

# THE GLOBE



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## THE GLOBE

### GLOBAL ALCOHOL POLICY ALLIANCE

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# Bridging the Gap

Nearly 400 participants from 32 countries gathered in Warsaw in June for the Bridging the Gap conference, a major initiative sponsored and organised by Eurocare with the financial support of the European Commission. Co-sponsors included the World Health Organisation, the European Cultural Foundation and the Polish State Agency for Prevention of Alcohol Problems.

**The conference opened with speeches of welcome by European Commissioner Designate Pavel Telicka, Irish Health Minister Michael Martin; Lars Møller of the European**

**Office of the World Health Organization. The conference was the first in a series of initiatives designed to bridge the gaps between scientists, policy makers and programme**

**implementers. Others include the creation of a European Union-wide alcohol policy network, the first meeting of which coincided with the conference, a Eurocare alcohol policy advocacy training manual, and two alcohol policy advocacy schools planned for 2005 and 2006.**

**In this double issue of The Globe we publish a number of the papers given at the conference.**

## Pavel Telicka

Let me begin by setting the issue of alcohol in the context of public health in Europe. Europe has the highest alcohol consumption in the world. Alcohol is therefore one of the key health determinants in the European Union and, sadly, alcohol-related harm comes directly after tobacco and high blood pressure as a cause of ill-health. The negative impact of alcohol on health and social well being plays an important role in the future development of public health policies in the European Union of 25. We have also reason to fear that the harmful impact of factors like alcohol on public health and society is likely to increase, for example excessive and harmful alcohol consumption is behind a high proportion of premature deaths in the European Union. 25 per cent of European men and 10 per cent of European women consume alcohol at levels hazardous and harmful to their health. Alcohol consumption is clearly related to a wide range of social problems: violence, child abuse, work-related problems and intoxication and heavy drinking are more frequent among adolescents and young adults.



*Pavel Telicka, European Commissioner Designate*

Now alcohol beverages of course are not all bad; they can give pleasures as well as problems but I would like to underline that we, working in the public health field, do not need to give more information on the pleasures of alcohol or encourage people to drink more alcohol. Our task is to provide information on alcohol's

impact on health and welfare and to take relevant actions to protect people from alcohol-related harm. Actions to reduce alcohol-related harm do not in any way jeopardise the positive benefits of alcohol.

Alcohol has a darker side. As you will all know better than me, alcohol is a substance that affects both the body and the brain, it can contribute to, among other things, acute toxic affects, alcohol dependence, liver cirrhosis, cancers and contributes to overweight and obesity. I know that you engaging in public health policy, agree that together in Europe we need to do more to minimise alcohol-related harm. Public authorities in Member States here in Europe have the primary responsibility to protect their citizens. Health promotion, prevention and health education are tasks for the public health community and of course the health promotion community.

The beverage alcohol industry has a clear responsibility with regard to its products to ensure that they do not sell, serve or market alcohol in a way that contributes to increased alcohol-related harm. Non-governmental organisations have a particular role to inform and mobilise civil society to advocate for the implementation of

effective evidence based alcohol policy. They also make an invaluable contribution to prevention and health promotion. For its part, the European Union through the European Commission and Council of Ministers has a vital role to play under the European Treaty, and here I would like also to pay tribute to the role of the European Parliament in showing leadership in these areas.

I would also like to underline the important role of international organisations, in particular the WHO and its European office, in giving important guidance to all of us. The European Alcohol Action Plan and the Stockholm Ministerial Conference on Young People and Alcohol have been important milestones in our work. So let me underline that what we want is an integrated approach to combating alcohol issues and we want an integrated approach with action by all agencies. This task concerns the family and the school but it also extends to alcohol producers, pub and bar owners, advertisers and national regulators. All have their role to play.

I enormously appreciate the title of your conference "Bridging the Gap". It focuses on one of the main problems of today, the gap between

policy makers, practitioners and researchers. Being a policy maker myself I welcome the progress made in the scientific understanding of the relationship between alcohol and health and of what works. I also welcome better co-operation between the actors; much will be gained if we can work together in a more sustainable, open and efficient way. The Commission is currently looking internally at a tool kit of actions that could be part of a comprehensive and coordinated approach to alcohol. This is our task in response to the Council of Ministers conclusions on alcohol consumption way back in 2001. Such a strategy will deal with topics such as drink driving, commercial communication, under age drinking and information of consumers. It will also have to touch on excise duties, illicit trade, fraud, dependence and clinical best practice. So I think that we have a great deal of work ahead and I hope that you will all contribute to our work in this important area. We need to do this in partnership with all those who share our concern. The Commission is determined to take these issues forward and to contribute to the protection of our citizens and especially young people from alcohol-related harm.



## Michael Martin

Delegates attending this conference will know that inappropriate alcohol consumption is one of the most important public health issues in the European region. Levels of alcohol consumption, harmful drinking patterns and related harm are a major concern among the public health community in Member States.

*Michael Martin, Irish Health Minister  
and the Chair of the EU Council of  
Health Ministers*

European countries rank as the world's biggest drinkers and a total burden of disease, injury and premature death attributable to alcohol is estimated to be in the region of 10 per cent. Across the

European Union deaths and the range of problems experienced in Member States reflects in large part the drinking culture and drinking patterns. Harmful drinking such as binge drinking is not just a feature of youth drinking but is also very common among young adults, especially males. In fact most of the alcohol-related harm across Europe is caused amongst the adult population. Because alcohol has so long been part of our many social and cultural traditions and because many of us can enjoy a drink sensibly I think that we have all been slow at recognising the real cost of alcohol-related harm and as such are paying catch-up in terms of developing strategies to tackle the problem. However, I do believe that there is a

real and determined effort to catch-up. This is borne up by developments at European Union Ministerial level. The Health Council in June 2001 unanimously decided on the need for a comprehensive European Union community strategy to reduce alcohol-related harm. This important issue was again made a focus of considerations during the Irish European Union Presidency. Conclusions adopted at the Health Ministers conference, which I chaired, on June 2nd include support, for example, for the Commission's ongoing work to develop a comprehensive strategy for alcohol which would highlight a more balanced approach where more attention is given to public health aspects in other policy areas, an

invitation to the Commission to put forward at an early date such a strategy and at reducing alcohol-related harm which shall compliment national policies, and set a timetable for the different actions. Special attention should be given to young people and alcohol within such a strategy. I know that across Europe there is a growing awareness of the harm caused by alcohol; the social and cultural acceptance of inappropriate alcohol consumption is beginning to be questioned. This I hope is beginning to see change which will ultimately aid the work of both the policy maker and the programme implementer. It is however the beginning of a very long road and every effort proceeding along it is very valuable.

## Lars Møller

It is just over 4 years ago that we launched the second European Alcohol Action Plan and 3 years since we met in Stockholm at the WHO Ministerial Conference on Young People and Alcohol.



*Lars Møller, WHO Europe*

During these years we have been working to implement the decisions taken and we are now in the phase where we have to evaluate our efforts and take the decision for a possible third European Alcohol Action Plan. Basically what we have managed is to move alcohol up the public health agenda of Europe.

Many countries have developed their own Alcohol Action Plans and we know that many countries have used the recommendations developed by the WHO for their own action plans.

The European Region of WHO, is the region with the highest alcohol intake worldwide and alcohol is the main burden of disease among developing countries with low mortality. The world health report 2002 presented figures by attributing 16 per cent of total deaths in central Europe to alcohol.

There is evidence that both the volume of alcohol consumed and the drinking pattern are relevant to health. It is still doubtful if some alcohol products are more harmful than others, but there is a close dose-response relationship between alcohol consumption and morbidity/mortality.

The development of alcohol policies in the European Region continues to make progress, but half of the 52 WHO Member States in Europe have not yet adopted a national alcohol action plan. Policy changes over the past few years have shown convergence on some alcohol policy measures. Specific policy efforts to reduce drink-driving illustrate effective policy measures at country-level, whereby many countries have lowered their blood alcohol limits and increased enforcement.

The regulatory provisions for alcohol-free environments have also been increased in many countries to ensure greater public safety and safer workplaces. Measures to regulate alcohol advertising have had mixed responses: some countries have introduced restrictions while many others have eased them.

In general, western European countries have moved towards stricter alcohol control policies. Especially the southern European

countries have reduced per capita consumption levels and they have lowered alcohol related harm to a greater degree than many of the countries in the central or eastern part of the Region.

Weaknesses in policy effectiveness still remain. The enforcement of codes, regulations or legislation is a critical factor in policy effectiveness. External pressures from the alcoholic beverage industry, commercial marketing and illegal trade militate against further progress. The lack of a collective willingness to recognize the seriousness of alcohol problems and the wide-ranging damage caused by alcohol in society is a further obstacle.

There is increasing evidence showing the effect of different alcohol policies, where pricing and taxation are shown to be effective. Unfortunately, the most recent trend in Europe is that prices are decreasing and in many European Union Member States more liberal rules for cross border sale have forced Member States to substantially decrease taxation. The effects of the most recent 45 per cent decrease in spirit taxation in Denmark and

Finland are not yet evaluated, but initially spirits sale went up 40 per cent and in both countries the level has stabilized at a 20 per cent increase. The impact of alcohol advertising is difficult to measure, but researchers have found that exposure to repeated high-level alcohol promotion results in pro drinking attitudes and increases the likelihood of heavier drinking.

The huge increase in sale of ready to drink products during the last 3-5 years and the intensive marketing of these products indicates a relationship between advertising and behaviour. During recent years the amount of alcohol advertising has increased. Young people and adolescents have become the group that is targeted more heavily by advertising. There is no indication that the Member States have changed the restrictions on alcohol advertising during recent years. The European Union has, through harmonisation of the market, made some Member States less restrictive with regards to laws on alcohol advertising and marketing.

Harmonization of taxes at a high level, provisions to reduce

smuggling, agreements to abolish duty free sale for tourists, bans on advertising, standards for testing alcoholic beverages, health warnings, etc are efficient policy measures that could be implemented in a coordinated way throughout Europe.

And the reason for adopting an international convention on alcohol products is that alcohol is not an ordinary commodity.

Before this conference Eurocare facilitated the establishment of a NGO network on alcohol policy. WHO welcomes this network and we look forward to cooperating in the future work of the network.

Furthermore, WHO and the European Commission have established good cooperation, particularly in the light of a possible common evaluation of the European Alcohol Action Plan, the Stockholm Declaration and the European Council Recommendation on the drinking of alcohol by young people and it is our hope that we will use the data for the development of a future European Strategy on alcohol.

## Peter Anderson



### **The more alcohol an individual drinks, the greater the harm**

For all types of alcohol-related harm, including social harms, accidents and violence, alcohol dependence, cirrhosis of the liver, cancers, and cardiovascular diseases, the more an individual drinks, the greater the risk of harm. The risks are due to alcohol and come from all beverage types, including wine.

**Alcohol reduces the risk of heart disease; a large amount increases the risk**

One drink every second day gives almost all the protection that alcohol

has on reducing the risk of a heart attack. This protective effect is not relevant for people who are at low risk of heart disease, which includes young people everywhere. Above two drinks a day the risk of heart disease goes up, with the more alcohol drunk, the greater the risk. The biochemical changes that might

*Peter Anderson, policy advisor to Eurocare, set the scene by outlining the health impact of alcohol in Europe*

reduce the risk of heart disease result equally from beer, wine or spirits; they do not result equally from grape juice or red wine from which the alcohol has been removed.

#### **The less a country drinks, the less the harm**

The lower the average alcohol consumption of a country, the less harm there is from alcohol. For example, European countries with a male adult per capita consumption of about 14 litres of alcohol have about twice the death rate from liver disease (a sensitive indicator of alcohol-related harm) than countries with a per capita

consumption of about 7 litres of alcohol. Also, the lower the average alcohol consumption of a population, the proportion of heavier drinkers is smaller.

#### **A country that reduces its consumption reduces its harm**

As a country reduces its alcohol consumption, alcohol-related harm also reduces. On average, as European countries in the middle range of alcohol consumption reduce their average male alcohol consumption by 1 Litre per person, the risk of male death from accidents is reduced by 4 per cent, from cirrhosis of the liver by 9 per cent,

from homicide by 11 per cent and from heart disease by 2 per cent.

#### **Alcohol causes nearly 1 in 10 of the burden of ill-health in Europe**

The World Health Organization's Global Burden of Disease Study finds that alcohol is the third most important risk factor for European ill-health and premature death, after smoking and raised blood pressure. Alcohol is more important than high cholesterol levels and overweight, three times more important than diabetes and five times more important than asthma. It causes nearly 1 in 10 of all ill-health and premature death in Europe.

# The financial costs and benefits of alcohol

**Christine Godfrey**

## **Introduction**

Economic arguments are frequently used in discussion of alcohol policies. From the industry, claims are frequently made about the economic importance of the industry and the benefits it brings. It is suggested that any policies to control the problems of alcohol would have a major economic impact. Health and other policy advocates will in contrast highlight the harms caused by alcohol and the costs they impose on society. Policy makers are increasingly suggesting they would like to follow evidence-based policy-making and as such are looking for economic evidence such as the cost-effectiveness or value for money of different policy alternatives.

Attempting to make sense of the arguments is complicated by different studies with different definitions and a number of arguments about what consists of either a cost or benefit. The purpose of this paper is to give a

brief review of the different types of costing studies and how these relate to different policy questions. Some guidance will be given as to how economic figures can be practically assembled to aid policy decision making but also some of the gaps in

evidence that remain. Three types of costing studies are considered:

- Cost of illness;
- Externality types;
- Economic evaluation/cost effectiveness.

Variations in the types of costs and benefits included and some examples of the different studies are discussed.

## **Terminology**

Economics is a subject with its own language and as in many areas common words are often used to represent very specific economic meaning. Costing studies are no different and it is useful to begin by defining how specific words will be used in this paper. Alcohol is a substance used by many in every European country. The consumption of alcohol obviously brings some benefit to those

Study	Country	Year	Costs (Euro billions)
Collins and Lapsley, 1991	Australia	1988	1.19
Collins and Lapsley, 1996	Australia	1992	1.52
Collins and Lapsley, 2002	Australia	1998	3.28
Rice et al., 1990	U.S.	1995	72.4
Harwood et al., 1997	U.S.	1992	141.0
ONDCP, 2001	U.S.	1998	127.8
Maynard, 1992	England & Wales	1985	3.73
Rannia, 2003	England	2000	20.0
Fenoglio et al., 2003	France	1997	17.6

Source: Rannia, 2003; Fenoglio et al., 2003.

**Table 1: Examples of alcohol cost of illness studies**

individuals. The value of this consumption is referred to in this paper as the private benefits of consumption. Alcohol consumption is also associated with a range of costs to the consumer. There is the monetary amount that alcohol costs. Also where there are availability controls, consumers may incur additional financial and time costs in acquiring their alcohol. However, alcohol consumed in the wrong quantity or pattern or in the wrong situation, for example at work or while driving, is also associated with a range of costs that fall on the individual. This can include short and long-term effects on health, lower earnings through sickness absence or a range of alcohol related workplace effects, etc. These costs are in terms of both monetary amounts, e.g. lost earnings or non monetary effects such as the loss of health related

quality of life. Economists frequently attempt to value these non monetary or sometimes called intangible impacts. Together all these impacts are defined as private costs. In a market economy it is usually assumed that consumers take all of the private benefits (monetary and non monetary) and all the private costs (monetary and non monetary) into account in making their decisions. In contrast, some effects of consumption decisions may have impacts on others than the individual drinker. This is most clearly seen in the victims of alcohol related accidents, such as those killed or injured by drunk drivers. These third-party effects are called external costs by economists. However another type of external cost occurs when resources are used by the state to deal with alcohol related problems. For example, health care resources

used to treat alcohol dependence could have been devoted to other illness. In systems where the individual does not pay (or pay fully) for their health care, these alcohol treatment costs are not borne by the alcohol misusers directly. Therefore alcohol misusers are imposing external costs on the non alcohol misusers. These are often referred to as institutional externalities and obviously they depend on the exact health and welfare systems of each individual country. Similar effects can occur in the workplace if employees do not lose wages in the event of a period of sickness or absence but the employer or other employees have to bear the cost of their loss of productivity.

Social costs are the sum of the private and external costs and likewise social benefits are the sum of the private and external benefits.

This discussion has excluded any impact of alcohol misuse on families. Some economists ignore costs and benefits within families across any behaviour, suggesting that households make decisions as a group. The only exception would be where criminal acts such as domestic abuse occurs. Historically many governments have also ignored such impacts other than providing some welfare support to families in poverty or crises as a result of alcohol misuse. However, the impact of alcohol misuse on families is considerable as a Eurocare report has documented (McNeill, 1998). Other economists would suggest that the impact on the family should be measured and included with other third party impacts. In practice these impacts have not been well documented and most cost studies have not attempted to put any monetary values on these impacts.

The terms financial and economic are also often used interchangeably. Many estimates of the costs of

Type of cost	Cost, £ billion	% of total	Euro billion
Health care	1.7	8.5	2.5
Workplace	3.9	19.5	5.8
Lost output to premature death	2.5	12.5	3.7
Crime	11.9	59.5	17.7
Total	20.0	100	30

Source: Rannia (2003)

**Table 2: Cost of alcohol misuse in England, 2000.**





alcohol include the monetary value of factors such as the loss of life or the fear of crime or violence. These economic estimates are a means of imposing a common value system of a range of different, real effects. However, the sum denoting the loss of a life cannot be conventionally realised in financial terms. In other studies the term financial is restricted to the impact on government or public finance. Some of the differences between studies, and which types of costs and benefits are included, are explored in the rest of the paper. For this paper, the focus is on economic costs, including both monetary and non-monetary impacts of alcohol.

