase to at least cover externalities (Easton 2002). One commentator in the area has suggested an increase of \$6 per litre of pure alcohol – which would raise the price of a can of beer by nine cents, bulk wine by 88 cents and a bottle of spirits by \$2.83 (Easton 2002). Manipulations targeted towards certain beverages (for example, making greater use of tax incentives for lower-strength beverages and considering an additional tax on alcopops to counter their inherent appeal as “transition drinks” for young teens) could also have public health gains. Public support for increasing tax to reduce harm will be strongest where increases are hypothecated for treatment and prevention purposes (Loxley et al. 2004), but must be directed towards evidence-based strategies.

REGULATING PHYSICAL AVAILABILITY: MINIMUM PURCHASE AGE

Evidence gained from countries that have changed their minimum purchase age, particularly the United States and Australia, indicates that an increase in minimum purchase age is one of the most effective measures to reduce alcohol-related harm. In the United States, for example, the lowering of the legal drinking age in most states in the 1970s was linked with an increase in alcohol consumption and alcohol-related traffic crashes involving young people. When the age was raised to 21 in 1984, the rates fell (Wagenaar 1981, O’Malley and Wagenaar 1991, Voas and Tippetts 1999).

Babor and colleagues (2003) rated this policy at the same level of effectiveness as taxation, with a good breadth of research evidence and a low cost to implement.

Table 2 Higher Minimum Purchase Age Policy Assessment

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Higher purchase ages	+++	+++	low

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:264.

1 However, in New Zealand’s context the bigger public health issue may be more about the impact of our exporting behaviour on the health and welfare of developing neighbours. At World Spirits Alliance talks with the World Trade Organisation this year, New Zealand representative Thomas Chin (Distilled Spirits Association) pressed for enhanced access to export markets through the reduction and preferably elimination of tariffs and non-tariff barriers that are “hobbling” potential export earnings (O’Connor 2004). Key markets include north and south Asia and the Pacific (Distilled Spirits Council of New Zealand 2004).

New Zealand Experience

New Zealand is now aligned with the majority of comparable countries – including Australia and most of Europe – which have a minimum purchase age of 18 years or younger. However, Sweden has an age limit of 20 (restaurants are 18), Japan has an age limit of 20 years for on-licences and off-licences, and the United States has an age limit of 21 years on purchase and consumption of alcohol (many states have exceptions for consumption on private property or with parental sanction).

Lowering the minimum purchase age to 18 years in New Zealand was narrowly defeated at a time of major liberalisation when the Sale of Liquor Act was rewritten in 1989. It was again an issue of vigorous debate in the late 1990s when the Act was again amended. The decision to lower the purchase age was passed in a close (59–55) vote despite strong evidence suggesting increased harm would follow, a united voice from the public health field against lowering the age, and public polling that supported retaining a 20-years age limit.

Industry groups argued that legalising the purchase of alcohol at 18 years of age was “normalising” drinking in a controlled and safe environment. “To suggest – as anti-alcohol groups do – that drinking at 18 years of age constitutes a major change with potentially unsafe consequences for society is alarmism with no basis in fact” (Beer Wines and Spirits Council 1999).

The Liquor Review Advisory Committee, which had been set up by the Ministry of Justice to review the Sale of Liquor Act, recommended an 18-years purchase age. They disagreed with the theory that the greater availability of alcohol provides the opportunity for greater abuse. Instead, their view concurred more with those presented by industry groups; that is, since many young people are already accessing alcohol through parents or other adults, the purchase age is immaterial. They stated: “Liquor abuse is a social problem which, in the end, will only be alleviated by social programmes which raise the level of public awareness and education about the dangers of excessive alcohol consumption” (Liquor Review Advisory Committee 1997:13).

Amendments in 1999 were designed to simplify the provisions around the purchase age and improve its enforceability. But while acceptable proof of age was stipulated in the Act, sighting it was not made a legal requirement. Enforcement resources were not increased and the promised “hard 18” culture has not become a reality. In a recent age-verification study, Huckle et al. (2004) found that 18-year-olds were able to purchase alcohol from Auckland off-licences in 56% of attempts without showing proof of age. The National Alcohol Survey (Habgood et al. 2001) and a number of controlled purchase operations run by the police have also confirmed that younger teens can

readily purchase alcohol. There is evidence that alcohol-related hospitalisations increased among younger groups between 1990 and 2003, particularly among teenagers (Huckle et al. 2005), and of a significant increase in the number of intoxicated 18–19-year-olds presenting to Auckland Emergency Department in the year following the lowering of the purchase age (Everitt and Jones 2002). However, three Ministry of Justice reports on the impact of lowering the age have given “inconclusive” verdicts based on available statistics (Lash 2002a, 2002b, 2004).

Future Policy Directions

A move to increase the purchase age, with adequate enforcement, could affect alcohol-related harm of those in the 18–19 years age group and may affect the access of those aged 17 years and younger. A return to a purchase age of 20 has had wide support, as is evident from informal public polls and statements from bodies such as the New Zealand Medical Association and some city councils. There are also advocates among Members of Parliament of raising the age, including two private members’ bills from smaller parties for a return to 20 years and a third supporting a 20-years age limit for off-licences only. A high level of enforcement is important, and strengthening the legal requirement to sight proof of age would help.

