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Legal interventions to reduce alcohol-related cancers

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SUMMARY

Research and public policy literature on alcohol-related harm predominantly focuses on the impact of alcohol policies over the short term. However, evidence on the effect of interventions on long-term, alcohol-related chronic disease, including cancers, is growing. The experience from tobacco control supports the use of interventions that increase the price of a commodity and restrict its availability in order to reduce consumption and realize long-term health gains. Meanwhile, the negative involvement of the alcohol industry in alcohol policy development is hampering efforts to intervene early and potentially save many lives. As the burden of alcohol-related cancers becomes more apparent, effective alcohol policies should be introduced sooner rather than later. This paper looks at some of the key legal interventions to reduce alcohol consumption, the potential for these interventions to reduce the risk of alcohol-related cancers, and some of the barriers to implementing these interventions. Examples of law reform efforts in Australia, New Zealand and the UK are given, as well as a short discussion of global alcohol policy initiatives.

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Introduction: alcohol as a cause of cancer

Alcohol is a known cause of cancer. In 1998, the International Agency for Research on Cancer (IARC) classified alcoholic beverages as a Group 1 carcinogen (i.e. a substance known to cause cancer in humans).¹ Ethanol, which is present in all alcohol products, has also been classed by IARC as a Group 1 carcinogen.²

The World Cancer Research Fund conducted a comprehensive review of the scientific evidence linking alcohol and cancer in 2007, and concluded that there is convincing evidence that alcohol is a cause of cancer of the mouth, pharynx, larynx, oesophagus, bowel (in men) and breast; and that there is probable evidence that the use of alcohol increases the risk of bowel cancer (in women) and liver cancer.³ Studies show that the risk of cancer in men and women increases as consumption and frequency of consumption increases.^{3–6}

In Australia, it is estimated that 5070 cases of cancer (or 5% of all cancers) are attributable to long-term chronic use of alcohol each year, including one in five breast cancers. Globally, in 2008, approximately 20% of all alcohol-attributable deaths were from cancer, compared with 22% from cardiovascular disease and 15% from liver cirrhosis.⁷ In other words, more than half of all alcohol-related deaths are from non-communicable diseases. These figures do not take into account the fact that alcohol consumption is also associated with an increased risk of other major chronic diseases such as diabetes and chronic kidney disease.⁸

Research from 2010 estimated that the total known costs of all alcohol-related harms in Australia, including harm to others, was AU\$36 billion annually.⁹ The cost of alcohol to British society is currently estimated at over £25 billion per annum.¹⁰ Globally, the costs associated with alcohol are

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estimated to be more than 1% of the gross national product in high- and middle-income countries.¹¹

Using the law to change the drinking environment: reducing alcohol-related cancers

There is a dose–response relationship between alcohol and cancer for men and women; thus, every drinking occasion contributes to the lifetime risk of harm from alcohol.¹² Therefore, any reduction in the dose (i.e. the amount and frequency of alcohol consumed) will reduce the lifetime risk of alcohol-related harm.¹² A review prepared for the World Cancer Research Fund and American Institute for Cancer Research estimates that not consuming alcoholic drinks has the potential to prevent a good proportion of cancers of the mouth, pharynx and larynx, oesophagus, breast and liver (e.g. approximately 11% and 22% of breast cancers and 34% and 51% of oesophageal cancers in the USA and UK, respectively).¹³

There is a large body of evidence on alcohol policy interventions to reduce short- and long-term harms associated with alcohol use. However, much of the available evidence for alcohol policy interventions is focused on the reduction of rates of short-term harm, such as sudden death, criminality and hospitalizations. Additionally, these policies may not be primarily directed at reducing consumption, although they may have an effect on consumption levels; for example, drink-driving policies are primarily intended to deter driving while under the influence in order to reduce alcohol-related crashes and mortality.

The prevention of alcohol-related chronic disease requires the implementation of policies that shift patterns of consumption downwards, rather than seeking to make the drinking environment safer for individuals. Additionally, the prevention of alcohol-related chronic disease takes time. This is true of cancer as with any other chronic disease; common adult cancers are thought to take many years to develop to the stage when they can be diagnosed.¹³ Therefore, there will necessarily be a lag between the introduction of an intervention and a corresponding effect on cancer rates. This can be a challenging policy environment to operate within, where the likely effect of policy interventions may not be evident for some time.