### Cost of Illness Studies

A number of studies have produced estimates of the costs of alcohol for a particular country in a particular year. Frequently the estimated total figures are expressed as a percentage of Gross National Product. This gives a useful advocacy tool in demonstrating the size of the impact of alcohol. Most of these published studies have used the cost of illness approach. The question addressed in these studies is to estimate the costs of alcohol compared to the hypothetical situation that there was no alcohol

consumption. However, the specifics of the question do vary from study to study. Some consider only the costs associated with alcohol misuse, while others cover all alcohol use and attempt to factor in the potential benefits of lower alcohol consumption.

A set of international guidelines on conducting cost of illness studies for substance misuse is available and a second edition has been recently published (Single et al, 2003). However, despite these guidelines, most published studies have varied in both the methods used and the items included or excluded making international comparisons difficult.

This is partly due to some inherent methodological and conceptual difficulties with the cost of illness approach but is also due to differences in data availability and completeness of the estimates in different countries.

- There are some common contents of these studies including normally:
- Health care costs;
- Loss of life;
- Productivity costs associated with sickness absences and excess unemployment;

- Alcohol related crime costs;
- Accidents, including road traffic accidents;
- Loss of life;
- Policy and research costs.

The costs are generally external costs of alcohol misuse although whether loss of life is a private or external costs is discussed below. Also some studies confine estimates to tangible elements such as public sector resource costs and ignore intangible elements such as the fear of crime although practice does vary. The estimates are usually based on the current prevalence of problems in the year in question, again with the exception of the treatment of the loss of life.

A number of studies have been conducted across the world and some examples are given in Table 1. The increase in cost across countries and time is partly due to inflation but another important factor is the wider range of alcohol related problems for which data are available. Clearly there are also some changes in the drinking patterns across time but existing studies have not used consistent enough data and methods to be able to track the impact of such changes.

It is important to note that the figures are based on the estimate of actual costs in a given year relate to any past or present alcohol use. Not all these costs are avoidable. Therefore while the figure may give an estimate of the importance of the problem and how it relates to estimates of other problems, it gives no guide to how and whether such costs can be reduced or the potential "savings" to be made.

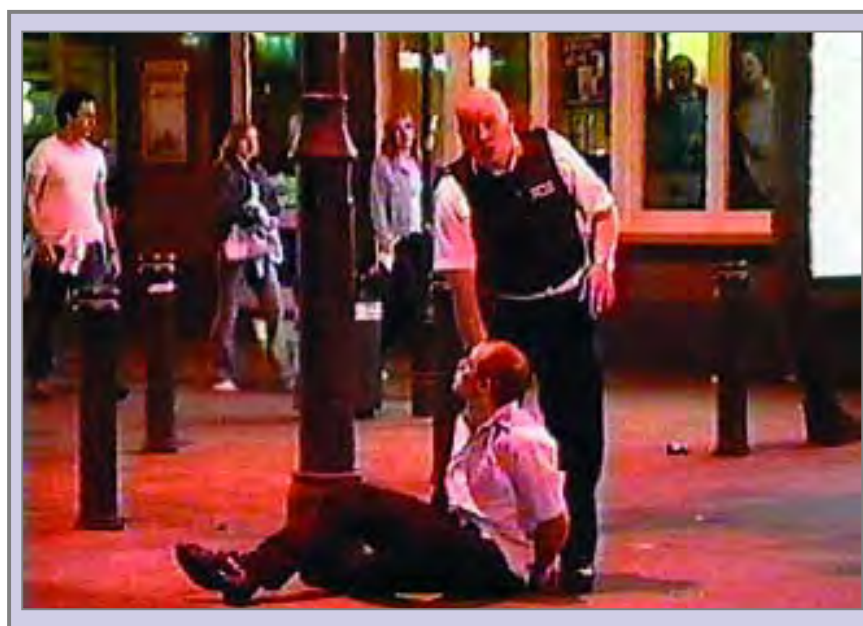
One of the biggest contrasts in the size of the estimates is for England and Wales. Here the estimates have seemingly increased ten fold over 15 years. However, the differences related largely to the types of drinkers included. Maynard's (1992) estimate was based on very

heavy drinkers only whereas Rannia's (2003) study contained a much wider range of drinking effects, especially for crime. Interestingly a similar study in Scotland (Scottish Executive, 2001) had resulted in a similar level of costs per head as the new English study.

A more detailed breakdown of the Rannia (2003) study for England is given in Table 2. This study did include some policy costs associated with dealing with alcohol related problems such as treatment costs (£96.2 million, 143 million Euros), and criminal justice costs for drink-driving (£77.3 million, 115 million Euros), alcohol specific (£29.9 million, 44.5 million Euros) and alcohol related offences (£1720 million, 2563 million Euros). However, the costs of preventive programmes (there are no current national campaigns) or research expenditure were not included in the figures.

All studies have some estimate of the health care costs of alcohol related illnesses. The estimates are based on international reviews of the relative risks of alcohol consumption on a range of diseases. These relative risks combined with information about the drinking patterns in a specific country in a specific year. Combining relative risk information with consumption patterns yields estimates of the attributable risks or proportion of each disease category that can be attributed to alcohol. These proportions can then be applied to disease based costs of health services.

However, not all countries will have health care accounts by classification of diseases. Even



where figures are available some health services such as primary care and emergency care may be excluded and therefore alcohol related costs may often be underestimated. Another potential source of underestimation is that costs for those with alcohol related problems are often higher than those with the same disease problem without alcohol involvement. Harwood et al (1997) in one US study did attempt to adjust figures for this impact. Health care costs typically make up between 5 per cent to 20 per cent of the total estimates.

The impact of alcohol on the workplace is also generally included but the data available for such estimates varies widely. Rather than evidence being available from international systematic reviews, specific country studies are used to provide some guidance to the costs involved. There are a variety of different costs that can be included in the section (Godfrey et al, 1997). Most studies include some estimate

of the productivity costs of alcohol related illness, particularly longer-term illness related to alcohol dependency. Depending on the country and the particular workplace these costs may fall all or partly on the employer or be borne in part by the state or the individual drinker. More difficult to measure but likely to be of sizeable impact are the short-term absences, especially those associated with binge drinking.

Another area of more controversy is the impact of drinking on the productivity of those at work. This aspect has been frequently considered by considering earnings differentials across different drinking patterns. However, higher earnings are also a factor influencing drinking patterns and it becomes statistically difficult to differentiate these factors. Another issue is whether earnings can be taken to reflect individual productivity rather than some group productivity particularly in European workplaces.

	<b>Addicted (not rational)</b>	<b>Not addicted</b>
Unaware of adverse consequences	Private + external costs + production resources	Private and external costs
Aware of adverse consequences	External costs + ?	External costs

**Table 3: External cost models – which costs count under different assumptions.**

It is clear that in many work situations the poor performance of those with alcohol problems whether short term or longer-term are a cost on fellow workers and their employers but this may not necessarily be reflected initially in their earnings. Very heavy and chronic drinking is associated with excess unemployment.

While this impact has been included in many of the costing studies there is some question about how such productive loss should be valued in economies where there is not a shortage of labour. Finally there are other impacts of alcohol in the workplace, which may be of particular significance to employers, including legal liability for health and safety and return on training and investment in key workers. These aspects will be considered further in workshops at this meeting.

Crime costs vary considerably between studies. In Rannia's (2003) study for England crime costs account for a much higher proportion of the total at nearly 60 per cent compared to, for example, the most recent Australian study where crime only accounted for 16 per cent of the total (Collins and Lapsley, 2002). Differences are hard to pinpoint but the English study included the same detailed attributable risk calculations across all types of crime as described above for health care costs. Also the costs of crime included not only the criminal justice costs but also costs involved in prevention of such crimes and the property, production and victim costs associated with the crimes. These victim costs for the alcohol related crimes accounted for 68 per cent of the total crime costs.

A major component of all cost of illness studies is the value given to premature mortality related to alcohol use. The figures of premature deaths are calculated using the same sorts of epidemiological reviews of relative

risks for different diseases employed for estimating health service costs.

Most studies use calculated deaths in the year of the study and value these deaths by an estimate of their lost future earnings. There are several important issues with the inclusion of such deaths and the method used to calculate the value of these deaths occurring. First, unlike other items the costs are calculated for projected loss over future years. Second, deaths and their value could be considered as a private costs rather than an external cost to society.

This argument relates to the valuation method used, which is the value of the loss of life in terms of productivity loss not intrinsic worth. The human capital method of valuing loss of life through calculating future lost earnings has been largely abandoned in other areas of economic evaluation. There are serious ethical concerns at giving lower values to the lives of the unwaged, women, the retired and the disabled. Some studies have extended the methodology to suggest that these groups do have some "productive" worth through caring etc and give a value for these deaths. Using more conventional values for the loss of life would yield much higher values. For example, Rannia (2003) had an

average value of £147,187 per alcohol related death. These deaths include 500 related to road traffic accidents where a significant number could be of "innocent" victims – a true external cost of alcohol use. If these deaths had been valued by the willingness to pay methodology, the Government's own estimate of this value was £1,144,890 (Department for Transport, 2000). Replacing this valuation for the one used in the study would raise the total figure from £20 billion to £43 billion.

The inclusion of a value for loss of life also illustrates clearly the economic rather than financial element of cost of illness studies. Saving lives from reducing alcohol misuse is of important social value but it does not bring financial savings to governments' or employers' budgets. Confusingly these estimates are often grouped with costs occurring in the workplace. Not surprisingly in most studies the value put on premature deaths is one of the largest items of the calculated costs.

Finally some studies include the policy expenditure on preventing alcohol misuse and research into alcohol misuse as well as the harmful consequences. This means in theory the estimate of social costs could be seen to rise, at least in the

Treatment type	Net health care cost per death averted, £2002
Coping/social skills	-3073
Behavioural self control training	-1278
MET	-2089
Marital/family	-2388
Acamprosate	-1122
Naltrexone	2076
Unsupervised disulfiram	5536

Source: Slattery et al, 2003

**Table 4 Simulated cost-effectiveness of alcohol treatments using local cost data, models of longer term health consequences and reviews of evidence.**

short term, if governments enact a comprehensive alcohol strategy.

What can be concluded from cost of illness studies and how difficult is it to undertake these studies? It is clear from this brief review that one of the ways studies differ is in the data available to enumerate alcohol related problems.

Estimates of alcohol related costs have generally risen in countries, which have performed more than one study as more data on the risks associated with alcohol become available. Potentially this is one of the values of undertaking these studies as it does reveal the range and extent of alcohol related health, workplace and crime related costs.

The studies can be resource intensive if new international reviews of the evidence are required. However, there is increasingly international risk estimates becoming available, which bring these calculations within the reach of many countries with reasonable sources of routine data. These figures and calculations are a useful resource which can be employed in many other more specific studies and policy evaluations.

### Externality Studies

The second type of study has a different question and framework but much of the data collected for cost of illness studies with some adjustment can be used. While some have used the externality approach empirically in the tobacco field, for alcohol the studies have been of more theoretical interest opening up the debate about what should or should not count as a cost and benefit of alcohol use.

The basic question being addressed is, unlike the cost of illness studies, directly policy relevant. Are the current policies directed against alcohol misuse sufficient such that there are no "external" costs

compared to all or part of the revenue from alcohol consumption? If there was evidence of an excess, this would be a signal to governments that there was potential to improve social welfare by policies directed at reducing misuse. However, such policies would only be worth pursuing if the benefits (in terms of reducing the "external" costs) outweigh the resources needed to enact the policy. This additional question about the value for money of individual policies is the third type of costing study being considered in this paper. The savings and costs being considered in this type of study are in terms of resources not just financial flows. For example, nuisance from alcohol related violence clearly impacts on non drinkers and could be part of these types of study. Reduction in such nuisance would improve social welfare but such improvements would not conventionally appear in national accounts and Gross Domestic Product (GDP).

The economic framework for these studies rests on market theory. This involves assuming the consumer is fully informed about the risks of consumption and is rational, that is the consumer is capable of making consumption decisions in their own best interests. Under these assumptions, only external costs would be considered. Any individual impact including possibly loss of life would be ignored as a private cost, the risk of death being part of the consumption decision. Also any policy that led to an involuntary change in alcohol consumption could be seen to have some costs in terms of individuals losing the benefits of consumption. However, economists have argued that neither information or rationality assumptions may fully hold in alcohol markets (see Buck et al, 1997 for a summary of these arguments and Table 3).

In the situation that consumers are not fully aware of the risks of consumption, they will not take all the private costs into account in their decisions. In considering whether governments are currently maximising social welfare it is therefore necessary to include some of the internal costs in the externality model.

However, consumer attitudes to risk and information are complex. For smoking risks are often known and sometimes overestimated but smokers still can be rational in demanding government interventions such as increased taxes (see Gruber 2003). For alcohol young people may overestimate risks from life threatening diseases such as liver cirrhosis (Lundberg, 2003) but be unaware of many of the more immediate risks from accidents and binge drinking.

Dealing with the young drinker and dependent drinker raises the question of rationality. If people cannot make choices in their own best interests then there is an argument that social welfare may be higher if resources devoted to alcohol production were switched to other goods or services. Taking a part of the alcohol consumption expenditure into account in cost models (see Collins and Lapsley, 1991) could significantly increase the excess costs of alcohol. However, others would argue that even with dependence, consumers do make choices as evidenced by changes in behaviour prompted by economic incentives such as price changes.

Finally, Markandya and Pearce (1989) argue for tobacco that not all revenue yields should be used to compare to any excess costs of a lifestyle factor. They argue that the purpose of the tax is not to "correct" market distortions because of the adverse effects of consumption but to raise revenue.

They suggest only a proportion of the revenue should be used in addressing the question are governments doing enough.

These arguments can seem complex but underlie very important issues in addressing alcohol policy. Free market economics is the background to many international trade agreements and much of the EU policy. The externality model and its extensions follow the logic of these market theories and suggest a framework for improving economic and social welfare from many of the policies the alcohol industry are arguing against. Again using such economic models also gives an argument against the consideration of loss of jobs or revenue associated with one form of consumption. The models suggest that as people change habits new jobs and revenue would be created from their new spending patterns replacing any loss from reduced alcohol use.

In practical terms empirical testing of the models could be conducted using some of the same data as is compiled for cost of illness studies. Indeed in the Australian (Collins and Lapsley, 2002) and French (Fenoglio et al. 2003) costs studies some attempt is made to look at just the external costs and compare this to revenue yields. For the UK, the external costs are likely to be in excess of the £20 billion figure and indeed taking loss of life into account and using more usual figures to value this loss could bring the total closer to £45 –50 billion for the UK as a whole. This is clearly way in excess of the revenue yield of £12 billion in 2000/01.

### Economic evaluations

As more evidence becomes available it is likely that in many countries studies could be conducted which suggests governments should be more active in reducing alcohol consumption and problems.

However, these governments will also need to be persuaded about the evidence of effectiveness of different policies and their cost effectiveness or value for money. Economic evaluation techniques have been most developed and used in health care planning. Indeed in many countries there are explicit regulatory frameworks that govern the introduction of new medical technologies.

In the UK, the National Institute for Clinical Excellence uses an economic framework to assess the additional costs and effectiveness of the technology under evaluation in comparison to current practice. Technologies yielding health gains of a quality of life year for £30,000 (45,000 Euros) or less are generally recommended for adoption.

The question is whether different alcohol policies would fall below this benchmark.

Economic evaluation studies compare the costs and consequences (good and bad) of two or more alternative interventions. Costs include the actual cost of the intervention to the service provider but can also include the costs that are borne by other agencies or indeed the time and financial costs that fall on the individual and families.

As mentioned above this may for coercive policies include the lost benefits of foregone consumption. The benefits or consequences of the interventions include both private and external impacts. For health interventions the gains are often measures in deaths averted, life years gained or quality adjusted life years gained but could be expressed in more alcohol specific measures.

It is outside the scope of this paper to provide a full review of available studies (see Ludbrook et al., 2001). Many of the other speakers at the conferences and in the workshops will be presenting data from a range

of data on both effectiveness and some costs. There is also an increasing literature on the cost effectiveness of different alcohol policies. The WHO CHOICE project is also producing some more global estimates in terms of costs per DALYs on a range of alcohol strategies. There are also good bibliographies of published economic evaluation studies available through the NIAAA website. There are also more explicit guidelines on conducting studies of costing interventions and evaluating cost effectiveness available from the EMCDDA.

As economic and cost data are local to areas there are some more difficulties in translating evidence across countries and time periods. Most economic evidence relates to treatment and the evidence here is impressive. Effective brief and more intensive interventions compared to no treatment, generally not only fall beneath cost effectiveness thresholds, but yield positive savings in resources even when the health benefits to the individual drinker have been excluded. Similar evidence in the illicit drug field in the UK led to a major increase in public expenditure for drug treatment but a similar policy initiative has not as yet been put in place for alcohol.

What can be done to increase this evidence and its strength? Obviously there are major research gaps. Some of these are in the basic epidemiological data linking drinking patterns to different risks. However there is also a lack of empirical economic evaluations. Increasing numbers of studies are including economic evaluation alongside rigorous evaluations of effectiveness.

The UKATT trial in the UK is an example of a large randomised trial of 720 heavy drinkers and a large amount of economic and drinking outcome data has been collected and

is now being analysed. Such projects are however expensive. Another alternative is to build economic evaluation on retrospectively to other studies as was achieved with Project Match (Holder et al, 2000). Even with more studies reporting cost effectiveness results however local decision makers need to model the data using local cost figures and adapt studies to their own population. A lot can be done with existing data and in a recent study for the Scottish Executive (Slattery et al, 2003) models of different treatment were compiled at a reasonable research cost, see Table 4.

This study used systematic reviews of treatment effectiveness with a model of the costs of treatment and the long term health consequences averted. Finally as more data on the pattern of social costs across a broader range of drinking patterns emerges it will be possible to conduct broader and order of magnitude modelling across a wider range of policies. Programme budgeting techniques provide a method of combining available evidence and simple modelling of the available economic data to guide decision choices.