RESTRICTION ON HOURS OF SALE AND DENSITY OF LIQUOR OUTLETS

Restricted hours of sale and restricted density of liquor outlets both have good evidence for effectiveness, with the potential to reduce drinking and alcohol-related problems (Babor et al. 2003). While the effects of marginal changes, where there is already considerable availability of alcohol, are minor, large changes in outlet density, such as allowing beer in grocery stores, can have a substantial influence on consumption and problems (Noval and Nilsson 1984, in Babor et al. 2003). Restrictions were rated as having good evidence of effectiveness.

Table 3 Restricted Trading Hours and Outlet Density Policy Assessment

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Restricting trading hours	++	++	low
Restricting outlet density	++	+++	low

Note: Ratings range from +++ (highest) to 0 (lowest).

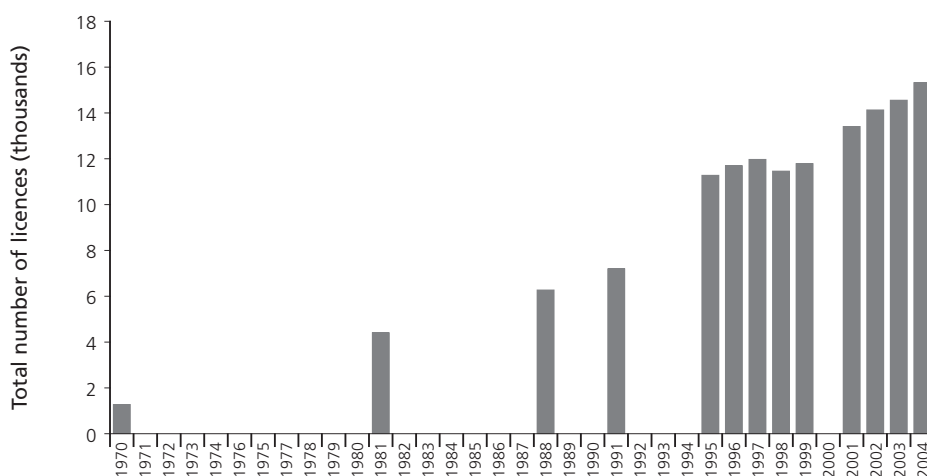
Source: Babor et al. 2003:264.

New Zealand Experience

Since the late 1980s New Zealand has introduced a series of changes to the Sale of Liquor Act that have greatly increased the physical availability of alcohol in New

Zealand. A major change was in 1989, when wine sales in supermarkets were allowed as well as wide extension of licensing hours, including the possibility of 24-hour licences. The criterion of community “need”, which had effectively restricted the density of liquor outlets in the previous Act, was removed and market forces were allowed to determine the number of outlets. Amendments to the Act in 1999 allowed beer in supermarkets and Sunday trading. Un-opposed licensing was devolved to local government licensing agencies, making licensing a simpler procedure. Figure 1 shows the increased density of outlets in New Zealand, which has reached higher levels per head of population than comparable jurisdictions, such as New South Wales.

Figure 1 Total Number of Liquor Licences in New Zealand 1970–2004*



* Includes on-licences, off-licences and club licences. Data not available for some years.

Source: Liquor Licensing Authority 2004.

The most recent amendment in 2004 continued the reduction of restrictions, allowing Easter Sunday trading in wineries.

The gradual lifting of restrictions on trading hours over this time is also illustrated by the Auckland central business district: in the 1980s on-licences were required to close at 10.30 pm (1.30 am if providing a meal); in the mid-1990s closure for city bars was mostly 3 am; by 2004 the majority of the central business district’s bars and clubs had been given 24-hour licences. Current proposals in Auckland City’s draft Alcohol Strategy are for 24/7 trading for all licences within the central business district, as long as there are no recurring noise or crowd behaviour issues.

A brief analysis of the debate surrounding the introduction of the Sale of Liquor Act amendments in 1999 pertaining to this policy area provides yet another illustration of

the often polarised views that represent commercial and public health interests. Public health groups at the time asserted that the changes would have major enforcement implications and possibly lead to price wars and other competitive promotional practices, including sales to minors (Justice and Law Reform Committee 1999), and they suggested that resulting behaviour would stretch police resources and have considerable impact on local residents. Beverage industry groups supported the changes and argued that the deregulatory process was consistent with the “normalisation” or “Europeanisation” of the drinking environment in New Zealand (Beer Wines and Spirits Council 1999:5).

The facilitation of greater community control, which was the intention of the devolution of licensing to local authorities, has not come to pass. Legislative amendments have left an effective gap between the planning and licensing acts, so that not only is there no effective control over density of liquor outlets, but the narrowly prescribed grounds for objection do not allow some community concerns over location to be addressed.

This area also illustrates the key role of enforcement and implementation in alcohol policy. Changes brought in under the 1989 Act were claimed to make licences “easy to gain”, “easy to lose”. The first part of the equation has eventuated, as illustrated in Figure 1. The key mechanism of control is now through management requirements. While these were strengthened in the amendments, and short suspensions through the Liquor Licensing Authority have become more common in the past five years, licences have not yet proved to be easy to lose.

Police in many districts have reported that longer hours have led to disorder and stretched police resources (Adams, quoted in Liquor Licensing Authority 2004). It has also been the experience of the Liquor Licensing Authority that longer hours contribute to a greater degree of intoxication and, they say, migration to late opening bars has been “irrefutable” (Liquor Licensing Authority 2004).

The marked increase in availability of alcohol that has resulted from these policies is likely to have contributed to increased drinking by young people and women over this period.