However, the key policy interventions that have an impact on long-term harm are also some of the best interventions to reduce rates of short-term harm. The World Health Organization (WHO) has developed a 'stepwise approach' to alcohol policy options for the prevention and control of non-communicable diseases.¹¹ This approach, which is consistent with alcohol policy priorities to reduce short-term harm, ranks mechanisms that impact on alcohol affordability, availability and promotion as top interventions to reduce alcohol-related harm.¹¹

Additionally, alcohol, although in many respects different from other environmental causes of cancer (such as tobacco, overweight and obesity), is similar when it comes to the effects of control measures. For example, increasing the price of alcoholic drinks reduces their sales and consumption, much as was found in tobacco control. A review of cancer

prevention policies conducted by the World Cancer Research Fund and the American Institute for Cancer Research concluded that 'taxation has the greatest and most cost-effective impact on reducing the average burden of high-risk alcohol use',³ while 'policies restricting the supply and availability of alcohol are effective in reducing the harm caused by alcohol'.³

The focus of this paper is legal interventions in relation to alcohol and cancer risk. Therefore, the policy discussion in this paper is limited to interventions that have either been shown to have an impact on alcohol and cancer, or that have the strongest evidence base to reduce long-term alcohol consumption rates. Where evidence shows an effect from a policy on long-term alcohol-related harm or long-term alcohol consumption, this suggests the potential for employing such policies for cancer prevention.

Affordability

Research shows that there is a strong link between alcohol price, consumption and resulting harms; simply put, when prices increase, alcohol consumption and harms decrease.¹³ For example, a price increase of 10% reduces consumption by an average of 5%.^{15–17}

Countries with high average consumption of alcohol also have high rates of death from liver cirrhosis, as well as cancers of the mouth and throat.³ Studies of cirrhosis deaths have found that tax increases reduce mortality.¹⁴ In general terms, increasing the price of alcohol has been shown to be effective at reducing the amount of alcohol consumed at population level over time, with corresponding decreases in the rates of alcohol-related chronic diseases.^{12,18}

One of the strongest arguments for price control to reduce alcohol consumption is the experience from tobacco control. Taxing tobacco has been shown to be effective in 'reducing the number of smokers, lowering the numbers of cigarettes smoked, decreasing the duration of smoking, and discouraging people from starting to smoke'.¹³

Taxes that are scaled according to the alcohol content of beverages and adjusted regularly in line with inflation have been shown to reduce a country's consumption and related harm, provided that the real price of alcohol is affected.¹¹ Evidence also suggests that this reduction in consumption applies to all groups of drinkers, and not just heavy or problem drinkers.¹³ This makes alcohol taxation an attractive option for reducing alcohol consumption at population level; it is likely that this would also impact on rates of alcohol-related cancers.

Availability

A substantial amount of research has examined the impact of changes in alcohol availability on alcohol consumption and related harm.¹⁹ Most studies have concluded that increasing the availability of alcohol results in a corresponding increase in alcohol-related harm, particularly rates of violence.¹⁹

Studies that investigated the association between the number of liquor outlets and rates of alcohol consumption have reported mixed results, suggesting that outlets may

influence violence rates without necessarily increasing consumption.¹⁴ However, evidence is growing that demonstrates links between alcohol outlet density and rates of alcohol-related disease.²⁰ For example, a Victorian study found a strong association between increases in packaged liquor availability and chronic alcohol-related disease.²⁰

Research on retail alcohol monopolies provides some of the best evidence about the impact of alcohol availability on long-term alcohol-related harm. For example, countries that have government retail monopolies tend to have fewer stores, open for shorter hours, and lower rates of alcohol-related harm.²⁰ In Finland, changes to the monopoly system to allow beer with an alcohol content up to 4.7% to be sold in supermarkets, together with various relaxations of liquor licensing requirements and lowering of the legal drinking age, led to an overall increase in alcohol consumption of 46% over 12 months.¹³ Over the following 5 years, there was an increase in alcohol-related harms, including a 50% increase in mortality from liver cirrhosis.¹⁴ This impact on liver cirrhosis suggests that limiting access to alcohol may have some impact on alcohol-related cancers.