## Conclusions

Studies showing a large monetary sum associated with alcohol misuse have the power to attract attention and foster debate about appropriate government responses. These figures have generally been constructed using the cost of illness methodology. The figures generally have been in the range of 1 to 5 per cent of GDP. This methodology can require considerable work in constructing country specific data on alcohol consumption and drinking problems. While these studies have improved in standards and expanded in scope, there are still many differences between published studies.

Externality studies have not been generally used to examine the question of the scale of government action to reduce alcohol problems – is enough being done? The benefit of this technique is that it provides a framework for discussion of the economic arguments supporting government action in market economies. Such models and other economic analysis of health behaviour suggest that consumers can rationally choose policies that restrict their choices for the sake of their own and others well-being.

Finally there is accumulating evidence about the cost effectiveness and cost ineffectiveness of different alcohol interventions. A number of empirical studies of face-to-face interventions indicate that implementing these interventions will bring net savings. However, this does not necessarily mean that the “savings” are financial or can be realised in the short term.

The most cost effective interventions may not be the cheapest to implement. Also many of those interventions favoured by both governments and industry such as school interventions may be both costly and ineffective. There also remains an issue of persuading governments to invest now to yield both the economic savings and the increases in the health of their populations.

While there are large gaps in our information about the costs of alcohol policies and their economic consequences, studies can be undertaken to help guide policy decisions with the best data available.

These data are likely to provide a much stronger evidence base than claims made by industry about potential economic impacts on their own industry.

Alcohol policy advocates do need to fully understand the financial

costs and benefits of alcohol so that they can, with some help from economist friends, produce local relevant and persuasive figures of the financial costs of alcohol misuse and the financial benefits of alcohol interventions.

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- Alcohol Problems in the Family*

# Alcohol Policy and Young People

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## Introduction

The WHO European Alcohol Action Plan 2000-2005 has as its aim to prevent and reduce the harm done by alcohol throughout the European Region. The WHO aim, is reflected in Member States individual alcohol strategies or action plans, including Ireland's National Alcohol Policy. The central issues addressed in this paper, are what constitutes an effective policy response to reducing alcohol related harm among young people, how has Ireland acted since the 1990s and what of the challenges.

There can be no more excuses. The scientific body of knowledge has never been more comprehensive, in terms of its quality, the strength of evidence and its robustness across cultures, as to which strategies work and how to make them work to prevent and reduce alcohol related problems. In Ireland, we have learned that ignoring the problem and in some instances adding to the problem has carried an enormous human, social and economic cost to Irish society over the last decade. However, there have been some recent positive signs of progress on the alcohol issue.

## Young people

Young people have a right to grow up in a society where they are protected from pressures to drink and from the harm done by alcohol, declared the World Health Organisation and all European Member States agreed in 2001<sup>1</sup>. Young people's attitude and drinking behaviour is shaped, to a

large extent, by the society they live in. In Ireland, young people recognise the powerful influence of

the 'drinking culture' on their lives. Dáil na nÓg (National Children Parliament), recently criticised adults for creating and passing on to their generation the problems related to alcohol.

As noted by Donegal Youth Council "we inherit our drinking culture, we celebrate if we win and we celebrate if we lose, any excuse! Even if there's no excuse we still drink alcohol". Therefore re-shaping the attitudes and behaviours of the adult society is necessary in order to provide a safer social climate for young people to lead healthy and productive lives.



Country	Binge per 100 drinking occasions	Reported Total consumption (pure alcohol)	Reported Total consumption 18-29 age group
<b>MEN</b>			
Finland	29	7.0	8.2
France	9	7.5	6.1
Germany	14	5.3	4.3
Italy	13	7.1	6.4
Sweden	33	5.3	7.5
UK	40	13.1	16.0
Ireland*	58	14.3	17.9
<b>WOMEN</b>			
Finland	17	2.4	2.9
France	5	2.2	1.8
Germany	7	2.4	3.2
Italy	11	3.5	2.5
Sweden	18	1.7	1.9
UK	22	5.1	7.9
Ireland*	30	4.8	9.1

Source: ECAS survey2 ;\*Irish survey using ECAS questions3

**Table 2: Drinking Patterns among adults in EU countries**

### Alcohol and Young People

Young people and alcohol, a phrase, often used to imply that alcohol is a problem for young people only, especially those under age, and that the rest of adult society has no problem with alcohol, which belies the facts and figures. However the focus of this paper is young people, which can be divided into three main groups, young adults (18-30 years), teenagers (15-17 years) and children (under 15) when discussing alcohol.

Young adults (18-29 years) tend to drink large amounts of alcohol when they drink and overall are heavy consumers of alcohol, although there is wide variation across cultures. Drinking among adults, from available comparable data (ECAS), show that men drink more than women and binge drinking is 3 to 4 times more common among men than women in the ECAS countries<sup>2</sup> (Table 1).

Binge drinking is higher in the north of Europe and lower in the south. The highest frequency of binge drinking is among young adults (18-29 yrs). Young adults also have the highest total alcohol consumption in Finland, Sweden, UK and Ireland<sup>3</sup> for both men and women, while in France, Germany and Italy total consumption peaks in the middle to older age groups. The consequences of such drinking patterns have been also reported. One of the clear findings was that the total amount of alcohol consumed was an import predictor of alcohol related social problems.

Teenagers and children tend to follow similar drinking patterns to adults, although at a lesser magnitude. The international survey data (HBSC<sup>4</sup>, ESPAD<sup>5</sup>) show that children do experiment with alcohol at very early ages, some regularly consume alcohol and a proportion are involved in high risk

drinking (binge drinking and drunkenness). For the most part, alcohol use and abuse increases with age and is higher among boys than girls with wide variation between countries. The critical age for accelerated alcohol use and abuse is between 13 and 15 years of age in many countries. At 16 years, about one in four boys in 9 of the EU countries are regular binge drinkers. (Table 2). For girls, one in five are regular binge drinkers in 6 of the EU Member States at age 16 years. Binge drinking was defined as 5 or more drinks per drinking occasion. Given that alcohol use poses serious risks for children and teenagers still developing and maturing, the main focus is to keep children alcohol-free.

Some factors, identified in the HBSC survey, associated with staying alcohol-free were spending fewer evenings with friends, liking school and less inclined to be truanting from



Country	HBSC 1998 At 11 years drunk twice or more often		HBSC 1998 At 13 years drunk twice or more often		ESPAD 1999 At 16 years Drunk 10 times or more during last year		ESPAS 1999 At 16 years Binge drinking 3 times or more during last 30 days	
	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %	Boys %	Girls %
Austria	4	2	13	7				
Belgium**	6	1	11	6				
Cyprus					4	0	18	6
Czech Rep.	6	2	14	6	19	9	25	11
Denmark	6	3	25	21	43	35	37	22
Estonia	2	1	15	4	15	7	18	12
Finland	4	1	16	18	29	28	21	15
France*	1	0.4	8	5	6	1	16	7
Germany*	2	0.3	10	7				
Greece	5	1	9	5	4	1	13	5
Hungary	3	1	9	4	9	2	18	8
Ireland	7	1	15	8	28	25	32	32
Italy					4	1	na	na
Latvia	4	0.4	15	8	11	6	19	9
Lithuania	6	1	15	6	15	5	12	5
Malta					5	3	25	18
Poland	4	1	14	6	13	5	41	23
Portugal	4	1	10	5	6	1	10	5
Slovakia	16	8	23	13	9	5	12	7
Slovenia					14	9	29	19
Sweden	1	0.3	8	6	21	16	22	13
UK*	9	3	25	22	30	26	33	27

\* HBSC data for France and Germany represents regions. UK data is for England \*\* Belgium (Flemish); Spain, Netherlands, and Luxembourg were not involved in the surveys.

Sources: WHO-HBSC, 20004; ESPAD 1999 Report5.

**Table 1: Drinking patterns among children (11, 13 years) and teenagers (16 years) in the Enlarged European Union**

school. For girls, being able to communicate well with their father was important. There was also a strong line between not smoking and not drinking. The consequences of alcohol use by teenagers, reported in ESPAD, include a range of problems affecting their performance at school, being in accidents, difficulties in relationships with others, unwanted sexual experiences, fights and trouble with the police.

### Effective alcohol policy – A Review

The research evidence is very clear on a number of key issues. Firstly, not all alcohol policy measures are equally effective. Secondly, policy measures that influence and change the physical, social and cultural environment around alcohol are more effective in preventing and reducing alcohol related harm, than measures targeted at the individual

drinker. Thirdly, policies exclusively targeted at young people, while ignoring the wider adult population, are doomed to failure. Fourthly, while education programmes can influence beliefs and attitudes about alcohol, the overwhelming weight of the international evidence, across several contexts and settings including schools, colleges and communities, concludes that



educational strategies show little or no effect in reducing alcohol consumption or related harm<sup>6</sup>.

The most recent global review of alcohol policy, supported by WHO, clearly shows that the 'best value' for an effective alcohol policy response should combine measures targeted at the general population (taxes, controlling access to alcohol, RBT, Lower BAC), at high-risk groups (minimum age, enforcement of on-premise alcohol laws, community mobilisation) and at high-risk drinkers (brief intervention)<sup>6</sup>. Table 3 summarises Babor et al evaluation ratings for 30 different strategies, assessed for their effectiveness in preventing and reducing alcohol related problems.

**Controlling the physical availability of alcohol**, be it the hours and days of sale, the number and type of alcohol outlets or certain restrictions on access to alcohol, is effective in reducing alcohol consumption and related problems. Setting a minimum age for the purchase of alcohol is one of the most effective measures in limiting access of alcohol to young people.

In North America, increasing the minimum age from 18 to 21 years reduced drink driving, car crashes and traffic fatalities among young people<sup>7,8</sup>. The majority of European

countries set 18 years as the legal age for alcohol purchase<sup>9</sup>. In Denmark, after the introduction of a minimum 15 age limit for alcohol purchase in 1998, a 36 per cent drop in alcohol consumption among teenagers and a 17 per cent drop in older students were reported<sup>10</sup>.

As with all alcohol laws, the critical factor for effectiveness is enforcement with a credible deterrent. Government stores selling alcohol off-premise, remove the pressure to maximise profit as in the private sector, can limit alcohol consumption and related problems<sup>11,12</sup>.

Such stores mainly operate in the US, Canada and in the Nordic countries. Making alcohol more available increases the likelihood that those under the legal age of purchase can access alcohol more easily and can result in increased youth drinking<sup>13</sup>. There is evidence to suggest that making drinks available, with a lower alcohol content, offers the possibility of reducing intoxication<sup>6</sup>.

**The price of alcohol** influences frequent and heavy drinkers as well as children and young adults, which means when the price of alcohol increases, alcohol consumption tends to decrease<sup>14</sup>. Over the past

thirty years in the UK, the decline in the relative cost of alcohol has corresponded to an increase in alcohol consumption<sup>15</sup>. Increasing alcohol taxes is a key instrument in the mix of effective policy measures. Raising alcohol taxes can also lead to a reduction in a host of alcohol related problems such as drinking and driving, death from liver cirrhosis, injuries, alcohol related violence and other crimes<sup>14,6</sup>. In the UK, it is estimated that a 10 per cent increase in alcohol taxes could reduce alcohol related mortality between 7 per cent and 37 per cent<sup>15</sup>.

#### **Modifying the drinking context**

mainly focuses on preventing and limiting harm in the social drinking environment (licensed premises) by holding servers legally liable for serving to drunken persons, active enforcement of alcohol laws, better trained staff in responsible serving practices and effective management of potential problem behaviours among customers. There is a substantial body of scientific evidence from the USA, Australia, New Zealand, and Finland that a community policy approach is effective. That is institutions, organisations and groups within a community working together to change policies and practices to reduce alcohol related problems. However, sustaining the gains beyond the initial time scale of the project remains a challenge. Community mobilization approaches have been successful in reducing high risk drinking<sup>16,17</sup>, violence in and around licensed premises<sup>18,19</sup>, alcohol related injuries<sup>20,17</sup> and drink driving<sup>21,22,23</sup>. The community mobilisation approach has also been effective in addressing underage drinking<sup>24</sup>. While alcohol free alternatives (AFA) have not been shown to be effective as a single strategy in reducing underage drinking, AFA have been considered useful when combined with a community policy approach such as limiting alcohol availability



through licensing laws, use of by-laws for restricting drinking in public places and enhanced law enforcement.

#### Regulating alcohol promotion:

Alcohol marketing is sophisticated in its methods, exceptionally well funded and powerful in its impact on young people including young adults, adolescents and those who have not yet tried alcohol<sup>25,26</sup>. Alcohol marketing places alcohol as a defining feature of youth culture, linking alcohol with social and sexual success. Alcohol marketing also undermines efforts to communicate health promotion messages to young people.

While there is some evidence that bans on alcohol advertising decrease alcohol consumption<sup>27</sup>, the other promotional activities, often using the largest part of the marketing budget, also need to be regulated<sup>26</sup>. Such activities include sponsorship, product placement and special alcohol promotions, which especially appeal to young males, the groups mostly likely to be high risk and heavy drinkers<sup>6</sup>.

**Drink driving countermeasures** are considered one of the great success stories in reducing alcohol related problems and have produced population-wide long term problem reductions of between 5 per cent

and 30 per cent<sup>6</sup>. The measures of proven high effectiveness are random breath testing and lower BAC (blood alcohol concentration). High visibility road checks act both as a deterrent and law enforcement, increasing compliance and reducing drink-driving offences.

An immediate suspension from driving and a licence disqualification are also effective measures in preventing and reducing alcohol related harm and should form part of an overall policy strategy.

Given that young people tend to be inexperienced in driving and have high numbers of risky drinkers, a lower BAC limit near zero has shown to be very effective in reducing injuries, crashes and young drivers with a positive BAC<sup>24,25,26</sup>. Graduated licensing for novice drivers (night curfews, delayed access to full licence) have also been effective in reducing drinking and driving among young people<sup>6</sup>.

**3.6 The purpose of early intervention** is to detect high risk drinking and harmful drinking in individuals before or shortly after the early signs of alcohol related problems. Effective screening tools have been developed to match high risk and harmful drinking patterns

with appropriate interventions<sup>31</sup>. Brief intervention, typically consisting of one to three sessions involving counselling and education, has been shown to reduce high risk and harmful drinking and related problems<sup>6</sup>. Brief intervention is delivered in a variety of health care settings, with primary care and emergency room the most common. It is recommended that screening and brief intervention on alcohol issues should be routine in all aspects of health service delivery for an integrated system<sup>31</sup>.

The health promotion literature has recognised for over two decades that **information and education** does not change complex health behaviours and that creating a supportive environment with healthy public policies is essential for sustained behaviour change<sup>32,33,34</sup>. The alcohol research literature also concurs that education is not effective in reducing alcohol related harm, but can be useful in increasing understanding and in building life skills. Therefore, education should not be the lead policy measure, but rather an integral part of an overall strategy.

The mistaken over-reliance on education as the key solution to underage drinking has diverted attention and delayed more effective strategies being implemented. Media advertising, warning labels and information at point of sale outlets are also useful in creating awareness.

The use of warning labels on alcohol products in the USA increased awareness of the potential risks of alcohol use, among the target groups, in the areas specified on the labels – pregnancy, driving a car or operating machinery. Recall was also good for warning messages as in media advertisements, and on signs at point-of-sale<sup>35,36</sup>. The value of media campaigns lie in creating greater awareness of alcohol issues and in providing a forum for public debate

and support for policy changes<sup>37</sup>.

**Alcohol Policy and Young People:** In summary, priority should be given to implementing the following effective policies in an integrated way, to reduce harm among young people.

- Regulating availability, through minimum age, alcohol taxes, government monopoly of off-license sales, alcohol control enforcement, seller liability
- Modifying the drinking context by community mobilisation targeting high risk drinking, violence, drinking driving and underage drinking and promoting low strength alcoholic beverage.
- Drink driving countermeasures by graduated license for novice drinkers, lower BAC for young drinkers, random breath testing and license disqualification,
- Regulating alcohol promotion by restricting sport sponsorship, high-risk promotional activities and volume of alcohol advertising.
- Early intervention by screening and brief intervention across health and social welfare services,
- Creating greater awareness and support for effective alcohol policies across society. Providing education as a supporting strategy rather than a lead strategy and link it to drug education.

### **Ireland and Alcohol – A Profile**

#### **Social and cultural environment:**

Irish society has experienced major changes over the last decade with rapid economic growth, increased employment opportunities attracting many young adults back home, more young people with part-time jobs, heightened interest in recreational, leisure and sporting activities and changing attitudes to

lifestyle issues. The link of alcohol use with all forms of leisure, sport and entertainment, gives a clear message to young people – ‘to have enjoyment and to make friends you need alcohol’. Against this backdrop, the rise in alcohol consumption has been dramatic and the rise in harm alarming.

**Consumption and harm:** We in Ireland are now amongst the highest consumers of alcohol in the world. Between 1990 and 2002, alcohol consumption per capita increased by 41 per cent, the highest rate of increase in Europe<sup>38</sup>. Alcohol harm is visible on our streets, in our courts, hospitals, workplaces, schools and homes. The vast majority of alcohol harm occurs among the adult population. Alcohol related mortality increased significantly during the same time period.

The number of people who died (rate per 100,000) from alcohol abuse/dependency increased by a factor of four, cirrhosis doubled and alcohol poisoning almost doubled. High profile cases involving alcohol and violence have grabbed media headlines, but are only the tip of the iceberg. Since 1996, public order offences increased by 247 per cent, assaults by 82 per cent and drink driving offences by 125 per cent<sup>39</sup>. One in four attending the hospital emergency room are alcohol related.