Future Policy Directions

Improved practice in the areas of trading hours and outlet density requires increased resources for monitoring and enforcement to keep pace with the increased hours and upsurge in the number of premises. The development of sound policy mechanisms for better control over density, location and hours is also a priority. Amendments of the Sale of Liquor Act could require the development of policies that enable more effective

means of control and meaningful community input, and greater use could be made of the potential for social impacts of premises to be considered through the Resource Management Act. The recent gambling and prostitution reform acts, that allow for consideration of issues of density, neighbouring land use and the social impacts of the activity in planning, may provide models.

MANAGING THE DRINKING ENVIRONMENT

The evidence relating to different approaches to managing the drinking environment illustrates the importance of enforcement in achieving an impact on alcohol-related harm. Where there has been reliance on voluntary codes, in-house policies and training of staff, these have been less effective than where enforcement of legislation and regulation against selling to intoxicated patrons has taken place (Babor et al. 2003). The costs involved when enforcement is implemented are assessed as high. There have been some successful examples of community mobilisation aimed at reducing problems associated with licensed premises, but the sustainability of these changes has yet to be demonstrated (Babor et al. 2003).

Table 4 Assessment of Environmental Policies

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Enforcement of on-premise regulations and legal requirements	++	+	high
Bar staff training	+	+	moderate
Outlet policy not to serve intoxicated patrons	+	+++	moderate
Voluntary codes of bar practice	0	+	low
Community mobilisation	++	++	high

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:265.

New Zealand Experience

New Zealand, like similar jurisdictions, has long had legislation in place prohibiting the sale of alcohol to intoxicated patrons or serving people to a state of intoxication. The 1989 Sale of Liquor Act included new provisions directed at encouraging healthier drinking environments, including the requirement for food and non-alcoholic beverages in all on-licensed premises. These host-responsibility provisions were strengthened in 1999. Host-responsibility training for managers became mandatory, and promotions, competitions and pricing structures that encourage fast or excessive

drinking were expressly prohibited. However, it is unlikely that any major increase in resources deployed towards enforcement have occurred.

Neither of the two mechanisms available to monitor and report on licensed premises – community control and inspection by council and police – have been resourced adequately. For example, the Auckland City police district had, as of 2005, approximately 1,500 licensed premises, for which it had available four district licensing inspectors and five liquor licensing police (Auckland City district licensing inspector, personal communication, 4.2.05).

There has, however, been some improvement in this area. Coordination of existing district-level resources has occurred as police data linking alcohol-related offences to the place of last drink is fed back to statutory agencies (health, council inspectors and liquor-licensing police) and used to better target “problem premises” for enforcement and staff-training purposes (Marriot-Lloyd and Webb 2002). More recently a stronger stance on intoxication in licensed premises has been taken in Liquor Licensing Authority decisions: “Allowing a person to be or to become intoxicated in licensed premises are among the more serious examples of a failure to contribute to the reduction of liquor abuse” (Liquor Licensing Authority 2003). There has been no active lobbying by the industry interests against these actions.

Future Policy Directions

The evidence on effectiveness and New Zealand’s current practice shows the need for more resources for enforcement and to ensure the consistent use of penalties, rather than reliance on voluntary policies and education of licensees. An increase in licence fees (currently costing around \$5 a week for renewed licences) to recover more of the cost of more adequately monitoring premises might facilitate this.

MEASURES TO REDUCE DRINK-DRIVING

Several measures to reduce drink-driving, and associated injury and death, have strong evidence for effectiveness. Increasing the frequency and visibility of random testing and administrative licence suspension can have an impact, and lowering legal blood alcohol concentration (BAC) levels also has strong evidence for being a positive and cost-effective strategy. Returns diminish at lower levels (.05–.02 mg/ml), but they are still significant. A lower BAC limit near zero has been shown to be very effective in reducing alcohol-related crashes in young drivers (Babor et al. 2003). However, designated driver programmes show no evidence of being a cost-effective strategy.

Table 5 Assessment of Drink-Driving Policies

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Lowered BAC for driving	+++	+++	low
Lowered BAC for young drivers	+++	++	low
Random breath testing	+++	++	moderate
Administrative licence suspension	++	++	moderate
Designated driver and ride services	0	+	moderate

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:266.

New Zealand Experience

Many effective measures have been introduced in New Zealand since the late 1980s. A lower legal breath/blood alcohol limit for drivers aged under 20 years was introduced in 1993, as was compulsory (random) breath testing. Immediate 28-day suspension of a licence for a high breath test reading was introduced in 1998. A recently passed Land Transport Amendment Bill includes tougher penalties for serious and recidivist drink-drivers, including lowering the legal BAC level for roadside licence suspension.

On BAC level, however, New Zealand's policy rates less favourably. At .08 mg/ml for adults (.03 for under 20 years), New Zealand shares with the United Kingdom, Ireland, the United States and Canada one of the highest BAC levels among comparable countries. Australia, Japan and most of Europe have .05 mg/ml legal limits for adults and some (for example, Sweden at .02 mg/ml) have lower levels.

The introduction of compulsory (random) breath testing sparked fears, as reported in the media, that the hospitality industry would be "devastated", but following its introduction 76% of the population now believe it works (Land Transport Safety Authority 2004).