Advertising

Evidence on the impact of alcohol marketing restrictions on the prevalence of chronic disease is limited. Results from econometric studies looking at the link between advertising and increased alcohol consumption yield mixed results in terms of effect on alcohol consumption; meta-analyses, on the other hand, have found some effects of alcohol advertising on drinking behaviour.²¹

Studies into the effect of alcohol marketing have found an association with the uptake of alcohol use, and studies on the long-term impact of adolescent alcohol use have consistently shown that early and frequent use of alcohol approximately doubles the risk of alcohol-related problems later in life, including increased risk of a range of chronic diseases.²² The latter also suggest that the effects of exposure may be cumulative; in markets with greater availability of alcohol advertising, young people were more likely to continue to increase their drinking as they moved into their mid-twenties, while drinking declined earlier in those who were less exposed.²³

Very few jurisdictions have complete bans on alcohol advertising and promotion. As a result, there is only a limited amount of research into the effectiveness of bans to reduce alcohol consumption.¹⁴ The best example of the effectiveness of alcohol advertising restrictions on alcohol-related harm is France's *Loi Evin*, which prohibits all alcohol advertising in all media unless specifically exempted.¹⁴

In the mid-20th Century, rates of liver cirrhosis and mouth and throat cancers in France were among the highest in the world.¹³ Following government intervention, particularly during the 1990s, which increased the cost of alcohol to the consumer and introduced tough restrictions on alcohol advertising, there was an almost 50% decrease in wine consumption, although heavy drinking and 'binge' drinking remains a problem.¹³ Although this decrease cannot be attributed solely to advertising, it indicates the potential for success in reducing consumption over the long term by

employing a comprehensive approach to interventions, including by limiting advertising.

The experience of advertising bans in tobacco control suggests the effectiveness of similar legal measures in alcohol policy. For example, while many countries have restricted the marketing and advertising of tobacco since the 1970s, countries with more stringent restrictions have been shown to have approximately 5% lower tobacco use than those with more flexible arrangements.¹³

Responding to alcohol-related harm: the context and challenges of alcohol policy interventions

Best practice policy interventions to reduce alcohol-related harm exist, and although the majority of evidence supports the effect of these interventions on short-term harm, there is good, and growing, evidence that similar interventions can have an impact on long-term consumption and harm. There is also value in looking at the effectiveness of tobacco control policies to reduce consumption. In Australia, a combination of policies that significantly increased the price of tobacco, while restricting its availability and promotion, resulted in marked decreases in tobacco use over time, to the extent that Australia ranks with Sweden, Canada and the USA as having achieved the largest falls in daily smoking prevalence of any nation.²⁴

However, in spite of this experience and the growing research base in alcohol policy, converting evidence into policy has been difficult, as evidenced by the responses to alcohol-related harm in Australia, New Zealand and the UK over recent years.

In 2008, the Australian Government established a National Preventative Health Taskforce to develop strategies to address the health challenges caused by tobacco, alcohol and obesity.²⁵ The Taskforce released a National Preventative Health Strategy in June 2009, which recommended, amongst other things, reforming alcohol taxation and pricing arrangements to discourage harmful drinking, and phasing out alcohol promotions from times and placements which have high exposure to young people aged up to 25 years.²⁵ In 2009, a review by the Australian Federal Government into Australia's taxation system recommended a volumetric tax on alcohol, so that alcohol products would be taxed according to their alcohol content.²⁶

At the same time, the New Zealand Law Commission conducted a comprehensive review of the legislative framework for the sale and supply of alcohol in that country, recommending a significant increase in the excise tax on alcohol to raise the price of alcohol by around 10%; returning the legal purchase age for alcohol from 18 to 20 years; and introducing maximum closing hours for on- and off-licences (4am and 10pm, respectively).²⁷

The UK has also been exploring options to address alcohol-related harm. In May 2010, UK the Coalition Government declared an intention to ban the sale of alcohol below cost price, and review alcohol taxation and pricing.²⁸