**Drinking Patterns and harm:** A recent study showed that adults in Ireland had the highest reported consumption per drinker, the highest level of binge drinking and experienced more harm than other European countries<sup>3</sup>. Binge drinking is the norm among Irish men, in that out of every 100 drinking occasions, 58 end up in binge drinking for men and 30 for women. Binge drinking is defined as drinking at least one bottle of wine, or 7 measures of spirits or 4 pints of beer or more during one drinking occasion (75/80 grams of pure alcohol). The harm

experienced as a result of their drinking had personal (regrets, fights, accidents), economic (work) and social (friendship and home-life) consequences. Young Irish men (18-29 age group) reported the highest consumption of alcohol, had more binge drinkers and experienced more harm (fights, accidents, work) than any other group in the population.

**Youth drinking and harm:** In 2002, fewer children under 15 years, reported experimenting with alcohol, drinking on a regular basis or getting drunk, in comparison to 1998<sup>40</sup>. However, for those 15-17 years there was no reported change in the overall pattern of drinking, where about half of the boys and girls were regular drinkers and drunkenness was prevalent. Among 16 year olds, one in three were regular binge drinkers and one in four reported being drunk ten or more times in the last year<sup>5</sup>. In 2002, alcopops was the most popular drink among girls while beer continued to be the most popular drink among boys<sup>40</sup>.

The significant role alcohol contributes to harm among Irish young people such as unsafe sex, alcohol overdose, accidents, assaults, suicide and poor school performance has been previously documented<sup>41</sup>. A glimpse of the problems experienced by young people can be seen in the work of the Garda Juvenile Diversion Programme.

Between 1997 and 2002, there was a 185 per cent increase in juvenile alcohol related offences<sup>42</sup>. Of particular concern is the increase in ‘intoxication in public places’ among teenagers, which increased from 550 offences in 1997 to 1,898 offences in 2002, an increase of 245 per cent. However, the figure for the same offence, intoxication in a public place, among adults was 22,701 in 2002, up 194 per cent since 1997.

**Alcohol Marketing Practices**

**Sponsorship:** By the early 1990's the drinks industry had developed sponsorship deals with many musical and cultural events around Ireland. The current high visibility alcohol sport sponsorships, in sports with the highest youth participation (gaelic football, rugby and soccer), began in 1994 with the Guinness All Ireland Hurling Championship and symbolised a major social shift in a community rich in tradition and culture. The GAA sponsorship deal was followed by the Heineken Cup (rugby) and the Carlsberg League (soccer). Sponsorship deals of this type give in-depth exposure through event naming, product placement, sport commentary and discussions of the sporting events and embed the alcohol product into the daily lives of people. Alcohol sports sponsorship, linking alcohol, masculinity and sport, attracts young males, the groups mostly likely to be high risk and heavy drinkers<sup>6</sup>.

**Alcohol products:** The introduction of alcopops in 1995, with a strong sweet taste, disguising the taste of alcohol, attracted many young people into alcohol. The more recent new alcohol products with high alcohol content (shooter, shots) provide for a quick and easy 'fix' of alcohol for those who are interested in getting drunk fast. Drink combinations such as 'vodka and red bull' allow the drinker to consume large quantities of alcohol that the body otherwise could not normally tolerate, due to the stimulant affect of red bull. Alcohol promotions such as free alcohol, cheap alcohol and strong alcohol encourage high risk drinking which contributes to increased risk of alcohol related problems.

**Alcohol advertising:** In Ireland, alcohol advertising is governed by voluntary codes or self-regulation. The codes of advertising all set

down certain guidelines to protect young people. However, during the last decade alcohol advertising has increased in volume, as reflected in the advertising spend, from 25.8 million in 1996 to 43.2 million in 2002<sup>43</sup>. The greatest increase happened in spirits advertisements between 1996 and 2000, coinciding with the introduction to the market of the new spirits based alcopops - television (+228 per cent), outdoors (+136 per cent), cinema (+116 per cent) and press (83 per cent) and radio (-62 per cent). Alcohol advertising also extended its scope by advertising alcopops products on television, despite the voluntary code that spirits drinks would not be advertised on television. During this time period a new commercial television station came into operation. A study was undertaken in 2000 asking young people how they perceived alcohol advertisements and whether the advertisements were in compliance with the codes.

The results suggested that alcohol advertisements did infringe the codes in a number of ways. These included linking of alcohol use with social or sexual success, depiction of immoderate drinking, use of characters that appear to be under 25 years, implying that alcohol had therapeutic effects or improved physical performance and alcohol advertisements targeted at young people<sup>44</sup>. In 2003 the Drinks Industry Group established a Central Copy Clearance company to vet alcohol advertising prior to launch to ensure compliance with the voluntary code. However, despite the CCC role, alcohol advertisements continue to breach the code, illustrating the deficiencies of the self-regulation system<sup>45</sup>.

**Irish Policy Responses**

**Alcohol availability:** In Ireland alcohol is easy to access, as there are at least 13,000 outlets that sell

alcohol. Since the 1980s, alcohol has become more available by increases in the number of exemptions (later opening) and in the number of outlets (restaurants and clubs, off-licenses). During the economic boom since 1994, there was no increase in alcohol taxes (excise duty), although alcohol prices did increase. In response to calls for longer opening hours, from the retail drinks and tourist sectors, a Dail Select Committee examined the issue in 1996. Despite the scientific evidence showing the increased risks of increasing availability presented to the Committee and outlined in the National Alcohol Policy<sup>46</sup>, the Dail committee decided to recommend greater availability through longer opening hours and more exemptions, which was enacted in the Intoxicating Liquor Act 2000. The longer opening hours combined with no increases in alcohol taxes over a seven-year period and an annual economic growth rate of at least 10 per cent, was akin to throwing petrol on an already burning fire. In contrast, the same legislation<sup>47</sup> introduced strong measures to curb underage drinking by imposing a 'closure order' for those convicted of selling alcohol to those underage. Illustrating the misperception that drinking in Ireland is a problem only for those underage.

The Minister of Justice, Equality and Law Reform, established the Commission on Liquor Licensing (CLL) in 2000 to consider reform of the licensing laws. Some of the CLL recommendations, if implemented will further increase availability such as more off-licences, more on-premises bars (café bar model) and distance sales<sup>48</sup> and pose a threat of increased alcohol problems.

**Community approach in the college environment:** A framework for the development of a college alcohol policy was developed in 2000 with

the Heads of Colleges and the Student Union, in response to a growing concern about alcohol promotion practices on campus and related problems<sup>49</sup>. Five key areas were addressed, controlling marketing, promotions and sponsorship, limiting harm in the drinking environment, increasing awareness and education, encouraging alternatives and choice and providing campus support services. Each third level institution is encouraged to adopt the framework into policy to reflect the needs and aspirations of their own campus environment.

**Information and education:** A three-year alcohol awareness campaign (2001-2003) was implemented to raise awareness and create debate on alcohol issues and to highlight the necessity of a public health approach to reducing alcohol problems. A server training initiative was developed, in co-operation with the Drinks Industry, to establish policies and procedures in the retail drinks trade to reduce harm in the drinking environment. It is now administered by the training organisation (Failte Ireland) for the hospitality sector.

Youth participation in matters that affect them is a key goal of the National Children's Strategy in Ireland. Several initiatives have been developed, both in terms of structures and programmes, for active participation by young people. A Dáil na nÓg or National Children's Parliament has been established as a national forum where children can raise and debate issues of concern. At county level, the Donegal Youth Council is an example of youth democracy in action where young people elect young people to a junior council, mirroring that of the senior County Council. The Gaf in Galway, set up by the Western Health Board as a social health project, provides a safe space (alcohol and drug free) for young people can go to meet and hang out with friends, listen or partake in music as well as access information (The Gaf evaluation 2003). A similar café style service for young people is Elmo's Attic in Ennis. Both these centres are used by boys and girls 15 years and older and involve young people in the active management of the centres. Innovative programmes include Teenage Kicks, Bono Vox and the

No Name Club. Bono Vox is a mentoring programme between University students and second level students, culminating in a play on alcohol issues co-written by the teenagers and performed by the drama students in the university.

Teenage Kicks is an arts, education and health project, illustrating young people's perceptions of the impact of alcohol on themselves and their community through art and film. The No Name Club promotes alcohol-free social activities.

**Strategic Task Force on Alcohol:** The Strategic Task Force on Alcohol (STFA), set up by the Minister of Health in 2002, was asked to bring forward specific measures to Government, based on sound scientific evidence, to prevent and reduce alcohol related harm in Ireland. The STFA first Interim Report<sup>41</sup> recommended specific measures for action including an increase in alcohol taxes, the introduction of random breath testing, lower BAC, prohibition of service to drunk customers, restrictions on high risk sales promotions and reduced exposure of children to alcohol marketing.

#### Signs of Progress:

**Increased taxes:** Excise duty was increased on cider and spirits by Government in December 2001 and 2002 respectively. Following the increases in excise duty, the alcohol sales figures for both cider and spirits significantly decreased, demonstrating that alcohol taxes can have an influence on alcohol consumption. In 2002, cider sales decreased by -11.3 per cent, while wine and spirits increased and beer remained relatively stable. In 2003 following the tax increase on spirit products, spirits sales decreased by 20 per cent while wine sales increased (+8 per cent) and both beer (-2.5 per cent) and cider (+1 per cent) showed marginal changes<sup>50</sup>.



**Stronger laws:** The Intoxicating Liquor Act 2003 includes measures to combat drunkenness and disorderly conduct, binge drinking and underage drinking. These include a ban on the supply of alcohol to drunken customers and 'closure order' if convicted; a ban on happy hours; reverting to the earlier closing time on Thursday night; restrictions on those under 18 year from bars after 9pm; a requirement for 18-21 year olds to carry age document and the provision for plain clothes gardai to enforce alcohol laws. The Road Traffic Act 2003 extended the grounds for requesting a breath test to detect alcohol. The Minister for Transport is committed to the introduction of random breath testing in the near future. The Minister for Health and Children received government approval to proceed with legislation to reduce the exposure of children to alcohol marketing. The proposed legislation will restrict where alcohol advertisements can be placed, limit content, ban drinks industry sponsorship of youth leisure activities and require a health warning on advertisements.

**STFA 2004 Report:** The STFA 2004 Report will bring forward a comprehensive list of new recommendations; to build capacity in communities and organisations to prevent and respond to alcohol related harm; to achieve the targets set out in the WHO Declaration on Alcohol and Young People; and for early intervention to reduce high risk and harmful drinking and related problems.

### Challenges

**Involvement of Young People:** All young people have a right to be heard and participate when policies, services and programmes are being developed to meet their needs. Member States in the European Region made commitments at WHO

and EU level to involve young people in the shaping of decisions that affect their lives. However, translating that commitment into tangible actions has not been very apparent across Europe.

**Alcohol a global product, but no ordinary commodity:** The European Union was developed to provide for a single market where goods can be sold without unnecessary barriers to trade. It has provided opportunities for economic growth and prosperity in all Member States, including Ireland. However, alcohol is no ordinary commodity and its harmful properties result in a wide range of problems, therefore the full suite of market rules do not and should not necessarily apply.

The recent proposal on excise duty and the sale promotion directive illustrates the divergent views within the EU. Both measures would result in cheaper and more available alcohol, which is not in the best interest of public health and are unlikely to improve the well-being of European citizens. A better balance is needed at European level between public health policy and other policy areas. European policies should complement and reinforce Member States strategies to reduce alcohol related harm.

**Alcohol Industry:** The alcohol industry exists to sell alcohol. Their aim, like all commercial businesses, is for a better bottom line not for better health for the citizens of Europe. Therefore, it is inevitable that effective public health measures will continue to be opposed by the drinks industry if they impact on profits. While the drinks industry says it is committed to reducing alcohol related harm, the continuing call by the industry for education as the lead strategy rings hollow given the research evidence, which shows that education is a supportive rather than a lead strategy. The Drinks Industry of Ireland rejected several

of the recommendations in the STFA Interim Report (reduce overall consumption, increase taxes, lower BAC) despite the strong scientific evidence base for these recommendations<sup>51</sup>. One can only conclude that the alcohol industry is at best lukewarm on the public health approach

### Conclusion

The myth that the Irish are a nation of drinkers, perhaps true 100 years ago, has become a self-fulfilling reality in the last decade. Lessons must be learned from Ireland's mistakes. Economic gains in one dimension of life can carry a social, economic and health loss in another dimension. We must ensure that the public understand and support the need for specific integrated actions, based on what works, in the interest of the common good of society. The reality is, that although alcohol in moderation is enjoyable, sociable and part of most cultures, there is also an inherent risk with its use as it is a toxic substance and a drug. We do a disservice to our young people in not facing that reality, i.e. that alcohol is no ordinary commodity. We have to adjust our attitudes, behaviours and environments to reflect that sobering reality.

To improve the quality of life of communities across the European Region and to ensure our most valuable asset - young people - are supported in leading healthy and productive lives, our starting point should be balanced pro health alcohol policies.

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# Towards alcohol free roads in Europe

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Unfortunately, there is very little to indicate that we are getting any closer to this very desirable goal, but more about this below.

The level of road safety varies greatly between nations. The table below is one way of presenting it.

These great differences between European nations reflect cultural differences as well as differences in legislation and attitudes. In some African nations the number of vehicles is down below 100! These figures also prove that it is possible to achieve great improvements.

It is interesting to compare the most with the least safe nations but also to compare the very safest ones in order to find critical factors. Thus, a study which compares the Netherlands, Sweden and the UK (Koornstra et al., 2002) among other things looks at the fact that these three nations have almost equal levels of road safety but differ greatly e.g. when it

comes to the legislation re alcohol in traffic. Below, Sweden will often be used as an example not only because it represents one of the nations with the highest levels of road safety – the country where the Vision Zero was born and where car manufacturers have always emphasized safety - but also because Sweden represents what happens when a nation faces a weakening or even loss of alcohol policies.

## Comparable statistics

In the mid-nineties, the EU Commission asked the member states about the proportion of alcohol related fatal accidents in the respective countries. The resulting ranking list saw a somewhat surprising winner with only 1 per cent. Two other countries followed

closely with 4 per cent etc. If this list reflected the reality, it would mean that the problem of drunk driving would need little concern in many European countries and it would mean that we could devote our resources to other problem areas in traffic, which are in much greater need of countermeasures like speeding and safety belt use or rather the lack of it.

Unfortunately, almost all of these figures have little correspondence with the reality on the roads. It is very improbable that any country on this planet can claim a real involvement of alcohol in fatal traffic accidents of less than 10 per cent or perhaps even 20 per cent.

Let us look at a few examples – Sweden, which for ages has been looked upon as being very successful in preventing drunk driving, reports that 28 per cent of fatally injured car drivers were positive for alcohol in 2002. Germany reported 17 per cent alcohol involvement to the EU in 1997, however, fatally injured drivers in single vehicle fatal accidents are not tested for alcohol or drugs and since we know that the involvement of alcohol is higher in single vehicle accidents than in any other type of accident, we can draw the conclusion that a realistic figure regarding the involvement of alcohol in fatal accidents should be considerably higher than 17 per cent.

Sweden reported 3.3 per cent to the EU. This was the figure in the official Swedish statistics. This anomaly depends on the fact that the official statistics are based on police suspicion of drunken driving. The higher figure is derived from

## How many motor vehicles are needed to kill one person/yr?

Sweden	7450	France	4350
Norway	7350	Spain	3950
UK	7100	Belgium	3850
Holland	7100	Cyprus	3700
Finland	7000	Czech Rep	3100
Germany	6950	Slovenia	2750
Italy	6200	Greece	2750
Luxemburg	4900	Estonia	2350
Austria	4450	Latvia	1100

actual analyses of blood samples taken during the autopsies.

Since almost every fatality in road traffic is autopsied, there is a good basis for a more realistic estimation of the role of alcohol at least concerning active road users who are killed. The proportion of fatally injured drivers who are tested varies considerably among European countries - from no systematic testing to compulsory testing.

This lack of reliable and comparable statistics to describe the situation on the European roads, when it comes to the role of alcohol in accidents, is potentially very dangerous. It is easy to imagine what happens when the road safety people approach the politicians and decision makers in a country which boasts an involvement of alcohol in the fatal accidents of 1 per cent or 4 per cent and ask for resources to fight the problem of drunken driving.

The response will probably or even with certainty be: "our country does not have a real problem in that area – there are other areas which are in greater need of resources". Thus, the poor description of the situation on the roads will lead to wrong prioritization and consequently to unnecessary death and suffering. As for the suffering, we have even less knowledge about how many are killed and injured by drunk drivers. Almost all that we know concerns active road users who are killed themselves.

Recommendation: a pan-European monitoring system following the development of the drinking and driving situation needs to be established before 2010

### A major problem

Despite all of these shortcomings, most of us who are active in the field of road safety agree that alcohol is one of our worst problems on the roads. The European Commission has

estimated that at least one quarter of the deaths in road accidents can be attributed to alcohol. The estimated cost of this is 10 billion euros per year ( Official Journal, 2001). The WHO estimates that alcohol plays an even greater role.

In some countries the development of road fatalities shows an increasing trend after almost 10 years of decline. Unfortunately, the same is true of the development of alcohol related fatalities in traffic. Sweden is a good example of the latter trend.

In 1989-92 the proportion of alcohol related fatalities among car drivers was 30-31 per cent. This was followed by a number of years characterized by a sharp decline in the proportion of alcohol related fatalities.