A recent attempt in New Zealand to lower the legal BAC for driving to .05 mg/ml in late 2003, was not supported at Cabinet. Media analysis of the lead-up to the Cabinet decision not to pass the 0.05 level shows that policy is unlikely to be adopted in the face of ambivalence and lack of cohesion on the part of the public health sector and a strong media representation of the industry position that "the proposal is incomprehensible when the majority of New Zealanders drive responsibly and keep under the limit" (Stewart, quoted in Smith 2003).²

2 References to "Stewart" are to Nicki Stewart, Chief Executive, Beer Wine and Spirits Council.

Future Policy Directions

The downward trend in alcohol-related deaths and crashes experienced during the 1990s has plateaued, supporting the call for a 0.05 mg/ml BAC level for drivers and a near-zero level for young drivers. The perceived risk of detection requires more resources. Although public awareness of the presence and value of enforcement has increased, a third of New Zealanders still believe the risk of being caught drink-driving is small (Land Transport Safety Authority 2004). In 2004, 46% of New Zealand drivers reported being stopped at an alcohol checkpoint, whereas a survey of Australian motorists in 1999 showed 82% reported being stopped (Williams et al. 2000).

REGULATING ALCOHOL PROMOTION

Unlike other aspects of alcohol production and distribution that have been subject to policy for centuries, marketing is a rapidly evolving area with new technologies providing new opportunities to influence behaviour in unhealthy ways. Most research has focused on restrictions on the advertising of alcohol, and bans are rated as having some evidence for effectiveness and being of low cost to implement. Evidence comes from cross-country studies of the effects of bans (Saffer 1991, Saffer and Dave 2002), and also from measures of the impact of advertising, particularly on young people. For example, New Zealand longitudinal research has shown that recall and positive responses to beer advertising predicts later heavier drinking (Connolly et al. 1994, Casswell and Zhang 1998, Casswell et al. 2002, Wyllie et al. 1998a, 1998b).

Although there is no research on the effectiveness of advertising content controls, when these are implemented through industry self-regulation evidence suggests they are unlikely to be implemented adequately.

Table 6 Assessment of Policies Regulating Promotion

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Advertising bans	+	++	low
Advertising content controls	?	0	moderate

Note: Ratings range from +++ (highest) to 0 (lowest).
 Source: Babor et al. 2003:265.

New Zealand Experience

Regulation of the promotion of alcohol is another area in which major liberalising changes have occurred. In 1992 the ban on broadcast brand-alcohol advertising in New Zealand was lifted and self-regulation allowed – a system that has been shown to be “fragile and largely ineffective” (Babor et al. 2003:183). An amendment to the Broadcasting Act in 1993 gave total jurisdiction over the content of alcohol advertising, including the conducting of its own code reviews, to the Advertising Standards Authority, an organisation representing the advertising and media industries.

This was followed by an increase in exposure of alcohol advertising to young people. Between 1991 and 1993 there was a more than four-fold increase in expenditure on television alcohol advertising. Annual broadcast expenditure on all alcohol advertisements increased from less than \$5 million pre-1990 to nearly \$35 million in 1995 (Wyllie et al. 1996). In 1999 this had increased to over \$45 million (Inter-Agency Committee on Drugs 2000). In addition to this is the wide range of unmeasured marketing that is taking place, estimated in the United States to be two to three times as much as measured promotions (Federal Trade Commission 1999).

Restricting the marketing of alcohol is a contentious policy area, with public health advocates and industries with vested interests holding strongly opposing views. Unlike a policy area such as taxation (which only affects the producers and retailers), the area of marketing is important for the financial wellbeing of the advertising and media industries. The major change in policy in 1991 occurred in the context of an economic downturn that affected the advertising industry and at a time when government was looking to move broadcast media towards greater reliance on advertising revenue (Casswell et al. 1993).

Three reviews over the past 10 years by the Advertising Standards Authority of its Code for Advertising Liquor, which have sought submissions on further restriction or liberalisation of advertising, have resulted in a tweaking of the voluntary codes. The most recent review, in 2003, resulted in the previous restriction of televised alcohol advertisements after 9 pm being revised to 8.30 pm, as well as recommendations to harmonise the liquor codes with those of Australia. The only public health representative on the panel publicly voiced disappointment at the review outcome, but his dissenting view was not published in the final report (Tukuitonga 2003).

The advertising issue also illustrated the marked influence of a change in policy position by a key organisation, ALAC. ALAC, which had opposed alcohol advertising on the broadcast media in their policy documents in the 1980s, shifted position in the 1990s. In the policy change of 1991, ALAC received free television and radio broadcast time to show their “moderation” ads. In 1998 their position on advertising policy

changed in a submission in which they stated that they had taken into account the social and political climate of the time (Alcohol Advisory Council of New Zealand 1998). The view of ALAC was given considerable weight, since it is “specifically empowered by parliament to make recommendations to any review body considering liquor advertising and its regulation” (Advertising Standards Authority 1998). ALAC subsequently commented: “there is no doubt that this change weakened the position of public health lobby groups that alcohol advertising on radio and television should be banned” (Alcohol Advisory Council of New Zealand 2003a).

In 2003 ALAC submitted that “there be no further liberalisation of advertising in the broadcast media, given the emerging link between alcohol advertising and the drinking culture of a country” (Alcohol Advisory Council of New Zealand 2003b). ALAC now is of the view that any further liberalisation of broadcast advertising of alcohol would be unwise. However, ALAC went on to state a preference for self-regulation codes for broadcasting and a strengthening of the regulatory focus on “‘new’ media” (Alcohol Advisory Council 2003b:2).

Industry attempts to influence public opinion in the media have claimed that “restricting advertising would divert attention from the real issues of education and the role of the family” (Stewart, quoted in *New Zealand Herald* 2002). The industry’s key position is reiterated internationally: “There is insufficient evidence to support an association between advertising and levels or patterns of drinking, either among adults or young people. Other factors – especially parental and peer influences – appear more important” (International Centre for Alcohol Policy 2003).