The recommendations to all three governments – notably, by independent bodies in Australia and New Zealand – have echoed the research and public policy literature for reducing

alcohol-related harm. Encouragingly, the focus by the Taskforce and the Law Commission has been broad and not limited to policies to reduce the short-term effects of alcohol consumption; for example, the Taskforce report set three targets for alcohol consumption, including to reduce the proportion of Australians aged ≥ 14 years who drink at long-term risky/high-risk levels from 10.3% to 7.2% by 2020, amounting to a 30% reduction in alcohol consumption in this group.²⁵

In Australia, the response to the recommendations by the Taskforce was reserved, with the Government declining to consider regulatory action to restrict alcohol advertising.²⁹ Similarly, the Australian Government also rejected the recommendation from the Federal tax review to standardize the taxation of alcohol.³⁰

Meanwhile, in New Zealand, the response to the Law Commission's recommendations was described by one commentator as 'unduly cautious', after the New Zealand Government ruled out an excise tax increase and refused to commit to introducing greater restrictions on advertising and sponsorship.³¹ Analysis of the Alcohol Reform Bill, drafted in response to the Law Commission's report and introduced to the New Zealand Parliament in November 2010, showed that the New Zealand Government has largely failed to adopt the strongest reform recommendations, and ignored the evidence-based advice provided in the Law Commission's report.³²

This is in spite of strong public support for interventions to change the drinking culture in New Zealand. For example, there were an unprecedented 9000 public submissions to the review; a large proportion of these submissions supported an increase in the minimum purchase age to 20 years, together with restrictions on outlet density and late night trading, and better regulation of alcohol advertising.³²

Finally, the UK Government followed up their declaration to address alcohol harm with an alcohol 'Responsibility Deal', touted as a strategy in which government and business work together to address 'challenges which... can't be solved by regulation and legislation alone'.³³ The Responsibility Deal was commenced with the intention of balancing 'proportionate regulation with corporate responsibility'.³³ Public health organizations, the Government and industry were encouraged to come together to develop public health policies.

However, industry representatives dominated the final membership of the Responsibility Deal Working Groups; for example, the Alcohol Working Group is chaired by the Head of the Wine and Spirit Trade Association.³³ The extent of industry involvement in the policy process resulted in leading public health groups, including the British Medical Association and Alcohol Concern UK, to refuse to sign up to the deals.³⁴ In the meantime, stating a preference for voluntary rather than imposed regulation, the UK Government has already ruled out using price to influence alcohol consumption.³⁵

At an international level, WHO, recognizing that alcohol is a major cause of chronic disease, developed a Global Alcohol Strategy to guide Member States in developing alcohol policy.³⁶ Endorsed by the World Health Assembly in May 2010, the strategy emphasizes the importance of addressing alcohol affordability, availability and promotion.³⁶ In November 2010,

WHO recommended that governments should raise taxes on alcohol and tobacco, and use the revenue to assist people unable to afford health care.³⁷

In 2006, the European Commission adopted an Alcohol Harm Reduction Strategy to support Member States in reducing alcohol-related harm.³⁸ The strategy comprises five main themes: the protection of young people and unborn children; reduction of deaths from alcohol-related traffic accidents; reduction of alcohol-related harm among adults, especially work-related harm; increasing awareness of risky consumption; and the creation of a better evidence base for future policies.³⁸ Within each theme, the strategy includes a list of best practice policies; for example, to protect young people, the strategy recommends the enforcement of restrictions on advertising to young people.³⁸

However, both the European Strategy and the Global Alcohol Policy are non-binding, and therefore implementation of the recommendations depend on national governments choosing to follow what are, at this stage, merely policy directions.

Involvement of the alcohol industry in policy making

The challenge for policy makers in this field is combatting the influence and involvement of the alcohol industry in alcohol policy making, whether that involvement is direct (as in the case of the UK) or apparent (as can be seen in responses from the Australian and New Zealand Governments).