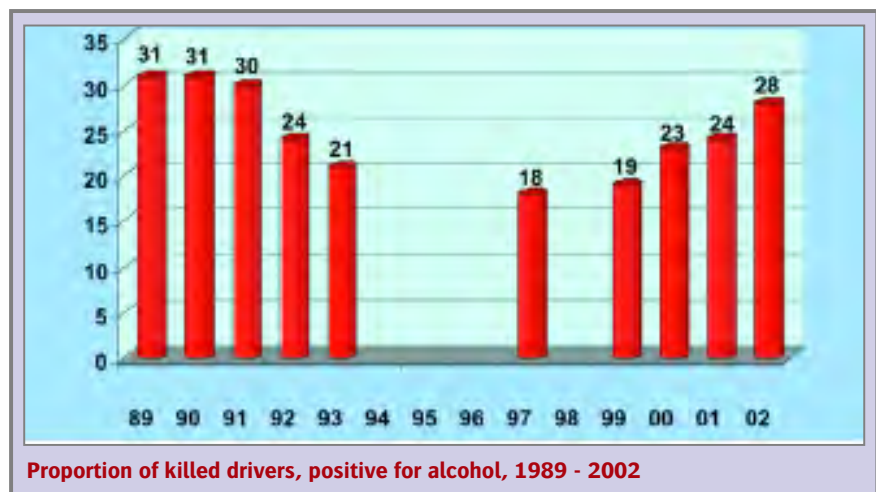
The lowest level was recorded in 1997, when only 18 per cent of the car drivers who were killed were positive for alcohol. This decline could be attributed to a number of coinciding factors: the legal blood alcohol concentration (BAC) limit was lowered from 0.5 promille (0.05 per cent or 50mg per cent) to 0.2 promille in 1990; stiffer penalties for drunken driving were introduced; a massive increase of police enforcement – going from approx. 600,000 random breath tests per year to 1.8 million in 1994; resources for attitudinal campaigns were more than doubled.

Evaluations of the lowering of the legal limit demonstrated that fatal accidents were reduced by approx. 8 per cent. Since 1997, however, the development is reversed. There has been a steady increase of the proportion of fatally injured drivers who were positive for alcohol and in 2002 the level was 28 per cent, as mentioned above and seen in the graph, below.

The tremendous increase also has a number of contributing factors: probably the primary factor is the sharply rising alcohol consumption – from 8 litres of pure alcohol/capita in 1996 to 10 litres in 2002 (Leifman & Gustafsson, 2003). The rise in alcohol consumption has been especially pronounced among young people; reductions in breath testing by one third; a fifty per cent reduction of the resources for attitudinal campaigns; less severe penalties.

We also need to realize that the poor quality of the statistics means that we underestimate the role of alcohol in that we have little knowledge about the number of people who are killed or injured by drunk drivers. Sweden joined the European Union in 1996. This meant, among other things, that Sweden had to accept a gradual loss of the traditional restrictive alcohol policy.

The alcohol retail monopoly was partly broken; the ban on alcohol advertising now only applies to





hard liquor; the import restrictions have been lifted and the only limitation now is that you can only import alcohol for your own personal use. In practice, this means that there are no quantitative limits. In conjunction with recent lowering of alcohol taxes in Germany, Denmark and Finland plus the inclusion of the Baltic states who have even lower taxation on alcohol, the pressure is now tremendously high on the Swedish Government to lower alcohol taxation.

Even such a small change as the introduction of wine in “bag-in-

box”, which is now the most popular packaging of wine, has had an enormous impact on the drinking habits. Most of the increase in alcohol consumption stems from more frequent drinking – not so much from greater quantities on each drinking occasion. This results in many more conflicts between transportation needs and alcohol consumption.

#### **Tools which are used to various degrees to reach our goal**

Legislation, enforcement, information/education, public transportation, rehabilitation,



increased drinking age, alcohol ignition interlock systems, etc. - to what degree do we have these tools at our disposal – well, this depends on your position in the system. In most cases societal bodies have only one or two of these in their own toolbox and thus have to rely upon others to look in their boxes and use relevant tools.

#### **Alcohol policy**

Research has demonstrated that there is a close correlation between the level of total alcohol consumption in a society and the level of violent crime (Skog & Bjork 1988; Lenke 1990). In the area of drunk driving, only few studies have elucidated the correlation between total consumption and drunk driving (Kendell 1984; Smart & Mann 1987).

Norström found that for each per cent of increase of total consumption of alcohol, the level of drunk driving increased by 0.6 per cent (Norström 1999).

#### **Enforcement**

Without police enforcement, the legislation will have little impact on the road safety situation. One very important aspect of the drunk driving legislation is the legal possibilities for the police to test the road users for presence of alcohol. This also varies considerably. Experience has demonstrated that random breath testing, where the police are authorized to stop any driver at any time and at any place for the administration of a screening test, has led to improvements of road safety. Homel (1990) has illustrated that the use of random breath testing leads to drastic reduction of driving under the influence if the controls are accompanied by intensive publicity campaigns and are carried out often and in good visibility. This reduction is due to the fact that the subjective risk of detection is dramatically

increased. When random breath testing was introduced in Australia, fatal crashes decreased by 22 per cent (Homel, 1988). Shults et al. (2001) found that 23 studies of random breath testing yielded an average decline of 22 per cent in fatal crashes. It has also been demonstrated that random breath testing is at least twice as effective as selective checkpoints (Henstridge et al., 1997).

It is estimated that unrestricted breath testing may reduce drink driving fatalities by between one third and one half. In the light of this, it is remarkable that a number of the EU member states still do not allow random breath testing. Furthermore, this type of police activity is probably unique in that it is generally viewed by the road users as positive enforcement. For the police it also entails a bonus in that other types of criminal activity is often detected when vehicles are stopped at random. The level of random breath testing also varies considerably. In Finland, every third driver is tested each year; in Sweden about one in five; France has a similar level

#### Information/education

This is an area which is constantly being discussed. It is often claimed that campaigns do not change behaviour. However, it has been demonstrated that, especially if campaigns are combined with other important activities like changes in legislation or extraordinary police enforcement activities, positive effects can be reached.

It is necessary to introduce the concept of separation between alcohol and driving in each new generation of drivers. This is not enough to keep them from driving drunk, since we often find that they have the best intentions – having decided to use public transportation but then things go wrong and they miss the bus and someone decides to



drive. Then it is important that someone stops him from actually doing it and if no-one is able to, at least no-one rides with him.

Examples of what may happen when we neglect to address this problem can be found in Sweden where there was a lack of resources for information directed towards young people for a number of years. This has led to a shift in the attitudes towards drinking and driving and the proportion of young people who have been driving under the influence or been riding with a drunk driver has increased to very worrying levels.

#### Legislation

There is ample scientific evidence that crash risk increases as the blood alcohol concentration increases and that the increase starts already at the 0.1 promille level (Preusser et al. This evidence is used differently in different countries. In the USA, a majority of the states now have lowered their legal limit to 0.8 promille, but some 20 states still have a limit of 1.0 promille.

In Europe, the vast majority of the countries have adopted a 0.5 promille level. There are a few exceptions, however – Ireland, Italy, Luxemburg and UK still accept 0.8

promille. Sweden has a 0.2 promille law. Two countries, Austria and Spain have lower levels applying to beginners and to drivers of heavy vehicles.

Lower legal limits for young drivers may reduce fatal crashes among young drivers by as much as 24 per cent. It is unfortunate that these differences between European countries still exist. A uniform legal maximum BAC limit would send a non-ambiguous, clear and consistent message to European road users.

There is also evidence that lowering of the legal blood alcohol concentration limit generally produces positive results across all BAC concentrations and reduces alcohol related road accidents (Jonah et al., 2000). Sweden lowered the legal limit from 0.05 per cent to 0.02 per cent in 1990. This led to a reduction of fatal alcohol related accidents of 8 per cent (Norström, 1997). Four Australian states went from 0.08 per cent to 0.05 per cent in the time span from 1976 to 1992 and experienced between 8 and 18 per cent reductions of fatal alcohol related accidents (Henstridge et al., 1997). The lowering of the legal limit in France resulted in a 4 per cent improvement and in Belgium an initial improvement of 10 per

cent in the first year after the introduction of the new law and a further improvement of 11 per cent the following year. In Austria the limit was lowered from 0.08 per cent to 0.05 per cent, generally and to 0.01 per cent for novice drivers. This was accompanied by a reduction in accidents for novice drivers by 32 per cent and for the general driving population, by 9 per cent (Bartl and Esberger, 2000).

A national study of US states found a net decrease of 24 per cent in the number of young drivers with positive BACs as a result of zero tolerance laws (Voas et al. 1999). Shults et al. (2001) found similar results in a review of both US and Australian studies. It is estimated that if all states in the USA introduced a limit of 0.08 per cent, 400 – 500 fatal accidents could be avoided (Hingson et al., 2000).

Going in the other direction, i.e. raising the legal limit also has consequences. When former East Germany was reunited with former West Germany, the legal limit in East Germany went from zero to 0.8 promille. This change could be seen in a marked increase of alcohol related crashes in East Germany (Schöch, 1998). Similarly, when Portugal raised the legal limit after a short period of 0.02 per cent, back to 0.05 per cent, alcohol related

fatalities increased by 10 per cent. In this case it may be argued that the experience with a lower level was very short, only a few months and therefore it is difficult to draw safe conclusions. However, it can probably be safely concluded that a lowering of the limit, especially in the countries which have the highest legal limits in Europe, would have accident reducing effects, (Desapriya, 2000).

In some countries lower legal BAC limits apply to commercial drivers and drivers of heavy vehicles etc.. In the USA, a 0.04 per cent limit was introduced in 1986. It also encompasses more severe penalties.

A second drunk driving offence by a driver of a vehicle transporting dangerous goods means loss of the commercial licence for life. Austria and Spain also have lower limits for drivers of heavy vehicles.

Sometimes it is feared that a lowering of the limit will lead to an increased workload on the police but experience in Norway and Sweden indicates that the police found fewer drunk drivers after the reform, despite having made a greater number of screening breath tests.

Legislation also encompasses sanctions for breaking the law. The severity of the penalties which apply to drunken driving and to having

caused injury or death in alcohol related accidents vary enormously between countries. It requires a lengthy report to give a description of even the variations within the EU. Here, only a few examples will be mentioned. In many EU member states, having driven with 0.5- 0.8 promille typically means only an administrative penalty involving fines, which often are tied to BAC level. In some countries the fines are also related to income level. Only when 0.8 has been exceeded does licence suspension or revocation become involved. Other countries introduce licence suspension for a length of time which varies with the blood alcohol concentration but occurs also at the lowest blood alcohol concentrations. The length of the suspension may vary from a few days to lifetime.

Imprisonment for offenders not involved in traffic accidents occurs at higher levels of BAC – in some cases above 1.0 promille and in others above 2.0 promille. Penalties are usually increased if the offence or crime is repeated. Community service seems to have become more and more popular as an alternative sanction.

Some member states also require participation in short driver improvement courses, paid for by the participants. Such remedial programmes may reduce alcohol related accidents by 8-9 per cent.

### Licence suspension and revocation

Most nations have licence suspension and revocation in their legislations as a measure to reduce drunken driving recidivism. There are great variations in the applications of such laws as far as when suspension and revocation should be used and for how long etc. In some legislations it is part of the penal system in others it is part of the administrative system. A review of 46, mostly North American studies



on licence suspension concludes that alcohol related accidents may be reduced by 5 per cent and fatal accidents by 26 per cent (Zobeck and Williams, 1994).

Wells-Parker et al. (1995) found in a meta-analysis of 215 programs, that licence suspension plus education, psychotherapy, counselling or follow-up contact probation produced an additional reduction in drinking-driving recidivism and alcohol-involved accidents when compared with groups that received licence restrictions only,

Relevant literature maintains that educational measures and licence suspension should be used concomitantly. It is also claimed that suspensions which last for shorter periods than 3 months are non-effective and that the most effective length of suspension is 12 to 18 months. (Austrian Road Safety Board, 2003).

Siskind (1996) has said that, at least during the suspension period, drivers show improved driving behaviour, either by restricting driving in general or if they are driving despite the suspension, by showing more caution. This effect is stronger the longer the suspension. Licence restriction is therefore justified as a method of punishment, control and rehabilitation of drinking drivers.

### **Relicensing**

Some countries stipulate that the drunk driver, if he was above a certain BAC or reoffended, must participate in a rehabilitation programme or prove that drug or alcohol dependency is not involved.

This can be done in medical checks over a period of time involving the application of biological markers. Too rigorous programs may lead to increased levels of unlicensed driving, however. This again is probably closely related to the levels of police enforcement.

Sweden has a program which requires that drivers who have been caught with a BAC exceeding 0.1 per cent must prove that they are not dependent upon alcohol or other drugs in order to have their driving licences reinstated. This program works well, but, some 30-40 per cent of these drivers choose not to enter the program and never apply for a driver's licence again. It is doubtful whether they refrain from driving.

### **Rehabilitation**

The proportion of drink drivers who have a drinking problem is not very well researched and it probably varies somewhat from country to country. In Sweden, an extensive study over 10 years has demonstrated that a majority of arrested drink drivers showed signs of harmful drinking habits or problem drinking (Bergman et al., 2004) Typically, drunk driving is a crime with a high degree of reoffending. Some 30 per cent reoffend within three years.

It is therefore important to ensure that drunk drivers are screened for drinking problems and if found to have such, to provide adequate sanctions which include participation in rehabilitation programs. If this is not provided, we will see a lot of recidivism. (See Relicensing above). Particularly for young drivers and first time offenders it has been found that recidivism rates can be halved by participation in training programs (Limbeck, 2001)

### **Tools which could be used Alcohol Ignition Interlock Devices (AIID)**

There is little doubt that the introduction of AIID in all cars would almost eliminate the problem of drunk driving from our roads. Unfortunately, this is something which will probably take a number of years before being implemented. Only one European country has had AIID programs

running for any lengthy period and no one has introduced legislation requiring AIID for any type of transportation. It is most likely that the introduction of such legislation will be done gradually.

The first types of transportation which will see mandatory AIID are probably transportation of hazardous goods and buses. In Sweden some 3000 units are in use in buses, trucks, taxis and driving school cars. The experience is very favourable. Employers as well as employees say that they now do not want to be without AIID.

The experience from the use in the conditional licence suspension program has demonstrated lower accident rates in the AIID group as compared to those who have their licences suspended. Liver enzyme tests show that the AIID group has healthier levels at the end of the two-year AIID-period than the licence suspension group. Unexpectedly, it was also found that the AIID group had fewer sick-leave periods than the licence suspension group.

It should be emphasized that the long-term effects, i.e. after the interlock period, have not yet been evaluated. The North American experience is that AIID program is very effective for as long as the devices are legally required but that the reoffence levels rise quickly after the removal of the AIID.

The Swedish approach with strict requirements on the participants with tri-monthly medical screening and biological markers seems promising in that it forces the participants to refrain from drinking for the duration of the AIID program which is 24 months.

### **Designated driver programs**

This kind of measure involves encouragement of one person in a group of drinkers to refrain from drinking alcoholic beverages and to act as the sober driver. There is



little evidence that formal designated programs have yielded significant positive effects (Caudill and Harding, 1997). But informal application of the principle of designated driver i.e. applying the principle in drinking situations, e.g. in other social settings than bars, pubs, restaurants etc, can be effective. This is the general experience in Sweden.

#### **Electronic driving licence (EDL)**

Licence sanction like suspension and revocation are not as efficient as they could be. Although there is an unfortunate lack of tangible data regarding the frequency with which people drive despite suspension or revocation, experience tells us e. g. that between 30 and 40 per cent of such drivers never reapply for a driver's licence in Sweden. These drivers are not reached by measures which target their drinking habits and possible dependency problems.

In order to address this problem, systems have been developed in which the car checks that the driver has a valid licence (Goldberg, 2000). The EDL is a "smart card" which is used as the key to doors and ignition and it is read by an on-board computer which compares

the information on the card with information stored in the computer. If the licence number on the card corresponds to what is listed in the computer, the car will start. If the licence is revoked or suspended, this information is beamed to all computers and this licence will not be validated by the on-board computer.

A system like this would give us the driver's licence as a very powerful tool which would effectively prevent unlicensed driving and motivate suspended drivers to participate in rehabilitation programs in order to be relicenced.

#### **Graduated licensing**

Once more we need to look at the experience gained on the North American continent for guidance. There is ample evidence that a step by step acquisition of all driving privileges over a period of 1 – 2 years reduces the involvement of young drivers in road accidents. Probably the most important ingredient is the "curfew" legislation which means that during the first two years, the licence is not valid at night time. Since night time is also the prime time for drunk driving, this limitation of the driving privileges is specifically

effective in the area of alcohol and driving (Preusser et al., 1984)

#### **Raising the drinking age**

Evidence from the USA (Voas et al., 1999) shows us that the raising of the legal drinking age, which has taken place over the years in the USA and Canada, has yielded very favourable results. All of the North American states and provinces have raised the legal drinking age to 21 years of age. On the basis of an extensive literature review, Törnros (1994) notes that increasing the legal drinking age to 21 has clear effects.

A drinking age of 21 means that in most states, driving age is separated from drinking age by five years, also meaning that the young drivers are not inexperienced in both driving and drinking at the same time. This unfavourable combination is, however, being considered in many European countries, where often the driving age and the drinking age coincide. Although proven to be an effective harm reducing measure, it is a politically difficult one since it is probably rather unpopular among their young voters.

#### **Vehicle sanctions**

There is a great tendency for drunken drivers to reoffend. They often ignore driving licence suspension and continue driving confident that the risk of detection is very low. One way of controlling this problem is to impound or forfeit the vehicle or confiscate the licence plates or to mark the licence plates in a conspicuous manner. Sweedler and Stewart (2000) claim high efficiency for all forms of vehicle sanctions even after the expiry of the measure.

The experience stems mainly from North American legislation. Vehicle impoundment or forfeiture is an option in a number of legislations but seems to be used very sparsely in Europe, whereas it is applied widely



in the US, where it has been found to reduce recidivism of multiple offenders by up to one third.