Contemporary marketing has almost certainly contributed to increases in youth drinking. New Zealand has experienced an especially marked increase in consumption of spirits-based drinks, as have other countries, following the introduction of alcopop and ready-to-drink beverages, which are clearly marketed with young people in mind (Brain 2000).

Future Policy Directions

There is increasing awareness of the contribution of alcohol marketing to the drinking culture. A private member’s bill currently in the ballot seeks to restrict broadcast advertising of alcohol to after 10.30 pm and place all broadcast liquor advertising under the jurisdiction of the Broadcasting Standards Authority. Another bill in the queue intends to ban broadcast advertising of alcohol. The Government has agreed to lead a review of the current voluntary regime in 2005, the result of a petition calling for an inquiry into the effects of alcohol promotion (Group Against Liquor Advertising 2004).

The proliferation of new modes of marketing suggests the need to look beyond the more visible broadcast advertising for effective marketing, particularly to young people (Casswell 2004). In response to this there is a need for new developments in marketing policy, such as a statutory body to oversee and regulate all marketing developments, exposure and content.

EDUCATION AND PERSUASION: SCHOOL-BASED EDUCATION

School-based education programmes, which aim to modify young people's beliefs, attitudes and behaviours, have generally not been found to lead to any lasting effects on drinking behaviour despite a considerable breadth of research support (Foxcroft et al. 1997, Babor et al. 2003). Such a finding is in line with theoretical understanding and empirical evidence of the effect of similar education with similar behaviours (White and Pitts 1998). Despite their relative ineffectiveness and high cost for training and implementation, education as a strategy to reduce alcohol and illicit drug use in young people has widespread support, probably in large part because it does not affect any vested interest groups (Babor et al. 2003).

Table 7 Assessment of School-Based Education Policy

Policy	Effectiveness rating	Breadth of research support	Cost to implement
School-based education	0	+++	high

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:265.

New Zealand Experience

New Zealand has had a number of private providers of alcohol and other drug education in the schools during the 1990s. Some of these are still active and are invited into schools at the discretion of the boards of trustees. However, there is now a greater consensus on best practice that advocates for information about alcohol provided in a school setting to be taught by the schools' regular teachers and for the material to be taught as part of the school curriculum. Alcohol is now a key area of learning in the Health and Physical Education Curriculum, with 81% of primary and secondary schools (90% of the non-primary schools) providing a drug education programme in 2001 (Education Review Office 2002). Identifying and encouraging best practice for school-based education is also a major strategy of the Government's *Action Plan on Alcohol and Illicit Drugs* (Ministerial Committee on Drug Policy 2004).

As a strategy that is clearly aimed at the individual drinker and unlikely to affect sales adversely, education is strongly advocated by industry groups around the world. In

New Zealand, the Beer Wine and Spirits Council lobbies for education as a key strategy and supports several programmes aimed at educating young people about responsible drinking behaviour (Beer Wines and Spirits Council 2003).

Future Policy Directions

While the public health sector is well aware of its lack of efficacy, school-based education is a popular strategy in the minds of the industry and politicians and is likely to continue. The current New Zealand policy of containing it within the school curriculum will probably utilise fewest resources and reduce the chance of high-profile education campaigns, which may give the erroneous idea that these in isolation provide an adequate response to the situation.

MASS MEDIA MESSAGES

Mass media public information campaigns were assessed as having no effectiveness. “While it is expected that these public service messages have a direct effect on the target audience, this is seldom the case” (Babor et al. 2003:189).

Table 8 Assessment of Public Service Messages

Policy	Effectiveness rating	Breadth of research support	Cost to implement
Public service messages	0	+++	moderate

Note: Ratings range from +++ (highest) to 0 (lowest).

Source: Babor et al. 2003:265.

New Zealand Experience

Since large-scale media campaigns require considerable resources, and are helped by access to the free broadcast time (provided as a quid pro quo to the advertising policy change in 1991), their provision in New Zealand has largely been confined to the Land Transport Safety Authority and ALAC. They have generally not been used in conjunction with stronger strategies, such as enhanced enforcement, although there is evidence that they may be more effective when supporting policy change, for example, the use of media campaigns to support public awareness of compulsory (random) breath testing (Homel 1988, 1993).

In June 2004 the Government announced a major new programme funded by a “small levy increase” on alcohol (between one and five cents a bottle) that would go to ALAC for a three-year Culture Change Campaign and a range of associated initiatives (Wilson 2004). Information to date has not shown clear links between the social advertising

campaign and effective policy, or how it will deal with the level of alcohol marketing, which influences the drinking culture and provides a hostile environment for health promotion messages (Wallack 1983).

Supporting high-profile campaigns is a key public relations strategy of the industry. Industry groups have voiced support for the Culture Change programme and the opportunity to “work with ALAC and other industry colleagues in its implementation” (Stewart in O’Connor 2004) and absorbed the increased costs of the levy as a gesture of support for the campaign (O’Connor 2004). It is worth noting, perhaps, that weeks prior to the announcement, the two major breweries had independently raised the wholesale price of beer by between 3% and 6% (*Southland Times* 2004).

Future Policy Directions

Communication campaigns should be confined to the support of effective policies. The extent to which marketing can be restricted will be relevant to the likely impact of the proposed social marketing Culture Change campaign. So, too, given the evidence, will be the extent to which it is designed to support the implementation of existing and new policy aimed at reducing intoxication. Such use of a public information campaign is currently underway in Norway and could provide a useful model (Lunde 2004).