The alcohol industry constantly argues against the implementation of regulatory approaches that have a strong evidence base for effectiveness (such as increasing the price, reducing the availability and restricting the marketing of alcohol).¹⁹ Instead, the industry prefers to press the value of voluntary regulation, the importance of educational approaches, and an emphasis on personal responsibility.²¹ However, research consistently shows that voluntary advertising codes of practice do not protect young people from exposure to alcohol advertising, that responsible drinking messages are strategically ambiguous, and that the emphasis on personal responsibility fails to properly acknowledge the effect of environmental and economic factors on people's decisions.^{21,39}

The alcohol industry employs consulting organizations, such as the Portman Group in the UK and the International Council on Alcohol Policy, to lobby 'against effective strategies and for ineffective strategies' to reduce alcohol-related harm and to influence the direction of alcohol policy towards interventions that are alcohol-industry friendly, and contrary to public health best practice.¹¹ Industry and industry-supported groups also fund research to instill doubt about non-industry-based research, primarily through misrepresentation and critique of data and methods.¹¹

For example, the industry response to the European Strategy (discussed above) was predictable. A study by the Weinberg Group, on behalf of the Brewers of Europe, stated that European-wide policies were neither necessary nor expected to work.⁴⁰ The study criticized the lack of evidence

base for the European Union's alcohol policies and noted the major risk of reducing 'appropriate alcohol use'.⁴⁰

In addition to this indirect action to influence policy, the alcohol industry is heavily involved in direct lobbying, normally with a financial component that public health groups cannot match.¹¹ Casswell and Thamarangsi gives a number of examples of direct lobbying by the alcohol industry against alcohol policies in 'Reducing harm from alcohol: call to action'; for example, the Global Alcohol Producers Group paid \$240,000 to lobbyists to promote alcohol industry interests at WHO in the lead up to the 2007 World Health Assembly.¹¹

Public health policy making

Perceptions of alcohol policy interventions show the impact of the influence of the alcohol industry; for example, personal responsibility interventions such as designated driver programmes, which tend to be ineffective, are some of the most popular interventions, while the more effective strategies (affecting affordability, availability and advertising) tend to be the least popular. The challenge for public health advocates is to respond to the industry tactic of discrediting the evidence base for effective interventions, while also selling the unpopular, yet effective policy interventions.

Jahiel and Babor suggested that the solution is to reframe the issue as an industrial epidemic; in other words, shifting the policy focus away from the individual (the young drinker) or the product (in this case, alcohol) and towards the 'disease vector' (the alcohol industry) as the actor responsible for the exposure of vulnerable populations to the risks of alcohol.⁴¹

In addition to focusing on interventions, policy efforts must also tackle the problem of the industry. Legal interventions remain one of the most effective ways in which to constrain and change industrial activities, whether in the financial, environmental or health policy arena. For example, in Australia, corporations are prohibited from engaging in misleading or deceptive conduct by provisions in the Competition and Consumer Act 2010; similar laws exist in the UK and New Zealand. Likewise, many jurisdictions have enacted environmental protection laws that directly impact on corporate practices that cause harm, or have the potential to cause harm, to the environment.

By seeking to address the impact of the alcohol industry in spreading alcohol harm, as described by *The Guardian's* Ann Gilmore and Jeff Colin, '[d]rinks companies spread liver disease as surely as mosquitoes do malaria', the context of alcohol policy interventions can be shifted to address how corporations operate in the public health sphere.⁴²

The evidence is strongest for legal interventions to reduce the burden of alcohol-related harm in order to create an environment more conducive to healthy choices.⁴³ Currently, the alcohol industry is permitted to create the environment in which decisions about alcohol consumption are made – an environment of cheap alcohol, pernicious advertising and easy access to alcohol – all to encourage consumption of alcohol at levels that are harmful to health.

Conclusion

As noted by Casswell and Thamarangsi, the 'preconditions for action on alcohol, including availability of cost-effective and affordable interventions, are in place'.¹¹ While policies that delay the uptake of drinking should remain the spearhead of alcohol policy intervention, it is risky to limit action to policies that affect young people or just heavy drinkers. There must be an emphasis on introducing policies that achieve a population reduction in alcohol consumption, such as increasing the real price of alcohol and reducing availability, which have a broad impact on consumption patterns.¹²

Equally, policy makers must address the negative influence of the alcohol industry. A comprehensive legal approach requires intervention to change the environment as well as corporate practices. Legislation remains one of the most effective constraints on corporate behaviour, just as legal interventions to reduce alcohol consumption have great potential to reduce the burden of preventable cancers and other alcohol-related chronic diseases, at enormous social and economic benefit.

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