#### Finally

If we are successful in applying our tools and reduce the problem of alcohol on our roads, we are also giving public health a helping hand. Measures taken in the road traffic system will also create benefits for the whole public health sector.

The world's leading researchers in the field of alcohol and public health list the ten options which stand out as "best practices" to avoid the harmful societal consequences of alcohol consumption, (Babor et al. 2003): minimum legal alcohol purchasing age; government monopoly of retail sales, restrictions on hours or days of sale; outlet density restrictions; alcohol taxes; sobriety checkpoints; lowered BAC limits; administrative licence suspension or revocation; graduated licensing for novice drivers; brief interventions for hazardous drinkers. It is worth noting that five of the ten "best practices" are directly related to road traffic.

I am afraid that before we will be able to make any significant progress in reducing the terrible toll that alcohol takes on our roads, it is necessary for us to be able to demonstrate to our politicians and to our decision makers how serious the problem is.

Most of them do not like the idea of being compared with other countries and to be found to score among the worst on a ranking list. It is a very powerful tool for convincing them that they need to change legislation and to provide resources for the battle against drunk driving. Therefore we must create an accident reporting system which reveals the true role of alcohol and of other drugs on our European roads.

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# The 'Loi Evin': a French exception

**Dr Alain Rigaud**

**Dr Michel Craplet**

The alcohol policy law, the Loi Evin, was passed in France in 1991 in order to control the advertising of alcohol and tobacco. Whilst direct advertising of tobacco had already been forbidden in France since 1974 (the Loi Veil), the tobacco articles of the Loi Evin address smoking in public places. Also as regards tobacco, control policy was further strengthened in 2003 through a sharp increase in taxation.

The articles on alcohol, on the other hand, were a new departure which initiated a real change. This law is relatively severe in a country where the "passion" for alcohol is intense and where alcohol control has often been lax. How can we explain this real French paradox?

## **A European-oriented French law**

The severity of the law can be understood better in a European context. Formerly, French law on advertising discriminated against foreign products which led the Scotch whisky producers to take the French Government to the European Court of Justice: France was condemned and was asked to change the law in 1980. A first law was passed in 1985 but the government did not produce a satisfactory text until 1991.

During this ten year period, producers and advertisers flagrantly used this legal loophole to full advantage. This situation led the French Parliament to pass the Loi Evin. This series of events explains why - unlike most European countries - the advertising of

alcohol in France does not depend on self-regulation or voluntary codes of practice depending on the good will of the producers; it is controlled by law and illegal advertisements can be brought before the courts. There are significant penalties for infringement.

## **Description of the law**

The articles relating to alcohol in the Loi Evin may be summarised as follows:

A clear definition of alcoholic drinks is given:

- all drinks over 1.2 per cent alcohol by volume are considered as alcoholic beverages.

Places and media where advertising is authorised are defined:

- no advertising should be targeted at young people;
- no advertising is allowed on television or in cinemas;
- no sponsorship of cultural or sport events is permitted;

- advertising is permitted only in the press for adults, on billboards<sup>2</sup>, on radio channels (under precise conditions), at special events or places such as wine fairs, wine museums.

When advertising is permitted, its content is controlled:

- messages and images should refer only to the qualities of the products such as degree, origin, composition, means of production, patterns of consumption ;
- a health message must be included on each advertisement to the effect that "l'abus d'alcool est dangereux pour la santé" : alcohol abuse is dangerous for health.

## **Effects of the law on advertising**

Since 1991, many advertisements infringing the law have been condemned by the French courts. Since 1991, more than twenty advertisements were brought to the courts by the French NGO ANPAA (Association Nationale de Prévention en Alcoologie et Addictologie) and eighteen of the adjudications were in our favour. This success story alarmed the alcohol producers, the advertisers, and media people.

As a consequence, since 1991, a real change in alcohol advertising is observable: the law has modified the language of advertising which has lost most of its seductive character. For example, it is no longer permissible to use images of drinkers or depict a drinking atmosphere. As a result the drinker has disappeared from the images which now highlight the product itself<sup>3</sup>.

The Loi Evin had an important disruptive side effect in Europe concerning sport. Television retransmission of several international football matches was cancelled.

Moreover, the law made it impossible for the American brewer Anheuser Busch to sponsor the 1998 Football World Cup in France, in spite of heavy lobbying of the French government. It is important to note that a new sponsor was found in the Casio company. This example shows that sport does not die without alcohol sponsorship.

### **Limits of the law**

It is regrettable that since 1991 some articles of the law have been changed: advertising is again permitted on billboards everywhere (and not only on places of production) and even in sports grounds, but the ban on television transmission restrains this advertising for major events.

It is true that some advertisements illustrating the patterns of consumption are still using a seductive atmosphere and still link alcohol with "beautiful people". Nevertheless the promoters of these advertisements are running quite high legal risks if the court interprets the law severely.

Of course, many marketing tools can still be used: mailing for middle-aged traditional drinkers or the Internet for the young looking for anything new and exciting. Even if official sponsorship is forbidden, alcoholic drinks are central to many social events such as harvesting, fairs, and, obviously enough, the launch of Beaujolais Nouveau and so on.

### **Assessment of the law**

The effect of the Loi Evin on alcohol problems has not yet been assessed, and it is probably impossible to do so.

### **The quantitative effect**

It is always difficult to assess the role of individual factors in the availability of alcohol, such as price, standard of living, number of sales outlets and advertising, especially as the role of these factors varies over time.

- We know from some scientific studies<sup>4</sup> that the effect of advertising on consumption is weak. This is the reason why alcohol producers and advertisers can argue that advertising has no influence on overall consumption, that most advertisements are brand advertising and are therefore, by definition, competitive.

- However, the impact of total bans is what has mostly been studied, and there are few examples of partial bans having been considered. In addition, their impact has not been assessed according to age group and socio-economic classes.

The French situation makes this assessment even more difficult: the effect of the Loi Evin has been swamped by the general trend towards reduced alcohol consumption in France. This is a powerful and long running diminution of the average consumption of 1 per cent per year making it decline dramatically from 30 to 13 litres of pure alcohol per capita per year between 1960 and 2004.

### **The symbolic effect**

These quantitative considerations have little importance compared to the qualitative and symbolic effect. Advertising is used to strengthen preconceived ideas about alcohol consumption. These ideas have not been forced on potential consumers, they are instead enshrined in our cultural background and advertisers only use pre-existing, conscious and unconscious images.

Whereas the effect on health or masculinity is theoretically no longer used in the Western world - having been proscribed by most codes of practice - alcohol consumption is still very often associated by advertisers with personal, sexual, and social success. The restrictiveness of the Evin Law was the only way to change this basic, insinuating, seductive language.

### **The global effect**

The effectiveness of advertising on sales and consumption being weak - and perhaps not measurable - the regulation of advertising can only form part of an overall strategy of prevention, the effects of which on



younger generations will not be felt for several decades.

The law has been efficient in correcting excesses in the form and the content of advertising messages and it is essential for the implementation of an overall and coherent preventative effort. Moreover, public health programmes should today address the topic of all psychoactive products in a global perspective. This is why we recently developed in France the concept of “addictologie”.

### A law which could be applied in Europe

It is imperative that a European legislative framework covering the advertising of alcohol be enacted. This need has been recognised by many organisations for a long time. They have observed the way products and images of alcohol are transmitted across borders. The internationalisation of life styles, particularly those of the younger generation, have been deployed by the multinational drinks industry in the development of their marketing strategies.

This is why ANPAA and Eurocare are working together for a European control of advertising. We are not suggesting that the Loi Evin should be transposed directly into the wider European context, but we believe that this French experience should be taken into consideration.

Confronted by various national circumstances and the opening up of the European Union to new Member States, it is more appropriate to propose basic measures acceptable to all, the aim of which is to protect the younger generation.

This is not to make young people scapegoats where many adults allow themselves to consume alcohol as they please, whilst at the same time denouncing the spread of alcohol

amongst the younger generation. In fact, these measures will be of help to the younger generations in their adult life. In order to limit the influence of advertising on the young, it is important to:

- Control forms of communications (advertising, public relations, sponsorship, patronage) using sporting and cultural international events.
- Forbid all advertisements for alcohol on television.

As far as national events and media limited to one country are concerned, we suggest giving Member States the freedom to regulate local advertising (billposting, radio, cinema, direct mail). In these fields, cultural characteristics play an important role, and prevention must take into account such cultural aspects in order to be acceptable and effective. There remains, of course, many problems posed by new IT-based communications where the assertion of liberalism (some would call “laissez-fairism”) would not favour such restrictions.

### A law that cannot be ignored

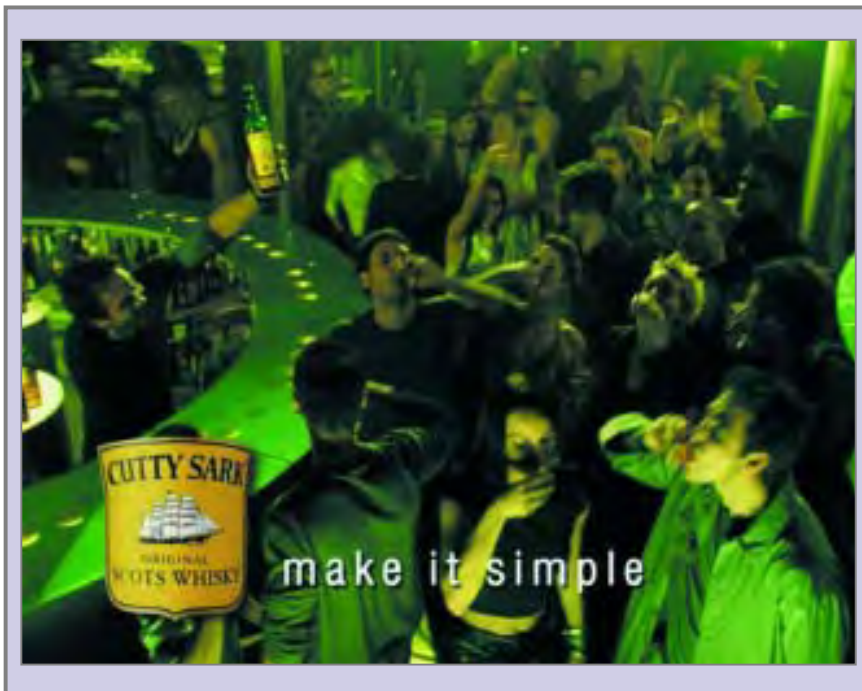
The Loi Evin has been constantly challenged but these attacks have not been successful. Many observers

noticed the strength of the law: “The complaints lodged with Brussels by several alcohol producers against the Evin Law have not been taken up, up to now. The European Commission has, in fact, concluded that the ban on the sponsorship of sporting events by alcoholic beverage producers should not be judged incompatible with Community law... the European Commission has considered in this instance that the protection of consumers’ health should prevail over the freedom of the provision of services”.

In France, these attacks culminated in 2004 with several proposals for new legislation to withdraw wine from the law. This came after the adjudications of advertisements for Burgundy and Bordeaux wines, the “stars” of French agriculture and culture. In an unstable political situation, these proposals are a cause for concern. On the other hand, it is possible to be cheered by some good from the EU.

On the 11th March 2004, the Advocate General of the European Union published his opinion<sup>7</sup> in the two cases against the Loi Evin before the European Court of Justice. He asserted that French legislation achieves the objective of protection of public health.





According to the Advocate General, it is reasonable to consider that the French measures limiting the advertising of alcoholic beverages may also reduce instances in which television viewers consume alcoholic beverages in response to the blandishments of advertising.

It is also stated that the mere fact that another Member State imposes less strict rules concerning advertising of alcoholic beverages does not mean that the French rules are disproportionate.

The Advocate General proposed that the Court should rule that neither the directive nor the principle of freedom to provide services enshrined in the Treaty preclude the prohibition laid down by French law regarding televised advertising of alcoholic beverages. It is greatly to be desired that the Court's decision will leave the Loi Evin intact because :

- the text seems easy to apply and causes no problems in French courts. When advertising campaigns were submitted to judges for review, no judgement mentioned the impossibility of using it, or its lack of clarity, in contrast to previous laws;

- the text seems fairly difficult to distort, it limits the boundaries and describes the acceptable content of message and images;
- the text allows for information on the products to be given, as is asked by the producers.

#### Alcohol control policy is encouraging freedom

Despite their reputation, public health experts do not wish to regulate peoples' lives nor do they wish to treat them solely as consumers, unlike alcohol producers whose aim is to impose consumption levels and who are paradoxically the new "norms givers".

On the contrary, the philosophy of the associations promoting prevention is to give citizens back their freedom of choice regarding products, consumption patterns, and rituals and to prevent these patterns and rituals becoming bounds which limit freedom. In addition to technical arguments, some non-governmental organisations such as the French Association Nationale de Prevention en Alcoologie et Addictologie and the European association Eurocare,

have adopted political and ethical positions, arguing that the EU can no longer content itself with economic objectives, but that it must become a social community where the collective interest has priority over particular economic interests. This collective interest is based on the fact that alcohol is not a product like any other: as a harmful product causing addiction, its use must be controlled by the public authorities.

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**Dr Michel Craplet is Medical advisor of ANPAA, chairman of Eurocare**

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- 1 As described in the book *Passion alcool*, Paris, Odile Jacob, 2000
- 2 The text limited billboard advertising to the places of production and selling. Later, another law permitted billboard advertising everywhere.
- 3 This satisfies the demand of the producers claiming that advertising is nothing but information. We can point that the frame given by the law can even stimulate the creativity of admen by forcing them to forget traditional images and the easy use of seductive language. Some recent advertising campaigns are indeed very well done. We can also suppose that highlighting on the product may have a perverse effect, not on the naïve, young, potential drinker but on former alcohol abusers or recovering alcoholics seeing again in these beautiful images the myths about drinks that they have to forget
- 4 Saffer H., *Journal of health Economics*, 1991 ; 10 ; p.65-79
- 5 As explained in the text written by A Morel, J-D Favre et A. Rigaud, "Rapprocher l'alcoologie et l'intervention en toxicomanie", *Alcoologie et Addictologie*, 2001; 23 (3): 393-403
- 6 *CB News*, 24 - 30 March 1997, n° 473
- 7 Press release is in <http://curia.eu.int/en/actu.communique.index.htm>

# Alcohol and health: A drink a day won't keep the doctor away

Charles S Lieber

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We should not advise patients to start drinking alcohol for its alleged cardiovascular benefits. The negative effects of alcohol are well established, and the evidence of alcohol's benefits comes mainly from epidemiologic studies that were not well controlled for other influences, such as lifestyle factors. Moreover, we have other means of lowering cardiovascular risk that are safe and proven. Those who are healthy and whose drinking history shows little risk of developing alcohol dependency may continue to drink moderate amounts. Heavy drinkers should be advised to quit.

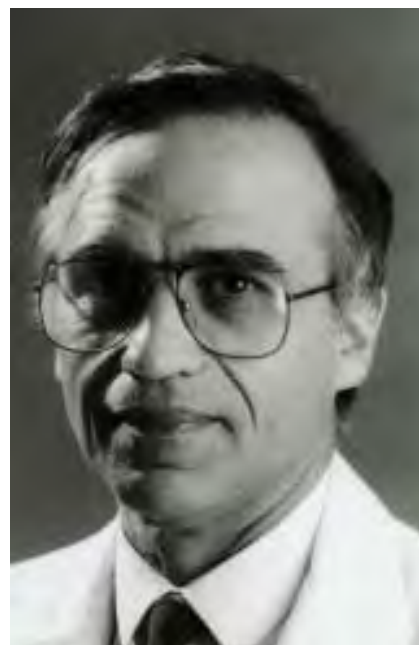
## KEY POINTS

Some reports of coronary and mortality benefits of alcohol were based on the use of negligible amounts of alcoholic beverages, indicating that factors other than alcohol might have been involved. The most likely explanation is lifestyle factors associated with moderate drinking.

National guidelines recommend caution when applying the results of epidemiologic evidence of benefit from alcohol consumption to individual patients. Alcohol consumption was shown to increase levels of high-density lipoprotein (HDL) cholesterol, but the HDL subtype that increased may not be one that is optimal for coronary protection.

Claims that wine is healthier than other alcoholic beverages have not been consistently corroborated.

There is no evidence that moderate drinking is detrimental in people who have shown that they are not prone to develop craving and slip into dependence.



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A drink a day does not keep the doctor away. This is what we should be telling patients who ask if they should start having a drink every day because they heard it lowers the risk of heart attack or stroke.

So far the claims of health benefits from moderate drinking come from epidemiologic studies, some of which involved the use of so little alcohol that other factors (such as high income and healthy lifestyles) must have been responsible for the

# Alcohol and health: A drink a day won't keep the doctor away

alleged health benefit. And the results of the studies have not been consistently corroborated.

In short, an evidence-based approach to health care does not support advising patients to start drinking for therapeutic purposes, especially when we already have effective, evidence-based ways to lower cardiovascular risk. Even if moderate drinking turns out to be beneficial in some people, the risk of developing alcohol abuse outweighs any potential cardiovascular benefits.

In this article, I examine the evidence to date for health benefits of moderate alcohol consumption and make recommendations based on this evidence.

## Explaining the apparent benefits of alcohol

Explanations for the apparent

health benefits of moderate alcohol consumption have included elevation of high-density lipoprotein (HDL) cholesterol, the presence of congeners that might have antioxidant or antiplatelet properties, interactions with genetic factors, and age.