CONCLUSION

Alcohol policies that increase the price of alcohol, limit access to alcoholic beverages, alter the drinking environment and deter drinking and driving are likely to be the most effective, and enforcement of these policies is essential. Restricting marketing is also likely to influence the climate of tolerance around alcohol and alcohol policies.

As has been seen in this analysis, however, policy making in the alcohol arena is a complicated process. Lobbying by commercial interests has influenced policy, and the focus of their efforts has been to make alcohol as “normal” a commodity as possible.

The 1990s and early 2000s have seen a large increase in the availability of alcohol, together with a rise in the sophistication and pervasiveness of alcohol promotion messages. These changes have undoubtedly been contributory factors in the increased levels of consumption and associated harms seen in young people (Habgood et al. 2001).

With mounting visibility of alcohol-related problems, particularly among young people, there is acknowledgement from many sectors that the increasingly liberal policies have allowed this situation to develop. Recent policy responses, however, have been small and uncoordinated and, aside from the minor change to excise tax structure, largely confined to public and industry-friendly interventions such as the social

marketing campaign. Consultation on the review of the National Drug Policy and, falling out of that, the National Alcohol Strategy, is imminent.

There has been a proliferation of liquor bans in public places³ in response to the public disorder associated with intoxication. Some of this will be linked to access by under-age patrons to takeaway alcohol and can be improved by a change in age legislation and by enforcement of the existing law. Some is linked to drinking on licensed premises and, once again, enforcement is the key requirement.

Many local governments have been active in developing policies guiding their responsibilities under the Sale of Liquor Act and some are developing wider-based strategies to reduce alcohol-related harm. However, without effective cross-sector policy their ability to achieve significant change is likely to be limited.

Given the evidence of lack of effectiveness of both educational programmes and public information campaigns, any developments involving industry funds and cooperation are best evaluated in the light of the industry's public relations goals. Alcohol policy development now takes place in an international context, as does alcohol marketing and trade, and increasingly the influence of international lobbying is being felt in New Zealand. The legitimate objectives of the industry – to sell as much of their product as possible – conflict with the objectives of public health. It is not surprising, therefore, that those policies for which there is evidence for greatest effectiveness receive the least support and that instead there is greater willingness to support the least effective policies and initiatives.

This brief review of New Zealand's recent history and current policy has revealed a period of consistent liberalisation and (not surprising) consequent increases in drinking by some sectors, and related harm. The evidence for effectiveness reported in this paper provides a framework for evaluating future policy directions and provides the opportunity for strategic planning that utilises the most effective policy options consistently over a period of time, rather than adopting a broad-brush approach which includes the least effective policies and allows resources to be wasted in those activities.

³ Approximately 30 of the country's 72 district or city councils now have year-round bans and a further 15 councils have seasonal bans for selected holiday spots or events (Webb et al. 2004).

REFERENCES

- Advertising Standards Authority Review Team on Liquor Advertising on Radio and Television (1998) *Report of the Review Team on Liquor Advertising on Radio and Television (The Barker Report)*, Advertising Standards Authority, Wellington.
- Alcohol Advisory Council and Ministry of Health (2001) *National Alcohol Strategy 2001-2003*, Alcohol Advisory Council/Ministry of Health, Wellington.
- Alcohol Advisory Council of New Zealand (1998) *Submission by the Alcohol Advisory Council to the Advertising Standards Authority Review on Broadcast Alcohol Advertising*, ALAC Occasional Publication No.3, Alcohol Advisory Council of New Zealand, Wellington.
- Alcohol Advisory Council of New Zealand (2003a) *The History of Alcohol Advertising on Radio and Television*, prepared for the Ministerial Committee on Drug Policy, www.alac.org.nz/InpowerFiles/Publications/CategorisedDocument.Document. Document.1.1336.846217c7-1d50-4ebc-aced-5657a4a01988.pdf.
- Alcohol Advisory Council of New Zealand (2003b) *Submission to the Liquor Advertising Review 2003*, www.alac.org.nz/InpowerFiles/Policies/Document.Document. 957.140e7f0d-189b-4f36-a20c-4a0d35d13208.pdf
- Babor, T., R. Caetano, S. Casswell, G. Edwards, N. Giesbrecht, K. Graham, J. Grube, P.J. Gruenevald, L. Hill, H. Holder, R. Homel, E. Osterberg, J. Rehm, R. Room and I. Rossow (2003) *Alcohol: No Ordinary Commodity – Research and Public Policy*, Oxford University Press, Oxford.
- Barker, F. (2002) *Consumption Externalities and the Role of Government: The Case of Alcohol*, Treasury Working Paper 02/25, The Treasury, Wellington.
- Beer Wines and Spirits Council (1999) *Submission to Justice and Law Reform Select Committee on Sale of Liquor Amendment Bill (No. 2)*, www.beerwsc.co.nz/submissions_5.htm [accessed July 2004].
- Beer Wines and Spirits Council (2003) *Submission to the Review of Liquor Advertising on Radio and Television 2003*, www.beerwsc.co.nz/page.asp?pageid=41 [accessed August 2004].
- Beer Wine and Spirits Council of New Zealand, Distilled Spirits Association of New Zealand and Wine Institute of New Zealand Incorporated (2001) *Submission on the Tax Review 2001*, www.beerwsc.co.nz/page.asp?pageid=49 [accessed August 2004].
- Boston, J., P. Dalziel and S. St John (1999) *Redesigning the Welfare State in New Zealand: Problems, Policies, Prospects*, Oxford University Press, Auckland.
- Brain, K. (2000) *Youth, Alcohol and the Emergence of the Post-Modern Alcohol Order*, Occasional Paper No.1, Institute of Alcohol Studies, London.
- Casswell, S. (2004) "Alcohol brands and young people's everyday lives: New developments in marketing" *Alcohol and Alcoholism*, 39(6):471-476.
- Casswell, S., M. Pledger and S. Pratap (2002) "Trajectories of drinking from 18 to 26: Identification and prediction" *Addiction*, 97:1427-1437.

- Casswell, S., L. Stewart and P. Duignan (1993) "The negotiation of New Zealand alcohol policy in a decade of stabilized consumption and political change: the role of research" *Addiction*, 88:9S-17S.
- Casswell, S. and J.-F. Zhang (1998) "Impact of liking for advertising and brand allegiance on drinking and alcohol-related aggression: A longitudinal study" *Addiction*, 93:1209-1217.
- Chaloupka, F., M. Grossman and H. Saffer (2002) "The effect of price on alcohol consumption and alcohol-related problems" *Alcohol Research & Health*, 26:22-34.
- Chisholm, D., J. Rehm, M. Ommeren and M. Monteiro (2004) "Reducing the global burden of alcohol use: A comparative cost-effectiveness analysis" *Journal of Studies on Alcohol*, 65:782-793.
- Coate, D. and M. Grossman (1988) "Effects of alcoholic beverage prices and legal drinking ages on youth alcohol use" *Journal of Law and Economics*, 31:145-171.
- Connolly, G., S. Casswell, J.-F. Zhang and P.A. Silva (1994) "Alcohol in the mass media and drinking by adolescents: A longitudinal study" *Addiction*, 89:1255-1263.
- Distilled Spirits Council of New Zealand (2004) *Spirits Are Raised as Free Trade Moves Ahead*, Media Release, www.distillers.co.nz [accessed 5 August 2004].
- Easton, B. (2002) *Taxing Harm: Modernising Alcohol Excise Duties*, Alcohol Advisory Council of New Zealand, Wellington.
- Education Review Office (2002) *Drug Education in Schools*, www.ero.govt.nz/Publications/pubs2002/DrugEducation.htm [accessed August 2004].
- Edwards, G., P. Anderson, T.F. Babor, S. Casswell, R. Ferrence, N. Giesbrecht, C. Godfrey, H.D. Holder, P. Lemmens, K. Makela, L.T. Midanik, T. Nostrom, E. Osterberg, A. Romero, R. Room, J. Simpura and O.-J. Skog (1994) *Alcohol Policy and the Public Good*, Oxford University Press, Oxford.
- Everitt, R. and P. Jones (2002) "Changing the minimum legal drinking age – its effect on a central city Emergency Department" *New Zealand Medical Journal*, 115:9-10
- Federal Trade Commission (1999) *Self-regulation in the Alcohol Industry: A Review of Industry Efforts to Avoid Promoting Alcohol to Underage Consumers*, Federal Trade Commission, Washington, D.C.
- Foxcroft, D., D. Lister-Sharp and G. Lowe (1997) "Alcohol misuse prevention for young people: A systematic review reveals methodological concerns and lack of reliable evidence of effectiveness" *Addiction*, 92:531-537.
- George, S. (1997) "How to win the war of ideas: Lessons from the Gramscian right" *Dissent*, 44:1-9.
- Group Against Liquor Advertising (2004) *Submission to Health Select Committee*, www.gala.org.nz.
- Habgood, R., S. Casswell, M. Pledger and K. Bhatt (2001) *Drinking in New Zealand: National Surveys Comparison 1995 & 2000*, Alcohol & Public Health Research Unit, Auckland.
- Hall, T. (1996) *The Alcohol Excise*, The Treasury, Wellington.

- Homel, R. (1988) "Random breath testing in Australia: A complex deterrent" *Australian Drug and Alcohol Review*, 7:231-241.
- Homel, R. (1993) "Random breath testing in Australia: Getting it to work according to specifications" *Addiction*, 88:275-335.
- Hubbard, A. (1996) "Taking the pulse of the heartland" *Sunday Star Times*, 6 October.
- Huckle, T., D. Broughton and M. Pledger (2004) *Auckland Pseudo Patrons Survey 2004*, Centre for Social & Health Outcomes Research & Evaluation and Te Ropu Whariki, Auckland.
- Huckle, T., M. Pledger and C. Casswell (2005) "Increased hospitalisations following liberalisation of alcohol policy" submitted for publication to *New Zealand Medical Journal*.
- Inter-Agency Committee on Drugs (2000) "Alcohol advertising and sponsorship" paper provided to Ministerial Committee on Drug Policy, 12 September.
- International Centre for Alcohol Policy (2003) "Industry views on beverage alcohol advertising and marketing, with special reference to young people" World Health Organization Conference, Valencia, Spain.
- Justice and Law Reform Committee (1999) *Report on Sale of Liquor Amendment Bill (No.2)*, 1999, New Zealand Government, Wellington.
- Land Transport Safety Authority (2004) *Public Attitudes to Road Safety*, Land Transport Safety Authority, Wellington.
- Lash, B. (2002a) *Some Statistics on the Possible Effects of the Sale of Liquor Amendment Act 1999 (Lowering the Drinking Age)*, Research and Evaluation Unit, Ministry of Justice, Wellington.
- Lash, B. (2002b) *Young People and Alcohol: Some Statistics on the Possible Effects of Lowering the Drinking Age*, Research and Evaluation Unit, Ministry of Justice, Wellington.
- Lash, B. (2004) *Young People and Alcohol: Some Statistics to 2002 on Possible Effects of Lowering the Drinking Age*, Ministry of Justice, Wellington.
- Lowe, M. (2003) "Lower drink-drive limit 'ridiculous'" *Sunday Star Times*, 22 December.
- Liquor Licensing Authority (2003) LLA Decision Number 909/2003-910/2003.
- Liquor Licensing Authority (2004) LLA Decision Number 654/2004.
- Liquor Review Advisory Committee (1997) *Report of the Advisory Committee*, Ministry of Justice, Wellington.
- Loxley, W., J. Toumbourou and T. Stockwell (2004) *The Prevention of Substance Use, Risk and Harm in Australia: A Review of the Evidence*, Australian Government Department of Health and Ageing, Canberra.
- Lunde, T. (2004) "Monitoring alcohol marketing in Norway" Bridging the GAP European Alcohol Policy Conference, Warsaw, 16-19 June.
- Marriott-Lloyd, P. and M. Webb (2002) *Tackling Alcohol-Related Offences and Disorder in New Zealand*, Policy Unit, Office of the Commissioner, New Zealand Police, Wellington, www.ndp.govt.nz/alcohol/tackling_alcohol.htm.