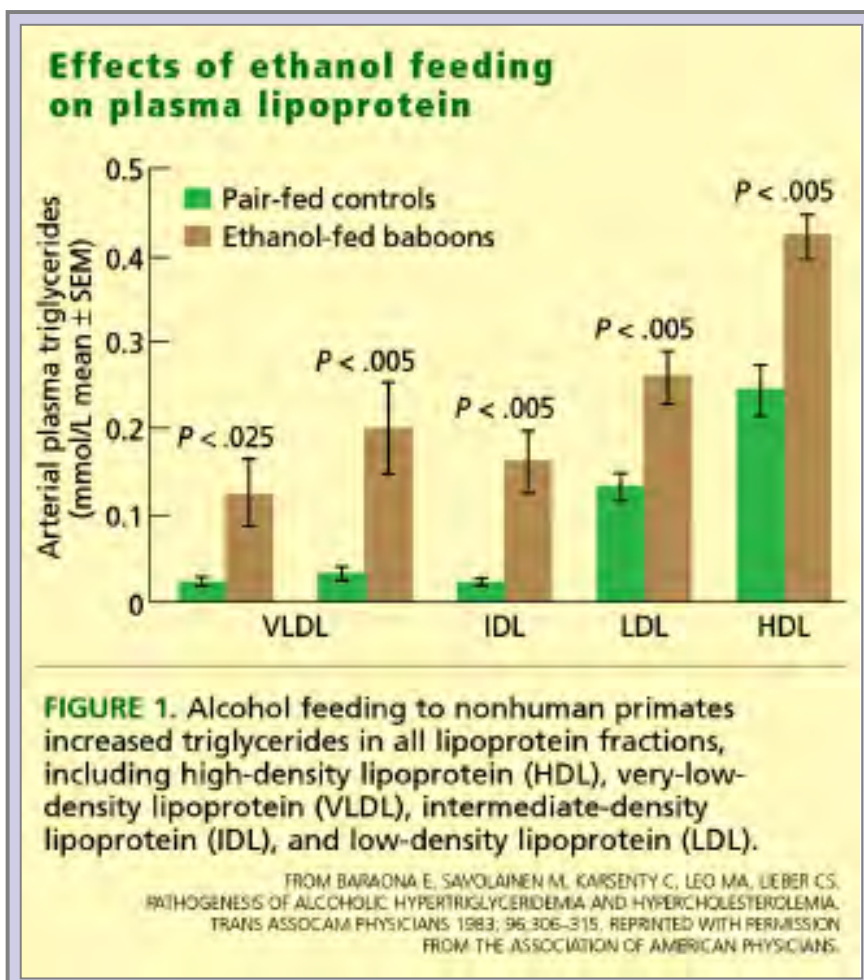
### High-density lipoprotein

Three decades ago, my group reported that rats that were fed alcohol developed hyperlipemia involving all lipoprotein classes.<sup>1,2</sup> In subsequent studies, we found that this also occurs in nonhuman primates,<sup>3</sup> with an effect predominant in HDL cholesterol (Figure 1). The rise in HDL levels was also confirmed in human studies,<sup>4</sup> and a number of studies indicated that HDL plays an important role in the transport of cholesterol and in preventing its adverse effects.<sup>5</sup>

When Klatsky et al<sup>6</sup> published the first large-scale epidemiologic study showing an inverse association between alcohol and coronary heart disease, the rise in HDL levels was invoked as a possible mechanism for the alcohol effect. Klatsky's study was followed by others that raised the hypothesis of a beneficial effect due to nonalcoholic components of the beverages rather than to alcohol itself. In that regard, the possible additional benefits of wine (especially red wine) received considerable attention. However, close scrutiny revealed weaknesses, and the challenge remains greater than ever to define in any given individual whether moderate drinking is beneficial or not in terms of cardiovascular and other diseases.

Not all HDLs are the same. When the role of HDL in cholesterol transport and its protective effect against atherosclerosis became apparent, it made sense to postulate that the apparent lower incidence of coronary heart disease in moderate drinkers might be due to the ethanol-induced elevation of HDL. However, although clinical laboratories generally report HDL as the combination of all fractions, HDL is in fact a heterogeneous group of lipoproteins with two major subclasses: the less dense HDL 2, epidemiologically associated with a lower incidence of coronary heart disease, and the more dense HDL 3, not clearly related to that disease one way or the other. Indeed, agents or conditions that are thought to affect coronary heart disease through HDL (such as exercise and female sex) have been shown to be associated with HDL 2, not HDL 3.

In one report, the increase in HDL after alcohol consumption apparently involved both HDL 2 and HDL 3, with a major change in HDL 2.<sup>7</sup> By contrast, Gaziano et al<sup>8</sup> reported that the inverse association of moderate alcohol intake with the



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risk of myocardial infarction is mediated in large part by increases in both HDL 2 and HDL 3 .

Conflicting reports. However, these various observations were made in alcoholics with a relatively high intake of alcohol. It is now well recognised that large amounts of alcohol have adverse effects not only on the liver,<sup>9,10</sup> but also on virtually all tissues of the body, including the cardiovascular system,<sup>11</sup> and it is generally agreed that such high intakes are not associated with protection against coronary heart disease.<sup>12</sup> Furthermore, Haskell et al<sup>13</sup> reported that moderate doses of alcohol raised levels of HDL 3 but not HDL 2 , and that upon abstinence from moderate consumption, levels of HDL 3 decreased, but not levels of HDL 2 . In addition, according to a study of Hartung et al,<sup>14</sup> consumption of alcohol in moderation seems to be associated with increased HDL cholesterol levels in inactive men but not in men who run or jog regularly. Thus, in view of these conflicting studies, we must now reconsider some of the previously derived implications.

## Congeners

Various effects of some congeners (components other than alcohol in alcoholic beverages), such as antioxidants or inhibitors of platelet aggregation, have been invoked to explain the apparent decrease in coronary complications with moderate drinking, and with the drinking of wine vs any other alcoholic beverage. These substances include polyphenols. However, according to Corder et al,<sup>15</sup> they are unlikely to account for the beneficial effects. Furthermore, extensive epidemiologic data indicate no substantial difference depending on the type of alcoholic beverages.<sup>16-18</sup>

One group of researchers described an ethanol-induced increase of

surface-localised fibrinolytic activity in cultured human endothelial cells,<sup>19</sup> but it is noteworthy that experimental studies showed that neither ethanol nor red wine polyphenols either reduced mature atherosclerosis or changed the collagen content of plaques in apolipoprotein E-deficient mice.<sup>20</sup>

## Genetic factors

It was reported that, compared with homozygosity for the allele related to a fast rate of ethanol oxidation (gamma-1), homozygosity for the allele associated with a slow rate of oxidation (gamma-2) is accompanied by a lower risk of myocardial infarction.

Furthermore, moderate drinkers who are homozygous for the slow-oxidizing allele were observed to have higher HDL levels and a substantially decreased risk of myocardial infarction.<sup>21</sup> More recently, however, it was found that the alcohol dehydrogenase genotype does not modify the effects of alcohol on HDL.<sup>22</sup> Further studies are needed to determine how genetic information can be applied to the management of patients who drink.

## Age

Recent studies reported that light to moderate alcohol consumption is

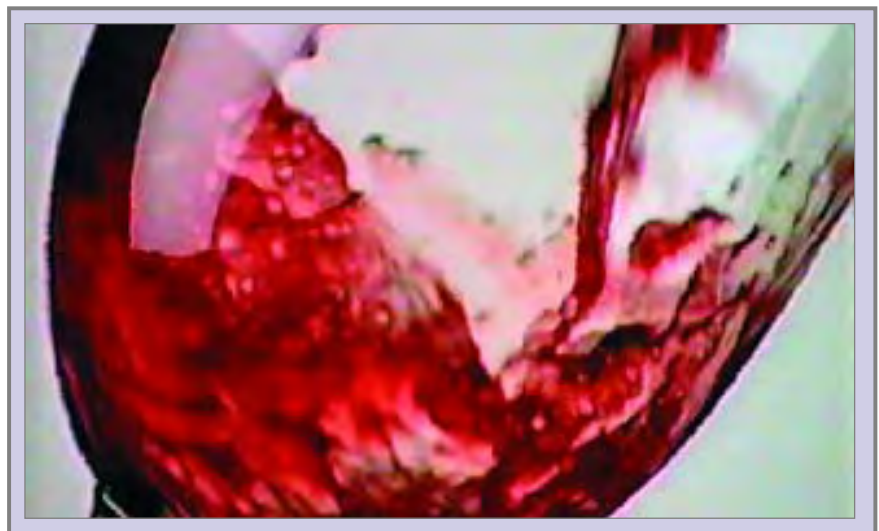
associated with a lower risk of dementia in people age 55 and older. The effect seemed to be independent of the source of alcohol.<sup>23</sup> Furthermore, Mukamal et al<sup>24</sup> showed consumption of one to six drinks weekly to be associated with a lower risk of dementia among older adults. However, the amount of alcohol involved was so low as to raise doubts that it could explain such benefits.

## Is wine 'healthier' than other alcoholic beverages?

Many physicians and patients have heard reports of the "French paradox" or the "Mediterranean diet," in which red wine is supposed to offer significant health benefits. But the data to date do not show that wine is any healthier than any other type of alcoholic beverage.

In some studies, the amount of wine used (as little as one glass a month) was so small that we should doubt whether it could really have been responsible for the beneficial effects observed. The improved outcome could have been due to another factor, such as lifestyle.

For example, the Copenhagen heart study<sup>25</sup> found that wine drinkers had a lower relative risk for coronary artery disease, but also that they consumed twice as much fruit and vegetables.



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Furthermore, Mortensen et al<sup>26</sup> showed that wine drinking is a general indicator of optimal social, cognitive, and personality development. Consequently, the association between drinking habits and social and psychological characteristics may explain, in large part, the apparent health benefits of wine. This is also the interpretation of some other investigators, including those of the National Institute of Alcohol Abuse and Alcoholism.<sup>27</sup>

## What is 'moderate'?

What constitutes "moderate" drinking is debatable. According to the Dietary Guidelines for Americans<sup>28</sup> published every 5 years by the US Department of Agriculture and the US Department of Health and Human Services, moderate means a daily intake of one drink for women and two drinks for men. A drink was defined as one 5-ounce glass of wine, one 12-ounce can of beer, or 1.5 ounces of 80-proof distilled beverage, each of which contains about 14 g of alcohol.

The sex difference is justified by a corresponding difference in susceptibility to the adverse effects of alcohol.<sup>29</sup> For instance, 40 g per

## 'Moderate' means no more than two drinks a day for men, one for women

day is an amount above which alcohol consumption becomes associated with a detectable increase in the incidence of cirrhosis of the liver in men, whereas in women the corresponding amount is only 20 g (or 1.5 drinks) per day.<sup>30</sup>

In a study of Japanese men,<sup>31</sup> consumption above a similarly low level was found to be associated with an increased risk of rectal cancer in beer drinkers and of lung cancer in whiskey drinkers.

## How many drinks to reach the toxicity threshold?

The "threshold" for toxicity may depend on various factors – not only sex, but also congeners, drinking patterns, and genetic predisposition. Consequently, considerable variation exists in individual responses. At present, one's past capacity to keep consumption within socially and medically acceptable bounds is probably the most useful guide in deciding for that patient whether moderate drinking is appropriate or not. In patients for whom such

evidence is lacking, we should not recommend even moderate drinking.

## Drinking for health: the case against

There are a variety of reasons not to advocate moderate drinking for the purpose of reducing cardiovascular risk.

## Not all studies are positive

Contrary to some of the positive studies, a 21-year follow-up of 5,766 Scottish men ages 35 to 64<sup>32</sup> found no cardiovascular or other evidence that alcohol consumption reduced mortality for light and moderate drinkers. Furthermore, higher levels of intake (three drinks per day) were associated with increased mortality in men with previous myocardial infarction.<sup>33</sup> Another study of alcohol use in middle-aged people came to similar conclusions.<sup>34</sup>

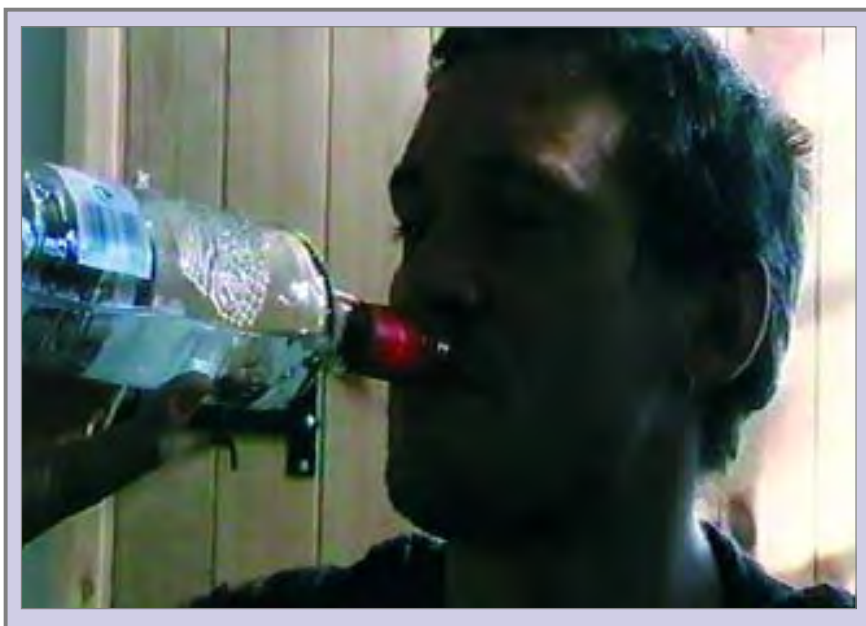
A meta-analysis of many of the alcohol-cardiovascular studies concluded that "the degree of protection from moderate doses of alcohol should be reconsidered, and further research investigating the effect of drinking patterns on the risk of coronary heart disease should be performed."<sup>35</sup>

## Publication bias

In view of the objections raised above, one may wonder why the number of papers reporting positive effects of moderate drinking exceeds the negative ones. It is probable that publication bias led to overestimation of the reported effects.<sup>35</sup>

## Confounding factors in abstainers, the 'control group'

In most studies, the effects of





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moderate alcohol consumption are compared with the events in total abstainers. However, in our society, people who totally abstain from alcohol often either are former heavy drinkers or do so because they have a disease in which drinking is discouraged, such as diabetes mellitus, and this fact might affect the significance of any such comparisons. Some studies have tried to take these factors into account, but the necessary adjustments are not easy to make.

## **Epidemiologic data not applicable to an individual's risk of alcohol dependency**

Although Mukamal et al<sup>36</sup> observed that, in men, the consumption of alcohol at least 3 to 4 days per week was inversely associated with the risk of myocardial infarction, the authors also pointed out that national guidelines recommend caution when applying the results of epidemiologic studies of alcohol consumption to individual patients, since optimal care requires taking into account the many health effects of alcohol and the individual's susceptibility.

## **Underage drinking and traffic accidents**

At present, alcohol is the leading drug abused by US teens. Underage drinking accounts for 19.7 per cent of US alcohol consumption. Seventy-eight per cent of high school students have tried alcohol. Thirty per cent admit to binge drinking at least once a month. The average age of the first drink is 14.<sup>37</sup> Encouraging moderate drinking in adults may unintentionally encourage drinking in those who are under the legal drinking age, which could increase the well-known associated risk of motor vehicle accidents.

## **Risk of dependence outweighs any alleged health benefit**

There are no people in whom

moderate drinking is clearly desirable as therapy. Even if moderate alcohol consumption turns out to be beneficial in some people, the risk of developing alcohol dependence would outweigh any potentially benefit in reducing heart disease.

## **Adverse cardiovascular effects of moderate drinking**

Other reasons not to recommend moderate alcohol consumption relate to possible negative health effects. Although the cardiovascular benefits of moderate drinking are often cited, other studies have found negative effects of moderate drinking.

## **Stroke**

It has been reported that light to moderate alcohol consumption reduces the overall risk of stroke, and specifically the risk of ischemic stroke.<sup>38</sup> However, since the benefit was apparent with as little as one drink per week,<sup>39</sup> it is highly unlikely that the effect was due to alcohol per se.

By contrast, a prospective study of the health effects of alcohol consumption in middle-aged and elderly men<sup>40</sup> found that light and

moderate drinkers were actually at increased risk for fatal and non-fatal stroke.

## **Blood pressure**

Drinking can raise blood pressure. Increased blood pressure has been observed with three drinks a day.<sup>41</sup> In a Kaiser-Permanente study,<sup>42</sup> women who drank two or fewer drinks per day had lower blood pressure than non-drinkers, whereas men and women who took three or more drinks per day had higher systolic pressures. In 1986, the same investigators reconfirmed the relationship of higher blood pressure to alcohol use in both men and women.<sup>18</sup> The vasopressor effect of ethanol may explain the association between long-term consumption of alcohol and hypertension. Furthermore, alcoholics have elevated levels of plasma homocysteine,<sup>43</sup> which has been linked to premature vascular disease.

## **Other cardiovascular effects**

Orlando et al<sup>44</sup> reported that drinking either 2 or 5 ounces of ethanol aggravates exercise-induced angina pectoris and increases associated ischemic ST-segment depression.



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## Advocation of moderate drinking may lead to heavy drinking

### To drink (moderately) or not to drink: my recommendations

In view of the lack of definitive evidence for beneficial effects of moderate drinking, Goldberg<sup>45</sup> proposed to settle this issue by assigning patients with cardiovascular disease to an alcohol treatment study. However, such a study would be ill advised, because of the risk that a former abstainer might develop alcohol dependence. The consequences for the individual and for society could be catastrophic.

Nearly 20 years ago, in a New England Journal of Medicine editorial,<sup>46</sup> I stated that whether a patient should start drinking must take special circumstances into account, and that still holds true today. When intact judgment and motor coordination are essential, as in driving, temporary cessation of alcohol intake is of course indicated. Abstinence is also advisable under other special circumstances, such as pregnancy, since even moderate amounts of alcohol may adversely affect the fetus.