- Ministerial Committee on Drug Policy (2004) *Action Plan on Alcohol and Illicit Drugs as at March 2004*, www.ndp.govt.nz/publications/drugactionplan.html [accessed August 2004].
- Ministry of Health and Social Affairs [Stockholm] (2002) *Preventing Alcohol-Related Harm: A Comprehensive Policy for Public Health in Sweden*, Division for Public Health, Stockholm.
- New Zealand Herald* (2002) "Don't blame booze ads for the abuse of alcohol" 19 December.
- O'Connor, D. (2004) Press release, Damien O'Connor, Associate Minister of Health, 24 June.
- O'Malley, P. and A. Wagenaar (1991) "Effects of minimum age drinking laws on alcohol use, related behaviors and traffic crash involvement among American youth: 1976-1987" *Journal of Studies on Alcohol*, 52: 478-491.
- Osterberg, E. (1995) "Do alcohol prices affect consumption and related problems" in H. Holder and G. Edwards (eds.) *Alcohol and Public Policy: Evidence and Issues*, Oxford University Press, Oxford.
- Saffer, H. (1991) "Alcohol advertising bans and alcohol abuse: An international perspective" *Journal of Health Economics*, 10:65-79.
- Saffer, H. and D. Dave (2002) "Alcohol consumption and alcohol advertising bans" *Applied Economics*, 30:1325-1334.
- Smith, N. (2003) "Minister deaf to protests over cut in drink-drive threshold" *National Business Review*, 24 January.
- Southland Times* (2004) "Breweries cash in on excise tax rise" 17 June.
- Stewart, N. (2001) "A tax right out of history" (press release by Nicki Stewart, Chief Executive Beer Wines and Spirits Council), www.beerwsc.co.nz/article.asp?articleID=55 [accessed August 2004].
- Tax Review Team (2001) *Final Report: Overview*, The Treasury, Wellington, www.treasury.govt.nz/taxreview2001/finalreport/tr01-final-ov.pdf
- Tukuitonga, C. (2003) *Interview with Colin Tukuitonga (Director of Public Health) on National Radio*, August.
- Voas, R. and A. Tippetts (1999) *Relationship of Alcohol Safety Laws to Drinking Drivers in Fatal Crashes*, National Highway Traffic Safety Administration, Washington, D.C.
- Wagenaar, A. (1981) "Effects of an increase in the legal minimum drinking age" *Journal of Public Health Policy*, 2:206-225.
- Wallack, L. (1983) "Mass media campaigns in a hostile environment: Advertising as anti-health education" *Journal of Alcohol & Drug Education*, 28: 51-63
- Webb, M., P. Marriot-Lloyd and M. Grenfell (2004) "Banning the bottle: Liquor bans in New Zealand" 3rd Australasian Drug Strategy Conference, Alice Springs, May.
- White, D. and M. Pitts (1998) "Educating young people about drugs: A systematic review" *Addiction*, 93(10):1475-1487.

- Williams, A., S. Ferguson and M. Cammisa (2000) *Self-reported Drinking and Driving Practices and Attitudes in Four Countries and Perceptions of Enforcement*, Insurance Institute for Highway Safety, Arlington, Virginia.
- Wilson, S. (2004) "Tax grab just goes on, says wine industry" *Marlborough Express*, 25 June.
- World Health Organisation (2002) *The World Health Report, 2002: Reducing Risks, Promoting Healthy Life*, WHO, Geneva.
- World Health Organization (2004) *Global Status Report: Alcohol Policy*, Department of Mental Health and Substance Abuse, WHO, Geneva.
- Wyllie, A., A. Waa and J.-F. Zhang (1996) *Alcohol and Moderation Advertising Expenditure and Exposure: 1996*, Alcohol & Public Health Research Unit, Auckland, September.
- Wyllie, A., J.-F. Zhang and S. Casswell (1998a) "Positive responses to televised beer advertisements associated with drinking and problems reported by 18 to 29 year olds" *Addiction*, 93:749-760.
- Wyllie, A., J.-F. Zhang and S. Casswell (1998b) "Responses to televised alcohol advertisements associated with drinking behaviour of 10-17-year-olds" *Addiction*, 93:361-371.