Advising abstainers to take up moderate drinking to protect their coronary arteries puts them at risk for alcohol dependency and its associated social and medical problems. However, there is no compelling reason to advise abstinence to our patients who are already drinking at a moderate level and have demonstrated the capacity to keep their drinking at an acceptable level.

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## Alcohol advertising in New Zealand:

### Time for second thoughts on self-regulation?

Linda Hill

In September 2003 New Zealand's Advertising Standards Authority (ASA), an industry body representing advertisers and broadcasters, extended alcohol advertising on television by half an hour. The start time changed from 9 pm to 8.30. This was opposed by the Alcohol Advisory Council (ALAC), who wanted the time pulled back to 10.30, and by the Ministry of Health who recommended the discontinuation of all alcohol advertising on radio and television.

'Minimising the exposure of young people to alcohol marketing messages' is one of the Objectives of the National Alcohol Strategy adopted by this government in 2001. Between 8.30 and 9 pm, 26 per cent of 12-17 year olds are watching television. This drops to around 10 per cent by 11 pm. Few alcohol ads are scheduled after 11 pm, so bringing the start time forward extending exposure time by 20 per cent.

Why wasn't this stopped? Because in 1993, the year after the 9 pm

restriction was set, responsibility for standards in advertisements (rather than programming) was passed to industry self-regulation under voluntary codes. In 2003 the ASA asserted its right to self-regulation by declining to meet concerned Ministers prior to release of its revised Code on Liquor Advertising with the new start time.

The government has no current powers to intervene on this issue – although it has the power to create some. At the time, there was other

legislation before Parliament prohibiting smoking in bars and restaurants, to industry cries of 'nanny state'.

#### Liberalisation of broadcasting and alcohol advertising

New Zealand has had laws about the sale of alcohol since 1842 but the marketing of alcohol is a modern phenomenon that has received less policy attention. For historical reasons related to donations to political parties, alcohol legislation is decided by the individual 'conscience' votes of MPs. This means the health policies of political parties do not include alcohol issues.

As in many European countries, the liberalisation of alcohol advertising paralleled the commercialisation of broadcasting in the 1980s and 1990s. Radio and television were developed by a state department whose in-house rules did not permit alcohol advertising. In the 1970s

# Alcohol advertising in New Zealand

private radio stations were licenced, in 1987 the first private television channel went to air and from 1989 state broadcasting was required to compete on a commercial basis. In 1981 advertising for bottle stores was permitted on radio and television and from 1987 alcohol companies could broadcast corporate and sport sponsorship ads. Young teenagers thought these simply promoted alcohol. Public concern led to a review of alcohol advertising by a newly created Broadcasting Standards Authority (BSA) in 1990-1991.

The outcome was a decision that alcohol brand advertising should be permitted with restricted hours of viewing. Part of the deal was that broadcasters would donate free time for alcohol health promotion advertising. This began in February 1992. In 1997, alcohol ad exposure outweighed health promotion exposure by ten to one. In a sample of weekend television in February 2002, one health promotion ad was shown for every five alcohol ads.

Organisations for the broadcasting, print media and advertising industries now support the alcohol industry on alcohol advertising issues. The alcohol market in New Zealand is dominated by a few main players who are major clients for these industries. Being a large client has advantages. For example, in 2002 the alcohol advertising sold by the two state-owned television channels cost 54 per cent less than equivalent time charged at standard rates.

## Loss of policy control

The BSA that facilitated the deal on alcohol brand advertising is an independent statutory body under the Broadcasting Act, 1989. It has jurisdiction over both public and private sectors and its functions include encouraging broadcasters to develop codes of broadcasting standards that include, among other

things, 'the protection of children' and 'the restriction of liquor promotion'. The Minister of Broadcasting can refer matters to the BSA for its consideration.

Until 1999 the Broadcasting Act gave the Cabinet and Governor-General a standard power to pass regulations, but this disappeared when regulations on household broadcasting fees were abolished.

When the BSA was considering the 9 pm decision, it wrote to the Minister of Broadcasting to check that this was 'consistent with government policy'. The Minister told the media that the matter had been discussed with Cabinet and Caucus colleagues.

At that time, the government was amending the Broadcasting Act to clarify complaints processes. Complaints about programmes would go to the BSA. Complaints about advertisements would go to the Advertising Standards Authority (ASA) that already had a code and a complaints procedure for print advertisements. The effect of this amendment was that all matters related to alcohol advertising on radio and television passed out of any direct or indirect control by government.

## Self-regulation and self-review

The BSA developed the first Code of Liquor Advertising in 1992 but in 1995 the ASA was responsible for a major review of its own new arrangements. The review recommended a committee to pre-vet ads. Unsurprisingly, it recommended continuation of broadcast advertising, despite opposition from the Ministry of Health, ALAC and public health organisations.

The ASA's terms of reference limited reviews in 1998 and 2003 to the code itself and to 'new evidence' only. The code is mainly about ad content but states the time at which

ads are permitted on television. As well as changing the start time, the 2003 review committee decided that one ad with multiple segments within a commercial break would not infringe the 'saturation' rule under the BSA's Code on Liquor Programming.

Non-industry members have been included on review committees, often with marketing rather than public health expertise. In 2003 the review team included a Director of Public Health, however. He did not agree to the time change, but the review report was released without his dissenting opinion.

The time restriction does not apply to all alcohol promotion on television. Alcohol brand logos can appear at the beginning and end of sponsored sports coverage and other programmes at any time of day. In the February 2002 sample of weekend television, 37 alcohol sponsorship logos appeared within a three-hour period of afternoon sports coverage. An afternoon infomercial for a brew kit was recently ruled by the ASA complaints committee to be an advertisement, but not an alcohol advertisement. Beer was depicted and discussed, the kit was made by the largest alcohol producer, the presenter was the manager of the brewery that developed the recipe and viewers were told where that brewery was located. This decision is about to be reviewed by the appeals committee of the ASA.

## Reclaiming policy control

Reviews of the Code of Liquor Advertising have been used to deflect efforts to have alcohol advertising policy addressed at the political level. A Private Member's Bill was taken off the parliamentary timetable on the grounds that the 1995 review would occur. Alcohol advertising was included in the

# Alcohol advertising in New Zealand

terms of reference of the 1996 review of liquor licensing legislation, but not considered by the industry-friendly review committee on the grounds that the code would be reviewed in 1998. A further Private Member's Bill is in currently in the ballot box.

On 9 June, the Group on Alcohol Advertising, supported by the NZ Drug Foundation, presented a petition to Parliament. The presenters wore sandwich boards parodying Tui beer slogans. The petition calls for a Health Committee inquiry into alcohol advertising. The Ministry of Health proposed this in 2001 as an option in a paper to the Ministerial Committee on Drugs, but no action was taken. Following the 2003 ASA review, there appears to be some ministerial support for this approach. The Health Committee inquiry can be a focus for public

and political debate that may lead on to policy action.

## Second thoughts on the drinking age

Alcohol advertising is not the only issue being raised in New Zealand. Since 1989 New Zealand has liberalised liquor licensing, extended hours and days of trading and allowed wine and beer sales from supermarkets, as well as allowing alcohol advertising on radio and television. In December 1999, the age of alcohol purchase was lowered from 20 to 18. A national survey a year later showed 18-19 year olds are now the heaviest drinkers. The most marked increases in drinking were among 14-17 year olds. In 2000-2002 drink driving prosecutions increased among both these age groups. Police in many districts report increases in teenagers drinking in public, too intoxicated to look after themselves.

In May 2004 the Chair of the Ministerial Committee on Drugs called for the drinking age to be reconsidered. An opposition Private Member's Bill is on this is in the ballot box, alongside the one on alcohol advertising from the third largest party. A recent public opinion poll gave 75 per cent support to putting the age of purchase back up to 20. This is 5 per cent higher than support for 20 before Parliament lowered the age in 1999. It appears that New Zealanders are willing to learn from Parliament's mistakes.

*See [www.tui.co.nz](http://www.tui.co.nz) for a marketing campaign that targets students and young males with juvenile humour, branded clothing and photo competitions.*

*Barb Lash (2004) Young people and alcohol: Some statistics to 2002 on possible effects of lowering the drinking age. Final Report. Ministry of Justice. May. [www.justice.govt.nz/pubs/reports/2004/youth-alcohol/index.html](http://www.justice.govt.nz/pubs/reports/2004/youth-alcohol/index.html)*

WHO publishes a new review of alcohol policies around the world. Here, Linda Hill summarises its main conclusions.

## Global Status Report: Alcohol Policy

World Health Organization, 2004

Alcohol has been identified by the World Health Organization as the fifth largest risk factor for the global burden of injury and disease. It is the third largest risk factor in industrialised countries. In developing countries with low general mortality – mainly countries with growing prosperity – it is now the highest risk factor.

Alcohol policy is a response to alcohol-related harm in the interests of public health and social well-being. Government measures to control supply and demand, minimise harm and promote public health are important to achieve this,

says the report. Alcohol policies can be grouped as

(i) Population-based policies that can shape drinking behaviour across the whole population, e.g. taxation, availability restrictions, minimum drinking age;

- ii Policies targeted at particular problems, such as drink-driving or offences like sales to minors;
- iii Policies to help individual drinkers, such as brief interventions or rehabilitation programmes.

The report notes a trend away from policies to reduce drinking by the whole population towards focusing on harmful drinking by certain groups or in particular settings. In many countries, policy choices may be influenced by economic and commercial interests. WHO

# Global Status Report: Alcohol Policy

recognises that alcohol-related harm is not confined to small numbers of heavy drinkers or alcoholics, however. Even non-drinkers may be victims of alcohol-related aggression. The largest share of harm is associated with light and moderate drinkers, because they may occasionally drink hazardously and because their numbers are higher.

## A world survey

The Global Status Report: Alcohol Policy aims to raise international awareness about the need for alcohol policies, and provides a benchmark for the further encouragement of effective policy-making by member countries. The report builds on the Global Status Report on Alcohol, 1999, a global survey of consumption data on alcohol, and the Global Status Report: Young People & Alcohol, 2001, as part of WHO's Global Alcohol Database project.

A four-page questionnaire was sent to WHO representatives or key contact people working in the alcohol field in each country. The choice of questions – on price and taxation, restrictions on availability, drink driving and advertising – was based partly on earlier data and partly on research about the effectiveness of different policies. The survey does not capture the full variety and detail of countries' policies and it was acknowledged that relying on the knowledge and assessments of contact people may affect accuracy. The report provides a first snapshot, as at May 2002, of alcohol policies in 118 countries with around 86 per cent of the world's population. Each policy area is reviewed and comparisons made between countries and WHO regions. Tables provide individual country profiles.

## Findings

The survey is intended as a starting point for developing a minimum set of essential policies. Suggested

policies are listed in the discussion section of the report, which provide a useful framework for highlighting some of the report's findings.

## Defining alcohol in law

Defining alcoholic beverages in law provides the basis for other policies. Definitions in different countries range from 0.1 per cent to 12.0 per cent alcohol by volume, with around 1.2 per cent the most usual level. Definitions of 4.5 or more were considered high because this would not cover many traditional beverages. High definition in law might also be exploited. For example, Sweden allows advertising of products with less than 2.2 per cent alcohol, so companies advertise low alcohol beer in order to promote higher strength beer with the same brand name and packaging.

## Government control over the sale of alcohol

Retail sales for drinking off the premises were reported on, because this is the cheapest source of commercial alcohol. Only 13 countries had no government restrictions on takeaway alcohol sales. There was a government monopoly in 15 per cent of countries, which could allow higher prices and availability restrictions such as fewer outlets and limiting hours of sale. There were licensing systems in 73 per cent of countries, for at least one but usually all alcoholic beverages.

This allows control over the suitability of the licence holder and/or the premises, and over impacts on the neighbourhood. Licences can be suspended or cancelled, so monitoring and enforcement is a key issue. A substantial fee could fund treatment, prevention or policy activities. Licensing may be more difficult to achieve in countries where home-brewing or smuggling is common.

## Sales restrictions by time and place

Alcohol availability can be restricted by limiting hours, days and places of sale, and the density and location of outlets. Restriction by beverage is usually for spirits. Restrictions on place of sale is most common (56 per cent) followed by hours (45 per cent), days (26 per cent) and density (16-22 per cent). A quarter of countries had high levels of restrictions (particularly in the Americas Region), while 59 per cent had few or none (particularly in the African Region).

However, in countries with restrictions, these were rarely enforced in 23 per cent and not enforced in 10 per cent. This leaves much room for improvement through governmental or local action, the report concluded.

## A minimum age, effectively enforced

The age reported was for purchasing beer to drink on the premises and for purchase beer to take away. Eighteen was by far the most common age. There was no age limit in 15 per cent of countries for drinking beer on the premises and no age for purchasing takeaway beer in 12 per cent. The age limit was 15-16 in 12 per cent and 13 per cent of countries for on- and off-sales respectively. Around 9 per cent of countries had a minimum age of 19 or higher. Most countries had the same minimum age for all outlets and all beverages.

The age at which young people start drinking has been linked to higher levels of harm, such as injury, and heavy drinking later in life. Research shows that introducing a minimum age or raising the minimum age can reduce harm to young people. The survey did not ask about enforcement, although the report noted research showing that even a small increase in enforcement can

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reduce sales to people below the legal age.

## **Blood alcohol limit for drivers**

In most countries, general laws against drink-driving have been replaced by specific limits on blood alcohol content (BAC). A successful drink-drive strategy requires highly visible, frequent, random road checks, to test both breath and blood.

Only 7 countries (excluding the Eastern Mediterranean Region) did not have legislation and a BAC limit. In almost 40 per cent of countries with a BAC limit, this was set at around 0.5/100m. The limit was lower in a further 30 per cent of countries. Nearly a third did not do random testing. A quarter did so frequently and these were more likely to be countries with a low BAC level.

## **Taxation affecting price**

Alcohol taxes affect price levels, which influence consumption levels. Different tax rates are sometimes used to balance up the lower production costs of spirits (per litre of pure alcohol) or encourage people to drink lower alcohol beers or wine. The report compares the price of beer, wine and spirits, the price of any traditional beverages, and looks at alcohol taxes as a proportion of retail price.

In 16 countries, a beer cost less than a cola. In most countries, 1-3 soft drinks could be bought for the price of a beer. Alcohol is sold cheaper in developing countries. Relative to national wealth, one beer in Europe costs the same as nine beers in Africa.

There is good evidence that that higher taxes and higher prices can reduce alcohol related harm. The tax rate may need to be weighed against any risk of illegal production, but many countries put tax stamps on bottle labels. The

report recommends that traditional brews be included in alcohol tax systems to keep all consumption and harm down. In some countries the real price of alcohol has been falling, in part because the tax has not been increased in line with inflation. It was noted that industrialised countries are not using alcohol tax to its full potential as a public health measure. The report ranks tax high on the list of possible policy measures, as it is effective, cost-effective, easy to implement and can generate government revenue.

## **Controlling alcohol advertising and sponsorship**

Alcohol advertising portrays drinking as socially desirable, while ignoring risks to individuals and to public health. Advertising can potentially promote pro-alcohol attitudes, recruit new drinkers and increase consumption among current drinkers. Although its effects on total consumption levels and on alcohol related harm may be limited and long-term, the report considers restrictions on alcohol advertising and sponsorship to be an appropriate part of a comprehensive alcohol policy.

A considerable proportion of countries reported no restrictions on advertising, particularly for print media and billboards. Broadcast media were more commonly restricted, particularly for spirits. Less than a third of countries that had laws restricting advertising considered that they were fully enforced. Those countries that reported fully enforced laws were more likely to have more and stronger restrictions. About 15 per cent of countries rely on industry agreements, which appear difficult to enforce effectively because of their ambiguous and voluntary nature.

Sponsorships are becoming increasingly important in alcohol

marketing. Only a quarter of countries have laws controlling sponsorship of youth and sports events. Alcohol marketing on the internet is also on the increase, often targeting young people.

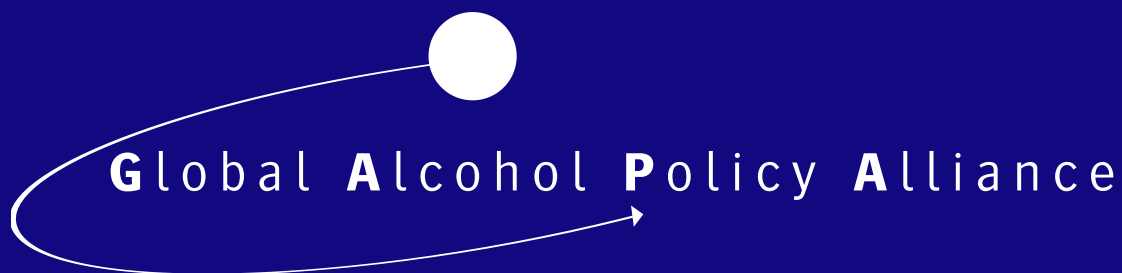
## **Alcohol free environments**

Restrictions on drinking alcohol in public settings has two aims: to ensure a safe public environment for leisure and sports, and to minimise injury and loss of productivity. There is limited research in this area. Some restrictions may be set by local governments rather than nationally. The survey asked about places and settings in which the drinking of alcohol was restricted.

These included educational and healthcare institutions, government offices, workplaces, public transport, parks and streets, sporting and leisure events. Alcohol was most commonly restricted in official settings. Half the countries had total bans. There was less control over drinking in parks, streets and sports or leisure events. For this approach to be credible, alcohol free environments need to be supported by local communities and properly enforced.

## **Conclusion**

The Global Status Report: Alcohol Policy emphasises that single policies are less likely to impact on drinking and alcohol related-harm than several policies working together. This is particularly important if all government policies are not necessarily working in the same direction. Global marketing and trade agreements may make more effective control measures difficult to achieve. To be effective, says the report, alcohol policy should include regulatory and other environmental supports that promote the health of the population as a whole.



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